

## **Ross, Stephen**

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**From:** Leach, Carol  
**Sent:** Thursday, November 09, 2000 11:27 AM  
**To:** Ross, Stephen  
**Subject:** Zamora v



pendrag-cl\_.doc

I like it. I made a few comments. I think the court will be ready to defer to the technical expertise of the commission when it gets to desorption, despite your doing a great job of explaining it. And I was ready to quit when I got to millidarcies, because I have no idea what it is.

Good job.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANT'S STATEMENT OF APPELLATE ISSUES**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. *See* Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.
2. Whether Order R-1133-A is within the scope of authority of the Commission.
3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.
4. Whether Order R-11133-A is otherwise in accordance with law.

## **II. SUMMARY OF PROCEEDINGS**

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias' order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias' Order prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the

appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which require that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337. Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was re-heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply", but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

### **III. ARGUMENT**

#### **A. Introduction.**

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time and, with time and pressure, formed hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989). When a pool of natural gas forms, it is differentiated from other pools by the specific

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<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules for the Basin-Fruitland Coal Gas Pool. RP at 5212-5216.



sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns from the surface of the earth to the base of the Fruitland coal. RP at 4897, ¶ 6 (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at 4896. Pendragon's ownership permits it to produce natural gas trapped within **the Pictured Cliffs formation**. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 1991. RP at 2893, 4900-4901. Pendragon purchased its wells in December 1994 at auction from previous operators; the wells had been drilled and produced two decades earlier. RP at 2894, 3249, 4899-4900.

The parties each sought to prove to the Commission that the other party was producing the other's gas. Two general theories were presented. The first theory was geological in nature; the parties claimed that wells were "perforated" in the wrong geologic formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 103 at 10. The perforations are holes blown through the casing with explosives. *Id.* When a well is producing from a **specific** formation, holes have been blown through the casing into that formation. *Id.* Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are perforated somewhat lower in the earth, in the Pictured Cliffs

sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that the perforations in each party's wells were properly placed; that issue is not before the Court.

The second general theory presented to the Commission concerned completion practices and the possibility that such practices created fractures that extended from one formation to another. This issue, which the Commission referred to as "the Engineering Issue," is the issue before the Court in this appeal. Whiting claimed that a completion practice called "hydraulic fracturing" caused fractures in the rocks from Pendragon's wells into the Fruitland coal and caused an escape of gas into Pendragon's wells. Whiting presented evidence that Pendragon's hydraulic fracturing created cracks and fissures upward into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. See RP at 4954 (Whiting's Closing Statement Memorandum). Pendragon ~~disputed this claim~~ and claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at 5105 (Closing Statement of Pendragon).

Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly increases the area from which a natural gas well produces. 1 Williams & Meyers, § 103 at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901.

## B. The Commission's Order

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ 33. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped. ¶ 34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation gradually increased so that it was above the pressure in the Pictured Cliffs, setting the stage for gas migration to Pendragon's wells. ¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation for this was hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland ~~formation~~ coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four ~~Chaco~~ <sup>9</sup> (I don't think you have discussed Chaco...so this kind of does not fit) wells (Order, ¶ 5).

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<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page 17, below.

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented, which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, these findings and conclusions are supported by substantial evidence in the record of the proceedings, were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." *See* NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 907 P.2d 182 (1995). *See also Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary,

unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87 N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds 1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, each party, Whiting and Pendragon, were represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing is more than sufficient for a reasonable mind might to accept as adequate to support the conclusions reached by the Commission. *Fugere, supra*.


##### **a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced sudden, unexpected and unprecedented production increases in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental

timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir.

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899-4900. Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at 4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. *See also* RP at 2893-98 (testimony of Alexis M. O'Hare).

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2911, 2949-52, 3253. Exhibits 7 through 10 to the testimony of James T. Brown (do you think you might give titles or other limited credentials degrees—etc. so this seems more credible?) dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270. Mr. Brown testified that from their peak production in late 1978, the Chaco wells declined to a non-economic, depleted state by 1986. He testified: "There is absolutely no scientific explanation for the reservoir to some way



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<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

'recharge' so that in 1995 the rates and pressures of these Chaco wells *significantly exceeded initial, virgin gas flow and pressure.*" RP at 3254. *See also* RP at 856-57, 2898, 3267-76, 3276-3302

Evidence was also presented that wells like Chaco Nos. 1, 2-R, 4 and 5 exhibited a characteristic decline curve from first production, and the production of the Chaco wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. Bradley M. (same as above) Robinson testified that the average flow rate of the Pendragon wells increased 500-fold after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000 Mcf/month.* RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in production "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of . . . 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, *Maxis M.* *qualifications* Mr. O'Hare (first name, etc) testified

that the production volumes seen in the Chaco wells after 1995 exceeded production rates

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<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.



when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production

patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes under virgin reservoir conditions when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. *See also* RP at 2911 and 3253 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that other wells were not hydraulically fractured, and did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas.

Mr. O'Hare testified that comparing production from Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured helps illustrates the uncharacteristic behavior of Pendragon's newly stimulated wells.

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon*

*did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic increase whenever the adjoining Whiting Fruitland Coal wells were shut down, evidence that the two sets of wells and formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Those plant down times resulted in the Gallegos Federal wells being shut-in. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomena reflects effective communication between the Chaco wells and the Fruitland coal exists.

RP at 3253, lines 15-23.

Pendragon's expert David O. Cox also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. *See* RP at 651-652.

Mr. Brown testified that Whiting's production *increased* after Pendragon's wells were shut down. *See* R.P. at 3254, lines 9-18. *See also* RP at 2909, ll. 4-10. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. *See* RP at 1085 ll. 24-25, 1086, ll. 1-5.

**c. The Connection Between Pendragon's Fracturing and Communication**

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect.

Testimony and evidence showed that great care is taken when designing hydraulic fracturing work so as to avoid extending fractures into other formations. *See e.g.* RP at 2895-2896, 319 (fracture treatments designed to keep fractures within zone). Even so, fracturing can create communication between zones as occurred here; Mr. Conway, Pendragon's fracturing expert, even assumed for purposes of his work that the Pictured Cliffs and the Fruitland coal communicate. RP at 324.

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. *See* RP at 305-402 (testimony of Michael W. Conway), 1255-1416 (testimony of Bradley M. Robinson), 3393-3409 (same). Nevertheless, substantial evidence supports the Commission's finding that Pendragon fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained

for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had "likely" extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

Despite the care taken by Whiting not to fracture into the Pictured Cliffs, the Commission found it had. However, the Commission also found that Whiting had not produced any significant amounts of Pictured Cliffs gas. Substantial evidence exists for the Commission's conclusions in this regard. *See* RP at 861-862, 1080, 2908-2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's fracturing --- suggests little if any gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs).

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**

Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. *After the frac, the pressures in the Chaco wells are about equal to the pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.*

RP at 1275, ll. 1-9 (emphasis added). Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. *See also* 3276-3302. Mr. Brown testified further on cross-examination the Btu values of gas produced by Pendragon's wells after the 1995 stimulation was Fruitland gas, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. *See also* RP at 3277-3280 (Exhibits of Mr. Brown depicting Btu decline).

Even Roland Blauer, Pendragon's expert witness who testified concerning gas content, agreed on cross-examination that the composition of the gas from the two sources was "similar":

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion. RP at 910, 1057. Mr. O'Hare described the typical Pictured Cliffs production pattern:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines 4-7.

Evidence was also presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Once water is removed, gas will leave the coal and begin to collect:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-4. The gas forms because natural gas (methane) is embedded in the pores of coal; the methane will leave the pores and become free gas only when the pressure in the surrounding coal is reduced. RP at 1082-83. This process is called "desorption." The testimony and evidence indicated that once the methane is released from the pores of the coal, it gradually accumulates, and as it does, the pressure increases. *Id.* If no production occurs, the gas pressure gradually increases until it reaches a point

beyond which no more methane can desorb from the coal. *Id.* The pressure stabilizes at that point. *Id.* Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, and especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

These conclusions are supported by evidence presented to the Commission of water production from Pendragon's wells. If Pendragon's wells were producing gas from the Fruitland Coal, logic dictates that the wells must produce some water. RP at 862-863, 2896-2897. The wells might not produce as much water as coal wells do initially, but evidence was presented that Whiting had dewatered the Fruitland coal for several years



before Pendragon fractured into the high pressure gas. RP at 2896-2898. Evidence was presented that the Chaco wells produced water after the 1995 fracture stimulation. RP at 2899, 2911-2915, 2928-2948.

**f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive and production had followed typical decline curves to the point that remaining reserves were minimal, and the pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 1993 showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-12. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon had already recovered "in excess of" the recoverable gas from its wells:

Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

R.P. at 2921, ll. 22-25. Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55%

percent of initial formation pressure, and Pictured Cliffs wells can only recover 60-70 percent of initial pressure. R.P. at 856-57. *See also* RP at 1099-1101.

Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells had already produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.* Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He

testified that it was not economically feasible to produce the remaining reserves in

Pendragon's wells:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" (or separated from the pipeline) indicated that the wells reached a "depleted state by 1986 and remained in that state." RP at 3252-3253. *See also* RP at 855-67 and 2902-05 (testimony of Alexis M. O'Hare); RP at 1079-80 and 3252-57 (testimony of Mr. Brown).

Mr. Brown also testified that a depleted reservoir cannot suddenly "recharge" as suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9.

Finally, Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale in 1993 or 1994. RP at 855. He declined to purchase the wells after his analysis showed him the wells were uneconomic. RP at 866-67, 1157-58, 2903-2904, 3076-96.

**g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra*.

**2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). And, the Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, and to do whatever may be reasonably necessary to carry out the purpose of [the Oil and Gas Act], whether or not indicated or specified in any section hereof." NMSA 1978, § 70-2-11(A)(emphasis added).

Factual findings of the Commission indicated that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the former to the latter. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful.

Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A). Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done. Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench", the lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate (gas bubbles, gas highways and gas compartments), and the BTU findings are unsupported by substantial evidence. Pendragon also claims that the Commission disregarded evidence that Pendragon presented. However, the Commission considered each and every one of these contentions, and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to support the findings and conclusions reached by the Commission. *Fugere, supra*.

For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." The Commission specifically considered the "third bench" claim, and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For

example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. *If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.*

RP at 1423-1424 (emphasis added). *See also* RP at 2904-05 (no reports of gas production from a "third bench" known to Mr. O'Hare), 3402 (lower Pictured Cliffs "mainly water saturated").

In a contradictory argument, Pendragon presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." Pendragon offered testimony of expert witnesses who testified that

Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can buy it. Number one, that makes almost all of Mr. Cox's



calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

RP at 1315. *See also* RP at 903-904 (there may have been a "small component of damage" present but "... it was [not] significant enough to triple the reserve recovery), 942 (removal of damage might improve flows but cannot increase the amount of gas in the reservoir), 1155-56 (no reports of damage in well files), 1273 (type of damage alleged "cannot happen in this reservoir"), 2904 (skin damage cannot "recharge a reservoir").

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See* pages 19-21 (depletion), 9-13 and 17-19 (communication), 15-16 (Btu), above. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See* pages 9-22, above. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra*. And, Pendragon's many alternative theories for what happened in the San Juan County wells do not have to be blindly accepted by the Commission, or the Court:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not

bolstered by the expertise of the Commission to which we give special weight and credence ...

*Fasken v. Oil Conservation Commission*, 87 N.M. 292, 293, 532 P.2d 588 (1975). This case is no different.

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## **2. Pendragon's "Legal Arguments"**

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth the substance of *all* evidence bearing on the proposition.); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (" ... [I]t is true that our admonitions against

one-sided statements of the facts probably pertain most often to briefs challenging the sufficiency of the evidence ..."). Such arguments also improperly invite the Court to reweigh the evidence presented to the Commission. *Grace, supra*.

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Statement of the Issues*, at 8. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief", nor does Pendragon cite authority for this proposition. The argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply ..." *Appellant's Statement of the Issues*, page 8. However, as seen on pages 9-22, above, the Commission *did* determine this question, adversely to Pendragon.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, and found that Fruitland coal gas had escaped into the Pictured Cliffs formation through

Pendragon's hydraulic fractures --- it ordered Pendragon's wells shut down to prevent further communication.

A similar substantial evidence argument **masquerading** (I love that phrase) as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] illegally produced ... from Whiting's Pictured Cliffs Coal wells ..." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. *See* pages 19-21, above. Substantial evidence supports this finding. *Id.* Therefore, the Commission *did* determine how much Pictured Cliffs gas was "illegally" produced by Whiting. The production figures and pressure data presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. *See* pages 9-12, above.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting was producing Pendragon's gas. *Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act

and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.

Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 635-36, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. "[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence."). The Commission is entitled to rely on its own expertise in these matters; that is in part what the Oil Conservation Commission is for --- to resolve complicated technical questions that might be difficult for the courts to resolve.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. *See* pages 19-21, above. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's

gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool ..." NMSA 1978, § 70-2-17(A) (Repl. 1995).

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A). No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas ..." *Id.*

Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13.

However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool ...*" NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas.

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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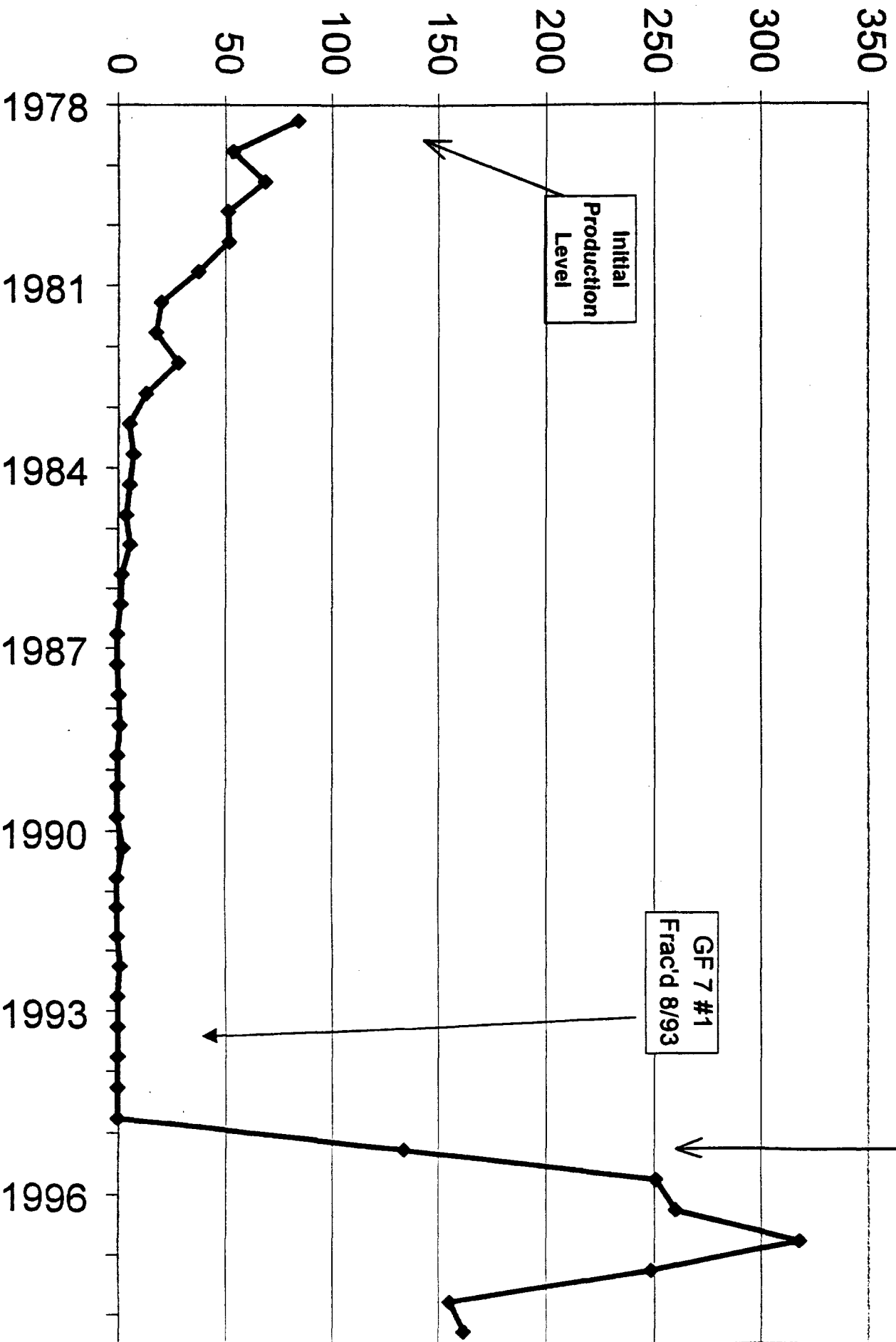
Stephen C. Ross



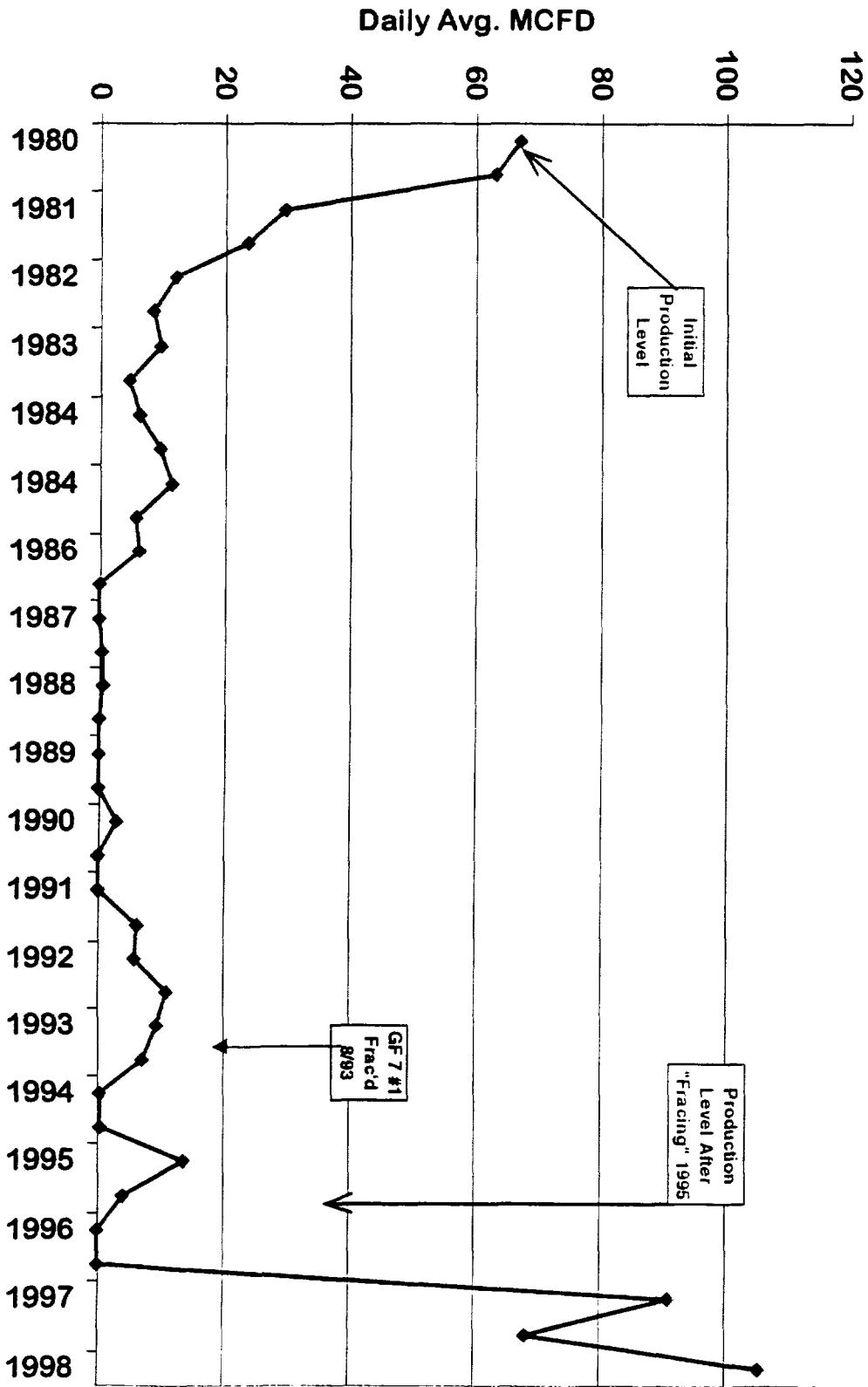
# CHACO 1 GAS PRODUCTION HISTORY

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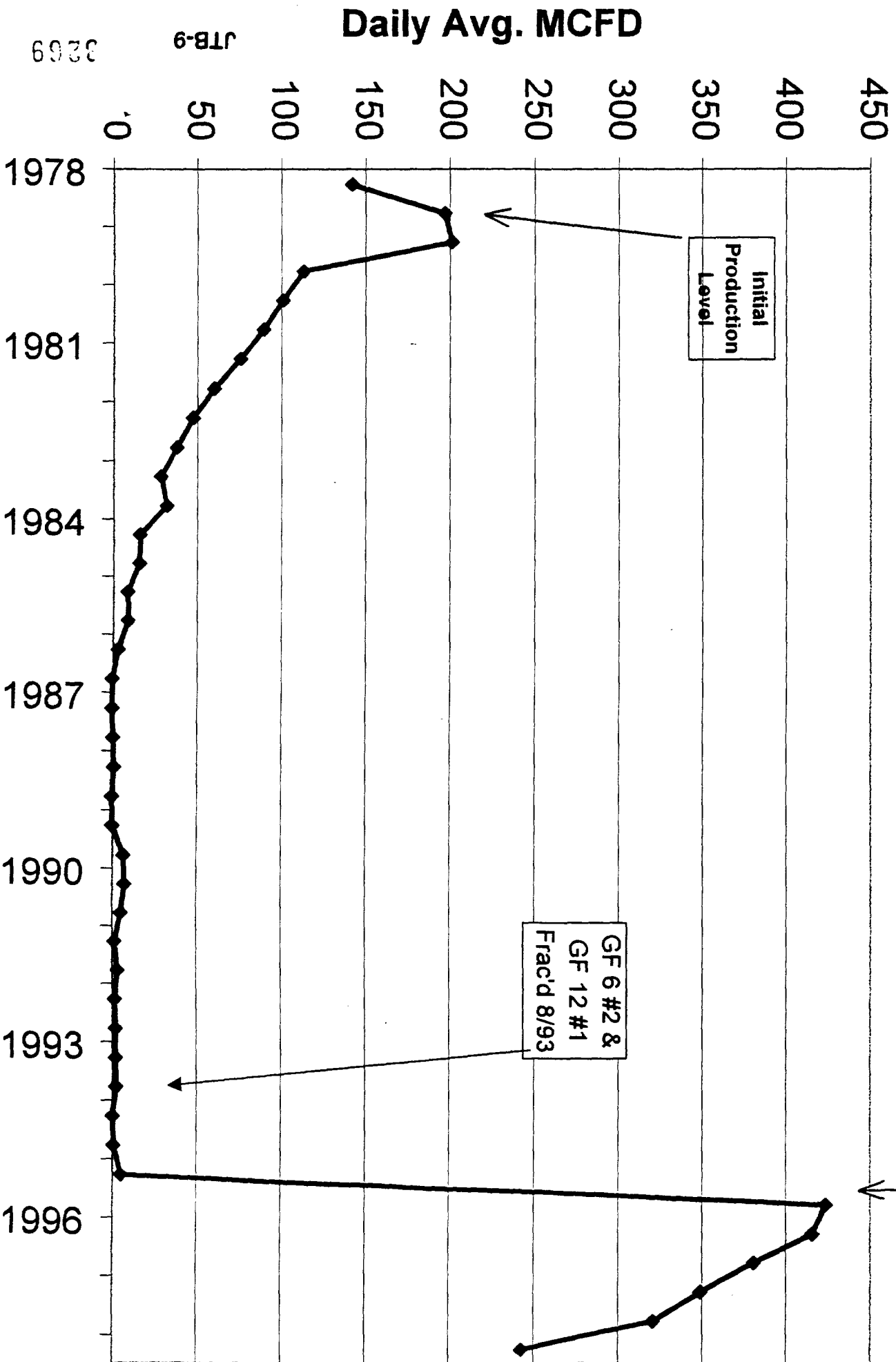
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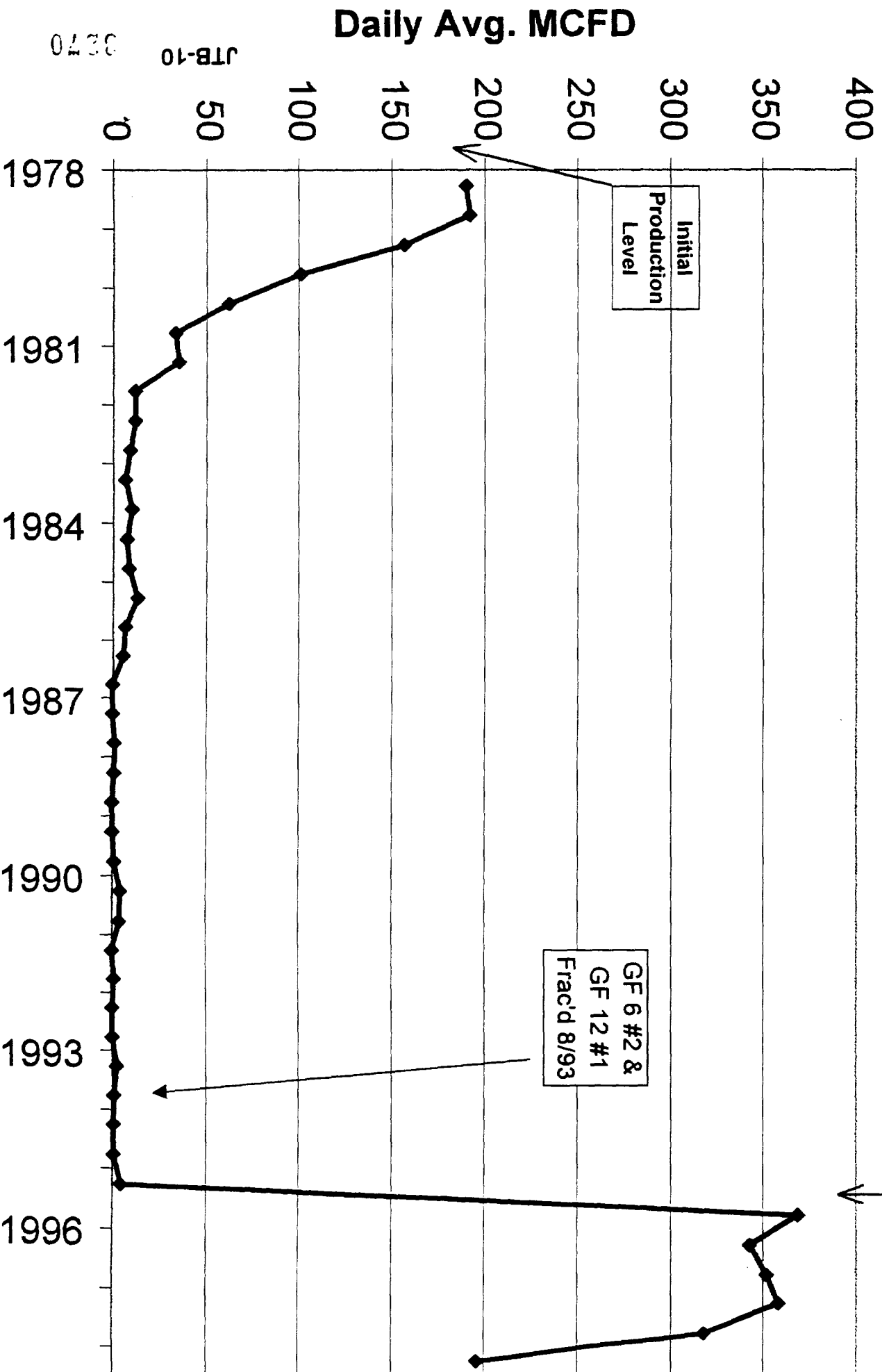
# CHACO 2R GAS PRODUCTION HISTORY



# CHACO 4 GAS PRODUCTION HISTORY



# CHACO 5 GAS PRODUCTION HISTORY



STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND J.K EDWARDS ASSOCIATES, INC.  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO

CASE NO. 11996

OIL CONSERVATION DIV.  
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WHITING'S MEMORANDUM IN LIEU OF CLOSING STATEMENT

Whiting Petroleum Corporation and Maralex Resources, Inc. ( "Whiting"), submit this Memorandum in lieu of a closing statement discussing the evidence presented at the hearing on August 12-21, 1999.

I.

INTRODUCTION

This case arises out of a rework program initiated in 1994-1995 by Applicants (collectively "Pendragon") with respect to depleted Pictured Cliffs wells in T-26-N, R12 and 13W, San Juan County: Chaco wells Nos. 1,1J, 2J, 2R, 4 and 5 ("Chaco wells"). Pendragon's ownership in the leases underlying the Chaco wells is "Limited from the base of the Fruitland formation to the base of the Pictured Cliffs formation" ("PC"). (Emphasis added). Whiting owns interests in the same leases from the surface of the earth to "the base of the Fruitland formation." Whiting developed five Fruitland coal gas wells ("Gallegos Federal wells") in 1992-93 in the three sections within the subject area. The respective conveyances to Whiting and to Pendragon were from common grantors (Bayless, Merrion, et al.), describing the transferred interests by formations, not by New Mexico Oil Conservation Division ("Division") defined gas pools.

After Pendragon acidized and fracture stimulated the Chaco wells in 1995, Whiting observed that the wells were producing volumes of gas extraordinarily inconsistent with

3 - 640 ac spacing

004954

6 - 1980'  
330'

restimulated wells in the old WAW Fruitland Sand - Pictured Cliffs reservoir. Investigations revealed that the shut-in pressures on the Chaco wells were higher than one would expect from the Pictured Cliffs in that area and were approximating pressure levels Whiting was seeing in its coal wells. Whiting also noted significant water production from the Chaco wells being dumped into unlined earthen pits. Simultaneously, Whiting observed a premature break on the incline of its offsetting coal gas production. Gas sample analyses pointed to the source of the Chaco wells remarkable production being the coalbeds owned by Whiting.

Not willing to make serious accusations based on work by its in-house technicians, Whiting engaged the independent expertise of Holditch Reservoir Technologies to study the evidence. Holditch experts concluded that the Pendragon restimulations of the Chaco wells had caused communication with the Fruitland coal zones so that the coals were the source of the pressures, gas production and water being produced at the Chaco wells.

Whiting filed suit on May 26, 1998 against Pendragon in Santa Fe County District Court, Cause No. SF-CV-98-01295 alleging trespass and conversion. A preliminary injunction hearing was held on June 29, 1998, and the district court ordered Chaco wells Nos. 1, 2R, 4 and 5 shut-in. District Judge Art Encinias found that Pendragon had created hydraulic fractures into the Fruitland coal and was "high-jacking" Whiting's gas. The district court granted a preliminary injunction against Pendragon shutting-in the Chaco wells, and deferred to the Commission on matters presented by Pendragon's Application which were peculiarly within the agency expertise. (Whiting Exhibit 5).

Pendragon quickly filed an application with the Division requesting an Order confirming that its Chaco wells are producing from the appropriate common source of supply, i.e., the PC formation, and that Whiting's Gallegos Federal coal seam gas wells are producing from their

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appropriate common source of supply, i.e. the Fruitland Formation.<sup>1</sup> After three lengthy days of hearing before the Division (Examiner David Catanach) in July 1998, Pendragon not only failed to prove its allegations, but the Division held that Pendragon had caused communication with the coal formation by its stimulation treatments, had been producing coal gas, and ordered the Chaco wells to remain shut-in. Order R-11133, February 5, 1999.

On this de novo appeal the evidence presented to the Commission established that: (a) Pendragon's 1995 rework program targeted the Fruitland coal formation, just as the Whiting wells were dewatered and producing coal gas and reached economic levels of gas production; (b) the Chaco wells, excepting the 2R, are perforated in the Fruitland sands above the base of the Fruitland coal formation; (c) Pendragon acidized and fracture stimulated its Chaco wells Nos. 1, 1J, 2J, 2R, 4 and 5 in 1995 causing communication with Whiting's coal seam zones; (d) Pendragon from 1995 to 1998 produced from perforations in its Chaco wells Nos. 1, 2J, 4 and 5 in the Fruitland sandstone within the Fruitland formation owned by Whiting; (e) Pendragon has filed false reports with the Division and failed to report and properly dispose of water production from the Chaco wells, in violation of the Division's Rules and Regulations; and (f) the stimulations on the Gallegos Federal wells did not grow into the Pictured Cliffs formation, and even if such a theory had been proven, it has not resulted in gas cross flow from the lower pressured, depleted formation to the Gallegos Federal wells.

The Commission can simply dismiss Pendragon's Application for failure of proof, leaving the parties to resolve their dispute in the pending litigation in Santa Fe County District Court. If the Commission rules on the merits, it should find that Pendragon has, from 1995 until June 29, 1998, produced Fruitland Sandstone and Fruitland coal seam gas belonging to Whiting from its

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<sup>1</sup> Fundamental legal principles provide that Pendragon, as Applicant, has the burden of proving the allegations it makes in order to prevail. Bank of Santa Fe v. Petty, 116 N.M. 261, 264, 867 P.2d 431 (Ct. App. 1993); Carter v. Burn Construction Co., 85 N.M. 27, 32, 508 P.2d 1324 (Ct. App. 1973); Imperial American Resources Fund v. Railroad Commission of Texas, (Tex. 1997) 557 S.W.2d 280, 286 ("the applicants [must] discharge their burden of proof that the exceptions are necessary to prevent waste or confiscation of property.")



Chaco wells Nos. 1, 2J, 2R, 4 and 5. All the Chaco wells must be plugged and abandoned to prevent further trespass and conversion by Pendragon.

## II.

### **PENDRAGON IMPEACHES ITS OWN APPLICATION**

One of the more curious aspects of this proceeding is Pendragon's impeachment of its own Application by a most extraordinary reversal in position. Pendragon's Application seeks an order that both the Pendragon Chaco wells and the Whiting Gallegos Federal wells are producing from their respective appropriate common source of supply. Pendragon's Application and the evidence Pendragon presented before the Division in the July, 1998 hearing were generally consistent; Pendragon denied any communication between the Pictured Cliffs formation and the Fruitland formation, or between the Chaco wells and the Gallegos Federal wells in the area in question.

Having lost before the Division on the communication issue, Pendragon did a 180 degree change in its evidentiary story before the Commission, but has not sought to amend its Application. Pendragon now concedes communication between the two formations. But Pendragon contends for the first time in this three year dispute that it is the Gallegos Federal wells that caused the communication, and that the Gallegos Federal wells are producing Pictured Cliffs gas. The malleability of Pendragon's "expert" evidence in switching from its old story to the contradictory new one should invoke a healthy dose of skepticism by the Commission, even before the flaws in that testimony are demonstrated below.

## III.

### **DIVISION HISTORY CONCERNING THE FRUITLAND COALS AND STANDARDS FOR ANALYSIS**

The issues here do not come before the Commission in a vacuum. There is a very significant regulatory history addressing the nature of the Fruitland coal formation and its relationship to the underlying Pictured Cliffs formation. It is a history which Examiner Catanach

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has lived. When the Division entered Order R-8768 in 1988 in Case No. 9420, it had the benefit of testimony from industry experts and the lengthy, detailed study and recommendation of the special Coalbed Methane Committee on several issues which are germane to this case. That Order established the Basin-Fruitland Coal Gas Pool in the Fruitland formation. In 1988, testimony was presented by several witnesses on the issue of Fruitland Sand or Pictured Cliffs stimulations growing into and communicating with coal seams in the Basin, a matter of general industry knowledge in 1988.<sup>2</sup>

In order to address this situation, the Division adopted Special Rules in Order No. R-8768.<sup>3</sup> Rule 3 thereof authorizes the Director to require an operator of a proposed or existing Pictured Cliffs well, here Pendragon, to submit certain data in order to demonstrate to the satisfaction of the Division that the well will be or is currently producing from the appropriate common source of supply. Rule 2 specifies the data to be used in the analysis, including:

- a. Electric Log Data
- b. Drilling Time
- c. Drill Cuttings or Log Cores
- d. Mud Logs
- e. Completion Data
- f. Gas Analysis
- g. Water Analysis
- h. Reservoir Performance
- i. Other evidence which may be utilized in making such determination

The hearing in July 1998 before Examiner David Catanach on behalf of the Division gave Pendragon the opportunity to provide the required data. At that hearing it was Whiting who by and large brought forth data contemplated by the Rule. The Division ultimately found that Pendragon had caused communication with the Fruitland formation by its acidizations and fracture stimulations on the Chaco wells, and that Pendragon had improperly produced coal

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<sup>2</sup> Paul Thompson, Pendragon's contract operator who monitored the dewatering of the Gallegos Federal wells, and designed and supervised the hydraulic fractures in issue here, was a member of the Coalbed Methane Committee.

<sup>3</sup> Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, Case No. 9420, Order No. 9420, October 17, 1988. Case No. 9420 and 9421 were heard by Examiner David Catanach.

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seam gas from those wells from 1995 until shut-in by Order of the District Court in late June, 1998. The Division ordered the Chaco wells shut-in.

#### IV.

#### **THE EVIDENCE PRESENTED CONFIRMS THAT THE CHACO WELLS AND THE GALLEGOS FEDERAL WELLS PRODUCE COAL SEAM GAS**

Whiting's Gallegos Federal wells are coal seam gas wells that have exhibited a classic dewatering and gas incline pattern. The wells were originally drilled in 1992 and fracture stimulated in 1993. Following the fracture stimulations of the Gallegos Federal wells there was no pressure or production response in the offsetting Chaco wells. See Whiting JTB Exs. 6 through 16.

The evidence demonstrated that the WAW Fruitland Sand - Pictured Cliffs pool was depleted in the subject area prior to 1992. From the initial completions in 1978-1980, pressures in the Chaco wells showed steady declines, and production rates declined to abandonment levels of 0-15 MCFD. The decline curves of the Chaco wells, along with essentially all the wells in the pool, were consistent with the depletion of a sandstone reservoir.

Unchallenged evidence presented to the Commission demonstrated incredible and uncommon pressure and production increases in the Chaco wells immediately after Pendragon performed fracture stimulations on Chaco wells 1, 4 and 5. The Chaco wells which Pendragon did not fracture stimulate, the 1J and 2J, had no significant production increase even though closely offset by Gallegos Federal wells 26-13-1 #1 and 26-13-1 #2. (The GF 13-#1 is on the same pad only 180 feet distant from the Chaco 2J). The correlation and cause-effect relationship is indisputable. Pendragon did not even attempt to explain why the Chaco wells did not respond to the Gallegos Federal wells fracture stimulations, but did respond immediately to the Pendragon fracture stimulations. These objectively ascertainable facts alone disprove Pendragon's theory that Whiting fracture stimulations caused communication. When faced with unfavorable facts Pendragon's approach was to either ignore them, try to avoid them as

"inconclusive," or argue that damaging data is unreliable.<sup>4</sup> For its affirmative case Pendragon offered theories built on self-serving assumptions. Pendragon experts used data in some calculations and ignored the same data in others when it would not fit the desired result. None of that constitutes "substantial evidence" which the Commission must have in order to make findings favorable to a party. Continental Oil Co. v. Oil Conservation Commission, 70 N.M. 310, 320, 373 P.2d 809 (1962).

**A. Pre-1995 History of the Chaco Wells**

The Chaco wells are shallow, inexpensive slim hole completions. They were completed in the 1978-80 era when the NGPA gas prices exceeded \$3.00 per Mcf. By the mid-1980s, all of the Chaco wells, like virtually all the wells in that sandstone pool, were non-productive or making only 5 to 15 MCF of gas per day. Pressures in the wells, which were originally in the range of 200 to 250 psi, had declined by the mid-1980s to around 100 psi.<sup>5</sup>

Merrion Oil and Gas and Bob Bayless are two of the more expert and experienced operators in the San Juan Basin. They saw plugging liabilities and no rework potential in the Chaco wells. They offered Maralex the Pictured Cliffs rights in the Chaco wells and other Pictured Cliffs wells in 1992. Maralex turned them down. Mr. O'Hare evaluated the properties and determined that the Pictured Cliffs formation had no remaining economic reserves. Exhibit W-35. Correspondingly, it is significant that neither J.K. Edwards nor Pendragon produced any studies or investigations made before the 1995 reworks that justified the development of supposed untapped Pictured Cliffs reserves.

No evidence was presented to the Commission that any other operators in the area are reworking WAW Fruitland Sand - Pictured Cliffs wells to recover PC reserves. There is no literature discussing untapped reserves in the PC formation in this area. All Pendragon offers is

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<sup>4</sup> Pendragon witnesses continually denigrated the value of gas analysis and implied that every unfavorable shut-in surface pressure reading that did not fit their theory must have been distorted by water in the wellbore, an assumption Pendragon never proved or substantiated.

<sup>5</sup> Deliverability tests were discontinued in 1984, so there is a hiatus in pressure readings of about ten years.

O'Hare  
Evaluation

the after-the-fact theories of its experts who must now invent some explanation – other than the obvious – for the extraordinary pressure and volume response of the Chaco wells.

Pendragon points to the Chaco Plant No. 5 as the “poster well” providing inspiration for the Chaco well project. Interestingly, the Commission August 1999 hearing marked the first time Pendragon ever mentioned the Chaco Plant No. 5 as having been involved in any way in its decision to implement the Chaco well restimulation program.<sup>6</sup> The evidence, however, suggested that the Chaco Plant No. 5, like the Chaco wells, is actually producing coal seam gas as a result of communication with the Fruitland formation during the restimulation process.

In sum, only after a prolific volume of coal gas was flowing from the Chaco wells and Whiting discovered the trespass has Pendragon constructed theories that the gas somehow comes from the PC. This is not science. This is not the behavior of reputable operators. An operator studies the reservoir for potential before making an investment. The Commission has before it a disreputable operator who has been caught and is casting about for a way out.

**B. Production Volumes and Pressure Readings Since Restimulation Confirmed the Production of Coal Seam Gas**

With one notable exception, production and pressures rose in the Chaco wells following either acidization or fracture stimulation to levels resembling pressures in the Fruitland coal formation, while wells Pendragon did not fracture stimulate showed no significant pressure or production response. Whiting JTB Ex. 6 through 10, 15 and 16. The Chaco 4 well reflected a 97 psi WHSIP on a C-122A in July 1983; the rig report when acidization was to be done in January 1995 read 119 psi. In twelve years the reservoir had “repressured” 22 psi. Two weeks following Pendragon’s acidization of the Chaco 4 the rig reported shut-in pressure of 170 psi – a 51 psi


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<sup>6</sup> The most reasonable inference is that the Lansdale Federal No. 1 was the true Pendragon guinea pig. Pendragon justified investment in the Chaco well restimulations on the work that it had performed in December, 1994 when it intentionally completed the Fruitland coal formation in its Lansdale Federal No. 1 well. Pendragon failed to report the well as a coal well in notices filed with the Division, failed to document water production from the well, but began producing coal seam gas from what it falsely reported as a “Pictured Cliffs well” occupying a 160 spacing unit, rather than the 320 acres required for a coal well.



increase in two weeks! The only scientific conclusion to be drawn from the data is that the acidization caused communication between the Pictured Cliffs formation and the higher pressured and relatively untapped Fruitland coal formation. The Chaco 5 well, relied upon by Pendragon as having pressure increases prior to stimulation, had a casing leak that was discovered in February, 1995, prior to the stimulation. Communication with the coal was already established. In contrast, the Chaco 2R well did not respond immediately to the Pendragon fracture stimulation in 1995. This well produced considerable water and required the installation of a compressor for continuous production. Unlike the other three fracture treated wells, the 2R is not perforated in the Fruitland sandstone directly under the thick coal seam.<sup>7</sup>

### C. The Overcoming "Damage" Notion

Before a summary of the evidence on this critical issue, it should be noted that so-called reservoir "damage" does not prevent a well from seeing true shut-in reservoir pressure. The tip-off to the presence of damage is that shut-in pressures are relatively good, while gas production is poor. This phenomena was grudgingly conceded by Pendragon. But when both pressures and production increased with the 1995 stimulations, Pendragon was quick to speculate the pre-1995 pressures readings were distorted by liquid in the wellbore. 

There are diagnostic well tests to actually determine whether there is damage. Pressure-production differentials that would raise suspicions of damage are routinely noted in the well files by operators. There is no evidence of either testing or operator observations concerning damage. Indeed, the decline curve of the total wells in the WAW Fruitland-Pictured Cliffs pool illustrated on Whiting Ex. W-30 would say, according to Pendragon, that all wells in the pool had damage.

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<sup>7</sup> This unique character of the Chaco 2R obviously made it the preferred candidate for Pendragon witness Conway to select for a fracture simulation study that would show the fracture staying in zone.

The “damage” theory was totally theoretical. Witnesses Nicol, McCartney and Cox each postulated the existence of damage in the Chaco wells, but each speculated a different type of damage or damage mechanism. Each was mere speculation, with neither testing nor documentation for substantiation.

The obvious explanation for the Chaco wells’ uplift in production and pressure remains the correct explanation, viz:

1. The Chaco wells behaved the way they did before 1995 because their source of gas was depleted.
2. The Chaco wells behaved the way they did after the stimulations in 1995 because they became communicated with the high pressure and gas filled coals of the Fruitland formation.

**D. Accounting for the Gas Produced**

Pendragon faced a dilemma in light of its Chaco wells being miraculously transformed from dead dogs into live race horses. The excuse was the “damage” theories.

Pendragon faced yet another dilemma. Given the thickness and characteristics of the pay zone in the Pictured Cliffs, there was simply not enough remaining recoverable gas in place in the Pictured Cliffs to account for the volume produced from the Chaco wells before they were ordered shut-in in 1998. This issue inspired Pendragon's “third bench” theory.

Pardon the pun, but this theory is all wet. The lower Pictured Cliffs is highly water saturated as clearly reflected on all logs presented. What gas exists in the lower sandstone is unrecoverable. That is why all knowledgeable operators do not perforate that zone. Pendragon itself has not perforated the “third bench” and thus has not attempted to stimulate that zone in the very Chaco wells in question.

Whiting’s evidence demonstrated that there is enough recoverable gas in the coal to account for all past and projected coal well production as well as the 1995 to July 1998 production of coal gas from the communicated Chaco wells. Experience in the San Juan Basin as well as recent literature is revealing that original estimates of 110-120 standard cubic feet per

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ton of coal were significantly understated, and that 150-160 scf per ton is probably more accurate. The coals are a new gas resource, and more is constantly being learned about coal gas production and reserves in coal gas formations.

#### **E. Fracture Stimulations**

Whiting recognizes that both sides presented contradictory fracture simulation evidence to the Commission, and shares the Commission's questions about the efficacy of such studies. Computer programs are commonly used in the industry today for "modeling" what supposedly happens when a well is fracture stimulated. The outcomes are highly dependent upon the program operator selecting meaningful and accurate variables for use in the models.

The Commission could disregard the simulation evidence, yet readily conclude, as did the Division, that the Pendragon induced fractures caused the communication resulting in coal gas being produced by the Chaco wells. As previously discussed, there is substantial undisputed data and evidence which conclusively demonstrates that the Whiting fracture stimulations did not communicate with the PC. When the Gallegos Federal wells were fracture stimulated in 1993, the Chaco wells showed no production or pressure response. The Chaco wells did not show any production or pressure response until Pendragon fracture stimulated the wells in 1995, and then, only those wells which were fracture stimulated in the sandstone layer between the massive coal and the Basal coal in the area showed an immediate pressure and production response.

What can be learned from the fracture simulator evidence is this:

1. Pendragon Witness Conway. Dr. Conway selected for his analysis the Chaco 2R, the single Pendragon well not perforated and so not fracture stimulated in the sandstone stringer within the Fruitland formation directly below the main coal, as were the Nos. 1, 4 and 5. His simulation showed that the Chaco fracture grew up to the base of the coal and then ran along it for some distance. The coal is known to contain a natural, well developed cleat system so at a minimum the

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Chaco well fracture opened a propped channel to the existing natural pathways in the coal. The Conway simulation did not predict a fracture that would penetrate the coal, nor establish a propped fracture into the coal. But he was able to obtain that result only because he assumed (a) the maximum theoretical stress value ( $>1.0$  psi/ft) for the coal and (b) that the coal was impermeable, thus disregarding existence of the natural cleat system.

Dr. Conway's simulation of the Gallegos Federal 26-12-6 # 2 could not show that the Whiting fracture stimulation broke into the Pictured Cliffs sandstone at the wellbore (which is where the greatest pressure is normally expected). His initial analysis showed that the fracture stayed in the coal. He had to force his computer to assume a dramatic change in lithology (an ash "pod" in the coal) about 750 feet from away the wellbore in order to predict that the fracture escaped from the coal.<sup>8</sup>

2. Whiting Witness Robinson. The Whiting expert's simulator runs indicate that both Chaco well fractures and Whiting well fractures can grow out of zone near the wellbores. One run using the same data and rock properties supported by the literature was made by Brad Robinson for each case with no "tweaking" of the variables to get a desired result. This evidence showed that the fracture treatments of the sandstone create a conductive, proppant-filled channel in communication with the coal cleat system.

Expert Robinson went on to demonstrate how the data of observed pressures, flow rates and variations in the type of gas being produced from a well are consistent with communication between the zones occurring at the Chaco wellbores. The same data are not consistent with communication at the Gallegos Federal wellbores. Downhole cross-flow occurs from higher to

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<sup>8</sup> The "pod" theory has no scientific support whatsoever. In fact, both Pendragon's witness Dr. Whitehead and Whiting's geologist Dr. Ayers confirmed that tonstein (ash) occurs in the coal as very thin sheets over large areas, not in concentrated pods.



lower pressures at the Chaco wellbores. The Chaco wells will steal gas from the coal seams when the Chaco wells are producing.

**F. Pressure Interference Studies**

As in the case of modeling fracture geometry, the pressure interference calculations are entirely dependent upon variables assumed for the estimates. The time within which a pressure wave will travel through test formations depends on the value used for the permeability of the relative formations in question. The difference between the credibility of the opinions of Pendragon's Dave Cox versus Whiting's Brad Robinson is readily resolved. Cox plucked out of thin air a permeability of 25 millidarcies for the coal. Robinson used 200 millidarcies for the coal, not from whole cloth, but based on the results of an injection test performed on one of the Gallegos Federal wells. With that, what was presented is summarized as follows:

1. Pendragon Witness Cox. Pendragon assumed pressure interference observed at the Chaco 4 and 5 was caused by communication at the Whiting wells. In order to support this theory, Mr. Cox grossly over estimated permeability in the Pictured Cliffs (150-200 md.) and used a drastically lower permeability for the coal than measured in Whiting's injection test. Mr. Cox even arbitrarily moved the wells closer together in order to generate his desired results!
2. Whiting Witness Robinson. Mr. Robinson established that if the true permeabilities of the coal and the PC are applied, the results are the opposite of Mr. Cox's conclusions. Mr. Robinson showed the flaws in the permeability assumptions by Mr. Cox. Then, he simply compared the data corresponding to shut-ins of the Whiting wells. The data showed that during each shut-in the Chaco 4 and 5 are virtually monitor wells for the coal, rising and falling with the Gallegos Federal well pressures. Pendragon's own Cox Exhibits C-10 and C-11 showed this obvious pressure tracking during the August 1998 week-long shut-in of the coal wells. Whiting also showed that the Chaco 4 logged off in April 1998



following the Whiting 6 # 2 coal well going on compression. When the compression took effect, the 6 # 2 drew down the pressure in the coal and, since the cleat system makes the coal very permeable, the coal zone pressure at the Chaco 4 wellbore was quickly reduced to a flowing pressure below the line pressure.

**G. Water Analysis from the Chaco Wells Since Stimulation Confirms the Production of Coal Seam Gas**

Ironically, Pendragon relies on its own malfeasance in water reporting as evidence in its favor. One of the spins Pendragon put on the evidence in this case has been to cite the supposed lack of water production from its Chaco wells as evidence that the wells were not in communication with the coal formations. When Pendragon recorded water production it was significant. Indeed, for a period in March, 1998, records demonstrated that Pendragon was hauling 80 barrels of water away from its Chaco 1 well site every two or three days. Given that the water was being dumped into unlined pits in porous soil, substantially larger volumes of water must have been produced by the Chaco wells during that period.

More importantly, the evidence demonstrates that the Pendragon Chaco wells produced significant volumes of water since the restimulations in 1995. Mickey O'Hare and Dennis Reimers testified that they observed substantial water production from the Chaco wells into the unlined earthen pits as early as 1995. Pictures submitted by Whiting at the hearing, Exhibits AMO-8, demonstrate that the unlined pits have, at various times in their existence, been completely full. Pendragon magically began reporting water production from the Chaco wells in March, 1998 following a site inspection by Ernie Busch of the Division's Aztec office. Pendragon offered no explanation, because there is no valid scientific or engineering explanation, to account for the Chaco wells producing no water for three years, then mysteriously starting to make significant volumes of water in 1998 corresponding to the time of the Division's field inspection.

The most damning evidence presented at the hearing on this issue came from Pendragon's agent, Paul Thompson. Mr. Thompson admitted during his rebuttal testimony that Pendragon utilized a daily progress report for the Chaco wells which did not include a column for reporting water production. Mr. Thompson conceded that the Chaco wells produced substantially larger volumes of water than was reported on the daily progress reports. For periods when the wells were recorded as having sporadically produced water, given that they were operating and producing gas on a daily basis, Mr. Thompson admitted that the wells would have produced equal volumes of water on all days during the period. For the month of March, 1995 for the Chaco 1, Mr. Thompson estimated that the actual water production for that well was some 10 to 20 times greater than the reported water production. Even when Mr. Thompson or his pumpers noted water production on their daily reports, Pendragon still failed to report even those sporadic observations to the Division as required on the C-115 forms. Pendragon did not even report water production on coal seam gas wells it operated in the area, notwithstanding that those wells produced substantial volumes of water.

The fact of the matter is Pendragon destroyed evidence, both by depositing produced water into unlined pits, where much of that water percolated into the loamy soil or evaporated, and by failing to report water production from the Chaco wells until it realized that the Aztec office staff had visual confirmation of water production. Under the doctrine of "spoliation" of evidence, all inferences regarding water production from the Chaco wells must be decided against Pendragon and in favor of Whiting in this proceeding.<sup>9</sup>

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<sup>9</sup> Coleman v. Eddy Potash, Inc., 120 N.M. 645, 905 P.2d 185 (1995) (recognizing tort of intentional spoliation or destruction of evidence); Aranburu v. The Boeing Co., 112 F.3d 1398, 1407 (10<sup>th</sup> Cir. 1997) (bad faith destruction of document relevant to proof of issue generally gives rise to inference that evidence would be unfavorable to party responsible for destruction); Miller v. Montgomery County, 494 A.2d 761, 768 (Md. Ct. Spec. App. 1985) (the appropriate remedy for spoliation of evidence by party is evidentiary presumption that evidence is unfavorable).

#### IV.

#### **LOG DATA AND GEOLOGIC EVIDENCE CONFIRM THE BOUNDARY BETWEEN THE FRUITLAND FORMATION AND THE PICTURED CLIFFS FORMATION AT THE TOP OF THE MASSIVE SANDSTONE**

In 1988 when the Division created the Basin-Fruitland Coal Gas Pool, it recognized the Amoco Production Company Schneider Gas Com "B" Well No. 1 as the marker well for the pool. Order R-8768 found that the Fruitland coal gas pool was comprised of "all coal seams" (emphasis added) within the vertical limits of the stratigraphic interval in the Schneider well from a depth of approximately 2450 feet to 2880 feet as shown on the well's Gamma Ray/Bulk Density log. That log demonstrates two typical coal seams, one thick seam separated by a silt and sandstone interval from a lower coalbed stringer that overlies a massive sandstone formation. Exhibit WA-4. Since 1988, the accepted boundary between the Fruitland formation and the Pictured Cliffs formation has been identified at the top of the massive sandstone underlying the smaller continuous coal stringer.

Whiting introduced evidence at the hearing based upon log data from the Chaco wells and Whiting's coal seam wells in the area in question that demonstrated a remarkable similarity with the lithology of the Schneider well. Exhibit WA-3 shows a thick coal which is continuous in the area, designated on the Exhibit as the B Coal. The cross-section also demonstrates a continuous coal stringer, designated by Whiting as the basal coal, which underlies the B Coal and sits above the massive Pictured Cliffs sandstone Unit 1. Between the Basal and B Coal stringers is a small sandstone layer, similar to the sandstone layer which is seen between the two lower Fruitland coalbeds in the Schneider B Com log. That sandstone stringer is a "Fruitland Sandstone" and is not part of the Pictured Cliffs formation.

Since 1971, governmental and independent research geologists who have no reason for bias have picked the boundary between the Fruitland formation and the Pictured Cliffs sandstone formation "at the top of the massive sandstone below the lowermost coal of the

Fruitland except in those areas where the Fruitland and the Pictured Cliffs intertongue." Pendragon Exhibit N-44. An identical pick was made in the 1988 hearing in Case No. 9420. Tr. 39. In reopened Case No. 9420 before Examiner Catanach in February, 1991, experts uniformly recognized the existence of a lower basal coal stringer above the massive Pictured Cliffs sandstone.

Whiting's witness, Walter Ayers, is the dean of San Juan Basin geologists. Dr. Ayers testified the use of the massive sandstone as the boundary marker for the two formations is geologically accepted, and also offered a means to avoid the need to redefine the boundary in every well in the area, since there is a consistently recognizable, massive marine Pictured Cliffs sandstone in the logs. Dr. Ayers is an independent consultant with no financial interest in the dispute who has studied coal and sandstone deposition in the San Juan Basin for many years, and has published two dozen articles on the subject prior to this dispute. Even Dr. Whitehead admitted that the base of the Fruitland formation is below the last coal stringer where the PC intertongues, making the base of the Fruitland formation substantially lower than the self-serving geological pick by Pendragon's president.

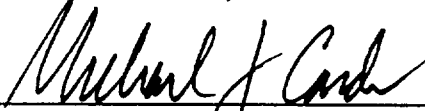
It is undisputed that Pendragon stimulated and produces from perforations in the Chaco wells Nos. 1, 2, 4 and 5 in the sandstone formation which lies between the two coal seams. These perms are in a zone which is above the base of the Fruitland formation. No witness characterized the Fruitland sandstone interval at issue here as massive. Dr. Ayers established that this sandstone interval is not a marine deposit, but rather is a coastal plain, non-marine deposit. Pendragon's president-geologist conceded that the sandstone interval was not a marine deposition. In fact, Mr. Nicol opined that the subject sandstone was deposited in a lagoon, which is not a marine setting.

Pendragon's president-geologist contended, without offering any supporting core data or sand analysis, that the sandstone interval between the B Coal and the Basal Coal was a marine deposit. This contention is unsupported by evidence from any other source or literature. Mr.

Since Pendragon has already produced more than available reserves from the PC along with large volumes of coal gas through the Chaco wells following restimulation, it would be unfair and violative of Whiting's correlative rights to allow Pendragon to continue to operate these wells. Every Mcf of coal gas that is produced through the Chaco wells deprives Whiting of not only its reserves and sales revenues, but valuable I.R.C. Section 29 tax credits as well. Shutting in the Chaco wells will not cause waste, since the Pictured Cliffs gas has already been produced and the coal seam gas reserves will ultimately be produced by Whiting through its coal seam gas wells.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By 

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Attorneys for Whiting

**CERTIFICATE OF SERVICE**

I hereby certify that I have caused a true and correct copy of the foregoing to be mailed on this 29th day of November, 1999 to the following:

J. Scott Hall, Esq.  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, NM 87501-1986

  
MICHAEL J. CONDON

for: Lori  
Janice  
Lynn

[Redacted content]

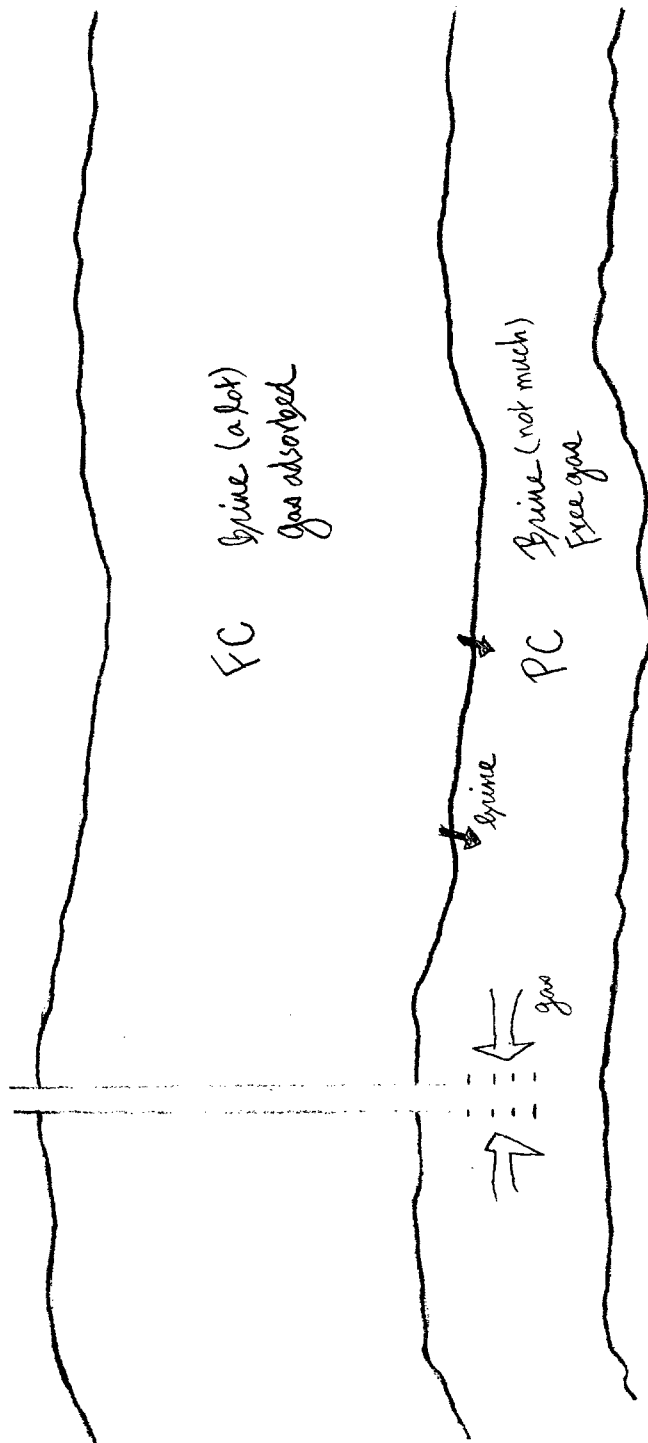
Time

ILLEGIBLE

Time 0

- Bayless

Chaco



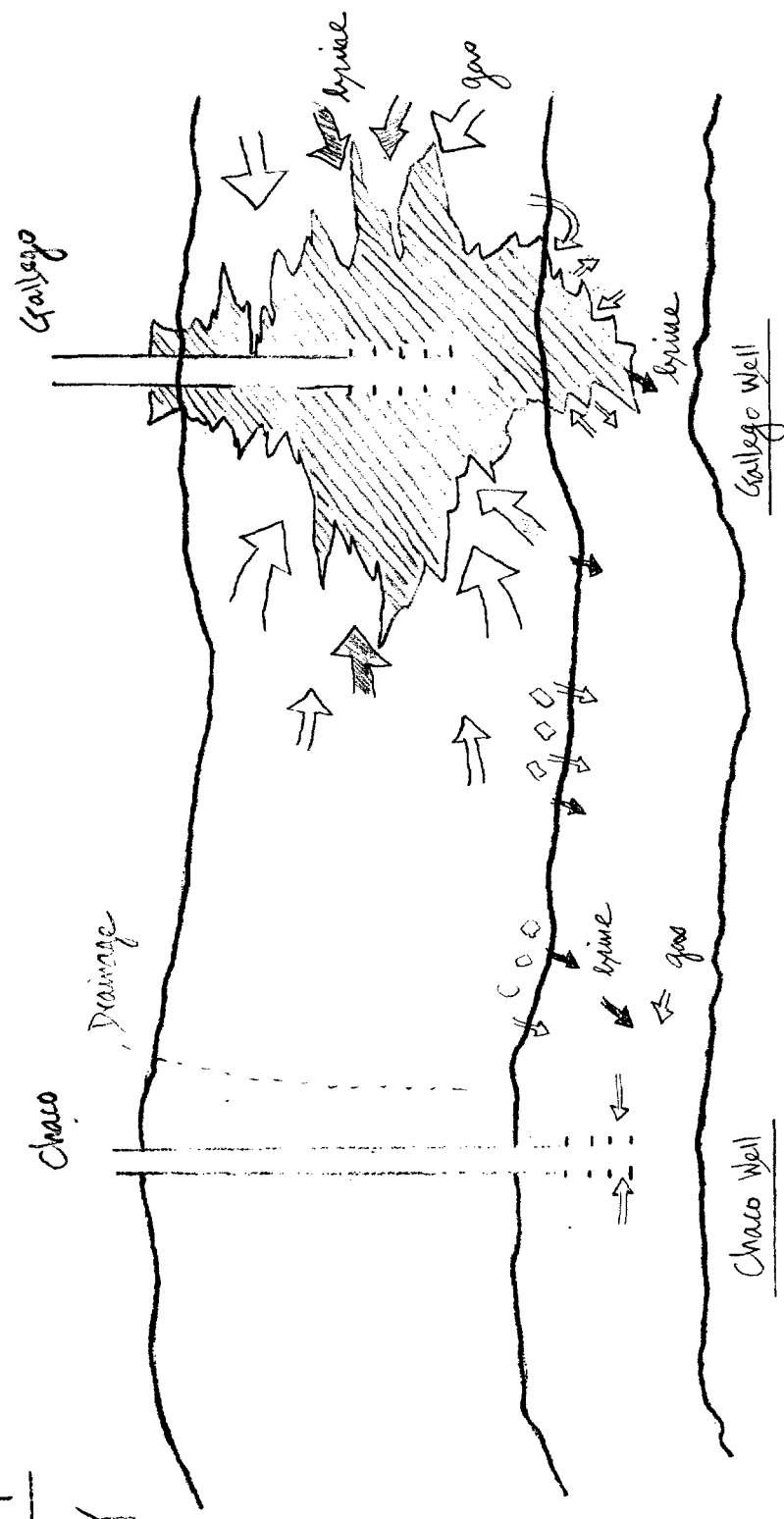
- Comments:
- Gas production of the chaco well is mainly from PC.
  - Pressure of PC declines, PC is the pressure sink in
  - Not much gas movement from FC to PC, since gas is still in her adsorption state
  - Not much water movement from FC to PC.

**ILLEGIBLE**



Time 1

- Whiting



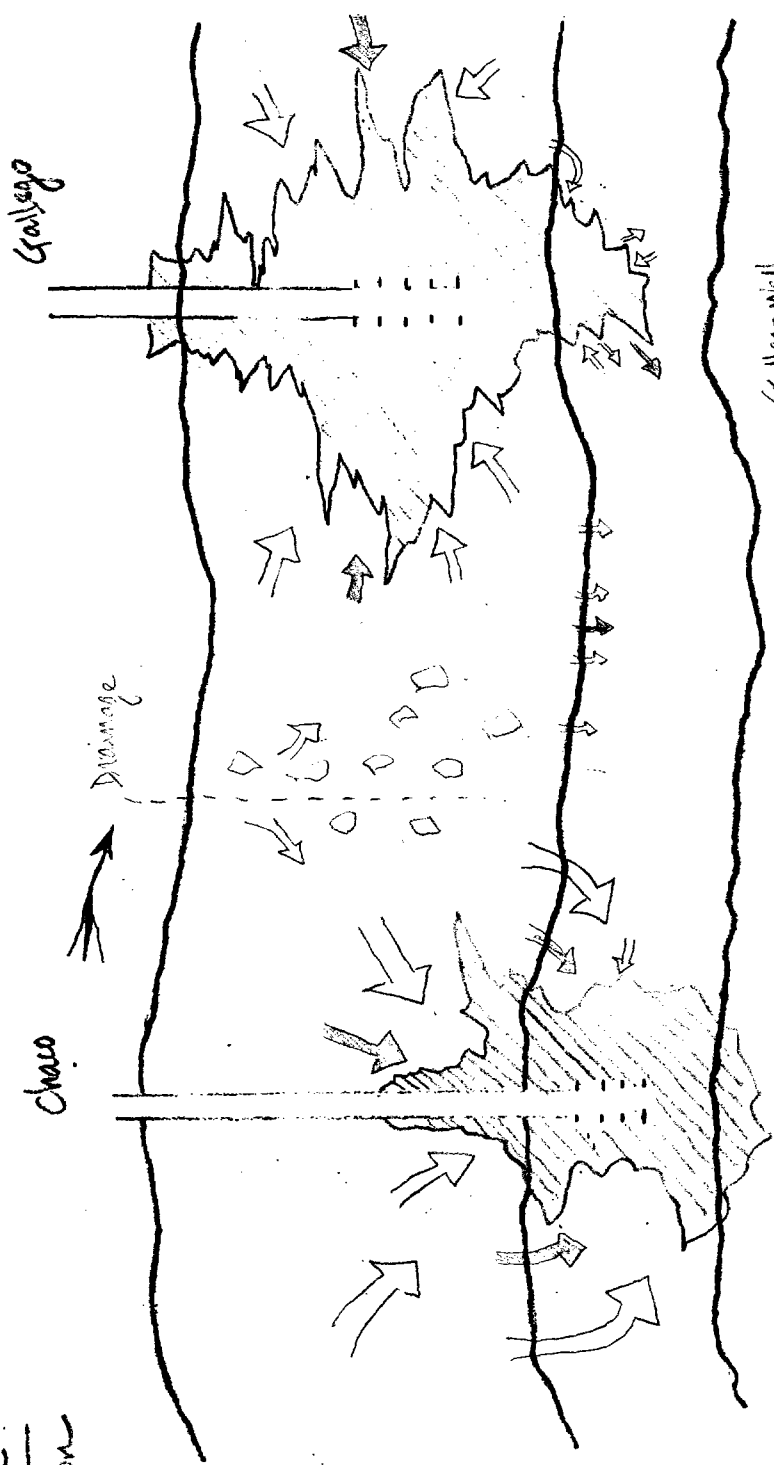
Comments:

- During the de-watering, gas in FC is mobilized, some of them, going into FC.
- FC's pressure increases,
- FC's water comes and reduces the permeability; therefore, no significant production increase.

- Multiple fractures in near wellbore region, very near wellbore.
- Single fracture into PC
- During the de-watering, gas in FC is mobilized. Majority of the gas and water go into the pressure sink, the Gallego well.

**ILLEGIBLE**

Time 2:  
Pardragon



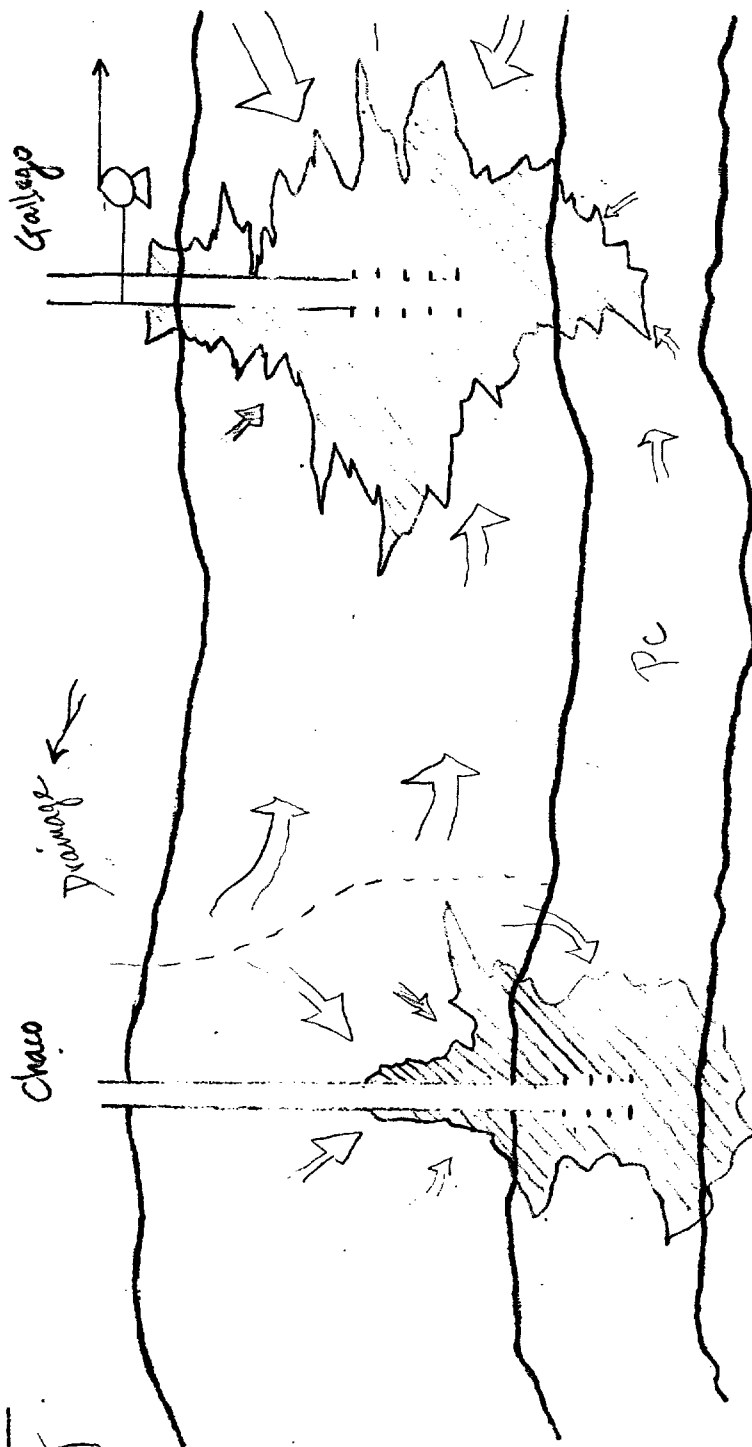
Gallego well

Chaco well

- Comments:
- After hydraulic fracturing, water and gas from FC come in Chaco well, not PC.
  - Chaco well exhibits FC's characteristics.
  - PC's average pressure is increasing since no water barriers between FC and PC any more.
  - Although, the drainage is reduced - no significant loss of production initially.
  - Declining curve is sharpened.

ILLEGIBLE

Time 3  
• Whiting



Chaco well

Comments:

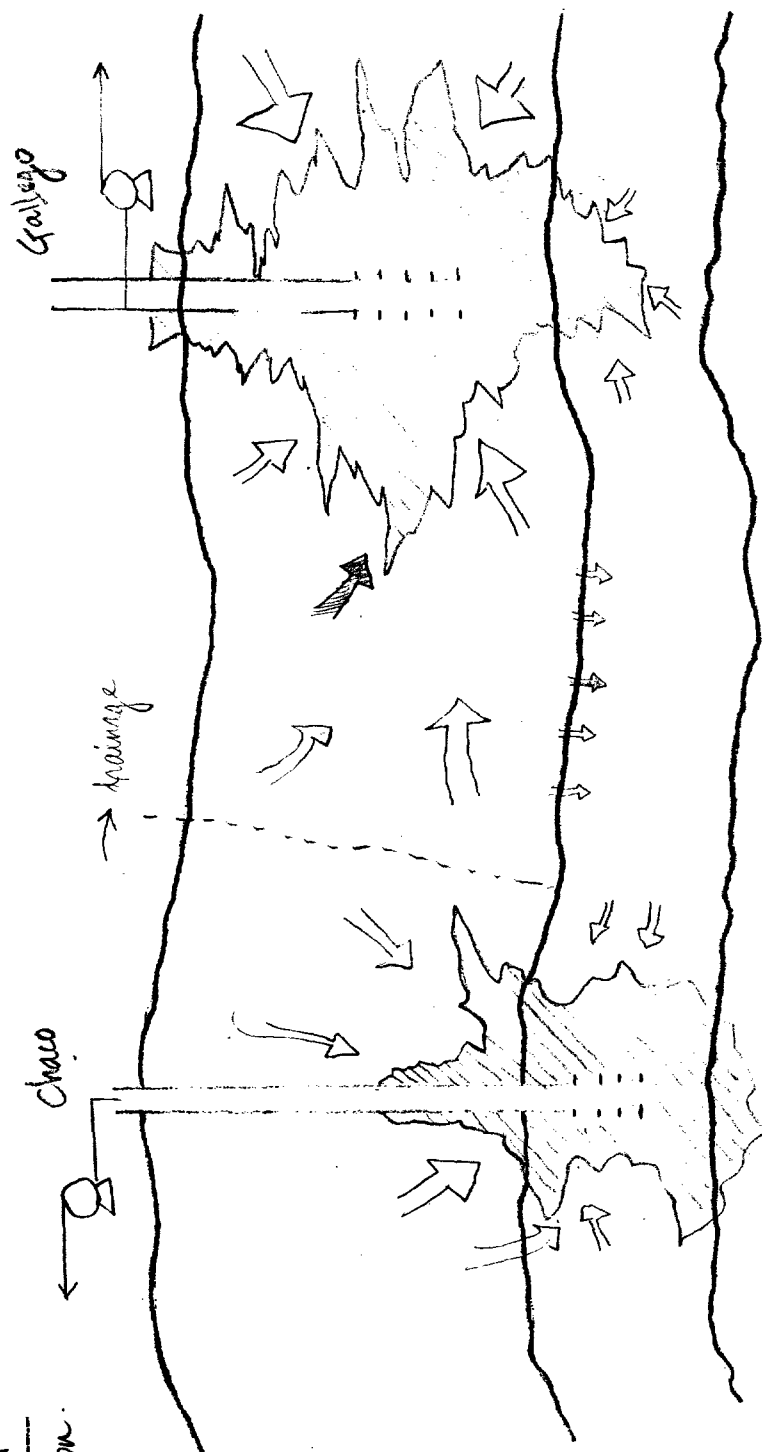
- Drainage area is reduced.
- Production decreases

Gallego

- Drainage area is increased.
- Production increases, and some production from PC
- PC's pressure is declining

ILLEGIBLE

Time A  
Penchayon



Gallego Well

- Produce water & gas from both zones.

Chaco Well

- Comments:
- Recovers some drainage area.
  - Some immediate increase of production.
  - Produce water & gas from both zones.

**ILLEGIBLE**

STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION, INC.  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO

OCD CASE NO. 11996

OIL CONSERVATION DIV.  
99 AUG 10 PM 3:15

STIPULATION OF FACTS

Applicants ("Pendragon") and opponents ("Whiting") hereby submit the following as true facts to which the parties have stipulated to be considered as evidence in the hearing scheduled before the New Mexico Oil Conservation Commission on August 12 and 13, and 19 and 20, 1999 in this proceeding.

1. Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

2. The Applicants pursuant to Rule 3 of the "Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool," as promulgated by Division Order No. R-8768, as amended, seek an order confirming that the following described wells completed within the vertical limits of the WAW-Fruitland Sand-Pictured Cliffs Pool and the Basin-Fruitland Coal (Gas) Pool are producing from the appropriate common source of supply and providing further relief as the Commission deems necessary: (i) the Pendragon Energy Partners, Inc. operated Chaco Well Nos. 1, 2-R, 4 and 5 and Chaco Ltd. Well Nos. 1-J and 2-J located in Sections 7 and 18, Township 26 North, Range 12 West and Section 1, Township 26 North, Range 13 West, and (ii) the Whiting Petroleum Corporation operated Gallegos Federal "26-12-6" Well No. 2, Gallegos Federal "26-12-

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7" Well No. 1, Gallegos Federal "26-13-1" Well Nos. 1 and 2, and Gallegos Federal "26-13-12" Well No. 1 located in Sections 6 and 7, Township 26 North, Range 12 West and Sections 1 and 12, Township 26 North Range 13 West.

3. Pendragon Energy Partners, Inc., Pendragon Resources, L.P. and Edwards Energy Corporation, (together, "Pendragon"), are the interest owners in the following wells operated by Pendragon Energy Partners:

WAW Fruitland Sand-Pictured Cliffs Gas Pool Producing Wells

<u>Operator</u>	<u>Well Name &amp; API Number</u>	<u>Well Location</u>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 2R (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13 W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

These wells are collectively referred to as the "Chaco wells."

4. Pendragon acquired its interests in the Chaco wells by virtue of a Transfer of Operating Rights from Bayless, Merrion, et al. to J.K. Edwards and Associates Inc. dated February 1, 1995. That transfer described the interest Pendragon acquired in the Chaco wells as

"Limited from the base of the Fruitland coal formation to the base of the Pictured Cliffs formation."

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5. Whiting Pendragon Corporation and Maralex Resources, Inc. (collectively "Whiting") are operators and interest owners of the following Basin-Fruitland Coal Gas Pool wells:

Basin-Fruitland Coal Gas Pool Producing Wells

<u>Operator</u>	<u>Well Name &amp; API Number</u>	<u>Well Location</u>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13 W

These wells are collectively referred to as the "Gallegos Federal wells."

6. Whiting acquired its interests in the Gallegos Federal wells by a Transfer of Operating Rights from Bayless, Merrion, et al. to Maralex Resources, Inc. dated December 1, 1993. The Transfer provides that Maralex received

"Operating Rights from the surface of the earth to the base of the Fruitland (Coal Gas) Formation, subject to the terms and provisions of that certain Farmout Agreement, dated December 7, 1992, by and between Merrion Oil & Gas, et al., Robert L. Bayless, Pitco Production Company and Maralex Resources, Inc."

7. All eleven wells that are the subject of this application are located within an area (hereinafter referred to as the "Subject Area") that comprises:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM

Section 6: W/2  
Section 7: W/2  
Section 18: NW/4

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TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 1: All  
Section 12: N/2

8. The Subject Area is located within the horizontal boundaries of the Basin-Fruitland Coal Gas Pool created by Division Order No. R-8768 dated October 17, 1988. The vertical limits of this pool, as defined by Ordering Paragraph (1) of Order No. R-8768, are as follows:

“all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2,450 feet to 2,880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company’s Schneider Gas Com “B” Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10, West, NMPM, San Juan County, New Mexico.”

9. Order No. R-8768 further established Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool including provisions for standard 320-acre gas spacing and proration units with wells to be located no closer than 790 feet from the outer boundary of the proration unit nor closer than 130 feet from any quarter section line nor closer than 10 feet from any quarter-quarter section line or subdivision inner boundary. In addition, wells are to be located in the NE/4 or SW/4 of a single governmental section.

10. The Subject Area is also located within the horizontal boundaries of the WAW Fruitland Pictured Cliffs Gas Pool. The vertical limits of this pool comprise all of the Pictured Cliffs formation (Order No. R-4260 dated February 22, 1972) and the sandstone intervals of the Fruitland formation (Order No. R-8769 dated October 17, 1988 and Nunc Pro Tunc Order R-8769-A dated April 11, 1989).

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11. A brief history of the Chaco wells is as follows:

- a) the Chaco Well No. 1 was drilled by Merrion and Bayless in February, 1977. The well was perforated and completed from a depth of 1,113' to 1,139'. The well initially tested in this interval at a rate of approximately 342 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, J.K. Edwards & Associates, Inc. (Edwards) became operator of the well. In January, 1995, the well was fracture stimulated in the perforated intervals. In January, 1996, Pendragon became operator of the well;
- b) the Chaco Well No. 2R was drilled by Merrion and Bayless in October, 1979. The well was perforated and completed from a depth of 1,132' to 1,142'. The well initially tested in this interval at a rate of approximately 150 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was fracture stimulated in the perforated intervals. In January, 1996, Pendragon became operator of the well;
- c) the Chaco Well No. 4 was drilled by Merrion and Bayless in April, 1977. The well was perforated and completed from a depth of 1,163' to 1,189'. The well was initially tested in this interval at a rate of approximately 480 MCFGD, 0 BOPD, and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7½ percent HCl. In May, 1995, the well was re-perforated in the interval from 1,163' to 1,189' and fracture stimulated in this interval. In January, 1996, Pendragon became operator of the well;
- d) the Chaco Well No. 5 was drilled by Merrion and Bayless in April, 1977. The well was perforated and completed from a depth of 1,165' to 1,192'. The well initially tested in this interval at a rate of approximately 1029 MCFGD, 0 BOPD and 0 BWPD. In May, 1979 the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January, 1995, the well was re-perforated in the interval from 1,165' to 1,192 feet and was fracture stimulated in this interval. In January, 1996, Pendragon became operator of the well;
- e) the Chaco Limited Well No. 1J was drilled by Merrion and Bayless in April, 1982. The well was perforated and completed from a depth of 1,200' to 1,209'. The well initially

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tested in this interval at a rate of approximately 10 MCFGD, 0 BOPD and a trace of water. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7½ percent HCl. In January, 1996, Pendragon became operator of the well.

- f) the Chaco Limited Well No. 2J was drilled by Merrion and Bayless in September 1979 to test the Pictured Cliffs formation. The well was perforated and completed ~~in the~~ <sup>typo</sup> Fruitland Coal from a depth of 1,186' to 1,202'. The well was initially tested in this interval at a rate of approximately 208 MCFGD, 0 BOPD and 4 BWPD. In October 1979, the well was fracture stimulated in this interval. In January 1995, Edwards became operator of the well. In January 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.

12. A brief history of the Gallegos Federal wells is described as follows:

- a) the Gallegos Federal 26-12-6 No. 2 was drilled by Maralex in December, 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal from a depth of 1,138' to 1,157'. The well was subsequently fracture stimulated in this interval. In September, 1995, Whiting became operator of the well;
- b) the Gallegos Federal 26-12-7 No. 1 was drilled by Maralex in December, 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal from a depth of 1,131' to 1,150'. The well was subsequently fracture stimulated in this interval. In September, 1995, Whiting became operator of the well;
- c) the Gallegos Federal 26-13-1 No. 1 was drilled by Maralex in December, 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal from a depth of 1,158' to 1,177'. The well was subsequently fracture stimulated in this interval. In September, 1995, Whiting became operator of the well;
- d) the Gallegos Federal 26-13-1 No. 2 was drilled by Maralex in December, 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal from a depth of 1,047' to 1,208'. The well was subsequently fracture stimulated in this interval. In September, 1995, Whiting became operator of the well; and

- e) the Gallegos Federal 26-13-12 No. 1 was drilled by Maralex in December, 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal from a depth of 1,178' to 1,197'. The well was subsequently fracture stimulated in this interval. In September, 1995, Whiting became operator of the well.

13. The Pictured Cliffs formation was deposited in a marine environment. The Fruitland formation was deposited in a non-marine or inland terrestrial environment (i.e. fluvial channels, deltaic distributary channels, etc.)

MILLER, STRATVERT &  
& TORGERSON, P.A.

By J. Scott Hall  
J. Scott Hall  
For Applicant Pendragon and Edwards

GALLEGOS LAW FIRM, P.C.

By J.E. Gallegos  
J.E. Gallegos  
For Opponents Whiting and Maralex

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On the damage theory, Pendragon offered testimony of its expert witnesses who testified that Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered, and rejected, this claim. Exhibit A, ¶ 40.

Substantial evidence existed for this conclusion. For example, Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce

///  
...

the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can but it. Number one, that makes almost all of Mr. Cox's calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

RP at 1315.

The bottom line is that the Commission carefully weighed the evidence, exercised its judgment, and found in favor of Whiting's position. That it did not find in favor of *Pendragon* Whiting is not a matter of which "the Court should be gravely concerned." *Appellant's Statement of Appellate Issues*, at \_\_\_\_\_. Pendragon has not pointed to any evidence that the Commission did not specifically consider or point out why the evidence that was before the Commission should not be considered. Thus, instead of being concerned, the Court should apply the standard of review, and apply the approach employed by the Supreme Court in *Fasken v. Oil Conservation Commission*, 87 N.M. 292, 532 P.2d 588 (1975), and give due deference to the Commission's decision:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not bolstered by the expertise of the Commission to which we give special weight and credence ...

*Fasken*, 87 N.M. at ◇.

#### **IV. STATEMENT OF RELIEF SOUGHT**

The Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

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#### **Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANTS' STATEMENT OF APPELLATE ISSUES** ✓

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. *See* Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.
2. Whether Order R-1133-A is within the scope of authority of the Commission.
3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.
4. Whether Order R-11133-A is otherwise in accordance with law.

## II. SUMMARY OF PROCEEDINGS

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias' order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias' Order prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the



appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which require that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337.

Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was ~~re~~heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply," but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

it seems  
contradictory  
to say  
"reheard...  
de novo."  
Why not  
just  
"heard"?

### III. ARGUMENT

#### A. Introduction.

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time and, with time and pressure, formed hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989). When a pool of natural gas forms, it is differentiated from other pools by the specific

<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules for the Basin-Fruitland Coal Gas Pool. RP at 5212-5216.

sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns from the surface of the earth to the base of the Fruitland coal. RP at 4897, ¶ 6 (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at 4896. Pendragon's ownership permits it to produce natural gas trapped within this formation. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 1991. RP at 2893, 4900-4901. Pendragon purchased its wells in December 1994 at auction from previous operators; the wells had been drilled and produced two decades earlier. RP at 2894, 3249, 4899-4900.

The parties each sought to prove to the Commission that the other party was producing <sup>its ?</sup> ~~the other's~~ gas. Two general theories were presented. The first theory was geological in nature; the parties claimed that wells were "perforated" in the wrong geologic formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 103 at 10. The perforations are holes blown through the casing with explosives. *Id.* When a well is producing from a formation, holes have been blown through the casing into that formation. *Id.* Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are perforated somewhat lower in the earth, in the Pictured Cliffs sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that

the perforations in each party's wells were properly placed; that issue is not before the Court.

The second general theory presented to the Commission concerned completion practices and the possibility that such practices created fractures that extended from one formation to another. This issue, which the Commission referred to as "the Engineering Issue," is the issue before the Court in this appeal. Whiting claimed that a completion practice called "hydraulic fracturing" caused fractures in the rocks from Pendragon's wells into the Fruitland coal and caused an escape of gas into Pendragon's wells. Whiting presented evidence that Pendragon's hydraulic fracturing created cracks and fissures upward into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. *See* RP at 4954 (Whiting's Closing Statement Memorandum). Pendragon disputed this claim and claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at 5105 (Closing Statement of Pendragon).

Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly increases the area from which a natural gas well produces. 1 Williams & Meyers, § 103 at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901.

## **B. The Commission's Order**

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ 33. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped.

¶ 34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation gradually increased so that it was above the pressure in the Pictured Cliffs, setting the stage for gas migration to Pendragon's wells. ¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation for this was hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four Chaco wells (Order, ¶ 5).

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<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page 17, below.

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented, which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, these findings and conclusions are supported by substantial evidence in the record of the proceedings, were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." *See* NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 907 P.2d 182 (1995). *See also Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary,

unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87 N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds 1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, ~~each party~~ Whiting and Pendragon, were *both* represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing is more than sufficient for a reasonable mind might to accept as adequate to support the conclusions reached by the Commission. *Fugere, supra.*

##### **a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced sudden, unexpected and unprecedented production increases in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental

timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir.

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899-4900. Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at 4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. *See also* RP at 2893-98 (testimony of Alexis M. O'Hare).

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2911, 2949-52, 3253. Exhibits 7 through 10 to the testimony of James T. Brown dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270. Mr. Brown testified that from their peak production in late 1978, the Chaco wells declined to a non-economic, depleted state by 1986. He testified: "There is absolutely no scientific explanation for the reservoir to some way 'recharge' so that in 1995 the rates

<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.



and pressures of these Chaco wells *significantly exceeded initial, virgin gas flow and pressure.*" RP at 3254. *See also* RP at 856-57, 2898, 3267-76, 3276-3302

Evidence was also presented that wells like Chaco Nos. 1, 2-R, 4 and 5 exhibited a characteristic decline curve from first production, and the production of the Chaco wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. Bradley M. Robinson testified that the average flow rate of the Pendragon wells increased 500-fold after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000 Mcf/month.* RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in production "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of . . . 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, Mr. O'Hare testified that the production volumes seen in the Chaco wells after 1995 exceeded production rates when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production

would it be helpful to h.s. Robinson as a per. engineer or whatever he is?

patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes under virgin reservoir conditions when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. *See also* RP at 2911 and 3253 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that other wells were not hydraulically fractured<sup>g</sup> and did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas. ✓

Mr. O'Hare testified that comparing production from Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured helps illustrate the uncharacteristic behavior of Pendragon's newly stimulated wells.

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon*

*did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic increase whenever the adjoining Whiting Fruitland ~~Coal~~ <sup>u</sup> wells were shut down, evidence that the two sets of wells and ✓ formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Those plant down times resulted in the Gallegos Federal wells being shut-in. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomena reflects effective communication between the Chaco wells and the Fruitland coal exists.

RP at 3253, lines 15-23.

Pendragon's expert <sup>what?</sup> David O. Cox also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. *See* RP at 651-652.

Mr. Brown testified that Whiting's production *increased* after Pendragon's wells were shut down. *See* R.P. at 3254, lines 9-18. *See also* RP at 2909, ll. 4-10. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. *See* RP at 1085 ll. 24-25, 1086, ll. 1-5.

### **c. The Connection Between Pendragon's Fracturing and Communication**

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect.

Testimony and evidence showed that great care is taken when designing hydraulic fracturing work so as to avoid extending fractures into other formations. *See e.g.* RP at 2895-2896, 319 (fracture treatments designed to keep fractures within zone). Even so, fracturing can create communication between zones as occurred here; Mr. Conway, Pendragon's fracturing expert, even assumed for purposes of his work that the Pictured Cliffs and the Fruitland coal communicate. RP at 324.

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. *See* RP at 305-402 (testimony of Michael W. Conway), 1255-1416 (testimony of Bradley M. Robinson), 3393-3409 (same). Nevertheless, substantial evidence supports the Commission's finding that Pendragon fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained

for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had "likely" extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

Despite the care taken by Whiting not to fracture into the Pictured Cliffs, the Commission found it had. However, the Commission also found that Whiting had not produced any significant amounts of Pictured Cliffs gas. Substantial evidence exists for the Commission's conclusions in this regard. See RP at 861-862, 1080, 2908-2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's fracturing --- suggests little if any gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs).

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**

Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

*The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. After the frac, the pressures in the Chaco wells are about equal to the pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.*

RP at 1275, ll. 1-9 (emphasis added). Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

*this is confusing to me - it may probably is - me*

*Sometimes "c" is cap sometimes not*

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. *See also* 3276-3302. Mr. Brown testified further on cross-examination the Btu values of gas produced by Pendragon's wells after the 1995 stimulation was Fruitland gas, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. *See also* RP at 3277-3280 (Exhibits of Mr. Brown depicting Btu decline).

Even Roland Blauer, Pendragon's expert <sup>in what?</sup> witness who testified concerning gas content, agreed on cross-examination that the composition of the gas from the two sources was "similar":

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

*after  
communication  
was established*

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion. RP at 910, 1057. Mr. O'Hare described the typical Pictured Cliffs production pattern:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines 4-7.

Evidence was also presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Once water is removed, gas will leave the coal and begin to collect:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-4. The gas forms because natural gas (methane) is embedded in the pores of coal; the methane will leave the pores and become free gas only when the pressure in the surrounding coal is reduced. RP at 1082-83. This process is called "desorption." The testimony and evidence indicated that once the methane is released from the pores of the coal, it gradually accumulates, and as it does, the pressure increases. *Id.* If no production occurs, the gas pressure gradually increases until it reaches a point

beyond which no more methane can desorb from the coal. *Id.* The pressure stabilizes at that point. *Id.* Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, and especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

These conclusions are supported by evidence presented to the Commission of water production from Pendragon's wells. If Pendragon's wells were producing gas from the Fruitland Coal, logic dictates that the wells must produce some water. RP at 862-863, 2896-2897. The wells might not produce as much water as coal wells do initially, but evidence was presented that Whiting had dewatered the Fruitland coal for several years



before Pendragon fractured into the high pressure gas. RP at 2896-2898. Evidence was presented that the Chaco wells produced water after the 1995 fracture stimulation. RP at 2899, 2911-2915, 2928-2948.

**f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive and production had followed typical decline curves to the point that remaining reserves were minimal, and the pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 1993 showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-12. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon had already recovered "in excess of" the recoverable gas from its wells:

Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

R.P. at 2921, ll. 22-25. Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55%

percent of initial formation pressure, and Pictured Cliffs wells can only recover 60-70 percent of initial pressure. R.P. at 856-57. *See also* RP at 1099-1101.

Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells had already produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.* Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He

testified that it was not economically feasible to produce the remaining reserves in Pendragon's wells:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" (or separated from the pipeline) indicated that the wells reached a "depleted state by 1986 and remained in that state." RP at 3252-3253. *See also* RP at 855-67 and 2902-05 (testimony of Alexis M. O'Hare); RP at 1079-80 and 3252-57 (testimony of Mr. Brown).

Mr. Brown also testified that a depleted reservoir cannot suddenly "recharge" as suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9.

Finally, Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale in 1993 or 1994. RP at 855. He declined to purchase the wells after his analysis showed him the wells were uneconomic. RP at 866-67, 1157-58, 2903-2904, 3076-96.

**g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra*.

**2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata

•..." NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require ✓ ✓

wells to be drilled, operated and produced in such manner as to prevent injury to

neighboring leases or properties..." NMSA 1978, § 70-2-12(B)(7). And, the ✓ ✓

Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool,..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad ✓ ✓

authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, and to do whatever may be reasonably necessary to carry out the purpose of

*[the Oil and Gas Act], whether or not indicated or specified in any section hereof."*

NMSA 1978, § 70-2-11(A)(emphasis added).

Factual findings of the Commission indicated that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the former to the latter. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into other strata..." NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful. ✓

Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties •..." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool..." NMSA 1978, § 70-2-17(A). ✓

Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done. Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench" the lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate (gas bubbles, gas highways and gas compartments), and the BTU findings are unsupported by substantial evidence. Pendragon also claims that the Commission disregarded evidence that Pendragon presented. However, the Commission considered each and every one of these contentions and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to support the findings and conclusions reached by the Commission. *Fugere, supra.*

For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." The Commission specifically considered the "third bench" claim and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For

example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. *If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.*

✓  
did you  
mean  
for these  
to be  
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italics?  
good

RP at 1423-1424 (~~emphasis added~~). See also RP at 2904-05 (no reports of gas production from a "third bench" known to Mr. O'Hare), 3402 (lower Pictured Cliffs "mainly water saturated").

In a contradictory argument, Pendragon presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." Pendragon offered testimony of expert witnesses who testified that

Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can buy it. Number one, that makes almost all of Mr. Cox's

Can or can't? 26



calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

RP at 1315. *See also* RP at 903-904 (there may have been a "small component of damage" present but "... it was [not] significant enough to triple the reserve recovery), 942 (removal of damage might improve flows but cannot increase the amount of gas in the reservoir), 1155-56 (no reports of damage in well files), 1273 (type of damage alleged "cannot happen in this reservoir"), 2904 (skin damage cannot "recharge a reservoir").

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See* pages 19-21 (depletion), 9-13 and 17-19 (communication), 15-16 (Btu), above. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See* pages 9-22, above. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra*. And, Pendragon's many alternative theories for what happened in the San Juan County wells do not have to be blindly accepted by the Commission, or the Court:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not

bolstered by the expertise of the Commission to which we give special weight and credence ...



*Fasken v. Oil Conservation Commission*, 87 N.M. 292, 293, 532 P.2d 588 (1975). This case is no different.

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## **2. Pendragon's "Legal Arguments"**

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth the substance of *all* evidence bearing on the proposition.); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (" ... [I]t is true that our admonitions against

one-sided statements of the facts probably pertain most often to briefs challenging the sufficiency of the evidence..."). Such arguments also improperly invite the Court to reweigh the evidence presented to the Commission. *Grace, supra.*

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Statement of the Issues*, at 8. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief," nor does Pendragon cite authority for this proposition. The argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply..." *Appellant's Statement of the Issues*, page 8. However, as seen on pages 9-22, above, the Commission *did* determine this question, adversely to Pendragon.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, and found that Fruitland coal gas had escaped into the Pictured Cliffs formation through

Pendragon's hydraulic fractures --- it ordered Pendragon's wells shut down to prevent further communication.

A similar substantial evidence argument masquerading as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] illegally produced ... from Whiting's Pictured Cliffs Coal wells..." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. *See* pages 19-21, above. Substantial evidence supports this finding. *Id.* Therefore, the Commission *did* determine how much Pictured Cliffs gas was "illegally" produced by Whiting. The production figures and pressure data presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. *See* pages 9-12, above.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting was producing Pendragon's gas. *Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act

and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.

Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 635-36, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. "[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence."). The Commission is entitled to rely on its own expertise in these matters, <sup>Fasten, supra</sup> that is in part what the Oil Conservation Commission is for --- to resolve complicated technical questions that might be difficult for the courts to resolve.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. *See* pages 19-21, above. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's

While true,  
I wonder if  
this  
statement  
might  
offend  
a court  
in a  
haughty  
mood?

gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool..." NMSA 1978, § 70-2-17(A) (Repl. 1995). ✓

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A) *(emphasis added)*. No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas..." *Id.* ✓

Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13.

However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool*..." NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas. ✓

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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\_\_\_\_\_  
Stephen C. Ross



**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANT'S STATEMENT OF APPELLATE ISSUES**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. *See* Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.
2. Whether Order R-11133-A is within the scope of authority of the Commission.
3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.
4. Whether Order R-11133-A is otherwise in accordance with law.

## II. SUMMARY OF PROCEEDINGS

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias' order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias' Order ~~apparently~~ prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the

appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and apparently refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which require that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon apparently requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337. Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was re-heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply", but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

### III. ARGUMENT

#### A. Introduction.

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time and, with time and pressure, formed hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989). When a pool of natural gas forms, it is differentiated from other pools by the specific sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

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<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns from the surface of the earth to the base of the Fruitland coal. RP at 3249 (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at 3250. Pendragon's ownership permits it to produce natural gas trapped within this formation. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. RP at \_\_\_\_\_. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 1993. RP at 2893.

Pendragon purchased its wells at auction from previous operators in December 1994.

who which had drilled and produced the wells two decades earlier. RP at 2894, 3249.

~~Each party claiming the other's wells produce natural gas from its formation. The parties each claimed the other's wells were not properly "perforated" in the correct formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 104 at 10. The perforations are holes blown through the casing with explosives. Id. When a well is producing from a formation, holes have been blown through the casing into that formation. Id. Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are perforated somewhat lower in the earth, in the Pictured Cliffs sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that the perforations in each party's wells were properly placed; that issue is not before the Court.~~

*move or remove*  
*The parties each sought to prove to the Comm'n that the other party was producing the other's gas. Two general theories were presented. The first theory was geological in nature; and that the parties claimed that wells were "perforated" in the wrong geologic formation.*

for the Basin-Fruitland Coal Gas Pool. RP at \_\_\_\_\_.

*general theory presented to the Commission that concerned completion practices all the possibility that such practices created fractures that extended from one formation to another.*

The second issue presented by the parties to the Commission and the issue before the Court in this appeal ~~concerns the escape of natural gas from the Fruitland coal formation into Pendragon's wells.~~ *completion* Whiting claimed that a practice Pendragon engaged in called "hydraulic fracturing" *fracturing of rock which* caused the escape of gas from the Fruitland coal into Pendragon's wells. Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly *extended into the F.C. and caused an* increases the area from which a natural gas well produces. 1 Williams & Meyers, § 104 at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901. Whiting presented evidence to the Commission that Pendragon's hydraulic fracturing created cracks and fissures upwards into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. See RP at 4954 (Whiting's Closing Statement Memorandum). Pendragon disputed this claim and claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at \_\_\_\_ (Closing Statement of Pendragon).

#### **B. The Commission's Order**

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ \_\_\_\_\_. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped. ¶

34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation gradually increased so that it was above the pressure in the Pictured Cliffs, setting the stage for gas migration to Pendragon's wells. ¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas ~~that had originated~~ in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation for this was hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four Chaco wells (Order, ¶ 5).

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented,

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<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page \_\_\_\_, below.

which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, the <sup>32</sup>~~Commission's~~ findings and conclusions are supported by substantial evidence in the record of the proceedings, were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." *See* NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 907 P.2d 182 (1995). *See also Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary, unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87

N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds



1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, each party, Whiting and Pendragon, were represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing is more than sufficient for a reasonable mind might to accept as adequate to support the conclusions reached by the Commission. *Fugere, supra*.

**a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced a sudden, unexpected and unprecedented production increase<sup>3</sup> in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir:

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899. Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at

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<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. *See also* RP at 2893-98 (testimony of Alexis M. O'Hare).

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2911, 2949-52, 3253. Exhibits 7 through 10 to the testimony of James T. Brown dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270. Mr. Brown testified that from their peak production in late 1978, the Chaco wells declined to a non-economic, depleted state by 1986. He testified: "There is absolutely no scientific explanation for the reservoir to some way 'recharge' so that in 1995 the rates and pressures of these Chaco wells *significantly exceeded initial, virgin gas flow and pressure.*" RP at 3254. *See also* RP at 856-57, 2898, 3267-76, 3276-3302

Evidence was also presented that wells like ~~the~~ Chaco Nos. 1, 2-R, 4 and 5 exhibited a characteristic decline curve from first production and the production of the *Chaco* wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. Bradley M. Robinson testified that the average flow rate of the Pendragon wells increased *500-fold* after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000*

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<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.

*Mcf/month*. RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in production "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of . . . 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, Alexis M. O'Hare testified that the production volumes seen in the Chaco wells after 1995 exceeded production rates when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes under virgin reservoir conditions when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. *See also* RP at 2911 and 3253 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that <sup>other</sup> wells ~~that~~ were not hydraulically fractured, <sup>and</sup> did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas:

Mr. O'Hare testified that <sup>as</sup> a comparison <sup>from</sup> of the production of Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured <sup>g</sup> illustrates the uncharacteristic behavior of Pendragon's newly stimulated wells.

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic increase whenever the adjoining Whiting Fruitland Coal wells were shut down, evidence that the two sets of wells and formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Those plant down

times resulted in the Gallegos Federal wells being shut-in. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomena reflects effective communication between the Chaco wells and the Fruitland coal exists.

RP at 3253, lines 15-23.

Pendragon's expert David O. Cox also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. *See* RP at 651-652.

Mr. Brown testified that Whiting's production *increased* after Pendragon's wells were shut down. *See* R.P. at 3254, lines 9-18. *See also* RP at 2909, ll. 4-10. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. *See* RP at 1085 ll. 24-25, 1086, ll. 1-5.

**c. The Connection Between Pendragon's Fracturing and Communication**

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect:

Testimony and evidence showed that great care is taken when designing hydraulic fracturing work so as to avoid extending the fractures ~~created during the process~~ <sup>to</sup> other formations. *See e.g.* RP at 2895-2896, 319 (fracture treatments designed to keep fractures within zone). Even so, fracturing can create communication between zones as occurred here; Mr. Conway, Pendragon's fracturing expert, even assumed for purposes of his work that the Pictured Cliffs and the Fruitland coal communicate. RP at 324.

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. *See* RP at 305-402 (testimony of Michael W. Conway), 1255-1416 (testimony of Bradley M. Robinson), 3393-3409 (same). Nevertheless, substantial evidence supports the Commission's finding that Pendragon fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had "likely" extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

Despite the care taken by Whiting not to fracture into the Pictured Cliffs, the Commission found it had. However, the Commission also found that Whiting had not produced any significant amounts of Pictured Cliffs gas, both for engineering reasons (discussed at page \_\_\_\_, *infra.*) and because the Pictured Cliffs was depleted. Substantial evidence exists for the Commission's conclusions in this regard. *See* RP at 861-862, 1080, 2908-2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's

fracturing --- suggests little if any gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs).

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**

Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. *After the frac, the pressures in the Chaco wells are about equal to the pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.*

RP at 1275, ll. 1-9 (emphasis added). Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. *See also* 3276-3302. Mr. Brown testified further on cross-examination the Btu values of gas produced by Pendragon's wells after the 1995 stimulation was Fruitland gas, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU

range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. *See also* RP at 3277-3280 (Exhibits of Mr. Brown depicting Btu decline).

Even Roland Blauer, Pendragon's expert witness who testified concerning gas content, agreed on cross-examination that the composition of the gas from the two sources was "similar":

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion ~~without the necessity of dewatering~~; *still not defined* as a result, little or no water production is associated with a Pictured Cliffs well. RP at 910, 1057. Mr.

O'Hare described the typical Pictured Cliffs production pattern:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines 4-7.



By contrast, evidence was presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Mr. O'Hare described that process as well:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-4. This is because natural gas (methane) is embedded in the pores of coal; the methane will leave the pores and become free gas only when the pressure in the surrounding coal is reduced. <sup>as water is removed (?)</sup> RP at 1082-83. This process is called "desorption." The testimony and evidence indicated that once the methane is released from the pores of the coal, it gradually accumulates, and as it does, the pressure increases. *Id.* If no production occurs, the gas pressure gradually increases until it reaches a point beyond which no more methane can desorb from the coal. *Id.* The pressure stabilizes at that point. *Id.* Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

Evidence was presented that the Whiting wells had been placed on compression in late 1997 and 1998 to lower the pressure in the well. RP at 2920 (testimony of Alexis M.

O'Hare). The reduced pressure created by the compressors allowed additional gas to desorb from the pores of the coal. RP at \_\_\_\_\_ (testimony of Alexis M. O'Hare).

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, and especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

These conclusions are supported by evidence presented to the Commission of water production from Pendragon's wells. If Pendragon's wells were producing gas from the Fruitland Coal, logic dictates that the wells must produce some water. RP at 862-863, 2896-2897. The wells might not produce as much water as coal wells do initially, but evidence was presented that Whiting had ~~significantly~~ dewatered the Fruitland coal for several years before Pendragon fractured into the high pressure gas. RP at 2896-2898. Evidence was presented that the Chaco wells produced water after the 1995 fracture stimulation. RP at 2899, 2911-2915, 2928-2948. (Pendragon claimed to have produced no water because none was recorded with the Oil Conservation Division. RP at \_\_\_\_.) However, evidence was ~~also~~ presented that Pendragon had not recorded water production from its wells and that Pendragon did not even have a place on its production forms to record such data. RP at \_\_\_\_\_. There was also testimony presented that Pendragon's wells

discharged into unlined pits and that the soil comprising those pits was porous RP at 2911-2915.

sucking it to the ground ?

**f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive and production had followed typical decline curves to the point that remaining reserves were minimal, and the pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 19<sup>93</sup><sub>2</sub> showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-12. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon had already recovered "in excess of" the recoverable gas from its wells:


Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

R.P. at 2921, ll. 22-25. Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55%

percent of initial formation pressure, and Pictured Cliffs wells can only recover 60-70 percent of initial pressure. R.P. at 856-57. *See also* RP at 1099-1101.

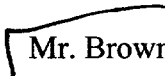
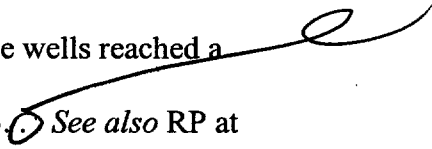
Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells had already produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.*

 Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He continued:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

 Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" (or separated from the pipeline) indicated that the wells reached a "depleted state by 1986 and remained in that state." RP at 3252-3253.  See also RP at 855-67 and 2902-05 (testimony of Mr. O'Hare); RP at 1079-80 and 3252-57 (testimony of Mr. Brown).

Mr. Brown also testified that there was no way for a depleted reservoir to suddenly "recharge" as apparently suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9.

Finally, Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale in 1993 or 1994. RP at 855. He declined to

purchase the wells after his analysis showed him the wells were uneconomic. RP at 866-67, 1157-58, 2903-2904, 3076-96.

**g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra*.

**2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). And, the Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, and to do whatever may be reasonably necessary to carry out the purpose of

*[the Oil and Gas Act], whether or not indicated or specified in any section hereof."*

NMSA 1978, § 70-2-11(A)(emphasis added).

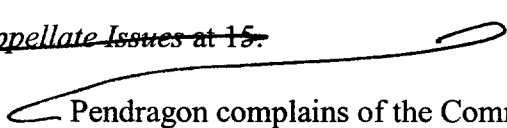
Factual findings of the Commission indicated that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the former to the latter. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful.

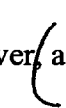
Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A). Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done ~~in their Statement of Appellate Issues at 15.~~ 

Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench", the lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate (gas bubbles, gas highways and gas compartments), and the ~~BTU~~ findings are ~~all~~ unsupported by substantial evidence. Pendragon also claims that the Commission disregarded evidence that Pendragon presented. However,  as should already be apparent), the Commission considered each and every one of these contentions, and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to support the findings and conclusions reached by the Commission.

*not necessary?*

*Fugere, supra.*

For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." The Commission



specifically considered the "third bench" claim, and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. *If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.*

RP at 1423-1424 (emphasis added). See also RP at 2904-05 (no reports of gas production from a "third bench" known to Mr. O'Hare), 3402 (lower Pictured Cliffs "mainly water saturated").

In a contradictory argument, Pendragon ~~also~~<sup>g</sup> presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." Pendragon offered testimony of expert witnesses who testified that Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made


some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can buy it. Number one, that makes almost all of Mr. Cox's calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

RP at 1315. *See also* RP at 903-904 (there may have been a "small component of damage" present but "... it was [not] significant enough to triple the reserve recovery), 942 (removal of damage might improve flows but cannot increase the amount of gas in the reservoir), 1155-56 (no reports of damage in well files), 1273 (type of damage alleged "cannot happen in this reservoir"), 2904 (skin damage ~~cannot~~ <sup>cannot</sup> recharge a reservoir, ~~and~~ <sup>but</sup> that is what <sup>is</sup> happened here).

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See infra.* at \_\_\_\_\_. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See infra.* at \_\_\_\_\_. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra.* And, Pendragon's many alternative theories for what happened in the San Juan County wells do not have to be blindly accepted by the Commission, or the Court:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The

theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not bolstered by the expertise of the Commission to which we give special weight and credence ...

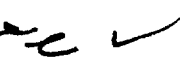

*Fasken v. Oil Conservation Commission*, 87 N.M. 292, , 532 P.2d 588 (1975). This case is no different.

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## **2. Pendragon's "Legal Arguments"**

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth

the substance of *all* evidence bearing on the proposition.); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (" ... [I]t is true that our admonitions against one-sided statements of the facts probably pertain most often to briefs challenging the sufficiency of the evidence ..."). Such arguments also improperly invite the Court to reweigh the evidence presented to the Commission. *Grace, supra*.

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Statement of the Issues*, at 8. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief", nor does Pendragon cite authority for this proposition. This  argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply ..." *Appellant's Statement of the Issues*, page 8. However, as noted on page \_\_\_\_\_,  *supra*, the Commission *did* determine this question, although adversely to Pendragon.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's*

*Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, ~~adverse to Pendragon.~~

*and found that Fruitland gas had escaped into PC through P's faces.*  
A similar substantial evidence argument masquerading as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] <sup>g</sup> were illegally produced ... from Whiting's Pictured Cliffs Coal wells ..." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. *It ordered P's wells shut down to prevent*  
And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. *See* page \_\_\_\_, *supra*. Substantial evidence supports this finding. *See* page \_\_\_\_, *supra*. Therefore, the Commission did determine how much *appropriate for* Pictured Cliffs gas was "illegally" produced by Whiting. The production figures and *conclusively* pressure data presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. *See* page \_\_\_\_, *supra*.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting was producing Pendragon's gas.

*Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act

and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.

Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 635-36, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. "[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence."). The Commission is entitled to rely on its own expertise in these matters; that is in part what the Oil Conservation Commission is for --- to resolve complicated technical questions that might be difficult for the courts to resolve.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. <sup>Supra</sup> ~~Infra~~, page \_\_\_\_\_. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's

gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool ..." NMSA 1978, § 70-2-17(A) (Repl. 1995).

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A). No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas ..." *Id.*

Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13.



However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool ...*" NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas.

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

*Cite checked  
COP*

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANT'S STATEMENT OF APPELLATE ISSUES**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. *See* Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.
2. Whether Order R-1133-A is within the scope of authority of the Commission.
3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.
4. Whether Order R-11133-A is otherwise in accordance with law.

## **II. SUMMARY OF PROCEEDINGS**

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias' order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias' Order apparently prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the

appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and apparently refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which require that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon apparently requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337. Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was re-heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply", but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

### **III. ARGUMENT**

#### **A. Introduction.**

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time and, with time and pressure, formed hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989). When a pool of natural gas forms, it is differentiated from other pools by the specific sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

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<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules

fit

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns from the surface of the earth to the base of the Fruitland coal. RP at <sup>4897-4906</sup>~~3249~~ (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at <sup>4896</sup>~~3250~~. Pendragon's ownership permits it to produce natural gas trapped within this formation. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. RP at \_\_\_\_\_. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 199<sup>1</sup>~~2~~ RP at 2893, <sup>4900-4901.</sup> Pendragon purchased its wells at auction from previous operators in December 1994, which had drilled and produced the wells two decades earlier. RP at 2894, 3249, <sup>4899-4900.</sup>

Each party claims the other's wells produce natural gas from its formation. The parties each claimed the other's wells were not properly "perforated" in the correct formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 10<sup>3</sup>~~4~~ at 10. The perforations are holes blown through the casing with explosives. *Id.* When a well is producing from a formation, holes have been blown through the casing into that formation. *Id.* Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are perforated somewhat lower in the earth, in the Pictured Cliffs sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that the perforations in each party's wells were properly placed; that issue is not before the Court.

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for the Basin-Fruitland Coal Gas Pool. RP at \_\_\_\_\_.

The second issue presented by the parties to the Commission (and the issue before the Court in this appeal) concerns the escape of natural gas from the Fruitland coal formation into Pendragon's wells. Whiting claimed that a practice Pendragon engaged in called "hydraulic fracturing" caused the escape of gas from the Fruitland coal into Pendragon's wells. Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly increases the area from which a natural gas well produces. 1 Williams & Meyers, § 10<sup>3</sup> at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901. Whiting presented evidence to the Commission that Pendragon's hydraulic fracturing created cracks and fissures upwards into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. See RP at 4954 (~~Whiting's~~ Closing Statement Memorandum). Pendragon disputed this claim and claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at <sup>5105</sup> (Closing Statement of Pendragon).

#### **B. The Commission's Order**

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ 33. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped. ¶

34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation gradually increased so that it was above the pressure in the Pictured Cliffs, setting the stage for gas migration to Pendragon's wells. ¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas that had originated in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation for this was hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four Chaco wells (Order, ¶ 5).

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented,

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<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page \_\_\_\_, below.



which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, the Commission's findings and conclusions are supported by substantial evidence in the record of the proceedings, were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." See NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 907 P.2d 182 (1995). See also *Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary, unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87

N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds

1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, each party, Whiting and Pendragon, were represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing is more than sufficient for a reasonable mind might to accept as adequate to support the conclusions reached by the Commission. *Fugere, supra*.

**a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced a sudden, unexpected and unprecedented production increase in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir:

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899. <sup>4900</sup> Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at

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<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. See also RP at 2893-98 (testimony of Alexis M. O'Hara) x

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2949-2952, 2911, 3253. Exhibits 7 through 10 to the testimony of James T.

Brown dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270.

(See also RP at 856-57, 2898, 3254-54, 3267-76, 3276-3302.)

Evidence was also presented that wells like the Chaco Nos. 1, 2-R, 4 and 5 exhibited a characteristic decline curve from first production and the production of the wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. Bradley M. Robinson testified that the average flow rate of the Pendragon wells increased 500-fold after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000 Mcf/month*. RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in production "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.

James T. Brown  
3254: "There is absolutely no scientific explanation for the

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, Alexis M. O'Hare testified that the production volumes seen in the Chaco wells after 1995 exceeded production rates when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. See also RP at (1099-1101) 2911-2953 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that wells that were not hydraulically fractured did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by

Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas:

Mr. O'Hare testified that a comparison of the production of Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured, illustrates the uncharacteristic behavior of Pendragon's newly stimulated wells.

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic increase whenever the adjoining Whiting Fruitland Coal wells were shut down, evidence that the two sets of wells and formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomenon reflects effective communication between the Chaco wells and the Fruitland coal exists.

Those plant down times resulted in the Gallagos Federal wells being shut-in.

RP at 3253, lines 15-23.

Pendragon's expert David O. Cox also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. See RP at 651-652.

Mr. Brown testified that ~~production from~~ Whiting's ~~wells also~~ <sup>production</sup> increased after Pendragon's wells were shut down. See R.P. at 3254, lines 9-18. See also RP at ~~2908-18~~ <sup>2909 11. 4-10</sup>. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. See RP at 1085-6. <sup>11. 24-25</sup> <sup>1-5</sup>

### c. The Connection Between Pendragon's Fracturing and Communication

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect:

Testimony and evidence showed that ~~hydraulic fracturing techniques are not precise and can result in cracks that extend between formations. RP at \_\_\_\_ Natural gas can flow through these cracks and migrate from one formation to another and from a well in one formation to a well in another formation. RP at \_\_\_\_~~ Therefore, great care

is taken when designing hydraulic fracturing work so as to avoid fracturing into other formations. See e.g. RP at ~~2906-2908, 2896~~ <sup>2895 - (a) testimony of Mr. Cox fracture treatments designed to confine fractures w/ 14 zones</sup>

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. See RP at 305-402, 1255-1416, 3393-3409 <sup>(testimony of Michael W. Conway)</sup> <sup>(same)</sup> <sup>Bradley R. Robinson</sup>. Nevertheless, substantial evidence supports the Commission's finding that Pendragon

Conway - "unlikely that fracture grew out of coal"

fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had <sup>"likely"</sup> extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

Despite the care taken by Whiting not to fracture into the Pictured Cliffs, the Commission found it had, <sup>However</sup> although the Commission also found that Whiting had not produced any significant amounts of Pictured Cliffs gas, both for engineering reasons (discussed at page \_\_\_\_, <sup>Supra?</sup> infra.) and because the Pictured Cliffs ~~gas~~ was depleted. Substantial evidence exists for the Commission's conclusions in this regard, ~~although not challenged~~ by Whiting on appeal. ~~See RP at 859-61, 2890-2896, 2906-08. See also RP at 861, 1080, 2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's fracturing is~~ <sup>if any</sup> ~~evidence that little gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs) and RP at 859-61, 1147, 1270-81, 2895-98, 2902, 3251-58 (no Pictured Cliffs gas was produced in Whiting's wells).~~ <sup>no pressure response</sup> <sup>102</sup> <sup>suggests</sup>

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**



Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

g The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. After the frac, the pressure in the Chaco wells are about equal to the pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.

RP at 1274-1275 (emphasis added). See also 3276-3302. Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. He testified further on cross-examination the Btu values of gas produced by Pendragon's wells after the 1995 stimulation was Fruitland gas, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. 3277 - 3280. See also RP at ~~3270~~.

Even Roland Blauer, Pendragon's expert witness who testified concerning gas content, agreed on cross-examination that the composition of the gas from the two sources was "similar":

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion without the necessity of dewatering; RP at ~~857, 1082-~~

~~84.~~ As a result, little or no water production is associated with a Pictured Cliffs well.

The typical PC production pattern is as follows:  
RP at ~~895~~<sup>9</sup>, 910, 1057. Mr. O'Hare described ~~this~~ process:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines <sup>4-</sup>~~5~~-7.

By contrast, evidence was presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Mr. O'Hare described that process as well:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will

begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-~~4~~. ~~See also RP at 1095 (testimony of James T. Brown) ("So you had to wait until part of the dewatering had occurred so that a sufficient gas rate could be expected ..."); 431-32 (4).~~ This is because natural gas (methane) is embedded in the pores of coal; the methane will leave the pores and become free gas only when the pressure in the surrounding coal is reduced. RP at 1082-83. This process is called "desorption." The testimony and evidence indicated that once the methane is released from the pores of the coal, it gradually accumulates, and as it does, the pressure increases. Id. ~~RP at 1082-83.~~ If no production occurs, the gas pressure gradually increases until it reaches a point beyond which no more methane can desorb from the coal. Id. ~~RP at 1082-83.~~ The pressure stabilizes at that point. Id. ~~RP at 1082-83.~~ Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

Evidence was presented that the Whiting wells had been placed on compression in late 1997 and 1998 to lower the pressure in the well. RP at 2920 (testimony of Alexis M. O'Hare). The reduced pressure created by the compressors allowed additional gas to desorb from the pores of the coal. RP at ~~2897, lines 1-7~~ (testimony of Alexis M. O'Hare).

no

Find

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, and especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

These conclusions are supported by evidence presented to the Commission of water production from Pendragon's wells. If Pendragon's wells were producing gas from the Fruitland Coal, logic dictates that the wells must produce some water. RP at \_\_\_\_.

The wells might not produce as much water as coal wells do initially, but evidence was presented that Whiting had significantly dewatered the Fruitland coal before Pendragon

fractured into the high pressure gas. RP at \_\_\_\_.

Evidence was presented that the Chaco wells had produced water after the 1995 fracture stimulation. RP at \_\_\_\_.

Pendragon claimed to have produced no water because none was recorded with the Oil

Conservation Division. RP at \_\_\_\_.

However, evidence was also presented that Pendragon had not recorded water production from its wells and that Pendragon did not

even have a place on its production forms to record such data. RP at \_\_\_\_.

There was also testimony presented that Pendragon's wells discharged into unlined pits and that the

soil comprising those pits was porous. RP at \_\_\_\_.

#### **f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive and production had followed typical decline curves to the point that remaining reserves were minimal, and the pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 19\_\_ showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-1<sup>2</sup>7. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon had already recovered "in excess of" the recoverable gas from its wells:

Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

11. 22-25  
R.P. at 2921, Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55% percent of initial formation pressure, and Pictured Cliffs wells can only recover 60-70 percent of initial pressure. R.P. at 856-57.

Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic

depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation, ~~calculating the drainage area for each well~~ (◇) and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells had already produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. ~~get exhibit reference~~ This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.*

Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He continued:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" <(or separated from the pipeline)><define earlier> indicated that the wells reached a "depleted state by 1986 and remained in that state." RP at 3252-3253. Mr. Brown also testified that there was no way for a depleted reservoir to suddenly "recharge" as apparently suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9. (See also RP at 855-67 (✓), 1079-80 (✓), 2902-05 (✓), 3252-57 (◇).) *Testimony of Mr. Brown*  
*Testimony of Mr. O'Hare*

Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale. He declined to purchase the wells after his analysis showed him the wells were uneconomic. RP at 2893-2894. ~~See also~~ 855, 866-67, 1157-58, 2903-2904, 3076-96.

#### **g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a

reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra.*

## **2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). And, the Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, *and to do whatever may be reasonably necessary to carry out the purpose of [the Oil and Gas Act], whether or not indicated or specified in any section hereof.*" NMSA 1978, § 70-2-11(A)(emphasis added).

Factual findings of the Commission indicated that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the former to the latter. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into



other strata ..." NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful.

Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A). Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous

section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done in their *Statement of Appellate Issues* at 15.

Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench", the lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate (gas bubbles, gas highways and gas compartments), and the BTU findings are all unsupported by substantial evidence. Pendragon also claims, citing to \_\_\_\_\_, that the Commission disregarded evidence that Pendragon presented. However, as should already be apparent, the Commission considered each and every one of these contentions, and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to support the findings and conclusions reached by the Commission. *Fugere, supra*.

For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." RP at \_\_\_\_\_. The Commission specifically considered the "third bench" claim, and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor

reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. *If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.*

RP at 1423-1424 (emphasis added). See also RP at 2905-06 (◇), 3402 (◇).

In a contradictory argument, Pendragon also presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." RP at \_\_\_\_\_. Pendragon offered testimony of expert witnesses who testified that Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. See *Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

no reports of gas production from a "third bench" known to Mr. Olyk  
Lower Pictured Cliff mainly water saturated

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can buy it. Number one, that makes almost all of Mr. Cox's calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

*3 There may have been a "small" component*  
RP at 1315. See also RP at 902-904 (◇), 942 (◇), 1155-56 (◇), 1273 (◇), 1313-22 (◇), 2904 (◇), 3401-3405 (◇).

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means

by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See infra*. at \_\_\_\_\_. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See infra*. at \_\_\_\_\_. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra*. And, Pendragon's many alternative theories for what happened in the San Juan County wells do not have to be blindly accepted by the Commission, or the Court:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not bolstered by the expertise of the Commission to which we give special weight and credence ...

*Fasken v. Oil Conservation Commission*, 87 N.M. 292, <>, 532 P.2d 588 (1975). This case is no different.

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## 2. Pendragon's "Legal Arguments"

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth the substance of *all* evidence bearing on the proposition.); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (" ... [I]t is true that our admonitions against one-sided statements of the facts probably pertain most often to briefs challenging the sufficiency of the evidence ..."). Such arguments also improperly invite the Court to reweigh the evidence presented to the Commission. *Grace, supra*.

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Brief* at \_\_\_\_\_. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief", nor does Pendragon cite authority for this proposition. This argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply ..." *Appellant's Statement of the Issues*, page 8.

However, as noted on page \_\_\_\_\_, above, the Commission *did* determine this question, although adversely to Pendragon. Exhibit A, page ◇, ¶ ◇.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, adverse to Pendragon.

A similar substantial evidence argument masquerading as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] were illegally produced ... from Whiting's Pictured Cliffs Coal wells ..." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. See page \_\_\_\_\_, *supra*. Substantial evidence supports this finding. See page \_\_\_\_\_, *supra*. Therefore, the Commission did determine how much Pictured Cliffs gas was "illegally" produced by Whiting. The production figures presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. RP at \_\_\_\_\_.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission

failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting <???. *Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.

Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 635-36, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. "[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence."). The Commission is entitled to rely on its own expertise in these matters; that is in part what the Oil Conservation Commission is for - to resolve complicated technical questions that might be difficult for the courts to resolve.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's*



*Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. *Infra.*, page \_\_\_\_\_. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool ..." NMSA 1978, § 70-2-17(A) (Repl. 1995).

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A). No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas ..." *Id.*

Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13. However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool ...*" NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas.

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
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(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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Michael Condon  
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---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**TITLE PAGE**

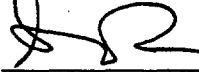
COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and states that the following are the attorneys who represent the parties in this appeal:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
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(505) 989-9857 (facsimile)  
On behalf of Appellants Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation

*xtra  
copies*

J.E. Gallegos  
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(505) 986-1367 (facsimile)  
On behalf of Whiting Petroleum Corp., Maralex Resources Inc. and T.H. McElvain Oil and Gas LP

Respectfully Submitted.



---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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(505) 827-8156 (telephone)  
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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 31<sup>st</sup> day of July, 2000:

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---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

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**TITLE PAGE**

COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and states that the following are the attorneys who represent the parties in this appeal:

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On behalf of Whiting Petroleum Corp., Maralex Resources Inc. and T.H. McElvain Oil and Gas LP

Respectfully Submitted.



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Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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**Certificate of Service**

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Santa Fe, New Mexico 87505



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Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**TITLE PAGE**

COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and states that the following are the attorneys who represent the parties in this appeal:

J. Scott Hall  
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On behalf of Appellants Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation

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On behalf of Whiting Petroleum Corp., Maralex Resources Inc. and T.H. McElvain Oil and Gas LP

Respectfully Submitted.



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Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 31<sup>st</sup> day of July, 2000:

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Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505



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Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel for Appellants,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional twenty-one (21) days to file with the clerk of the court the Record on Appeal in this matter.

---

The Honorable Daniel A. Sanchez

Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
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Telephonically approved, July 12, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**ORDER AUTHORIZING APPELLANT AND APPELLEE  
TO EXCEED PAGE LIMITATION, GRANTING  
LEAVE TO FILE BRIEFS, AND EXTENDING TIME**

THIS MATTER, coming before the Court pursuant to the Agreed Motion of Appellants, Pendragon Energy Partners, Inc., *et al.*, and Appellee, New Mexico Oil Conservation Commission, for authorization to exceed the page limitation on the statements of appellate issues, for leave to file memorandum briefs and for an extension of time, and the Court being duly advised:

IT IS ORDERED that the Appellants' and Appellee's are authorized: (1) to exceed the page limitation under NMRA 1-074.N; (2) to file memorandum briefs; and (3) file the Appellants' statement of issues by September 29, 2000.

---

The Honorable Daniel Sanchez  
District Judge

Agreed:

MILLER, STRATVERT & TORGERSON, P.A.

By T. J. Scott Hall

J. Scott Hall  
Post Office Box 1986  
Santa Fe, New Mexico 87501  
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Attorneys for Appellants

Telephonically approved: 9/18/00

Steve C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
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(505) 827-8156  
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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel for Appellants,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional twenty-one (21) days to file with the clerk of the court the Record on Appeal in this matter.

---

The Honorable Daniel A. Sanchez

Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
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(505) 827-8177 (facsimile)

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional seven (7) days to file with the clerk of the court the Record on Appeal in this matter. The Record on Appeal shall be filed no later than August 10, 2000.

---

The Honorable Daniel A. Sanchez

Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
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Telephonically approved, August 3, 2000:

J. Scott Hall  
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Telephonically approved, August 2, 2000:

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file the record on appeal in this matter, on the following grounds:

1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.
2. The Notice of Appeal was filed by Appellants on June 13, 2000. Ordinarily, the Record on Appeal (hereinafter referred to as "the Record") should be filed with the clerk of the court on July 13, 2000.
3. By Order of the Court entered July 17, 2000 the time to file the record was extended to August 3, 2000.
4. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large

engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

5. Counsel for Appellant, counsel for Appellee and counsel for intervenors have conferred concerning the Record to insure that it is complete and accurate when filed with the Court and to coordinate its duplication. These efforts continue and, because of the size of the Record, cannot be completed by the deadline for filing. However, at this time, the Record is approximately 75% compiled and copied and counsel anticipate being able to file the Record with the Court no later than August 10, 2000.

6. Counsel of record agree to entry of an order extending the time for filing the Record an additional seven (7) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional seven (7) days to August 10, 2000.

Respectfully Submitted.



---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 3rd day of August, 2000:

J. Scott Hall  
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Santa Fe, New Mexico 87504

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Santa Fe, New Mexico 87505



---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional seven (7) days to file with the clerk of the court the Record on Appeal in this matter. The Record on Appeal shall be filed no later than August 10, 2000.

---

The Honorable Daniel A. Sanchez



Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
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Santa Fe, New Mexico 87505  
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Telephonically approved, August 3, 2000:

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Telephonically approved, August 2, 2000:

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

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**No. D 0117-CV-2000-1449**

**vs.**

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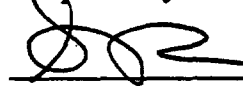
3. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

4. Counsel for Appellant and counsel for Appellee have conferred concerning the Record, both to insure that it is complete and accurate when filed with the Court, and to coordinate copying of the Record so that both parties have a copy. These efforts continue and, because of the size of the Record, cannot be completed by the deadline for filing.

5. Counsel for Appellants has agreed to entry of an order extending the time for filing the Record an additional twenty-one (21) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional twenty-one (21) days

Respectfully Submitted.



Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 12<sup>th</sup> day of July, 2000:

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P.O. Box 1986  
Santa Fe, New Mexico 87504



Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
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5. Counsel for Appellants has agreed to entry of an order extending the time for filing the Record an additional twenty-one (21) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional twenty-one (21) days

Respectfully Submitted.



Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
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(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 12<sup>th</sup> day of July, 2000:

J. Scott Hall  
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Santa Fe, New Mexico 87504



Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**STIPULATED MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court, with concurrence of counsel for Appellants, for an extension of time to file the record on appeal in this matter, on the following grounds:

1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.
2. The Notice of Appeal was filed by Appellants on ◇.
3. The record in this case is extensive and contains many thousands of pages and dozens of original exhibits. Many of the documents are large engineering charts that are difficult if not impossible to duplicate.
4. Counsel have conferred in an effort to agree on the content of the record on appeal and determine whether duplicate copies exist. This effort is ongoing and is not completed and will not be completed by the deadline for filing the record on appeal.

5. Counsel for Appellants has agreed to extend the time for filing the record on appeal an additional thirty (30) days so that the Court and parties will have a complete and intelligible record.

WHEREFORE, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional thirty days

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of July, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the record on appeal in this matter, and the Court having reviewed the pleadings and noting concurrence of counsel for Appellant,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee shall have an additional thirty (30) days to file with the clerk of the court the record on appeal in this matter.

---

The Honorable Daniel A. Sanchez



Submitted by:

---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
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Telephonically approved, June 8, 2000:

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
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EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ENTRY OF APPEARANCE**

COMES NOW Stephen C. Ross, Special Assistant Attorney General, and hereby enters his appearance in this matter on behalf of the Appellee, the New Mexico Oil Conservation Commission.

Respectfully Submitted.



---


Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 28<sup>th</sup> day of June, 2000:

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\_\_\_\_\_  
Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
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**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

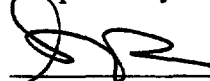
**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ENTRY OF APPEARANCE**

COMES NOW Stephen C. Ross, Special Assistant Attorney General, and hereby enters his appearance in this matter on behalf of the Appellee, the New Mexico Oil Conservation Commission.

Respectfully Submitted.



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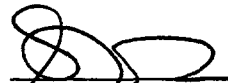
Stephen C. Ross  
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\_\_\_\_\_  
Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

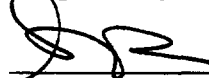
**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ENTRY OF APPEARANCE**

COMES NOW Stephen C. Ross, Special Assistant Attorney General, and hereby enters his appearance in this matter on behalf of the Appellee, the New Mexico Oil Conservation Commission.

Respectfully Submitted.



---


Stephen C. Ross  
Special Assistant Attorney General  
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2040 S. Pacheco  
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\_\_\_\_\_  
Stephen C. Ross

Dear Steve - 10/6/00

Our computers are on  
the net, otherwise I'd  
attach a cover letter to  
this statement -

Amanda Olsen  
Waller, Student &  
Toregerson, P.A.

---



OIL CONSERVATION DIV.

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

00 SEP 32 AM 3:46

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**APPELLANTS'**  
**STATEMENT OF THE ISSUES**

Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation, (variously referred to herein as "Pendragon" or "Appellants"), in accordance with NMRA 1978 1-074 K, submit their statement of appellate issues in this matter.

**I. Statement of the Issues**

This statutory appeal is before this Court following the New Mexico Oil Conservation Commission's ("NMOCC" or "Commission") consideration of Pendragon's administrative Application in Case No. 11996 in August of 1999 and the issuance of Order No. R-11133-A on April 26, 2000. A more comprehensive description of the dispute, along with a description of the lands and the wells involved, is set forth in the Order [RP page 5174] and in the Summary of Proceedings, below. The Commission's Order purported to resolve a number of matters, including the over-arching issue of whether acidization and hydraulic fracture stimulation treatments

performed by the operators of Pictured Cliffs formation gas wells and nearby Fruitland Coal formation gas wells caused those separately-owned and separately-regulated formations to come into communication with each other.<sup>1</sup> Such hydraulic fracture stimulation treatments are often called “frac jobs”. To “frac a well” is a term used to refer to the methods used by the oil and gas industry to increase the production from a well by pumping a liquid or other substance into a well under pressure to crack (or fracture) and prop open the hydrocarbon-bearing formation. Fracture treatments are a commonly used method to stimulate oil and gas production that has been applied to well over half of the wells drilled in the United States.

While the Commission successfully resolved a number of issues, it fell short on several others, with the result that an ambiguous, incomplete and impractical order was issued. Consequently, this Court’s review is required in order to resolve the Commission’s failure to discharge its statutory and administrative duties and its disregard of the pertinent facts.

Pendragon seeks this Court’s review of the following issues:

**Issue 1.** The failure of the NMOCC to accord meaningful regulatory relief, fully and finally resolving the issues before it, in disregard of the Commission’s statutory mandate and in contravention of its statutes, regulations and prior orders.

**Issue 2.** Whether the NMOCC’s exceeded its statutory authority, acted arbitrarily, or misapplied the law to facts when it purported to determine that Pendragon’s wells had produced their “fair share” of gas and that further production should be limited, when in fact the Appellants own one hundred percent of the Pictured Cliffs formation gas.

**Issue 3.** The following findings in the agency’s Order are not supported by substantial evidence:

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<sup>1</sup> The proximity of the legal and geologic boundaries of those separately-owned formations (or “pools”) was also contested in the administrative proceedings. However, the Commission’s geological findings are not at issue in this

- (a) That Pendragon's wells either "depleted" or "nearly depleted" the Pictured Cliffs formation prior to 1995.
- (b) That there is no geologic evidence supporting the existence of the "third bench" interval contributing to Pictured Cliffs formation gas production.
- (c) That the Pictured Cliffs formation in the area had not incurred reservoir damage over the years.
- (d) That fracture stimulation treatments performed on four of Pendragon's wells escaped from the Pictured Cliffs formation and penetrated to the separately-owned Fruitland Coal formation.
- (e) That increases in gas production from Pendragon's Pictured Cliffs wells following the fracture stimulation treatments was attributable to "high-pressure gas compartments" in the area.
- (f) That BTU analysis evidence supports the conclusion that the fracture stimulation treatments on the Pictured Cliffs wells came into communication with the Fruitland Coal formation.

## **II. Summary of the Proceedings and Background**

In 1992, Maralex Resources, Inc. acquired the oil and gas leasehold operating rights to the Fruitland Coal Gas formation in the general area of the WAW field in San Juan County. Maralex acquired its Fruitland Coal formation rights from its predecessors in interest, Merrion Oil and Gas Corporation and Bayless Oil and Gas Corporation. Maralex subsequently assigned the majority of its lease interests to its current partner, Whiting Petroleum Corporation [RP page 4895, pg.3, para.6]

---

appeal.

Shortly after acquiring its interests, Maralex drilled and completed its “Gallegos Federal” wells in the Fruitland coal formation and performed a series of rather heavy and aggressive fracture stimulation treatments on its wells. The frac jobs performed on the coal seams consisted of fracture fluid volumes on the average of 41,030 gallons at proppant weights averaging 72,656 pounds, injected at treating rates ranging between 45-60 barrels per minute (BPM).<sup>2</sup> [RP page 1753]

In 1994, after Maralex had applied its heavy and aggressive frac jobs on its coal wells, Merrion and Bayless assigned its remaining rights below the base of the Fruitland Coal formation to the base of the Pictured Cliffs formation to J.K. Edwards and Associates, Inc.<sup>3</sup> The assignment of the Pictured Cliffs rights covered the Formation that is in close proximity to, and in most cases is overlain by the Fruitland coal rights owned by Maralex [RP page 4895; Ex.N-4; RP page 2021] Edwards subsequently assigned a majority of its interests to Pendragon, and Pendragon subsequently became operator of these Pictured Cliffs properties.

Years before assigning its Pictured Cliffs rights, Merrion and Bayless had drilled and completed a number of wells (the “Chaco wells”) in that formation. In some cases, Merrion had performed acid jobs or fracture stimulation treatments on its Pictured Cliffs wells. When Edwards/Pendragon acquired the six Chaco wells, it performed additional stimulation treatments. Three of the wells received acid treatments and frac jobs were applied to four of the wells. Compared to the heavy and uncontrolled frac jobs Maralex had applied to the coal formation, the Edwards/Pendragon frac jobs were substantially lighter and much more precise.<sup>4</sup> An exhibit demonstrating the proximity of the Chaco Pictured Cliffs wells and the Gallegos Federal Fruitland Coal wells at issue is attached. (Exhibit 1).

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<sup>2</sup> In the case of the Gallegos Federal 26-12-6 No. 2, the Maralex frac job consisted of a fracture fluid volume of 81,025 gallons with a 121,700 pound proppant weight injected at treating rates of between 45-60 BPM. [RP page 1753]

<sup>3</sup> Now known as Edwards Energy Corporation

<sup>4</sup> The foam fracs specifically designed for the Pictured Cliffs wells were applied at fluid volumes averaging 31,248 gallons at proppant weights averaging 38,421 pounds injected at treating rates ranging from between 22 to 34 BPM. [RP page 1753]

In 1998, Whiting and Maralex involved Pendragon in discussions before the New Mexico Oil Conservation Division (“NMOCD” or “Division”) to address a perceived problem of communication between the Pictured Cliffs formation in the WAW Fruitland Pictured Cliffs pool and the Basin-Fruitland coal formation. At the same time, Whiting and Maralex filed a formal Application<sup>5</sup> with the NMOCD, alleging, generally that the drilling and fracture stimulation operations in the Pictured Cliffs formation had caused that formation to become communicated with the Basin Fruitland coal formation and that Pendragon’s Pictured Cliffs wells were draining reserves owned by Whiting and the other interest owners in its wells. Whiting and Maralex also made the assertion that the producing formation Pendragon’s wells had been drilled to was not the Pictured Cliffs formation, but was instead the Fruitland sandstone and Fruitland coal formation where Whiting owned the lease rights.

On May 26, 1998, Whiting and Maralex suddenly dismissed their application before the NMOCD and instead filed suit in District Court making the same basic allegations. Pendragon simultaneously filed its application with the Division in this case. In the meantime, before the Division could convene a hearing in this matter, Whiting and Maralex obtained a preliminary injunction from the District Court, shutting in four of Pendragon’s Pictured Cliffs wells. However, pursuant to separate motions, the Court entered a ruling deferring to the Division’s jurisdiction over the central issues in dispute and there has been little or no activity in the court proceeding since. On February 5, 1999, following hearings, the NMOCD issued Order No. R-11133 in Case No. 11996. Subsequently, both Pendragon and Whiting each filed applications for hearing de novo before the New Mexico Oil Conservation Commission (“NMOCC”).<sup>6</sup> [RP page 4270; RP page 4301]

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<sup>5</sup> NMOCD Case No. 11921; Application of Whiting Petroleum Corporation and Maralex Resources, Inc. For An Order Shutting In, Limiting Production From, or Approving Downhole Commingling In Certain Wells, San Juan County, New Mexico.

<sup>6</sup> One of Whiting’s partners, T.H. McElvain Oil and Gas LP dropped out of the case.

On August 12 – 21<sup>st</sup>, 1999, the NMOCC convened a hearing on Pendragon's Application brought pursuant to, inter alia, Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in NMOCD Order No. R-8768, as amended, seeking a determination that its Chaco wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool, and that Whiting Petroleum's Gallegos Federal wells completed within the Basin-Fruitland Coal Gas Pool were producing from the appropriate "common source of supply."

Pendragon also sought further relief, including, specifically, an order bringing Whiting's non-conforming wells back into compliance with the Division's rules, regulations and orders.

At the hearing, both parties contended that the other's well stimulation treatments caused their separately owned formations to come into communication. Both sides also contended that their wells experienced interference and that gas was being produced out of formation as a result. Significantly, at the hearing, Whiting's witnesses admitted that the high volume, high pressure and high injection rate fracture stimulation treatments performed on the Gallegos Federal wells by Maralex Resources likely caused their wells to come into communication with the Pictured Cliffs formation owned by Pendragon. [RP pages 3399 to 3400; page 3405 and page 3252] Conversely, Pendragon asserted and presented substantially more evidence that the acid jobs and relatively mild fracture stimulation treatments performed on its Chaco wells remained contained within the Pictured Cliffs formation and did not communicate with the Fruitland Coal Formation owned by Whiting. [RP pages 1735 to 17155 and the exhibits referenced therein; RP pages 1823 to 1878 and the exhibits referenced therein; RP pages 1901 to 1906 and the exhibits referenced therein; and RP pages 1910 to 1936 and the exhibits referenced therein]

On April 26, 2000, after hearing, the Commission issued Order No. R-11133-A [RP page 5174] which found that all of Pendragon's subject Chaco wells were perforated within the Pictured

Cliffs formation of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. The Order also effectively rejected the claims of Whiting and Maralex that the upper-set of perforations in Pendragon's wells were situated in, and producing from the Fruitland formation. Order R-11133-A affirmed that the vertical boundaries between the Pictured Cliffs and Fruitland Coal formations conformed to the respective lease ownership of Pendragon and Whiting. These geologic findings are not at issue in this appeal.

In addition, Order R-11133-A found that the Pictured Cliffs and Fruitland Coal formations first came into communication because of the heavy fracture stimulation treatments Maralex performed on five of the Whiting Fruitland Coal wells in 1992. (Finding 32.) The Order also found that the fracture treatments subsequently performed on four of the Chaco wells in 1995 communicated with the Fruitland Coal formation and ordered them shut-in pending further proceedings before the NMOCD.<sup>7</sup> As a result of this communication between the separately owned formations, the Order identified three categories of gas capable of being produced from Pendragon's Chaco 1, 2R, 4 and 5 Pictured Cliffs wells: Category I: Gas originally in-place in the Pictured Cliffs formation<sup>8</sup>; Category II: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through the 1995 fractures around the Pendragon Chaco wells; and Category III: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through the 1992 fractures around the Whiting Fruitland Coal wells. (Finding 44.) The Order then refers to the matter to the NMOCD for further proceedings in order to place these wells back on production. (Decretal Paragraph 4.)

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<sup>7</sup> Pendragon continues to dispute this particular finding.

<sup>8</sup> Whiting conceded that at least ten percent of the gas produced from the Chaco wells is this category of gas. [Rp page 5052; Whiting's proposed order, pg. 24, para.6.; pg. 16, para.69] Pendragon asserts it all of the production is Category I and Category III gas.

### III. Points and Authorities

**Issue 1.** The Commission failed to discharge a number of its statutory and regulatory duties for which its jurisdiction was specifically invoked pursuant to Pendragon's Application. In addition, the Commission failed to fully and finally resolve the issues before it. At the same time, a number of the provisions in the Commission's Order are in direct conflict with one another. As a consequence, the Commission's Order is ambiguous, inconsistent, incomplete and unworkable. Accordingly, the Commission failed to accord meaningful regulatory relief.

Pendragon requested the Commission to exercise its authority under the provisions of Order No. R-8768 [RP Testimony of Al Nicol, Page 110-114; RP pages 1767 to 1771; also RP for NMOCD application pages 5217 to 5233 (supplemental record), Pre-Hearing Statement (RP pages 4844 to 4849) and Stipulation of Facts (RP pages 4895 to 4901)] to determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply. The Commission was also requested to fulfill certain duties under the Division's enabling statutes, the New Mexico Oil and Gas Act (NMSA 1978 §§ 70-2-1, *et seq.*), as well as the agency's rules regulations and orders.<sup>9</sup> Among these are:

#### **NMSA 1978 §§70-2-12 B (2) and (7)**

**[T]he Division is authorized to make rules, regulations and orders ...**

**(2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata; [and]**

**(7) to require wells to be drilled operated and produced in such manner as to prevent injury to neighboring leases or properties [.]**

#### **19 NMAC 15.C.106.A**

**During the drilling of any...well,...all oil, gas, and water strata above the producing and/or injection horizon shall be sealed or separated in order to prevent their contents from passing into other strata.**

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<sup>9</sup> The jurisdiction and duties of both the Division and the Commission are concurrent in all respects (See NMSA 1978 §§ 70-2-11.B)



## 19 NMAC 15.N.303.A

**Each pool shall be produced as a single common source of supply and wells therein shall be completed, cased, maintained and operated so as to prevent communication, within the well bore, with any other separate pool or horizon and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with the production from any other pool or pools is strictly prohibited.**

Similar mandates are outlined in Special Rules 2 and 12 of NMOCD Order No. R-8768 setting forth the Special Rules and Regulations for operators producing from the Basin-Fruitland Coal Gas Pool. Those special rules are specifically applicable to the circumstances here and were invoked under Pendragon's original Application.. [See Order No. R-8768; RP pages 5212 to 5216 (supplemental record); Pendragon's Application may be seen at RP pages 5207 to 5211 (supplemental record)]

The findings and decretal portions of Order R-11133-A make the affirmative determination that the Whiting Fruitland Coal wells are not producing from their "appropriate common source of supply" as required under *inter alia* Order No. R-8768. Order R-11133-A expressly determined that the Whiting coal wells are producing gas from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool. Production from the Pictured Cliffs formation by the offending coal wells would include Category I, II and III gas identified in the Order. Such production is in ongoing violation of Section 70-2-12 B (2) and (7) of the Oil and Gas Act as well as the regulations, order and rules cited above. Consequently, the Order fails to "afford such relief as necessary to bring the wells into compliance with the Division's rules, regulations and orders."

The Commission further failed to discharge its mandatory duties in two additional respects: (1) It failed to make a determination with respect to the volumes of Pictured Cliffs gas that were illegally produced (and continue to be produced) from Whiting's Fruitland Coal wells; and (2)

failed to take action to prevent the escape of gas from the strata *vis 'a vis* the ongoing production of Pictured Cliffs reserves by Whiting's Fruitland Coal wells.

In this regard, Pendragon established by a preponderance of the evidence that Whiting's coal wells produced 176,900 MCF of Pendragon's Pictured Cliffs gas from the time the Chaco wells were shut in on June 30, 1998 to June 30, 1999. [RP page 1969] The evidence in the record also establishes that the drainage of the Pictured cliffs gas reserves by Whiting's Gallegos Fruitland coal wells is ongoing. Whiting does not dispute this. [RP page 5052; pg. 5, para. 11; pg. 24, para. 5]

The engineering evidence presented by Pendragon establishes that the Pictured Cliffs reserves in the area of the Chaco No. 1, Chaco No. 4 and Chaco No. 5 wells continue to be drained by Whiting's Gallegos Federal Fruitland Coal wells since the June 30, 1999 data was collected. Whiting's witnesses agreed that Pictured Cliffs gas was flowing into the Fruitland Coal formation. [RP pages 1686 to 1734; 1954-1978; 1823 to 1873]

The pressure data showing direct communication between Whiting's Gallegos Federal Fruitland Coal wells and the Chaco No. 4 and 5 wells, and the possible communication with the Chaco No. 1 well, establish that the loss of the reserves is the result of the production of Pictured Cliffs gas by the Gallegos Federal Fruitland Coal wells. [August 1999 hearing; RP page 564; RP pages 1972 to 1978]

Pendragon presented testimony and exhibits with respect to the pressure versus cumulative production ("P/Z data") for the Chaco No. 1, 4 and 5 wells demonstrating the volumes of gas that would need to be produced in order to lower the pressures between 14 and 19 PSIG over the yearlong shut-in period. At a minimum, the Chaco No. 1 well lost 19 psi (pounds per square inch), with a resulting loss of reserves of 60,500 MCF (thousand cubic feet).

The Chaco No. 4 experienced a 15 psi loss in pressure, resulting in a loss of reserves of 63,500 MCF. The Chaco No. 5 experienced a 14 psi pressure loss, resulting in a loss of reserves of 52,900 MCF. The total lost reserves for all three of the wells for the period from June 30, 1998 to June 30, 1999 was approximately 176,900 MCF. [Jack McCartney page 17, line 2; RP pages 1968 to 1975]

Maralex's president testified that he concluded gas from the Pictured Cliffs formation is now moving into the Fruitland Coal formation, thus supporting Pendragon's conclusions. To support his conclusion, Maralex's president pointed to the apparent equilibration in pressures between the Pictured Cliffs and Fruitland Coal formations. [August 1999 hearing; RP pages 918, 922, 973, 978 and 979]

The effect of Whiting's drainage is apparent: the combined production from the Gallegos Federal 26-12-6 No. 2, the 26-12-7 No. 1 and the 26-13-12 No.1 increased by approximately 500 MCFd (thousand cubic feet per day) from late 1997 to April 1998 when compression was installed on the Fruitland Coal wells. During the same period, combined production from the Chaco wells declined by more than 200 MCFd. [August 1999 hearing; RP pages 425 to 429]

As the record irrefutably establishes, and as recognized on the face of Order R-11133-A itself, there is an ongoing escape of gas from the Pictured Cliffs formations into the Fruitland Coal formation in direct violation of NMSA 1978 §§ 70-2-12 and 19 NMAC 15.C.106.A and 303.A. Yet, the Commission does nothing about it.

The Commission was also asked to exercise its authority to afford relief in accordance with its regulatory duties. Specifically, the Commission was asked to restore the Chaco wells to production to determine (1) whether any of the wells have been permanently lost, (2) the quantification of gas produced out of zone, and (3) to re-establish a steady state of Pictured Cliffs

production in order to determine (a) a curtailed rate of production for the offsetting coal wells to eliminate further drainage, (b) to establish how the Pictured Cliffs and Fruitland Coal wells may be simultaneously produced without interference, or, alternatively, if (b) proves impractical, then (c) determining how the coal wells should be re-completed or shut-in to prevent further drainage. In addition, the Commission was also asked to convene further proceedings to determine the volumes of Pictured Cliffs gas produced by Whiting's wells subsequent to the August, 1999 hearing in addition to the 176,900 MCF proved to have been produced prior to the hearing. The Commission failed to address these matters. Without these necessary components, the Order is incomplete and fails to afford meaningful relief.

Additionally, while Order R-11133-A authorizes the NMOCD to approve restoring the four shut-in Chaco wells to producing status, the Order omits any similar provision requiring Whiting to demonstrate how its five Fruitland Coal wells may be produced without interfering with the Chaco wells or otherwise producing gas out of the separately owned Pictured Cliffs formation. The omission is significant and further demonstrates both how the Order is incomplete and how the NMOCC disregarded its statutory duties. Nevertheless, on August 1, 2000, Pendragon initiated such an application before the NMOCD in case No. 12479, proposing to establish a method to restore the Chaco wells to production as specifically provided for by Order R-11133-A. [RP page 5207] (See supplemental record.) On August 22<sup>nd</sup>, the NMOCD declined to implement this express provision of Order R-11133-A, choosing instead to stay the application in case No. 12479 until this appeal is resolved. (The Division advised of the stay verbally and issued no formal order.) The NMOCD's unwillingness to implement the NMOCC's Order is a compelling demonstration of how the Order is incomplete, unworkable and does not afford meaningful relief.

**Issue 2.** Pendragon and its partners own one hundred percent of the Pictured Cliffs formation lease rights and are accordingly entitled to produce one hundred percent of the recoverable Pictured Cliffs reserves. While Order R-11133-A says on the one-hand that Pendragon can continue to produce its Chaco 1J and 2J wells and that the Chaco 1, 2R, 4 and 5 wells may be restored to production, the Order later contradicts itself and says these wells have already produced their “fair share” of gas. (Order R-11133-A, Findings 34, 45 and 46.) The basis for this finding is not explained. Neither does the Order define “fair share”.

Moreover, under the circumstances here where one hundred percent of the common source of supply is owned by Pendragon, the Commission does not have the authority, either express or implied, to make a determination of what constitutes a “fair share”. It is only where the “correlative rights” of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his “just and equitable share” of gas in the pool. (See, NMSA 1978, 70-2-17 A.) That situation does not exist here. Whiting’s wells are located within the horizontal and vertical limits of the Basin-Fruitland Coal Gas Pool as defined by the Division in Order No. R-8768. Pendragon’s wells are located within the horizontal and vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas pool as defined by the Division in Orders R-4260 and R-8769. They are separate “common sources of supply” or “pools” within the meaning of Section 70-2-33.B of the Oil and Gas Act. Whiting and Maralex have no interest in Pendragon’s Pictured Cliffs production and consequently, they have no “correlative rights”<sup>10</sup> that are affected. Significantly, there is no “correlative rights” finding in Order R-11133-A.

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<sup>10</sup> “Correlative rights” are defined in NMSA 1978 70-2-33.B as “...the opportunity afforded...to the owner of each property in a pool to produce without waste his just and equitable share of the oil or gas or both in a pool...”

Absent an administrative proceeding consolidating the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool into a single “common source of supply,”<sup>11</sup> the Commission is unable to make the determination that Pendragon has produced its “fair share” from its separate gas reserves. By purporting to do so, the Commission has clearly exceeded its statutory authority. In one fell-swoop, the Commission has acted (1) arbitrarily and capriciously, (2) outside the scope of its authority, and (3) not in accordance with law.

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<sup>11</sup> Such proceedings are frequent and are done via the NMOCD’s authority under Section §§ 70-2-12 B(12) of the Oil and Gas Act.

**Issue 3.** The following findings are not supported by substantial evidence.

(a) Depletion. Findings 34, 45 and 46.

The findings that the Pictured Cliffs formation was “depleted” or “nearly depleted” prior to the time the acid and fracture stimulation treatments were performed on Pendragon’s Chaco wells in 1995 are not supported by the evidence. It is apparent that the Commission’s findings in this regard rely heavily on the separate finding (finding 40) that the Pictured Cliffs formation had not incurred reservoir damage. As discussed below, this separate finding is not supported by the evidence. To the contrary, the record is replete with uncontroverted, direct evidence establishing the existence of three types of reservoir damage. Acid and frac jobs are specifically designed to reverse the effects of such reservoir damage and restore wells to higher production rates. That is exactly what was established by Pendragon.

The evidence does not support the depletion findings for two additional and equally compelling reasons: (1) Depletion is a function of economics. The Commission’s findings presuppose the Chaco Pictured Cliffs wells were uneconomic without any substantiating evidence at all. (2) It is inarguable that the most important physical indicator of a reservoir’s ability to produce is reservoir pressure. The overwhelming proof in the record with respect to reservoir pressures does not support any conclusion that the Pictured Cliffs was depleted. In this regard, the Commission “ignores pertinent facts”. (High Ridge Hinkle v. City of Albuquerque, 119 N.M. 29, 40, 888 P.2d 475, 485 [Ct. App.], *cert. denied*, 199 N.M. 20, 888 P.2d 466 [1994]) The Commission’s disregard of the evidence on reservoir pressures and the failure to make any findings in its order are on this material issue arbitrary and capricious and contrary to law. As a result, the Commission’s findings are not “sufficiently extensive to show the basis of the order.” (Viking Petroleum v. Oil Conservation Com’n, 100 N.M. 451, 453, 672 P.2d 280, 282 [1983]:

“The findings must disclose the reasoning of the Commission in reaching its conclusion.”, Id.  
“The Oil Conservation Commission must make findings of ultimate facts which are material to  
the issues.” Fasken v. Oil Conservation Commission, 87 N.M. 292, 532 P.2d 588 [1975]).

Finding 43 of the Order concludes that the acid treatment jobs on the Chaco 1J and 2J wells did not establish communication with the Fruitland Coal formation and that these treatments “did not alter these wells’ rates of production.” This finding is not in error, but demonstrates why the Commission’s failure to address the well and pressure data is so significant. If these two wells did not connect with the Fruitland Coal formation, then the pressures reported for the wells [RP pages 1689 to 1701; 1720 to 1734] are true Pictured Cliffs reservoir pressures, both before and after the acid stimulation treatments. Consequently, the finding that the Pictured Cliffs reservoir is “depleted” is contra-indicated by Finding 43, as well as by the clearly relevant pressure data. As a further example, the evidence of pressure data for the Chaco No. 4 well should be examined. The high pressures measured immediately after the 1995 acid job on that well and before the subsequent fracture treatment in May of 1995 [RP page 1691; Ex. N-8 RP page 2137] also establish that (1) the Pictured Cliffs was not depleted, and (2) the pressures (and production) in the Pictured Cliffs were not a result of any communication with the Fruitland Coal formation. (Unless, of course, the Whiting Fruitland Coal wells that were heavily fractured in 1992 established the communication.)

The additional evidence in the record on reservoir pressures is substantial:

The original reservoir pressure in the Pictured Cliffs formation in the late 1970’s was approximately 230 psi. By 1995, reservoir pressures ranged from between approximately 150 to 170 psi, or higher. In 1999, Pictured Cliffs’ reservoir pressures ranged from above 150 psi to 73 psi in those areas characterized by significant offset production. The testimony and evidence establish



that Pictured Cliffs wells may be produced economically today at reservoir pressures falling below 50 psi. (A. Nicol; Pg 57, line 3) [RP page 1713] Hence, this Pictured Cliffs reservoir with pressures of generally 150 psi is not "depleted."

The pressure in the Chaco 1J had a surface shut-in casing pressure of 158 psi before any acidizing or other stimulation was done. (A. Nicol; Pg 31, line 5; Pg 34, line 1; Pg 42, line 11; and Pg 65, line 7) [RP page 1687, page 1690, page 1698; page 1721]

After the acid stimulation treatments in 1995 and following a pressure build-up period, pressure measurements in the Chaco No. 4 well over three months ranged between 140 to 147 lbs., which was approximately 60 percent of the original reservoir pressure of 230 lbs. (A. Nicol; Pg 38, line 6; page 49, line 5) [RP page 1694; page 1705; RP page 71]

In 1995, post-fracture stimulation pressures were 170 lbs. in the Chaco 1, 151 to 153 lbs. in the Chaco 4 and 5 wells, and, in July, 1996, 150 lbs. in the Chaco 2-R well, indicating a relatively uniform pressure throughout the Pictured Cliffs reservoir in the area. During this same period of time, pressures in the Fruitland Coal formation, measured in 1994 in the Gallegos Federal 6-2 well and the Gallegos Federal 7-1 well were approximately 220 lbs. Correspondingly, there is no evidence that the pressures exhibited in the Chaco wells increased to Fruitland Coal formation pressures during this period of time. Moreover, the Pictured Cliffs reservoir pressures are consistent both before and after the stimulation treatments. (A. Nicol; Pg 38, line 6; page 49, line 5) [RP page 1694; page 1705; RP pages 71 to 72]

The surface shut-in pressure of 158 psi measured on the Chaco 1-J well on January 28, 1995 is an accurate reflection of Pictured Cliffs reservoir pressures before any of the restimulation treatments were performed on the Chaco wells. This pre-stimulation pressure is in line with pressures taken subsequent to the acid job on that well (155 psi). Following a five-month shut-in

period, the Chaco 2-J well had a shut-in pressure of 198 psi in June 1995, subsequent to the January 30, 1995 acid job. When the well was opened to the atmosphere, it blew down to zero pressure in four minutes. Such well performance is not indicative of the high-rate, high-volume of the cross flow that could be expected if the well had communicated with the Fruitland Coal formation. (A. Nicol; Pg 31, line 5 and Pg 65, line 7) [RP page 1687; page 1721 ]

The measured pressures in the Pictured Cliffs wells in 1995 were less than the average reservoir pressure in the Fruitland Coal formation at that time. (D. Cox; Pg 14, line 14)[RP page 1836]

Pictured Cliffs reservoir pressure evidence presented by Pendragon establishes that there is no correlation between pressures in the Pictured Cliffs and distances from coal wells. The relatively constant pressure or, in some instances, the slight pressure increases, is indicative of a stabilized pressure over a large reservoir area. (A. Nicol; Pg 40, line 1) [RP page 1696 ]

At approximately 150 psi, 1995 Pictured Cliffs reservoir pressures in the subject area, generally, are approximately 62 percent of original pressure, indicating that the reservoir is only partially depleted. Further reservoir analysis evidence that assumed a reservoir thickness of 25 feet with 25 percent porosity, at 65 percent gas saturation and a 75 percent recovery efficiency established that the Pictured Cliffs reservoir has significant additional reserves remaining to be produced. [August 1999 hearing; RP page 1575; Cox, RP pages 1852 to 1853]

Pressure information obtained during the year-long shut-in of the Chaco Pictured Cliffs wells in 1998 confirms reservoir continuity and pressure communication over large areas which is additional evidence supporting the conclusion that each of the wells can produce reserves from a large area. In addition, the shut-in data show that pressure continues to build up in those areas

with little withdrawal, except where the Pictured Cliffs gas is being produced by the coal wells.

(J. McCartney; Pgs 19 to 21) [RP pages 1972 to 1974]; (A. Nicol) [RP pages 1702 to 1734]

Neither are the Commission's depletion findings supported by the significant amount of "volumetrics" and "material balance" evidence contained in the record.

Following their original completions, the Pictured Cliffs wells exhibited significantly high "IP's" ("initial production rates"). The Chaco No. 1 well had an IP of 342 MCFd while the Chaco 4 had 480 MCFd. The reported IP of Chaco No. 5 was 1,029 MCFd. However, at no time since their original completions or subsequent to the stimulation treatments did the production levels on any of the Chaco wells exceed the reported IP's. [August 1999 hearing; RP pages 478 and 479]

Pendragon presented volumetric and material balance analysis evidence showing that there are sufficient reserves in the Pictured Cliffs formation to support the historic and projected production from the Chaco wells. (J. McCartney; pg 2, line 17; pg 4, line 4)[RP page 1955; page 1957] (August 1999 hearing; RP pages 475 to 498; 555 to 570]

Generally, the evidence establishes that the Pictured Cliffs wells were producing volumes of gas that were less than their oil and gas in place ("OGIP"), whereas the Fruitland Coal wells have been and will produce more than their indicated OGIP on 320 acres. [August 1999 hearing; RP 677]

Pendragon's material balance and gas-in-place analysis data for the subject Chaco wells showed a material balance OGIP of 3,117,000 MCF for the five Pictured Cliffs wells. When compared with the performance history and estimated reserve analysis data, the subject Pictured Cliffs wells indicate an ultimate recovery of 2,301,525 MCF, or approximately 73.8 percent of the material balance reserves. Both the volumetric analysis and material balance analysis data show sufficient reserves in the Pictured Cliffs formation to support the historic and projected

production from the Chaco wells. (J. McCartney; pg 17, line 14)[RP page 1970] Again, this is not a “depleted” reservoir by any stretch of the imagination.

Volumetric analyses for the Fruitland Coal formation in the area establish that the basal coal contains an average of 1,262,661 MCF per 320-acre spacing unit.<sup>12</sup> Altogether, the five subject Fruitland Coal wells are estimated to have 6,897,801 MCF OGIP per 320 acres. The ultimate recoveries for these Fruitland Coal wells were shown to be significantly high relatively early in their producing lives. For instance, the Gallegos Federal 26-12-6 No. 2 and the 26-12-7 No. 1 have already produced more than 83 percent of their OGIP, each. Together, all of the subject Gallegos Federal Fruitland Coal wells have produced 54.1 percent of the OGIP. This analysis shows that the subject Fruitland Coal wells are producing much more gas than can be calculated to exist on each of their 320-acre spacing units. In addition, well performance and decline curve analysis demonstrates that each of Whiting’s wells are draining 545 acres, on average, presuming they produce only coal gas. (J. McCartney; pg 7, line 8)[RP page 1960]

The gas production history for the subject coal wells shows cumulative production for all five wells at 3,733,295 MCF. Remaining recoverable reserves based on estimates are 4,557,865 MCF. [Ex. M-2; RP 2563] At the 76 percent estimated recovery factor, ultimate recoveries are anticipated to be 8,291,160 MCF. The Whiting Fruitland Coal wells have produced and are expected to produce much more gas than can be accounted for from the Fruitland Coal formation on 320-acre spacing. The performance of the subject coal wells and subsequent gas recoveries establish that the Chaco wells are not producing Fruitland Coal gas reserves and are not interfering with the Gallegos Federal wells. [RP pages 1960 to 1961]

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<sup>12</sup> NMOCD rules require that Fruitland coal wells be produced on 320-acre spacing units while Pictured Cliffs wells must have 160-acre units.

The recent drilling and fracture stimulation completion of the Pictured Cliffs formation in the last few years in the nearby State 2-R well located in Section 2, T26N R13W, which produces approximately 400 Mcfd, is additional evidence establishing that the Pictured Cliffs is not depleted. (A. Nicol; pg 54, line 12)[RP page 1710]

Finally, when the Commission's "depletion" findings are placed side-by-side with the provisions and findings of the order that expressly provide for future production from the Chaco Pictured Cliffs wells, and Pictured Cliffs gas that is "now capable of production" (finding 44), the inconsistencies of this unworkable order are all too obvious. In this regard, the finding of "steady gas production" from the Chaco wells (finding 35) is in direct conflict with the depletion findings.

(b) Geologic evidence of the “third bench”.

Pendragon presented evidence of the existence of a “third bench” of the Pictured Cliffs formation in the area that contributes gas to Pictured Cliffs wells. Despite this, the Commission, at finding 39, oddly concluded that “The evidence does not support this assertion. No “third bench” has been reported previously throughout the San Juan region, and there is no geological evidence of this kind of formation.” Clearly, this finding of the Commission is not supported by the evidence.

Well log information presented by Pendragon establishes the absence of any lithologic barrier to the downward growth of fracture treatments initiated in the main body of the Pictured Cliffs into the lower, third bench of the Pictured Cliff sandstone. Correspondingly, Pendragon established by a preponderance of the evidence that the third bench of the Pictured Cliffs sandstone contributes substantial reserves to the subject Chaco wells. (A. Nicol; pg 159, line 4 to pg 165, line 4)[RP page 1816 to 1822]; [August 1999 hearing; RP page 95]

Pendragon produced evidence that irrefutably established the existence of the “third bench” and/or “lower bench” of the Pictured Cliffs formation, not only in the San Juan Basin generally, but in the immediate vicinity of the subject lands. [RP pages 1672, 1673; RP 1816 to 1822; Exhibit N-68, RP page 2334]

Well log correlations identified the third bench in a number of wells in the area. [Ex. N-68, RP page 2334] The High Roll #4 well located nearby in Section 35, T27N, R13W, was in fact completed in and produces from the third bench. [RP page 1818]

The nearby Dome Navajo 12-26-13 No. 1 well produces exclusively from the third bench. [RP page 1820]

The third bench is also found in the High Roll #4 well, the Chaco 2R well (one of the several subject wells within the third bench), as well as the Lansdale Federal No. 1 well. [RP pages 1820 and 1821]

Pendragon established that the lower bench/third bench of the Pictured Cliffs contributed “substantial” gas reserves to the Chaco wells. [RP pages 1966, 1967; Ex. M-16 to M-18, RP pages 2579 to 2581; RP pages 560 to 562]

The record testimony from the hearing is also replete with evidence on the third bench: [RP pages 95 and 96, 197 to 199, 201 to 203, and 472 to 473].

The finding in Order R-11133-A that there is “no geological evidence” of the third bench of the Pictured Cliffs formation is disturbing. This clearly erroneous conclusion indicates an utter lack of due diligence on the part of the Commission and, again, that it ignored critically material factual evidence in the record.

The disregard of this important geologic evidence undermines the Commission’s findings on a number of other central points, including, most notably, the finding that the Pictured Cliffs formation is depleted. The credibility of the entire order is called into question as a result.

The Court should be gravely concerned.

(c) The absence of well and reservoir damage.

The Commission's finding (finding 40) that it is "unlikely" the Chaco wells had suffered from significant reservoir damage is not supported by the evidence.

Pendragon presented extensive evidence on the existence of damage: [RP pages 659 to 662; 1852 to 1856; 1833 to 1834; 1848 and 1971 to 1972].

The rapid production decline experienced by the Chaco wells so soon after their initial completion is not consistent with the well production behavior that could be expected from a large, continuous reservoir with high permeabilities, therefore indicating the possibility of damage in the wellbore and in the reservoir in the immediate vicinity of the well. [August 1999 hearing; RP page 662; RP pages 1971 to 1972; RP pages 659 to 662]

Pressure build-up information derived from measured surface pressures and bottom hole pressures indicated the existence of reservoir damage that is more significant than what is typically attributed to "skin" damage. Pendragon's expert well-testing and reservoir engineer characterized the damage as "extreme, severe, deep, very deep" formation damage, extending to a great distance away from the wellbore. The extent of the damage is also reflected on the production curves for the subject Pictured Cliffs wells. [August 1999 hearing; RP pages 650 to 662]

Pendragon presented evidence establishing that the Chaco wells were damaged by one or more of the following: (1) scale precipitation, (2) water blockage and (3) migration of clay fines. [August 1999 hearing; RP pages 794 and 795]

Of the three types of damage determined to exist in the Chaco wells, the most likely cause of damage is water block that has plugged off the more permeable intervals of the Pictured Cliffs or those intervals with higher gas saturation levels. The testimony further established that even small



volumes of water in a relatively low pressure reservoir such as the Pictured Cliffs formation can cause water block, making it more difficult for Pictured Cliffs wells to recover once water intrudes into the area around the wellbore. (D. Cox; pg 34, line 7)[RP page 1856]

Outside substantiation for the existence of reservoir damage in the Pictured Cliffs is found in the Halliburton core sample analysis for the Lansdale Federal No. 1 well indicating that “the samples are basically fine to very fine grained kaolinite clay cemented sandstone. Permeabilities range from less than one millidarcy to 272 millidarcies. The main water sensitivity is kaolinite clay migration in the pores.” [August 1999 hearing; RP page 1527; Ex. N-62 RP page 2326 and RP pages 1529 to 1531]

A reservoir simulation model was used to determine theoretical well performance of a Pictured Cliffs well having a reservoir thickness of twenty-four feet and a permeability of 25 millidarcies. The simulation establishes that such a well has the capability to efficiently drain a 640 acre reservoir. The simulation results are additional evidence supporting the conclusion that the relatively poor performance exhibited by the subject Pictured Cliffs wells is a result of reservoir damage. (J. McCartney; pg 19, line 11)[RP page 1972]

The petroleum engineering expert testimony concluding that Pictured Cliffs well and reservoir damage was caused in part by scale is based on actual observations in the field in the area of the subject lands. [RP pages 235 to 236; 1584 to 1585]

An analysis of the transmissibility in the Pictured Cliffs formation using reported shut-in and well head flowing pressures over time establishes that the transmissibility in the reservoir had decreased. Calculations of flow capacity for the Pictured Cliffs wells show they were capable of flowing at only 9 percent to 36 percent of their fuel capability if their permeability had not changed. This evidence established that significant reservoir damage had occurred by 1986, which was

overcome by the fracture and acid stimulation treatments in 1995. (J. McCartney; pg 18, line 20)[RP page 1971]

Maralex's president also testified that the volumetric and material balance analyses performed on the Chaco Plant 5 and the Chaco No. 4 indicated a component of damage had affected those wells as they had substantially underproduced the recoverable gas in place. This not only substantiates the existence of damage, it directly contradicts the premise that the formation was fully depleted. [August 1999 hearing; RP page 903]

During the January 1995 acid stimulation treatment, the measured surface pressure on the Chaco No. 4 well reached 800 psi before the injection of 500 gallons of acid into the formation could commence, even though this well had the highest original permeability in the Pictured Cliffs. That such pressure was reached during the acid job is direct evidence of the existence of reservoir damage. (M Conway; pg 19, line 15; A. Nicol; pg 34, 14)[RP page 1928; page 1690]

The testimony and evidence established that once the skin damage was overcome by the acid and fracture stimulation treatments, the Chaco wells with their 50 millidarcy average permeabilities and their 150 psi Pictured Cliffs reservoir pressures were able to produce significant volumes of gas into a gathering system with 40 to 50 pound line pressures. [August 1999 hearing; RP pages 1576 and 1580]

Whiting presented no testimony or evidence that refuted the evidence of wellbore and reservoir damage in the Pictured Cliffs formation. Indeed, Whiting's engineering witness testified that he believed the Pictured Cliffs wells were draining only small areas, even though there was good reservoir quality. [RP pages 1367] Consequently, the existence of wellbore and reservoir damage is supported by a preponderance of the evidence.

This evidence substantiates the existence of damage that the well treatments were intended to overcome and further contradicts the conclusion that the formation was depleted.

(d) The Chaco well fracture stimulation treatments.

The findings that the fracture treatments on the Chaco 1, 2R, 4 and 5 wells extended into the Fruitland Coal formation (finding 33) or that such was a “possibility” (finding 39) do not have the support of substantial evidence in the record. To the contrary, the evidence established that the light frac jobs on the Chaco wells were specifically designed to take advantage of underground geologic conditions and inter-formational stress barriers to remain contained within zone. [RP pages 258 to 260, 1669, 1737 to 1753 and 1901 to 1907]

Stimulation treatments can be designed with fracturing fluids and pumping programs to control or prevent breaching into bounding formations. (M Conway; pg 23, line 14)[RP page 1932] Moreover, the finding that there is “no scientific basis” for believing that the fractures from the Chaco well stimulation treatments moved downward into the “third bench” is clear error and disregards actual “tracer” survey data<sup>13</sup> [Ex. N-33; RP page 2230] and the considerable testimony and evidence presented on fracture technology: RP pages 1967, 83 to 84, 197 to 206; 539; 1735 to 1755 and 1910 and 1935]

Well log information presented by Pendragon established the absence of any lithologic barrier to the downward growth of fracture treatments initiated in the main body of the Pictured Cliffs into the lower, third bench of the Pictured Cliff sandstone. (A. Nicol; pg 159, line 4 to pg 165, line 4)[RP page 1816 to 1822]; [August 1999 hearing; RP page 95]

Pendragon presented evidence which established that fractures will be likely to, and frequently do remain confined and not grow across the reservoir top or bottom if the bounding reservoir rock above or below the pay interval is stronger or has high in-situ stresses or if the

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<sup>13</sup> Radioactive isotopes are introduced into fracture fluids so that their locations in the fractures can be “traced”, establishing the size and locations of the fractures themselves.

interface between the two rocks can slip and absorb the energy of the fracture extension. (R. Blauer; pg 24, line 11)[RP page 1902] [M. Conway RP pages 1913 to 1914 and 1919 to 1921]

Pendragon presented additional evidence, which establishes that the different types of rocks at a reservoir boundary will have different in-situ stresses. The difference in the stresses is known as the stress contrast. The stress contrast between the sandstone and the coal in the Chaco area is approximately 400 psi and is 125 psi between the sandstone and a shale. During a fracture stimulation treatment, assuming there is no slip at the boundary of the different rock types, the fracture fluid must attain sufficient injection pressure to exceed the stress contrast in order to breach the boundary. If slip is present, then yet more pressure is required to exceed both the stress contrast and to displace the rocks sufficiently to create a crack in the breached interval. Consequently, assuming no slip, fracture pressures must exceed the stress contrast of 400 psi in order to breach into the coal. If the coal is not breached, then fracturing pressures will be controlled by the stresses in the sand and shales themselves. Conversely, a fracture initiated in the coal will more easily breach out of formation and into the sandstone, as the sand will have much lower stress than the coal formation. (R. Blauer; pg 24, line 18; M. Conway, pg 11, line 17)[RP page 1902; page 1920]

The evidence presented by Pendragon's petroleum engineers and geological engineers established that artificially induced fractures are influenced and controlled by lithology and bedding planes. Softer, more ductile rocks deform plastically at stresses where more brittle, less compressible rocks like sandstones tend to fracture. Coals and soft shales will tend to deform while hard sandstones will tend to crack. On a microscopic scale, shales and coals will tend to shear and slide, extending and thinning, rather than cracking, until some higher critical stress threshold is reached. Thus, the plastic properties which allow the higher stress to exist control the method of deformation as well. Similarly, the bedding planes, themselves, are capable of absorbing large

amounts of fracture energy effectively acting as a fracture barrier and confining fracture growth to a particular bed. (A. Nicol; pg 79, line 3)[RP page 1735 to 1747]

The testimony and geologic literature establish that fracture stimulations will tend to remain contained within the more brittle rock-like sandstones. Conversely, fracture stimulations are prone to grow out of more compressible rock, such as a shale or a coal, into more brittle rock. Induced fractures also tend to migrate from a higher-pressure zone, such as the Fruitland Coal formation in this case, into a lower pressured zone, such as the Pictured Cliffs sandstone formation. Reservoir pressures directly control fracture geometry. All of these findings are widely accepted and are confirmed by radioactive tracer survey studies. (M. Conway; pg 8, line 4)[RP page 1917]

Pendragon produced evidence of radioactive tracer survey data from the nearby Edwards Bartlesville No. 1 well located in Section 3, T-26-N, R-13-W which in 1998 received a fracture stimulation treatment in the Pictured Cliffs formation similar to that which was applied to the Chaco wells. The radioactive tracer survey information showed conclusively that fractures initiated in the Pictured Cliffs remained contained within the formation and stopped at the bedding plane between a thin coal and the thicker Pictured Cliffs sandstone. The Bartlesville well contained an Upper Pictured Cliffs sandstone interval very much like that encountered in the subject Chaco wells. The tracer survey information was confirmed by Nolte plot data, which showed no detectable vertical growth, indicating the fracture remained within the upper Pictured Cliffs sandstone interval. Similar results were also presented for the Dome Federal 17-27-13 No. 3 Well, also located in the near vicinity. (A. Nicol; pg 95, line 18; pg 97, line 18)[RP pages 1749 to 1751] (Exhibit N-33) [RP page 2230]

The normal in-situ properties of the Pictured Cliffs sandstone and the Fruitland Coal formation establish that it is more probable that a fracture initiated in the Fruitland Coal is more

likely to break out of zone into the Pictured Cliffs sandstone than is a fracture initiated in the Pictured Cliffs likely to break into the coal. [RP pages 1918 to 1921 and 1928] The evidence on these factors does not support any finding in the Commission's order, whether expressed as a "possibility" or not, that the fractures in the Pictured Cliffs broke out into the coal.

In this case, the evidence establishes that the Fruitland Coal was a higher pressured formation with higher *in-situ* stress than the Pictured Cliffs. Additionally, the coal fracture stimulations were of a significantly larger volume, and done at higher injection rates and at significantly higher pressures. These factors support the conclusion that the fractures initiated in the coal broke out into the Pictured Cliffs sandstone. [RP pages 1919 and 1929 to 1934]

The evidence presented establishes that the *in situ* stress in the coal formation is approximately 400 psi higher than in the Pictured Cliffs sandstone. Consequently, a large fracture treatment initiated in the sandstone must be stepped up even further to impart the equivalent of a 400 psi incremental increase in fluid pressure if the fracture is to penetrate into the coal. This would be a substantial and unnecessary increase in treating pressure over that required to extend the fracture within the sandstone. The evidence further establishes that fractures are contained where there is boundary slippage at the interface between the coal and shale or sandstones. Where slippage occurs, the fluid pressure must be increased even higher in order to break down the higher stress layer before the fracture can grow into the coal. Such evidence is further substantiation for a finding that it is not likely that the fractures initiated in the Pictured Cliffs sandstone broke out into the Fruitland Coal formation. (M. Conway; pg 14, line 18)[RP page 1751]

The testimony of Whiting's consulting petroleum engineer at the hearing established that because of the higher stress gradient in the coal, the treatment pressure of any of the fracture

stimulations initiated in the Pictured Cliffs sand would not have been sufficient to overcome both the stress gradient and closure pressure in the coal to allow the placement of any proppant into a fracture into the coal. [August 1999 hearing; RP page 1288; RP pages 1341 to 1342]

The evidence and testimony further established that it is more probable that the proppant circulated in any upward growing fracture in the Pictured Cliffs sandstone would settle downwards to the bottom of the fracture, thus allowing the upper portion of the fracture to close. Such closed, unpropped fractures could not serve as conduits for the production of water or gas out-of-zone. [August 1999 hearing; RP page 314]

Conversely, it is more probable that fractures growing downward from the Fruitland Coal into the Pictured Cliffs formation will remain propped open by the settlement of proppants into the bottom portion of the fracture. Consequently, fractures growing downward from the coal are more likely to serve as conduits for the production of gas from the Pictured Cliffs formation. [RP page 1349]

All of the above evidence is consistent with the admission of Whiting's expert engineering witnesses that the fractures initiated in the Fruitland coal formation grew downward into the Pictured Cliffs. [RP page 3400; RP page 1335]



(e) Gas “bubbles”, gas “highways” and gas “compartments”.

In discussing the post-stimulation increases in gas production experienced on the Chaco wells, at finding 36, the Commission engages in speculation that a growing “gas bubble” in the Fruitland Coal formation extended toward an area of high-pressure contrast where a “thin capillary barrier may have been broken, allowing gas migration between the two zones.” What it was that actually broke the barrier, the Commission does not say in the finding. Then, at finding 39, the Commission makes the rather tentative “finding” that “[o]ne possibility is that the hydraulic fractures were extended upward to the Fruitland Coal formation and generated a gas highway to the gas bubble.” The order also indulges in conjecture about “high pressure gas compartments” (finding 37). By these suggestions, the Commission does not preclude another “possibility” e.g., it is possible that these inter-fingered formations came into communication naturally.

This is all rank speculation by the Commission. Neither side presented any evidence of the existence of high-pressure “gas compartments”. This finding is wholly unsupported by the evidence. The finding that the fracture stimulation treatments on the Chaco wells broke into such “compartments” is directly at odds with the tracer survey exhibits and testimony on the Bartlesville well and the Dome Federal well establishing that such fracture treatments were successfully contained within the appropriate zone. (Ex. N-33) [RP page 2230; RP pages 1735 to 1755] Moreover, there is no evidence in the record at all of the existence of any “gas bubble”.

Findings 36, 37 and 39 are only hypotheses conjured up by the Commission and are not supported by substantial evidence.

(f) The BTU data.

The finding that the BTU heating content data derived from gas samples supports the conclusion that the fracture stimulation treatments on the Chaco wells communicated to the Fruitland Coal formation (finding 41) is not supported by substantial evidence. Direct evidence to the contrary means that the finding is in error.

Early on, both parties considered the possibility that an BTU heating content analyses could help determine the source of gas being produced by a well, the idea being that coal wells produce gas with lower BTU values while Pictured Cliffs gas has higher heating content. The BTU data presented by both Pendragon and Whiting shows post-shut in BTU values for the Chaco wells to be well within the range of values measured for those wells when they were originally completed in the 1970's. [RP 84 to 87]; Ex. N-37 and N-39 [RP pages 2250 to 2258 and page 2265] In addition, the finding ignores the pre- and post shut-in data presented for the Chaco 2R well which showed high BTU values and increasing pressure following shut-in while the coal wells continued to produce. [RP page 1766] Moreover, the Commission's finding is at odds with the BTU data for the Chaco 1J and 2J wells. These wells, which the Commission concluded did not communicate with the Fruitland coal formation showed lower BTU values. However, the data from the Chaco 1J and 2J wells shows that the gas produced from these wells has BTU values similar to the gas produced from those wells the Commission concluded did communicate. [RP page 1765 to 1766] It is another inconsistency in the Order.

The evidence establishes that the BTU contents and the proportions of "higher end" or lighter molecular components in the gas produced from the wells in the area of the subject lands are not only highly variable from well to well, but also vary over time and with the producing conditions of the reservoir. Production from most Pictured Cliffs wells tends to contain heavier

components during the early stages of production, although this characteristic can be affected by a number of factors. Moreover, there is no clear differentiation in chemical content between gas produced from the Fruitland Coal formation and the Pictured Cliffs sandstone. (A. Nicol; pg 103, line 4)[RP page 1760]

The fact that the BTU or methane percentage may have decreased over the producing life of a Pictured Cliffs sandstone well is not evidence that the well is producing gas from another zone. (A. Nicol; pg 104, line 4)[RP page 1761]

Evidence from the geological and engineering literature establishes that Fruitland Coal and Pictured Cliffs formation wells in the area of the subject lands are frequently found to be producing similar gases which may come from source materials in the Lewis shales and/or from coal. The sources cannot be separated as being limited to coal for the coal wells or strictly Lewis shale for the Pictured Cliffs wells. Consequently, the gases cannot be clearly differentiated when they are produced. In addition, under the reduced pressures and at the reservoir temperatures measured in the Chaco area, the heavier components tend to drop out or move through the reservoir rock more slowly than methane, making the produced gas more lean. (A. Nicol; pg 102, line 6)[RP page 1759]

In February 1999, after more than seven months of shut-in, gas samples were taken from the Chaco No. 1, 4 and 5 Wells. The BTU analyses were all above 1,100 and were nearly identical to those at the times of original completion. [RP page 1870]

Pendragon presented evidence utilizing 155 gas analyses of numerous Pictured Cliffs and coal wells to demonstrate that there is no separation or stratification of BTU or other properties in the range between 1,000 BTU and 1,100 BTU which would allow the differentiation of coal gas from Pictured Cliffs gas in this area. [RP page 1756] (Ex. N-37) [RP pages 2250 to 2258]

The impropriety of the Commission's erroneous findings of communication based on the BTU data was demonstrated by Whiting's own engineering witness who also incorrectly concluded that any well producing gas with BTU values less than 1000 to 1050 could be presumed to be producing coal gas [RP 1158 to 1160].

#### IV. Relief

Based on the foregoing, the Court should **find**:

1. The agency's order is incomplete, ambiguous and impractical. The order fails to make findings of ultimate facts material to the issues.
2. The agency has failed to fulfill its statutory duties and has disregarded its own rules, regulations and prior orders.
3. The agency has failed to accord meaningful regulatory relief.
4. The agency has acted outside the scope of its authority and not in accordance with law.
5. The agency has acted arbitrarily and capriciously. Moreover, the agency's order ignores pertinent facts and fails to provide an adequate explanation of its basis.
6. The following findings in Order R-11133-A are not supported by substantial evidence:

The Court should **reverse** Order R-11133-A with respect to findings 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 45 and 46 and the relevant portions of decretal paragraphs 1, 4 and 5. The matter should then be **remanded** to the Commission and the agency should be directed to take the reservoir pressure data evidence into account and specifically find that the subject Pictured Cliffs reservoir is not depleted. Using such evidence, the Commission should also be directed to explain the reasoning for its findings.

The Commission should also be directed to further fulfill its duty to avoid further waste, dissipation of reservoir energy and loss of gas out of the strata by providing for the immediate restoration of the Chaco Pictured Cliffs wells to production.

The agency should also be directed to bring Whiting's Fruitland Coal formation wells into regulatory compliance by providing for the following:

- (a) Ordering the immediate shut-in of the offending coal wells, the Gallegos Federal 26-12-6 No. 2, the 26-13-12 No. 1 and the 26-12-7 No.1.
- (b) Restoration of the shut-in Chaco Pictured Cliffs wells to production to determine:
  - (i) Whether any of the Pictured Cliffs wells have been permanently lost as a result of the shut-in and, if so, the quantification of lost reserves;
  - (ii) The re-establishment of a steady state of decline in order to:
  - (iii) Determine the curtailed production rates the Fruitland Coal wells might be restored to so that drainage areas are equalized, in order to minimize or eliminate future damages; and
  - (iv) Alternatively, allow Whiting to demonstrate to the satisfaction of the Division how both the Pictured Cliffs and Fruitland Coal formation wells can be simultaneously produced without interference, and if they fail to do so, require the Gallegos Federal Fruitland Coal wells to be permanently shut-in or recompleted.


The Commission should be directed to convene a proceeding to determine the volumes of Pictured Cliffs gas reserves that have been produced by Whiting Gallegos Federal coal wells since June 30, 1999, whether any of the Pictured Cliffs wells have been permanently lost, and if so, the quantification of lost reserves as a result of the shut-in, in addition to the 176,900 MCF previously produced. For the Pictured Cliffs wells that Pendragon is able to restore to production, the Commission should receive evidence demonstrating the re-establishment of a steady state of decline for those wells.

Following the accumulation of relevant data, both parties should be afforded the opportunity to present evidence and make recommendations to the Commission to enable it to determine the curtailed production rates the Fruitland Coal wells may be restored to so that drainage areas are equalized and in order to minimize or eliminate future damage or interference. The parties should also be allowed the opportunity to demonstrate to the satisfaction of the Commission how both the Pictured Cliffs and the Fruitland Coal formation wells can be simultaneously produced without interference or drainage. If such evidence shows it is not reasonably possible to operate the Gallegos Federal Fruitland Coal wells without further damage, interference or drainage of the Pictured Cliffs formation, then the Commission should order Whiting to recomplete the Fruitland Coal wells. Alternatively, the Gallegos Federal 26-12-6 No.2, the 26-13-12 No. 1 and the 26-12-7 No. 1 should be ordered permanently shut-in.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By



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I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Statement of Issues  
was mailed to

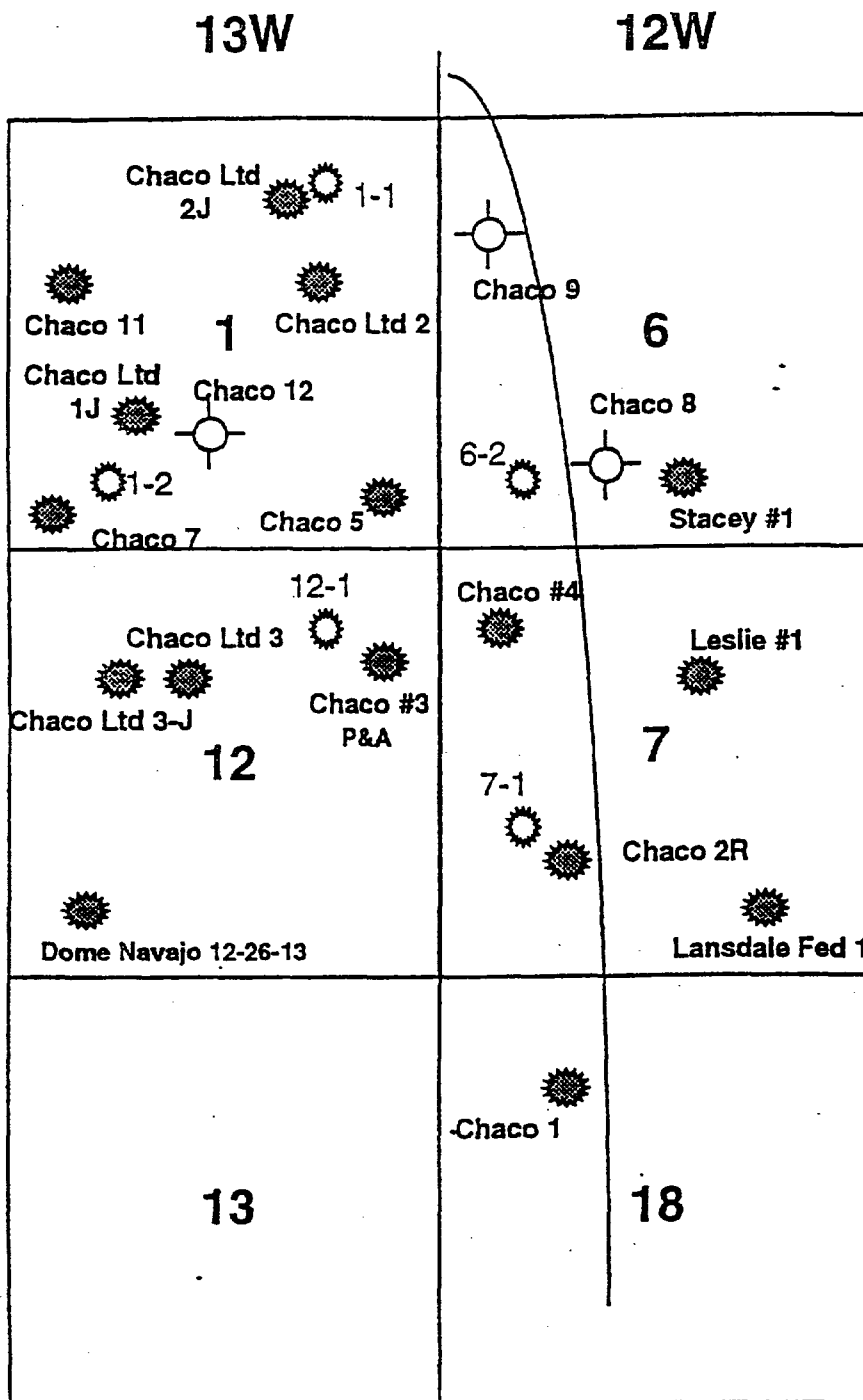
Steve Ross, Esq.  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

on this 2 day of October, 2000.



J. Scott Hall





26N

-  Fruitland Coals
-  Pictured Cliffs



FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

OIL CONSERVATION DIV.

00 SEP 32 AM 3:46

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**APPELLANTS'  
STATEMENT OF THE ISSUES**

Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation, (variously referred to herein as "Pendragon" or "Appellants"), in accordance with NMRA 1978 1-074 K, submit their statement of appellate issues in this matter.

**I. Statement of the Issues**

This statutory appeal is before this Court following the New Mexico Oil Conservation Commission's ("NMOCC" or "Commission") consideration of Pendragon's administrative Application in Case No. 11996 in August of 1999 and the issuance of Order No. R-11133-A on April 26, 2000. A more comprehensive description of the dispute, along with a description of the lands and the wells involved, is set forth in the Order [RP page 5174] and in the Summary of Proceedings, below. The Commission's Order purported to resolve a number of matters, including the over-arching issue of whether acidization and hydraulic fracture stimulation treatments

performed by the operators of Pictured Cliffs formation gas wells and nearby Fruitland Coal formation gas wells caused those separately-owned and separately-regulated formations to come into communication with each other.<sup>1</sup> Such hydraulic fracture stimulation treatments are often called “frac jobs”. To “frac a well” is a term used to refer to the methods used by the oil and gas industry to increase the production from a well by pumping a liquid or other substance into a well under pressure to crack (or fracture) and prop open the hydrocarbon-bearing formation. Fracture treatments are a commonly used method to stimulate oil and gas production that has been applied to well over half of the wells drilled in the United States.

While the Commission successfully resolved a number of issues, it fell short on several others, with the result that an ambiguous, incomplete and impractical order was issued. Consequently, this Court’s review is required in order to resolve the Commission’s failure to discharge its statutory and administrative duties and its disregard of the pertinent facts.

Pendragon seeks this Court’s review of the following issues:

**Issue 1.** The failure of the NMOCC to accord meaningful regulatory relief, fully and finally resolving the issues before it, in disregard of the Commission’s statutory mandate and in contravention of its statutes, regulations and prior orders.

**Issue 2.** Whether the NMOCC’s exceeded its statutory authority, acted arbitrarily, or misapplied the law to facts when it purported to determine that Pendragon’s wells had produced their “fair share” of gas and that further production should be limited, when in fact the Appellants own one hundred percent of the Pictured Cliffs formation gas.

**Issue 3.** The following findings in the agency’s Order are not supported by substantial evidence:

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<sup>1</sup> The proximity of the legal and geologic boundaries of those separately-owned formations (or “pools”) was also contested in the administrative proceedings. However, the Commission’s geological findings are not at issue in this

- (a) That Pendragon's wells either "depleted" or "nearly depleted" the Pictured Cliffs formation prior to 1995.
- (b) That there is no geologic evidence supporting the existence of the "third bench" interval contributing to Pictured Cliffs formation gas production.
- (c) That the Pictured Cliffs formation in the area had not incurred reservoir damage over the years.
- (d) That fracture stimulation treatments performed on four of Pendragon's wells escaped from the Pictured Cliffs formation and penetrated to the separately-owned Fruitland Coal formation.
- (e) That increases in gas production from Pendragon's Pictured Cliffs wells following the fracture stimulation treatments was attributable to "high-pressure gas compartments" in the area.
- (f) That BTU analysis evidence supports the conclusion that the fracture stimulation treatments on the Pictured Cliffs wells came into communication with the Fruitland Coal formation.

## **II. Summary of the Proceedings and Background**

In 1992, Maralex Resources, Inc. acquired the oil and gas leasehold operating rights to the Fruitland Coal Gas formation in the general area of the WAW field in San Juan County. Maralex acquired its Fruitland Coal formation rights from its predecessors in interest, Merrion Oil and Gas Corporation and Bayless Oil and Gas Corporation. Maralex subsequently assigned the majority of its lease interests to its current partner, Whiting Petroleum Corporation [RP page 4895, pg.3, para.6]

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appeal.

Shortly after acquiring its interests, Maralex drilled and completed its "Gallegos Federal" wells in the Fruitland coal formation and performed a series of rather heavy and aggressive fracture stimulation treatments on its wells. The frac jobs performed on the coal seams consisted of fracture fluid volumes on the average of 41,030 gallons at proppant weights averaging 72,656 pounds, injected at treating rates ranging between 45-60 barrels per minute (BPM).<sup>2</sup> [RP page 1753]

In 1994, after Maralex had applied its heavy and aggressive frac jobs on its coal wells, Merrion and Bayless assigned its remaining rights below the base of the Fruitland Coal formation to the base of the Pictured Cliffs formation to J.K. Edwards and Associates, Inc.<sup>3</sup> The assignment of the Pictured Cliffs rights covered the Formation that is in close proximity to, and in most cases is overlain by the Fruitland coal rights owned by Maralex [RP page 4895; Ex.N-4; RP page 2021] Edwards subsequently assigned a majority of its interests to Pendragon, and Pendragon subsequently became operator of these Pictured Cliffs properties.

Years before assigning its Pictured Cliffs rights, Merrion and Bayless had drilled and completed a number of wells (the "Chaco wells") in that formation. In some cases, Merrion had performed acid jobs or fracture stimulation treatments on its Pictured Cliffs wells. When Edwards/Pendragon acquired the six Chaco wells, it performed additional stimulation treatments. Three of the wells received acid treatments and frac jobs were applied to four of the wells. Compared to the heavy and uncontrolled frac jobs Maralex had applied to the coal formation, the Edwards/Pendragon frac jobs were substantially lighter and much more precise.<sup>4</sup> An exhibit demonstrating the proximity of the Chaco Pictured Cliffs wells and the Gallegos Federal Fruitland Coal wells at issue is attached. (Exhibit 1).

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<sup>2</sup> In the case of the Gallegos Federal 26-12-6 No. 2, the Maralex frac job consisted of a fracture fluid volume of 81,025 gallons with a 121,700 pound proppant weight injected at treating rates of between 45-60 BPM. [RP page 1753]

<sup>3</sup> Now known as Edwards Energy Corporation

<sup>4</sup> The foam fracs specifically designed for the Pictured Cliffs wells were applied at fluid volumes averaging 31,248 gallons at proppant weights averaging 38,421 pounds injected at treating rates ranging from between 22 to 34 BPM. [RP page 1753]

In 1998, Whiting and Maralex involved Pendragon in discussions before the New Mexico Oil Conservation Division ("NMOCD" or "Division") to address a perceived problem of communication between the Pictured Cliffs formation in the WAW Fruitland Pictured Cliffs pool and the Basin-Fruitland coal formation. At the same time, Whiting and Maralex filed a formal Application<sup>5</sup> with the NMOCD, alleging, generally that the drilling and fracture stimulation operations in the Pictured Cliffs formation had caused that formation to become communicated with the Basin Fruitland coal formation and that Pendragon's Pictured Cliffs wells were draining reserves owned by Whiting and the other interest owners in its wells. Whiting and Maralex also made the assertion that the producing formation Pendragon's wells had been drilled to was not the Pictured Cliffs formation, but was instead the Fruitland sandstone and Fruitland coal formation where Whiting owned the lease rights.

On May 26, 1998, Whiting and Maralex suddenly dismissed their application before the NMOCD and instead filed suit in District Court making the same basic allegations. Pendragon simultaneously filed its application with the Division in this case. In the meantime, before the Division could convene a hearing in this matter, Whiting and Maralex obtained a preliminary injunction from the District Court, shutting in four of Pendragon's Pictured Cliffs wells. However, pursuant to separate motions, the Court entered a ruling deferring to the Division's jurisdiction over the central issues in dispute and there has been little or no activity in the court proceeding since. On February 5, 1999, following hearings, the NMOCD issued Order No. R-11133 in Case No. 11996. Subsequently, both Pendragon and Whiting each filed applications for hearing de novo before the New Mexico Oil Conservation Commission ("NMOCC").<sup>6</sup> [RP page 4270; RP page 4301]

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<sup>5</sup> NMOCD Case No. 11921; Application of Whiting Petroleum Corporation and Maralex Resources, Inc. For An Order Shutting In, Limiting Production From, or Approving Downhole Commingling In Certain Wells, San Juan County, New Mexico.

<sup>6</sup> One of Whiting's partners, T.H. McElvain Oil and Gas LP dropped out of the case.

On August 12 – 21<sup>st</sup>, 1999, the NMOCC convened a hearing on Pendragon's Application brought pursuant to, inter alia, Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in NMOCD Order No. R-8768, as amended, seeking a determination that its Chaco wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool, and that Whiting Petroleum's Gallegos Federal wells completed within the Basin-Fruitland Coal Gas Pool were producing from the appropriate "common source of supply."

Pendragon also sought further relief, including, specifically, an order bringing Whiting's non-conforming wells back into compliance with the Division's rules, regulations and orders.

At the hearing, both parties contended that the other's well stimulation treatments caused their separately owned formations to come into communication. Both sides also contended that their wells experienced interference and that gas was being produced out of formation as a result. Significantly, at the hearing, Whiting's witnesses admitted that the high volume, high pressure and high injection rate fracture stimulation treatments performed on the Gallegos Federal wells by Maralex Resources likely caused their wells to come into communication with the Pictured Cliffs formation owned by Pendragon. [RP pages 3399 to 3400; page 3405 and page 3252] Conversely, Pendragon asserted and presented substantially more evidence that the acid jobs and relatively mild fracture stimulation treatments performed on its Chaco wells remained contained within the Pictured Cliffs formation and did not communicate with the Fruitland Coal Formation owned by Whiting. [RP pages 1735 to 17155 and the exhibits referenced therein; RP pages 1823 to 1878 and the exhibits referenced therein; RP pages 1901 to 1906 and the exhibits referenced therein; and RP pages 1910 to 1936 and the exhibits referenced therein]

On April 26, 2000, after hearing, the Commission issued Order No. R-11133-A [RP page 5174] which found that all of Pendragon's subject Chaco wells were perforated within the Pictured

Cliffs formation of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. The Order also effectively rejected the claims of Whiting and Maralex that the upper-set of perforations in Pendragon's wells were situated in, and producing from the Fruitland formation. Order R-11133-A affirmed that the vertical boundaries between the Pictured Cliffs and Fruitland Coal formations conformed to the respective lease ownership of Pendragon and Whiting. These geologic findings are not at issue in this appeal.

In addition, Order R-11133-A found that the Pictured Cliffs and Fruitland Coal formations first came into communication because of the heavy fracture stimulation treatments Maralex performed on five of the Whiting Fruitland Coal wells in 1992. (Finding 32.) The Order also found that the fracture treatments subsequently performed on four of the Chaco wells in 1995 communicated with the Fruitland Coal formation and ordered them shut-in pending further proceedings before the NMOCD.<sup>7</sup> As a result of this communication between the separately owned formations, the Order identified three categories of gas capable of being produced from Pendragon's Chaco 1, 2R, 4 and 5 Pictured Cliffs wells: Category I: Gas originally in-place in the Pictured Cliffs formation<sup>8</sup>; Category II: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through the 1995 fractures around the Pendragon Chaco wells; and Category III: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through the 1992 fractures around the Whiting Fruitland Coal wells. (Finding 44.) The Order then refers to the matter to the NMOCD for further proceedings in order to place these wells back on production. (Decretal Paragraph 4.)

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<sup>7</sup> Pendragon continues to dispute this particular finding.

<sup>8</sup> Whiting conceded that at least ten percent of the gas produced from the Chaco wells is this category of gas. [Rp page 5052; Whiting's proposed order, pg. 24, para.6.; pg. 16, para.69] Pendragon asserts it all of the production is Category I and Category III gas.



### III. Points and Authorities

**Issue 1.** The Commission failed to discharge a number of its statutory and regulatory duties for which its jurisdiction was specifically invoked pursuant to Pendragon's Application. In addition, the Commission failed to fully and finally resolve the issues before it. At the same time, a number of the provisions in the Commission's Order are in direct conflict with one another. As a consequence, the Commission's Order is ambiguous, inconsistent, incomplete and unworkable. Accordingly, the Commission failed to accord meaningful regulatory relief.

Pendragon requested the Commission to exercise its authority under the provisions of Order No. R-8768 [RP Testimony of Al Nicol, Page 110-114; RP pages 1767 to 1771; also RP for NMOCD application pages 5217 to 5233 (supplemental record), Pre-Hearing Statement (RP pages 4844 to 4849) and Stipulation of Facts (RP pages 4895 to 4901] to determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply. The Commission was also requested to fulfill certain duties under the Division's enabling statutes, the New Mexico Oil and Gas Act (NMSA 1978 §§ 70-2-1, *et seq.*), as well as the agency's rules regulations and orders.<sup>9</sup> Among these are:

#### **NMSA 1978 §§70-2-12 B (2) and (7)**

**[T]he Division is authorized to make rules, regulations and orders ...**

**(2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata; [and]**

**(7) to require wells to be drilled operated and produced in such manner as to prevent injury to neighboring leases or properties [.]**

#### **19 NMAC 15.C.106.A**

**During the drilling of any...well,...all oil, gas, and water strata above the producing and/or injection horizon shall be sealed or separated in order to prevent their contents from passing into other strata.**

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<sup>9</sup> The jurisdiction and duties of both the Division and the Commission are concurrent in all respects (See NMSA 1978 §§ 70-2-11.B)

19 NMAC 15.N.303.A

**Each pool shall be produced as a single common source of supply and wells therein shall be completed, cased, maintained and operated so as to prevent communication, within the well bore, with any other separate pool or horizon and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with the production from any other pool or pools is strictly prohibited.**

Similar mandates are outlined in Special Rules 2 and 12 of NMOCD Order No. R-8768 setting forth the Special Rules and Regulations for operators producing from the Basin-Fruitland Coal Gas Pool. Those special rules are specifically applicable to the circumstances here and were invoked under Pendragon's original Application.. [See Order No. R-8768; RP pages 5212 to 5216 (supplemental record); Pendragon's Application may be seen at RP pages 5207 to 5211 (supplemental record)]

The findings and decretal portions of Order R-11133-A make the affirmative determination that the Whiting Fruitland Coal wells are not producing from their "appropriate common source of supply" as required under *inter alia* Order No. R-8768. Order R-11133-A expressly determined that the Whiting coal wells are producing gas from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool. Production from the Pictured Cliffs formation by the offending coal wells would include Category I, II and III gas identified in the Order. Such production is in ongoing violation of Section 70-2-12 B (2) and (7) of the Oil and Gas Act as well as the regulations, order and rules cited above. Consequently, the Order fails to "afford such relief as necessary to bring the wells into compliance with the Division's rules, regulations and orders."

depleted  
no  
need

The Commission further failed to discharge its mandatory duties in two additional respects:

- (1) It failed to make a determination with respect to the volumes of Pictured Cliffs gas that were <sup>no</sup> <sub>requirement</sub> illegally produced (and continue to be produced) from Whiting's Fruitland Coal wells; and (2)

failed to take action to prevent the escape of gas from the strata vis <sup>same as above</sup> 'a vis the ongoing production of Pictured Cliffs reserves by Whiting's Fruitland Coal wells.

In this regard, Pendragon established by a preponderance of the evidence that Whiting's coal wells produced 176,900 MCF of Pendragon's Pictured Cliffs gas from the time the Chaco wells were shut in on June 30, 1998 to June 30, 1999. [RP page 1969] The evidence in the record also establishes that the drainage of the Pictured cliffs gas reserves by Whiting's Gallegos Fruitland coal wells is ongoing. Whiting does not dispute this. [RP page 5052; pg. 5, para. 11; pg. 24, para. 5] asks Court to re-weigh

The engineering evidence presented by Pendragon establishes that the Pictured Cliffs reserves in the area of the Chaco No. 1, Chaco No. 4 and Chaco No. 5 wells continue to be drained by Whiting's Gallegos Federal Fruitland Coal wells since the June 30, 1999 data was collected. Whiting's witnesses agreed that Pictured Cliffs gas was flowing into the Fruitland Coal formation. [RP pages 1686 to 1734; 1954-1978; 1823 to 1873] asks Court to re-weigh

The pressure data showing direct communication between Whiting's Gallegos Federal Fruitland Coal wells and the Chaco No. 4 and 5 wells, and the possible communication with the Chaco No. 1 well, establish that the loss of the reserves is the result of the production of Pictured Cliffs gas by the Gallegos Federal Fruitland Coal wells. [August 1999 hearing; RP page 564; RP pages 1972 to 1978] asks Court to re-weigh

Pendragon presented testimony and exhibits with respect to the pressure versus cumulative production ("P/Z data") for the Chaco No. 1, 4 and 5 wells demonstrating the volumes of gas that would need to be produced in order to lower the pressures between 14 and 19 PSIG over the yearlong shut-in period. At a minimum, the Chaco No. 1 well lost 19 psi (pounds per square inch), with a resulting loss of reserves of 60,500 MCF (thousand cubic feet).

The Chaco No. 4 experienced a 15 psi loss in pressure, resulting in a loss of reserves of 63,500 MCF. The Chaco No. 5 experienced a 14 psi pressure loss, resulting in a loss of reserves of 52,900 MCF. The total lost reserves for all three of the wells for the period from June 30, 1998 to June 30, 1999 was approximately 176,900 MCF. [Jack McCartney page 17, line 2; RP pages 1968 to 1975] *irrelevant*

Maralex's president testified that he concluded gas from the Pictured Cliffs formation is now moving into the Fruitland Coal formation, thus supporting Pendragon's conclusions. To support his conclusion, Maralex's president pointed to the apparent equilibration in pressures between the Pictured Cliffs and Fruitland Coal formations. [August 1999 hearing; RP pages 918, 922, 973, 978 and 979] *But gas move to PC from Fruitland!*

The effect of Whiting's drainage is apparent: the combined production from the Gallegos Federal 26-12-6 No. 2, the 26-12-7 No. 1 and the 26-13-12 No.1 increased by approximately 500 MCFd (thousand cubic feet per day) from late 1997 to April 1998 when compression was installed on the Fruitland Coal wells. During the same period, combined production from the Chaco wells declined by more than 200 MCFd. [August 1999 hearing; RP pages 425 to 429] *reversal*

As the record irrefutably establishes, and as recognized on the face of Order R-11133-A itself, there is an ongoing escape of gas from the Pictured Cliffs formations into the Fruitland Coal formation in direct violation of NMSA 1978 §§ 70-2-12 and 19 NMAC 15.C.106.A and 303.A. Yet, the Commission does nothing about it. *→ irrelevant field depleted*

The Commission was also asked to exercise its authority to afford relief in accordance with its regulatory duties. Specifically, the Commission was asked to restore the Chaco wells to production to determine (1) *no duty p permit to steal more gas* whether any of the wells have been permanently lost, (2) the quantification of gas produced out of zone, and (3) to re-establish a steady state of Pictured Cliffs

*no "duty" to quantify -  
trusts for OTS  
in damage suit*

production in order to determine (a) a curtailed rate of production for the offsetting coal wells to eliminate further drainage, (b) to establish how the Pictured Cliffs and Fruitland Coal wells may be simultaneously produced without interference, or, alternatively, if (b) proves impractical, then (c) determining how the coal wells should be re-completed or shut-in to prevent further drainage. In addition, the Commission was also asked to convene further proceedings to determine the volumes of Pictured Cliffs gas produced by Whiting's wells subsequent to the August, 1999 hearing in addition to the 176,900 MCF proved to have been produced prior to the hearing. The Commission failed to address these matters. Without these necessary components, the Order is incomplete and fails to afford meaningful relief. *no det for costs*

Additionally, while Order R-11133-A authorizes the NMOCD to approve restoring the four shut-in Chaco wells to producing status, the Order omits any similar provision requiring Whiting to demonstrate how its five Fruitland Coal wells may be produced without interfering with the Chaco wells or otherwise producing gas out of the separately owned Pictured Cliffs formation. The omission is significant and further demonstrates both how the Order is incomplete and how the NMOCC disregarded its statutory duties. Nevertheless, on August 1, 2000, Pendragon initiated such an application before the NMOCD in case No. 12479, proposing to establish a method to restore the Chaco wells to production as specifically provided for by Order R-11133-A. [RP page 5207] (See supplemental record.) On August 22<sup>nd</sup>, the NMOCD declined to implement this express provision of Order R-11133-A, choosing instead to stay the application in case No. 12479 until this appeal is resolved. (The Division advised of the stay verbally and issued no formal order.) The NMOCD's unwillingness to implement the NMOCC's Order is a compelling demonstration of how the Order is incomplete, unworkable and does not afford meaningful relief. *depleted*

Issue 2. Pendragon and its partners own one hundred percent of the Pictured Cliffs formation lease rights and are accordingly entitled to produce one hundred percent of the recoverable Pictured Cliffs reserves. While Order R-11133-A says on the one-hand that Pendragon can continue to produce its Chaco 1J and 2J wells and that the Chaco 1, 2R, 4 and 5 wells may be restored to production, the Order later contradicts itself and says these wells have already produced their "fair share" of gas. (Order R-11133-A, Findings 34, 45 and 46.) The basis for this finding is not explained. Neither does the Order define "fair share". *statute*

Moreover, under the circumstances here where one hundred percent of the common source of supply is owned by Pendragon, the Commission does not have the authority, either express or implied, to make a determination of what constitutes a "fair share". It is only where the "correlative rights" of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his "just and equitable share" of gas in the pool. (See, NMSA 1978, 70-2-17 A.) That situation does not exist here. Whiting's wells are located within the horizontal and vertical limits of the Basin-Fruitland Coal Gas Pool as defined by the Division in Order No. R-8768. Pendragon's wells are located within the horizontal and vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas pool as defined by the Division in Orders R-4260 and R-8769. They are separate "common sources of supply" or "pools" within the meaning of Section 70-2-33.B of the Oil and Gas Act. Whiting and Maralex have no interest in Pendragon's Pictured Cliffs production and consequently, they have no "correlative rights"<sup>10</sup> that are affected. Significantly, there is no "correlative rights" finding in Order R-11133-A.

<sup>10</sup> "Correlative rights" are defined in NMSA 1978 70-2-33.B as "...the opportunity afforded...to the owner of each property in a pool to produce without waste his just and equitable share of the oil or gas or both in a pool..."

Absent an administrative proceeding consolidating the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool into a single "common source of supply,"<sup>11</sup> the Commission is unable to make the determination that Pendragon has produced its "fair share" from its separate gas reserves. By purporting to do so, the Commission has clearly exceeded its statutory authority. In one fell-swoop, the Commission has acted (1) arbitrarily and capriciously, (2) outside the scope of its authority, and (3) not in accordance with law.

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<sup>11</sup> Such proceedings are frequent and are done via the NMOCD's authority under Section §§ 70-2-12 B(12) of the Oil and Gas Act.

Issue 3. The following findings are not supported by substantial evidence.

(a) Depletion. Findings 34, 45 and 46.

The findings that the Pictured Cliffs formation was “depleted” or “nearly depleted” prior to the time the acid and fracture stimulation treatments were performed on Pendragon’s Chaco wells in 1995 are not supported by the evidence. It is apparent that the Commission’s findings in this regard rely heavily on the separate finding (finding 40) that the Pictured Cliffs formation had not incurred reservoir damage. As discussed below, this separate finding is not supported by the evidence. To the contrary, the record is replete with uncontroverted, direct evidence establishing the existence of three types of reservoir damage. Acid and frac jobs are specifically designed to reverse the effects of such reservoir damage and restore wells to higher production rates. That is exactly what was established by Pendragon. re-weigh

The evidence does not support the depletion findings for two additional and equally compelling reasons: (1) Depletion is a function of economics. The Commission’s findings presuppose the Chaco Pictured Cliffs wells were uneconomic without any substantiating evidence at all. (2) It is inarguable that the most important physical indicator of a reservoir’s ability to produce is reservoir pressure. The overwhelming proof in the record with respect to reservoir pressures does not support any conclusion that the Pictured Cliffs was depleted. <sup>where??</sup> In this regard, the Commission “ignores pertinent facts”. (High Ridge Hinkle v. City of Albuquerque, 119 N.M. 29, 40, 888 P.2d 475, 485 [Ct. App.], *cert. denied*, 199 N.M. 20, 888 P.2d 466 [1994]) The Commission’s disregard of the evidence on reservoir pressures and the failure to make any findings in its order are on this material issue arbitrary and capricious and contrary to law. As a result, the Commission’s findings are not “sufficiently extensive to show the basis of the order.” (Viking Petroleum v. Oil Conservation Com’n, 100 N.M. 451, 453, 672 P.2d 280, 282 [1983]:



“The findings must disclose the reasoning of the Commission in reaching its conclusion.”, Id.  
“The Oil Conservation Commission must make findings of ultimate facts which are material to the issues.” Fasken v. Oil Conservation Commission, 87 N.M. 292, 532 P.2d 588 [1975]).

Finding 43 of the Order concludes that the acid treatment jobs on the Chaco 1J and 2J wells did not establish communication with the Fruitland Coal formation and that these treatments “did not alter these wells’ rates of production.” This finding is not in error, but demonstrates why the Commission’s failure to address the well and pressure data is so significant. If these two wells did not connect with the Fruitland Coal formation, then the pressures reported for the wells [RP pages 1689 to 1701; 1720 to 1734] are true Pictured Cliffs reservoir pressures, both before and after the acid stimulation treatments. Consequently, the finding that the Pictured Cliffs reservoir is “depleted” is contra-indicated by Finding 43, as well as by the clearly relevant pressure data. As a further example, the evidence of pressure data for the Chaco No. 4 well should be examined. The high pressures measured immediately after the 1995 acid job on that well and before the subsequent fracture treatment in May of 1995 [RP page 1691; Ex. N-8 RP page 2137] also establish that (1) the Pictured Cliffs was not depleted, and (2) the pressures (and production) in the Pictured Cliffs were not a result of any communication with the Fruitland Coal formation. (Unless, of course, the Whiting Fruitland Coal wells that were heavily fractured in 1992 established the communication.)

The additional evidence in the record on reservoir pressures is substantial:

The original reservoir pressure in the Pictured Cliffs formation in the late 1970’s was approximately 230 psi. By 1995, reservoir pressures ranged from between approximately 150 to 170 psi, or higher. In 1999, Pictured Cliffs’ reservoir pressures ranged from above 150 psi to 73 psi in those areas characterized by significant offset production. The testimony and evidence establish

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that Pictured Cliffs wells may be produced economically today at reservoir pressures falling below 50 psi. (A. Nicol; Pg 57, line 3) [RP page 1713] Hence, this Pictured Cliffs reservoir with pressures of generally 150 psi is not "depleted."

The pressure in the Chaco 1J had a surface shut-in casing pressure of 158 psi before any acidizing or other stimulation was done. (A. Nicol; Pg 31, line 5; Pg 34, line 1; Pg 42, line 11; and Pg 65, line 7) [RP page 1687, page 1690, page 1698; page 1721]

After the acid stimulation treatments in 1995 and following a pressure build-up period, pressure measurements in the Chaco No. 4 well over three months ranged between 140 to 147 lbs., which was approximately 60 percent of the original reservoir pressure of 230 lbs. (A. Nicol; Pg 38, line 6; page 49, line 5) [RP page 1694; page 1705; RP page 71]

In 1995, post-fracture stimulation pressures were 170 lbs. in the Chaco 1, 151 to 153 lbs. in the Chaco 4 and 5 wells, and, in July, 1996, 150 lbs. in the Chaco 2-R well, indicating a relatively uniform pressure throughout the Pictured Cliffs reservoir in the area. During this same period of time, pressures in the Fruitland Coal formation, measured in 1994 in the Gallegos Federal 6-2 well and the Gallegos Federal 7-1 well were approximately 220 lbs. Correspondingly, there is no evidence that the pressures exhibited in the Chaco wells increased to Fruitland Coal formation pressures during this period of time. Moreover, the Pictured Cliffs reservoir pressures are consistent both before and after the stimulation treatments. (A. Nicol; Pg 38, line 6; page 49, line 5) [RP page 1694; page 1705; RP pages 71 to 72]

The surface shut-in pressure of 158 psi measured on the Chaco 1-J well on January 28, 1995 is an accurate reflection of Pictured Cliffs reservoir pressures before any of the restimulation treatments were performed on the Chaco wells. This pre-stimulation pressure is in line with pressures taken subsequent to the acid job on that well (155 psi). Following a five-month shut-in

period, the Chaco 2-J well had a shut-in pressure of 198 psi in June 1995, subsequent to the January 30, 1995 acid job. When the well was opened to the atmosphere, it blew down to zero pressure in four minutes. Such well performance is not indicative of the high-rate, high-volume of the cross flow that could be expected if the well had communicated with the Fruitland Coal formation. (A. Nicol; Pg 31, line 5 and Pg 65, line 7) [RP page 1687; page 1721 ]

The measured pressures in the Pictured Cliffs wells in 1995 were less than the average reservoir pressure in the Fruitland Coal formation at that time. (D. Cox; Pg 14, line 14)[RP page 1836]

Pictured Cliffs reservoir pressure evidence presented by Pendragon establishes that there is no correlation between pressures in the Pictured Cliffs and distances from coal wells. The relatively constant pressure or, in some instances, the slight pressure increases, is indicative of a stabilized pressure over a large reservoir area. (A. Nicol; Pg 40, line 1) [RP page 1696 ]

At approximately 150 psi, 1995 Pictured Cliffs reservoir pressures in the subject area, generally, are approximately 62 percent of original pressure, indicating that the reservoir is only partially depleted. Further reservoir analysis evidence that assumed a reservoir thickness of 25 feet with 25 percent porosity, at 65 percent gas saturation and a 75 percent recovery efficiency established that the Pictured Cliffs reservoir has significant additional reserves remaining to be produced. [August 1999 hearing; RP page 1575; Cox, RP pages 1852 to 1853]

Pressure information obtained during the year-long shut-in of the Chaco Pictured Cliffs wells in 1998 confirms reservoir continuity and pressure communication over large areas which is additional evidence supporting the conclusion that each of the wells can produce reserves from a large area. In addition, the shut-in data show that pressure continues to build up in those areas

with little withdrawal, except where the Pictured Cliffs gas is being produced by the coal wells. (J. McCartney; Pgs 19 to 21) [RP pages 1972 to 1974]; (A. Nicol) [RP pages 1702 to 1734]

Neither are the Commission's depletion findings supported by the significant amount of "volumetrics" and "material balance" evidence contained in the record.

Following their original completions, the Pictured Cliffs wells exhibited significantly high "IP's" ("initial production rates"). The Chaco No. 1 well had an IP of 342 MCFd while the Chaco 4 had 480 MCFd. The reported IP of Chaco No. 5 was 1,029 MCFd. However, at no time since their original completions or subsequent to the stimulation treatments did the production levels on any of the Chaco wells exceed the reported IP's. [August 1999 hearing; RP pages 478 and 479]

Pendragon presented volumetric and material balance analysis evidence showing that there are sufficient reserves in the Pictured Cliffs formation to support the historic and projected production from the Chaco wells. (J. McCartney; pg 2, line 17; pg 4, line 4)[RP page 1955; page 1957] (August 1999 hearing; RP pages 475 to 498; 555 to 570]

Generally, the evidence establishes that the Pictured Cliffs wells were producing volumes of gas that were less than their oil and gas in place ("OGIP"), whereas the Fruitland Coal wells have been and will produce more than their indicated OGIP on 320 acres. [August 1999 hearing; RP 677]

Pendragon's material balance and gas-in-place analysis data for the subject Chaco wells showed a material balance OGIP of 3,117,000 MCF for the five Pictured Cliffs wells. When compared with the performance history and estimated reserve analysis data, the subject Pictured Cliffs wells indicate an ultimate recovery of 2,301,525 MCF, or approximately 73.8 percent of the material balance reserves. Both the volumetric analysis and material balance analysis data show sufficient reserves in the Pictured Cliffs formation to support the historic and projected

production from the Chaco wells. (J. McCartney; pg 17, line 14)[RP page 1970] Again, this is not a “depleted” reservoir by any stretch of the imagination.

Volumetric analyses for the Fruitland Coal formation in the area establish that the basal coal contains an average of 1,262,661 MCF per 320-acre spacing unit.<sup>12</sup> Altogether, the five subject Fruitland Coal wells are estimated to have 6,897,801 MCF OGIP per 320 acres. The ultimate recoveries for these Fruitland Coal wells were shown to be significantly high relatively early in their producing lives. For instance, the Gallegos Federal 26-12-6 No. 2 and are the 26-12-7 No. 1 have already produced more than 83 percent of their OGIP, each. Together, all of the subject Gallegos Federal Fruitland Coal wells have produced 54.1 percent of the OGIP. This analysis shows that the subject Fruitland Coal wells are producing much more gas than can be calculated to exist on each of their 320-acre spacing units. In addition, well performance and decline curve analysis demonstrates that each of Whiting’s wells are draining 545 acres, on average, presuming they produce only coal gas. (J. McCartney; pg 7, line 8)[RP page 1960]

The gas production history for the subject coal wells shows cumulative production for all five wells at 3,733,295 MCF. Remaining recoverable reserves based on estimates are 4,557,865 MCF. [Ex. M-2; RP 2563] At the 76 percent estimated recovery factor, ultimate recoveries are anticipated to be 8,291,160 MCF. The Whiting Fruitland Coal wells have produced and are expected to produce much more gas than can be accounted for from the Fruitland Coal formation on 320-acre spacing. The performance of the subject coal wells and subsequent gas recoveries establish that the Chaco wells are not producing Fruitland Coal gas reserves and are not interfering with the Gallegos Federal wells. [RP pages 1960 to 1961]

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<sup>12</sup> NMOCD rules require that Fruitland coal wells be produced on 320-acre spacing units while Pictured Cliffs wells must have 160-acre units.

The recent drilling and fracture stimulation completion of the Pictured Cliffs formation in the last few years in the nearby State 2-R well located in Section 2, T26N R13W, which produces approximately 400 Mcfd, is additional evidence establishing that the Pictured Cliffs is not depleted. (A. Nicol; pg 54, line 12)[RP page 1710]

Finally, when the Commission's "depletion" findings are placed side-by-side with the provisions and findings of the order that expressly provide for future production from the Chaco Pictured Cliffs wells, and Pictured Cliffs gas that is "now capable of production" (finding 44), the inconsistencies of this unworkable order are all too obvious. In this regard, the finding of "steady gas production" from the Chaco wells (finding 35) is in direct conflict with the depletion findings.

(b) Geologic evidence of the “third bench”.

Pendragon presented evidence of the existence of a “third bench” of the Pictured Cliffs formation in the area that contributes gas to Pictured Cliffs wells. Despite this, the Commission, at finding 39, oddly concluded that “The evidence does not support this assertion. No “third bench” has been reported previously throughout the San Juan region, and there is no geological evidence of this kind of formation.” Clearly, this finding of the Commission is not supported by the evidence.

Well log information presented by Pendragon establishes the absence of any lithologic barrier to the downward growth of fracture treatments initiated in the main body of the Pictured Cliffs into the lower, third bench of the Pictured Cliff sandstone. Correspondingly, Pendragon established by a preponderance of the evidence that the third bench of the Pictured Cliffs sandstone contributes substantial reserves to the subject Chaco wells. (A. Nicol; pg 159, line 4 to pg 165, line 4)[RP page 1816 to 1822]; [August 1999 hearing; RP page 95]

Pendragon produced evidence that irrefutably established the existence of the “third bench” and/or “lower bench” of the Pictured Cliffs formation, not only in the San Juan Basin generally, but in the immediate vicinity of the subject lands. [RP pages 1672, 1673; RP 1816 to 1822; Exhibit N-68, RP page 2334]

Well log correlations identified the third bench in a number of wells in the area. [Ex. N-68, RP page 2334] The High Roll #4 well located nearby in Section 35, T27N, R13W, was in fact completed in and produces from the third bench. [RP page 1818]

The nearby Dome Navajo 12-26-13 No. 1 well produces exclusively from the third bench. [RP page 1820]

The third bench is also found in the High Roll #4 well, the Chaco 2R well (one of the several subject wells within the third bench), as well as the Lansdale Federal No. 1 well. [RP pages 1820 and 1821]

Pendragon established that the lower bench/third bench of the Pictured Cliffs contributed “substantial” gas reserves to the Chaco wells. [RP pages 1966, 1967; Ex. M-16 to M-18, RP pages 2579 to 2581; RP pages 560 to 562]

The record testimony from the hearing is also replete with evidence on the third bench: [RP pages 95 and 96, 197 to 199, 201 to 203, and 472 to 473].

The finding in Order R-11133-A that there is “no geological evidence” of the third bench of the Pictured Cliffs formation is disturbing. This clearly erroneous conclusion indicates an utter lack of due diligence on the part of the Commission and, again, that it ignored critically material factual evidence in the record.

The disregard of this important geologic evidence undermines the Commission’s findings on a number of other central points, including, most notably, the finding that the Pictured Cliffs formation is depleted. The credibility of the entire order is called into question as a result.

The Court should be gravely concerned.



(c) The absence of well and reservoir damage.

The Commission's finding (finding 40) that it is "unlikely" the Chaco wells had suffered from significant reservoir damage is not supported by the evidence.

Pendragon presented extensive evidence on the existence of damage: [RP pages 659 to 662; 1852 to 1856; 1833 to 1834; 1848 and 1971 to 1972].

The rapid production decline experienced by the Chaco wells so soon after their initial completion is not consistent with the well production behavior that could be expected from a large, continuous reservoir with high permeabilities, therefore indicating the possibility of damage in the wellbore and in the reservoir in the immediate vicinity of the well. [August 1999 hearing; RP page 662; RP pages 1971 to 1972; RP pages 659 to 662]

Pressure build-up information derived from measured surface pressures and bottom hole pressures indicated the existence of reservoir damage that is more significant than what is typically attributed to "skin" damage. Pendragon's expert well-testing and reservoir engineer characterized the damage as "extreme, severe, deep, very deep" formation damage, extending to a great distance away from the wellbore. The extent of the damage is also reflected on the production curves for the subject Pictured Cliffs wells. [August 1999 hearing; RP pages 650 to 662]

Pendragon presented evidence establishing that the Chaco wells were damaged by one or more of the following: (1) scale precipitation, (2) water blockage and (3) migration of clay fines. [August 1999 hearing; RP pages 794 and 795]

Of the three types of damage determined to exist in the Chaco wells, the most likely cause of damage is water block that has plugged off the more permeable intervals of the Pictured Cliffs or those intervals with higher gas saturation levels. The testimony further established that even small

volumes of water in a relatively low pressure reservoir such as the Pictured Cliffs formation can cause water block, making it more difficult for Pictured Cliffs wells to recover once water intrudes into the area around the wellbore. (D. Cox; pg 34, line 7)[RP page 1856]

Outside substantiation for the existence of reservoir damage in the Pictured Cliffs is found in the Halliburton core sample analysis for the Lansdale Federal No. 1 well indicating that "the samples are basically fine to very fine grained kaolinite clay cemented sandstone. Permeabilities range from less than one millidarcy to 272 millidarcies. The main water sensitivity is kaolinite clay migration in the pores." [August 1999 hearing; RP page 1527; Ex. N-62 RP page 2326 and RP pages 1529 to 1531]

A reservoir simulation model was used to determine theoretical well performance of a Pictured Cliffs well having a reservoir thickness of twenty-four feet and a permeability of 25 millidarcies. The simulation establishes that such a well has the capability to efficiently drain a 640 acre reservoir. The simulation results are additional evidence supporting the conclusion that the relatively poor performance exhibited by the subject Pictured Cliffs wells is a result of reservoir damage. (J. McCartney; pg 19, line 11)[RP page 1972]

The petroleum engineering expert testimony concluding that Pictured Cliffs well and reservoir damage was caused in part by scale is based on actual observations in the field in the area of the subject lands. [RP pages 235 to 236; 1584 to 1585]

An analysis of the transmissibility in the Pictured Cliffs formation using reported shut-in and well head flowing pressures over time establishes that the transmissibility in the reservoir had decreased. Calculations of flow capacity for the Pictured Cliffs wells show they were capable of flowing at only 9 percent to 36 percent of their fuel capability if their permeability had not changed. This evidence established that significant reservoir damage had occurred by 1986, which was

overcome by the fracture and acid stimulation treatments in 1995. (J. McCartney; pg 18, line 20)[RP page 1971]

Maralex's president also testified that the volumetric and material balance analyses performed on the Chaco Plant 5 and the Chaco No. 4 indicated a component of damage had affected those wells as they had substantially underproduced the recoverable gas in place. This not only substantiates the existence of damage, it directly contradicts the premise that the formation was fully depleted. [August 1999 hearing; RP page 903]

During the January 1995 acid stimulation treatment, the measured surface pressure on the Chaco No. 4 well reached 800 psi before the injection of 500 gallons of acid into the formation could commence, even though this well had the highest original permeability in the Pictured Cliffs. That such pressure was reached during the acid job is direct evidence of the existence of reservoir damage. (M Conway; pg 19, line 15; A. Nicol; pg 34, 14)[RP page 1928; page 1690]

The testimony and evidence established that once the skin damage was overcome by the acid and fracture stimulation treatments, the Chaco wells with their 50 millidarcy average permeabilities and their 150 psi Pictured Cliffs reservoir pressures were able to produce significant volumes of gas into a gathering system with 40 to 50 pound line pressures. [August 1999 hearing; RP pages 1576 and 1580]

Whiting presented no testimony or evidence that refuted the evidence of wellbore and reservoir damage in the Pictured Cliffs formation. Indeed, Whiting's engineering witness testified that he believed the Pictured Cliffs wells were draining only small areas, even though there was good reservoir quality. [RP pages 1367] Consequently, the existence of wellbore and reservoir damage is supported by a preponderance of the evidence.

This evidence substantiates the existence of damage that the well treatments were intended to overcome and further contradicts the conclusion that the formation was depleted.

(d) The Chaco well fracture stimulation treatments.

The findings that the fracture treatments on the Chaco 1, 2R, 4 and 5 wells extended into the Fruitland Coal formation (finding 33) or that such was a “possibility” (finding 39) do not have the support of substantial evidence in the record. To the contrary, the evidence established that the light frac jobs on the Chaco wells were specifically designed to take advantage of underground geologic conditions and inter-formational stress barriers to remain contained within zone. [RP pages 258 to 260, 1669, 1737 to 1753 and 1901 to 1907]

Stimulation treatments can be designed with fracturing fluids and pumping programs to control or prevent breaching into bounding formations. (M Conway; pg 23, line 14)[RP page 1932] Moreover, the finding that there is “no scientific basis” for believing that the fractures from the Chaco well stimulation treatments moved downward into the “third bench” is clear error and disregards actual “tracer” survey data<sup>13</sup> [Ex. N-33; RP page 2230] and the considerable testimony and evidence presented on fracture technology: RP pages 1967, 83 to 84, 197 to 206; 539; 1735 to 1755 and 1910 and 1935]

Well log information presented by Pendragon established the absence of any lithologic barrier to the downward growth of fracture treatments initiated in the main body of the Pictured Cliffs into the lower, third bench of the Pictured Cliff sandstone. (A. Nicol; pg 159, line 4 to pg 165, line 4)[RP page 1816 to 1822]; [August 1999 hearing; RP page 95]

Pendragon presented evidence which established that fractures will be likely to, and frequently do remain confined and not grow across the reservoir top or bottom if the bounding reservoir rock above or below the pay interval is stronger or has high in-situ stresses or if the

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<sup>13</sup> Radioactive isotopes are introduced into fracture fluids so that their locations in the fractures can be “traced”, establishing the size and locations of the fractures themselves.

interface between the two rocks can slip and absorb the energy of the fracture extension. (R. Blauer; pg 24, line 11)[RP page 1902] [M. Conway RP pages 1913 to 1914 and 1919 to 1921]

Pendragon presented additional evidence, which establishes that the different types of rocks at a reservoir boundary will have different in-situ stresses. The difference in the stresses is known as the stress contrast. The stress contrast between the sandstone and the coal in the Chaco area is approximately 400 psi and is 125 psi between the sandstone and a shale. During a fracture stimulation treatment, assuming there is no slip at the boundary of the different rock types, the fracture fluid must attain sufficient injection pressure to exceed the stress contrast in order to breach the boundary. If slip is present, then yet more pressure is required to exceed both the stress contrast and to displace the rocks sufficiently to create a crack in the breached interval. Consequently, assuming no slip, fracture pressures must exceed the stress contrast of 400 psi in order to breach into the coal. If the coal is not breached, then fracturing pressures will be controlled by the stresses in the sand and shales themselves. Conversely, a fracture initiated in the coal will more easily breach out of formation and into the sandstone, as the sand will have much lower stress than the coal formation. (R. Blauer; pg 24, line 18; M. Conway, pg 11, line 17)[RP page 1902; page 1920]

The evidence presented by Pendragon's petroleum engineers and geological engineers established that artificially induced fractures are influenced and controlled by lithology and bedding planes. Softer, more ductile rocks deform plastically at stresses where more brittle, less compressible rocks like sandstones tend to fracture. Coals and soft shales will tend to deform while hard sandstones will tend to crack. On a microscopic scale, shales and coals will tend to shear and slide, extending and thinning, rather than cracking, until some higher critical stress threshold is reached. Thus, the plastic properties which allow the higher stress to exist control the method of deformation as well. Similarly, the bedding planes, themselves, are capable of absorbing large

amounts of fracture energy effectively acting as a fracture barrier and confining fracture growth to a particular bed. (A. Nicol; pg 79, line 3)[RP page 1735 to 1747]

The testimony and geologic literature establish that fracture stimulations will tend to remain contained within the more brittle rock-like sandstones. Conversely, fracture stimulations are prone to grow out of more compressible rock, such as a shale or a coal, into more brittle rock. Induced fractures also tend to migrate from a higher-pressure zone, such as the Fruitland Coal formation in this case, into a lower pressured zone, such as the Pictured Cliffs sandstone formation. Reservoir pressures directly control fracture geometry. All of these findings are widely accepted and are confirmed by radioactive tracer survey studies. (M. Conway; pg 8, line 4)[RP page 1917]

Pendragon produced evidence of radioactive tracer survey data from the nearby Edwards Bartlesville No. 1 well located in Section 3, T-26-N, R-13-W which in 1998 received a fracture stimulation treatment in the Pictured Cliffs formation similar to that which was applied to the Chaco wells. The radioactive tracer survey information showed conclusively that fractures initiated in the Pictured Cliffs remained contained within the formation and stopped at the bedding plane between a thin coal and the thicker Pictured Cliffs sandstone. The Bartlesville well contained an Upper Pictured Cliffs sandstone interval very much like that encountered in the subject Chaco wells. The tracer survey information was confirmed by Nolte plot data, which showed no detectable vertical growth, indicating the fracture remained within the upper Pictured Cliffs sandstone interval. Similar results were also presented for the Dome Federal 17-27-13 No. 3 Well, also located in the near vicinity. (A. Nicol; pg 95, line 18; pg 97, line 18)[RP pages 1749 to 1751] (Exhibit N-33) [RP page 2230]

The normal in-situ properties of the Pictured Cliffs sandstone and the Fruitland Coal formation establish that it is more probable that a fracture initiated in the Fruitland Coal is more

likely to break out of zone into the Pictured Cliffs sandstone than is a fracture initiated in the Pictured Cliffs likely to break into the coal. [RP pages 1918 to 1921 and 1928] The evidence on these factors does not support any finding in the Commission's order, whether expressed as a "possibility" or not, that the fractures in the Pictured Cliffs broke out into the coal.

In this case, the evidence establishes that the Fruitland Coal was a higher pressured formation with higher *in-situ* stress than the Pictured Cliffs. Additionally, the coal fracture stimulations were of a significantly larger volume, and done at higher injection rates and at significantly higher pressures. These factors support the conclusion that the fractures initiated in the coal broke out into the Pictured Cliffs sandstone. [RP pages 1919 and 1929 to 1934]

The evidence presented establishes that the *in situ* stress in the coal formation is approximately 400 psi higher than in the Pictured Cliffs sandstone. Consequently, a large fracture treatment initiated in the sandstone must be stepped up even further to impart the equivalent of a 400 psi incremental increase in fluid pressure if the fracture is to penetrate into the coal. This would be a substantial and unnecessary increase in treating pressure over that required to extend the fracture within the sandstone. The evidence further establishes that fractures are contained where there is boundary slippage at the interface between the coal and shale or sandstones. Where slippage occurs, the fluid pressure must be increased even higher in order to break down the higher stress layer before the fracture can grow into the coal. Such evidence is further substantiation for a finding that it is not likely that the fractures initiated in the Pictured Cliffs sandstone broke out into the Fruitland Coal formation. (M. Conway; pg 14, line 18)[RP page 1751]

The testimony of Whiting's consulting petroleum engineer at the hearing established that because of the higher stress gradient in the coal, the treatment pressure of any of the fracture



stimulations initiated in the Pictured Cliffs sand would not have been sufficient to overcome both the stress gradient and closure pressure in the coal to allow the placement of any proppant into a fracture into the coal. [August 1999 hearing; RP page 1288; RP pages 1341 to 1342]

The evidence and testimony further established that it is more probable that the proppant circulated in any upward growing fracture in the Pictured Cliffs sandstone would settle downwards to the bottom of the fracture, thus allowing the upper portion of the fracture to close. Such closed, unpropped fractures could not serve as conduits for the production of water or gas out-of-zone. [August 1999 hearing; RP page 314]

Conversely, it is more probable that fractures growing downward from the Fruitland Coal into the Pictured Cliffs formation will remain propped open by the settlement of proppants into the bottom portion of the fracture. Consequently, fractures growing downward from the coal are more likely to serve as conduits for the production of gas from the Pictured Cliffs formation. [RP page 1349]

All of the above evidence is consistent with the admission of Whiting's expert engineering witnesses that the fractures initiated in the Fruitland coal formation grew downward into the Pictured Cliffs. [RP page 3400; RP page 1335]

(e) Gas “bubbles”, gas “highways” and gas “compartments”.

In discussing the post-stimulation increases in gas production experienced on the Chaco wells, at finding 36, the Commission engages in speculation that a growing “gas bubble” in the Fruitland Coal formation extended toward an area of high-pressure contrast where a “thin capillary barrier may have been broken, allowing gas migration between the two zones.” What it was that actually broke the barrier, the Commission does not say in the finding. Then, at finding 39, the Commission makes the rather tentative “finding” that “[o]ne possibility is that the hydraulic fractures were extended upward to the Fruitland Coal formation and generated a gas highway to the gas bubble.” The order also indulges in conjecture about “high pressure gas compartments” (finding 37). By these suggestions, the Commission does not preclude another “possibility” e.g., it is possible that these inter-fingered formations came into communication naturally.

This is all rank speculation by the Commission. Neither side presented any evidence of the existence of high-pressure “gas compartments”. This finding is wholly unsupported by the evidence. The finding that the fracture stimulation treatments on the Chaco wells broke into such “compartments” is directly at odds with the tracer survey exhibits and testimony on the Bartlesville well and the Dome Federal well establishing that such fracture treatments were successfully contained within the appropriate zone. (Ex. N-33) [RP page 2230; RP pages 1735 to 1755] Moreover, there is no evidence in the record at all of the existence of any “gas bubble”.

Findings 36, 37 and 39 are only hypotheses conjured up by the Commission and are not supported by substantial evidence.

(f) The BTU data.

The finding that the BTU heating content data derived from gas samples supports the conclusion that the fracture stimulation treatments on the Chaco wells communicated to the Fruitland Coal formation (finding 41) is not supported by substantial evidence. Direct evidence to the contrary means that the finding is in error.

Early on, both parties considered the possibility that an BTU heating content analyses could help determine the source of gas being produced by a well, the idea being that coal wells produce gas with lower BTU values while Pictured Cliffs gas has higher heating content. The BTU data presented by both Pendragon and Whiting shows post-shut in BTU values for the Chaco wells to be well within the range of values measured for those wells when they were originally completed in the 1970's. [RP 84 to 87]; Ex. N-37 and N-39 [RP pages 2250 to 2258 and page 2265] In addition, the finding ignores the pre- and post shut-in data presented for the Chaco 2R well which showed high BTU values and increasing pressure following shut-in while the coal wells continued to produce. [RP page 1766] Moreover, the Commission's finding is at odds with the BTU data for the Chaco 1J and 2J wells. These wells, which the Commission concluded did not communicate with the Fruitland coal formation showed lower BTU values. However, the data from the Chaco 1J and 2J wells shows that the gas produced from these wells has BTU values similar to the gas produced from those wells the Commission concluded did communicate. [RP page 1765 to 1766] It is another inconsistency in the Order.

The evidence establishes that the BTU contents and the proportions of "higher end" or lighter molecular components in the gas produced from the wells in the area of the subject lands are not only highly variable from well to well, but also vary over time and with the producing conditions of the reservoir. Production from most Pictured Cliffs wells tends to contain heavier

components during the early stages of production, although this characteristic can be affected by a number of factors. Moreover, there is no clear differentiation in chemical content between gas produced from the Fruitland Coal formation and the Pictured Cliffs sandstone. (A. Nicol; pg 103, line 4)[RP page 1760]

The fact that the BTU or methane percentage may have decreased over the producing life of a Pictured Cliffs sandstone well is not evidence that the well is producing gas from another zone. (A. Nicol; pg 104, line 4)[RP page 1761]

Evidence from the geological and engineering literature establishes that Fruitland Coal and Pictured Cliffs formation wells in the area of the subject lands are frequently found to be producing similar gases which may come from source materials in the Lewis shales and/or from coal. The sources cannot be separated as being limited to coal for the coal wells or strictly Lewis shale for the Pictured Cliffs wells. Consequently, the gases cannot be clearly differentiated when they are produced. In addition, under the reduced pressures and at the reservoir temperatures measured in the Chaco area, the heavier components tend to drop out or move through the reservoir rock more slowly than methane, making the produced gas more lean. (A. Nicol; pg 102, line 6)[RP page 1759]

In February 1999, after more than seven months of shut-in, gas samples were taken from the Chaco No. 1, 4 and 5 Wells. The BTU analyses were all above 1,100 and were nearly identical to those at the times of original completion. [RP page 1870]

Pendragon presented evidence utilizing 155 gas analyses of numerous Pictured Cliffs and coal wells to demonstrate that there is no separation or stratification of BTU or other properties in the range between 1,000 BTU and 1,100 BTU which would allow the differentiation of coal gas from Pictured Cliffs gas in this area. [RP page 1756] (Ex. N-37) [RP pages 2250 to 2258]

The impropriety of the Commission's erroneous findings of communication based on the BTU data was demonstrated by Whiting's own engineering witness who also incorrectly concluded that any well producing gas with BTU values less than 1000 to 1050 could be presumed to be producing coal gas [RP 1158 to 1160].

#### IV. Relief

Based on the foregoing, the Court should **find**:

1. The agency's order is incomplete, ambiguous and impractical. The order fails to make findings of ultimate facts material to the issues.
2. The agency has failed to fulfill its statutory duties and has disregarded its own rules, regulations and prior orders.
3. The agency has failed to accord meaningful regulatory relief.
4. The agency has acted outside the scope of its authority and not in accordance with law.
5. The agency has acted arbitrarily and capriciously. Moreover, the agency's order ignores pertinent facts and fails to provide an adequate explanation of its basis.
6. The following findings in Order R-11133-A are not supported by substantial evidence:

The Court should **reverse** Order R-11133-A with respect to findings 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 45 and 46 and the relevant portions of decretal paragraphs 1, 4 and 5. The matter should then be **remanded** to the Commission and the agency should be directed to take the reservoir pressure data evidence into account and specifically find that the subject Pictured Cliffs reservoir is not depleted. Using such evidence, the Commission should also be directed to explain the reasoning for its findings.

The Commission should also be directed to further fulfill its duty to avoid further waste, dissipation of reservoir energy and loss of gas out of the strata by providing for the immediate restoration of the Chaco Pictured Cliffs wells to production.

The agency should also be directed to bring Whiting's Fruitland Coal formation wells into regulatory compliance by providing for the following:

- (a) Ordering the immediate shut-in of the offending coal wells, the Gallegos Federal 26-12-6 No. 2, the 26-13-12 No. 1 and the 26-12-7 No.1.
- (b) Restoration of the shut-in Chaco Pictured Cliffs wells to production to determine:
  - (i) Whether any of the Pictured Cliffs wells have been permanently lost as a result of the shut-in and, if so, the quantification of lost reserves;
  - (ii) The re-establishment of a steady state of decline in order to:
  - (iii) Determine the curtailed production rates the Fruitland Coal wells might be restored to so that drainage areas are equalized, in order to minimize or eliminate future damages; and
  - (iv) Alternatively, allow Whiting to demonstrate to the satisfaction of the Division how both the Pictured Cliffs and Fruitland Coal formation wells can be simultaneously produced without interference, and if they fail to do so, require the Gallegos Federal Fruitland Coal wells to be permanently shut-in or recompleted.

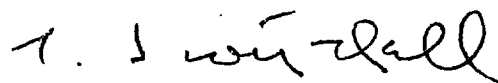
The Commission should be directed to convene a proceeding to determine the volumes of Pictured Cliffs gas reserves that have been produced by Whiting Gallegos Federal coal wells since June 30, 1999, whether any of the Pictured Cliffs wells have been permanently lost, and if so, the quantification of lost reserves as a result of the shut-in, in addition to the 176,900 MCF previously produced. For the Pictured Cliffs wells that Pendragon is able to restore to production, the Commission should receive evidence demonstrating the re-establishment of a steady state of decline for those wells.

Following the accumulation of relevant data, both parties should be afforded the opportunity to present evidence and make recommendations to the Commission to enable it to determine the curtailed production rates the Fruitland Coal wells may be restored to so that drainage areas are equalized and in order to minimize or eliminate future damage or interference. The parties should also be allowed the opportunity to demonstrate to the satisfaction of the Commission how both the Pictured Cliffs and the Fruitland Coal formation wells can be simultaneously produced without interference or drainage. If such evidence shows it is not reasonably possible to operate the Gallegos Federal Fruitland Coal wells without further damage, interference or drainage of the Pictured Cliffs formation, then the Commission should order Whiting to recomplete the Fruitland Coal wells. Alternatively, the Gallegos Federal 26-12-6 No.2, the 26-13-12 No. 1 and the 26-12-7 No. 1 should be ordered permanently shut-in.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By



J. Scott Hall  
Post Office Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614  
Attorneys for Pendragon Energy Partners, Inc., *et al.*



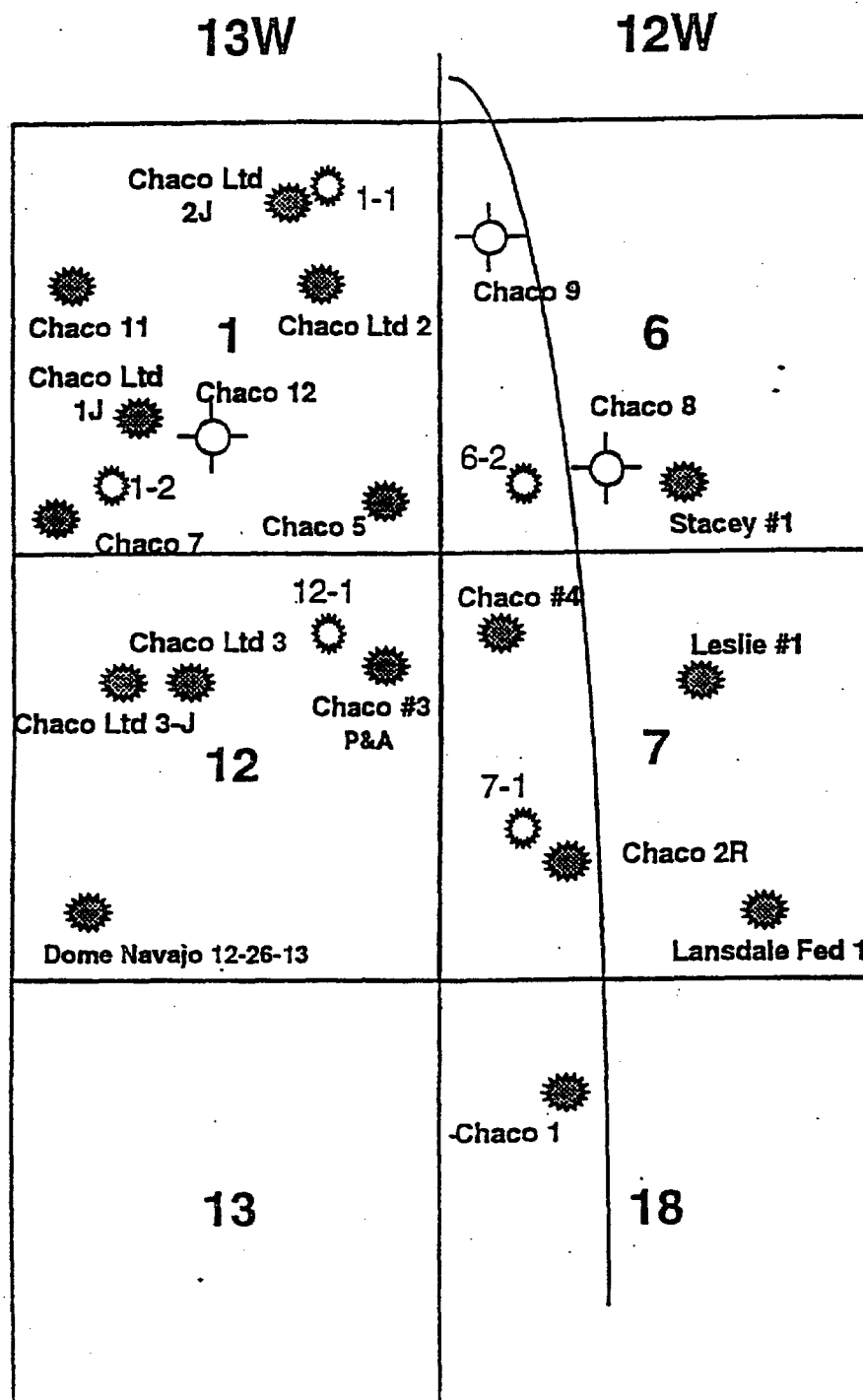
I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Statement of Issues  
was mailed to

Steve Ross, Esq.  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

on this 7 day of October, 2000.

A handwritten signature in black ink, appearing to read "J. Scott Hall", written over a horizontal line.

J. Scott Hall



 Fruitland Coals

 Pictured Cliffs



RECEIVED  
JUN 19 1998

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PLEASE REPLY TO SANTA FE

\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN NATURAL RESOURCES - OIL & GAS LAW  
\*\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN REAL ESTATE LAW

January 18, 2001  
**BY FACSIMILE TRANSMISSION: 986-1367**

J.E. Gallegos, Esq.  
Gallegos Law Firm, P.C.  
460 St. Michaels Dr., #300  
Santa Fe, New Mexico 87505-7602

Re: Whiting Petroleum Corporation, et al. v. Pendragon Energy Partners, Inc., et al.;  
Pendragon Energy Partners, Inc. v. New Mexico Oil Conservation Commission

Dear Gene:


From a telephone conversation with Michael Condon and in a subsequent voice-mail message from him, I understand you are preparing some form of motion that will vacate the current Rule 16-B Scheduling Order deadlines pending the outcome of the Commission appeal. I also understand there will be no need to file the witness and exhibit lists which were otherwise due today.

Please forward a draft of your proposed motion for my review and approval.

Thank you.

Very Truly Yours,

MILLER, STRATVERT & TORGERSON, P.A.



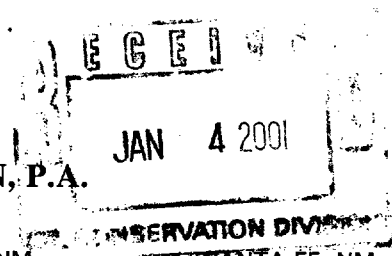
J. Scott Hall

JSH:ao

CC: Steve Ross, Esq., NMOCC

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PLEASE REPLY TO SANTA FE

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January 3, 2001

J.E. Gallegos  
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Gallegos Law Firm, P.C.  
460 St. Michaels Dr., #300  
Santa Fe, New Mexico 87505-7602

Steve Ross  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
Santa Fe, New Mexico 87505


Re: Whiting Petroleum Corp. and Maralex Resources, Inc. vs. Pendragon Energy Partners, Inc., and J.K. Edwards Associates, Inc.; No D-0101-CV-98-01295 and Pendragon Energy Partners, Inc. v. NMOCC No. D-0117-CV-2000-1449, Consolidated

Gentlemen:

Enclosed for your records is an endorsed copy of the Protective Order in the above-referenced matter.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao  
Enclosures

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

and

WHITING PETROLEUM CORPORATION,  
a corporation, and MARALEX RESOURCES,  
INC., a corporation,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS,  
INC., and J.K. EDWARDS ASSOCIATES,  
INC., a corporation

Defendants.

**PROTECTIVE ORDER**

This matter, having come before the Court pursuant to the Motion For Protective Order submitted on behalf of Pendragon Energy Partners, Inc., et al., and the Court being duly advised, IT IS ORDERED that all discovery in Cause No. SF-CV-01295 is stayed until the appeal in Cause No. D-0117-CV-2000-1449 is completed.

ORIGINAL SIGNED BY  
JUDGE ENCINIAS

---

Art Encinias  
District Judge

Submitted by

By:

*J. Scott Hall*

---

J. Scott Hall  
Attorneys for Appellants  
Miller, Stratvert & Torgerson, P.A.  
Post Office Box 1986  
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Approved as to form:

By Telephonic approval 12/22/00

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December 28, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS\*

## **VIA HAND-DELIVERY**

The Honorable Art Encinias  
Santa Fe Judicial Complex  
Santa Fe, New Mexico 87501

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295

Dear Judge Encinias:

Enclosed pursuant to LR1-306(G), please find copies of the following pleadings:

1. Motion to Dismiss Pendragon's Appeal, including Supporting Authority;
2. Response to Motion to Dismiss Appeal; and
3. Whiting's Reply Memorandum in Support of Motion to Dismiss Pendragon's Appeal.

We have not included a Notice of Hearing form based on the Court's announcement that it would render a decision on the pleading.

Respectfully yours,

GALLEGOS LAW FIRM, P.C.

By   
J. E. GALLEGOS

JEG:sa

Enclosures

fxc: J. Scott Hall

John Hazlett

Mickey O'Hare

ioc: Michael J. Condon

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295  
CONSOLIDATED**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449  
CONSOLIDATED**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**WHITING'S REPLY MEMORANDUM IN SUPPORT  
OF MOTION TO DISMISS PENDRAGON'S APPEAL**

Whiting Petroleum Corp. and Maralex Resources, Inc. (collectively "Whiting"),  
hereby file this Reply Memorandum in Support of the Motion to Dismiss Pendragon's  
Appeal.



I.

**INTRODUCTION**

The motion raises an issue regarding Pendragon's complete failure, which Pendragon concedes by silence in its Response to Motion to Dismiss Appeal ("Response"), to provide the Court with any reference to the overwhelming volume of evidence introduced at the administrative proceeding which supports the decision of the New Mexico Oil Conservation Commission ("Commission") from which Pendragon appeals.

II.

**ARGUMENT AND AUTHORITY**

Whiting's Motion is premised upon the notion, well grounded in law and equity, that a party that raises substantial evidence or other challenges based on evidence in an appeal is under an obligation to furnish the reviewing Court with all relevant evidence admitted in the administrative proceeding which supports the administrative decision. This obligation is codified in Rule 1-074(K)(2), NMRA 2000 for administrative appeals. As the Court can readily determine from the responses to Pendragon's Statement of Appellate Issues filed by both Whiting and the Commission, there was substantial evidence submitted in the administrative proceeding below which supports the Commission decision. Pendragon's Response does not cite to a single instance in Pendragon's Statement of Appellate Issues where any of this evidence was disclosed. In fact, Pendragon has conceded in its Response, by its failure to refute the factual proposition, that it did not comply with Rule 1-074(K)(2) in filing its Statement of Appellate Issues.

Because it cannot establish compliance with the Rule, Pendragon offers two hyper-technical arguments against dismissing its administrative appeal. First, Pendragon argues that Rule 1-074(K)(2) does not contain waiver language found in Rule 12-213(A)(3), and that therefore there is no available remedy of dismissal of an administrative appeal. Pendragon contends that an appellant is free to ignore Rule 1-074(K)(2) because there is no available sanction for a violation. This is wrong. The letter and spirit of the Rule 74 requirement was violated by Pendragon in filing its Statement. Where there is a rule violation, this Court has ample authority under Rule 74 itself, and under its general power to control its docket, to fashion a remedy sufficient to address the deficiency in Pendragon's filing. See Rule 1-041(B), NMRA 2000 (Court may dismiss action for failure to comply with rules).

The fact that Rule 1-074(K)(2) does not contain the waiver provision found in Rule 12-213(A)(3) does not prohibit the Court from applying waiver principles. The disclosure requirement set forth in the rule is there for a purpose: to require an appellant who raises substantial evidence challenges, as Pendragon does in this administrative appeal, to provide the reviewing court with evidence introduced below which supports the administrative findings and decision from which the appellant appeals. Where Pendragon files a statement under Rule 1-074(K) with the reviewing court, but fails to provide the reviewing court with evidence which supports the administrative decision, it is misleading the Court and attempting to create a false climate for the review of the questions presented on appeal. Pendragon's Statement was designed to give this reviewing court the false impression that there was no evidence, or at least grossly insufficient evidence presented below, to support the administrative decision. Nothing

could be further from the truth in this case. See Whiting's Response to Appellants' Statement of Appellate Issues, pp. 10-26; Commission's Response to Appellants' Statement of Appellate Issue, pp. 3-32.

The cases which Whiting cited in its Motion to Dismiss support the basic principle, applicable to administrative appeals, that a one-sided statement of facts is no help to the Court. Whiting cited several appellate cases invoking appeals under Rule 12-213 because there are no decisions construing the Rule 1-074(K)(2) disclosure requirement. The cases decided under Rule 12-213 apply with equal force here. The disclosure requirement for administrative appeals is identical to the requirement imposed upon appellants in raising substantial evidence challenges under Rule 12-213. An appellant in an administrative appeal who raises a substantial evidence challenge has the same obligation as an appellant under Rule 12-213 to provide the reviewing court with all evidence relevant to the issues raised, including evidence introduced below which supports the administrative agency decision, not just the evidence it wishes the agency would have accepted.

Pendragon's second argument is that it has raised issues other than substantial evidence challenges on appeal, and that those issues should not be impacted by its failure to provide this Court with a description of evidence which supports the Commission decision. The crux of all issues Pendragon raises on appeal, contrary to Pendragon's labeling, is impacted by the existence of evidence which supports the administrative decision. In reality, all of Pendragon's issues on appeal are based upon claims that the Commission erred in making certain findings, or failed to make findings and determinations based upon evidence which Pendragon submitted below. For

instance, on its Issue 1 -- the claim that the Commission failed to discharge its statutory duty -- Pendragon's entire argument is based upon its recitation of evidence which it claims established that Whiting caused communication with the Pictured Cliffs Formation and was producing Pictured Cliffs gas. See Pendragon's Statement of the Issues, pp. 10-12. This is, in essence, a substantial evidence challenge.

With respect to Issue 2 -- the "fair share" finding -- this too, is dependent on Pendragon's claims that the Commission erred in making certain findings, and that the Commission somehow erred in making its ultimate determination that Pendragon had already produced its "fair share" of gas. This determination is based upon the Commission's findings, supported by substantial evidence below, that the Pictured Cliffs Formation was depleted prior to the Pendragon well reworks in 1995, that there was not sufficient remaining Pictured Cliffs gas in that formation to support the gas production volumes of Pendragon's Chaco wells from 1995 until they were shut-in by Court Order in 1998, and that the Whiting coal seam gas wells were producing coal seam gas. Since those findings are amply supported by the evidence, the "fair share" finding and disposition should be affirmed. Pendragon's complaint on appeal is limited by the evidentiary record below.

### III.

#### **CONCLUSION**

Pendragon has violated the letter and spirit of Rule 1-074(K)(2) in its Statement of the Issues in this appeal by failing to cite the Court to substantial evidence in the record below which supports the Commission's findings and dispositive provisions of Order R-11133-A. Under these circumstances, the Court should determine that

Pendragon has waived its right to prosecute this administrative appeal, and dismiss Pendragon's appeal with prejudice.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By 

J.E. GALLEGOS

MICHAEL J. CONDON

460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505  
(505) 983-6686

Attorneys for Plaintiffs

**CERTIFICATE OF SERVICE**

I hereby certify that I have caused a true and correct copy of the foregoing Whiting's Reply Memorandum in Support of Motion to Dismiss Pendragon's Appeal to be mailed on this 28<sup>th</sup> day of December, 2000 to the following counsel for defendants:

J. Scott Hall  
Miller, Stratvert, Torgerson & Schlenker, P.A.  
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Santa Fe, New Mexico 87501

Steve Ross  
New Mexico Oil Conservation Commission  
2040 S. Pacheco Street  
Santa Fe, New Mexico 87505

  
MICHAEL J. CONDON

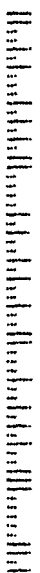
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87505-3472 57



FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee,

and

WHITING PETROLEUM CORP. and  
MARALEX RESOURCES, INC.,

Intervenors.

**RESPONSE TO MOTION TO DISMISS APPEAL**

Appellants Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation, ("Pendragon"), by counsel, submit this Response to Whiting Petroleum Corporation and Maralex Resources, Inc.'s ("Whiting") Motion to Dismiss Pendragon's Appeal. In opposition to the Motion, Pendragon states as follows:

**Introduction**

In its Motion to Dismiss, Whiting claims that Pendragon failed to inform the District Court of extensive evidence in the record that supports the Commission's findings. Because Pendragon failed to set forth a summary of all of such evidence, Whiting claims that Pendragon

has waived its claim that the Commission's Order is not supported by substantial evidence, and therefore its appeal should be dismissed. This Motion marks the seventh attempt by Whiting to circumvent the orderly appellate process.

### Argument

In its Response to Appellant's Statement of the Issues, Whiting cites to cases supporting its position, but all of these cases construe Rule 12-213(A)(3). This appeal, however, is a Rule 74(K)(2) administrative appeal to the District Court. Whiting acknowledges that this is a Rule 74(K)(2) appeal, but then goes on at some length as if this were an appeal to the Court of Appeals or Supreme Court. This is not an appeal to either the Court of Appeals or the Supreme Court of New Mexico to which the Rules of Appellate Procedure apply. Whiting's entire argument is premised on case law construing Rule 12-213(A)(3), but Whiting ignores the fact that this rule governs the procedure in appeals only to the Supreme Court and the Court of Appeals. NMRA 12-101(A) ("**Scope of rules.** These rules govern procedure in appeals to the supreme court and the court appeals...."). On the other hand, Rule 74(A) provides: "**Scope of rule.** This rule governs appeals from administrative agencies to the district court when there is a statutory right or review to the district court...." NMRA 1-074(A).

While Rule 74(K)(2) and Rule 12-213(A)(3) are very similar, they diverge precisely on the point that Whiting claims requires dismissal of Pendragon's appeal. While both Rule 74(K)(2) and Rule 12-213(A)(3) require a summary of facts relevant to the issues presented on appeal, Rule 74(K)(2) does not contain a waiver provision like Rule 12-213(A)(3) does, and so Whiting's argument for dismissal of Pendragon's appeal is completely without merit.

Rule 12-213(A)(3) states that the appellant's summary of the proceedings "shall include a



summary of the facts relevant to the issues presented for review. \* \* \* A contention that a verdict, judgment for finding of fact is not supported by substantial evidence shall be deemed waived unless the summary of proceedings includes the substance of the evidence bearing upon the proposition.” NMRA 12-213(A)(3).

Rule 74(K)(2) states that an appellant’s summary of the proceedings “shall include a short recitation of all facts relevant to the issues presented for review, with appropriate references to the record on appeal showing how the issues were preserved in the proceedings before the agency.” NMRA 1-074(K)(2). Rule 74(K)(2) does not, however, contain the waiver provision appearing in Rule 12-213(A)(3) and upon which Whiting relies to demand dismissal of Pendragon’s appeal.

Because the language on which Whiting relies to request dismissal does not appear in Rule 74(K)(2), the case law cited by Whiting is completely irrelevant. In short, Whiting is arguing for dismissal of this administrative appeal on grounds that simply do not exist.

Contrary to Whiting’s accusation that “Pendragon plucks from the record selectively unfavorable” evidence to support reversal of the Commission (Motion, ¶5), it is actually Whiting that is guilty of “selectively plucking” from case law and from a rule that do not govern this appeal. Whiting has cited to no cases that allow the same kind of sanction specifically provided for under Rule 12-213(A)(3) in a Rule 74(K)(2) administrative appeal. Rule 74(K)(2) contains no provision for sanctions or waiver, and so Whiting’s Motion to Dismiss Pendragon’s appeal is unfounded.

Whiting also ignores that there are additional statutory bases for this appeal under the relatively recent amendments to Section 39-3-1.1. Having made no mention of this statute in

either its motion or its Response to Appellants' Statement of Appellate Issues, it is not surprising that Whiting misapprehends that Pendragon's appeal involves more than contentions that numerous findings in Order No. R-11133-A are not supported by substantial evidence. In its Statement of Issues, Pendragon also asserts that (1) the Commission departed from its statutory mandate in contravention of its own statutes, regulations and prior orders by failing to accord meaningful regulatory relief, and (2) it acted arbitrarily and capriciously when it purportedly determined the ownership of Pendragon's "fair share" of gas.<sup>1</sup> In essence, in addition to challenging the lack of substantial evidence, Pendragon's appeal also explains that the Commission's actions were arbitrary and capricious and were not in accordance with law. By failing to discharge its duty to resolve the matters before it and, in the case of its "fair share" finding, the Commission "refused to follow statutory procedures" and acted without an "adequate determining principal".<sup>2</sup> As additional grounds for its appeal, Pendragon asserts that the Commission disregarded clearly pertinent evidence. There is more than adequate case law support for appealing agency actions on all these grounds.

In an administrative appeal, the role of an appellate court in determining whether an

---

<sup>1</sup> NMSA 1978 §§ 70-2-25 states that a party dissatisfied with an Order or decision of the Commission must first file an application for rehearing: if dissatisfied with the disposition of the application, then the party may appeal to the District Court pursuant to NMSA 1978 §§ 39-3-1.1, which provides:

(Subparagraph D) In a proceeding for judicial review of a final decision by an agency, the district court may set aside, reverse or remand the final decision if it determines that:

- (1) the agency acted fraudulently, arbitrarily or capriciously;
- (2) the final decision was not supported by substantial evidence; or
- (3) the agency did not act in accordance with law.

<sup>2</sup> See *Planning and Design Solutions v. City of Santa Fe*, 118 N.M. 707, 713, 885 P.2d 628, 634 (1994).

administrative agency has abused its discretion by acting in an arbitrary and capricious manner, is to review the record to determine whether there has been unreasoned action without proper consideration in disregard for the facts and circumstances. *See Perkins v. Department of Human Services*, 106 N.M. 651, 655, 748 P.2d 24, 28 (Ct. App. 1979), *quoting Petras v. Arizona State Liquor Bd.*, 631 P.2d 1107 (Ariz. App.1981); *Barrie v. Kitsap County*, 613 P.2d 1148 (Wash. 1980) (En Banc).

An arbitrary and capricious action is also one without "consideration of facts and circumstances," *see Planning and Design Solutions v. City of Santa Fe*, 118 N.M. 707, 713, 885 P.2d 628, 634, (1994); one in which the governing agency acted "without an adequate determining principle," *see id. (quoting United States v. Carmack*, 329 U.S. 230, 246 fn. 14 (1946).)

When an agency does not weigh all the evidence and arbitrarily disregards particularly important and qualified testimony, the agency is behaving in an arbitrary and capricious manner. *See Alto Village Services Corp.*, 92 N.M. 323, 325-26; 587 P.2d 1334, 1336-37 (1978).

When an agency ignores evidence it is required to look at, it is behaving in an "unreasonable, irrational, and willful way". *See Oil Transport Co.*, 110 N.M. 568, 572, 798 P.2d 169, 173 (1990). In addition, an agency is acting arbitrarily if it considers evidence only when it supports a position, and disregards it at other times. *See id.*

If an agency refuses to follow governing rules and procedures, its behavior is arbitrary and capricious. *See Planning and Design Solutions*, 118 N.M. 707, 713, 885 P.2d 628, 634 (1994). If an agency departs from explicit statutory standards, then its decision is not governed by any fixed rules. In such an instance, the agency acts without an adequate determining

principle, and this amounts to an act depending on the will alone, which is "arbitrary". *See id.* Unquestionably, there are much broader bases for advancing an administrative appeal than the limited or inapposite authorities cited by Whiting would suggest.

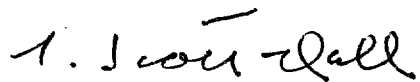
### Conclusion

Whiting is requesting a remedy that does not exist. Instead of Pendragon being guilty of failing to apprise this Court of a complete summary of the facts, it is Whiting which is guilty of failing to apprise the Court that its requested remedy is not provided for under the applicable rule: Rule 74(K)(2). There is simply no basis for Whiting's demand for dismissal of Pendragon's appeal. Unlike Rule 12-213(A)(3), Rule 74(K)(2) does not provide for the waiver of a right to a substantial evidence challenge. Similarly, Whiting wishes the Court to disregard the statutory bases for this appeal under Section 39-3-1.1.

WHEREFORE, Pendragon respectfully requests that this Court deny Whiting's Motion to dismiss.

Respectfully Submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By   
J. Scott Hall  
Jeffrey E. Jones  
Attorneys for Appellant  
P.O. Box 1986  
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(505) 989-9614

I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Response was mailed  
to all counsel of record on  
this 18 day of December 2000.

By J. Scott Hall  
JEFFREY E. JONES  
J. SCOTT HALL

**MILLER, STRATVERT & TORGERSON, P.A.**  
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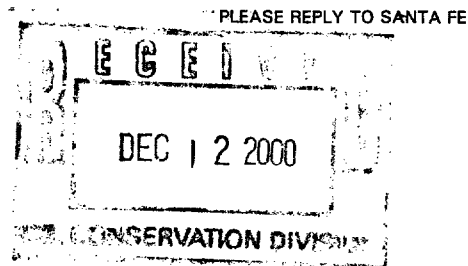
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December 11, 2000

**By Hand Delivery**

The Honorable Art Encinias  
First Judicial District Court  
Post Office Box 2268  
Santa Fe County Judicial Complex Bldg.  
Santa Fe, New Mexico 87504-2268



Re: Pendragon. v. NMOCC; Whiting v. Pendragon, No D-0101-CV-98-01295

Dear Judge Encinias:

Enclosed is a copy of the Motion To Strike Whiting's Pleadings which I understand was not included in the Court's file in Cause No. D-0117-CV-2000-1449. Separately, counsel have agreed to an extension of time to respond to the Whiting Motion to Dismiss Appeal. A copy of our Agreed Motion for Extension and an original Agreed Order for such is enclosed for your review and approval.

Very Truly Yours,

MILLER, STRATVERT & TORGERSON, P.A.

J. Scott Hall

JSH/ao

Enclosure(s) – as stated

Cc: J. E. Gallegos, Esq. (with enclosures)  
Steve Ross, Esq. (with enclosures)

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

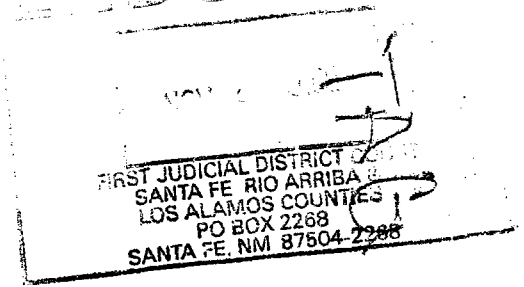
Appellee.

**MOTION TO STRIKE WHITING'S PLEADINGS**

Appellants Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation, ("Pendragon"), by counsel, pursuant to NMRA 1-012(F) submit this Motion to Strike Whiting Petroleum Corporation and Maralex Resources, Inc.'s ("Whiting") Motion to Dismiss Pendragon's Appeal and to strike its Response to Pendragon's Statement of Appellate Issues. As grounds, Pendragon states as follows:

**Introduction**

The case before this Court is the administrative appeal from the Commission's Order below. Whiting claims that it is entitled to intervene as a matter of right in this appeal under NMRA 1-024(A)(2), but this Court has not granted Whiting's application for intervention, and so Whiting is not a party to the appeal. Whiting was entitled to appeal as a matter of right from the Commission's Order, but for whatever reason it chose not to do so. Because Whiting has failed to show all of the elements required for intervention under Rule 24(A)(2), its Motion to Intervene



should be denied.

### Argument

Yet even before its Motion to Intervene has been ruled upon, Whiting “jumps the gun” and files a Motion to Dismiss the Appeal. Without even waiting for permission to join this action as a party, Whiting presumptively seeks to barge in as an uninvited guest, not to contribute to the orderly resolution of this appeal, but rather to summarily end it.

It is the height of arrogance to file a motion to dismiss a proceeding in which the movant is not a party. Whiting’s application to intervene has not been granted by the Court, and Whiting does not even extend the courtesy to the Court of waiting for the Court’s ruling on Whiting’s Motion to Intervene before seeking relief as if Whiting were a party.

In its Response to Pendragon’s Statement of Appellate Issues, Whiting is attempting to address the merits of the appeal without leave to join the appeal as a party. Because Whiting is not a party to this appeal, it has no standing to participate in this appeal, much less request that the appeal be dismissed. Whiting’s pleadings are simply premature, and they should be stricken.

Whether or not there is substantial evidence to support either the affirmance or the reversal of the Commission’s Order will be decided in due course by this Court. Whiting apparently does not respect the orderly administration of justice, seeking instead to short-cut a proceeding to which Pendragon has an absolute right without even awaiting permission from this Court to join the proceeding as a party.

Whiting voluntarily elected not to appeal from the Commission, and actually tried to prevent Pendragon from exercising its automatic right to appeal. In its Motion to Dismiss and in its Response to Pendragon’s Statement of Appellate Issues, however, Whiting is trying to join



the appeal through the back door, not to help the process along, but only to kill it.

If Whiting is allowed to intervene, however, Pendragon requests a reasonable amount of time thereafter within which to respond to Whiting's Motion to Dismiss and to file a Reply to its Response to Appellants' Statement of Issues.

WHEREFORE, Pendragon respectfully requests that this Court enter an Order striking Whiting's Motion to Dismiss and its Response to Appellants' Statement of Appellate Issues; and awarding Pendragon its reasonable costs, including attorneys' fees for having to file this Motion seeking Whiting's compliance with the Rules of Civil Procedure; in the alternative, Pendragon requests that if Whiting is allowed to intervene, Pendragon requests a reasonable amount of time thereafter within which to respond to Whiting's Motion to Dismiss and to file a Reply to its Response to Appellants' Statement of Issues.

Respectfully Submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By

J. Scott Hall

Jeffrey E. Jones

Attorneys for Appellant

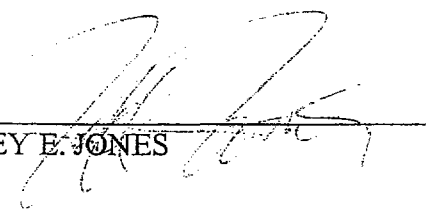
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Santa Fe, New Mexico 87504

(505) 989-9614

I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Motion to Strike was  
mailed to all counsel of record on  
this 24 day of November 2000.

By

  
JEFFREY E. JONES

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

and

WHITING PETROLEUM CORPORATION,  
a corporation, and MARALEX RESOURCES,  
INC., a corporation,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS,  
INC., and J.K. EDWARDS ASSOCIATES,  
INC., a corporation

Defendants.

**AGREED ORDER EXTENDING TIME  
TO RESPOND TO MOTION TO DISMISS**

This matter, having come before the Court pursuant to the Motion of Pendragon Energy Partners, Inc., Pendragon Resources, L.P., and Edwards Energy Corporation, ("Appellants"), for an extension of time to respond to the Motion to Dismiss Appeal filed on behalf of Intervenor, Whiting Petroleum Corporation and Maralex Resources, Inc., and the Court being duly advised,

IT IS ORDERED, that the time for Appellants to file their Response to the Motion to Dismiss shall be extended to December 18, 2000.

\_\_\_\_\_  
Art Encinias  
District Judge

AGREED:

By T. J. Scott-Hall 12/11/00  
J. Scott Hall  
Attorneys for Appellants  
Miller, Stratvert & Torgerson, P.A.  
Post Office Box 1986  
Santa Fe, New Mexico 87501  
(505) 989-9614

By Telephonically approved 12/11/00  
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Special Assistant Attorney General  
Oil Conservation Commission  
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(505) 827-8156

By Telephonically approved 12/11/00  
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(505) 983-6686

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

and

WHITING PETROLEUM CORPORATION,  
a corporation, and MARALEX RESOURCES,  
INC., a corporation,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS,  
INC., and J.K. EDWARDS ASSOCIATES,  
INC., a corporation

Defendants.

**AGREED MOTION TO EXTEND TIME  
TO RESPOND TO MOTION TO DISMISS**

Pendragon Energy Partners, Inc., Pendragon Resources, L.P., and Edwards Energy Corporation, ("Appellants"), move that the Court enter its order extending the time to respond to the Motion to Dismiss Appeal filed on behalf of Intervenor, Whiting Petroleum Corporation and Maralex Resources, Inc. In support, Appellants state:

Whiting's Motion to Dismiss Appeal was filed on November 8, 2000, prior to a ruling on Whiting's separately filed Motion To Intervene. In the interim, Appellants filed their Motion to Strike Whiting's Pleadings on November 21<sup>st</sup>. Subsequently, on December 7, 2000, the Court entered its Order Authorizing Intervention and Consolidation.

In its Response to the Appellants' Motion to Strike, Intervenor indicated they would have no objection to some extension of time for Pendragon to respond to the Whiting Motion to Dismiss.

Counsel for Appellants, Appellee and Intervenor have conferred this day by telephone and all have agreed to a motion and order extending the time to December 18, 2000 in which to respond to the Motion to Dismiss.

WHEREFORE, Appellants request the Court enter its order extending the time for Appellants to file their Response to the Motion to Dismiss to December 18, 2000.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By 

J. Scott Hall

Post Office Box 1986

Santa Fe, New Mexico 87504

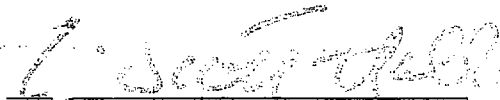
(505) 989-9614

Attorneys for Pendragon Energy Partners, Inc., *et al.*

Telephonically approved: December 11, 2000  
Steve C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
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Telephonically approved: December 11, 2000  
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Attorneys for Intervenors  
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Santa Fe, New Mexico 87505-7602  
(505) 983-6686

I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Motion was forwarded  
to all counsel of record on  
this 11 day of December, 2000.

  
\_\_\_\_\_  
J. Scott Hall

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,

Defendants.

and

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,

Appellant,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee,

WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation,

Appellees-Intervenors,

**RESPONSE IN OPPOSITION TO MOTION TO  
STRIKE WHITING'S PLEADINGS**

Intervenors Whiting Petroleum Corporation and Maralex Resources, Inc.  
(collectively "Whiting") hereby file their Response in Opposition to the Motion to Strike  
Whiting's Pleadings filed by appellants ("Pendragon") in Pendragon Energy Partners.



Inc., et al. v. New Mexico Oil Conservation Commission, et al., No. D-0117-CV-2000-1449. Pendragon's Motion is without merit and should be summarily denied.

Pendragon filed its Notice of Appeal in this matter on June 13, 2000. Pendragon appeals from the Order of the New Mexico Oil Conservation Commission in Case No. 11996, Order R-11133-A. This was a de novo proceeding before the Commission. Pendragon and Whiting were adverse parties in the Commission proceeding. Both participated fully in the proceedings before the Commission. Although Whiting is a real party in interest in this appeal, Pendragon failed to name Whiting as a party appellee.

Whiting filed its Motion to Intervene and for Consolidation on July 18, 2000. Pendragon opposed the Motion. Briefing was concluded on the Motion to Intervene on August 7, 2000, at which time Whiting promptly submitted a Request for Hearing to Honorable Daniel Sanchez. A copy is attached hereto as Exhibit A.<sup>1</sup> Through no fault of Whiting, the Motion to Intervene was not heard until November 22, 2000. At that hearing, Judge Sanchez granted the Motion to Intervene, as well as the request for consolidation. An Order reflecting those rulings was entered on December 7, 2000 (a presentment hearing was required because of Pendragon's counsel refusal to approve a tendered order).

Pendragon filed its Statement of the Issues on appeal pursuant to Rule 1-074K, NMRA 2000, on October 22, 2000. Because the deadline for the appellees' response statement was running before a hearing had been scheduled on the Motion to Intervene, Whiting filed its Response to the Appellants' Statement of Appellate Issues "Subject to their pending Motion to Intervene" on November 3, 2000. Whiting also filed

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<sup>1</sup> The Court Clerk's office erroneously stamped the Request for Hearing on July 7, 2000.

on November 8, 2000, a Motion to Dismiss Pendragon's appeal for failure to comply with Rule 1-074.<sup>2</sup> Again, that pleading was filed because of deadlines which were accruing in this case, and because Whiting could not get an earlier hearing on its Motion to Intervene. The Response to Appellants' Statement of Appellate Issues filed by the Commission on November 13, 2000, raises the same issue attacking the insufficiency of Pendragon's Statement in setting forth the evidence. See Commission Response, p. 9.

On November 21, 2000, one day before the hearing on the Motion to Intervene, Pendragon filed its Motion to Strike Whiting's pleadings. As to that part of the Motion which seeks to strike Whiting's pleadings because the Court has not granted Whiting's Motion to Intervene, the motion is moot.

Pendragon's Motion also states that it seeks a "reasonable amount of time" within which to respond to Whiting's Motion to Dismiss and to file a Reply to Whiting's Response Statement to Appellants' Statement of Issues. Whiting objects to any request by Pendragon to file a Reply, since there is no provision for such a pleading under Rule 1-074. The rule specifies that the appellant will file a Statement of Appellate Issues and provides for an Appellees' Response thereto closing the pleading. There is no provision for appellants to file a Reply, nor is such a reply warranted.

While Whiting does not object to some extension of time for Pendragon to respond to the Motion to Dismiss, Pendragon has never stated exactly how much time it requires. At this writing, it is a month since Whiting filed its Motion to Dismiss, over three weeks since the Commission raised the issue in its Response, and over two weeks since the Court granted Whiting's Motion to Intervene. Pendragon has yet to file


---

<sup>2</sup> Pendragon's Statement of the Issues fails to cite the Court to abundant substantial evidence in the record which supports the Commission decision that Pendragon challenges on appeal.


a response to the Motion to Dismiss or specify when the response will be filed. If the Court grants Pendragon an extension, such extension should be brief, so that Pendragon is not allowed to further delay the ultimate determination of the issues in the administrative appeal.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.


By   
J.E. GALLEGOS  
MICHAEL J. CONDON  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505  
(505) 983-6686

**CERTIFICATE OF SERVICE**

 I hereby certify that I have caused a true and correct copy of the foregoing Response in Opposition to Motion to Strike Whiting's Pleadings to be mailed on this day of December, 2000 to the following counsel for defendants:

J. Scott Hall  
Miller, Stratvert, Torgerson & Schlenker, P.A.  
150 Washington Avenue  
Santa Fe, New Mexico 87501

Steve Ross  
New Mexico Oil Conservation Commission  
2040 S. Pacheco Street  
Santa Fe, New Mexico 87505

  
J. E. GALLEGOS

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION,**

**Appellee.**

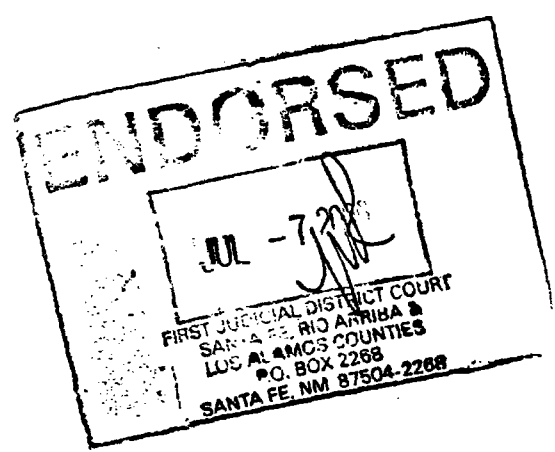
**IN RE:**

**APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY**

**NMOCC CASE NO. 11996  
Order No. R-11133-A *De Novo***

**REQUEST FOR HEARING**

1. Assigned Judge: THE HONORABLE DANIEL SANCHEZ
2. Type of Case: ADMINISTRATIVE APPEAL
3. Jury: Non-Jury: X
4. Dates of hearings presently set: NONE.
5. Specific matter(s) to be heard upon this request: MOTION TO INTERVENE AND FOR CONSOLIDATION
6. Estimated total time required: THIRTY MINUTES
7. Attach separate sheet(s) listing name, firm, capacity, address, and telephone number of all parties entitled to notice.



Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By



J.E. GALLEGOS

MICHAEL J. CONDON

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(505) 983-6686

Attorneys for Plaintiffs

**CERTIFICATE OF SERVICE**

I certify that a copy of this Request for Hearing was mailed on this 2<sup>th</sup> day of August, 2000 to the following counsel of record:

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Steve Ross

New Mexico Oil Conservation Commission

2040 S. Pacheco Street

Santa Fe, New Mexico 87505



J. E. GALLEGOS

**ALL PARTIES ENTITLED TO NOTICE**

**ATTORNEY FOR PLAINTIFFS:**

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**ATTORNEY FOR DEFENDANT:**

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**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION,**

**Appellee,**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation,**

**Appellees-Intervenors,**

**REQUEST FOR HEARING**

1. Assigned Judge: THE HONORABLE ART ENCINIAS
2. Type of Case: COMPLAINT FOR TORTIOUS CONDUCT, AND FOR  
DAMAGES AND  
EQUITABLE RELIEF / APPEAL FROM AN ORDER OF THE OIL  
CONSERVATION COMMISSION

3. Jury: X Non-Jury:
4. Dates of hearings presently set: December 15, 2000
5. Specific matter(s) to be heard upon this request: MOTION TO DISMISS APPEAL AND/OR ORAL ARGUMENT ON APPEAL OF NEW MEXICO OIL CONSERVATION COMMISSION DECISION
6. Estimated total time required: ONE HOUR
7. Attach separate sheet(s) listing name, firm, capacity, address, and telephone number of all parties entitled to notice.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By



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Attorneys for Plaintiffs

**CERTIFICATE OF SERVICE**

I certify that a copy of this request for hearing was mailed on this 8th day of December, 2000 to the following counsel of record:

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J. E. GALLEGOS



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**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** November 22, 2000  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 827-8177  
**FROM:** Michael J. Condon

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 5**

### **IMPORTANT**

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November 22, 2000  
(Our File No. 98-266.00)

MICHAEL J. CONDON

## VIA TELECOPY

J. Scott Hall  
Miller, Stratvert, Torgerson  
& Schlenker, P.A.  
150 Washington, Suite 300  
Santa Fe, New Mexico 87501

Re: Pendragon, et al. v. New Mexico Oil Conservation Commission,  
Cause No. D-0117-CV-2000-1449

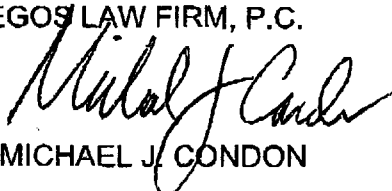
Dear Mr. Hall:

Attached is a proposed Order reflecting the decision by Judge Sanchez at today's hearing authorizing Whiting to intervene in this case and consolidating this matter with the case currently styled before Judge Encinias. Please let me know if we can note your approval to the form of the order. We just received today your Motion to Strike Whiting's pleadings in this case. We assume, based upon the rulings today, that you will withdraw that Motion. Please let us know if you require a response.

Your truly yours,

GALLEGOS LAW FIRM, P.C.

BY:

  
MICHAEL J. CONDON

MJC:sa

fx: Stephen C. Ross  
ioc: J.E. Gallegos

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION,**

**Appellee.**

**IN RE:**

**APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY**

**NMOCC CASE NO. 11996  
Order No. R-11133-A *De Novo***

**ORDER**

THIS MATTER having come before the Court upon the motion of movants Whiting Petroleum Corporation and Maralex Resources, Inc., seeking intervention in this proceeding pursuant to Rule 1-024, NMRA 2000, and to consolidate this action pursuant to Rule 1-042, NMRA 2000, with the cause previously filed and currently pending in the First Judicial District Court, styled Whiting, et al. v. Pendragon, et al., Cause No. D-0101-CV-98-01295 before the Honorable Art Encinias, and the parties having appeared by their counsel, and the Court having considered the pleadings and having heard argument of counsel FINDS that the Motion to Intervene and for Consolidation is well-taken and should be GRANTED.

11/22/00 10:10 AM 000001001

IT IS THEREFORE ORDERED that Whiting is authorized to intervene in this administrative appeal proceeding as an appellee.

IT IS FURTHER ORDERED that this case shall be consolidated with Cause No. D-0101-CV-98-01295, and that all future proceedings in this administrative appeal shall be tried before the Honorable Art Encinias in that cause.

\_\_\_\_\_  
The Honorable Daniel B. Sanchez  
District Judge

Submitted by:

GALLEGOS LAW FIRM, P.C.

By \_\_\_\_\_  
J E. Gallegos  
Michael J. Condon  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505

Attorneys for Movants-Intervenors  
Whiting Petroleum Corporation and  
Maralex Resources, Inc.

Approved:

NEW MEXICO OIL CONSERVATION COMMISSION

By Telephonically approved 11/22/00  
Stephen C. Ross  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Attorney for Appellee New Mexico Oil  
Conservation Commission

Approved as to form:

MILLER, STRATVERT, TORGERSON  
& SCHLENKER, P.A.

By \_\_\_\_\_  
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Energy Corporation

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**FACSIMILE TRANSMISSION COVER SHEET**

DATE: December 5, 2000

TO: Steve Ross, Esq.

FAX NO.: 827-8177

FROM: J. Scott Hall, Esq.

OPERATOR: Amanda Olsen

MESSAGE:

NUMBER OF PAGES INCLUDING COVER SHEET: 6

IF YOU DO NOT RECEIVE THE ENTIRE DOCUMENT, PLEASE CALL OUR SANTA FE OFFICE AS SOON AS POSSIBLE AT (505) 989-9614.

\*\*\*\*\*

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**MILLER, STRATVERT & TORGERSON, P.A.**  
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PLEASE REPLY TO SANTA FE

\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN NATURAL RESOURCES - OIL & GAS LAW  
\*\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN REAL ESTATE LAW

December 5, 2000

**BY FACSIMILE TRANSMISSION**

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505

Re: *Pendragon Energy Partners, Inc., et al. v. New Mexico Oil Conservation Commission*, No. D-0117-CV-2000-1449

Dear Counsel:

Enclosed for your review is a draft Order Authorizing Intervention And Consolidation in the above matter. If the draft order is agreeable, please provide your telephonic approval to my assistant, Amanda Olsen.

Very Truly Yours,

MILLER, STRATVERT & TORGERSON, P.A.

*J. Scott Hall*

J. Scott Hall

JSH:ao

Enclosures: as stated

6304/20253/Ross & Gallegos ltr4.doc



FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**ORDER AUTHORIZING INTERVENTION AND CONSOLIDATION**

This matter, having come before the Court pursuant to the Motion To Intervene And For Consolidation filed on behalf of Whiting Petroleum Corporation, ("Whiting"), and Maralex Resources, Inc., ("Maralex"), and the Court being duly advised, finds as follows:

1. This proceeding is an administrative appeal from the issuance by the New Mexico Oil Conservation Commission, ("NMOCC"), of Order No. R-11133-A in Case No. 11996 *de novo* brought by Appellants, Pendragon Energy Partners, Inc., et al, pursuant to NMSA 1978 Section 70-2-25 of the New Mexico Oil and Gas Act and Section 39-3-1.1 (Repl. Pamp. 1995) and NMRA 1-074. The NMOCC is the Appellee in this proceeding.

2. Whiting and Maralex, along with T.H. McElvain Oil and Gas L.P., were parties of record and participated in the administrative proceedings in Case No. 11996.

3. Following the issuance of Order No. R-11133-A by the NMOCC on April 26, 2000, Appellants timely filed their Application for Rehearing by the agency, followed by their timely Notice of Appeal as required by NMSA 1978 70-2-25(A).

4. Neither Whiting nor Maralex sought to appeal or otherwise challenge any aspect of Order No. R-11133-A. No Application for Rehearing or Notice of Appeal was filed by them pursuant to NMSA 1978 Section 70-2-25(A), Section 39-3-1.1 or NMRA 1-074.

5. Whiting and Maralex are also parties in *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc., Pendragon Resources L.P. and Edwards Energy Corporation*, Cause No. D-0101-CV-98-01295. Whiting and Maralex seek to intervene in the instant administrative appeal, having asserted that the NMOCC cannot adequately represent Whiting's interests in this administrative appeal. Whiting and Maralex also seek to have Cause No. D-0101-CV-98-01295 consolidated with this administrative appeal, asserting that there are common issues of law and fact and that the interests of judicial economy are served.

6. Appellants oppose intervention and consolidation for the reasons, *inter alia*, that movants did not comply with the conditions of Section 70-2-25 and that their unauthorized filings indicated their intention to bring an impermissible collateral attack against the NMOCC's order; that the purpose and the capacity of the movants in the appeal is uncertain; that there is insufficient commonality of issues; that the proceedings present distinct questions of law; and that an appeal on the record does not lend itself to consolidation with a trial on questions of fact.

WHEREFORE, it is ORDERED as follows:

A. Whiting and Maralex shall be authorized to intervene in this administrative appeal from the issuance by the NMOCC of Order No. R-11133-A in Case No. 11996 *de novo* brought by Appellants pursuant to NMSA 1978 Section 70-2-25, Section 39-3-1.1 (Repl. Pamp. 1995) and NMRA 1-074.

B. Provided, however, that Whiting and Maralex may intervene for the limited purpose of asserting that NMOCC Order No. R-11133-A should be upheld. Whiting and Maralex are prohibited from contesting or collaterally attacking in any way any finding, conclusion or decretal provision of Order No. R-11133-A.

C. This administrative appeal proceeding and Cause No. D-0101-CV-98-01295 shall be consolidated.

\_\_\_\_\_  
Hon. Daniel A. Sanchez  
District Judge

Approved as to form:

By \_\_\_\_\_  
J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
Post Office Box 1986  
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(505) 989-9614

Attorneys for Appellants

By \_\_\_\_\_

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Special Assistant Attorney General  
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Attorneys for Appellee

By \_\_\_\_\_

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ROBIN A. GOBLE  
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KIRK R. ALLEN  
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H. BROOK LASKEY  
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FRED SCHILLER  
PAULA G. MAYNES  
MICHAEL C. ROSS  
CARLA PRANDO  
KATHERINE N. BLACKETT  
JENNIFER L. STONE  
ANDREW M. SANCHEZ  
M. DYLAN O'REILLY  
AMINA QUARGNALI-LINSLEY  
BEATE BOUDRO  
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MARY A. WOODWARD  
JENNIFER L. OLSON

COUNSEL

PAUL W. ROBINSON  
ROSS B. PERKAL  
JAMES J. WIDLAND  
BRADLEY D. TEPPER\*\*  
GARY RISLEY

OF COUNSEL

WILLIAM K. STRATVERT  
RALPH WM. RICHARDS

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PLEASE REPLY TO SANTA FE

\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN NATURAL RESOURCES - OIL & GAS LAW  
\*\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN REAL ESTATE LAW

January 11, 2001

Mr. Steve Ross, Esq.  
Assistant General Counsel  
New Mexico Oil Conservation Commission  
1220 South St. Francis  
Santa Fe, New Mexico 87505

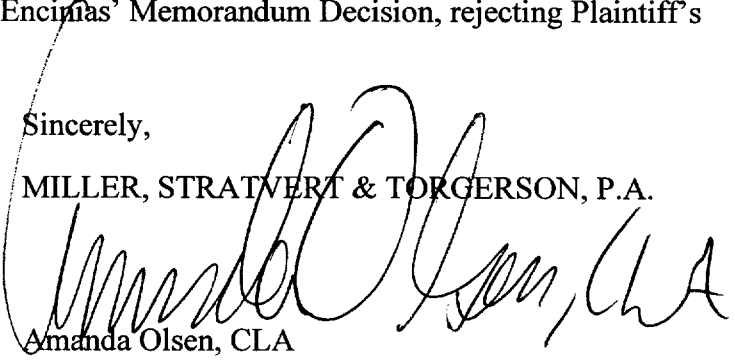
Re: Whiting Petroleum Corp. and Maralex Resources, Inc. vs. Pendragon Energy Partners, Inc., and J.K. Edwards Associates, Inc. No D-0101-CV-98-01295 and Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449 CONSOLIDATED

Dear Counsel:

Enclosed is a copy of Judge Encinas' Memorandum Decision, rejecting Plaintiff's Motion to Dismiss.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

6304/20253/Rossltr2.ao.doc

STATE OF NEW MEXICO  
COUNTY OF SANTA FE  
FIRST JUDICIAL DISTRICT

NO. D-0101-CV-98-1295

**WHITING PETROLEUM COMPANY, et al.**  
Plaintiffs

vs

**PENDRAGON ENERGY PARTNERS, INC., et al.**  
Defendants

RECEIVED  
JAN 05 2001

MILLER STRATVERT  
TORGERSON, P.A.  
SANTA FE, NEW MEXICO

## MEMORANDUM DECISION

THIS MATTER came before the court upon the Plaintiffs' Motion to Dismiss Pendragon's appeal. The Defendants timely filed a written Response in opposition to the Motion and, thereafter, the Plaintiffs timely filed a written Reply. Because the Motion, Response and Reply are clear and comprehensive, the court finds no necessity for hearing in order to resolve the matter.

Given the volume of evidence presented to the hearing body and which the court must review, it is pointless to compel any party to pinpoint evidence in support of or opposed to its position. Further, while I find ample authority for dismissal of an appeal where rule violations occur, nothing in the present circumstances prompts me to invoke that authority. In my view, the present motion was a complete waste of the court's time.

### Conclusion

The Plaintiff's Motion to Dismiss is not well-taken and its should be denied.

### Directions to Counsel

Mr. Hall, please prepare a sparely worded form of Order in accordance with the court's decision and circulate the same to opposing counsel for approval as to form and submit the approved form to the court for signature and entry no later than **February 16, 2001 at 1:30 p.m.**

In the event that there is undue delay in securing approval or in the event that there are objections to the form of the Order, please present the proposed form in open court on **February 16, 2001 at 1:30 p.m.** Objections, if any, shall be in writing and filed with the Clerk of the Court with courtesy copies to counsel and the court no later than three (3) working days before the date set for presentment.



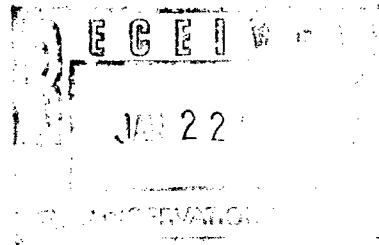
---

**ART ENCINIAS, District Judge**

J. E. Gallegos  
Gallegos Law Firm  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, NM 87505

J. Scott Hall  
Miller, Stratvert & Torgerson  
P.O. Box 1986  
Santa Fe, NM 87504-1986

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**



**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**PLAINTIFFS' WITNESS LIST**

Plaintiffs, by and through their counsel, and pursuant to the Scheduling Order entered by the Court, hereby designate the following witnesses for trial:

1. Alexis M. "Mickey" O'Hare  
Maralex Resources, Inc.  
Post Office Box 338  
Ignacio, Colorado 81137  
(970) 563-4000




2. James Brown  
Whiting Petroleum Corporation  
Mile High Center  
1700 Broadway, #2300  
Denver, CO 80290-2301  
(303) 390-4276
3. Dennis Reimer  
Maralex Resources, Inc.  
Post Office Box 338  
Ignacio, Colorado 81137  
(970) 563-4000
4. Bradley Robinson  
S.A. Holditch & Associates, Inc.  
900 Southwest Parkway East  
College Station, Texas 77840  
(979) 764-1122
5. Walter Ayers  
S.A. Holditch & Associates, Inc.  
900 Southwest Parkway East  
College Station, Texas 77840  
(979) 764-1122
6. David Hajny  
Rogoff, Erickson, Diamond & Walker, LLP  
P.O. Box 93656  
Albuquerque, NM 87199-3656  
(505) 998-3200
7. David Catanach  
New Mexico Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87504  
(505) 476-3440
8. Keith Edwards  
J.K. Edwards & Associates  
Denver, Colorado  
By deposition
9. Paul Thompson  
Walsh Engineering & Production Corp.  
204 N. Auburn  
Farmington, NM 87401

By deposition or through use of prior sworn testimony

Plaintiffs reserve the right to supplement this witness list pending the outcome of the administrative appeal by Pendragon which is currently before the Court for consideration. Plaintiffs serve the right to call rebuttal witnesses, whose testimony cannot be reasonably anticipated at this time, based upon evidence introduced by defendants at trial.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By   
J.E. GALLEGOS  
MICHAEL J. CONDON  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505  
(505) 983-6686

**CERTIFICATE OF SERVICE**

I hereby certify that I have caused a true and correct copy of Plaintiffs' Witness List to be mailed on this 19th day of January, 2001 to the following counsel for defendants:

J. Scott Hall  
Miller, Stratvert, Torgerson & Schlenker, P.A.  
150 Washington Avenue  
Santa Fe, New Mexico 87501

Steve Ross  
New Mexico Oil Conservation Commission  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

  
J.E. GALLEGOS

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**PLAINTIFFS' EXHIBIT LIST FOR TRIAL**

Pursuant to the Scheduling Order entered herein on July 26, 2000, the plaintiffs submit the following exhibit list. The exhibits will be made available for inspection and copying by opposing counsel upon reasonable arrangements.

## Whiting/Maralex Exhibits

EXHIBIT NO.	DESCRIPTION	OFFERED	ADMITTED
1	Transfers of Operating Rights, Bayless et al. to Maralex and Edwards		
1A	Demo – language of transfers of operating rights to Maralex, to Edwards		
2	Chaco 1 Well File		
3	Chaco 2R Well File		
4	Chaco 4 Well File		
5	Chaco 5 Well File		
6	Chaco 1 Gas Production History		
7	Chaco 2R Gas Production History		
8	Chaco 4 Gas Production History		
9	Chaco 5 Gas Production History		
10	Chaco Ltd 1J Gas Production History		
11	Chaco Ltd 2J Gas Production History		
12	Chaco Ltd 3 Gas Production History		
13	Chaco Ltd 3-J Gas Production History		
14	Chaco 1 Cum Production vs. WHSIP ( <i>demo</i> )		
15	Fruitland Coal / Pictured Cliffs Subject Area Plat		
16	Plat of Distances Between Coal Wells and Chaco Wells		
17	O'Hare analysis Merrion wells (1992) to confirm PC formation did not contain substantial reserves		

EXHIBIT NO.	DESCRIPTION	OFFERED	ADMITTED
18	Pendragon Chaco Production, Production & WHSIP vs. Time		
19	Chaco Wells BTU		
20	Chaco Wells SICP		
21	Chaco 1J & 2J SICP		
22	Total Monthly Production Five Gallegos Federal Coal Wells Before and After Chaco Wells		
22A	Whiting Coal Wells before / after Chaco Wells Shut-In ( <i>demo</i> )		
23	Water/Gas Ratios, Pendragon v. Whiting Wells		
24	Production information from the Whiting coal wells used to calculate the water/gas ratios on those wells		
25	Chaco 4 Cum Production vs. WHSIP ( <i>demo</i> )		
26	Chaco 5 Cum Production vs. WHSIP ( <i>demo</i> )		
27	btu AS A Function of Zone vs. Date ( <i>demo</i> )		
28	WAW Fruitland PC Wells by Operator		
29	WAW Fruitland PC Production, Annual MCF @ 15.025 psi		
30(A)	Historical Production Performance of the Pictured Cliffs Sands Years 1-5		
30(B)	Historical Production Performance of the Pictured Cliffs Sands Years 6-10		

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>	<b>OFFERED</b>	<b>ADMITTED</b>
30(C)	Historical Production Performance of the Pictured Cliffs Sands Years 11-15		
30(D)	Historical Production Performance of the Pictured Cliffs Sands Years 16-20		
31	Flow Rate Calculations, Chaco 1		
32	Flow Rate Calculations, Chaco 2R		
33	Flow Rate Calculations, Chaco 4		
34	Flow Rate Calculations, Chaco 5		
35	Average-Well Zero-Time Plot Comparison		
36	Average Production Rate vs. Time, FC for Whiting Petroleum Only		
37	Illustration of the Production Mechanisms Creating the Pressure "Sink" Around the Fruitland Coal Wellbores		
38	Gas in Place Calculations		
39	Gas in Place Calculations		
40	Estimate of Pictured Cliffs Gas Production from Chaco Wells		
41	Chaco 1 Log Data		
42	Net Pressure Plot for Chaco 1		
43	Chaco 1 Predicted Fracture Dimensions		
44	Chaco 4 Log Data		
45	Net Pressure Plot for Chaco 4		
46	Chaco 4 Predicted Fracture Dimensions		

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>	<b>OFFERED</b>	<b>ADMITTED</b>
47	Chaco 5 Log Data		
48	Net Pressure Plot for Chaco 5		
49	Chaco 5 Predicted Fracture Dimensions		
50	Comparison of Propped Fracture Widths Between Fruitland Coal and Pictured Cliffs Sand		
51	Predicted Fracture Geometry for Gallegos Federal 26-12-6 # 2		
52	The Effect of Multiple Fractures Created in the Fruitland Coal		
53	Illustration of Drainage Areas		
54	Estimated Recovery Efficiency		
55	Comparison of OGIP and Actual Production		
56	Fruitland/Pictured Cliffs Type Log, James E. Fassett (USGS 1988) Article, "Geometry and Depositional Environment of Fruitland Formation Coal Beds, San Juan Basin, New Mexico and Colorado: Anatomy of a Giant Coal Bed Methane Deposit		
57	Pictured Cliffs and Fruitland Coal Stratigraphic Cross Section A-A'		
58	Schneider Gas Com B No. 1 Log		
59	Stratigraphic Cross Section B-B'		
60	Depositional Model for Fruitland Coal Seams		
61	Pictured Cliffs Sandstone Spontaneous Potential		

EXHIBIT NO.	DESCRIPTION	OFFERED	ADMITTED
62	WAW Sandstone Gross Thickness		
63	Log-pattern Analysis of the Six-Section Subject Area and Surrounding Area		
64	Geophysical Log Pattern Distribution Map		
65	Halliburton Petrographic Analyses		
66	Core Laboratories, Inc., (Report RP-3-2847)		
67	Gas Analysis Trend (Several Wells) (demo)		
68	Chaco Wells SICP after Shut-In (demo)		
69	San Juan County Drainage Area Acres (demo)		
70	Well Logs Used in Evaluation of Project Area by Holditch		
71	MAP – San Juan County, New Mexico All Wells by Name and Number		
72	Induction Logs		
73	Whiting and Pendragon Wells Gas and Water Production		
74	Average Production Rate vs. Time FC for Whiting Petroleum Only		
75	Letter January 23, 1995 from Merrion to Bayless and Riggs on option sales of Chaco Wells		
76	Lansdale Federal #1 Gas Sales Dec 92 – Dec 98		
77	Lansdale Fed 1 Well File		




<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>	<b>OFFERED</b>	<b>ADMITTED</b>
78	Preliminary Injunction Against Pendragon in Cause No. SF CV 98-01295		
79	Summary of Water Production for Chaco 1, 2R, 4, 5, 1J and 2J		
80	Photos of Unlined Earthen Pit at Chaco 1		
81	Photos of Unlined Earthen Pit at Chaco 2R		
82	Photo of Chaco 2J with Gallegos Federal 26-13-1 # 1		
83	Photo of Unlined Pit at Chaco 4		
84	Two Photos of Unlined Chaco 5 Pit		
85	Well Reports / Water Hauling Tickets Showing Unreported Water Production from Chaco Wells		
86	C-115 Production Report		
87	Well Report for Chaco Plant # 5		
88	Chaco Plant No. 5 Production		
89	Photographs of Chaco Plant # 5		
90	2 Basin Fruitland Coal Wells Gas and Water Production		
91	Electrical Log Chaco Plant # 5		
92	Chaco #4 & Chaco #5 Production History		
93	Halliburton Fracturing Service Treatment Report		

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>	<b>OFFERED</b>	<b>ADMITTED</b>
94	Data from Nicol Exhibit N37E, Percentage of Gas Samples by BTU Range Coal, 65 Total Samples Taken		
95	Data from Nicol Exhibit N37E, Percentage of Gas Samples by BTU Range PC Without Designated Hitter #2 PC to 12/93, 19 Total Samples Taken		
96	Data from Nicol Exhibit N37E, Percentage of Gas Samples by BTU Range PC Without Designated Hitter #2, PC from 1/94, 45 Total Samples Taken		
97	Gas Composition Chaco 1, 4, & 5, Before Shut-in – After Shut		
98	Charts showing the initial gas formation volume factors and gas recovery facts used by Mr. Robinson in support of his analysis		
100	Plat of T-26-S, R-12 and 13-W Showing Wells at Issue		
101	Comparison of frac designs for Whiting Coal Wells vs. Pictured Wells		
102	Comparison of compression uplift Whiting coal wells vs. Chaco Wells		
103	Table of stimulated Pictured Cliffs wells, frac in zone and resultant production		
104	Table of stimulated PC wells, frac into coal and resultant production		
110	Damages calculation – gas volumes		
111	Damages calculation – Section 29 tax credits		
112	Damages summary – <i>Demo</i>		

Plaintiffs reserve the right to supplement this Exhibit List following service by defendants of their exhibit list and completion of discovery. Plaintiffs also reserve the right to utilize any exhibit designated by defendants in this proceeding, as well as any public record document maintained by the New Mexico Oil Conservation Division or the New Mexico Oil Conservation Commission.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By   
J.E. GALLEGOS  
MICHAEL J. CONDON  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505  
(505) 983-6686

Attorneys for Whiting and Maralex

**CERTIFICATE OF SERVICE**

I hereby certify that I have caused a true and correct copy of Plaintiffs' Exhibit List for Trial to be mailed on this 15th day of January, 2001 to the following counsel for defendants:

J. Scott Hall  
Miller, Stratvert, Torgerson & Schlenker, P.A.  
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Santa Fe, New Mexico 87501

Steve Ross  
New Mexico Oil Conservation Commission  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

  
J. E. GALLEGOS

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JAN 23

**MILLER, STRATVERT & TORGERSON, P.A.**  
LAW OFFICES

CONSERVATION DIVISION  
SANTA FE, NM

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ALICE T. LORENZ  
GREGORY W. CHASE  
LYMAN G. SANDY  
STEPHEN M. WILLIAMS  
STEPHAN M. VIDMAR  
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RUDOLPH LUCERO  
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PLEASE REPLY TO SANTA FE

\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN NATURAL RESOURCES - OIL & GAS LAW  
\*\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN REAL ESTATE LAW

January 22, 2001

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
1220 South St. Francis  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505


Re: Whiting Petroleum Corp. and Maralex Resources, Inc. vs. Pendragon Energy Partners, Inc., and J.K. Edwards Associates, Inc. No D-0101-CV-98-01295 and Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449  
CONSOLIDATED

Dear Counsel:

Enclosed is Pendragon's Witness and Exhibit List in the above-referenced matter.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

:ao

Enclosures: as stated

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee,

and

WHITING PETROLEUM CORPORATION,  
a corporation, and MARALEX RESOURCES,  
INC., a corporation,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS,  
INC., and J.K. EDWARDS ASSOCIATES,  
INC., a corporation

Defendants.

**APPELLANTS AND DEFENDANTS PENDRAGON ENERGY PARTNERS, INC.  
and J. K. EDWARDS ASSOCIATES, INC.'S WITNESS AND EXHIBIT LIST**

COME NOW Appellants and Defendants, Pendragon Energy Partners, Inc., *et al.*, by and through their attorneys, Miller, Stratvert & Torgerson, P.A. (J. Scott Hall), and identify the following as witnesses who may be called to testify in the trial of this matter:

## **I. IDENTIFICATION OF WITNESSES**

1. Mr. Alan B. Nicol  
621 17<sup>th</sup> Street, Suite 750  
Denver, Colorado 80293  
(303) 296-9402
  
2. Mr. Dave O. Cox  
  
Questa Engineering Corporation  
1010 Tenth Street  
Golden, Colorado 80401  
(303) 277-1629
  
3. Mr. Roland E. Blauer  
Resource Services International, Inc.  
1580 Lincoln Street #110  
Denver, Colorado 80203  
(303) 830-9427
  
4. Mr. Michael W. Conway  
Stim-Lab, Inc.  
Post Office Box 1644  
Duncan, Oklahoma 73534  
(405) 252-4309
  
5. Ken Ancell  
Fairchild, Ancell & Wells, Inc.  
1155 Diary Ashford, Suite 206  
Houston, Texas 77079  
(281) 497-8990
  
6. Jack A. McCartney  
McCartney Engineering, LLC  
1888 Sherman Street, Suite 760  
Denver, Colorado 80203-1160  
(303) 830-7208

7. Neil H. Whitehead, III  
31634 Black Widow Way  
Conifer, Colorado 80433-9610  
(303) 679-8573
8. A. M. "Mickey" O'Hare  
Maralex Resources, Inc.  
Post Office Box 338  
Ignacio, Colorado 31137  
(970) 563-4000
9. Professor Bruce Kramer  
School of Law  
Texas Tech University  
15th St & University Ave  
Lubbock, Texas 79409  
(806) 742-3162
10. Mr. Samuel D. Haas  
Thompson & Knight  
1700 Pacific Ave # 3300  
Dallas, Texas 75201  
(214) 969-1700
11. Mr. Bob Zarahdnik  
Southern Ute Tribe of Indians  
217 Capote Dr  
Ignacio, Colorado 81137  
(970) 563-4401
12. Mr. Dave Kramer  
B. J. Services  
1660 Lincoln St # 1600  
Denver, Colorado 80264-3101  
(303) 832-3722

13. Mr. Matthew Dodson  
B. J. Services  
3250 Southside River Rd  
Farmington, New Mexico 87401-7967  
(505) 327-6222
14. Mr. James T. Brown  
Whiting Petroleum Corporation  
Mile High Center  
1700 Broadway, #2300  
Denver, Colorado 80290-2301  
(303) 390-4276
15. Paul Thompson  
Walsh Engineering & Production Corp.  
204 N. Auburn  
Farmington, New Mexico 87401  
(505) 327-4892
16. West Hahn  
Walsh Engineering & Production Corp.  
204 N. Auburn  
Farmington, New Mexico 87401  
(505) 327-4892
17. Michael Wagner  
Walsh Engineering & Production Corp.  
204 N. Auburn  
Farmington, New Mexico 87401  
(505) 327-4892
18. Any witness identified by the Plaintiffs or the Appellee
19. Any witness necessary to authenticate a document to be offered as an exhibit
20. Any witness whose testimony cannot reasonably be anticipated at this time



## I. IDENTIFICATION OF EXHIBITS

The following exhibits may be offered by Appellants and Defendants in the trial of this matter:

1. Curriculum Vitae of Alan B. Nicol
2. Chronology (April 1, 1975 to February 5, 1999)
3. Map of Pendragon Leasehold Ownership or Operating Rights in San Juan County, New Mexico, June 1999
4. Map of Structure Top of Basal Fruitland Coal in San Juan County, New Mexico, June 1999
5. Pendragon Structural Cross Section A-A', San Juan County, New Mexico, April 1998
6. Walsh Engineering & Production Workover and Completion Report, June 1998
7. Pendragon Production Curves Montage, San Juan County, New Mexico, April, 1998
8. Compilation of Well Data
9. Log comparing pressures of Chaco 1, 1J, 2J, 2R, 4 and 5, 1981 to 1997
10. Walsh Engineering & Production Workover and Completion Report, January 1995
11. Pendragon diagram of increasing pressure versus area
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13. Pendragon Chart of Chaco 2R Corrected Pressure PSI, July 1, 1998 to July 26,

1999

14. Walsh Engineering & Production Well Reports for Chaco #5, Designated Hitter #2, Frew Federal #2, #9, and #12, and Ross Federal #1, July and August 1998
15. Pendragon Daily Production charts
16. Pendragon Chart of Chaco 5 Line Pressures, January 1, 1998 to June 30, 1998
17. Log – Chaco Area Wells Gage Corrections to Deadweight Tester and Gage changes, July 1, 1998 to June 30, 1999; also SI Pressures of Pendragon and Whiting/Maralex wells, June 30, 1998 to June 30, 1999
18. A.) Pendragon Chart of Chaco 1, 2R, 4 and 5 Corrected Pressure PSI, July 1, 1998 to July 26, 1999; B.) Pendragon Chart of Chaco 2R and Gallegos Fed 26-12-7-1 Corrected Pressure PSI, July 1, 1998 to July 26, 1999 and C.) Pendragon Chart of Chaco 1 and Gallegos Fed 26-12-7-1 Corrected Pressure PSI, July 1, 1998 to July 26, 1999
19. Tefteller, Inc.'s pressure logs and charts on Chaco #1-J, June 20, 1998
20. Tefteller, Inc.'s pressure logs and charts on Chaco #1-J, April 21, 1999
21. Walsh Engineering & Production Well Reports for Chaco #1-J, February 13, 1995
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24. Tefteller, Inc.'s pressure logs and charts on Chaco #1, April 21, 1999
25. Pendragon chart comparing Corrected PSI Pressures of Chaco #4 and Chaco #5
26. Tefteller, Inc.'s pressure logs and charts on Chaco #4, April 21, 1999
27. Tefteller, Inc.'s pressure logs and charts on Chaco #5, April 21, 1999

28. Tefteller, Inc.'s correspondence, pressure logs and charts on Chaco #2-J, May 1998
29. Tefteller, Inc.'s correspondence, pressure logs and charts on Chaco #2-J, July 1998
30. Tefteller, Inc.'s pressure logs and charts on Chaco #2-J, April 21, 1999
31. Sketch of enlarged thin section of fractured dolomite from Altamont.
32. Pendragon logs for Fracpro Examples for Phillip A. Miller #3-11 well
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53. Aerial infrared map
54. Pendragon Stratigraphic Correlation Section J-J'
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60. Pendragon Stratigraphic Correlation Section E-E'
61. Pendragon Stratigraphic Correlation Section L-L'
62. List of wells where operator perforated Pictured Cliffs sand and reported as Pictured Cliffs production
63. Various data and logs on Landsdale Federal #1
64. Pendragon Stratigraphic Correlation Section C-C'
65. Pendragon Stratigraphic Correlation Section D-D'

66. Pendragon Stratigraphic Correlation Section K-K'
67. Pendragon Stratigraphic Correlation Section I-I'
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75. Computation of Pressure Response in a Multi-Layer System
76. Chaco #1 Shut-in Response, July 1, 1998 to August 1, 1999
77. Chaco #1-J Shut-in Response, July 1, 1998 to August 1, 1999
78. Chaco #2-J Shut-in Response, July 1, 1998 to August 1, 1999
79. Chaco #2-J Buildup, July 15-31, 1998
80. Chaco #2-R Shut-in Response, July 1, 1998 to August 1, 1999
81. Chaco #4 Shut-in Response, July 1, 1998 to August 1, 1999
82. Chaco #5 Shut-in Response, July 1, 1998 to August 1, 1999
83. Comparison between Chaco #4 and CBM Well Pressures, July 1, 1998 to January 1, 1999
84. Comparison between Chaco #5 and CBM Well Pressures, July 1, 1998 to January

1, 1999

85. Gallegos Federal 26-13-1 #2 Pressures, July 1, 1998 to August 1, 1999
86. Gallegos Federal 26-12-6 #2 Pressures, July 1, 1998 to August 1, 1999
87. Gallegos Federal 26-12-7 #1 Pressures, July 1, 1998 to August 1, 1999
88. Gallegos Federal 26-13-12 #1 Pressures, July 1, 1998 to August 1, 1999
89. Interference Response between Fruitland and Pictured Cliffs for Fruitland Coal Well Producing then Shut-in, Analysis 1 – Langmuir Pressure = 1833 psia
90. Fruitland Coal Well Buildup Response, with or without Pictured cliffs Connection, Analysis 1 – Langmuir Pressure = 1833 psia
91. Pictured Cliffs Interference Response, Analysis 1 – Langmuir Pressure = 1833 psia
92. Pictured Cliffs Interference Response, Analysis 3- Fruitland Permeability = 50 md
93. Fruitland Coal Well Buildup Response, Analysis 3- Fruitland Permeability = 50 md
94. Pictured Cliffs Interference Response, Analysis 4- Pictured Cliffs Permeability = 50 md
95. Pictured Cliffs Interference Response, Analysis 5 – Pictured Cliffs Permeability = 150 md, Pictured Cliffs Thickness = 25 feet
96. Pictured Cliffs Interference Response, Analysis 6 – Effective Interwell Distance = 2000 feet
97. Pictured Cliffs Interference Response, Analysis 7 – Effective Interwell Distance = 500 feet

98. Observed Chaco No. 4 Pressure Changes Compared to Analysis Case 7
99. Observed Chaco No. 5 Pressure Changes Compared to Analysis Case 7
100. Observed Gallegos Federal 26-12-6 #2 Pressure Changes Compared to Analysis Case 7
101. Observed Gallegos Federal 26-12-7 #1 Pressure Changes Compared to Analysis Case 7
102. Observed Gallegos Federal 26-13-12 #1 Pressure Changes Compared to Analysis Case 7
103. Chaco #1 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
104. Chaco #1J chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
105. Chaco #2J chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
106. Chaco #2R chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
107. Chaco #4 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
108. Chaco #5 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
109. Gallegos Federal 26-13-1 #1 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001



110. Gallegos Federal 26-12-6 #2 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
111. Gallegos Federal 26-12-7 #1 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
112. Gallegos Federal 26-13-12 #1 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
113. Chaco #11 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
114. Dome Navajo 13-26-13 #1 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
115. Dome Navajo 13-26-13 #3 chart - Gas (Mcf/d) and Water (bwqd) rates between January 1976 to January 2001
116. Shut-in Pictured Cliffs Wellhead Pressures, 1977-1997
117. Chaco wells shut-in Wellhead Pressures, 1977-1997
118. Coalbed Methane Isotherms from the Lansdale Federal #1
119. Recovery factors based on Landsdale Federal #1 Isotherms
120. Aggregate Production from 6 Pendragon Pictured Cliffs Wells and 3 Whiting Methane Wells
121. Aerial Distribution of Btu content
122. Histogram of BTU Content in Area
123. Subdividing Subject Well Results
124. Histogram for Pictured Cliffs wells

125. Histogram for Fruitland Coal wells
126. Distribution of BTU content of Gases in the Area
127. Pictured Cliffs Heat Content over Time for wells that are not Chaco wells
128. Chaco #4 and #5 Heat Content over Time
129. Histogram of Ethane % in Area
130. Histogram of Propane % in Area
131. Histogram of Carbon Dioxide % in Area
132. Histogram of Nitrogen % in Area
133. Coalbed Methane Reservoir Engineering by Dave O. Cox, June 21, 1995
134. Roland E. Blauer resume
135. Phase-Change Graph
136. Graph on Methane pressure
137. Graph on Ethane pressure
138. Graph on Propane pressure
139. Graph on Butane pressure
140. Equilibrium phase diagram for the mixture of various gases
141. Gas Analysis Service Well/Lease Information and Analysis for Chaco #2-R,  
February 11, 1998
142. Graph on Solubility of methane in water
143. Graph on Solubility of ethane in water
144. Graph on Solubility of Propane in water
145. Graphs on Absorption of Hydrocarbon and Hydrobon Gases in Water

146. Table of the Reactivity of a Series of Gases with the Metals and Miscellaneous Other Substances
147. Sketch of before and after production of boundary pressures
148. Tabulation of wells in area sorted by BTU content
149. Graph - Designated Hitter #2 Production and Heat Content, January 1976 to January 1995
150. Graphs on Hitter #2 BTU History and Methane and Carbon Dioxide History, January 1976 to January 1996
151. Graph - BTU Relationships Hydrocarbons
152. Graph - BTU Relationships Diluent Carbon Dioxide
153. Graph - BTU Relationships Diluent Nitrogen
154. Graphs on Ethane and Propane Content
155. Graphs on Historical BTU Content Variation
156. Diagram of drilling structure
157. Diagrams of patterns of various types of fractures
158. Diagrams comparing contained versus breached sandstone fracture
159. Graph of Hydraulic Fracture Treatment data
160. List of Stim-Lab, Inc.'s Participation in Various Trials and Commission Cases
161. Curriculum Vitae of Michael W. Conway
162. Graphs on Fracture Geometry and Pressures in Coal Stimulation Treatments
163. Graph on Total Stress used in Fruitland Coal Stimulation (depth versus total stress)

164. Chart comparing fractures to sandstone and coal
165. Graph of GOHFER Stimulation of Chaco #2-R Treatment
166. Chart of Fracture Width (in) Time Step Number 495
167. Chart on Fracture Geometry and Pressures in Sandstone Stimulation Treatments  
Where the Nature Fracture is Very High using Chaco #2-R Lithology
168. Graph of GOHFER Stimulation of Chaco #2-R Treatment (Fracture Geometry  
and Pressures in Sandstone Stimulation Treatments Where the Nature Fracture is  
Very High using Chaco #2-R Lithology)
169. Graph of Simulation of Acid Injection in Chaco #4
170. Chart on Fracture Geometry at End of Pumping Acid in Chaco #4
171. Graph on Variations in Shut-In Pressure with Assumptions about Overburden  
Stress in the Simulation of the Treatment for Federal 26-12-6 #2
172. Chart on Fracture Geometry in Coal Stimulation Treatment in Federal 26-12-6 #2
173. Chart on Fracture Geometry and Pressures in Coal Stimulation Treatments Where  
the Breach into the PC Occurs Early at the Wellbore
174. Graph on Predicted Pressures for Treatments that Break into the Pictured Cliffs  
sandstone at Different Locations in the Federal 26-12-6 #2
175. Chart on Fracture Geometry and Pressures in Coal Stimulation Treatments Where  
the Breach into the PC is Remote from the Wellbore in Federal 26-12-6 #2
176. Stress Profile and Graph on Chaco #1 Fracture Dimensions
177. Graph of Methane Capacity of Coal
178. Graph of Relative Permeability

179. Pressure Profiles for Single Well versus Multi-Well Patterns
180. Graph of Single Well in Large Reservoir
181. Graph of 320 acre Interference Effects
182. Graph of Shut-in pressure and gas for Chaco #1, January 1994 to July 1998
183. Graph of Shut-in pressure and gas for Chaco #4, January 1994 to July 1998
184. Graph of Shut-in pressure and gas for Chaco #5, January 1994 to July 1998
185. Graph of water and gas for Chaco #4 and Gallegos Federal 26-12-6 #2, January 1994 to July 1999
186. Graph of water and gas for Chaco #5 and Gallegos Federal 26-13-12 #1, January 1994 to July 1999
187. Graph of water and gas for Chaco #1 and Dome Navajo, Galway and Hard Heal, January 1994 to April 1998
188. Graph of Isotherm of Gas Content as a Function of Pressure
189. Coalbed Methane Reserves and Recoveries
190. Graph of Gallegos Federal 26-12-6 #2 Production History, January 1993 to January 2001
191. Graph of Gallegos Federal 26-12-7 #1 Production History, January 1993 to January 2001
192. Graph of Gallegos Federal 26-13-1 #1 Production History, January 1993 to January 2001
193. Graph of Gallegos Federal 26-13-1 #2 Production History, January 1993 to January 2001

194. Graph of Gallegos Federal 26-13-12 #1 Production History, January 1993 to January 2001
195. Table of Fruitland Coalbed Methane Well Performance and Decline Curve Analyses as of May 1, 1999
196. Table of Fruitland Coalbed Methane Well Performance and Decline Curve Analyses, Based on Reported Wellhead Pressures July 30, 1997 and August 21, 1998
197. Graph of Chaco #1 Production History, January 1993 to January 2002
198. Graph of Chaco #4 Production History, January 1993 to January 2002
199. Graph of Chaco #5 Production History, January 1993 to January 2002
200. Graph of Chaco #2-R Production History, January 1993 to January 2002
201. Graph of Chaco #1-J Production History, January 1993 to January 2002
202. Graph of Chaco #2-J Production History, January 1993 to January 2002
203. Graph of Chaco #1 Gas Saturation in Pictured Cliffs formation
204. Graph of Chaco #4 Gas Saturation in Pictured Cliffs formation
205. Graph of Chaco #5 Gas Saturation in Pictured Cliffs formation
206. Graph of Chaco #1 P/Z versus Cumulative Gas Production
207. Graph of Chaco #1-J P/Z versus Cumulative Gas Production
208. Graph of Chaco #2-J P/Z versus Cumulative Gas Production
209. Graph of Chaco #2-R P/Z versus Cumulative Gas Production
210. Graph of Chaco #4 P/Z versus Cumulative Gas Production
211. Graph of Chaco #5 P/Z versus Cumulative Gas Production

212. Darcy Radial Flow Damage Calculations – Pictured Cliffs Flow Rate Analysis
213. Graph of Theoretical Well Performance of 640 Acre Area – 25 Millidarcy Permeability
214. Graph of Chaco #1 Shut-in Response, July 1, 1998 to July 1, 1999
215. Graph of Chaco #1-J Shut-in Response, July 1, 1998 to July 1, 1999
216. Graph of Chaco #2-R Shut-in Response, July 1, 1998 to July 1, 1999
217. Graph of Chaco #4 Shut-in Response, July 1, 1998 to July 1, 1999
218. Graph of Chaco #5 Shut-in Response, July 1, 1998 to July 1, 1999
219. Comparison graph of Chaco #1 and Gallegos Federal 26-12-7 #1 Pressure versus time, December 31, 1993 to December 31, 1998
220. Comparison graph of Chaco #4, Chaco #5, Gallegos Federal 26-12-6 #2 and Gallegos Federal 26-12-7 #1 Pressure versus time, December 31, 1993 to December 31, 1998
221. Comparison graph of Chaco #4 and #5 and Gallegos Federal 26-12 6 #2, 7 #1 and 12 #1 production, January 1993 to January 1999
222. Comparison graph of Chaco production versus Gallegos Federal 26-12 6 #2, 7 #1 and 12 #1 production
223. Curriculum Vitae of Jack A. McCartney
224. Chaco log analyses
225. Gas/Water Ratio Comparisons of Fruitland Coal Wells and Pictured Cliffs Wells
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- 232. Index map showing detailed geologic study area, type wells, cross sections and geologic maps
- 233. Isopach map of Interval Between Top of Pictured Cliffs Sandstone and the Huerfanito Bentonite Bed of the Lewis Shale, La Plata County, Colorado and Rio Arriba and San Juan Counties of New Mexico, 1986
- 234. Miscellaneous Field Studies Map MF-1831 A'
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238. Geologic Map of the Ojo Encino Mesa Quadrangle, McKinley and Sandoval Counties, New Mexico, 1980, U.S. Geological Survey
239. Table of Stratigraphic interval thickness from the top of the marine upper Pictured Cliffs Sandstone to the top of the main body of the Pictured Cliffs Sandstone
240. BLM Transfers of Operating Rights in a Lease for Oil and Gas or Geothermal Resources from Bayless and Merrion to Maralex, December 1, 1993
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July 6, 1988

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I hereby certify that a true and correct  
copy of the foregoing Witness and  
Exhibit List was mailed to counsel for  
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January 12, 2001

**By Hand Delivery**

The Honorable Art Encinias  
First Judicial District Court  
Post Office Box 2268  
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Santa Fe, New Mexico 87504-2268

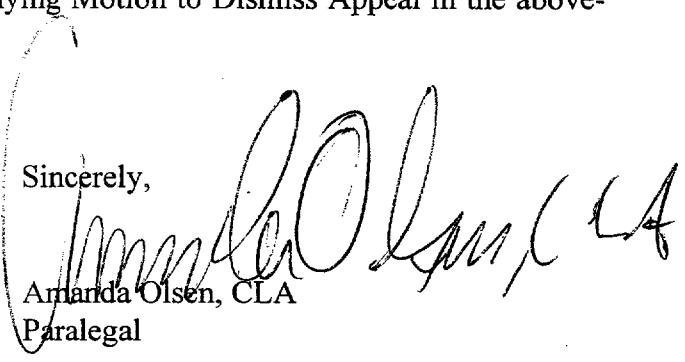
Re: Whiting Petroleum Corp. and Maralex Resources, Inc. vs. Pendragon Energy Partners, Inc., and J.K. Edwards Associates, Inc. No D-0101-CV-98-01295 and Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449 CONSOLIDATED

Dear Judge Encinias:

Enclosed please find the Order Denying Motion to Dismiss Appeal in the above-referenced matter.

Thank you for your consideration.

Sincerely,

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

cc: J.E. Gallegos, Esq.  
Steve Ross, Esq.

6304/20253/Enciniasltr2.ao.doc

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee,

and

WHITING PETROLEUM CORPORATION,  
a corporation, and MARALEX RESOURCES,  
INC., a corporation,

Plaintiffs,

vs.

No. SF-CV-98-01295

PENDRAGON ENERGY PARTNERS,  
INC., and J.K. EDWARDS ASSOCIATES,  
INC., a corporation

Defendants.

**ORDER DENYING MOTION TO DISMISS APPEAL**

This matter, having come before the Court pursuant to the Motion To Dismiss Appeal filed on behalf of the intervenors, Whiting Petroleum Corporation, et al., and the Court being duly advised, IT IS ORDERED that the motion is denied.

---

Hon. Art Encinias  
District Judge

Submitted by:

By 1. J. Scott Hall

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
Post Office Box 1986  
Santa Fe, New Mexico 87501  
(505) 989-9614

Attorneys for Appellants

Approved as to form:

By Steve C. Ross

Steve C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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Attorneys for Appellee

By Telephonically Approved 1/11/2001

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(505) 983-6686

Attorneys for Intervenors

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

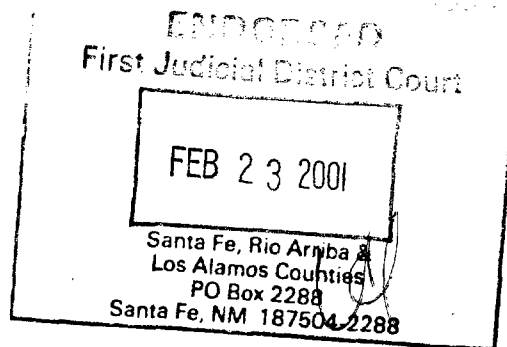
**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**ORDER ALLOWING DISCOVERY**

THIS MATTER came before the Court on February 16, 2001, for a Pre-Trial Conference. The case is set for jury trial on a docket beginning March 19, 2001. Discovery has been stayed pending disposition of the Rule 1-074 appeal from the decision of the Oil Conservation Commission, but in order to prepare for trial good cause exists to lift the stay and allow discovery to proceed.



IT IS THEREFORE ORDERED that the parties are authorized to proceed with pre-trial discovery and the Court will set an additional Pre-Trial Conference for approximately one week before the docket date in order to address matters pertaining to the trial proceeding.

ORIGINAL SIGNED BY  
JUDGE ENCINIAS

\_\_\_\_\_  
The Honorable Art Encinias  
District Judge

Submitted:

GALLEGOS LAW FIRM, P.C.

By 

J.E. Gallegos  
Michael J. Condon  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505

Attorneys for Plaintiffs


Approved:

NEW MEXICO OIL CONSERVATION COMMISSION

By Telephonically Approved by Stephen C. Ross  
Stephen C. Ross 2/19/01  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Noted:

MILLER, STRATVERT, TORGERSON  
& SCHLENKER, P.A.

By  2.21.01

J. Scott Hall  
150 Washington Avenue  
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Attorneys for Defendants



**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

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a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

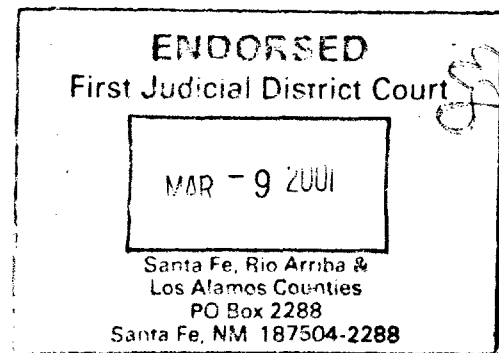
**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**JOINT MOTION FOR DISMISSAL WITH PREJUDICE**

The parties through their undersigned counsel and pursuant to Rule 1-041A, NMRA 2000, jointly move the Court for dismissal of all claims, appeals and counterclaims with prejudice. As grounds for this motion the parties state:

1. This consolidated litigation involves an action by the plaintiffs in Cause No. D-0101-CV-98-01295 for damages based on common law torts and an appeal by the



petitioner in Cause No. D-0117-CV-2000-1449 from Order R-11133A issued by the Oil Conservation Commission on April 26, 2000.

2. The private litigants jointly inform the Court that they have resolved all disputes between them raised in these proceedings by an agreement of settlement. By the agreement of the petitioners in the administrative appeal to dismiss such appeal, the Oil Conservation Commission joins in this motion.

WHEREFORE the parties jointly move for entry of an Order of the Court dismissing both of these actions with prejudice.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By  \_\_\_\_\_  
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NEW MEXICO OIL CONSERVATION  
COMMISSION

By Telephonically approved 03/07/01

Stephen C. Ross

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Attorney for NMOCC

05/07/01 14:01 FAX 505 9861367 GALLEGOS LAW FIRM 001

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**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** March 7, 2001  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 476-3462  
**FROM:** J. E. Gallegos

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 7**

## **IMPORTANT**

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March 7, 2001  
(Our File No. 98-266.00)

J.E. GALLEGOS\*

**VIA FACSIMILE**

Stephen Ross  
Special Assistant Attorney General  
New Mexico Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295

Dear Steve:

Attached are copies of a Joint Motion for Dismissal and Order of Dismissal that we will file and present. Scott Hall has given his telephonic approval.

Please let me know as soon as possible if you would like the pleading delivered for your signature or can give me approval by phone.

When presented to Judge Encinas we will confirm that the Pre-Trial Conference for March 15<sup>th</sup>, and of course the trial setting, are off the calendar.

Sincerely,

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG/rjr

cc: Scott Hall

**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**JOINT MOTION FOR DISMISSAL WITH PREJUDICE**

The parties through their undersigned counsel and pursuant to Rule 1-041A, NMRA 2000, jointly move the Court for dismissal of all claims, appeals and counterclaims with prejudice. As grounds for this motion the parties state:

1. This consolidated litigation involves an action by the plaintiffs in Cause No. D-0101-CV-98-01295 for damages based on common law torts and an appeal by the

petitioner in Cause No. D-0117-CV-2000-1449 from Order R-11133A issued by the Oil Conservation Commission on April 26, 2000.

2. The private litigants jointly inform the Court that they have resolved all disputes between them raised in these proceedings by an agreement of settlement. By the agreement of the petitioners in the administrative appeal to dismiss such appeal, the Oil Conservation Commission joins in this motion.

WHEREFORE the parties jointly move for entry of an Order of the Court dismissing both of these actions with prejudice.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

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Attorneys for Whiting

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Attorney for Pendragon

NEW MEXICO OIL CONSERVATION  
COMMISSION

By \_\_\_\_\_

Stephen C. Ross  
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Santa Fe, New Mexico 87505

Attorney for NMOCC



**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**ORDER OF DISMISSAL WITH PREJUDICE**

These consolidated matters came before the Court on the parties' Joint Motion for Dismissal with Prejudice and the Court being fully advised in the premises,

IT IS ORDERED AND DECREED that these actions and all claims, appeals and counterclaims of all parties are dismissed with prejudice, each party to bear their costs and attorney fees.

---

**The Honorable Art Encinias  
District Judge**

**Agreed and Approved:**

GALLEGOS LAW FIRM, P.C.

By J.F. Gallegos  
J.F. Gallegos  
Michael J. Condon  
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Attorneys for Movants-Intervenors  
Whiting Petroleum Corporation and  
Maralex Resources, Inc.

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Attorney for Appellee New Mexico Oil  
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By J. Scott Hall  
J. Scott Hall  
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Santa Fe, New Mexico 87501

Attorneys for Appellants Pendragon Energy  
Inc., Pendragon Resources, LP and Edwards  
Energy Corporation

## **Ross, Stephen**

---

**From:** J. Scott Hall[SMTP:shall@mstLAW.com]  
**Sent:** Tuesday, March 06, 2001 9:21 AM  
**To:** Steve Ross (E-mail)  
**Subject:** Pendragon v. NMOCC

Steve: Judge Encinias has set another pre-trial hearing for Thursday, March 15, 2001 at 4:30. I was unsure whether you had received the notice.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANTS' STATEMENT OF APPELLATE ISSUES**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. See Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

**ENDORSED**

NOV 13 2000

FIRST JUDICIAL DISTRICT COURT  
SANTA FE RIO ARriba &  
LOS ALAMOS COUNTIES  
PO BOX 2268  
SANTA FE, NM 87504-2268

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.

2. Whether Order R-1133-A is within the scope of authority of the Commission.

3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.

4. Whether Order R-11133-A is otherwise in accordance with law.

Issue 1 is discussed in section III(D)(1), below and Issues 2, 3 and 4 are discussed in section III(D)(2).

## **II. SUMMARY OF PROCEEDINGS**

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias's order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias's Order prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which requires that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337. Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply," but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

### **III. ARGUMENT**

#### **A. Introduction.**

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time, and with time and pressure, formed

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<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules for the Basin-Fruitland Coal Gas Pool. RP at 5212-5216.

hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989).

When a pool of natural gas forms, it is differentiated from other pools by the specific sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns the mineral rights from the surface of the earth to the base of the Fruitland coal. RP at 4897, ¶ 6 (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 1991. RP at 2893, 4900-4901. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at 4896. Pendragon's ownership permits it to produce natural gas trapped within this formation. Pendragon purchased its wells in December 1994 at auction from previous operators; the wells had been drilled and produced two decades earlier. RP at 2894, 3249, 4899-4900.

The parties each sought to prove to the Commission that the other party was producing its gas. Two general theories were presented. The first theory was geological in nature; the parties claimed that wells were "perforated" in the wrong geologic formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 103 at 10. The perforations are holes blown through the casing into the formation with explosives. *Id.* Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are

perforated somewhat lower in the earth, in the Pictured Cliffs sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that the perforations in each party's wells were properly placed; that issue is not before the Court.

The second general theory presented to the Commission concerned completion practices and the possibility that such practices created fractures that extended from one formation to another. This issue, which the Commission referred to as "the Engineering Issue," is the issue before the Court in this appeal. Whiting claimed that a completion practice called "hydraulic fracturing" caused fractures in the rocks from Pendragon's wells into the Fruitland coal and caused an escape of gas into Pendragon's wells. Whiting presented evidence that Pendragon's hydraulic fracturing created cracks and fissures upward into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. *See* RP at 4954 (Whiting's Closing Statement Memorandum). Pendragon claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at 5105 (Closing Statement of Pendragon).

Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly increases the area from which a natural gas well produces. 1 Williams & Meyers, § 103 at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901.



## **B. The Commission's Order**

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ 33. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped. ¶ 34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation decreased so that gas began to free itself from the coal, setting the stage for gas migration to Pendragon's wells. ¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation was that hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four wells (Order, ¶ 5).

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it

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<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page 17, below.

unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented, which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, these findings and conclusions are supported by substantial evidence in the record of the proceedings and were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." *See* NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87 N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is

substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

"Substantial evidence" means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 783, 907 P.2d 182 (1995). *See also Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary, unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds 1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, both Whiting and Pendragon were represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing was more than sufficient for a reasonable mind to accept as adequate to support the conclusions reached. *Fugere, supra*.

##### **a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced sudden, unexpected and unprecedented production increases in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental

timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir.

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899-4900. Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at 4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. *See also* RP at 2893-98 (testimony of Alexis M. O'Hare).

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2911, 2949-52, 3253. Exhibits 7 through 10 to the testimony of James T. Brown, an engineer with expertise in well completion, production and facility engineering, dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270. Mr. Brown testified that from their peak production in late 1978, the Chaco wells

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<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.

declined to a non-economic, depleted state by 1986. He testified: "There is absolutely no scientific explanation for the reservoir to some way 'recharge' so that in 1995 the rates and pressures of these Chaco wells *significantly exceeded initial, virgin gas flow and pressure.*" RP at 3254. *See also* RP at 856-57, 2898, 3267-76, 3276-3302

Evidence was also presented that wells like Chaco Nos. 1, 2-R, 4 and 5 exhibit a characteristic decline curve from first production, and the production of the Chaco wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. Bradley M. Robinson, a petroleum engineer with expertise in completion, evaluation and stimulation of unconventional reservoirs, hydraulic fracturing, well completion and reservoir engineering, testified that the average flow rate of the Pendragon wells increased *500-fold* after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000 Mcf/month.* RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in productivity "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of . . . 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, Alexis M. O'Hare, President of Maralex Resources, Inc. and a petroleum engineer with expertise in reservoir engineering and development of coal seam gas wells, testified that the production volumes seen in the Chaco wells after 1995 exceeded production rates when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes under virgin reservoir conditions when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. *See also* RP at 2911 and 3253 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that other wells were not hydraulically fractured and did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas.

Mr. O'Hare testified that comparing the behavior of Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured illustrates the uncharacteristic behavior of Pendragon's newly stimulated wells:

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic pressure increase whenever the adjoining Whiting Fruitland coal wells were shut down, evidence that the two sets of wells and formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Those plant down times resulted in the Gallegos Federal wells being shut-in. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomena reflects effective communication between the Chaco wells and the Fruitland coal exists.

RP at 3253, lines 15-23.

Pendragon's expert David O. Cox, an engineer, also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. *See* RP at 651-652.



Mr. Brown testified that Whiting's production *increased* after Pendragon's wells were shut down. *See* R.P. at 3254, lines 9-18. *See also* RP at 2909, ll. 4-10. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. *See* RP at 1085 ll. 24-25, 1086, ll. 1-5.

**c. The Connection Between Pendragon's Fracturing and Communication**

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect.

Testimony and evidence showed that great care is taken when designing hydraulic fracturing work so as to avoid extending fractures into other formations. *See e.g.* RP at 2895-2896, 319 (fracture treatments designed to keep fractures within zone). Even so, fracturing can create communication between zones as occurred here; Mr. Conway, Pendragon's fracturing expert, even assumed for purposes of his work that the Pictured Cliffs and the Fruitland coal communicate. RP at 324.

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. *See* RP at 305-402 (testimony of Michael W. Conway), 1255-1416 (testimony of Bradley M. Robinson), 3393-3409 (same). Nevertheless, substantial evidence supports the Commission's finding that Pendragon fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication

with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had "likely" extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

The Commission found that Whiting had fractured into the Pictured Cliffs as well, but also found that Whiting had not produced any significant amounts of Pictured Cliffs gas. Substantial evidence exists for the Commission's conclusions in this regard. *See* RP at 861-862, 1080, 2908-2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's fracturing --- suggests little if any gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs).

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**

Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. *After the frac, the pressures in the Chaco wells are about equal to the*

*pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.*

RP at 1275, ll. 1-9 (emphasis added). Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. *See also* 3276-3302. Mr. Brown testified further on cross-examination that the Btu evidence showed that gas produced by Pendragon's wells after the 1995 stimulation was Fruitland, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. *See also* RP at 3277-3280 (exhibits of Mr. Brown depicting Btu decline).

Even Roland Blauer, an engineer and rheologist called by Pendragon, who testified concerning gas content, agreed on cross-examination that the composition of the gas from

the Pendragon's wells after it fractured its wells was "similar" to gas found in the Fruitland coal:

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion. RP at 910, 1057. Mr. O'Hare described the typical Pictured Cliffs production pattern:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines 4-7.

Evidence was also presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Once water is removed, gas will leave the coal:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-4. The gas forms because natural gas (methane) is fixed, or adsorbed, to the surface of the coal; the methane will leave the pores and become free gas only when the pressure is reduced by dewatering. RP at 1082-83. This process is called

"desorption." If production ceases, the gas pressure gradually increases until it reaches a point beyond which no more methane can desorb from the coal. *Id.* The pressure stabilizes at that point. *Id.* Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

**f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive, production had followed typical decline curves to the point that remaining reserves were minimal, and the

pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 1993 showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-12. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon has already recovered "in excess of" the recoverable gas from its wells:

Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

R.P. at 2921, ll. 22-25. Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55% percent of initial formation pressure. R.P. at 856-57. *See also* RP at 1099-1101.

Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies

that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells have now produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.* Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He testified that it was not economically feasible to produce the remaining reserves in Pendragon's wells:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" (or separated from the pipeline) indicated that the wells reached

a "depleted state by 1986 and remained in that state." RP at 3252-3253. *See also* RP at 855-67 and 2902-05 (testimony of Alexis M. O'Hare); RP at 1079-80 and 3252-57 (testimony of Mr. Brown).

Mr. Brown also testified that a depleted reservoir cannot suddenly "recharge" as suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9.

Finally, Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale in 1993 or 1994. RP at 855. He declined to purchase the wells after his analysis showed him the wells were uneconomic. RP at 866-67, 1157-58, 2903-2904, 3076-96.

**g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra.*



## **2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata .... " NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties .... " NMSA 1978, § 70-2-12(B)(7). And, the Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, *and to do whatever may be reasonably necessary to carry out the purpose of [the Oil and Gas Act], whether or not indicated or specified in any section hereof.*" NMSA 1978, § 70-2-11(A)(emphasis added).

Factual findings of the Commission showed that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the latter to the former. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into other strata .... " NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful.

Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties ...." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool ...." NMSA 1978, § 70-2-17(A). Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done. Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench," the

lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate, and the Btu data are unsupported by substantial evidence. Pendragon also claims that the Commission disregarded evidence that Pendragon presented.

The Commission considered each and every one of these contentions and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to accept as supporting the findings and conclusions reached by the Commission. *Fugere, supra*. For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." The Commission specifically considered the "third bench" claim and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.

RP at 1423-1424. *See also* RP at 2904-05 (no reports of gas production from a "third bench" known to Mr. O'Hare), 3402 (lower Pictured Cliffs "mainly water saturated").

In a contradictory argument, Pendragon presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." Pendragon offered testimony of expert witnesses who testified that Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things.

Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. *See also* RP at 903-904 (there may have been a "small component of damage" present but "... it was [not] significant enough to triple the reserve recovery), 942 (removal of damage might improve flows but cannot increase the amount of gas in the reservoir), 1155-56 (no reports of damage in well files), 1273 (type of damage alleged "cannot happen in this reservoir"), 2904 (skin damage cannot "recharge a reservoir").

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See* pages 18-21 (depletion), 9-14 and 17-18 (communication), 15-17 (Btu), above. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See* pages 9-21, above. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra*. Nor do Pendragon's alternative theories for what happened underneath San Juan County have to be simply accepted by the Commission; the law permits the Commission to apply its own special technical expertise to resolve questions of conflicting technical evidence:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of

counsel and are not bolstered by the expertise of the Commission to which we give special weight and credence ....

*Fasken v. Oil Conservation Commission*, 87 N.M. 292, 293, 532 P.2d 588 (1975).

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## **2. Pendragon's "Legal Arguments"**

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth the substance of *all* evidence bearing on the proposition."); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, ¶ 28, 123 N.M. 220, 227, 937 P.2d 979 (" ... [I]t is true that our admonitions against one-sided statements of the facts probably pertain most often to

briefs challenging the sufficiency of the evidence ...."). Such arguments also improperly invite the Court to re-weigh the evidence presented to the Commission. *Grace, supra*.

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Statement of the Issues*, at 8. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief," nor does Pendragon cite authority for this proposition. The argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply ...." *Appellant's Statement of the Issues*, page 8. However, as seen on pages 9-22, above, the Commission *did* determine this question, adversely to Pendragon.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, and found that Fruitland coal gas had escaped into the Pictured Cliffs formation through Pendragon's hydraulic fractures --- it ordered Pendragon's wells shut down to prevent further communication.

A similar substantial evidence argument masquerading as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] illegally produced ... from Whiting's Pictured Cliffs Coal wells ...." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. *See* pages 19-21, above. Substantial evidence supports this finding. *Id.* Therefore, the Commission *did* determine how much Pictured Cliffs gas was "illegally" produced by Whiting. The production figures and pressure data presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. *See* pages 9-12, above.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting was producing Pendragon's gas. *Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.



Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 636, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. '[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence.'"). The Commission is entitled to rely on its own expertise in these matters. *Fasken, supra*.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. *See* pages 19-21, above. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise

requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool ...." NMSA 1978, § 70-2-17(A) (Repl. 1995).

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A)(emphasis added). No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas ...." *Id.*

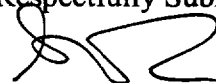
Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13. However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to

the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool ....*" NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas.

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.



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**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 13<sup>th</sup> day of November, 2000:

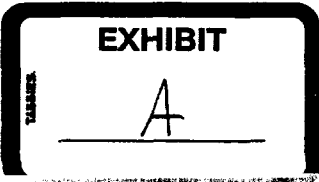
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Stephen C. Ross



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION FOR THE PURPOSE OF  
CONSIDERING:

De Novo  
Case No. 11996  
Order No. R-11133-A

APPLICATION OF PENDRAGON ENERGY PARTNERS, INC.  
AND J. K. EDWARDS ASSOCIATES, INC.  
TO CONFIRM PRODUCTION FROM  
THE APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This case came on for hearing at 9:00 a.m. on August 12, 1999, at Santa Fe, New Mexico, before the New Mexico Oil Conservation Commission ("Commission") and continued on August 13, 19, 20 and 21, 1999.

NOW, on this 26<sup>th</sup> day of April, 2000, the Commission, a quorum being present and having considered the record,

FINDS THAT:

(1) Due public notice has been given and the Commission has jurisdiction of this case and its subject matter.

(2) The applicants, Pendragon Energy Partners, Inc. and J. K. Edwards Associates, Inc. (hereinafter referred to as "Pendragon"); pursuant to Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in Oil Conservation Division (hereinafter referred to as "the Division") Order No. R-8768, as amended, seek an order confirming that the following described wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool ("Pendragon Chaco and Chaco Limited Wells") or the Basin-Fruitland Coal Gas Pool ("Whiting Fruitland Coal Wells"), are producing from the appropriate common source of supply and for such further relief as the Commission deems necessary:

Pendragon Chaco and Chaco Limited Wells

<u>Operator</u>	<u>Well Name &amp; API Number</u>	<u>Well Location</u>	
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W	05220

Pendragon Energy Partners, Inc.	Chaco No. 2R. (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.-	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

**Whiting Fruitland Coal Wells**

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(3) Whiting Petroleum Corporation and Maralex Resources, Inc. (hereinafter referred to as "Whiting") appeared at the hearing in opposition to the application. Whiting claimed that the Pendragon Chaco and Chaco Limited Wells are producing:

- a) gas from a sandstone interval located within the Fruitland Coal formation; and
- b) coal gas from the Basin-Fruitland Coal Gas Pool because of the establishment of communication between the Basin-Fruitland Coal and WAW Fruitland Sand-Pictured Cliffs Gas Pools.

CASE NO. 11996

Order No. R-11133-A

Page 3

(4) All eleven wells that are the subject of this application are located within an area (hereinafter referred to as the "Subject Area") that comprises:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM

Section 6: W/2

Section 7: W/2

Section 18: NW/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 1: All

Section 12: N/2

(5) The Subject Area is located within the horizontal boundaries of the Basin-Fruitland Coal Gas Pool created by Division Order No. R-8768 dated October 17, 1988. The vertical limits of this pool, as defined by Ordering Paragraph (1) of Order No. R-8768, encompass:

... all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2,450 feet to 2,880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(6) The Subject Area is also located within the horizontal boundaries of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. The vertical limits of this pool encompass all of the Pictured Cliffs Formation (Order No. R-4260 dated February 22, 1972) and all the sandstone intervals of the Fruitland Coal Formation (Order No. R-8769 dated October 17, 1988).

(7) Pendragon and Whiting received assignments of oil and gas leases in the Subject Area from common grantors, Robert Bayless ("Bayless") and Merriion Oil and Gas Corporation ("Merriion"), during the period from 1992 through 1994.

a) The assignments of rights, in pertinent part, to Whiting are as follows:

Operating rights from the surface of the earth to the base of the Fruitland (Coal Gas) Formation subject to the terms and provisions of that certain Farmout Agreement dated December 7, 1992 by and between Merriion Oil & Gas et al., Robert L. Bayless, Pitco Production Company, and Maralex Resources, Inc.

b) The assignment of rights to Pendragon, in pertinent part, are as follows:

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Leases and lands from the base of the Fruitland Coal Formation to the base of the Pictured Cliffs Formation.

(8) A brief history of the Pendragon Chaco and Chaco Limited Wells follows:

- a) Merrion and Bayless drilled the Chaco Well No. 1 in February 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,113' to 1,139'. The well initially tested in this interval at a rate of approximately 342 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, J. K. Edwards & Associates, Inc. ("Edwards") became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January, 1996, Pendragon became operator of the well.
- b) Merrion and Bayless drilled the Chaco Well No. 2R in October 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,132' to 1,142'. The well initially tested in this interval at a rate of approximately 150 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January 1996, Pendragon became operator of the well.
- c) Merrion and Bayless drilled the Chaco Well No. 4 in April 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,163' to 1,189'. The well was initially tested in this interval at a rate of approximately 480 MCFGD, 0 BOPD, and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In May 1995, the well was re-perforated in the interval from 1,163' to 1,189' and fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.
- d) Merrion and Bayless drilled the Chaco Well No. 5 in April 1977, to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,165' to 1,192'. The well initially tested in this interval at a rate of approximately 1029 MCFGD, 0 BOPD and 0 BWPD. In May 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January 1995, the well was re-perforated in the interval from 1,165' to 1,192' and was

fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.

- e) The Chaco Limited Well No. 1J was drilled by Merriion and Bayless in April 1982 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,200' to 1,209'. The well initially tested in this interval at a rate of approximately 10 MCFGD, 0 BOPD and a trace of water. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.
- f) The Chaco Limited Well No. 2J was drilled by Merriion and Bayless in September 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,186' to 1,202'. The well initially tested in this interval at a rate of approximately 208 MCFGD, 0 BOPD and 4 BWPD. In October, 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.

(9) A brief history of the Whiting Fruitland Coal Wells follows:

- a) Maralex drilled the Gallegos Federal 26-12-6 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,138' to 1,157'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- b) Maralex drilled the Gallegos Federal 26-12-7 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,131' to 1,150'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- c) Maralex drilled the Gallegos Federal 26-13-1 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,158' to 1,177'. The well was subsequently fracture

CASE NO: 11996

Order No. R-11133-A

Page 6

stimulated in this interval. In September 1995, Whiting became operator of the well.

- d) Maralex drilled the Gallegos Federal 26-13-1 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,047' to 1,208'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- e) Maralex drilled the Gallegos Federal 26-13-12 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,178' to 1,197'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.

Geologic Issues

Fruitland Sand vs. Pictured Cliffs Sand

(10) Related geologic issues are raised by the application: the proper means for determining the limits of the pools and formations at issue, and the effect on this analysis, if any, of integration or interfingering of different rock types.

(11) In its Chaco Wells No. 1, 4 and 5 and its Chaco Limited Well No. 2J, Pendragon is producing from two separate sandstone intervals, hereinafter referred to as the Upper Sandstone and Lower Sandstone intervals. In its Chaco Well No. 2R and Chaco Limited Well No. 1J, Pendragon is producing only from the Lower Sandstone interval. It is the position of Pendragon that the top of the Pictured Cliffs Formation occurs at or above the top of the Upper Sandstone.

(12) The perforated intervals in each of the Pendragon Chaco and Chaco Limited Wells are as follows:

<u>Well Name &amp; Number</u>	<u>"Upper Sandstone" Perforations</u>	<u>"Lower Sandstone" Perforations</u>
Chaco Well No. 1	1,113'-1,119'	1,134'-1,139'
Chaco Well No. 4	1,163'-1,166'	1,173'-1,189'
Chaco Well No. 5	1,165'-1,169'	1,174'-1,192'
Chaco Limited Well No. 2J	1,186'-1,188'	1,200'-1,202'
Chaco Well No. 2R	None	1,132'-1,142'
Chaco Limited Well No. 1J	None	1,200'-1,209'

(13) Whiting agrees that the Lower Sandstone interval is within the Pictured Cliffs Formation; however, it contends that the top of the Pictured Cliffs Formation is the top of the Lower Sandstone interval and the Upper Sandstone is within the Fruitland Coal Formation. It is on this basis that Whiting contends that Pendragon is producing from perforations in the Fruitland Coal Formation in its Chaco Wells Nos. 1, 4 and 5 and its Chaco Limited Well No. 2J.

(14) The parties have stipulated that the Pictured Cliffs Formation was deposited in a marine environment and the Fruitland Coal Formation was deposited in a non-marine or terrestrial environment.

(15) In its Order No. R-8768, the Division defined the vertical limits of the Basin Fruitland Coal Gas Pool as all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the well log from the Amoco Schneider Gas Com "B" Well No. 1. The pick for the base of the pool in Order No. R-8768 is the top of the Pictured Cliffs Formation. The pick is also the break between marine and non-marine sediments. It is undisputed that the coal or shale layers occurring below the stratigraphic pick set forth in Order No. R-8768 would not be included in the Basin Fruitland Coal Gas Pool or in the Fruitland Coal Formation.

(16) For the reasons set forth below, we find that the preponderance of the geologic evidence establishes that the Pendragon Chaco and Chaco Limited Wells are completed in the Pictured Cliffs Formation.

(17) The preponderance of the geologic evidence establishes that the Upper Sandstone is marine in origin and thus appropriately considered a part of the Pictured Cliffs Formation. The Upper Sandstone in the Subject Area cannot be differentiated from the main body of the Pictured Cliffs Formation.

(18) In the late Cretaceous period in what was to become the San Juan Basin, sediments were deposited contemporaneously in various environments. The Lewis Shale represents muds and storm-carried sands offshore of the barrier-beach setting. The Pictured Cliffs formation accumulated in primarily a barrier-beach setting. The Fruitland Coal formation accumulated on a coastal plain with swamps and bogs and the Kirtland Formation accumulated in an alluvial plain. As the ancient shoreline moved to the northeast, each of the environments of deposition shifted. At a single location a wellbore presents the familiar vertical sequence of Formations.

(19) Pendragon's isopach map of the Upper Sandstone, Exhibits 50 and 63, show this barrier-bar marine littoral environment with sandstone along the ancient shoreline trending in a northwest to a southeast direction. Pendragon's Exhibits 50 and 63 also show that the Upper Sandstone occurs in a continuous sheet that coalesces into the main body of the Pictured Cliffs Formation as it trends from the shoreline environment on the southwest toward the center of the San Juan basin to the northeast.

(20) In the Subject Area, tongues of Pictured Cliffs sandstone thin in a landward direction and thicken in a seaward direction and ultimately merge with the main body of the Pictured Cliffs Formation. These tongues "interfinger" or integrate with other rock types in the Subject Area.

(21) The interval between the top of the Upper Sandstone and the top of the main body of the Pictured Cliffs (the Lower Sandstone) is composed of a variety of rock types including marine sandstones, silt stones, shales, and thin coals. It has been the long-standing and accepted custom and practice of industry and the various regulatory agencies, including the Division in Order No. R-8768 and R-8769, to place this entire interval within the Pictured Cliffs Formation. This industry and regulatory agency practice conforms to the standards of the North American Stratigraphic Code and the International Stratigraphic Guide.

(22) The evidence presented by Pendragon establishes that over the years approximately 34 wells within approximately 2.5 miles of the Pendragon Chaco and Chaco Limited wells were actually perforated in the Upper Sandstone in conjunction with other Pictured Cliffs intervals and reported by the numerous different operators of those wells as Pictured Cliffs completions, consistent with the picks for the top of the Pictured Cliffs for the Chaco Plant No. 1 and the Pendragon Chaco and Chaco Limited Wells (Exhibit N-61). The evidence also establishes that those reported completions were accepted by the Division and the Bureau of Land Management and that industry and geologists have placed substantial reliance on those reported completions as Pictured Cliffs completions for nearly thirty years.

(23) In a written statement provided to the Commission during the hearing in this case, Merrion, the assignor of the interests in both the Fruitland Coal Formation to Whiting and Pictured Cliffs Formation to Pendragon, indicated it concurred with Pendragon in its identification of the Upper Sandstone interval and the historic recognition of that interval as Pictured Cliffs by Merrion and other operators in the area. (Exhibit N-43.) Merrion further stated that the Pendragon Chaco Wells are appropriately perforated in the Pictured Cliffs Formation and that it had no intention of conveying to Pendragon wells that were perforated in other zones. Merrion also stated that it never intended to farm-out to Whiting the rights to zones where the Pendragon Chaco Wells were perforated.

(24) Thus, identification and utilization of the Upper Sandstone tongues to establish the vertical boundaries of the Pictured Cliffs Formation by industry, governmental regulatory agencies and the parties or their predecessor-in-interest is a long-established custom and practice. Such custom and practice is to be accorded significant weight.

**CASE NO. 11996**

**Order No. R-11133-A**

**Page 9**

(25) Whiting asserted during the hearing of this matter that the Upper Sandstone interval was deposited in a non-marine, crevasse-splay deposit, resulting from a large, sediment-laden river breaking through its natural boundaries during a flood stage and spreading clean, well-sorted sand over an area more than sixteen-miles long and up to three-miles wide parallel to the shoreline. However, Whiting failed to establish by a preponderance of the evidence the existence of any crevasse splay or any depositional materials indicative of a sand-laden flood. Moreover, there is no evidence of the transporting river or river channel, the thinning of sand deposits in both directions at right angles to the river, adjacent deltaic deposits or any other non-marine mechanism with the capability of forming the thin, but areally extensive, sand of the dimensions seen in the Upper Sandstone.

(26) Whiting also asserted it was possible that the disputed interval was deposited as a washover fan. However, the washover fan depositional mechanism involves wave-dominated action, consistent with the accepted geologic definitions of a marine depositional mechanism. Such a theory also supports a conclusion that the Upper Sandstone was deposited in a marine environment.

(27) Pendragon presented aerial photographs of modern deposits of sands comparable in mode of deposition and areal extent to the Upper Sandstone located in the marine lagoonal areas behind barrier islands, thus demonstrating the validity of the depositional model. Pendragon demonstrated using these exhibits that these sands are wave and tidal-current dominated deposits, and further showed that the seaward beach of a barrier island is not to be confused with the true marine shoreline, which lies behind the island.

(28) The core analysis for the Lansdale Federal No. 1 located in the SE/4 of Sec. 7, T-26-N, R-12-W establishes that grain size and sorting throughout the Upper Sandstone is uniform, consistent with a marine depositional environment. The physical descriptions of the sand appearing in the Upper Sandstone and the Lower Sandstone are grey, fine-grained with little variation in clay content, consistent with a marine sand that has been laterally transported by currents and waves to the point where the energy available sorts the sand into uniform size. Sand-sorting characteristics of this sort are not consistent with a fluvial deposit with graded bedding coarsening downward.

(29) Pendragon presented evidence that the Spontaneous Potential ("SP") readings on electrical logs are much greater in the Pictured Cliffs Formation, which was deposited in a marine setting, than in the Fruitland sands, which were deposited in a fluvial, fresh water environment. Pendragon demonstrated that the SP readings for the Upper Sandstone were comparable or identical to those of the Lower Sandstone and were much greater than those of the Fruitland sands.

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(30) The SP map of the Pictured Cliffs Formation introduced by Whiting, Exhibit WA-9, showed 40 to 80 millivolt SP development in the Chaco area. The cross-section exhibit demonstrated that the disputed interval also showed 40 to 80 millivolts SP, even though it was interpreted by Whiting to be Fruitland sandstone, and all other Fruitland sands on his cross-section showed only zero to less than 10 millivolts. Additional testimony established that 40 to 80 millivolts is a significantly higher range than is typically associated with SP development in a fresh-water depositional environment and is more characteristic of the SP development in the Pictured Cliffs intervals observed on the well logs and cross-sections for the Pendragon Chaco Wells.

(31) Whiting contends that the top of the first "massive" sandstone below the lowermost coal of the Fruitland Coal Formation should be the basis for picking the top of the Pictured Cliffs formation. Whiting contends that the operators of approximately one hundred additional wells outside the Subject Area identified the top of the massive Pictured Cliffs Sandstone as the vertical boundary between the Pictured Cliffs and Fruitland Coal Formations. However, Whiting failed to present evidence establishing that the Upper Sandstone interval was present in any of the wells identified. Similarly, Whiting failed to show that any operator identified the top of the Pictured Cliffs sandstone as the massive sand in those areas where tongues of the Pictured Cliffs are known to exist. The geologic testimony and evidence shows that such a definition has little support in the geologic literature and that the arbitrary and undefined term "massive" makes its application impractical.

#### Engineering Issue

(32) Whiting, the owners and operators of the Whiting Fruitland Coal Wells, and Pendragon, the owner and operator of the Pendragon Chaco and Chaco Limited Wells, each contend that the other's well stimulation treatments established communication between their separately owned formations. Both parties contend that, as a result, their wells are experiencing interference and that gas is being produced out of zone.

(33) The preponderance of the engineering evidence established that the fracture stimulation treatments performed on both the Pendragon Chaco Wells by Pendragon and the Whiting Fruitland Coal Wells by Whiting established communication between the Fruitland Coal Formation and the Pictured Cliffs Formation.

(34) The treatment performed on the Whiting Fruitland Coal Wells after they were drilled created near-wellbore communication channels between the Fruitland Coal and Pictured Cliffs Formations. At the time, the gas in the Pictured Cliffs Formation was nearly depleted and very little gas could escape to the Fruitland Coal Formation, unless the Whiting Fruitland Coal Wells were operated under extremely low pressures. On the other hand, the adsorbed gas in the Fruitland Coal Formation stayed within the coal matrices until the pressure was lowered enough through the dewatering process for the gas to desorb.

CASE NO. 11996

Order No. R-11133-A

Page 11

(35) After the dewatering process, substantial amounts of adsorbed gas escaped from the coal matrices, especially in the near-wellbore region where pressure was lowest. As a result, the Whiting Fruitland Coal Wells began their commercial gas production. The desorbed gas moving toward the Whiting Fruitland Coal Wells may have migrated to the Pictured Cliffs Formation through the communication channels near the Whiting Fruitland Coal Wells if the local pressure in the Pictured Cliffs Formation was lower than that in the Fruitland Coal Formation. Gas in the Pictured Cliffs Formation may have migrated to the Fruitland Coal Formation through the communication channels if the production pressures at the Whiting Fruitland Coal Wells were low. However, these possible gas migrations were not significant, as evidenced by steady gas production from the Pendragon Chaco Wells.

(36) In 1995, after three years of the dewatering process, the region in which decreased pressures allowed gas to desorb from the coal matrices had grown toward the Pendragon Chaco Wells. At the edge of the resulting gas bubble, the gas pressure in the Fruitland Coal Formation was probably higher than the adjacent pressure in the Pictured Cliffs Formation. In the area of this relatively high-pressure contrast, the thin capillary barrier may have been broken, allowing gas migration between the two zones.

(37) Pendragon performed fracture stimulation treatments on the Pendragon Chaco Wells in 1995. The post-treatment gas production from the Pendragon Chaco Wells indicates that the stimulation work performed by Pendragon successfully broke into some high-pressure gas compartments.

(38) The production history of the Pendragon Chaco and Chaco Limited Wells is summarized as follows:

Well No.	Initial Production (Original Completion)	Pre-Acidization or Fracture Stimulation Production	Post-Acidization or Fracture Stimulation Production	Last Production
Chaco No. 1	80 MCF/D	0 MCF/D	250 MCF/D	165 MCF/D
Chaco No. 2R	70 MCF/D	0-15 MCF/D	90 MCF/D	120 MCF/D
Chaco No. 4	200 MCF/D	0 MCF/D	425 MCF/D	200 MCF/D
Chaco No. 5	190 MCF/D	0 MCF/D	370 MCF/D	210 MCF/D
Chaco Ltd. 1J	11 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D
Chaco Ltd. 2J	30 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D

(39) One possibility is that the hydraulic fractures were extended upward to the Fruitland Coal Formation and generated a gas highway to the gas bubble. Pendragon's experts vigorously denied this possibility. Instead, they asserted that an additional gas compartment, the so-called "third bench," exists below the perforations in the Pendragon Chaco Wells. The evidence does not support this assertion. No "third bench" has been reported previously throughout the San Juan region, and there is no geological evidence of this kind of formation. Furthermore, there is no scientific basis for believing that fractures moved downward into the "third bench" but not upward into the Fruitland Coal.



CASE NO. 11996

Order No. R-11133-A

Page 12

Formation. Therefore, the most reasonable explanation of the sudden significant increases in production following the fracture stimulation treatments on the Pendragon Chaco Wells was that the hydraulic fractures penetrated into the gas bubble established in the Fruitland Coal Formation.

(40) Pendragon also asserted that the fracture stimulation treatments increased production in the Pendragon Chaco Wells by counteracting the effects of reservoir damage caused by (a) scale precipitation, (b) water blockage, and (c) migration of clay fines. As the original Pictured Cliffs gas was relatively dry, however, it is unlikely that the Pendragon Chaco Wells suffered from significant reservoir damage of this type.

(41) The BTU analysis of the gas from the Pendragon Chaco Wells supports the conclusion that the fracture stimulation treatments of these wells in 1995 established communication with the Fruitland Coal Formation. Whiting showed that the hydrocarbon liquids content of the gas from the Pendragon Chaco Wells was slightly reduced from 1988 to 1995 and significantly reduced from 1995 to 1997.

(42) Expert witnesses for both Pendragon and Whiting presented their opinions on the effects of the fracture stimulation treatments in the Whiting Fruitland Coal Wells and the Pendragon Chaco Wells based on their own theories and models. Many input values for key parameters were questionable. Both simulators used in their testimony have a good reputation for assisting in the design of fracturing jobs, but it is easy to manipulate them incorrectly. In a case like this, their results are too exaggerated to be reliable.

(43) The acid stimulation treatments performed by Pendragon on the Chaco Limited Wells No. 1J and 2J in 1995 did not alter these wells' rates of production. These treatments did not establish communication between the Pictured Cliffs Formation and the Fruitland Coal Formation.

(44) The gas now capable of production from the Pendragon Chaco Wells No. 1, 2R, 4, and 5 is: (1) gas originally in place in the Pictured Cliffs Formation; (2) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Pendragon Chaco Wells; and (3) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Whiting Fruitland Coal Wells.

(45) The Pendragon Chaco Wells depleted the Pictured Cliffs Formation prior to the fracture stimulation treatments performed on the wells in 1995.

(46) Pendragon Chaco Wells No. 1, 2R, 4, and 5 have already produced their fair share of the gas in the Pictured Cliffs Formation.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Pendragon Energy Partners, Inc., and J. K. Edwards Associates, Inc., it is determined that the following described wells are perforated within the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool. It is further determined that the following described wells are producing from both the WAW Fruitland Sand-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool, San Juan County, New Mexico:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 2R (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W

(2) It is further determined that the following described wells are perforated within and producing solely from the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

(3) It is further determined that the following described wells are producing from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W

CASE NO. 11996  
Order No. R-11133-A  
Page 14

Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(4) Pendragon is hereby ordered to shut-in its Chaco Wells No. 1, 2R, 4 and 5 until such time as the Division approves a method for either putting them back into production or plugging them.

(5) Inasmuch as Whiting's wells may produce only minor amounts of gas from the already depleted WAW Fruitland Sand-Pictured Cliffs Pool, Whiting's wells are not to be shut-in.

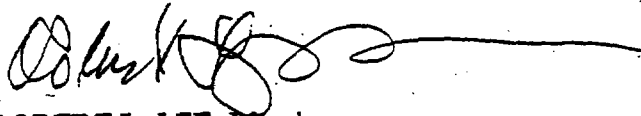
(6) Jurisdiction is hereby retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

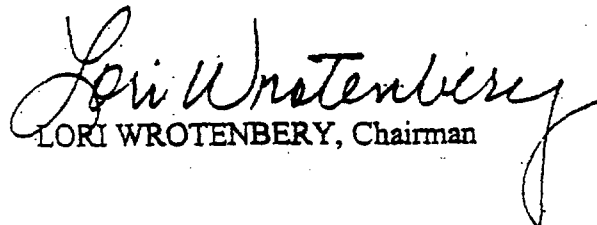
STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



JAMI BAILEY, Member



ROBERT L. LEE, Member



LORI WROTENBERY, Chairman

S E A L

05233

EXHIBIT

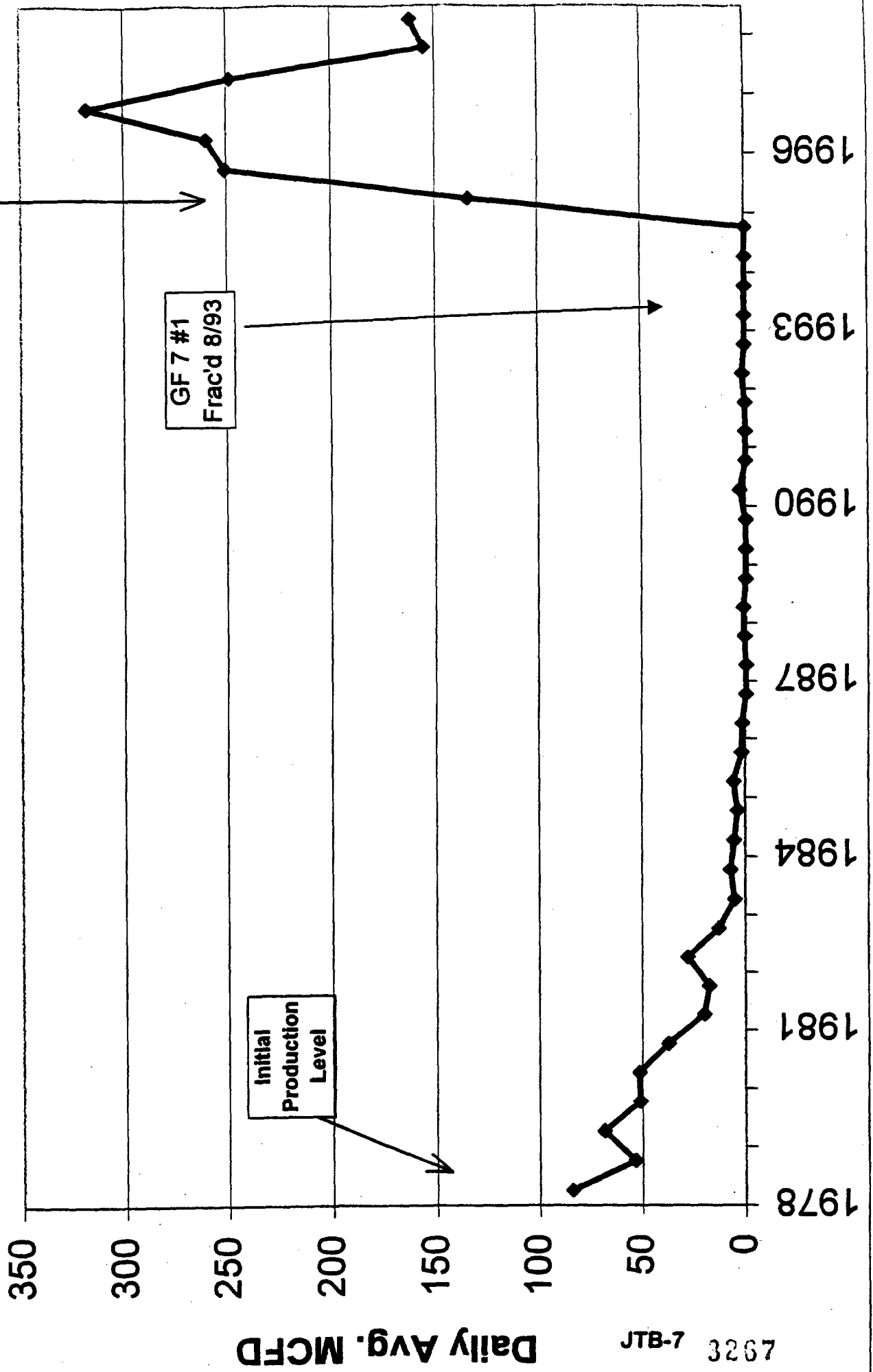
B

# CHACO 1 GAS PRODUCTION HISTORY

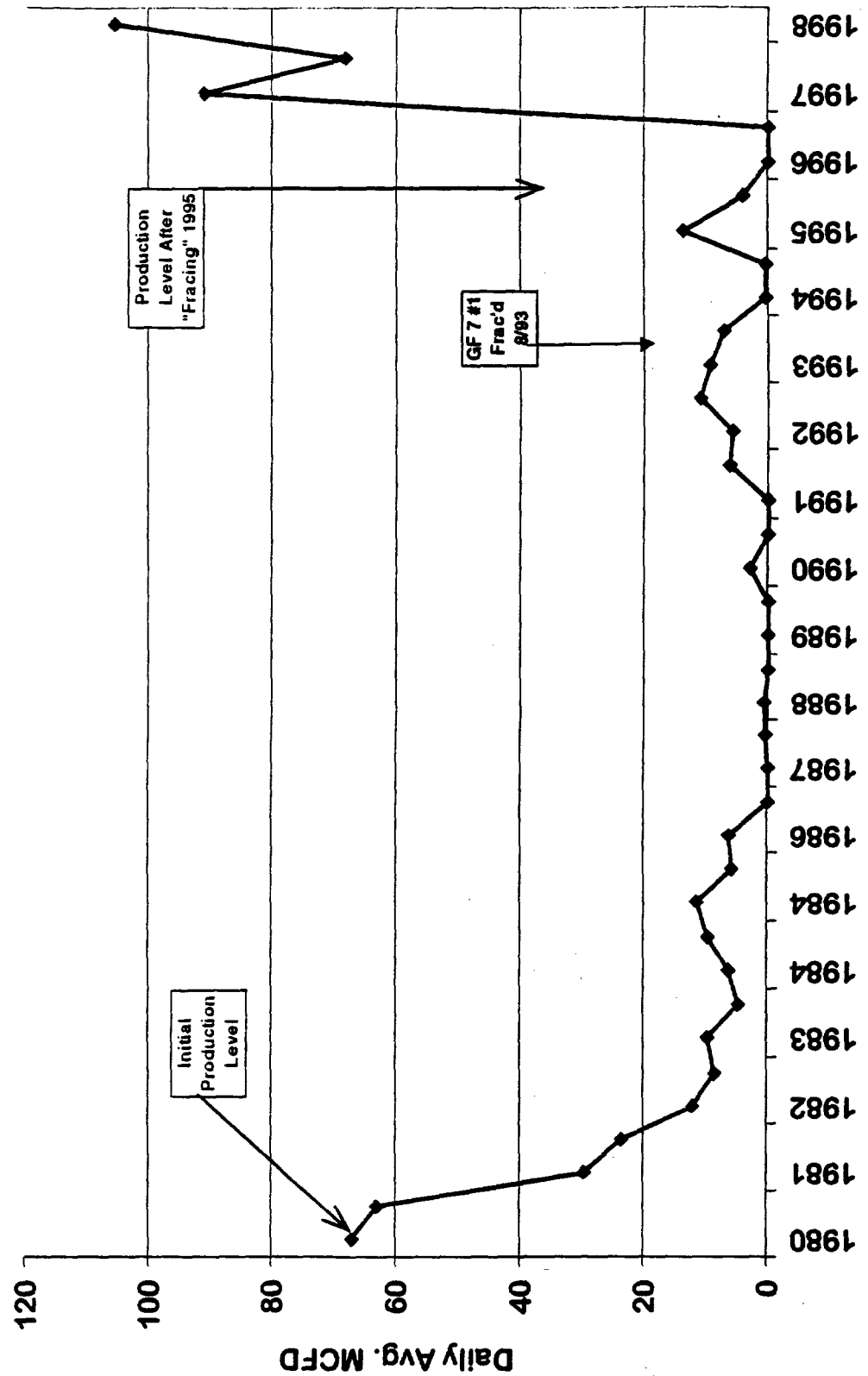
Production  
Level After  
"Fracing" 1995

GF 7 #1  
Frac'd 8/93

Initial  
Production  
Level



# CHACO 2R GAS PRODUCTION HISTORY

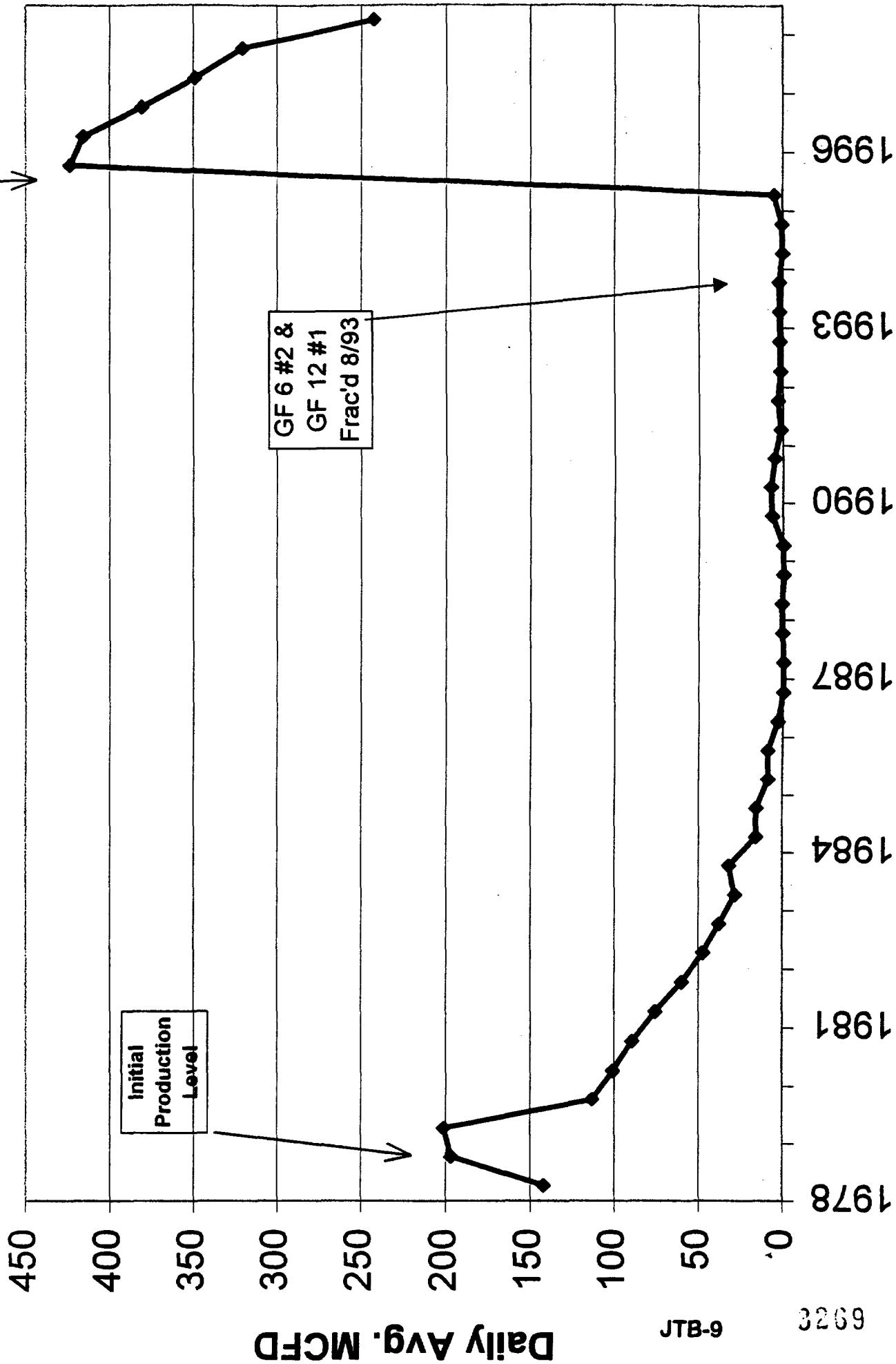


# CHACO 4 GAS PRODUCTION HISTORY

Production  
Level After  
"Frac'ing" 1995

GF 6 #2 &  
GF 12 #1  
Frac'd 8/93

Initial  
Production  
Level



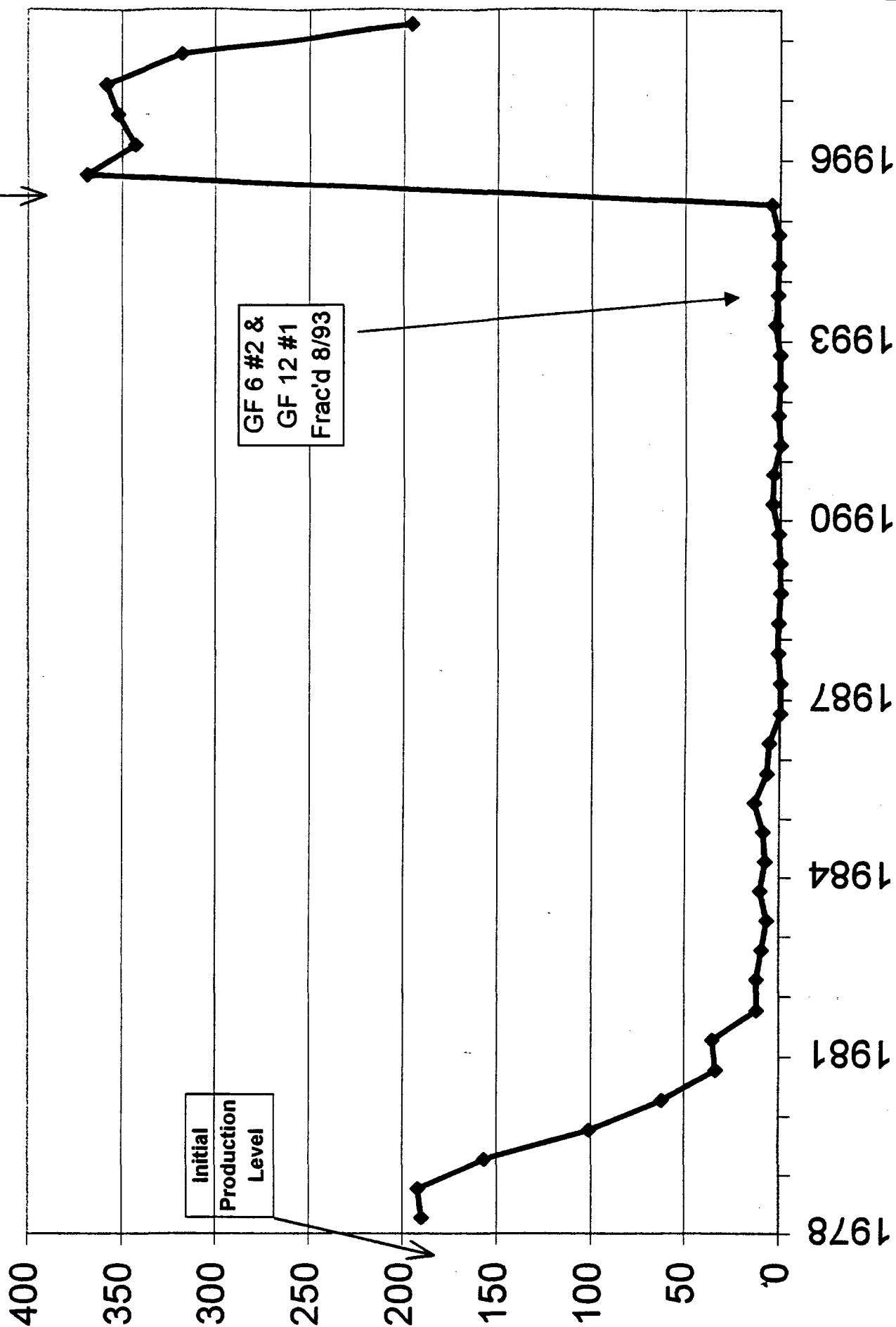
# CHACO 5 GAS PRODUCTION HISTORY

Production  
Level After  
"Frac'ing" 1995

Daily Avg. MCFD

JTB-10

0723





**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**WHITING PETROLEUM CORPORATION,  
a corporation, MARALEX RESOURCES,  
INC., a corporation, and T.H. McELVAIN  
OIL & GAS, Limited Partnership,**

**Plaintiffs,**

**vs.**

**No. SF-CV-98-01295**

**PENDRAGON ENERGY PARTNERS, INC.,  
a corporation, PENDRAGON RESOURCES,  
L.P., and J.K. EDWARDS ASSOCIATES, INC.,  
a corporation,**

**Defendants.**

**and**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORPORATION, MARALEX RESOURCES,  
INC.,**

**Appellees.**

**ORDER OF DISMISSAL WITH PREJUDICE**

These consolidated matters came before the Court on the parties' Joint Motion for Dismissal with Prejudice and the Court being fully advised in the premises,

IT IS ORDERED AND DECREED that these actions and all claims, appeals and counterclaims of all parties are dismissed with prejudice, each party to bear their costs and attorney fees.

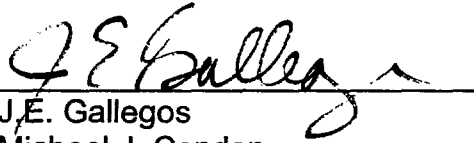
**ORIGINAL SIGNED BY  
JUDGE ENCINIAS**

---

The Honorable Art Encinias  
District Judge

Agreed and Approved:

GALLEGOS LAW FIRM, P.C.

By   
J.E. Gallegos  
Michael J. Condon  
460 St. Michael's Drive, Bldg. 300  
Santa Fe, New Mexico 87505

Attorneys for Movants-Intervenors  
Whiting Petroleum Corporation and  
Maralex Resources, Inc.

NEW MEXICO OIL CONSERVATION COMMISSION

By Telephonically Approved 03/07/01  
Stephen C. Ross  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Attorney for Appellee New Mexico Oil  
Conservation Commission

MILLER, STRATVERT, TORGERSON  
& SCHLENKER, P.A.

By Telephonically Approved 03/07/01  
J. Scott Hall  
150 Washington Avenue  
Santa Fe, New Mexico 87501

Attorneys for Appellants Pendragon Energy  
Inc., Pendragon Resources, LP and Edwards  
Energy Corporation

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**CLIENT: WHITING**  
**CLIENT NO.: 98-**

**266.00**

**DATE: March 8, 2001**  
**TO: Steve Ross**  
**COMPANY: New Mexico Oil Conservation Division**  
**TELEFAX NO.: (505) 476-3462**  
**FROM: J. E. Gallegos**

**MESSAGE:****NUMBER OF PAGES INCLUDING COVER SHEET: 2****IMPORTANT**

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# GALLEGOS LAW FIRM

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March 8, 2001  
(Our File No. 98-266.00)

J.E. GALLEGOS\*

**VIA HAND-DELIVERY**

The Honorable Art Encinias  
Santa Fe Judicial Complex  
Santa Fe, New Mexico 87501

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295  
Pendragon Energy Partners, Inc. v. New Mexico Oil Conversation  
Commission; Cause No. D-0117-CV-2000-1449

Dear Judge Encinias:

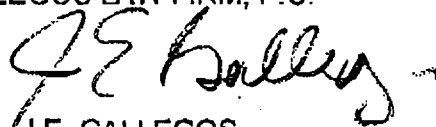
We are pleased to submit to Your Honor a Joint Motion for Dismissal With Prejudice and an Order of Dismissal With Prejudice for consideration of the Court. If acceptable, we request that the Motion and Order be entered and the Clerk of the Court provide stamped copies to the parties.

This brings an end to this lengthy and complex litigation. The Court's efforts and attention to these matters is appreciated by all parties. Unless we hear to the contrary from your office, it is assumed that the Pre-trial Conference scheduled for March 15, 2001, has been cancelled.

Respectfully yours

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG:sa

Enclosures

cc: Scott Hall  
Steve Ross

## **Ross, Stephen**

---

**From:** J. Scott Hall[SMTP:shall@mstLAW.com]  
**Sent:** Friday, February 09, 2001 4:07 PM  
**To:** 'Ross, Stephen'  
**Subject:** RE: Pendragon

This was from a scheduling order entered months ago.

-----Original Message-----

**From:** Ross, Stephen [mailto:sross@state.nm.us]  
**Sent:** Friday, February 09, 2001 4:00 PM  
**To:** 'J. Scott Hall'  
**Subject:** RE: Pendragon

Thanks! I certainly don't seem to be on the judge's list.

Stephen C. Ross  
Assistant General Counsel  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Commission  
1220 S. Saint Francis  
Santa Fe, New Mexico 87505  
Office: (505) 476-3451  
Fax:(505) 476-3462

> -----

> **From:** J. Scott Hall[SMTP:shall@mstLAW.com]  
> **Sent:** Friday, February 09, 2001 3:57 PM  
> **To:** Steve Ross (E-mail)  
> **Subject:** Pendragon  
>  
> Steve: FYI, there's a pre-trial conference before Judge Encinias on  
> Friday,  
> Feb 16 at 1:30. I doubt you were aware of it, and I'm not sure you even  
> need  
> to go. I doubt much will happen as we're still waiting on the appeal, but  
> we  
> might learn something about when we can expect a ruling.  
>

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PLEASE REPLY TO SANTA FE

- \* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN NATURAL RESOURCES - OIL & GAS LAW
- \*\* NEW MEXICO BOARD OF SPECIALIZATION RECOGNIZED SPECIALIST IN REAL ESTATE LAW

December 18, 2000

Steve Ross, Esq.  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J. E. Gallegos, Esq.  
Michael Condon, Esq.  
Gallegos Law Firm  
460 St. Michaels Dr., #300  
Santa Fe, New Mexico 87505

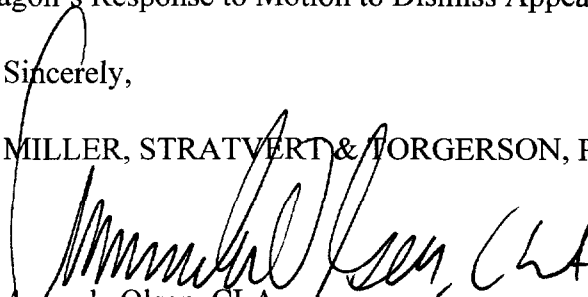
Re: Pendragon Energy Partners, Pendragon Resources, LP, & Edwards Energy Corp. v. New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Counsel:

Enclosed is a copy of a Pendragon's Response to Motion to Dismiss Appeal.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

6304/20253/Counsel trans ltr5.doc

# GALLEGOS LAW FIRM

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December 8, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS\*

## VIA HAND-DELIVERY

The Honorable Art Encinias  
Judge Steve Herrera Judicial Complex  
Grant & Catron  
Santa Fe, New Mexico 87501

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295  
Pendragon, et al. v. New Mexico Oil Conservation Commission,  
Cause No. D-0117-CV-2000-1449

Dear Judge Encinias:

By Order of Honorable Daniel Sanchez the Rule 1-074 appeal from the Commission decision pending in case No. D-0117-CV-2000-1449 has been consolidated with case No. SF-CV-98-01295 in your Court. The Appellant's Statement and the Appellees' Response Statements have all been completed and on file for some time. The matter is ripe for decision and on behalf of the Appellees Whiting Petroleum Corp et al. we ask that the Court set a hearing on the Motion to Dismiss the Appeal and, if necessary, oral argument on the appeal.

By the way, it is noted that the appeal from the Commission Order has incorrectly been assigned a Rio Arriba County number (0117) rather than the Santa Fe County prefix number.

Your Honor's consideration of this request is appreciated.

Sincerely,

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG:sa

cc: Scott Hall  
Steve Ross  
John Hazlett  
Mickey O'Hare  
ioc: Michael J. Condon  
Caroline C. Woods

**MILLER, STRATVERT & TORGERSON, P.A.**  
LAW OFFICES

NOV 27 2000

SANTA FE, NM

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PLEASE REPLY TO SANTA FE

November 21, 2000

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505

Re: Pendragon Energy Partners, Inc., Pendragon Resources, LP, and Edwards Energy Corporation v. New Mexico Oil Conservation Commission;  
No. D-0117-CV-2000-1449

Dear Mr. Ross and Mr. Gallegos:

Enclosed is an endorsed copy of the Motion to Strike Whiting's Pleadings the above-referenced matter.

Please give me a call if you have any questions.

Very truly yours,

  
Jeffrey E. Jones

JEJ/rm  
Enclosure



## OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505  
(505) 827-7133  
Fax: (505) 827-8177



(PLEASE DELIVER THIS FAX)

To: Scott Hall 989-9857

From: Steve Ross

Date: 10-26-2000

Number of Pages (Includes Cover Sheet) ~~6~~ 7

Message: See attached

If you have any trouble receiving this, please call:  
(505) 827-7133

TF S. Hall 10-26  
telephonically answered



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
**Oil Conservation Division**

October 26, 2000

*Via Facsimile*

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504-1986

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Scott,

Please find attached a proposed motion and order giving me an additional ten days to complete the response. I have it pretty well sketched out at this point and I don't believe I will need the ten days, but just in case something comes up, I thought I should give myself an adequate amount of time.

Please let me know if you approve of the Order. Thanks.

Sincerely,

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RESPONSE TO APPELLANTS'  
STATEMENT OF APPELLATE ISSUES**

COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file its response to Appellants' Statement of Appellate Issues, on the following grounds:

1. This matter before the Court is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.

2. Appellants' Statement of Appellate Issues was filed with the Court on or around October 2, 2000. Ordinarily, Appellee's response to that document should be filed with the Court no later than November 1, 2000.

3. The Record on Appeal in this matter is very extensive and contains many thousands of pages and dozens of original exhibits. The transcript of the hearing alone is more than 1,600 pages. Counsel for Appellee did not participate in the hearing and has

had to study the record in order to prepare an intelligible Response to Appellants' Statement of Appellate Issues. This task has been made all the more difficult as the undersigned has been out-of-town on work assignments five days out of the last ten.

4. Counsel for Appellant has been contacted and does not oppose a ten (10) day extension of time to file Appellee's Response to Appellant's Statement of Appellate Issue.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file Appellee's Response to Appellants' Statement of Appellate Issues an additional ten (10) days to November 10, 2000.

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of October, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RESPONSE TO APPELLANTS'  
STATEMENT OF APPELLATE ISSUES**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file its Response to Appellants' Statement of Appellate Issues in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional ten (10) days to file a response to Appellants' Statement of Appellate Issues in this matter. Appellants' Statement of Appellate Issues shall be filed no later than November 10, 2000.

---

The Honorable Daniel A. Sanchez

Submitted by:

---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, October 26, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614  
(505) 989-9857

## TRANSACTION REPORT

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NEW MEXICO ENERGY, MINERALS and  
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

Jennifer A. Salisbury

Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

October 26, 2000

The Honorable Daniel A. Sanchez  
First Judicial District Court  
P.O. Box 2268  
Santa Fe, New Mexico 87504

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Judge Sanchez,

Please find enclosed a Motion and proposed Order extending the time for the State to file its Response to Appellants' Statement of Appellate Issues an additional seven days. Counsel for Appellants' agrees with entry of the proposed Order.

If the Order is acceptable, would you be so kind as to sign it and file the Motion and Order with the clerk of the court? Would you also ask the clerk of the court to forward an endorsed copy of each document to counsel of record?

Thank you very much for your assistance.

Sincerely,

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

Enclosures as noted

Cc: J. Scott Hall, Esq.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RESPONSE TO APPELLANTS'  
STATEMENT OF APPELLATE ISSUES**

COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file its response to *Appellants' Statement of Appellate Issues*, on the following grounds:

1. The matter before the Court is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.

2. *Appellants' Statement of Appellate Issues* was filed with the Court on or around October 2, 2000. Ordinarily, Appellee's response to that document should be filed with the Court no later than November 1, 2000.

3. The Record on Appeal in this matter is very extensive and contains many thousands of pages and dozens of original exhibits. The transcript of the hearing alone is more than 1,600 pages. Counsel for Appellee did not participate in the hearing and has

had to study the record in order to prepare an intelligible response. This task has been made all the more difficult as the undersigned has been out-of-town on work assignments five days out of the last ten.

4. Counsel for Appellant has been contacted and does not oppose a ten (10) day extension of time to file its response to the *Appellant's Statement of Appellate Issues*.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file its response to *Appellants' Statement of Appellate Issues* an additional ten (10) days to November 10, 2000.

Respectfully Submitted.



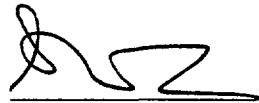
---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 26<sup>th</sup> day of October, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

A handwritten signature in black ink, appearing to be 'S. Ross', written over a horizontal line.

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RESPONSE TO APPELLANTS'  
STATEMENT OF APPELLATE ISSUES**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file its response to *Appellants' Statement of Appellate Issues* in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional ten (10) days to file its response to *Appellants' Statement of Appellate Issues* in this matter. Appellants' Statement of Appellate Issues shall be filed no later than November 10, 2000.

---

The Honorable Daniel A. Sanchez

Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, October 26, 2000:

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(505) 989-9857

## **Ross, Stephen**

---

**From:** Wrotenbery, Lori  
**Sent:** Sunday, November 12, 2000 6:02 PM  
**To:** Ross, Stephen  
**Subject:** Pendragon brief

Nice job!

I don't have your home phone number, so I'll give you my comments and suggestions here. Please excuse the shorthand, but I'm in a hurry to go get something to eat. I'll try to call you during our break in the morning to see if you have any questions.

II. SUMMARY OF PROCEEDINGS, Second sentence of second paragraph: Rule 303 . . . requires.

### III. ARGUMENT

#### A. Introduction

Second line of first paragraph: Shouldn't it read "over time, and with heat and pressure," rather than "over time and, with time and pressure."

Fourth sentence of first paragraph: Whiting owns the mineral rights from the surface . . . .

First sentence of second paragraph: "The parties each sought to prove to the Commission that the other party was producing its gas."

#### B. The Commission's Order

Fourth sentence of first paragraph: It doesn't sound right to me. I suggest changing it to read: "During the dewatering process, the pressure in the Fruitland coal formation gradually decreased so that gas began to free itself from the coal, setting the stage for gas migration to Pendragon's wells."

Last sentence of first paragraph: ". . . the most likely explanation was that hydraulic fractures . . . ."

Last paragraph: Insert "and" before "were made within the scope . . . ."

#### D. Application of the Standard of Review to the Commission's Order

##### 1. The Commission's Order was Supported by Substantial Evidence

Last sentence of second paragraph: Strike "might" and change "to support" to "support for"?????

##### a. Evidence of Pendragon's Sudden, Unexpected Production Increases

Fourth paragraph, right before Robinson quote: Change "thousandfold increase in production" to "thousandfold increase in productivity."

##### b. Communication Demonstrated by Pressure Response

First sentence of third paragraph: Insert "pressure" between "dramatic" and "increase."

##### e. The Commission's Theory of the Sequence of Events

Second sentence of second paragraph: Strike "and begin to collect."

Third and fifth sentences of second paragraph: I'm not sure how accurately the phrase "embedded in the pores of coal" describes coalbed methane. I would suggest revising the third sentence to read: "The gas forms because

natural gas (methane) is fixed, or adsorbed, to the surfaces of the coal; the methane will leave the coal and become free gas only when the pressure is reduced by dewatering." I'd strike the fifth sentence.

Sixth sentence of second paragraph: Change "If no production occurs" to "If production ceases."

Third paragraph, second sentence: Strike "and" before "especially."

Fourth paragraph: Is this paragraph necessary? I didn't really find any of the water evidence persuasive. If we must include it, can we at least strike the second sentence. I'm not certain that the water would have necessarily migrated with the gas. Also, in the third sentence, "might not produce" should be changed to "might not have produced."

#### f. Depletion of the Pictured Cliffs

Second paragraph, right before the quote: Change "had" to "has" because here O'Hare is referring to cumulative production figures after the frac jobs.

Second paragraph, last sentence: Strike ", and Pictured Cliffs wells can only recover 60-70 percent of initial pressure." I don't understand this phrase or how it relates to the rest of the sentence.

Fourth paragraph, fourth sentence: Change "had" to "have now."

#### E. Pendragon's Arguments

##### 1. Substantial Evidence

First paragraph, third sentence: Change "BTU findings" to "Btu data."

Last sentence of first paragraph: "for a reasonable mind to support the findings and conclusions" to "for a reasonable mind to accept as supporting the findings and conclusions."

Fourth paragraph, fourth sentence: Can we strike the Robinson quote about the effect of fracturing on permeability? It's confusing, I'm not sure how accurate it is, and I don't think it really adds anything.

Fifth paragraph, next to last sentence: This sentence jumps from the facts of this case to the facts of the *Fasken* case. Add a transition phrase.



## **Ross, Stephen**

---

**From:** Leach, Carol  
**Sent:** Thursday, November 09, 2000 11:27 AM  
**To:** Ross, Stephen  
**Subject:** Zamora v



pendrag-cl\_.doc

I like it. I made a few comments. I think the court will be ready to defer to the technical expertise of the commission when it gets to desorption, despite your doing a great job of explaining it. And I was ready to quit when I got to millidarcies, because I have no idea what it is.

Good job.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION'S  
RESPONSE TO APPELLANT'S STATEMENT OF APPELLATE ISSUES**

COMES NOW the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, and, pursuant to SCRA 2000, Rule 1-074(L), submits the foregoing as its response to Appellants' Statement of Appellate Issues in this matter.

**I. STATEMENT OF THE ISSUES.**

This is an appeal of Order No. R-11133-A of the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"). That Order required Pendragon Energy Partners, Pendragon Resources, Edwards Energy Corporation (hereinafter referred to collectively as "Pendragon" or "Appellants") to cease production of natural gas from four natural gas wells in San Juan County, New Mexico. *See* Exhibit A (Order of the Commission, attached for the convenience of the Court), also found in the Record Proper (hereinafter "RP") at 5220-5223. As the standard of review of such

orders is specified by NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000, review of Order No. R-11133-A is limited to the following issues:

1. Whether, based on the whole record on appeal, Order R-11133-A is supported by substantial evidence.
2. Whether Order R-11133-A is within the scope of authority of the Commission.
3. Whether the Commission acted "fraudulently, arbitrarily or capriciously" in entering the order.
4. Whether Order R-11133-A is otherwise in accordance with law.

## **II. SUMMARY OF PROCEEDINGS**

Although styled as a dispute between Pendragon and the Commission, this case actually arises from a dispute between Pendragon and Whiting Petroleum Corporation/Maralex Resources, Inc. (hereinafter collectively referred to as "Whiting"). The subject of the dispute is natural gas Pendragon produced from four natural gas wells and is the subject of an ongoing case in this judicial district, *Whiting Petroleum Corporation and Maralex Resources, Inc. v. Pendragon Energy Partners, Inc. and J.K. Edwards Associates*, No. SF-CV-98-01295. On July 7, 1998, Judge Encinias entered a preliminary injunction in that case against Pendragon to "cease and desist all gas production [from its Chaco wells 1, 2-R, 4 and 5]." RP at 2926. Judge Encinias' order referred the matter to the "... New Mexico Oil Conservation Division or New Mexico Oil Conservation Commission on certain issues within their administrative jurisdiction." RP at 2926.

Judge Encinias' Order prompted Pendragon to file an application with the Oil Conservation Division for a declaration that its wells were producing from "the

appropriate source of supply." RP at 5217-5219. The quoted language is from Pendragon's application and refers to Rule 303 of the Rules and Regulations of the Commission (19 NMAC 15.N.303), which require that each natural gas pool be produced separately from other pools.<sup>1</sup> By applying to the Division to confirm the appropriate source of supply under Rule 303, Pendragon requested that the Division determine whether Pendragon was producing gas from the formations which it owned or from formations Whiting owned.

The Oil Conservation Division heard the matter during an administrative hearing in July of 1998 and the Division issued an order, which is not at issue here. RP at 4337. Appellants were aggrieved by the Division's Order and requested review by the Commission. The case was re-heard by the Commission *de novo*. After a lengthy hearing spanning five days in August 1999, the Commission decided that the evidence supported the conclusion that Pendragon's wells were perforated in the Pictured Cliffs formation, the "appropriate source of supply", but nevertheless were producing natural gas from a formation owned by Whiting. Exhibit A.

### **III. ARGUMENT**

#### **A. Introduction.**

Like crude oil, natural gas exists in rocks and coal below the surface of the earth where organic matter decayed over time and, with time and pressure, formed hydrocarbons. 1 Williams & Meyers, *Oil and Gas Law*, §§ 101-102 (pages 1-3)(1989). When a pool of natural gas forms, it is differentiated from other pools by the specific

---

<sup>1</sup> Similar language appears in the Commission's Order No. 8768, which established special rules for the Basin-Fruitland Coal Gas Pool. RP at 5212-5216.

sedimentary layers in which the gas was created and now exists. *Id.*, pages 2-3.

Pendragon and Whiting own natural gas trapped in layers that were deposited right on top of one another. Whiting owns from the surface of the earth to the base of the Fruitland coal. RP at 4897, ¶ 6 (Stipulation of Facts). Whiting's ownership permits it to produce natural gas trapped in the Fruitland coal formation. Pendragon owns the mineral rights from the base of the Fruitland coal to the base of the Pictured Cliffs formation. RP at 4896. Pendragon's ownership permits it to produce natural gas trapped within **the Pictured Cliffs formation**. The Fruitland coal is quite literally a bed of coal, laid directly atop the natural gas producing sandstone of the Pictured Cliffs. Whiting drilled and produced 17 wells into the Fruitland coal formation commencing in 1991. RP at 2893, 4900-4901. Pendragon purchased its wells in December 1994 at auction from previous operators; the wells had been drilled and produced two decades earlier. RP at 2894, 3249, 4899-4900.

The parties each sought to prove to the Commission that the other party was producing the other's gas. Two general theories were presented. The first theory was geological in nature; the parties claimed that wells were "perforated" in the wrong geologic formation. Natural gas is produced from wells just like oil, and enters the well through "perforations" in the steel well casing. 1 Williams & Meyers, § 103 at 10. The perforations are holes blown through the casing with explosives. *Id.* When a well is producing from a **specific** formation, holes have been blown through the casing into that formation. *Id.* Thus, in the case of Whiting's wells, perforations have been created in Whiting's well casings alongside the Fruitland Coal formation. RP at 4900-4901. Pendragon's wells are perforated somewhat lower in the earth, in the Pictured Cliffs

sandstone. RP at 4899-4900. The Commission determined in Order No. R-11133-A that the perforations in each party's wells were properly placed; that issue is not before the Court.

The second general theory presented to the Commission concerned completion practices and the possibility that such practices created fractures that extended from one formation to another. This issue, which the Commission referred to as "the Engineering Issue," is the issue before the Court in this appeal. Whiting claimed that a completion practice called "hydraulic fracturing" caused fractures in the rocks from Pendragon's wells into the Fruitland coal and caused an escape of gas into Pendragon's wells. Whiting presented evidence that Pendragon's hydraulic fracturing created cracks and fissures upward into the Fruitland coal formations and that Pendragon was producing Whiting's natural gas. *See* RP at 4954 (Whiting's Closing Statement Memorandum). Pendragon disputed this claim and claimed that Whiting's hydraulic fracturing of its Fruitland coal wells had created cracks and fissures which extended *downward* into the Pictured Cliffs formation; Pendragon's witnesses and evidence suggested that Whiting was producing Pendragon's Pictured Cliffs natural gas from its wells. RP at 5105 (Closing Statement of Pendragon).

Hydraulic fracturing involves pumping liquids into a well in such volume and under such pressure that the rock breaks or fractures, creating cracks from which natural gas can migrate to the wellbore for production, a practice which greatly increases the area from which a natural gas well produces. 1 Williams & Meyers, § 103 at 10. The parties stipulated that each applied this technique to their wells. RP at 4899-4901.

## **B. The Commission's Order**

In Order No. R-11133-A, the Commission addressed this issue and found the preponderance of the engineering evidence established that fracture stimulation of *both* parties established communication between the Pictured Cliffs and Fruitland coal formations. Exhibit A, ¶ 33. The Commission found treatment of Whiting's wells in 1992 created communication channels near the wellbore, but very little gas escaped.

¶ 34. As Whiting's wells began commercial production with the dewatering<sup>2</sup> of the coal, higher gas pressure in the coal prevented Pictured Cliffs gas from migrating to Whiting's wells through the communication channels. ¶ 35. During the dewatering process, the pressure in the Fruitland coal formation gradually increased so that it was above the pressure in the Pictured Cliffs, setting the stage for gas migration to Pendragon's wells.

¶ 36. Then, Pendragon performed fracture stimulation of its wells, which broke into high-pressure gas in the Fruitland coal formation. ¶ 37. Following this event, production from Pendragon's wells increased many times over what the wells had produced previously. ¶ 38. The Commission indicated the most likely explanation for this was hydraulic fractures created by Pendragon had extended upwards from Pendragon's wells into the Fruitland ~~formation~~ coal. ¶ 39.

These findings, together with a finding that the Pictured Cliffs formation had been depleted by Pendragon's wells prior to 1995 (¶ 45), and the finding that Pendragon had already produced more than its fair share of the gas (¶ 46), led to the Commission's order that Pendragon stop producing from four Chaco (I don't think you have discussed Chaco..so this kind of does not fit) wells (Order, ¶ 5).

---

<sup>2</sup> The concept of dewatering and its importance on production from a coal formation is discussed at page 17, below.

The Commission found unpersuasive Pendragon's argument that the production increase resulted from repair of reservoir damage. ¶ 40. The Commission found it unlikely that damage was present in this reservoir to the extent claimed. *Id.* The Commission found unpersuasive the parties' computer fracture simulation demonstrations because of the ease of manipulating data to obtain the desired result. ¶ 42. And, the Commission found support for its findings and conclusions in the Btu data presented, which showed the hydrocarbon content of Pendragon's wells decreased as the Pictured Cliffs gas mixed with the lower-Btu Fruitland coal gas. ¶ 41.

As will be seen below, these findings and conclusions are supported by substantial evidence in the record of the proceedings, were made within the scope of the Commission's statutory authority and in accordance with established procedures.

### **C. Standard of Review**

Decisions of the Oil Conservation Commission may be reversed by the District Court on four very limited grounds: (1) if, based on the whole record on appeal, the "decision of the agency was not supported by substantial evidence"; (2) if the agency acted "fraudulently, arbitrarily or capriciously"; (3) if the action "was outside the scope of authority of the agency"; or (4) if the action of the agency "was otherwise not in accordance with law." *See* NMSA 1978, § 70-2-25(B) (Supp. 2000); NMSA 1978, § 39-3-1.1(D) (Supp. 2000) and Rule 1-074, SCRA 2000.

An "arbitrary or capricious" administrative action is an "illegal action." *Zamora v. Village of Ruidoso Downs*, 120 N.M. 778, 907 P.2d 182 (1995). *See also Regents of the University of New Mexico v. Hughes*, 114 N.M. 304, 309, 838 P.2d 458, 463 (1992)(formulation of judicial review of administrative agency in terms of "arbitrary,



unlawful, unreasonable, capricious or not based on substantial evidence" is synonymous with illegality).

An agency's decision is supported by "substantial evidence" if evidence presented to the agency is such that "a reasonable mind might accept [it] as adequate to support a conclusion." *Fugere v. State Taxation and Revenue Department*, 120 N.M. 29, 33, 897 P.2d 216 (Ct.App. 1995); *Rutter & Wilbanks Corp. v. Oil Conservation Commission*, 87 N.M. 286, 290, 532 P.2d 582, 586 (1975). In determining whether evidence is substantial, reviewing courts do not re-weigh the evidence the agency received, but only consider whether it is adequate to support the decision:

Substantial evidence means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. [citation omitted] In resolving those arguments of the appellant, *we will not weigh the evidence. By definition, the inquiry is whether, on the record, the administrative body could reasonably make the findings.*

*Grace v. Oil Conservation Commission of New Mexico*, 87 N.M. 205, 208, 531 P.2d 939 (1975)(emphasis added). While the substantial evidence standard does not require a Court to ignore contradictory evidence if it undermines the reasonableness of a decision, contradictory evidence is viewed in the light most favorable to upholding the agency decision according to the general standard of reasonableness:

[W]e view the evidence in a light most favorable to upholding the agency determination, but do not completely disregard conflicting evidence. [citation omitted] The agency decision will be upheld if we are satisfied that evidence in the record demonstrates the reasonableness of the decision.

*Santa Fe Exploration Co. v. Oil Conservation Commission of the State of New Mexico et al.*, 114 N.M. 103, 114, 835 P.2d 819 (1992).

#### **D. Application of the Standard of Review to the Commission's Order.**

##### **1. The Commission's Order was Supported by Substantial Evidence.**

If any case exists in which "substantial evidence" supports the Commission's Order, this is it. The hearing spanned five days, and that was just the cross-examination; witnesses' direct testimony was presented in written form prior to the hearing. Fifteen persons testified, most experts in either petroleum engineering, geological engineering, chemistry, geology or well completion. The transcript of the live testimony exceeds 1,600 pages. Hundreds of exhibits were admitted. As a result, the Record on Appeal now exceeds 5,000 pages. Most importantly, each party, Whiting and Pendragon, were represented by counsel during the hearing, and each insured that its position was well supported by evidence in the record.

Yet, it is this very record which Pendragon now argues is insufficient to support the Commission's order. However, in arguing the insufficiency of the evidence, Pendragon discusses only the evidence Pendragon presented during the hearing. To read Pendragon's account of the hearing and evidence presented, it is as if Whiting had not been present. Therefore, a more detailed review of the evidence presented than would normally be necessary follows, with apologies to the Court. As will be seen, the evidence presented during the hearing is more than sufficient for a reasonable mind might to accept as adequate to support the conclusions reached by the Commission. *Fugere, supra.*

##### **a. Evidence of Pendragon's Sudden, Unexpected Production Increases**

Evidence was presented to the Commission that four of Pendragon's wells had experienced sudden, unexpected and unprecedented production increases in 1995 immediately following hydraulic fracturing. Witnesses concluded that the coincidental

timing of the production increase and the degree of the increase could not be explained unless Pendragon had fractured into another, highly pressurized, gas reservoir.

The parties stipulated that Pendragon's wells were drilled two decades ago, between February, 1977 and April, 1982. RP at 4899-4900. Three of the wells were hydraulically fractured in January, 1995 and a fourth was fractured in May, 1995.<sup>3</sup> RP at 4899-4900. Whiting's wells were drilled in December, 1992 and subsequently fracture stimulated. RP at 4900-4901. *See also* RP at 2893-98 (testimony of Alexis M. O'Hare).

Evidence was presented that, after fracturing, Pendragon's wells began to produce as they had never produced previously. Wells which had been producing at 0-15 Mcf<sup>4</sup> per day, suddenly began producing 250 Mcf (Chaco No. 1), 90 Mcf per day (Chaco No. 2-R), 425 Mcf per day (Chaco No. 4) and 370 Mcf per day (Chaco No. 5). RP at 2949-2952. Given the fact that these wells had produced 80 Mcf per day, 70 Mcf per day, 200 Mcf per day and 190 Mcf respectively *when first produced*, and given the evidence and testimony which showed a consistent decline since, this production was unprecedented, and significant. RP at 2911, 2949-52, 3253. Exhibits 7 through 10 to the testimony of James T. Brown (do you think you might give titles or other limited credentials—degrees—etc. so this seems more credible?) dramatically demonstrate the unprecedented production increase of the wells, copies of which are attached for the Court's convenience as Exhibit B. RP at 3267-3270. Mr. Brown testified that from their peak production in late 1978, the Chaco wells declined to a non-economic, depleted state by 1986. He testified: "There is absolutely no scientific explanation for the reservoir to some way

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<sup>3</sup> Pendragon owns more than four wells but only the four ordered shut-in (the Chaco 1, 2-R, 4 and 5) are apparently at issue.

'recharge' so that in 1995 the rates and pressures of these Chaco wells *significantly exceeded initial, virgin gas flow and pressure.*" RP at 3254. *See also* RP at 856-57, 2898, 3267-76, 3276-3302

Evidence was also presented that wells like Chaco Nos. 1, 2-R, 4 and 5 exhibited a characteristic decline curve from first production, and the production of the Chaco wells after hydraulic fracturing was highly uncharacteristic, perhaps impossible. **Bradley M. (same as above)** Robinson testified that the average flow rate of the Pendragon wells increased *500-fold* after the treatment, *from an average flow rate of 20 Mcf/month to in excess of 10,000 Mcf/month.* RP at 3404, lines 12-16. He characterized a 500-fold increase as "not obtainable" through fracture stimulation. *Id.* On cross examination, he called a thousandfold increase in production "impossible" and stated the only explanation for such a phenomenon is fracturing into a new strata:

All right, let's go out here to about year 17 and look at what [the Chaco wells] did after the hydraulic fracture treatments. Before fracturing they were producing, on average, 20 to 30 MCF a month. After fracturing they jumped up here to over 10,000 MCF per month. Now notice . . . we go up a factor of . . . 500-fold increase in production, in the average production of these wells. And that doesn't even account for the pressure increase. As stimulation engineers and completions engineers, we look at the productivity. And you have to take into account the pressure. So the productivity of these wells is several thousandfold over what they were prior to stimulation. *And I've never seen, in my 20 years, a well that has increased several thousandfold that was fracture stimulated in the same zone. Now, I've seen it when they fracture into new zones, but not in the same zone, it's impossible. I've never seen it in 20 years.*

RP at 1271 -1272 (emphasis added). Similarly, **Mr. O'Hare** (first name, etc) testified that the production volumes seen in the Chaco wells after 1995 exceeded production rates

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<sup>4</sup> An "Mcf" is equivalent to 1,000 cubic feet. Thus, "15 Mcf per day" is 15,000 cubic feet of natural gas per day.

when the wells were first completed. Mr. O'Hare testified this is not consistent with normal production

patterns exhibited by Pictured Cliffs wells and can only be explained by communication with the Fruitland coal formation:

Second, the series of production charts on the Chaco wells, which are Exhibits JTB 7-14 [RP 3267-3274], demonstrate that after Pendragon performed its fracture stimulation on the Chaco wells those wells produced gas at volumes in excess of their production rates and production volumes under virgin reservoir conditions when they were first completed. Such production is entirely inconsistent with flow of conventional gas from the depleted Pictured Cliffs formation. Fracture stimulation of those wells could not have resulted in the extraordinary pressure and production response seen unless the wells were in communication with the Basin-Fruitland Coal Gas Pool.

RP at 2911. *See also* RP at 2911 and 3253 (Pictured Cliffs wells typically produce best when first completed and show the highest pressures at this time).

**b. Communication Demonstrated by Pressure Response**

Evidence was presented that other wells were not hydraulically fractured, and did not demonstrate the large, unexpected pressure and production increases of Chaco Nos. 1, 2-R, 4 and 5. Evidence was presented that after Pendragon's wells were shut down by Judge Encinias, pressures in those wells responded to changes in production from Whiting's wells, a clear indication of communication between the two sets of wells. Evidence was also presented that Whiting's wells produced more gas after Pendragon's wells were shut down, an indication that Pendragon had been diverting gas.

Mr. O'Hare testified that comparing production from Pendragon's wells that had been fractured with Pendragon's wells that had not been fractured helps illustrate the uncharacteristic behavior of Pendragon's newly stimulated wells.

First, as I previously indicated, the immediate pressure and production response in the Chaco wells after Pendragon acidized and/or frac'd those wells is one factor that clearly indicates that the Pendragon stimulations caused communication. *The Chaco wells, which Pendragon*

*did not stimulate, showed no pressure or production response during the period 1993 to the present.*

RP at 2910-2911 (emphasis added). *See also* RP at 3275 (exhibit prepared by Mr. Brown comparing production between stimulated and non-stimulated wells).

Mr. Brown testified that after Pendragon's wells were shut down by order of Judge Encinias, there was a sudden and dramatic increase whenever the adjoining Whiting Fruitland Coal wells were shut down, evidence that the two sets of wells and formations were communicating:

On July 8, 1998, the Santa Fe County district court, after hearing evidence, entered a Preliminary Injunction against Pendragon and Edwards requiring that the Chaco wells be shut-in. Since that time there have been instances of the El Paso Field Services gathering system being down when the Chaco processing plant was off-line. Those plant down times resulted in the Gallegos Federal wells being shut-in. Exhibit JTB-5A [RP at 3264] demonstrates that each time there is a significant shut down of the gathering system and the coal wells stop producing[,] the shut-in casing pressure (SICP) on the four reworked Chaco wells immediately increases. This phenomena reflects effective communication between the Chaco wells and the Fruitland coal exists.

RP at 3253, lines 15-23.

Pendragon's expert David O. Cox also testified to this effect and admitted that Pendragon's wells responded very quickly each time the adjoining coal wells were shut down, over periods as short as 1-2 days. *See* RP at 651-652.

Mr. Brown testified that Whiting's production *increased* after Pendragon's wells were shut down. *See* R.P. at 3254, lines 9-18. *See also* RP at 2909, ll. 4-10. A reasonable conclusion that can be drawn from such testimony is that Pendragon's wells had been diverting gas that should have been produced in Whiting's wells. Mr. Brown explicitly testified to this theory. *See* RP at 1085 ll. 24-25, 1086, ll. 1-5.

### **c. The Connection Between Pendragon's Fracturing and Communication**

Evidence was presented that Pendragon's hydraulic fracturing of its wells was responsible for the communication. While this is also evident from the pressure and production response of Pendragon's wells, additional technical evidence was presented by Whiting to this effect.

Testimony and evidence showed that great care is taken when designing hydraulic fracturing work so as to avoid extending fractures into other formations. *See e.g.* RP at 2895-2896, 319 (fracture treatments designed to keep fractures within zone). Even so, fracturing can create communication between zones as occurred here; Mr. Conway, Pendragon's fracturing expert, even assumed for purposes of his work that the Pictured Cliffs and the Fruitland coal communicate. RP at 324.

Both parties used computer-modeling techniques during the hearing before the Commission to illustrate that fractures did not migrate into other formations, evidence that the Commission did not entirely accept. *See* RP at 305-402 (testimony of Michael W. Conway), 1255-1416 (testimony of Bradley M. Robinson), 3393-3409 (same). Nevertheless, substantial evidence supports the Commission's finding that Pendragon fractured into the Fruitland coal. Mr. Robinson testified the hydraulic fracturing treatments on the Chaco Nos. 1, 2-R, No. 4 and No. 5 established direct communication with the Fruitland Coal. RP at 3396, lines 9-15. His conclusions were reached utilizing computer modeling techniques with data obtained and recorded during the actual fracturing. *Id.*, lines 15-18. Based on such simulations, Mr. Robinson concluded that the hydraulic fracturing of Chaco No. 1 produced a fracture in the rock which extended 1,050 feet up into the Fruitland Coal. RP at 3397, lines 21-23. Similar results obtained



for the other wells. RP at 3398, lines 1-5. Mr. Robinson also testified that the model predicted that the fracture stimulation of the Whiting well called the Gallegos Federal 26-12-5 No. 2 had "likely" extended from the Fruitland Coal into the Pictured Cliffs. RP at 3399-3400.

Despite the care taken by Whiting not to fracture into the Pictured Cliffs, the Commission found it had. However, the Commission also found that Whiting had not produced any significant amounts of Pictured Cliffs gas. Substantial evidence exists for the Commission's conclusions in this regard. *See* RP at 861-862, 1080, 2908-2909, 3267-88 (no pressure response in Pendragon's wells after Whiting's fracturing --- suggests little if any gas flow occurred even if Whiting's wells communicated with the Pictured Cliffs).

**d. Pressure and Btu Content of Pendragon's Wells Resembles Fruitland Coal Wells**

Evidence was presented that pressures recorded in Pendragon's wells and the Btu content of the gas from those wells were consistent with the recovery of gas from the Fruitland coal, not the Pictured Cliffs. Mr. Robinson testified that the pressures recorded in Pendragon's wells after hydraulic fracturing were consistent with pressures in the Fruitland coal formation, not the Pictured Cliffs:

*The pressure measured on all the Chaco wells now is also about what it is in the coal, and you've heard all sorts of arguments about fluid levels and this and that and, well, this pressure was measured before or after the frac. After the frac, the pressures in the Chaco wells are about equal to the pressure in the coal. And the production after the frac was almost identical to the average production in the Fruitland Coal, after the fracture treatment of the Chaco wells.*

RP at 1275, ll. 1-9 (emphasis added). Mr. Brown testified that the gas composition of the gas being recovered from Pendragon's wells after the 1995 well stimulation resulted in a significant change in the content of gas recovered:

Further confirmation of the communication is provided by examining the composition of the gas from the Chaco 1, 4 and 5 wells before and after the 1995 rework. Exhibit JTB-4 [RP at 3263] reveals that before the fracture treatments the gas from these wells reflected the typical Pictured Cliffs formation Btu range of 1100-1150. After, the fractures the gas composition was reflective of coal gas in the 1000-1025 Btu range.

RP at 3253, lines 10-14. *See also* 3276-3302. Mr. Brown testified further on cross-examination the Btu values of gas produced by Pendragon's wells after the 1995 stimulation was Fruitland gas, not Pictured Cliffs gas:

[Exhibit] JTB-4 [RP at 3263] is a plot of the measured BTU value for the Chaco wells as a function of time. The BTU value for the PC gas is generally in the range of 1075 -- excuse me, is 1075 to 1150. The BTU range for the Fruitland gas is 1000 to 1050. Based on the data presented, the gas produced from the Chaco wells since the fractures is Fruitland Coal gas.

RP at 1087, lines 1-7. Mr. O'Hare's Exhibit, RP 3172, depicts the Btu decline graphically. *See also* RP at 3277-3280 (Exhibits of Mr. Brown depicting Btu decline).

Even Roland Blauer, Pendragon's expert witness who testified concerning gas content, agreed on cross-examination that the composition of the gas from the two sources was "similar":

Q. ... So the answer is yes, the heating value, the gas composition from the coal wells and the Chaco wells during that period were very similar?

A. They were similar.

RP at 267.

**e. The Commission's Theory of the Sequence of Events**

Substantial time at the hearing was devoted to the method by which coal and conventional reservoirs produce natural gas and how that process played into the events at issue. Evidence was presented that the Pictured Cliffs is a conventional gas reservoir and produces gas upon completion. RP at 910, 1057. Mr. O'Hare described the typical Pictured Cliffs production pattern:

In a typical conventional sand, like the Pictured Cliffs formation, gas production will start off at its highest point immediately upon completion of the well. It will decline from that point until it reaches its economic limit and is abandoned.

RP at 2897, lines 4-7.

Evidence was also presented that Fruitland coal formation cannot produce natural gas without first being rid of water, a process called "dewatering." Once water is removed, gas will leave the coal and begin to collect:

The typical coal well will start producing minimal volumes of gas and very high volumes of water. As the water quantity declines the gas will begin an incline that will eventually peak and then start a decline to the end of the life of the well.

RP at 2897, lines 1-4. The gas forms because natural gas (methane) is embedded in the pores of coal; the methane will leave the pores and become free gas only when the pressure in the surrounding coal is reduced. RP at 1082-83. This process is called "desorption." The testimony and evidence indicated that once the methane is released from the pores of the coal, it gradually accumulates, and as it does, the pressure increases. *Id.* If no production occurs, the gas pressure gradually increases until it reaches a point

beyond which no more methane can desorb from the coal. *Id.* The pressure stabilizes at that point. *Id.* Mr. Brown described how the process evolves in various pressure states:

Coal reservoirs produce via a different mechanism than conventional rock reservoirs. \* \* \* When a coal reservoir is essentially dewatered, as the Gallegos Federal wells are, the pressure in the cleat system is a direct function of the bottomhole pressure in producing well, the cleat permeability, and how rapidly this gas is desorbing from the coal. The pressure in the cleat system has to be below the desorption pressure to allow methane to be produced. However, when the well is shut-in, the methane does not stop desorbing. Methane will continue to desorb from the coal until the reservoir pressure is equal to or greater than the desorption pressure. This is the cause for the pressure responses observed in Chaco 4 and 5.

R.A. at 1082-83.

The Commission reasoned that the adsorbed gas in the coal stayed within the Fruitland coal formation until the pressure was lowered enough through the dewatering process for gas to desorb. Exhibit A, page 10, ¶ 34. Once the dewatering process progressed, the Commission reasoned that substantial amounts of desorbed gas escaped the coal matrices, and especially in the near-wellbore regions where the pressure was low. ¶¶ 35-36. At this time, the Whiting wells began commercial production. At the same time, however, the desorbed coal gas also may have migrated through the communication channels previously described, ultimately arriving in the Pictured Cliffs formation. *Id.*

These conclusions are supported by evidence presented to the Commission of water production from Pendragon's wells. If Pendragon's wells were producing gas from the Fruitland Coal, logic dictates that the wells must produce some water. RP at 862-863, 2896-2897. The wells might not produce as much water as coal wells do initially, but evidence was presented that Whiting had dewatered the Fruitland coal for several years

before Pendragon fractured into the high pressure gas. RP at 2896-2898. Evidence was presented that the Chaco wells produced water after the 1995 fracture stimulation. RP at 2899, 2911-2915, 2928-2948.

**f. Depletion of the Pictured Cliffs**

Evidence was presented that before the fracture stimulation of the wells in 1995, Pendragon's wells had become essentially nonproductive and production had followed typical decline curves to the point that remaining reserves were minimal, and the pressures had declined to a level which made production difficult. Evidence was presented that an economic analysis of the wells in 1993 showed the formation to be depleted.

Mr. O'Hare testified that as of 1994 Pendragon's wells "... were essentially non-productive. A good portion of the time there was no production by the Chaco wells because the formation pressure was not high enough to overcome the sales line pressure." RP at 2898, lines 10-12. He concluded that "[t]he Pictured Cliffs formation in the area that is the subject of Pendragon's application was a depleted reservoir prior to 1995 and was not capable of producing Pictured Cliffs gas in paying quantities." RP at 2902, lines 6-8. He further testified that reservoir studies he conducted demonstrated that Pendragon had already recovered "in excess of" the recoverable gas from its wells:

Based upon reservoir studies and investigations I have performed since 1995, Pendragon has already recovered in excess of all the recoverable original Pictured Cliffs gas in place from the Chaco wells given the high production volumes produced from the Chaco wells from 1995 until July 1998.

R.P. at 2921, ll. 22-25. Mr. O'Hare testified that the reservoir was depleted because initial reported pressures of 230 to 250 psi had declined to 100 to 110 psi, a loss of 55%

percent of initial formation pressure, and Pictured Cliffs wells can only recover 60-70 percent of initial pressure. R.P. at 856-57. *See also* RP at 1099-1101.

Mr. Brown testified that Pendragon's Chaco wells "... exhibited a classic initial production level at their completion in 1978-1980 time span, and exhibited a classic depletion drive tight gas production decline profile. ... By 1995, the Pictured Cliffs formation was a depleted reservoir and the Chaco wells were shut-in or at noncommercial levels of production." RP at 3251, lines 17-23. *See also* RP at 1079 (Mr. Brown testifies that the Pictured Cliffs reservoir is a "depletion-drive reservoir, and it was at or near the end of its economic life in 1994.").

Mr. Robinson testified that his analysis of the production data from Pendragon's wells illustrates that Pendragon's wells had been substantially depleted in 1995, before stimulation. RP at 3402, lines 1-3. He reached this conclusion by determining the original amount of natural gas in place in the formation and determining the amount of recoverable gas left in place in 1995. RP at 3402. These calculations led him to the conclusion that the wells had already recovered 55 to 70% of the gas in place. RP at 3401, lines 21-23. He testified from an exhibit that summarized his conclusions that the wells had already produced an amount of natural gas in excess of what had been in place when the formation was first perforated. RP at 3437. This exhibit illustrated his conclusion: the Chaco No. 1 well was calculated to contain only 186,000 Mcf *in total*, but actually produced (after Pendragon's stimulation) some 378,000 Mcf, over twice what it could have been expected to produce. *Id.* Similar results were seen for the Chaco No. 4 and Chaco No. 5 well. *Id.* Mr. Robinson testified that a "depleted reservoir" is a reservoir where "there are very few economic reserves left to recover." RP at 1103. He

testified that it was not economically feasible to produce the remaining reserves in Pendragon's wells:

... I believe that ... the Pendragon wells at the time they were fracture-stimulated ... were pressure-depleted for all practical purposes. The pressure wasn't down to zero in the reservoir, it still had maybe 80 to 100 p.s.i., but it was not economically feasible to produce those reserves.

RP at 1272, lines 19-24.

Mr. Brown testified that combined production and wellhead pressures seen when the wells were "shut-in" (or separated from the pipeline) indicated that the wells reached a "depleted state by 1986 and remained in that state." RP at 3252-3253. *See also* RP at 855-67 and 2902-05 (testimony of Alexis M. O'Hare); RP at 1079-80 and 3252-57 (testimony of Mr. Brown).

Mr. Brown also testified that a depleted reservoir cannot suddenly "recharge" as suggested by Pendragon. He testified that there was "no reasonable scientific explanation" for the sudden production increases seen in Pendragon's wells after the 1995 treatments other than communication with another strata:

There is absolutely no scientific explanation for the reservoir to some way "recharge" so that in 1995 the rates and pressures of these Chaco wells significantly exceeded initial, virgin gas flow and pressures. The extraordinary increase in gas volume and pressure of the Chaco wells in 1995 corresponding to the Pendragon/Edwards reworks results from communication with Fruitland coal and flow from that source.

R.P. at 3253, lines 5-9.

Finally, Mr. O'Hare testified he had performed an economic analysis of the wells when they were offered to him for sale in 1993 or 1994. RP at 855. He declined to purchase the wells after his analysis showed him the wells were uneconomic. RP at 866-67, 1157-58, 2903-2904, 3076-96.

**g. Conclusion: Substantial Evidence Supports the Order**

All this evidence portrays a depleted, uneconomic reservoir springing to life and producing unprecedented amounts of natural gas whose production characteristics resembled that of the formation situated immediately above. Given the timing of the increase with Pendragon's hydraulic fracturing, this evidence is more than adequate for a reasonable mind to conclude that Pendragon fractured into high pressure Fruitland coal gas owned by Whiting. *Fugere, supra*.

**2. The Commission's Order Was In Accordance With Law.**

There can be no legitimate issue concerning the Commission's lawful authority to issue Order No. R-11133-A and therefore no legitimate argument can be made that the Order is arbitrary, capricious or otherwise not in accordance with law.

The Commission is specifically delegated authority by the Oil and Gas Act to "... prevent ... natural gas ... from escaping the strata in which it is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). The Commission has specific authority to "... require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). And, the Commission has authority to insure that "... the owner of each property in a pool [is afforded] the opportunity to produce his just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A)). The Commission is also delegated broad authority to prevent waste and to protect correlative rights and "... to make and enforce ... orders, and to do whatever may be reasonably necessary to carry out the purpose of [the Oil and Gas Act], whether or not indicated or specified in any section hereof." NMSA 1978, § 70-2-11(A)(emphasis added).



Factual findings of the Commission indicated that the Pictured Cliffs and Fruitland coal formations were in communication and that gas was migrating from the former to the latter. Order No. R-11133-A dealt with this problem by ordering Pendragon to cease production. As noted, the Commission is specifically delegated authority to "... prevent ... natural gas ... from escaping the strata in which is found into other strata ..." NMSA 1978, § 70-2-12(B)(2). Therefore, no legitimate argument can be made that making orders preventing or abating such an escape is not authorized or otherwise lawful.

Further findings of the Commission indicated that Pendragon was producing natural gas that was owned by Whiting. Whiting was therefore being damaged by Pendragon's production. This finding showed Pendragon's wells were not being operated and produced "... in such manner as to prevent injury to neighboring leases or properties ..." NMSA 1978, § 70-2-12(B)(7). The Commission's order remedied this situation by ordering Pendragon to cease production. Findings also demonstrated that Pendragon's production of Whiting's gas interfered with Whiting's ability "... to produce [its] just and equitable share of the ... gas ... in the pool ..." NMSA 1978, § 70-2-17(A). Pendragon's improper production thus implicated Whiting's correlative rights, which the Commission was authorized to protect by "orders" and by whatever means were "reasonably necessary to carry out the purpose of [the Oil and Gas Act]." NMSA 1978, § 70-2-11(A). Therefore, no legitimate argument can be made that protecting Whiting's interests is not authorized by the Oil and Gas Act.

So long as the Commission's findings were supported by substantial evidence (discussed previously), no reasonable argument can be made that its order that Pendragon cease production is not authorized by the Oil and Gas Act.

## **E. Pendragon's Arguments**

### **1. Substantial Evidence**

Given the sheer bulk of the evidence which supports the Commission's various findings and its conclusions, only a fraction of which was reviewed in the previous section, it seems disingenuous to suggest that the Commission's Order is not supported by substantial evidence. Yet that is exactly what Pendragon has done. Pendragon complains of the Commission's findings concerning depletion, existence of the "third bench", the lack of relevant well and reservoir damage, the communication caused by fracture stimulation treatments, the means by which the reservoirs communicate (gas bubbles, gas highways and gas compartments), and the BTU findings are unsupported by substantial evidence. Pendragon also claims that the Commission disregarded evidence that Pendragon presented. However, the Commission considered each and every one of these contentions, and found each unpersuasive. Evidence presented at the hearing was more than adequate for a reasonable mind to support the findings and conclusions reached by the Commission. *Fugere, supra.*

For example, at the hearing, Pendragon offered evidence that instead of communicating with the Fruitland coal it had tapped into a huge new source of gas in the lower Pictured Cliffs area, which it referred to as the "third bench." The Commission specifically considered the "third bench" claim, and rejected it. Exhibit A, page 11, ¶ 39. Substantial evidence exists that such an untapped source of gas does not exist. For

example, Mr. Robinson testified that no productive gas could be produced from the so-called "third bench" of the Pictured Cliffs, and it couldn't have been responsible for the production increases noted in the Pendragon wells because that area was known to be saturated with water:

Analysis of the openholes logs ... shows the lower Pictured Cliffs to be mainly water saturated (approximately 70% water) and of very poor reservoir quality (lower porosity, higher shale content). Thus, the additional gas reserves there would be minimal.

R.A. at 3402, lines 12-15. On cross examination, Mr. Robinson commented that producing gas from water saturated formations is problematic:

Q. The zone below the Pictured Cliff, you make the statement, you say there's 70-percent water saturation?

A. Yes, sir.

Q. What is the other 30 percent?

A. What is the other 30%? It's probably gas.

Q. So you're agreeing the gas is down there?

A. The gas is down there. It's probably, you know, irreducible saturation. *If any of the gas flows, it will be minute amounts. But, you know, in tighter formations irreducible gas saturations are easily 20- to 30-percent. So the fact that there's 20- to 30-percent gas saturation down there doesn't mean they're going to produce it, as you well know.*

RP at 1423-1424 (emphasis added). *See also* RP at 2904-05 (no reports of gas production from a "third bench" known to Mr. O'Hare), 3402 (lower Pictured Cliffs "mainly water saturated").

In a contradictory argument, Pendragon presented evidence that the sudden increase in production from its wells was the result of repair of "reservoir and well damage." Pendragon offered testimony of expert witnesses who testified that

Pendragon's completion techniques had remedied well and reservoir damage that was preventing production. *See Appellant's Statement of the Issues*, pages 24-27.

The Commission specifically considered this claim, and found it unpersuasive. Exhibit A, ¶ 40. Substantial evidence existed for this conclusion as well. Mr. Robinson testified that reservoir damage of the kind described by Pendragon simply couldn't have affected the entire reservoir; there is no scientifically recognized damage mechanism that can lead to such widespread damage in this type of reservoir:

Q. Okay, is there any damage mechanism recognized in the industry that you've seen that would cause a reduction in permeability throughout an entire reservoir?

A. The only damage mechanism that I know of that could cause that is formation compaction, and this can occur in softer, compressible rocks like we see along the Gulf Coast. When you have a real soft formation, and as the pressure is depleted in that reservoir, the overburden literally squashes the rock, because it's so soft, and reduces the permeability, is what we call formation compaction. But you've got to have two things. Number one, you've got to have pressure depletion, substantial, and number two, you've got to have soft rock. And of course that directly conflicts with what their experts say exists here. Mr. Nicol says it's a hard, brittle rock, and Mr. McCartney says pressure depletion isn't occurring in any substantial amount. So if they had come up with that idea as a means to reduce permeability in the whole reservoir, I'd have bought it. But these other explanations, I can't -- They just don't exist.

RP at 1313-1314. Mr. Robinson also testified that even if such a condition had existed, the stimulation techniques employed by Pendragon would not have repaired the damage:

No, fracture-stimulation doesn't repair the permeability, it only creates a conductive flow path for the gas or oil or water or whatever to be produced into the wellbore. So it doesn't repair the permeability at all. And if compaction had occurred -- I think Mr. McCartney actually made some calculations where he showed the permeability in the reservoir could have reduced to, say, 10 percent of the original value, which would have put the permeability of the Pictured Cliffs on the order of 3 to 5 millidarcies, something like that. He made those calculations to reproduce the behavior of the Chaco wells. And like I said, if that's due to formation compaction I can buy it. Number one, that makes almost all of Mr. Cox's

calculations wrong, because he's using a permeability for the Pictured Cliffs which is a factor of five or ten too high. And number two, any projections you make of future performance have to be based on that lower permeability, 3 to 5 millidarcies, not 25 millidarcies like Mr. McCartney did in his Exhibit M-26, but 3 to 5 millidarcies. Completely different reservoir performance after fracture-stimulation.

RP at 1315. *See also* RP at 903-904 (there may have been a "small component of damage" present but "... it was [not] significant enough to triple the reserve recovery), 942 (removal of damage might improve flows but cannot increase the amount of gas in the reservoir), 1155-56 (no reports of damage in well files), 1273 (type of damage alleged "cannot happen in this reservoir"), 2904 (skin damage cannot "recharge a reservoir").

Pendragon argues that the Commission's findings concerning depletion of the Pictured Cliffs, communication of the Pictured Cliffs and the Fruitland coal, the means by which the reservoirs came into communication and the Btu data were all unsupported by substantial evidence. They are not. *See* pages 19-21 (depletion), 9-13 and 17-19 (communication), 15-16 (Btu), above. Pendragon also urges the Court to consider its witnesses' testimony and exhibits to the exclusion of the evidence that supports the Commission's Order. *See* pages 9-22, above. However, as noted previously, the substantial evidence standard does not envision re-weighing the evidence. *Grace, supra*. And, Pendragon's many alternative theories for what happened in the San Juan County wells do not have to be blindly accepted by the Commission, or the Court:

In their argument in this court, each party attempts to explain precisely what is transpiring 5700 feet below the surface of Eddy County. Certainly we do not want for theories. We suffer from a plethora of theories. The theories of each party sounded equally logical and reasonable and each is diametrically opposed to those of the other party. The difficulty with them is that they emanate from the lips and pens of counsel and are not

bolstered by the expertise of the Commission to which we give special weight and credence ...

*Fasken v. Oil Conservation Commission*, 87 N.M. 292, 293, 532 P.2d 588 (1975). This case is no different.

The crux of Pendragon's arguments is that the Court should accept its theories over those of the Commission, the very body whose jurisdiction Pendragon invoked in its application. However, as noted previously, the question before the Court is not whether the evidence presented by Pendragon supported a different result, but whether the evidence supports the result the Commission reached. *Huning Castle Neighborhood Association v. City of Albuquerque*, 1998-NMCA-123, ¶ 15, 125 N.M. 631, 964 P.2d 192; *Las Cruces Professional Fire Fighters*, 1997-NMCA-044, ¶ 12, 123 N.M. 329, 940 P.2d 177. Pendragon's various evidentiary recitations amount to an invitation to this Court to substitute its judgment for that of the Commission, to re-weigh the evidence, which is not contemplated by the standard of review. *Grace, supra*.

## **2. Pendragon's "Legal Arguments"**

The remainder of Pendragon's arguments are presented as "legal" arguments, but are actually substantial evidence arguments in disguise. To make matters worse, and as pointed out previously, Pendragon only points out evidence which favors its position, most of which it presented, and completely ignores the evidence discussed previously that does not support its position. This is improper and burdensome to the appeal process. *See Martinez v. Southwest Landfills, Inc.*, 115 N.M. 181, 184-186, 848 P.2d 1108 (Ct.App. 1993) (party challenging the sufficiency of the evidence "must set forth the substance of *all* evidence bearing on the proposition.); *Hartman v. Texaco, Inc.*, 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (" ... [I]t is true that our admonitions against

one-sided statements of the facts probably pertain most often to briefs challenging the sufficiency of the evidence ..."). Such arguments also improperly invite the Court to reweigh the evidence presented to the Commission. *Grace, supra*.

An example of a sufficiency of the evidence argument masquerading as a legal argument is Appellant's argument that the Commission failed to afford "meaningful regulatory relief." *Appellant's Statement of the Issues*, at 8. The legal basis for this argument is unclear, for no requirement of law seems to require the Commission to provide "meaningful relief", nor does Pendragon cite authority for this proposition. The argument seems to be that the Commission committed error by failing to award Pendragon the relief it desired. For example, Pendragon argues that the Commission "failed to discharge [its] statutory and regulatory duties ..." by failing to "... determine if the subject Pictured Cliffs wells and Basin Fruitland Coal wells are producing from their appropriate common source of supply ..." *Appellant's Statement of the Issues*, page 8. However, as seen on pages 9-22, above, the Commission *did* determine this question, adversely to Pendragon.

A further example is Pendragon's argument that the Commission violated the Oil and Gas Act and its own rules by "permitting" communication between formations to continue. *Appellant's Statement of the Issues*, page 9. Pendragon, citing the Oil and Gas Act and rules and orders of the Commission, suggests that the Commission has an affirmative duty to prevent natural gas from escaping from a stratum. *Appellant's Statement of the Issues*, pages 8-9. As before, the Commission *did* resolve this issue, and found that Fruitland coal gas had escaped into the Pictured Cliffs formation through

Pendragon's hydraulic fractures --- it ordered Pendragon's wells shut down to prevent further communication.

A similar substantial evidence argument ~~masquerading~~ (I love that phrase) as a legal argument is Pendragon's complaint that the Commission had a "mandatory duty" to determine how much "... Pictured Cliffs gas [was] illegally produced ... from Whiting's Pictured Cliffs Coal wells ..." *Appellant's Statement of the Issues*, pages 9-10. There is simply no such requirement, nor has Appellant cited to any authority for this proposition either. And, as noted, the Commission specifically found that Pendragon's formation was economically depleted. *See* pages 19-21, above. Substantial evidence supports this finding. *Id.* Therefore, the Commission *did* determine how much Pictured Cliffs gas was "illegally" produced by Whiting. The production figures and pressure data presented to the Commission show that any of Pendragon's gas that was produced by Whiting in its wells was insignificant compared to the amount of Whiting's gas that Pendragon improperly produced. *See* pages 9-12, above.

Pendragon also complains that the Commission failed to consider its evidence it presented that Whiting was actually producing Pendragon's gas, that the Commission failed to consider its engineering evidence to that effect, that pressure data which was offered for the proposition that Whiting was producing Pictured Cliffs gas was ignored, and that the Commission failed to consider testimony and exhibits Pendragon presented which it claimed established its claim that Whiting was producing Pendragon's gas. *Appellant's Statement of the Issues*, pages 10-11. Pendragon complains that the "record" "irrefutably" established these facts and that a "direct violation" of the Oil and Gas Act



and regulation of the Commission exists requiring action. *Appellant's Statement of the Issues*, page 11.

Nothing requires the Commission to accept Pendragon's experts' opinions and conclusions, particularly when Whiting's experts presented conflicting opinions and conclusions. *See New Mexico Industrial Energy Consumers v. New Mexico Public Service Comm'n*, 111 N.M. 622, 635-36, 808 P.2d 592 (1991)(" When [the Commission] weighs the evidence, accepting certain testimony while rejecting other, [its] decision nevertheless may be supported by substantial evidence. "[E]vidence of two conflicting opinions in the record does not mean that the decision arrived at is unsupported by substantial evidence."). The Commission is entitled to rely on its own expertise in these matters; that is in part what the Oil Conservation Commission is for --- to resolve complicated technical questions that might be difficult for the courts to resolve.

Another issue raised by Pendragon under the guise of a legal argument concerns the Commission's finding No. 46, wherein the Commission found that Pendragon's Chaco No. 1, 2-R, 4 and 5 wells had "... already produced their fair share of gas in the Pictured Cliffs Formation." Pendragon claims the Commission exceeded its authority, acted arbitrarily, and "misapplied the law to the facts" in making this finding, because "Appellants own one hundred percent of the Pictured Cliffs formation gas." *Appellant's Statement of Appellate Issues*, page 2. However, the Commission specifically found that the Pictured Cliffs formation was depleted by Pendragon's wells. Exhibit A, page 12, ¶ 45. This finding is supported by substantial evidence. *See* pages 19-21, above. While it seems to be undisputed that Pendragon owns "one hundred percent" of the Pictured Cliffs formation, if Pendragon's interests were depleted, Pendragon was producing Whiting's

gas, not its own gas. Exhibit A. Nothing in the Commission's Order affects Pendragon's ownership, but the reality of the situation is "one hundred percent" of a depleted reservoir is still a depleted reservoir. Certainly nothing in the Oil and Gas Act or otherwise requires the Commission to declare that natural gas owned by someone else now suddenly belongs to Pendragon simply because it made its way to Pendragon's wells.

A companion argument is the argument that the Commission lacks the legal authority to make a finding that Pendragon has produced its "fair share of gas." However, the Oil and Gas Act specifically authorizes the Commission to make "orders" which "... afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool ..." NMSA 1978, § 70-2-17(A) (Repl. 1995).

The rules, regulations or orders of the division shall, so far as it is practicable to do so, *afford the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool*, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A). No reasonable argument can be made that the Commission's finding that Pendragon has produced its "fair share of gas" is not authorized so as to afford Whiting its "opportunity to produce [its] just and equitable share of the gas ..." *Id.*

Pendragon argues that this section does not apply because it is "only where the correlative rights of two or more interest owners are involved that the Commission has the statutory authority to determine whether each has had the opportunity to produce his 'just and equitable share' of gas in the pool." *Appellant's Statement of the Issues*, page 13.

However, the plain language of the statute quoted above does not admit of any such limitation. Even if it did, "correlative rights" are defined as the opportunity afforded to the owner of each property in a pool "... to produce without waste *his just and equitable share of the oil or gas or both in the pool ...*" NMSA 1978, § 70-2-33(H). Certainly, the Commission's Order protects Whiting's "correlative rights" by preventing any further production by Pendragon of Whiting's natural gas.

#### **IV. STATEMENT OF RELIEF SOUGHT**

For the reasons set forth herein, the Oil Conservation Commission respectfully requests that the Court affirm Order No. R-11133-A of the Commission and dismiss Pendragon's appeal, and for such other and further relief as the Court may deem appropriate.

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
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(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of November, 2000:

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Miller, Stratvert & Torgerson, P.A.  
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Santa Fe, New Mexico 87504

J.E. Gallegos  
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Santa Fe, New Mexico 87505-7602

---

Stephen C. Ross



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

Jennifer A. Salisbury

Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

November 21, 2000

J.E. Gallegos  
Gallegos Law Firm PC  
460 St. Michael's Drive, Suite 300  
Santa Fe, New Mexico 87505-7602

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Gene,

Thank you for your letter of November 14, 2000. I really appreciate the comments about the OCC's response to the Statement of Appellate Issues. It's not often one receives compliments about such dry and laborious documents and it is greatly appreciated.

If there is any credit to be given in this case, it should be yours for your coherent presentation during the hearing of August, 1999 and in particular for your very fine cross examination of Pendragon's experts, who ended up not looking very "expert" when you were done with them. I must say I greatly enjoyed these portions of what was otherwise a very dry transcript.

Thanks again for the comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen C. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

# GALLEGOS LAW FIRM

A Professional Corporation

OIL CONSERVATION DIV.

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November 14, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS\*

Stephen Ross  
Special Assistant Attorney General  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295

Dear Steve:


I have just completed reading your Response on behalf of the Commission the Pendragon Statement of Appellate Issues. You have my admiration and complements. Your writing is clear, logical and makes a complicated case readily understandable, plus you have built references to the evidence supporting the Commission decision in a manner that cannot be rebutted.

We are sure glad that your are on our side on this one.

Sincerely,

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG:sa

cc: Lori Wortenberg, Chair  
Dr. Robert Lee, Commissioner  
Jamie Bailey, Commissioner



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Jennifer A. Salisbury**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

November 13, 2000

J. Scott Hall  
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P.O. Box 1986  
Santa Fe, New Mexico 87504-1986

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Scott,

Please find enclosed an endorsed copy of the Oil Conservation Commission's Response to Pendragon's Statement of Appellate Issues. Please give me a call if you have any questions or need further information.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen C. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

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**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** October 26, 2000  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 827-8177  
**FROM:** J.E. Gallegos

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 7**

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**FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO**

**DRAFT**

10-26-00

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellant,**

**vs.**

**No. D-0117-CV-2000-1449**

**NEW MEXICO OIL CONSERVATION  
COMMISSION, WHITING PETROLEUM  
CORP. and MARALEX RESOURCES, INC.,**

**Appellees.**

**MOTION TO DISMISS PENDRAGON'S APPEAL**

Appellees/Intervenors Whiting Petroleum Corp. and Maralex Resources, Inc. (collectively "Whiting"), by and through their counsel, hereby move this Court for its Order dismissing the administrative appeal filed by appellants (collectively "Pendragon") in this action. Pendragon's administrative appeal raises three issues, all of which involve attacks on findings of fact entered by the New Mexico Oil Conservation Commission in Order R-11133-A. Pendragon has uniformly failed to inform the Court in its Statement of the Issues about the extensive evidence introduced before the Commission in proceedings below which overwhelmingly supports the Commission findings against Pendragon. This Court should rule that Pendragon has waived its right of review on the issues raised.

As grounds for this Motion, Whiting states as follows:

1. Pendragon appeals from Commission Order R-11133-A issued by the New Mexico Oil Conservation Commission ("Commission") on April 26, 2000. Pendragon's administrative appeal is taken pursuant to NMSA 1978 §§ 39-3-1.1 and

70-2-25 (2000 Cum. Supp.), and Rule 1-074, NMRA 2000. Pendragon filed its Statement of the Issues pursuant to Rule 1-074(K) on October 2, 2000.

2. Pendragon contends in its Statement of the Issues that it intends to raise three separate issues on appeal. Each involves an attack on various Commission findings in Order R-11133A. Issue One ostensibly challenges the Commission's refusal to sanction Whiting for what Pendragon contends is the improper production by Whiting of Pendragon's Pictured Cliffs gas. Pendragon's complaint on Issue 1 is dependent on its challenging various Commission findings that the Pictured Cliffs formation was depleted prior to 1995, that Whiting's wells may produce only minor amounts of gas from the already depleted WAW Fruitland Sand-Pictured Cliffs Pool, and that any gas flow from the Pictured Cliffs formation would be insignificant. See Findings 34, 35 and 45. In Issue Two, Pendragon complains that the Commission failed to recognize its right to produce gas from the Pictured Cliffs formation, thereby challenging Commission Findings 34, 35, 44 and 45, which found that the Pictured Cliffs formation was depleted prior to 1995, and that Pendragon had already produced its fair share of gas from the Pictured Cliffs formation. Finally, in Issue Three, Pendragon explicitly challenges various Commission findings which it contends are not supported substantial evidence.

3. Rule 1-074(K)(2) provides that a party's summary of proceedings "shall include a short recitation of all facts relevant to the issues presented for review . . .". (Emphasis added) In a substantial evidence challenge, a party is obligated to present the reviewing court with a complete statement of facts relevant to the issues, including facts in the record, and reasonable inferences which can be drawn therefrom, which support the administrative decision below. Martinez v. Southwest Landfills, Inc., 115 N.M. 181, 186, 848 P.2d 1108 (Ct. App. 1993).

4. Martinez involved an appeal under SCRA 1986 12-213, which imposed a requirement in filing of briefs on appeal that the party "shall include a summary of the facts relevant to the issues presented for review," an obligation virtually identical to that imposed by Rule 1-074(K)(2). The Court outlined the two-step process in an appeal challenging the sufficiency of evidence supporting an administrative decision. First, the appellant must set forth the substance of all evidence bearing on the proposition. Then, the appellant must demonstrate why, on balance, the evidence fails to support the finding made. The Martinez court then explained the purpose of this requirement as follows:

The primary purposes of SCRA 12-213's requirements are to fully apprise the reviewing court of the fact-finder's view of the facts and its disposition of the issues, and to help the court decide the issues on appeal. In this regard, it is not the responsibility of the reviewing court to search through the record to determine whether substantial evidence exists to support a finding. That is the obligation of the appellant.

SCRA 12-213 has another purpose just as salutary as those already discussed. It obliges an appellant to carefully review all of the evidence as a reviewing court would and then decide whether to pursue or discard a sufficiency challenge. SCRA 12-213 demands this winnowing process. Only after a party challenging the sufficiency of the evidence goes through the steps outlined above in a careful and candid manner can that party truly decide whether the issue is worth pursuing. As already noted, this process saves time and money when issues found to be without merit are discarded.

115 N.M. at 186.

5. Pendragon's Statement fails to apprise this Court of all evidence, and reasonable inferences which can be drawn therefrom, introduced below which support the Commission's findings which are the subject of challenge in Pendragon's appeal. Whiting has been forced to set forth that evidence, and has done so in its Response to Appellant's Statement of Appellate Issues, filed concurrently herewith, pp. 10-27,

which Whiting incorporates herein by reference. The Court can instantly determine from a review of Whiting's Response that there was substantial evidence introduced before the Commission which supports the various Commission findings. Rather than deal with that evidence appropriately as required by Rule 1-074(K)(2), Pendragon ignores evidence which supports the Commission's findings. Pendragon cites the Court in its Statement only to insubstantial and can tested evidence which Pendragon plucks from the record selectively, and it then offers to this Court in an attempt to bias and prejudice the Court against the Commission's decision.

6. New Mexico Courts have routinely recognized the need to sanction parties raising substantial evidence challenges who fail to comply with the rules for appeals of administrative decisions. In Martinez, the Court held that an appellant waived his right to review certain findings entered by the Workers' Compensation Judge because of a failure to apprise the appellate court of all evidence which related to a substantial evidence challenge:

We recently had occasion to refuse to consider a challenge to the sufficiency of the evidence where the appellant failed to include the substance of all of the evidence bearing upon a proposition. See *Maloo v. San Juan County Valuation Protests Bd.*, 114 N.M. 755, 845 P.2d 849 (Ct. App. 1992). Although *Maloo* was decided under the traditional standard of review, the same principles enunciated there apply to whole record review. In *Maloo*, we said that an appellant is bound by the findings of fact made below unless the appellant properly attacks the findings, and that the appellant remains bound if he or she fails to properly set forth all the evidence bearing upon the findings.

115 N.M. at 186. See also Hartman v. Texaco, Inc., 1997-NMCA-032, 123 N.M. 220, 937 P.2d 979 (A one-sided statement of facts is no help to the Court).

7. The same result should apply here. Pendragon's failure to apprise this Court of all the facts which relate to the issues it has raised in this administrative appeal

was done knowingly and with the intent to mislead the Court. In truth, there is more than substantial evidence in the record which supports each and every Commission finding which Pendragon challenges on appeal. Under these circumstances, this Court should hold that Pendragon has waived its right of review on all issues raised by this Administrative appeal.

8. Due to the dispositive nature of this Motion, the consent of Pendragon is presumed to be denied. The Commission concurs in this Motion.

WHEREFORE, on the basis of the foregoing points and authorities, and on the basis of the facts set forth in Whiting's Response to Appellant's Statement of Appellate Issues, supporting the various Commission findings challenged by Pendragon in this administrative appeal, Whiting respectfully requests that the Court enter its Order holding that Pendragon has waived its right of review in this administrative appeal, and dismissing this administrative appeal with prejudice.

Respectfully submitted,

GALLEGOS LAW FIRM, P.C.

By \_\_\_\_\_  
J.E. GALLEGOS  
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Attorneys for Whiting

**CERTIFICATE OF SERVICE**

I hereby certify that I have caused a true and correct copy of the foregoing Motion to Dismiss Pendragon's Appeal to be mailed on this \_\_\_\_ day of October, 2000 to the following counsel of record:

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PLEASE REPLY TO SANTA FE

October 23, 2000

**BY HAND-DELIVERY**

The Honorable Daniel A. Sanchez  
District Judge, Division VII  
First Judicial District Court  
Santa Fe County Judicial Complex  
Santa Fe, New Mexico 87501

Re: Pendragon Energy Partners, Pendragon Resources, LP, & Edwards Energy Corp. v.  
New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Ms. Miera:

Enclosed are an Agreed Motion and Order to Supplement Record in the above-referenced matter. Please present them to Judge Sanchez and if they meet with his approval, I will be happy to have someone stop by, file the Order and provide a copy to Mr. Ross. If this is not an acceptable method of presenting the enclosed pleadings, please do not hesitate to contact me.

Thank you for your assistance.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA

Paralegal

/ao

Enclosure(s) – as stated

cc: Steve Ross, Esq. (with enclosures)

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED ORDER AUTHORIZING  
SUPPLEMENTATION OF RECORD ON APPEAL**

This matter, having come before the Court pursuant to the Agreed Motion To Supplement the Record On Appeal, and the Court being duly advised, IT IS ORDERED that Appellant may supplement the record with (1) the original administrative application in this case, (2) the subsequent application pursuant to NMOCC Order No. R-11133-A and (3) NMOCD Order No. R-8768.


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The Honorable Daniel Sanchez  
District Judge

Agreed:

MILLER, STRATVERT & TORGERSON, P.A.

By

  
J. Scott Hall  
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Attorneys for Appellants



Approved: Telephonically on October 23, 2000

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED MOTION TO SUPPLEMENT RECORD**

Appellants, Pendragon Energy Partners, Inc., et al., move pursuant to NMRA 1-074-I for the entry of an order authorizing the supplementation of the record on appeal. In support, Appellants state:

Appellants' Statement of Appellate Issues makes reference to a small number of pleadings filed with the New Mexico Oil Conservation Division ("NMOCD") and the New Mexico Oil Conservation Commission ("NMOCC") that were not included in the record on appeal when the same was filed with the Court earlier. These pleadings include the original application filed with the NMOCD in this case and a separate application made to the NMOCD pursuant to the provisions of the NMOCC's order (Order No. R-11133-A) that is at issue in this case. (Document Nos. 5207 to 5233, attached hereto as Exhibit A.) These materials, consisting of some 26 additional pages, are relevant to, and provide additional context to the issues on appeal.

Counsel for the NMOCC concurs with this motion.

WHEREFORE, Appellants request the Court enter its order authorizing the supplementation of the record on appeal with the referenced materials.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By



J. Scott Hall  
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Attorneys for Pendragon Energy Partners, Inc., *et al.*

APPROVED:

October 23, 2000

Telephonically Approved

Steve Ross, Esq.  
New Mexico Oil Conservation Commission  
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Santa Fe, New Mexico 87505

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC. and J.K. EDWARDS  
ASSOCIATES, INC. TO CONFIRM PRODUCTION  
FROM THE APPROPRIATE COMMON SOURCE  
OF SUPPLY, SAN JUAN COUNTY, NEW MEXICO.

CASE NO. 11996

APPLICATION

Pendragon Energy Partners, Inc. ("Pendragon") and J.K. Edwards Associates, Inc. ("J. K. Edwards") through their counsel, hereby make application to the New Mexico Oil Conservation Division pursuant to Rule 3 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, Order No. R-8768-A and 19 NMAC 15.N.303.A for an order confirming that certain wells completed within the vertical limits of the WAW Fruitland-Pictured Cliffs Pool and the Basin-Fruitland Coal Gas Pool, respectively, are producing from the appropriate common source of supply. In support of their application, Pendragon and J.K. Edwards state:

1. Pendragon operates the following wells completed in and producing from the WAW Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico:

<u>Well Name</u>	<u>Location</u>
Chaco No. 1	NW 1/4, Section 18, T26N, R12W, N.M.P.M.
Chaco No. 2R	SW 1/4, Section 7, T26N, R12W, N.M.P.M.
Chaco No. 4	NW 1/4, Ssection 7, T26N, R12W, N.M.P.M.
Chaco No. 5	SE 1/4, Section 1, T26N, R13W, N.M.P.M.
Chaco Ltd. No. 1J	SW 1/4 Section 1, T26N, R13W, N.M.P.M.
Chaco Ltd. No. 2J	NE 1/4, Section 1, T26N, R13W, N.M.P.M.

In addition to being the designated Operator of the referenced wells, Pendragon, along



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with J.K. Edwards, owns working interests in the acreage dedicated to the subject wells.

2. Whiting Petroleum Corporation ("Whiting") is the Operator of the following wells completed within the Basin-Fruitland Coal Gas Pool:

<u>Well Name</u>	<u>Location</u>
Gallegos Federal 26-12-6 No. 2	W 1/2, Section 6, T12N, R12W, N.M.P.M.
Gallegos Federal 26-12-7 No. 1	W 1/2, Section 7, T26N, R12W, N.M.P.M.
Gallegos Federal 26-13-1 No. 1	E 1/2, Section 1, T26N, R13 W, N.M.P.M.
Gallegos Federal 26-13-1, No. 2	W 1/2, Section 1, T26N, R13W, N.M.P.M.
Gallegos Federal 26-13-12 No. 1	N 1/2 Section 12, T26N, R13W, N.M.P.M.

In addition to being the designated Operator of the referenced coal gas wells, Whiting, along with Maralex Resources, Inc., (Maralex) owns working interests in the acreage dedicated to the coal gas wells.

3. By Order No. R-8768 and R-8768-A, the Division created a new pool in all or parts of San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico classified as a gas pool for production from the Fruitland Coal seams and designated the pool as the Basin-Fruitland Coal Gas Pool. The wells and the lands that are the subject of this application are located within the horizontal limits of the Basin-Fruitland Coal Gas Pool as defined by Order No. R-8768 and R-8768-A. The Order also established the vertical limits of the pool by reference to the stratigraphic depth interval.

4. By Order No. R-8769 entered by the New Mexico Oil Conservation Division on October 17, 1988 in Case No. 9421 and as subsequently amended by Order No. R-8760-A, *nunc pro tunc*, the Division defined the vertical limits of the WAW Fruitland-Pictured Cliffs Pool as

follows:

The vertical limits of the WAW Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico are hereby contracted to include only the Pictured Cliffs formation and the sandstone interval of the Fruitland formation in said pool is hereby redesignated as the WAW Fruitland Sand-Pictured Cliffs pool.

All of the Pendragon operated wells referenced above are completed in and producing from the WAW Fruitland-Pictured Cliffs Pool.

5. Whiting and Maralex by their application, as amended, in Case No. 11921 have alleged generally, without any basis in fact, that as a result of drilling or the fracture stimulation, the Pendragon wells have become communicated with and are producing from the Basin-Fruitland Coal Gas pool. Whiting and Maralex further contend, also without any basis in fact, that the Pendragon wells "are draining reserves owned by Whiting and the other interest owners in its wells, and are impairing their correlative rights." Pendragon and Edwards deny that the drilling or the fracture stimulation of their Pictured Cliffs wells resulted in the communication of the two pools or that they are producing from the Basin-Fruitland Coal Gas Pool through their Pictured Cliffs completions. Pendragon and Edwards generally deny all other claims and allegations set forth in the Whiting/Maralex application, as amended.

6. Rule 3 of the Special-Rules and Regulations for the Basin-Coal Gas pool provide that the Division Director can require the Operator of a Basin Fruitland Coal Gas well, a Fruitland Sandstone well or a Pictured Cliffs Sandstone well to demonstrate to the satisfaction of the Division that the well is producing from the appropriate common source of supply.

7. Rule 19, NMAC 15.N.203.A of the Division's rules and regulations requires the segregation of production from separate sources of supply. The rule provides:

Each pool shall be produced as a single common source of supply and wells therein shall be completed, cased, maintained and operated so as to prevent communication, within the well bore, within any other specific pool or horizon and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with the production from any other pool or pools is strictly prohibited."

See also, Special Rules 2 and 12, Special Rules and Regulations for the Basin-Fruitland Coal Gas pool.

8. Under Section 70-2-6(A) of the New Mexico Oil and Gas Act (N.M. Stat. Ann. 1978, § 70-2-1, *et seq.*) the Division has primary jurisdiction and authority over all matters relating to the conservation of oil and gas and oil or gas operations in this state. In addition, the Division has specific statutory authority to prevent the escape of natural gas from one strata into other strata. N.M. Stat. Ann. 1978, § 70-2-12(B)(2).

The granting of this application is in the interests of the conservation of oil and gas resources and the prevention of waste.

WHEREFORE, Applicants request that this matter be set for hearing before the next scheduled hearing of the Oil Conservation Division and that after notice and hearing as required by law, the Division enter its order requiring the respective operators of the Fruitland Coal Gas wells and the Fruitland Pictured Cliffs sandstone wells to demonstrate are producing from the appropriate common sources of supply and providing such other and further relief as the Division deems appropriate. Applicants also request that this matter be made a part of and consolidated with Case No. 11921 presently pending before the Division.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By J. Scott Hall

J. Scott Hall

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(505) 989-9614

Attorneys for Pendragon Energy Partners, Inc. and  
J.K. Edwards Associates, Inc.



~~(CEDAR HILL-FRUITLAND BASAL COAL GAS (VERTICAL LIMITS EXTENSIONS) POOL - Cont'd.)~~

further defined and described as having vertical limits consistent within the vertical extension of the Cedar Hill-Fruitland Basal Coal Pool.

(3) Rule 1 of said Division Order No. R-7588, as amended is hereby suspended and shall be replaced with the following:

**RULE 1. (A)** Each well completed or recompleted in the Cedar Hill-Fruitland Basal Coal Pool shall be spaced, drilled, operated and prorated in accordance with the Special Rules and Regulations herein-after set forth.

**RULE 1. (B)** A Cedar Hill-Fruitland Basal Coal Pool well will be defined as one which meets a preponderance of the generally characterized coalbed methane criteria as derived from:

- (a) Wireline log data;
- (b) Drilling time;
- (c) Drill cutting;
- (d) Mud logs;
- (e) Completion data;
- (f) Gas analysis;
- (g) Water analysis;
- (h) Reservoir performance;
- (i) Any other evidence that indicates the production is predominantly coal methane.

No one characteristic of lithology, performance or sampling will either qualify or disqualify a well from being classified as a coal gas well. Absent any finding to the contrary, any well completed in accordance with these rules that has met a preponderance of the criteria for determining a coal well is therefrom presumed to be completed in and producing from the Cedar Hill-Fruitland Basal Coal Pool. The District Supervisor may, at his discretion, require that an operator document said determination of the appropriate pool or require an order under the provisions of General Rule 103(c) authorizing the commingling of pools in the event a coal well fails to meet the criteria for a coal well as set forth in this rule.

**IT IS FURTHER ORDERED THAT:**

(4) Any well drilling to or completed in a coal member of the Fruitland formation within this vertical extension of the Cedar Hill-Fruitland Basal Coal Pool on or before November 1, 1988 that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator of any such well shall notify the Aztec District Office of the Division, in writing, of the name and location of any such well on or before January 1, 1989.

(5) Applicant's request to authorize downhole commingling of Fruitland Sandstone Gas and Fruitland Coal Gas at the District Office level of the Division is hereby denied.

(6) This case shall be reopened at an examiner hearing in October, 1990, at which time the operators in the subject pool may appear and show cause why the vertical extension of the Cedar Hill-Fruitland Basal Coal Pool should not be rescinded and Division Order No. R-7588, as amended, should not be reinstituted as they existed prior to the issuance of this order.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

~~DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.~~

**BASIN-FRUITLAND COAL GAS POOL**  
San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico

Order No. R-8768, Creating and Adopting Temporary Operating Rules for the Basin-Fruitland Coal Pool, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, November 1, 1988, as Amended by Order No. R-8768-A, July 16, 1991, and Order No. R-8768-B, February 10, 2000.

In the Matter of the Hearing called by the Oil Conservation Division (OCD) on its own Motion for Pool Creation and Special Pool Rules, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico.

CASE NO. 9420  
Order No. R-8768

**ORDER OF THE DIVISION**

**BY THE DIVISION:** This Cause came on for hearing at 8:30 a.m. on July 6, 1988, at Farmington, New Mexico, before Examiner David R. Catanach.

**NOW,** on this 17th day of October, 1988, the Division Director having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof

(2) Division Case Nos. 9420 and 9421 were consolidated at the time of the hearing for the purpose of testimony.

(3) The Oil Conservation Division, hereinafter referred to as the "Division", on the recommendations of the Fruitland Coalbed Methane Committee, hereinafter referred to as the "Committee", seeks the creation of a new pool for the production of gas from coal seams within the Fruitland formation underlying the following described area in San Juan, Rio Arriba, McKinley, and Sandoval Counties, New Mexico:

Township 19 North, Ranges 1 West through 6 West;  
Township 20 North, Ranges 1 West through 8 West;  
Township 21 North, Ranges 1 West through 9 West;  
Township 22 North, Ranges 1 West through 11 West;  
Township 23 North, Ranges 1 West through 14 West;  
Township 24 North, Ranges 1 East through 16 West;  
Township 25 North, Ranges 1 East through 16 West;  
Township 26 North, Ranges 1 East through 16 West;  
Township 27 North, Ranges 1 West through 16 West;  
Township 28 North, Ranges 1 West through 16 West;  
Township 29 North, Ranges 1 West through 15 West;  
Township 30 North, Ranges 1 West through 15 West;  
Township 31 North, Ranges 1 West through 15 West;  
Township 32 North, Ranges 1 West through 13 West;

(4) The Division further seeks, also upon the recommendations of the Committee, the promulgation of special pool rules, regulations, and operating procedures for said pool including, but not limited to provisions for 320-acre spacing and proration units, designated well locations, well density, horizontal wellbore and deviated drilling procedures, venting and flaring rules, downhole commingling, and gas well testing requirements.

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

(5) In companion Case No. 9421, the Division seeks to contract the vertical limits of twenty-six existing Fruitland and/or Fruitland-Pictured Cliffs Gas Pools to include only the Pictured Cliffs sandstone and/or Fruitland sandstone intervals.

(6) The Committee, which included representatives of the oil and gas industry, New Mexico Oil Conservation Division, Colorado Oil and Gas Conservation Commission, Bureau of Land Management, and Southern Ute Indian Tribe, was originally formed in 1986 for the purpose of studying and making recommendations to the Division as to the most orderly and efficient methods of developing coal seam gas within the Fruitland formation.

(7) Geological evidence presented by the Committee indicates that the Fruitland formation, which is found within the geographic area described above, is composed of alternating layers of shales, sandstones, and coal seams.

(8) The evidence at this time further indicates that the coal seams within the Fruitland formation are potentially productive of natural gas in substantial quantities.

(9) The gas originating from the coal seams within the Fruitland formation is composed predominantly of methane and carbon dioxide and varies significantly from the composition of the gas currently being produced from the sandstone intervals, and as such, represents a separate common source of supply.

(10) A new pool for gas production from coal seams within the Fruitland formation should be created and designated the Basin-Fruitland Coal Gas Pool with vertical limits comprising all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(11) The proposed horizontal pool boundary, which represents the geographic area encompassed by the Fruitland formation, contains within it, an area previously defined as the Cedar Hill-Fruitland-Basal Coal Gas Pool (created by Division Order No. R-7588 effective February 1, 1984); said area currently comprises Sections 3 through 6 of Township 31 North, Range 10 West, and Sections 19 through 22 and 27 through 34 of Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(12) The proposed horizontal boundary of the Basin-Fruitland Coal Gas Pool should be amended to exclude that acreage currently defined as the Cedar Hill-Fruitland Coal Gas Pool described in Finding No. (11) above.

(13) The Committee has recommended the promulgation of special rules and regulations for the Basin-Fruitland Coal Gas Pool including a provision for 320-acre spacing and proration units, and in support thereof presented pressure interference data obtained from producing and pressure observation wells located within the Cedar Hill-Fruitland Coal Gas Pool, which indicates definite pressure communication between wells located 2180 feet apart (radius of drainage of a 320-acre proration unit = 2,106 feet).

(14) Further testimony and evidence indicates that due to the unique producing characteristics of coal seams (i.e. initial inclining production rates), engineering methods such as decline curve analysis and volumetric calculations traditionally used to aid in the determination of proper well spacing, cannot be utilized.

(15) The Committee further recommended the adoption of a provision in the proposed pool rules allowing for the drilling of a second well on a standard 320-acre proration unit in order to give an operator flexibility when addressing regional geological trends.

(16) Dugan Production Corporation, Merrion Oil and Gas Corporation, Hixon Development Company, Robert L. Bayless, and Jerome P. McHugh and Associates, hereinafter referred to as the "Dugan Group", appeared at the hearing and presented geologic and engineering evidence and testimony in support of a proposal which includes the following:

1. Establishment of an area within the Southern portion of the Basin-Fruitland Coal Gas Pool to be developed on 160-acre spacing and proration units.

2. Creation of a demarcation line and buffer zone separating the 320-acre spacing portion of the pool and the proposed 160-acre spacing portion of the pool.

(17) The Dugan Group owns oil and gas leasehold operating rights in the Fruitland formation in various areas of the San Juan Basin, and currently operates numerous wells producing from coal seams and sandstone intervals within the Fruitland formation.

(18) The Dugan Group has defined the location of the proposed demarcation line and 160-acre spacing area by utilizing a preponderance of geologic factors such as coal rank, depth of burial, thermal maturation, thickness of coal, and amount of gas in place.

(19) In support of the proposed 160-acre spacing area for the subject pool, the Dugan Group presented production data obtained from four producing wells, the Nassau Well Nos. 5, 6, 7 and 8 located in Section 36, Township 27 North, Range 12 West, NMPM, San Juan County, New Mexico, which indicates that the production rate from said Nassau Well No. 5 was unaffected by initiation of 160-acre offset production in said Nassau Well Nos. 6, 7, and 8.

(20) The evidence presented by the Dugan Group further indicates however, that the Nassau Well Nos. 5, 6, 7, and 8 are producing from commingled coal seam and sandstone intervals within the Fruitland formation, and as such, do not conclusively demonstrate 160-acre non-interference exclusively within the coal seams.

(21) Insufficient evidence exists at the current time to justify the creation of a 160-acre spacing area and demarcation line within the Basin-Fruitland Coal Gas Pool.

(22) The best technical evidence available at this time indicates that 320-acre well spacing is the optimum spacing for the entire Basin-Fruitland Coal Gas Pool.

(23) In order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and to otherwise protect correlative rights, special rules and regulations providing for 320-acre spacing units should be promulgated for the Basin-Fruitland Coal Gas Pool.

(24) The special rules and regulations should also provide for restrictive well locations in order to assure orderly development of the subject pool and protect correlative rights.

(25) Due to the relatively large area encompassed by the Basin-Fruitland Coal Gas Pool, and the relatively small amount of reservoir data currently available, the special rules and regulations should be promulgated for a temporary period of two years in order to allow the operators in the subject pool the opportunity to gather additional reservoir data relative to the determination of permanent spacing rules for the subject pool and/or specific areas within the pool.

(26) The evidence and testimony presented at the hearing is insufficient to approve at the present time, the proposed provision allowing for the drilling of a second well on a standard 320-acre proration unit.

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

(27) The Committee further recommended the adoption of a provision in the Special Rules and Regulations allowing the venting or flaring of gas from a Basin-Fruitland Coal Gas well during initial testing in an amount not to exceed a cumulative volume of 50 MMCF or a period not to exceed 30 days.

(28) The evidence presented does not justify the establishment of a specific permissible volume of gas to be vented or flared from Basin-Fruitland Coal Gas Wells at this time, however, the supervisor of the Aztec district office of the Division should have the authority to allow such venting or flaring of gas from a well upon a demonstration such flaring or venting is justified and upon written application from the operator.

(29) Evidence and testimony presented at the hearing indicates that the gas well testing requirements as contained in Division Order No. R-333-I may cause damage to a Basin Fruitland Coal Gas Well, and that special testing procedures should be established.

(30) The special rules and regulations promulgated herein should include operating procedures for determination and classification of Basin-Fruitland Coal Gas Wells, horizontal wellbore and deviated drilling procedures, and procedures and guidelines for downhole commingling.

(31) This case should be reopened at an examiner hearing in October, 1990, at which time the operators in the subject pool should be prepared to appear and present evidence and testimony relative to the determination of permanent rules and regulations for the Basin-Fruitland Coal Gas Pool.

## IT IS THEREFORE ORDERED THAT:

(1) Effective November 1, 1988, a new pool in all or parts of San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, classified as a gas pool for production from Fruitland coal seams, is hereby created and designated the Basin-Fruitland Coal Gas Pool, with vertical limits comprising all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(2) The horizontal limits of the Basin-Fruitland Coal Gas Pool shall comprise the following described area in all or portions of San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, with the exception of Section 3 through 6 of Township 31 North, Range 10 West, and Section 19 through 22, and 27 through 34 of Township 32 North, Range 10 West, San Juan County New Mexico, which said acreage currently comprises the Cedar Hill-Fruitland Basal Coal Gas Pool:

Township 19 North, Ranges 1 West through 6 West;  
 Township 20 North, Ranges 1 West through 8 West;  
 Township 21 North, Ranges 1 West through 9 West;  
 Township 22 North, Ranges 1 West through 11 West;  
 Township 23 North, Ranges 1 West through 14 West;  
 Township 24 North, Ranges 1 East through 16 West;  
 Township 25 North, Ranges 1 East through 16 West;  
 Township 26 North, Ranges 1 East through 16 West;  
 Township 27 North, Ranges 1 West through 16 West;  
 Township 28 North, Ranges 1 West through 16 West;  
 Township 29 North, Ranges 1 West through 15 West;  
 Township 30 North, Ranges 1 West through 15 West;  
 Township 31 North, Ranges 1 West through 15 West;  
 Township 32 North, Ranges 1 West through 13 West;

(3) Temporary Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
BASIN-FRUITLAND COAL GAS POOL

RULE 1. Each well completed or recompleted in the Basin-Fruitland Coal Gas Pool shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. A gas well within the Basin-Fruitland Coal Gas Pool shall be defined by the Division Director as a well that is producing from the Fruitland coal seams as demonstrated by a preponderance of data which could include the following:

- a. Electric Log Data
- b. Drilling Time
- c. Drill Cuttings of Log Cores
- d. Mud Logs
- e. Completion Data
- f. Gas Analysis
- g. Water Analysis
- h. Reservoir Performance
- i. Other evidence which may be utilized in making such determination.

RULE 3. (As Amended by Order No. R-8768-A, July 16, 1991) The Division Director may require the operator of a proposed or existing Basin-Fruitland Coal Gas well, Fruitland Sandstone well, or Pictured Cliffs Sandstone well, to submit certain data as described in Rule (2) above, which would not otherwise be required by Division Rules and Regulations, in order to demonstrate to the satisfaction of the Division that said well will be or is currently producing from the appropriate common source of supply. The confirmation that a well is producing exclusively from the Basin-Fruitland Coal Gas Pool shall consist of approval of Division Form C-104, provided however that such approval shall be for Division purposes only, and shall not preclude any other governmental jurisdictional agency from making its own determination of production origination utilizing its own criteria.

RULE 4. (As Amended by Order No. R-8768-A, July 16, 1991) Each well completed or recompleted in the Basin-Fruitland Coal Gas Pool shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision of the United States Public Lands Survey.

Individual operators may apply to the Division for an exception to the requirements of Rule No. (4) to allow the drilling of a second well on standard 320-acre units or on approved non-standard units in specifically defined areas of the pool provided that:

(a) Any such application shall be set for hearing before a Division Examiner;

(b) Actual notice of such application shall be given to operators of Basin-Fruitland Coal Gas Pool wells, working interest owners of undrilled leases, and unleased mineral owners within the boundaries of the area for which the infill provision is requested, and to all operators of Basin-Fruitland Coal Gas Pool wells within one mile of such area, provided however any operator in the pool or other interested party may appear and participate in such hearing.

Such notice shall be sent certified or registered mail or by overnight express with certificate of delivery and shall be given at least 20 days prior to the date of the hearing.

RULE 5. (As Amended by Order No. R-8768-A, July 16, 1991) The Supervisor of the Aztec district office of the Division shall have the authority to approve a non-standard gas proration unit within the Basin-Fruitland Coal Gas Pool without notice and hearing when the unorthodox size or shape is necessitated by a variation in the legal subdivision of the United States Public Lands Survey and/or consists of an entire governmental section and the non-standard unit in not less than 70% nor more than 130% of a standard gas proration unit. Such approval shall consist of acceptance of Division Form C-102 showing the proposed non-standard unit and the acreage contained therein.

**(BASIN-FRUITLAND COAL GAS POOL - Cont'd.)**

**RULE 6.** (As Amended by Order No. R-8768-A, July 16, 1991) The Division Director may grant an exception to the requirements of Rule (4) when the unorthodox size or shape of the gas proration unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey and the non-standard gas proration unit is less than 70% or more than 130% of a standard gas proration unit, or where the following facts exist and the following provisions are complied with:

(a) the non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a governmental half section, except as provided in paragraph (c) following.

(c) The non-standard unit conforms to a previously approved Blanco-Mesaverde or Basin-Dakota Gas Pool non-standard unit as evidenced by applicant's reference to the Division's order number creating said unit.

(d) The applicant presents written consent in the form of waivers from all offset operators or owners of undrilled tracts and from all operators owning interests in the half section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(e) In lieu of paragraph (d) of this rule, the applicant may furnish proof of the fact that all of the aforesaid parties were notified by certified or registered mail or overnight express mail with certificate of delivery of his intent to form such non-standard unit. The Division Director may approve the application if no such party has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application.

(f) The Division Director, at his discretion, may set any application under Rule (6) for public hearing.

**RULE 7.** (As Amended by Order No. R-8768-B, Effective February 10, 2000.) Wells drilled or recompleted on every standard or non-standard unit in the Basin-Fruitland Coal Gas Pool shall be located in the NE/4 or SW/4 or a single governmental section and shall be located no closer than 660 feet to any outer boundary of the proration unit nor closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.

**RULE 8.** The Division Director may grant an exception to the requirements of Rule (7) without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions, the recompletion of a well previously drilled to a deeper horizon, provided said well was drilled at an orthodox or approved unorthodox location for such original horizon, or the drilling of an intentionally deviated horizontal wellbore. All operators or owners of undrilled tracts offsetting the proposed location shall be notified of the application by registered or certified mail, and the applicant shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all parties described above or if no objections to the unorthodox location has been entered within 20 days after the Director has received the application.

**RULE 9(A).** The Division Director shall have the authority to administratively approve an intentionally deviated well in the Basin-Fruitland Coal Gas Pool for the purpose of penetrating the coalbed seams by means of a wellbore drilled horizontally, provided the following conditions are complied with:

(1) the surface location of the proposed well is a standard location or the applicant has obtained approval of an unorthodox surface location as provided for in Rule (8) above.

(2) The bore hole shall not enter or exit the coalbed seams outside of a drilling window which is in accordance with the setback requirements of Rule (7), provided however, that the 10 foot setback distance requirement from the quarter-quarter section line or subdivision inner boundary shall not apply to horizontally drilled wells.

(B) To obtain administrative approval to drill an intentionally deviated horizontal wellbore, the applicant shall file such application with the Santa Fe and Aztec offices of the Division and shall further provide a copy of such application to all operators or owners of undrilled tracts offsetting the proposed gas proration unit for said well by registered or certified mail, and the application shall state that such notice has been furnished. The application shall further include the following information:

(1) A copy of Division Form C-102 identifying the proposed proration unit to be dedicated to the well.

(2) Schematic drawings of the proposed well which fully describe the casing, tubing, perforated or open hole interval, kick-off point, and proposed trajectory of the drainhole section.

The Director may approve the application upon receipt of written waivers from all parties described above or if no objection to the intentionally deviated horizontal wellbore has been entered within 20 days after the Director has received the application. If any objection to the proposed intentionally deviated horizontal well is received within the prescribed time limit as described above, the Director shall, at the applicant's request, set said application for public hearing.

(C) During or upon completion of drilling operations the operator shall further be required to conduct a directional survey on the vertical and lateral portions of the wellbore and shall submit a copy of said survey to the Santa Fe and Aztec Offices of the Division.

(D) The Division Director, at his discretion, may set any application for intentionally deviated horizontal wellbores for public hearing.

**RULE 10.** Notwithstanding the provisions of Division Rule No. 404, the Supervisor of the Aztec District office of the Division shall have the authority to approve the venting or flaring of gas from a Basin-Fruitland Coal Gas Well upon a determination that said venting or flaring is necessary during completion operations, to obtain necessary well test information, or to maintain the producibility of said well. Application to flare or vent gas shall be made in writing to the Aztec district office of the Division.

**RULE 11.** Testing requirements for a Basin-Fruitland Coal Gas well hereinafter set forth may be used in lieu of the testing requirements contained in Division Order No. R-333-I. The test shall consist of a minimum twenty-four hour shut-in period, and a three hour production test. The Division Director shall have the authority to modify the testing requirements contained herein upon a showing of need for such modification. The following information from this initial production test must be reported:

1. The surface shut-in tubing and/or casing pressure and date these pressures were recorded.

2. The length of the shut-in period.

3. The final flowing casing and flowing tubing pressures and the duration and date of the flow period.

4. The individual fluid flow rate of gas, water, and oil which must be determined by the use of a separator and measurement facilities approved by the Supervisor of the Aztec district office of the Division; and

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

5. The method of production, e.g. flowing, pumping, etc. and disposition of gas.

RULE 12. The Division Director shall have the authority to approve the commingling within the wellbore of gas produced from coal seams and sandstone intervals within the Fruitland and/or Pictured Cliffs formations where a finding has been made that a well is not producing entirely from either coal seams or sandstone intervals as determined by the Division. All such applications shall be submitted to the Santa Fe office of the Division and shall contain all the necessary information as described in General Rule 303 (C) of the Division Rules and Regulations, and shall meet the prerequisites described in 303 (C) (1) (b). In addition, the Division Director may require the submittal of additional well data as may be required to process such application.

RULE 13. The Division Director may approve the commingling within the wellbore of gas produced from coal seams and sandstone intervals within the Fruitland and/or Pictured Cliffs formations where a well does not meet the prerequisites as described in General Rule 303 (C) (1) (b) provided that such commingling had been accomplished prior to July 1, 1988, and provided further that the application is filed as described in Rule (12).

## IT IS FURTHER ORDERED THAT:

(4) The locations of all wells presently drilling to, completed in, commingled in, or having an approved APD for the Basin-Fruitland Coal Gas Pool are hereby approved; the operator of any well having an unorthodox location shall notify the Aztec district office of the Division in writing of the name and location of the well within 30 days from the date of this order.

(5) Pursuant to Paragraph A. of Section 70-2-18, N.M.S.A. 1978, Comp., contained in Laws of 1969, Chapter 271, existing gas wells in the Basin-Fruitland Coal Gas Pool shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or pursuant to Paragraph C. of said Section 70-2-18, existing wells may have non-standard spacing and proration units established by the Division and dedicated thereto.

(6) In accordance with (5) above, the operator shall file a new Form C-102 dedicating 320 acres to the well or shall obtain a non-standard unit approved by the Division. The operator shall also file a new C-104 with the Aztec district office of the Division.

(7) Failure to comply with Paragraphs (5) and (6) above within 60 days of the date of this order shall subject the well to a shut-in order until such requirements have been met.

(8) This case shall be reopened at an examiner hearing in October, 1990 at which time the operators in the subject pool may appear and present evidence and testimony relative to the determination of permanent rules and regulations for the Basin-Fruitland Coal Gas Pool.

(9) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

VADA-DEVONIAN POOL  
Lea County, New Mexico

Order No. R-8770, Adopting Temporary Operating Rules for the Vada-Devonian Pool, Lea County, New Mexico, October 26, 1988.

Order No. R-8770-A, May 30, 1990, rescinds the temporary operating rules adopted in Order No. R-8770, October 26, 1988.

Application of Union Pacific Resources Company for Pool Extension and Special Pool Rules, Lea County, New Mexico.

CASE NO. 9439  
Order No. R-8770

## ORDER OF THE DIVISION

BY THE DIVISION: This cause came on for hearing at 8:15 a.m. on August 17, 1988, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of October, 1988, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

## FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Division Case Nos. 9439 and 9440 were consolidated at the time of the hearing for the purpose of testimony.

(3) By Order No. R-8667 dated June 10, 1988, the Division created and defined the Vada-Devonian Pool with horizontal limits consisting of the SW/4 of Section 26, Township 10 South, Range 33 East, NMPM, Lea County, New Mexico.

(4) The applicant, Union Pacific Resources Company, seeks to extend the horizontal limits of the Vada-Devonian Pool to include the NW/4 of Section 35, Township 10 South, Range 33 East, NMPM, Lea County, New Mexico, and further seeks the promulgation of temporary special rules and regulations for said pool, including a provision for 80-acre spacing and proration units, designated well locations, and a poolwide exception to Division Rule No. 111 allowing for directional drilling or well deviations of more than five degrees in any 500-foot interval.

(5) The applicant is the owner and operator of the discovery well for said pool, the State "26" Well No. 1 located 330 feet from the South line and 2310 feet from the West line of said Section 26.

(6) The applicant is also the owner and operator of the State "26" Well No. 2 located 1910 feet from the South line and 1980 feet from the East line (Unit J) of said Section 26, which was spudded on April 21, 1988, was drilled to a depth of 12,953 feet and is currently being sidetracked to an unorthodox subsurface location within a 150-foot radius of a point 1910 feet from the South line and 2580 feet from the East line (Unit J) of said Section 26, (being the subject of companion Case No. 9440).

STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC. PURSUANT TO ORDER  
NO. R-11133-A TO RESTORE THE CHACO 2-R  
PICTURED CLIFFS WELL TO PRODUCTION,  
SAN JUAN COUNTY, NEW MEXICO

OCD CASE NO. \_\_\_\_\_

APPLICATION

Pendragon Energy Partners, Inc., ("Pendragon"), through its counsel, Miller, Stratvert & Torgerson, P.A. (J. Scott Hall), hereby applies to the New Mexico Oil Conservation Division pursuant to Order No. R-11133-A for an order authorizing the restoration of the Chaco 2-R well completed in the WAW Fruitland-Pictured Cliffs pool to production. In support of its Application, Pendragon states:

1. Pendragon is the operator of the Chaco 2-R well (API No. 30-045-23691) located 1850 feet from the south and west lines (Unit K) of Section 7, T-26-N, R-12-W, NMPM, San Juan County.
2. The Chaco 2-R was originally drilled in 1979 by Pendragon's predecessor in interest, Merriam and Bayless Oil and Gas Company, and was perforated and completed in the Pictured Cliffs formation, WAW-Fruitland-Pictured Cliffs Gas Pool (Orders R-4260 and R-8796), from a depth of 1,132' to 1,142'.
3. On February 5, 1999, the Division, in Case No. 11196, issued Order No. R-11133 directing that the Chaco 2-R be shut-in along with five (5) other Pictured Cliffs wells, although the Division found there was not sufficient evidence to establish that the fracture stimulation treatment performed on the Chaco 2-R well in 1995 had established communication with the separately owned Basin-Fruitland Coal Gas Pool.

OIL CONSERVATION DIV.  
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Order R-11133 also authorized Pendragon to propose a method by which the well could be produced exclusively from the WAW Fruitland Sand-Pictured Cliffs Pool, or alternatively, a method for producing the well in its assumed state of communication.


4. Order No. R-11133 was subsequently appealed to the New Mexico Oil Conservation Commission and a hearing was held on August 12 – 21, 1999. On April 26, 2000, the Commission issued Order No. R-11133-A, finding, inter alia, that the Chaco 2-R well is producing from both the WAW Fruitland Sand-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool. Under Order No. R-11133-A it was also determined that a number of Fruitland coal gas wells operated by Whiting Petroleum Corporation were also producing from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool, including Whiting's Gallegos Fed. 26-12-7 No. 1 Fruitland coal gas well (API NO. 30-045-28899) offsetting the Chaco 2-R and located 2,482 feet from the south line and 1,413 feet from the west line of said Section 7. The Commission found that fracture stimulation treatments performed on Whiting's Fruitland coal wells in 1992 caused them to come into communication with the Pictured Cliffs formation in the area.
5. Similar to Order R-11133, Order No. R-11133-A further authorized the Division to approve a method for restoring the Chaco wells back to production. Pursuant to those orders, Applicant will present the Division with an appropriate method for the further production of gas from its Chaco 2-R well and for the restoration of the well to producing status. A copy of Order No. R-11133-A is attached.
6. The granting of this Application is in the interests of conservation of oil and gas resources and the prevention of waste.

WHEREFORE, the Applicant requests this matter be set for hearing before one of the Division's Examiners on August 24, 2000, and that after notice and hearing as required by law, the Division enter its order approving an appropriate method of production and further authorizing the Chaco 2-R well to be restored to producing status accordingly.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, PA.

By

  
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Post Office Box 1986  
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ATTORNEYS FOR PENDRAGON ENERGY  
PARTNERS, INC.



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION FOR THE PURPOSE OF  
CONSIDERING:

De Novo  
Case No. 11996  
Order No. R-11133-A

APPLICATION OF PENDRAGON ENERGY PARTNERS, INC.  
AND J. K. EDWARDS ASSOCIATES, INC.  
TO CONFIRM PRODUCTION FROM  
THE APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This case came on for hearing at 9:00 a.m. on August 12, 1999, at Santa Fe, New Mexico, before the New Mexico Oil Conservation Commission ("Commission") and continued on August 13, 19, 20 and 21, 1999.

NOW, on this 26<sup>th</sup> day of April, 2000, the Commission, a quorum being present and having considered the record,

FINDS THAT:

- (1) Due public notice has been given and the Commission has jurisdiction of this case and its subject matter.
- (2) The applicants, Pendragon Energy Partners, Inc. and J. K. Edwards Associates, Inc. (hereinafter referred to as "Pendragon"); pursuant to Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in Oil Conservation Division (hereinafter referred to as "the Division") Order No. R-8768, as amended, seek an order confirming that the following described wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool ("Pendragon Chaco and Chaco Limited Wells") or the Basin-Fruitland Coal Gas Pool ("Whiting Fruitland Coal Wells"), are producing from the appropriate common source of supply and for such further relief as the Commission deems necessary:

Pendragon Chaco and Chaco Limited Wells

<u>Operator</u>	<u>Well Name &amp; API Number</u>	<u>Well Location</u>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W

05220

Pendragon Energy Partners, Inc.	Chaco No. 2R. (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc..	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

**Whiting Fruitland Coal Wells**

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(3) Whiting Petroleum Corporation and Maralex Resources, Inc. (hereinafter referred to as "Whiting") appeared at the hearing in opposition to the application. Whiting claimed that the Pendragon Chaco and Chaco Limited Wells are producing:

- a) gas from a sandstone interval located within the Fruitland Coal formation; and
- b) coal gas from the Basin-Fruitland Coal Gas Pool because of the establishment of communication between the Basin-Fruitland Coal and WAW Fruitland Sand-Pictured Cliffs Gas Pools.

CASE NO. 11996

Order No. R-11133-A

Page 3

(4) All eleven wells that are the subject of this application are located within an area (hereinafter referred to as the "Subject Area") that comprises:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM

Section 6: W/2

Section 7: W/2

Section 18: NW/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 1: All

Section 12: N/2

(5) The Subject Area is located within the horizontal boundaries of the Basin-Fruitland Coal Gas Pool created by Division Order No. R-8768 dated October 17, 1988. The vertical limits of this pool, as defined by Ordering Paragraph (1) of Order No. R-8768, encompass:

... all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2,450 feet to 2,880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(6) The Subject Area is also located within the horizontal boundaries of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. The vertical limits of this pool encompass all of the Pictured Cliffs Formation (Order No. R-4260 dated February 22, 1972) and all the sandstone intervals of the Fruitland Coal Formation (Order No. R-8769 dated October 17, 1988).

(7) Pendragon and Whiting received assignments of oil and gas leases in the Subject Area from common grantors, Robert Bayless ("Bayless") and Merriion Oil and Gas Corporation ("Merriion"), during the period from 1992 through 1994.

a) The assignments of rights, in pertinent part, to Whiting are as follows:

Operating rights from the surface of the earth to the base of the Fruitland (Coal Gas) Formation subject to the terms and provisions of that certain Farmout Agreement dated December 7, 1992 by and between Merriion Oil & Gas et al., Robert L. Bayless, Pitco Production Company, and Maralex Resources, Inc.

b) The assignment of rights to Pendragon, in pertinent part, are as follows:

05222

Leases and lands from the base of the Fruitland Coal Formation to the base of the Pictured Cliffs Formation.

(8) A brief history of the Pendragon Chaco and Chaco Limited Wells follows:

- a) Merriam and Bayless drilled the Chaco Well No. 1 in February 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,113' to 1,139'. The well initially tested in this interval at a rate of approximately 342 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, J. K. Edwards & Associates, Inc. ("Edwards") became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January, 1996, Pendragon became operator of the well.
- b) Merriam and Bayless drilled the Chaco Well No. 2R in October 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,132' to 1,142'. The well initially tested in this interval at a rate of approximately 150 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January 1996, Pendragon became operator of the well.
- c) Merriam and Bayless drilled the Chaco Well No. 4 in April 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,163' to 1,189'. The well was initially tested in this interval at a rate of approximately 480 MCFGD, 0 BOPD, and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In May 1995, the well was re-perforated in the interval from 1,163' to 1,189' and fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.
- d) Merriam and Bayless drilled the Chaco Well No. 5 in April 1977, to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,165' to 1,192'. The well initially tested in this interval at a rate of approximately 1029 MCFGD, 0 BOPD and 0 BWPD. In May 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January 1995, the well was re-perforated in the interval from 1,165' to 1,192' and was

fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.

- e) The Chaco Limited Well No. 1J was drilled by Merrion and Bayless in April 1982 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,200' to 1,209'. The well initially tested in this interval at a rate of approximately 10 MCFGD, 0 BOPD and a trace of water. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.
- f) The Chaco Limited Well No. 2J was drilled by Merrion and Bayless in September 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,186' to 1,202'. The well initially tested in this interval at a rate of approximately 208 MCFGD, 0 BOPD and 4 BWPD. In October, 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.

(9) A brief history of the Whiting Fruitland Coal Wells follows:

- a) Maralex drilled the Gallegos Federal 26-12-6 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,138' to 1,157'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- b) Maralex drilled the Gallegos Federal 26-12-7 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,131' to 1,150'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- c) Maralex drilled the Gallegos Federal 26-13-1 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,158' to 1,177'. The well was subsequently fracture

CASE NO: 11996

Order No. R-11133-4

Page 6

stimulated in this interval. In September 1995, Whiting became operator of the well.

- d) Maralex drilled the Gallegos Federal 26-13-1 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,047' to 1,208'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- e) Maralex drilled the Gallegos Federal 26-13-12 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,178' to 1,197'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.

Geologic Issues

Fruitland Sand vs. Pictured Cliffs Sand

(10) Related geologic issues are raised by the application: the proper means for determining the limits of the pools and formations at issue, and the effect on this analysis, if any, of integration or interfingering of different rock types.

(11) In its Chaco Wells No. 1, 4 and 5 and its Chaco Limited Well No. 2J, Pendragon is producing from two separate sandstone intervals, hereinafter referred to as the Upper Sandstone and Lower Sandstone intervals. In its Chaco Well No. 2R and Chaco Limited Well No. 1J, Pendragon is producing only from the Lower Sandstone interval. It is the position of Pendragon that the top of the Pictured Cliffs Formation occurs at or above the top of the Upper Sandstone.

(12) The perforated intervals in each of the Pendragon Chaco and Chaco Limited Wells are as follows:

<u>Well Name &amp; Number</u>	<u>"Upper Sandstone" Perforations</u>	<u>"Lower Sandstone" Perforations</u>
Chaco Well No. 1	1,113'-1,119'	1,134'-1,139'
Chaco Well No. 4	1,163'-1,166'	1,173'-1,189'
Chaco Well No. 5	1,165'-1,169'	1,174'-1,192'
Chaco Limited Well No. 2J	1,186'-1,188'	1,200'-1,202'
Chaco Well No. 2R	None	1,132'-1,142'
Chaco Limited Well No. 1J	None	1,200'-1,209'

(13) Whiting agrees that the Lower Sandstone interval is within the Pictured Cliffs Formation; however, it contends that the top of the Pictured Cliffs Formation is the top of the Lower Sandstone interval and the Upper Sandstone is within the Fruitland Coal Formation. It is on this basis that Whiting contends that Pendragon is producing from perforations in the Fruitland Coal Formation in its Chaco Wells Nos. 1, 4 and 5 and its Chaco Limited Well No. 2J.

(14) The parties have stipulated that the Pictured Cliffs Formation was deposited in a marine environment and the Fruitland Coal Formation was deposited in a non-marine or terrestrial environment.

(15) In its Order No. R-8768, the Division defined the vertical limits of the Basin Fruitland Coal Gas Pool as all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the well log from the Amoco Schneider Gas Com "B" Well No. 1. The pick for the base of the pool in Order No. R-8768 is the top of the Pictured Cliffs Formation. The pick is also the break between marine and non-marine sediments. It is undisputed that the coal or shale layers occurring below the stratigraphic pick set forth in Order No. R-8768 would not be included in the Basin Fruitland Coal Gas Pool or in the Fruitland Coal Formation.

(16) For the reasons set forth below, we find that the preponderance of the geologic evidence establishes that the Pendragon Chaco and Chaco Limited Wells are completed in the Pictured Cliffs Formation.

(17) The preponderance of the geologic evidence establishes that the Upper Sandstone is marine in origin and thus appropriately considered a part of the Pictured Cliffs Formation. The Upper Sandstone in the Subject Area cannot be differentiated from the main body of the Pictured Cliffs Formation.

(18) In the late Cretaceous period in what was to become the San Juan Basin, sediments were deposited contemporaneously in various environments. The Lewis Shale represents muds and storm-carried sands offshore of the barrier-beach setting. The Pictured Cliffs formation accumulated in primarily a barrier-beach setting. The Fruitland Coal formation accumulated on a coastal plain with swamps and bogs and the Kirtland Formation accumulated in an alluvial plain. As the ancient shoreline moved to the northeast, each of the environments of deposition shifted. At a single location a wellbore presents the familiar vertical sequence of Formations.

(19) Pendragon's isopach map of the Upper Sandstone, Exhibits 50 and 63, show this barrier-bar marine littoral environment with sandstone along the ancient shoreline trending in a northwest to a southeast direction. Pendragon's Exhibits 50 and 63 also show that the Upper Sandstone occurs in a continuous sheet that coalesces into the main body of the Pictured Cliffs Formation as it trends from the shoreline environment on the southwest toward the center of the San Juan basin to the northeast.

(20) In the Subject Area, tongues of Pictured Cliffs sandstone thin in a landward direction and thicken in a seaward direction and ultimately merge with the main body of the Pictured Cliffs Formation. These tongues "interfinger" or integrate with other rock types in the Subject Area.

(21) The interval between the top of the Upper Sandstone and the top of the main body of the Pictured Cliffs (the Lower Sandstone) is composed of a variety of rock types including marine sandstones, silt stones, shales, and thin coals. It has been the long-standing and accepted custom and practice of industry and the various regulatory agencies, including the Division in Order No. R-8768 and R-8769, to place this entire interval within the Pictured Cliffs Formation. This industry and regulatory agency practice conforms to the standards of the North American Stratigraphic Code and the International Stratigraphic Guide.

(22) The evidence presented by Pendragon establishes that over the years approximately 34 wells within approximately 2.5 miles of the Pendragon Chaco and Chaco Limited wells were actually perforated in the Upper Sandstone in conjunction with other Pictured Cliffs intervals and reported by the numerous different operators of those wells as Pictured Cliffs completions, consistent with the picks for the top of the Pictured Cliffs for the Chaco Plant No. 1 and the Pendragon Chaco and Chaco Limited Wells (Exhibit N-61). The evidence also establishes that those reported completions were accepted by the Division and the Bureau of Land Management and that industry and geologists have placed substantial reliance on those reported completions as Pictured Cliffs completions for nearly thirty years.

(23) In a written statement provided to the Commission during the hearing in this case, Merrion, the assignor of the interests in both the Fruitland Coal Formation to Whiting and Pictured Cliffs Formation to Pendragon, indicated it concurred with Pendragon in its identification of the Upper Sandstone interval and the historic recognition of that interval as Pictured Cliffs by Merrion and other operators in the area. (Exhibit N-43.) Merrion further stated that the Pendragon Chaco Wells are appropriately perforated in the Pictured Cliffs Formation and that it had no intention of conveying to Pendragon wells that were perforated in other zones. Merrion also stated that it never intended to farm-out to Whiting the rights to zones where the Pendragon Chaco Wells were perforated.

(24) Thus, identification and utilization of the Upper Sandstone tongues to establish the vertical boundaries of the Pictured Cliffs Formation by industry, governmental regulatory agencies and the parties or their predecessor-in-interest is a long-established custom and practice. Such custom and practice is to be accorded significant weight.



CASE NO. 11996

Order No. R-11133-A

Page 9

(25) Whiting asserted during the hearing of this matter that the Upper Sandstone interval was deposited in a non-marine, crevasse-splay deposit, resulting from a large, sediment-laden river breaking through its natural boundaries during a flood stage and spreading clean, well-sorted sand over an area more than sixteen-miles long and up to three-miles wide parallel to the shoreline. However, Whiting failed to establish by a preponderance of the evidence the existence of any crevasse splay or any depositional materials indicative of a sand-laden flood. Moreover, there is no evidence of the transporting river or river channel, the thinning of sand deposits in both directions at right angles to the river, adjacent deltaic deposits or any other non-marine mechanism with the capability of forming the thin, but areally extensive, sand of the dimensions seen in the Upper Sandstone.

(26) Whiting also asserted it was possible that the disputed interval was deposited as a washover fan. However, the washover fan depositional mechanism involves wave-dominated action, consistent with the accepted geologic definitions of a marine depositional mechanism. Such a theory also supports a conclusion that the Upper Sandstone was deposited in a marine environment.

(27) Pendragon presented aerial photographs of modern deposits of sands comparable in mode of deposition and areal extent to the Upper Sandstone located in the marine lagoonal areas behind barrier islands, thus demonstrating the validity of the depositional model. Pendragon demonstrated using these exhibits that these sands are wave and tidal-current dominated deposits, and further showed that the seaward beach of a barrier island is not to be confused with the true marine shoreline, which lies behind the island.

(28) The core analysis for the Lansdale Federal No. 1 located in the SE/4 of Sec. 7, T-26-N, R-12-W establishes that grain size and sorting throughout the Upper Sandstone is uniform, consistent with a marine depositional environment. The physical descriptions of the sand appearing in the Upper Sandstone and the Lower Sandstone are grey, fine-grained with little variation in clay content, consistent with a marine sand that has been laterally transported by currents and waves to the point where the energy available sorts the sand into uniform size. Sand-sorting characteristics of this sort are not consistent with a fluvial deposit with graded bedding coarsening downward.

(29) Pendragon presented evidence that the Spontaneous Potential ("SP") readings on electrical logs are much greater in the Pictured Cliffs Formation, which was deposited in a marine setting, than in the Fruitland sands, which were deposited in a fluvial, fresh water environment. Pendragon demonstrated that the SP readings for the Upper Sandstone were comparable or identical to those of the Lower Sandstone and were much greater than those of the Fruitland sands.

05228

(30) The SP map of the Pictured Cliffs Formation introduced by Whiting, Exhibit WA-9, showed 40 to 80 millivolt SP development in the Chaco area. The cross-section exhibit demonstrated that the disputed interval also showed 40 to 80 millivolts SP, even though it was interpreted by Whiting to be Fruitland sandstone, and all other Fruitland sands on his cross-section showed only zero to less than 10 millivolts. Additional testimony established that 40 to 80 millivolts is a significantly higher range than is typically associated with SP development in a fresh-water depositional environment and is more characteristic of the SP development in the Pictured Cliffs intervals observed on the well logs and cross-sections for the Pendragon Chaco Wells.

(31) Whiting contends that the top of the first "massive" sandstone below the lowermost coal of the Fruitland Coal Formation should be the basis for picking the top of the Pictured Cliffs formation. Whiting contends that the operators of approximately one hundred additional wells outside the Subject Area identified the top of the massive Pictured Cliffs Sandstone as the vertical boundary between the Pictured Cliffs and Fruitland Coal Formations. However, Whiting failed to present evidence establishing that the Upper Sandstone interval was present in any of the wells identified. Similarly, Whiting failed to show that any operator identified the top of the Pictured Cliffs sandstone as the massive sand in those areas where tongues of the Pictured Cliffs are known to exist. The geologic testimony and evidence shows that such a definition has little support in the geologic literature and that the arbitrary and undefined term "massive" makes its application impractical.

#### Engineering Issue

(32) Whiting, the owners and operators of the Whiting Fruitland Coal Wells, and Pendragon, the owner and operator of the Pendragon Chaco and Chaco Limited Wells, each contend that the other's well stimulation treatments established communication between their separately owned formations. Both parties contend that, as a result, their wells are experiencing interference and that gas is being produced out of zone.

(33) The preponderance of the engineering evidence established that the fracture stimulation treatments performed on both the Pendragon Chaco Wells by Pendragon and the Whiting Fruitland Coal Wells by Whiting established communication between the Fruitland Coal Formation and the Pictured Cliffs Formation.

(34) The treatment performed on the Whiting Fruitland Coal Wells after they were drilled created near-wellbore communication channels between the Fruitland Coal and Pictured Cliffs Formations. At the time, the gas in the Pictured Cliffs Formation was nearly depleted and very little gas could escape to the Fruitland Coal Formation, unless the Whiting Fruitland Coal Wells were operated under extremely low pressures. On the other hand, the adsorbed gas in the Fruitland Coal Formation stayed within the coal matrices until the pressure was lowered enough through the dewatering process for the gas to desorb.

(35) After the dewatering process, substantial amounts of adsorbed gas escaped from the coal matrices, especially in the near-wellbore region where pressure was lowest. As a result, the Whiting Fruitland Coal Wells began their commercial gas production. The desorbed gas moving toward the Whiting Fruitland Coal Wells may have migrated to the Pictured Cliffs Formation through the communication channels near the Whiting Fruitland Coal Wells if the local pressure in the Pictured Cliffs Formation was lower than that in the Fruitland Coal Formation. Gas in the Pictured Cliffs Formation may have migrated to the Fruitland Coal Formation through the communication channels if the production pressures at the Whiting Fruitland Coal Wells were low. However, these possible gas migrations were not significant, as evidenced by steady gas production from the Pendragon Chaco Wells.

(36) In 1995, after three years of the dewatering process, the region in which decreased pressures allowed gas to desorb from the coal matrices had grown toward the Pendragon Chaco Wells. At the edge of the resulting gas bubble, the gas pressure in the Fruitland Coal Formation was probably higher than the adjacent pressure in the Pictured Cliffs Formation. In the area of this relatively high-pressure contrast, the thin capillary barrier may have been broken, allowing gas migration between the two zones.

(37) Pendragon performed fracture stimulation treatments on the Pendragon Chaco Wells in 1995. The post-treatment gas production from the Pendragon Chaco Wells indicates that the stimulation work performed by Pendragon successfully broke into some high-pressure gas compartments.

(38) The production history of the Pendragon Chaco and Chaco Limited Wells is summarized as follows:

Well No.	Initial Production (Original Completion)	Pre-Acidization or Fracture Stimulation Production	Post-Acidization or Fracture Stimulation Production	Last Production
Chaco No. 1	80 MCF/D	0 MCF/D	250 MCF/D	165 MCF/D
Chaco No. 2R	70 MCF/D	0-15 MCF/D	90 MCF/D	120 MCF/D
Chaco No. 4	200 MCF/D	0 MCF/D	425 MCF/D	200 MCF/D
Chaco No. 5	190 MCF/D	0 MCF/D	370 MCF/D	210 MCF/D
Chaco Ltd. 1J	11 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D
Chaco Ltd. 2J	30 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D

(39) One possibility is that the hydraulic fractures were extended upward to the Fruitland Coal Formation and generated a gas highway to the gas bubble. Pendragon's experts vigorously denied this possibility. Instead, they asserted that an additional gas compartment, the so-called "third bench," exists below the perforations in the Pendragon Chaco Wells. The evidence does not support this assertion. No "third bench" has been reported previously throughout the San Juan region, and there is no geological evidence of this kind of formation. Furthermore, there is no scientific basis for believing that fractures moved downward into the "third bench" but not upward into the Fruitland Coal

CASE NO. 11996

Order No. R-11133-A

Page 12

Formation. Therefore, the most reasonable explanation of the sudden significant increases in production following the fracture stimulation treatments on the Pendragon Chaco Wells was that the hydraulic fractures penetrated into the gas bubble established in the Fruitland Coal Formation.

(40) Pendragon also asserted that the fracture stimulation treatments increased production in the Pendragon Chaco Wells by counteracting the effects of reservoir damage caused by (a) scale precipitation, (b) water blockage, and (c) migration of clay fines. As the original Pictured Cliffs gas was relatively dry, however, it is unlikely that the Pendragon Chaco Wells suffered from significant reservoir damage of this type.

(41) The BTU analysis of the gas from the Pendragon Chaco Wells supports the conclusion that the fracture stimulation treatments of these wells in 1995 established communication with the Fruitland Coal Formation. Whiting showed that the hydrocarbon liquids content of the gas from the Pendragon Chaco Wells was slightly reduced from 1988 to 1995 and significantly reduced from 1995 to 1997.

(42) Expert witnesses for both Pendragon and Whiting presented their opinions on the effects of the fracture stimulation treatments in the Whiting Fruitland Coal Wells and the Pendragon Chaco Wells based on their own theories and models. Many input values for key parameters were questionable. Both simulators used in their testimony have a good reputation for assisting in the design of fracturing jobs, but it is easy to manipulate them incorrectly. In a case like this, their results are too exaggerated to be reliable.

(43) The acid stimulation treatments performed by Pendragon on the Chaco Limited Wells No. 1J and 2J in 1995 did not alter these wells' rates of production. These treatments did not establish communication between the Pictured Cliffs Formation and the Fruitland Coal Formation.

(44) The gas now capable of production from the Pendragon Chaco Wells No. 1, 2R, 4, and 5 is: (1) gas originally in place in the Pictured Cliffs Formation; (2) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Pendragon Chaco Wells; and (3) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Whiting Fruitland Coal Wells.

(45) The Pendragon Chaco Wells depleted the Pictured Cliffs Formation prior to the fracture stimulation treatments performed on the wells in 1995.

(46) Pendragon Chaco Wells No. 1, 2R, 4, and 5 have already produced their fair share of the gas in the Pictured Cliffs Formation.

CASE NO. 11996

Order No. R-11133-A

Page 13

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Pendragon Energy Partners, Inc., and J. K. Edwards Associates, Inc., it is determined that the following described wells are perforated within the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool. It is further determined that the following described wells are producing from both the WAW Fruitland Sand-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool, San Juan County, New Mexico:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 2R (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W

(2) It is further determined that the following described wells are perforated within and producing solely from the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

(3) It is further determined that the following described wells are producing from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W

CASE NO. 11996

Order No. R-11133-A

Page 14

Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(4) Pendragon is hereby ordered to shut-in its Chaco Wells No. 1, 2R, 4 and 5 until such time as the Division approves a method for either putting them back into production or plugging them.

(5) Inasmuch as Whiting's wells may produce only minor amounts of gas from the already depleted WAW Fruitland Sand-Pictured Cliffs Pool, Whiting's wells are not to be shut-in.

(6) Jurisdiction is hereby retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



JAMI BAILEY, Member



ROBERT L. LEE, Member



LORI WROTENBERY, Chairman

S E A L

05203

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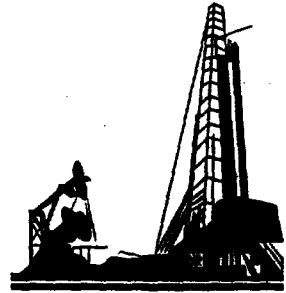
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September 18, 2000

**BY HAND-DELIVERY**

Attention: Sandy Miera  
The Honorable Daniel A. Sanchez  
District Judge, Division VII  
First Judicial District Court  
Santa Fe County Judicial Complex  
Santa Fe, New Mexico 87501


Re: Pendragon Energy Partners, Pendragon Resources, LP, & Edwards Energy Corp. v.  
New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Ms. Miera:

Enclosed are an Agreed Motion and Order to Exceed Page Limitation, For Leave to File Briefs, and for Extension of Time in the above-referenced matter. Again, it is my understanding that Judge Sanchez is still presiding over this case. If not, please direct this packet to the appropriate judge. Thank you for your assistance.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

cc: Steve Ross, Esq. (with enclosures)

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**ORDER AUTHORIZING APPELLANT AND APPELLEE  
TO EXCEED PAGE LIMITATION, GRANTING  
LEAVE TO FILE BRIEFS, AND EXTENDING TIME**

THIS MATTER, coming before the Court pursuant to the Agreed Motion of Appellants, Pendragon Energy Partners, Inc., *et al.*, and Appellee, New Mexico Oil Conservation Commission, for authorization to exceed the page limitation on the statements of appellate issues, for leave to file memorandum briefs and for an extension of time, and the Court being duly advised:

IT IS ORDERED that the Appellants' and Appellee's are authorized: (1) to exceed the page limitation under NMRA 1-074.N; (2) to file memorandum briefs; and (3) file the Appellants' statement of issues by September 29, 2000.

---

The Honorable Daniel Sanchez  
District Judge

Agreed:

MILLER, STRATVERT & TORGERSON, P.A.

By \_\_\_\_\_

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Attorneys for Appellants

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FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED MOTION TO EXCEED PAGE LIMITATION,  
FOR LEAVE TO FILE BRIEFS, AND FOR EXTENSION OF TIME**

Appellants, Pendragon Energy Partners, Inc., et al., ("Pendragon") and Appellee, New Mexico Oil Conservation Commission, ("NMOCC"), move pursuant to NMRA 1-074.N and O for authorization to exceed the page limitation on the statements of appellate issues, for leave to file memorandum briefs and for an extension of time. In support, movants state:

NMRA 1-074 limits the argument portions of the appellants' and appellee's respective statements of appellate issues to eight (8) pages, except by permission of the Court. In this circumstance, the limitation to eight pages will not allow a sufficient discussion of the contentions of the parties and the evidence in the record on the issues before the Court for appellate review. This proceeding involves a wide body of facts going back to 1992 and implicates regulatory matters reaching back to 1988. Extensive hearings involving complex technical evidence resulted in a record of several thousand pages, for which the transcript of hearing alone exceeds 1,600 pages. Condensing all this subject matter to a manageable and

comprehensible set of filings is challenging. However, it is clear that a full and fair discussion of the case can not be presented within the eight-page limit. Subpart N of Rule 1-074 expressly authorizes the Court to permit exceptions to the page limit in circumstances such as are presented here.

Counsel for Appellants and Appellees also agree that the filing of memorandum briefs would assist the Court's consideration of this appeal. Accordingly, both Appellants and Appellees seek leave to do so under Subpart O of Rule 1-074.

Finally, because of the breadth of issues and the volume of materials involved in this appeal, Appellants seek an extension of time to September 29, 2000 to file their statement of appellate issues.

Counsel for Appellants and Appellees agree to all the foregoing matters.

WHEREFORE, movants request the Court enter its Order authorizing the filing of statements of issues exceeding the page limitation under NMRA 1-074.N, authorizing Appellants and Appellees to file memorandum briefs, and extending the time for the filing of the Appellants' statement of issues to September 29, 2000.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By \_\_\_\_\_  
J. Scott Hall  
Post Office Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614  
Attorneys for Pendragon Energy Partners, Inc., *et al.*

Telephonically approved: \_\_\_\_\_  
Steve C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Motion was mailed  
to all counsel of record on  
this \_\_\_\_\_ day of September, 2000.

\_\_\_\_\_  
J. Scott Hall

OIL CONSERVATION DIV.

**MILLER, STRATVERT & TORGERSON, P.A.**  
LAW OFFICES

00 SEP 11 PM 12:22  
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OF COUNSEL

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RALPH WM. RICHARDS

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PLEASE REPLY TO SANTA FE

September 8, 2000

**BY HAND-DELIVERY**

Attention: Sandy Miera  
The Honorable Daniel A. Sanchez  
District Judge, Division VII  
First Judicial District Court  
Santa Fe County Judicial Complex  
Santa Fe, New Mexico 87501


Re: Pendragon Energy Partners, Pendragon Resources, LP, & Edwards Energy Corp. v.  
New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Ms. Miera:

Enclosed are an Agreed Motion and Order to Extend Time to File Statements of Appellate Issues for issuing and entrance in the above-referenced matter. It is my understanding that Judge Sanchez is still presiding over this case. If not, please direct this packet to the appropriate judge. Thank you for your assistance.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

cc: ~~FOR~~ Steve Ross, Esq. (with enclosures)

6304/20253/D Sanchez ltr1.ao.doc



FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED ORDER EXTENDING TIME TO FILE  
STATEMENTS OF APPELLATE ISSUES**

THIS MATTER having come before the Court upon the agreed motion of Appellants Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation and Appellee, New Mexico Oil Conservation Commission, by counsel, for an Order extending the time to file their Statements of Appellate Issues in this matter, and the Court being duly advised, finds the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED that Appellants and Appellees shall have an additional ten (10) days to file with the clerk of the Court their Statements of Appellate Issues in this matter.

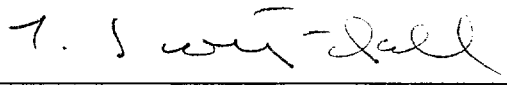
---

The Honorable Daniel Sanchez  
District Judge

Submitted by:

MILLER, STRATVERT & TORGERSON, P.A.

By

  
J. Scott Hall  
Post Office Box 1986  
Santa Fe, New Mexico 87501  
(505) 989-9614  
(505) 989-9857 (facsimile)

Attorneys for Appellants

Telephonically approved: September 8, 2000

Steve C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED MOTION TO EXTEND TIME  
TO FILE STATEMENTS OF APPELLATE ISSUES**

Appellants, Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation and Appellee, New Mexico Oil Conservation Commission, by counsel, hereby move the Court for an extension of time to file their Statements of Appellate Issues in this matter, on the following grounds:

1. This matter is an appeal from the decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.
2. The Record on Appeal Contents and the Title Page were filed by Appellee on August 8, 2000. Ordinarily, Appellants' Statement of Appellate Issues should be filed with the clerk of the court on September 11, 2000.

3. The record and issues on appeal in this matter are extensive and complex and counsel will require additional time to ensure all are fully addressed in the Statements of Appellate Issues.

4. Counsel for both Appellants and Appellee have agreed to entry of an order extending the time for filing the Statements of Appellate Issues by an additional ten (10) days.

WHEREFORE, for the foregoing reasons, Appellants Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation and the Appellee, New Mexico Oil Conservation Commission, move the Court enter its Order extending the time to file their Statements of Appellate Issues in this matter by an additional ten (10) days.

Respectfully submitted,

MILLER, STRATVERT & TORGERSO, P.A.

By

J. Scott Hall

Post Office Box 1986

Santa Fe, New Mexico 87504

(505) 989-9614

Attorneys for Pendragon Energy Partners, Inc., *et al.*

Telephonically approved: September 8, 2000

Steve C. Ross

Counsel for Appellee

Special Assistant Attorney General

Oil Conservation Commission

2040 S. Pacheco

Santa Fe, New Mexico 87505

(505) 827-8156

(505) 827-8177 (facsimile)

I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Motion was mailed  
to all counsel of record on  
this 8 day of September, 2000.

A handwritten signature in cursive script, appearing to read "J. Scott Hall", written over a horizontal line.

J. Scott Hall

**MILLER, STRATVERT & TORGERSON, P. A.**  
LAW OFFICES

RANNE B. MILLER  
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TELEPHONE: (505) 523-2481  
FACSIMILE: (505) 526-2215

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**FACSIMILE TRANSMISSION COVER SHEET**

DATE: September 8, 2000  
TO: Steve Ross, Esq.

FAX NO.: 827-8177

FROM: J. Scott Hall, Esq.

OPERATOR: Amanda Olsen

MESSAGE:

NUMBER OF PAGES INCLUDING COVER SHEET: 6

IF YOU DO NOT RECEIVE THE ENTIRE DOCUMENT, PLEASE CALL OUR SANTA FE OFFICE AS SOON AS POSSIBLE AT (505) 989-9614.

\*\*\*\*\*

THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS CONFIDENTIAL AND INTENDED SOLELY FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED ABOVE. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, AND COPYING, OR UNAUTHORIZED USE OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS FACSIMILE IN ERROR, PLEASE NOTIFY THE SENDER IMMEDIATELY BY TELEPHONE (COLLECT), AND RETURN THE FACSIMILE TO THE SENDER AT THE ABOVE ADDRESS VIA THE U. S. POSTAL SERVICE. THANK YOU.

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED MOTION TO EXTEND TIME  
TO FILE STATEMENTS OF APPELLATE ISSUES**

Appellants, Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation and Appellee, New Mexico Oil Conservation Commission, by counsel, hereby move the Court for an extension of time to file their Statements of Appellate Issues in this matter, on the following grounds:

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WHEREFORE, for the foregoing reasons, Appellants Pendragon Energy Partners, Inc., Pendragon Resources LP, and Edwards Energy Corporation and the Appellee, New Mexico Oil Conservation Commission, move the Court enter its Order extending the time to file their Statements of Appellate Issues in this matter by an additional ten (10) days.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By

J. Scott Hall

Post Office Box 1986

Santa Fe, New Mexico 87504

(505) 989-9614

Attorneys for Pendragon Energy Partners, Inc., *et al.*

Telephonically approved: September 8, 2000

Steve C. Ross

Counsel for Appellee

Special Assistant Attorney General

Oil Conservation Commission

2040 S. Pacheco

Santa Fe, New Mexico 87505

(505) 827-8156

(505) 827-8177 (facsimile)



I HEREBY CERTIFY that a  
true and correct copy of the  
foregoing Motion was mailed  
to all counsel of record on  
this 8 day of September, 2000.



J. Scott Hall

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellants,

vs.

No. D-0117-CV-2000-1449

NEW MEXICO OIL CONSERVATION  
COMMISSION,

Appellee.

**AGREED ORDER EXTENDING TIME TO FILE  
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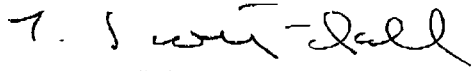
---

The Honorable Daniel Sanchez  
District Judge

Submitted by:

MILLER, STRATVERT & TORGERSON, P.A.

By

  
J. Scott Hall  
Post Office Box 1986  
Santa Fe, New Mexico 87501  
(505) 989-9614  
(505) 989-9857 (facsimile)

Attorneys for Appellants

Telephonically approved: September 8, 2000

Steve C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

**MILLER, STRATVERT & TORGERSON, P.A.**  
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PLEASE REPLY TO SANTA FE

August 30, 2000

Mr. Steve Ross, Esq.  
Assistant General Counsel  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation  
v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449


Dear Counsel:

Pursuant to your instructions, enclosed is a billing statement from our firm for copying the NMOCD record on the Pendragon appeal. Also enclosed is a completed vendor form that I trust you will direct to the appropriate party..

Thank you for your assistance.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

Enclosure(s) – as stated  
/ao

6304/20253/Ross ltr1.ao.doc

**MILLER, STRATVERT & TORGERSON, P. A.**  
**LAW OFFICES**

Telephone: (505) 842-1950  
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Post Office Box 25687

Albuquerque, NM 87125-0687

Facsimile: (505) 243-4408  
Federal I.D. : 850281527

Please Remit All Payments & Inquiries to the Albuquerque Office

New Mexico Oil Conservation Commission

August 15, 2000

Client: 006304

Matter: 020253

RE: Pendragon v. NMOCC

**DISBURSEMENTS**

<b>Date</b>	<b>Description of Disbursements</b>	<b>Amount</b>
08/03/2000	The Paper Tiger - Duplicating (Outside)	\$192.19
	Taxable Disbursements	\$192.19
	Total Disbursements	\$192.19
	Total Disbursements	\$192.19
	Gross Receipts Tax (6.4375%)	\$12.37
	Total Current Charges	\$204.56
	<b>Total Amount Due</b>	<b>\$204.56</b>

All amounts are due and payable within 30 days of invoice date.

A service charge of 1 1/2% per month (APR 18%) will apply to past due accounts.

## Vendor Form (Substitute W-9)

Substitute Form

Request for Taxpayer Identification  
Number (TIN) VerificationNew Mexico Department of  
Finance and Administration (DFA)

W-9

PRINT OR TYPE

Do Not Send to IRS

RETURN TO ADDRESS BELOW

Individual Name or  
Business Name

Miller, Stratvert &amp; Torgerson, PA

STATE OF NEW MEXICO  
DFA, FINANCIAL CONTROL DIV.  
P. O. BOX 25116  
SANTA FE, NEW MEXICO  
87503-5116

Doing Business As (dba) same

Address PO Box 25687

PHONE (505) 827-5071  
FAX (505) 827-3692

City Albuquerque

State NM

Zip 87125

Below, please place an 'X' beside the type of designation with which you conduct business with the State. Enter your taxpayer identification number (TIN) at the right.

Individual or Organization	Type of Taxpayer Identification Required	9 Digit Taxpayer Identification No.
<input type="checkbox"/> Individual	Individual's SSN (See Reverse Side)	---
<input type="checkbox"/> Sole Proprietorship	Owner's SSN or FEIN (See Reverse)	---
<input checked="" type="checkbox"/> Partnership Prof. Ass'n	Partnership's FEIN	8-5-0 2-8 1-5 2-7
<input type="checkbox"/> Estate/Trust	Legal Entity's FEIN	---
<input type="checkbox"/> Corporation	Corporation's FEIN	---
<input type="checkbox"/> Tax Exempt Including Medical Services Under Sec. 501(c)(3)	Organization's FEIN	---
<input type="checkbox"/> Governmental	Government Entity's FEIN	---
<input type="checkbox"/> Professional Corporation	Professional Corporation FEIN	---
<input type="checkbox"/> Providing a Medical Service Licensed Receptor Yes <input type="checkbox"/> No <input type="checkbox"/>		---

Under penalties of perjury, I certify that:

(1) The number shown on this form is my correct taxpayer identification number  
AND

(2) I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends or (c) the IRS has notified me that I am no longer subject to backup withholding (does not apply to real estate transactions, mortgage interest paid, the acquisition or abandonment of secured property, contribution to an individual retirement account (IRA), and payments other than interest and dividends)

Certification instructions — You must cross out item (2) above if you have been notified by IRS that you are currently subject to backup withholding because of underreporting interest or dividends on your tax return. (Also see Signing the Certification on the reverse side of this form.)

Name (Print or Type) J. SCOTT HALL

Title (Print or Type) DIRECTOR

Signature

J. Scott Hall

Date 8/8/96

Telephone (505) 989-9614

DO NOT WRITE BELOW THIS LINE

## AGENCY USE ONLY

Agency Name

Sent by

Division/Bureau

Office Location

## DFA USE ONLY

VEND

Addition

Change

1099

Yes

No

Action Completed By

Date

## **GALLEGOS LAW FIRM**

A Professional Corporation

460 St. Michael's Drive  
Building 300  
Santa Fe, New Mexico 87505  
Telephone No. (505) 983-6686  
Telefax No. (505) 986-0741 or (505) 986-1367

**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** August 15, 2000  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 827-8177  
**FROM:** J.E. Gallegos

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 2**

### **IMPORTANT**

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# GALLEGOS LAW FIRM

A Professional Corporation

460 St. Michael's Drive  
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Santa Fe, New Mexico 87505  
Telephone No. 505-983-6686  
Telefax No. 505-986-1367  
Telefax No. 505-986-0741

August 15, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS \*

## VIA HAND-DELIVERY

Chief Examiner Michael Stogner  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

## VIA HAND-DELIVERY

Marilyn S. Hebert.  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Application of Pendragon Energy Partners to Produce the Chaco 2R Well,  
NMOCD Case 12479

Dear Mr. Stogner and Ms. Hebert:

Yesterday, August 14, 2000, on behalf of Whiting Petroleum Corporation and Maralex Resources, Inc. we filed a Motion to Dismiss Or To Stay the above application. This application is an outgrowth of the cases heard by the Division and the Commission which resulted in Orders Nos. R-11133 and R-11133-A, *de novo*. The decision by the Commission has been appealed by Pendragon to the First Judicial District Court for Santa Fe County.

It is respectfully requested that the motion be set before August 24<sup>th</sup> or alternatively, the setting of this application on the August 24, 2000 docket be confined to hearing and deciding the motion to dismiss. If that is not the procedure, both sides will be put to considerable expense and the travel of witnesses from out-of-state to Santa Fe, all which could be an unnecessary expenditure of time and money if the motion is granted.

Sincerely,

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG:sa

cc: Scott Hall  
Stephen Ross, Esq.  
ioc: Michael J. Condon

\*New Mexico Board of Legal Specialization  
Recognized Specialist in the area of  
Natural Resources-Oil and Gas Law



AUG 11

**MILLER, STRATVERT & TORGERSON, P.A.**  
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PLEASE REPLY TO SANTA FE

August 10, 2000

Mr. Steve Ross, Esq.  
Assistant General Counsel  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation  
v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449

Dear Steve:

Thank you for the copy of the Title Page filed with the Court in the above matter.

I noted that the document listed T.H. McElvain Oil and Gas, LP as a potential party represented by Mr. Gallegos, assuming, of course, the Court grants leave for his clients to intervene in some capacity. Please note that T.H. McElvain was not a party of record in NMOCC Case No. 11996 and therefore would not be a proper party in the appeal in any event.

You may wish to file an amended Title Page to reflect this fact.

Very Truly Yours,

MILLER, STRATVERT & TORGERSON, P.A.



J. Scott Hall

JSH:ao

cc: J.E. Gallegos

6304/20253/Ross ltr.doc



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
**Oil Conservation Division**

August 9, 2000

J.E. Gallegos  
The Gallegos Law Firm  
460 St. Michael's Drive, Suite 300  
Santa Fe, New Mexico 87505

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504-1986

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Gentlemen,

I was able to file the Record on Appeal in this case yesterday, August 8, 2000. Enclosed please find endorsed copies of the Title Page and Record on Appeal Contents.

Please feel free to give me a call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

## OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505  
(505) 827-7133  
Fax: (505) 827-8177



**(PLEASE DELIVER THIS FAX)**

To: Amanda Olson

From: Stephen Ross

Date: 8-9-00

Number of Pages (Includes Cover Sheet) 2

Message: W-9 sheet for Pendragon reimbursement

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If you have any trouble receiving this, please call:  
(505) 827-7133**

## Vendor Form (Substitute W-9)

Substitute Form

Request for Taxpayer Identification  
Number (TIN) VerificationNew Mexico Department of  
Finance and Administration (DFA)

W-9

PRINT OR TYPE

Do Not Send to IRS

RETURN TO ADDRESS BELOW

Individual Name or  
Business Name

Doing Business As (dba)

Address

City

State

Zip

STATE OF NEW MEXICO  
DFA, FINANCIAL CONTROL DIV.  
P. O. BOX 25116  
SANTA FE, NEW MEXICO  
87503-5116  
PHONE (505) 827-5071  
FAX (505) 827-3692

Below, please place an 'X' beside the type of designation with which you conduct business with the State. Enter your taxpayer identification number (TIN) at the right.

Individual or Organization	Type of Taxpayer Identification Required	9 Digit Taxpayer Identification No.
<input type="checkbox"/> Individual	Individual's SSN (See Reverse Side)	-----
<input type="checkbox"/> Sole Proprietorship	Owner's SSN or FEIN (See Reverse)	-----
<input type="checkbox"/> Partnership	Partnership's FEIN	-----
<input type="checkbox"/> Estate/Trust	Legal Entity's FEIN	-----
<input type="checkbox"/> Corporation	Corporation's FEIN	-----
<input type="checkbox"/> Tax Exempt Including Medical Services Under Sec. 501(c)(3)	Organization's FEIN	-----
<input type="checkbox"/> Governmental	Government Entity's FEIN	-----
<input type="checkbox"/> Professional Corporation Providing a Medical Service Licensed Realtor Yes <input type="checkbox"/> No <input type="checkbox"/>	Professional Corporation FEIN	-----

Under penalties of perjury, I certify that:

(1) The number shown on this form is my correct taxpayer identification number

AND

(2) I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends or (c) the IRS has notified me that I am no longer subject to backup withholding (does not apply to real estate transactions, mortgage interest paid, the acquisition or abandonment of secured property, contribution to an individual retirement account (IRA), and payments other than interest and dividends)

**Certification instructions — You must cross out item (2) above if you have been notified by IRS that you are currently subject to backup withholding because of underreporting interest or dividends on your tax return. (Also see Signing the Certification on the reverse side of this form.)**

Name (Print or Type) \_\_\_\_\_ Title (Print or Type) \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_ Telephone (\_\_\_\_) \_\_\_\_\_

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Sent by \_\_\_\_\_  
Division/Bureau \_\_\_\_\_  
Office Location \_\_\_\_\_

**DFA USE ONLY**

VEND Addition \_\_\_\_\_ Change \_\_\_\_\_  
1099 Yes \_\_\_\_\_ No \_\_\_\_\_  
Action Completed By \_\_\_\_\_  
Date \_\_\_\_\_



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Jennifer A. Salisbury**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

August 8, 2000

J.E. Gallegos  
The Gallegos Law Firm  
460 St. Michael's Drive, Suite 300  
Santa Fe, New Mexico 87505

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504-1986

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Gentlemen,

I plan to be able to file the Record on Appeal in this case today or tomorrow. Enclosed is a copy of the Title Page and Record on Appeal Contents, for your files. I will send each of you an endorsed copy of both of these pleadings so you will be able to calendar submissions.

Please feel free to give me a call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "SR", written over a horizontal line.

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

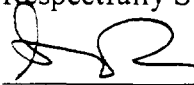
**TITLE PAGE**

COMES NOW Appellee, the New Mexico Oil Conservation Commission, by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and states that the following are the attorneys who represent the parties in this appeal:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614 (telephone)  
(505) 989-9857 (facsimile)  
On behalf of Appellants Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505  
(505) 983-6686 (telephone)  
(505) 986-1367 (facsimile)  
On behalf of Whiting Petroleum Corp., Maralex Resources Inc. and T.H. McElvain Oil and Gas LP

Respectfully Submitted.



---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 31<sup>st</sup> day of July, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505



---

Stephen C. Ross



**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**RECORD ON APPEAL CONTENTS**

COMES NOW Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and files the following with the Clerk of the Court as the Record on Appeal in the above-captioned matter:

1. Transcript of the hearings conducted in case number 11996 (hearings of August 12, 13 and August 19-20, 1999), stenographically recorded (vols. I-V). Record on Appeal (hereinafter "RA") pages 1-1617.
2. An index of the witness testimony and exhibits introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 1618-1649.
3. Volume 1 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 1650-2008.
4. Volume 2 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 2009-2350.

5. Volume 3 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 2351-2710.

6. Volume 4 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 2711-2889.

7. Volume 5 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 2890-3246.

8. Volume 6 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3247-3302.

9. Volume 7 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3303-3392.

10. Volume 8 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3393-3576.

11. Volume 9 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3577-3646.

12. Volume 10 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3647-3831.

13. Volume 11 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3832-3956.

14. Volume 12 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 3957-4137.

15. Volume 13 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 4138-4275.

16. Copies of the below-listed papers and pleadings filed in the proceedings of the agency:

- a) Letter of J. Scott Hall (Pendragon), February 17, 1999 (RA at 4276);
- b) Application for Hearing *de novo* (Pendragon), February 18, 1999 and letter of J. Scott Hall (RA at 4279);
- c) Subpoenas of Schlumberger Technology Corporation (2), B.J. Services Company USA (2) and Halliburton Energy Services (the Commission), undated (RA at 4283);
- d) Application for Hearing *de novo* as to Limited Issues (Whiting/Maralex), February 23, 1999 (RA at 4301);
- e) Letter of Michael J. Condon (Whiting/Maralex), February 23, 1999 (RA at 4303);
- f) Letter of J. Scott Hall (Pendragon), February 24, 1999 (RA at 4305);
- g) Subpoenas (4) of Maralex Resources (the Commission), February 25, 1999 (RA at 4307);
- h) Letter of Marilyn S. Hebert (the Commission), February 26, 1999 (RA at 4319);
- i) Motion for Partial Stay of Order No. R-11133 (Pendragon) and letter of transmittal of same, March 1, 1999 (RA at 4320);
- j) Motion for Stay of Proceedings and To Quash (Whiting/Maralex), March 3, 1999 (RA at 4378);
- k) Response to Motion for Stay of Proceedings etc. (Pendragon) and letter transmitting same, March 11, 1999 (RA at 4406);
- l) Response to Motion for Partial Stay of Order No. R-11133 (Whiting/Maralex), March 16, 1999 (RA at 4453);
- m) Letter of J. Scott Hall (Pendragon), March 18, 1999 (RA at 4481);
- n) Letter of Michael J. Condon (Whiting/Maralex), March 24, 1999 (RA at 4483);
- o) Letter of Lori Wrotenbery denying Motion for Partial Stay (the Commission), March 25, 1999 (RA at 4485);

- p) Letter of J. Scott Hall (Pendragon), March 26, 1999 (RA at 4486);
- q) Proposed Issues for Pre-Hearing Conference (Whiting/Maralex), March 30, 1999 (RA at 4488);
- r) Memorandum of Marilyn S. Hebert (the Commission), April 5, 1999 (RA at 4572);
- s) Statement in Support of Use of Discovery by Deposition (Whiting/Maralex), April 9, 1999 (RA at 4575);
- t) Memorandum Brief on Discovery Issues (Pendragon) and letter transmitting same, April 12, 1999 (RA at 4583);
- u) Motion to Conduct Reservoir Tests (Pendragon), proposed order, and letter of J. Scott Hall (Pendragon), April 22, 1999 (RA at 4594);
- v) Letter of J.E. Gallegos (Whiting/Maralex), April 26, 1999 (RA at 4625);
- w) Letter of J. Scott Hall (Pendragon), May 4, 1999 (RA at 4626);
- x) Response to Motion to Conduct Reservoir Tests (Whiting/Maralex), May 6, 1999 (RA at 4627);
- y) Affidavit of Bradley M. Robinson (Whiting/Maralex), May 10, 1999 (RA at 4632);
- z) Scheduling Order (the Commission), May 11, 1999 (RA at 4643);
- aa) Reply to the Motion to Conduct Reservoir Tests (Pendragon) and letter transmitting same, May 18, 1999 (RA at 4645);
- bb) Letter of J. Scott Hall (Pendragon), May 18, 1999 (RA at 4673);
- cc) Letter of J. Scott Hall (Pendragon), May 18, 1999 (RA at 4674);
- dd) Order Allowing Reservoir Pressure Testing (the Commission), May 19, 1999 (RA at 4676);
- ee) Letter of J. Scott Hall (Pendragon), May 21, 1999 (RA at 4678);
- ff) Letter of J.E. Gallegos (Whiting/Maralex), May 21, 1999 (RA at 4680);
- gg) Motion to Require comprehensive and Fairly Designed Testing on Connection With Reservoir Pressure Tests (Whiting/Maralex), June 1, 1999 (RA at 4682);

- bbb) Response in Opposition to Motion to Compel Compliance With Subpoena (Whiting/Maralex), June 15, 1999 (RA at 4774);
- ccc) Letter of J.E. Gallegos (Whiting/Maralex), June 15, 1999 (RA at 4798);
- ddd) Letter of J. Scott Hall (Pendragon), June 15, 1999 (RA at 4800);
- eee) Letter of J. Scott Hall (Pendragon), June 16, 1999 (RA at 4806);
- fff) Letter of J. Scott Hall (Pendragon), June 16, 1999 (RA at 4808);
- ggg) Letter of J.E. Gallegos (Whiting/Maralex), June 16, 1999 (RA at 4810);
- hhh) Response to Motion in Limine (Whiting/Maralex), June 17, 1999 (RA at 4811);
- iii) Letter of Lori Wrotenbery denying Motion in Limine (the Commission), June 18, 1999 (RA at 4824);
- jjj) Letter of J. Scott Hall (Pendragon), June 22, 1999 (RA at 4825);
- kkk) Certificate of Service and letter of J. Scott Hall transmitting same (July 28, 1999) (RA at 4828);
- lll) Exhibit List (Whiting/Maralex), June 28, 1999 (RA at 4831);
- mmm) Letter of Michael J. Condon (Whiting/Maralex), July 16, 1999 (RA at 4837);
- nnn) Letter of Michael Condon (Whiting/Maralex), July 28, 1999 (RA at 4838);
- ooo) Letter of J. Scott Hall (Pendragon), August 2, 1999 (RA at 4840);
- ppp) Letter of J. Scott Hall (Pendragon), August 2, 1999 (RA at 4841);
- qqq) Letter of J. Scott Hall (Pendragon), August 6, 1999 (RA at 4842);
- rrr) Prehearing Statement (Pendragon), August 6, 1999 (RA at 4844);
- sss) Objections and Motion to Strike Testimony (Pendragon) and letter transmitting same, August 12, 1999 (RA at 4849);
- ttt) Prehearing Statement (Whiting/Maralex), August 9, 1999 (RA at 4861);
- uuu) Stipulation of Facts (the parties), August 10, 1999 (RA at 4895);

vvv) Response to Motion to Pendragon's Objections and Response to Motion to Strike (Whiting/Maralex), August 11, 1999 (RA at 4902);

www) Motion to Strike (Whiting/Maralex), August 11, 1999 (RA at 4921);

xxx) Letter of Michael J. Condon (Whiting/Maralex), August 11, 1999 (RA at 4923);

yyy) Letter of J. Scott Hall (Pendragon), August 11, 1999 (RA at 4924);

zzz) Revised Exhibit List (Whiting/Maralex), August 12, 1999 (RA at 4925);

aaaa) Letter of Amanda Olson (Pendragon), August 24, 1999 (RA at 4933);

bbbb) Letter of Caroline Woods (Whiting/Pendragon), September 8, 1999 (RA at 4934);

cccc) Letter of Michael J. Condon (Whiting/Maralex), September 30, 1999 (RA at 4936);

dddd) Letter of J. Scott Hall (Pendragon), October 26, 1999 (RA at 4937);

eeee) Letter of Michael J. Condon (Whiting/Maralex), October 29, 1999 (RA at 4938);

ffff) Letter of J. Scott Hall (Pendragon), November 16, 1999 (RA at 4952);

gggg) Letter of J. Scott Hall (Pendragon), November 17, 1999 (RA at 4953);

hhhh) Memorandum in lieu of Closing Statement (Whiting/Maralex), November 29, 1999 (RA at 4954);

iiii) Proposed Order of the Commission (Pendragon), and letter transmitting same, November 29, 1999 (RA at 4973);

jjjj) Proposed Orders of the Commission (Whiting/Maralex) and letter transmitting same, November 29, 1999 (RA at 5029);

kkkk) Closing Statement Memorandum (Pendragon) and letter transmitting same, November 30, 1999 (RA at 5105);

llll) Letter of J. Scott Hall (Pendragon), November 30, 1999 (RA at 5128);

mmmm) Letter of J.E. Gallegos (Whiting/Maralex), December 3, 1999 (RA at 5129);

nnnn) Letter of J. Scott Hall (Pendragon), December 6, 1999 (RA at 5144);

oooo) Application for Rehearing, May 16, 2000 (RA at 5148); and

pppp) Response to Application for Rehearing (Whiting/Maralex), May 24, 2000 (RA at 5161).

3. A copy of the Commission's Order No. R-11133-A in case number 11996 (RA at 5174-5187).

4. Transcripts of the hearings of August 26, 1999, March 24, 2000 and April 26, 2000, stenographically recorded (RA pages 5188 through 5206).

**Respectfully Submitted:**



\_\_\_\_\_  
Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 8th day of August, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505



\_\_\_\_\_  
Stephen C. Ross

# GALLEGOS LAW FIRM

A Professional Corporation

460 St. Michael's Drive  
Building 300  
Santa Fe, New Mexico 87505  
Telephone No. 505-983-6686  
Telefax No. 505-986-1367  
Telefax No. 505-986-0741

August 7, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS \*

## **VIA HAND-DELIVERY**

The Honorable Daniel Sanchez  
Santa Fe Judicial Complex  
Santa Fe, New Mexico 87501

Re: Pendragon Energy Resources Inc. et al. v. New Mexico Oil Conservation Commission; Cause No. D-0117-CV-2000-1449

Dear Judge Sanchez:

In accordance with the "package procedure" specified by LR-1-306G. please find enclosed copies of the following:

1. Motion to Intervene and for Consolidation with Supporting Authorities;
2. Response to Whiting's Motion to Intervene;
3. Reply Memorandum in Support of Motion to Intervene and for Consolidation; and
4. Request for Hearing.

I have also enclosed the original and three copies of a Notice of Hearing. We would appreciate the Court's indulgence in scheduling a 30 minute hearing on this matter at the earliest available date.

Very truly yours,

GALLEGOS LAW FIRM, P.C.

By   
J. E. GALLEGOS

JEG:sa

Enclosures

fxc: J. Scott Hall  
Steve Ross  
John Hazlett  
Mickey O'Hare  
Larry Van Ryan  
ioc: Michael J. Condon

\* New Mexico Board of Legal Specialization  
Recognized Specialist in the area of  
Natural Resources-Oil and Gas Law





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Jennifer A. Salisbury**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

August 3, 2000

The Honorable Daniel A. Sanchez  
First Judicial District Court  
P.O. Box 2268  
Santa Fe, New Mexico 87504

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Judge Sanchez,

Please find enclosed a Motion and proposed Order extending the time for the State to file the Record on Appeal in this matter an additional seven days. Counsel of record (including counsel for intervenors) agree with entry of the proposed Order.

If the Order is acceptable, would you be so kind as to sign it and file the Motion and Order with the clerk of the court? Would you also ask the clerk of the court to forward an endorsed copy of each document to counsel of record?

Thank you very much for your assistance.

Sincerely,

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

Enclosures as noted

Cc: J. Scott Hall, Esq.  
J.E. Gallegos, Esq.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file the record on appeal in this matter, on the following grounds:

1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.
2. The Notice of Appeal was filed by Appellants on June 13, 2000. Ordinarily, the Record on Appeal (hereinafter referred to as "the Record") should be filed with the clerk of the court on July 13, 2000.
3. By Order of the Court entered July 17, 2000 the time to file the record was extended to August 3, 2000.
4. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large

engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

5. Counsel for Appellant, counsel for Appellee and counsel for intervenors have conferred concerning the Record to insure that it is complete and accurate when filed with the Court and to coordinate its duplication. These efforts continue and, because of the size of the Record, cannot be completed by the deadline for filing. However, at this time, the Record is approximately 75% compiled and copied and counsel anticipate being able to file the Record with the Court no later than August 10, 2000.

6. Counsel of record agree to entry of an order extending the time for filing the Record an additional seven (7) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional seven (7) days to August 10, 2000.

Respectfully Submitted.



---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 3rd day of August, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
The Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505



---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional seven (7) days to file with the clerk of the court the Record on Appeal in this matter. The Record on Appeal shall be filed no later than August 10, 2000.

---

The Honorable Daniel A. Sanchez

Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, August 3, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614  
(505) 989-9857

Telephonically approved, August 2, 2000:

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Michael J. Condon  
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QTY	DESCRIPTION				PRICE	AMOUNT
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1	1 1/2 1.078/3rd set				5	7.54
2	2 1/2 1.5 11x17				15	1.50
3	2 1/2 1.5 11x17				100	9.00
8	12x36				250	20.00
3	18x24				200	4.00
8	paste-ups				200	16.00
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To: J.E. Gallegos, J. Scott Hall

From: Stephen Ross

Date: 8-2-2000

Number of Pages (Includes Cover Sheet) 5

Message: Please review attached Motion and

Order and approve. This motion and

order are precautionary. We believe we can

get the record completed, indexed and copied

this week, but a few items remain to be copied.

SR

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file the record on appeal in this matter, on the following grounds:

1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.

2. The Notice of Appeal was filed by Appellants on June 13, 2000. Ordinarily, the Record on Appeal (hereinafter referred to as "the Record") should be filed with the clerk of the court on July 13, 2000.

3. By Order of the Court entered July 17, 2000 the time to file the record was extended to August 3, 2000.

4. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large

engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

5. Counsel for Appellant, counsel for Appellee and counsel for intervenors have conferred concerning the Record to insure that it is complete and accurate when filed with the Court and to coordinate its duplication. These efforts continue and, because of the size of the Record, cannot be completed by the deadline for filing. However, at this time, the Record is approximately 75% compiled and copied and counsel anticipate being able to file the Record with the Court no later than August 10, 2000.

6. Counsel for Appellants has agreed to entry of an order extending the time for filing the Record an additional seven (7) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional seven (7) days to August 10, 2000.

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of August, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
The Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505

\_\_\_\_\_  
Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel of record,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional seven (7) days to file with the clerk of the court the Record on Appeal in this matter. The Record on Appeal shall be filed no later than August 10, 2000.

---

The Honorable Daniel A. Sanchez

Submitted by:

---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, August 2, 2000:

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August 2, 2000

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505

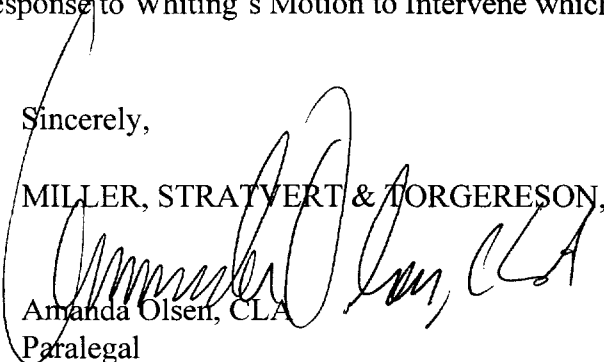
Re: Pendragon Energy Partners, Inc., Pendragon Resources, LP, & Edwards Energy Corp.  
v. New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Mr. Ross and Mr. Gallegos:

Enclosed is a copy of our Response to Whiting's Motion to Intervene which we have filed with the District Court this date.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

6304/20253/Gallegos & Ross 1ltr.doc



# OIL CONSERVATION DIVISION

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To: Amanda Olson

From: Stephen Ross

Date: 8-1-00

Number of Pages (Includes Cover Sheet) 11

Message: Pedragon Record Index (draft)

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**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**RECORD ON APPEAL CONTENTS**

COMES NOW Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record Stephen C. Ross, Special Assistant Attorney General, pursuant to Rule 1-074(H) NMRA (2000), and files the following with the Clerk of the Court as the Record on Appeal in the above-captioned matter:

1. Transcript of the hearings conducted in case number 11996 (hearings of August 12, 13 and August 19-20, 1999), stenographically recorded (vols. I-V). Record on Appeal (hereinafter "RA") pages 1-1617.
2. An index of the witness testimony and exhibits introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 1618-1649.
3. Volume 1 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 1618-1649.
4. Volume 2 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages 1650- \_\_\_\_.

5. Volume 3 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

6. Volume 4 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

7. Volume 5 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

8. Volume 6 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

9. Volume 7 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

10. Volume 8 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

11. Volume 9 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

12. Volume 10 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

13. Volume 11 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

14. Volume 12 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

15. Volume 13 of exhibits and prefiled testimony introduced during the hearings of August 12, 13, 19 and 20, 1999. RA pages \_\_\_\_ .

16. A title page containing the names and addresses of counsel for each party.

RA pages \_\_\_\_ .

17. Copies of the below-listed papers and pleadings filed in the proceedings of the agency:

- a) Letter of J. Scott Hall (Pendragon), February 17, 1999 (RA at \_\_\_\_ );
- b) Application for Hearing *de novo* (Pendragon), February 18, 1999 (RA at \_\_\_\_ );
- c) Subpoenas of Schlumberger Technology Corporation (2), B.J. Services Company USA (2) and Halliburton Energy Services (the Commission), undated (RA at \_\_\_\_ );

- d) Letter of J. Scott Hall (Pendragon), February 18, 1999 (RA at \_\_\_\_ );
- e) Application for Hearing *de novo* as to Limited Issues (Whiting/Maralex), February 23, 1999 (RA at \_\_\_\_ );
- f) Letter of Michael J. Condon (Whiting/Maralex), February 23, 1999 (RA at \_\_\_\_ );
- g) Letter of T. Scott Hall (Whiting/Maralex), February 24, 1999 (RA at \_\_\_\_ );
- h) Subpoenas (4) of Maralex Resources (the Commission), February 25, 1999 (RA at \_\_\_\_ );
- i) Letter of Marilyn S. Hebert (the Commission), February 26, 1999 (RA at \_\_\_\_ );
- j) Motion for Partial Stay of Order No. R-11133 (Pendragon) and letter of transmittal of same, March 1, 1999 (RA at \_\_\_\_ );
- k) Motion for Stay of Proceedings and To Quash (Whiting/Maralex), March 3, 1999 (RA at \_\_\_\_ );
- l) Response to Motion for Stay of Proceedings etc. (Pendragon) and letter transmitting same, March 11, 1999 (RA at \_\_\_\_ );
- m) Response to Motion for Partial Stay of Order No. R-11133 (Whiting/Maralex), March 16, 1999 (RA at \_\_\_\_ );
- n) Letter of J. Scott Hall (Whiting/Maralex), March 18, 1999 (RA at \_\_\_\_ );
- o) Letter of Michael J. Condon (Whiting/Maralex), March 24, 1999 (RA at \_\_\_\_ );
- p) Letter of Lori Wrotenbery denying Motion for Partial Stay (the Commission), March 25, 1999 (RA at \_\_\_\_ );
- q) Letter of J. Scott Hall (Pendragon), March 26, 1999 (RA at \_\_\_\_ );
- r) Proposed Issues for Pre-Hearing Conference (Whiting/Maralex), March 30, 1999 (RA at \_\_\_\_ );
- s) Memorandum of Marilyn S. Hebert (the Commission), April 5, 1999 (RA at \_\_\_\_ );

- t) Statement in Support of Use of Discovery by Deposition (Whiting/Maralex), April 9, 1999 (RA at \_\_\_\_ );
- u) Memorandum Brief on Discovery Issues (Pendragon) and letter transmitting same, April 12, 1999 (RA at \_\_\_\_ );
- v) Motion to Conduct Reservoir Tests (Pendragon), proposed order, and letter of J. Scott Hall (Pendragon), April 22, 1999 (RA at \_\_\_\_ );
- w) Letter of J.E. Gallegos (Whiting/Maralex), April 26, 1999 (RA at \_\_\_\_ );
- x) Letter of J. Scott Hall (Pendragon), May 4, 1999 (RA at \_\_\_\_ );
- y) Response to Motion to Conduct Reservoir Tests (Whiting/Maralex), May 6, 1999 (RA at \_\_\_\_ );
- z) Affidavit of Bradley M. Robinson (Whiting/Maralex), May 10, 1999 (RA at \_\_\_\_ );
- aa) Scheduling Order (the Commission), May 11, 1999 (RA at \_\_\_\_ );
- bb) Reply to the Motion to Conduct Reservoir Tests (Pendragon) and letter transmitting same, May 18, 1999 (RA at \_\_\_\_ );
- cc) Letter of J. Scott Hall (Pendragon), May 18, 1999 (RA at \_\_\_\_ );
- dd) Letter of J. Scott Hall (Pendragon), May 18, 1999 (RA at \_\_\_\_ );
- ee) Order Allowing Reservoir Pressure Testing (the Commission), May 19, 1999 (RA at \_\_\_\_ );
- ff) Letter of J. Scott Hall (Pendragon), May 21, 1999 (RA at \_\_\_\_ );
- gg) Letter of J.E. Gallegos (Whiting/Maralex), May 21, 1999 (RA at \_\_\_\_ );
- hh) Motion to Require comprehensive and Fairly Designed Testing on Connection With Reservoir Pressure Tests (Whiting/Maralex), June 1, 1999 (RA at \_\_\_\_ );
- ii) Letter of J. Scott Hall (Pendragon), June 2, 1999 (RA at \_\_\_\_ );
- jj) Response to Motion to Require Comprehensive and Fairly Designed Testing (Pendragon), letters of Amanda Olson of June 3 and 4, 1999 (RA at \_\_\_\_ );
- kk) Motion to Schedule Witness Presentation (Pendragon) and letter transmitting same, June 4, 1999 (RA at \_\_\_\_ );

- ll) Witness List (Pendragon), June 4, 1999 (RA at \_\_\_\_ );
- mm) Letter of J. Scott Hall (Whiting/Maralex), June 4, 1999 (RA at \_\_\_\_ );
- nn) Witness List (Whiting/Maralex), June 7, 1999 (RA at \_\_\_\_ );
- oo) Letter of J.E. Gallegos (Whiting/Maralex), June 7, 1999 (RA at \_\_\_\_ );
- pp) Letter of J. Scott Hall (Pendragon), June 8, 1999 (RA at \_\_\_\_ );
- qq) Request for Production to Whiting/Maralex (Pendragon) and letter transmitting same, June 8, 1999 (RA at \_\_\_\_ );
- rr) Request for Production to Maralex (Pendragon), June 8, 1999 (RA at \_\_\_\_ );
- ss) Letter of J. Scott Hall (Pendragon), June 8, 1999 (RA at \_\_\_\_ );
- tt) Letter of J. Scott Hall (Pendragon), June 8, 1999 (RA at \_\_\_\_ );
- uu) Letter of J.E. Gallegos (Whiting/Maralex), June 8, 1999 (RA at \_\_\_\_ );
- vv) Motion in Limine (Pendragon) and letter transmitting same, June 10, 1999 (RA at \_\_\_\_ );
- ww) Letter of J.E. Gallegos (Whiting/Maralex), June 10, 1999 (RA at \_\_\_\_ );
- xx) Motion to Compel Compliance With Subpoena (Pendragon), June 11, 1999 (RA at \_\_\_\_ );
- yy) Letter of J. Scott Hall (Pendragon), June 11, 1999 (RA at \_\_\_\_ );
- zz) Response to Request for Production (Maralex), June 13, 1999 (RA at \_\_\_\_ );
- aaa) Response to Request for Production (Whiting), June 13, 1999 (RA at \_\_\_\_ );
- bbb) Letter of J. Scott Hall (Pendragon), June 15, 1999 (RA at \_\_\_\_ );
- ccc) Response in Opposition to Motion to Compel Compliance With Subpoena (Whiting/Maralex), June 15, 1999 (RA at \_\_\_\_ );
- ddd) Letter of J.E. Gallegos (Whiting/Maralex), June 15, 1999 (RA at \_\_\_\_ );
- eee) Letter of J. Scott Hall (Pendragon), June 15, 1999 (RA at \_\_\_\_ );

- fff) Letter of J. Scott Hall (Pendragon), June 16, 1999 (RA at \_\_\_\_ );
- ggg) Letter of J. Scott Hall (Pendragon), June 16, 1999 (RA at \_\_\_\_ );
- hhh) Letter of J.E. Gallegos (Whiting/Maralex), June 16, 1999 (RA at \_\_\_\_ );
- iii) Response to Motion in Limine (Whiting/Maralex), June 17, 1999 (RA at \_\_\_\_ );
- jjj) Letter of Lori Wrotenbery denying Motion in Limine (the Commission), June 18, 1999 (RA at \_\_\_\_ );
- kkk) Letter of J. Scott Hall (Pendragon), June 22, 1999 (RA at \_\_\_\_ );
- lll) Exhibit List (Whiting/Maralex), June 28, 1999 (RA at \_\_\_\_ );
- mmm) Letter of Michael J. Condon (Whiting/Maralex), July 16, 1999 (RA at \_\_\_\_ );
- nnn) Certificate of Service and letter of J. Scott Hall transmitting same (July 28, 1999) (RA at \_\_\_\_ );
- ooo) Letter of Michael Condon (Whiting/Maralex), July 28, 1999 (RA at \_\_\_\_ );



- ppp) Letter of J. Scott Hall (Pendragon), August 2, 1999 (RA at \_\_\_\_ );
- qqq) Letter of J. Scott Hall (Pendragon), August 2, 1999 (RA at \_\_\_\_ );
- rrr) Letter from J. Scott Hall (Pendragon), August 6, 1999 (RA at \_\_\_\_ );
- sss) Prehearing Statement (Pendragon), August 6, 1999 (RA at \_\_\_\_ );
- ttt) Objections and Motion to Strike Testimony (Pendragon) and letter transmitting same, August 12, 1999 (RA at \_\_\_\_ );
- uuu) Prehearing Statement (Whiting/Maralex), August 9, 1999 (RA at \_\_\_\_ );
- vvv) Stipulation of Facts (the parties), August 10, 1999 (RA at \_\_\_\_ );
- www) Response to Motion to Pendragon's Objections and Response to Motion to Strike (Whiting/Maralex), August 11, 1999 (RA at \_\_\_\_ );
- xxx) Motion to Strike (Whiting/Maralex), August 11, 1999 (RA at \_\_\_\_ );
- yyy) Letter of Michael J. Condon (Whiting/Maralex), August 11, 1999 (RA at \_\_\_\_ );
- zzz) Letter from J. Scott Hall (Pendragon), August 11, 1999 (RA at \_\_\_\_ );
- aaaa) Revised Exhibit List (Whiting/Maralex), August 12, 1999 (RA at \_\_\_\_ );
- bbbb) Letter of Amanda Olson (Pendragon), August 24, 1999 (RA at \_\_\_\_ );
- cccc) Letter of Caroline Woods (Whiting/Pendragon), September 8, 1999 (RA at \_\_\_\_ );
- dddd) Letter of Michael J. Condon (Whiting/Maralex), September 30, 1999 (RA at \_\_\_\_ );
- eeee) Letter of J. Scott Hall (Pendragon), October 26, 1999 (RA at \_\_\_\_ );
- ffff) Letter of Michael J. Condon (Whiting/Maralex), October 29, 1999 (RA at \_\_\_\_ );
- gggg) Letter of J. Scott Hall (Pendragon), November 16, 1999;
- hhhh) Letter of J. Scott Hall (Pendragon), November 17, 1999;

iiii)Memorandum in lieu of Closing Statement (Whiting/Maralex), November 29, 1999;

jjjj)Proposed Order of the Commission (Pendragon), and letter transmitting same, November 29, 1999;

kkkk) Proposed Orders of the Commission (Whiting/Maralex) and letter transmitting same, November 29, 1999;

llll)Closing Statement Memorandum (Pendragon) and letter transmitting same, November 30, 1999;

mmmm) Letter of J. Scott Hall (Pendragon), November 30, 1999;

nnnn) Letter of J.E. Gallegos (Whiting/Maralex), December 3, 1999;

oooo) Letter of J. Scott Hall (Pendragon), December 3, 1999;

pppp) Letter of J. Scott Hall (Pendragon), December 6, 1999;

qqqq) Application for Rehearing, May 16, 2000;

rrrr) Response to Application for Rehearing (Whiting/Maralex), May 24, 2000;  
and

ssss) transcripts of hearings of August 26, 1999, March 24, 2000 and April 26, 2000, stenographically recorded.

3. A copy of the Commission's Order No. R-11133-A in case number 11996;

4. Exhibits introduced during the hearing conducted on August 12-13 and August 19-20, 1999 (exhibit vols. 1 through 13); and

6. Dockets of the Commission relating to Case No. 11996.

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of July, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505

---

Stephen C. Ross

**MILLER, STRATVERT & TORGERSON, P.A.**  
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GARY RISLEY

OF COUNSEL

WILLIAM K. STRATVERT  
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PLEASE REPLY TO SANTA FE

July 13, 2000

**BY HAND-DELIVERY**

Mr. Steve Ross, Esq.  
Assistant General Counsel  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Pendragon Energy Partners, Pendragon Resources & Edwards Energy Corporation  
v. New Mexico Oil Conservation Commission; # D-0117-CV-2000-1449

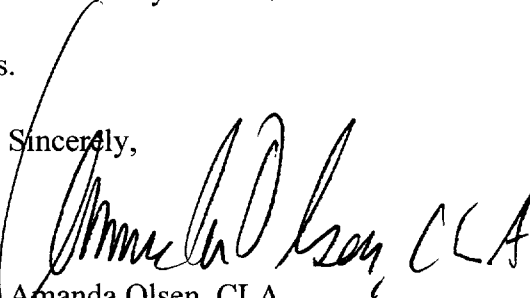
Dear Counsel:

Along with this letter, I am forwarding the following documents and materials to you:

1. Five disks containing the August 12 to 21, 1999 NMOCC hearing, saved on Word;
2. Three oversized copies of the exhibit to March 1, 1999 Motion of Partial Stay of Order No. R-11133 (Pendragon); listed as document 2j on the Record on Appeals Contents;
3. Two extra copies of Pendragon's Exhibits Volumes II and III; and
4. One extra copy of Pendragon's Testimony Volume I.

Please note that disks have the page numbers.

Sincerely,

  
Amanda Olsen, CLA  
Paralegal

Enclosure(s) – as stated  
/ao



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Jennifer A. Salisbury**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

July 12, 2000

The Honorable Daniel A. Sanchez  
First Judicial District Court  
P.O. Box 2268  
Santa Fe, New Mexico 87504

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Judge Sanchez,

Please find enclosed a Motion and proposed Order extending the time for the State to file the Record on Appeal in this matter. Counsel for Appellant agrees with entry of the proposed Order.

If the Order is acceptable, would you be so kind as to sign it and file the Motion and Order with the clerk of the court? Would you also ask the clerk of the court to forward an endorsed copy of each document to counsel of record?

Thank you very much for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen C. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

Enclosures as noted

Cc: J. Scott Hall, Esq.

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file the record on appeal in this matter, on the following grounds:

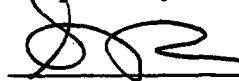
1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.
2. The Notice of Appeal was filed by Appellants on June 13, 2000. Ordinarily, the Record on Appeal (hereinafter referred to as "the Record") should be filed with the clerk of the court on July 13, 2000.
3. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

4. Counsel for Appellant and counsel for Appellee have conferred concerning the Record, both to insure that it is complete and accurate when filed with the Court, and to coordinate copying of the Record so that both parties have a copy. These efforts continue and, because of the size of the Record, cannot be completed by the deadline for filing.

5. Counsel for Appellants has agreed to entry of an order extending the time for filing the Record an additional twenty-one (21) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional twenty-one (21) days

Respectfully Submitted.



Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 12~~th~~ day of July, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504



Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel for Appellants,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional twenty-one (21) days to file with the clerk of the court the Record on Appeal in this matter.

---

The Honorable Daniel A. Sanchez



Submitted by:



---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, July 12, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
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Santa Fe, New Mexico 87504  
(505) 989-9614  
(505) 989-9857

**MILLER, STRATVERT & TORGERSON, P.A.**

LAW OFFICES

OIL CONSERVATION DIV.

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OF COUNSEL

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PLEASE REPLY TO SANTA FE

July 12, 2000

Attention: Sandy Miera  
The Honorable Daniel A. Sanchez  
District Judge, Division VII  
First Judicial District Court  
Santa Fe County Judicial Complex  
Santa Fe, New Mexico 87501

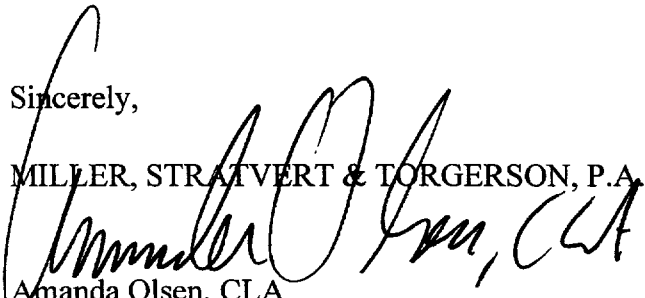
Re: Pendragon Energy Partners, Pendragon Resources, LP, & Edwards Energy Corp. v.  
New Mexico Oil Conservation Commission; No. D-0117-CV-2000-1449

Dear Ms. Miera:

Enclosed are a Request for Setting and a Notice Hearing, requesting that the Court set a status conference in the above matter at its earliest convenience. Also enclosed are self-addressed stamped envelopes to directed to counsel. When setting the conference, please keep in mind that Mr. Ross has advised me that he will be available neither on July 17<sup>th</sup> at 1:30 p.m. nor on July 20 and 26, all day. Thank you for your assistance.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao

Enclosure(s) – as stated

cc: Steve Ross, Esq. (with enclosures)

6304/20253/D Sanchez ltr.ao.doc

# OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505  
(505) 827-7133  
Fax: (505) 827-8177



**(PLEASE DELIVER THIS FAX)**

**To:** J. Scott Hall

**From:** Stephen C. Ross

**Date:** 7-12-00

**Number of Pages (Includes Cover Sheet)** 5

**Message:** Please approve form of order.

If acceptable, I'll send an endorsed copy.

Thanks! SCR

**If you have any trouble receiving this, please call:  
(505) 827-7133**

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**MOTION TO EXTEND TIME TO FILE RECORD ON APPEAL**

COMES NOW the Appellee, the New Mexico Oil Conservation Commission (hereinafter referred to as "the Commission"), by and through its attorney of record, Stephen C. Ross, Special Assistant Attorney General, and hereby moves the Court for an extension of time to file the record on appeal in this matter, on the following grounds:

1. This matter is an appeal from decision of the New Mexico Oil Conservation Commission pursuant to NMSA 1978, §§ 39-3-1.1 and 70-2-25(B) (Repl. 1999) and Rule 1-074 NMRA.

2. The Notice of Appeal was filed by Appellants on June 13, 2000. Ordinarily, the Record on Appeal (hereinafter referred to as "the Record") should be filed with the clerk of the court on July 13, 2000.

3. The Record on Appeal is very extensive and contains many thousands of pages and dozens of original exhibits. Some of the exhibits used in the hearing are large engineering charts that are difficult to duplicate. The transcript of the hearing alone is more than 1,600 pages.

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5. Counsel for Appellants has agreed to entry of an order extending the time for filing the Record an additional twenty-one (21) days.

WHEREFORE, for the foregoing reasons, Appellee New Mexico Oil Conservation Commission moves the Court for an Order extending the time to file the record on appeal in this matter for an additional twenty-one (21) days

Respectfully Submitted.

---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this \_\_\_\_ day of July, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

---

Stephen C. Ross

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ORDER EXTENDING TIME TO FILE RECORD ON APPEAL**

THIS MATTER having come before the court upon motion of Appellee, the New Mexico Oil Conservation Commission, by and through counsel of record, for an Order extending the time to file the Record on Appeal in this matter, and the Court having reviewed the pleadings and noted concurrence of counsel for Appellants,

FINDS that the motion is well-taken and should be granted.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Appellee, the New Mexico Oil Conservation Commission, shall have an additional twenty-one (21) days to file with the clerk of the court the Record on Appeal in this matter.

---

The Honorable Daniel A. Sanchez

Submitted by:

---

Stephen C. Ross  
Counsel for Appellee  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156  
(505) 827-8177 (facsimile)

Telephonically approved, July 12, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614  
(505) 989-9857

## TRANSACTION REPORT

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PLEASE REPLY TO SANTA FE

July 10, 2000

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm, P.C.  
460 St. Michaels Dr., #300  
Santa Fe, New Mexico 87505-7602

Steve Ross  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
Santa Fe, New Mexico 87505

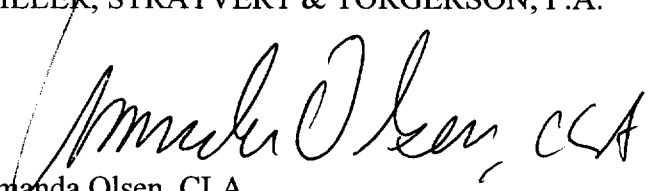
Re: Whiting Petroleum Corp. and Maralex Resources, Inc. vs. Pendragon Energy Partners, Inc., and J.K. Edwards Associates, Inc.; No D-0101-CV-98-01295

Gentlemen:

Enclosed herein is Pendragon's Response to Motion to Enjoin Defendants from Proceeding in Cause No. D-01170CV-2000-1449.

Sincerely,

MILLER, STRATVERT & TORGERSON, P.A.

  
Amanda Olsen, CLA  
Paralegal

/ao  
Enclosures

6304/20403/letters/Counsel ltr.doc

# GALLEGOS LAW FIRM

A Professional Corporation

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Telefax No. 505-986-1367  
Telefax No. 505-986-0741  
E-Mail glf460@spinn.net  
www.gallegoslawfirm.com

JUL 11 2000

July 10, 2000  
(Our File No. 98-266.00)

MICHAEL J. CONDON

Stephen Ross  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Whiting Petroleum Company et. al. v. Pendragon Energy  
Resources Inc. et al.; Cause No. SF-CV-98-01295

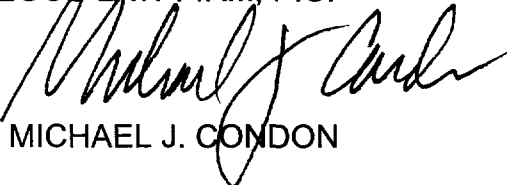
Dear Steve:

Enclosed please find a courtesy copy of the Motion to Uphold Commission Decision we are filing today, along with an index of Commission documents we are filing in support of the Motion. Please let us know if you have been successful in getting Scott Hall to agree to a stay of proceedings on his administrative appeal pending a decision by Judge Encinias on the pending motions, including our Motion to Enjoin Pendragon from prosecuting the administrative appeal. If you need anything else, please feel free to contact me.

Your truly yours,

GALLEGOS LAW FIRM, P.C.

BY:

  
MICHAEL J. CONDON

MJC:sa  
Enclosure  
ioc: J. E. Gallegos

**INDEX OF EXHIBITS  
SUBMITTED TO COURT WITH  
PLAINTIFFS' MOTION FOR ORDER OF  
THE COURT UPHOLDING THE DECISION BY  
THE NEW MEXICO OIL CONSERVATION COMMISSION**

**Bradley M. Robinson Expert Testimony**

RESUME

BR-1

BR-2

BR-3

BR-4

BR-5

BR-6

BR-7

BR-8

BR-9

BR-10

BR-11

BR-12

BR-13

BR-14

BR-15

BR-16

BR-17

BR-18

BR-19(a)

BR-19(b)

BR-19(c)

BR-19(d)

BR-20

BR-21

BR-22

BR-23

BR-24

BR-25

BR-26

BR-26(a)

BR-27

BR-28

BR-29

BR-30

## **JAMES T. BROWN EXPERT TESTIMONY**

### **RESUME**

JTB-1  
JTB-2  
JTB-3  
JTB-4  
JTB-5A  
JTB-5B  
JTB-6  
JTB-7  
JTB-8  
JTB-9  
JTB-10  
JTB-11  
JTB-12  
JTB-13  
JTB-14  
JTB-15  
JTB-16

## **ALEXIS MICHAEL "MICKEY" O'HARE EXPERT TESTIMONY**

### **RESUME**

AMO-2  
AMO-4  
AMO-6  
AMO-8  
AMO-9  
AMO-10  
JTB-7  
WA-4

## **TRANSCRIPT OF PROCEEDINGS VOL. I - V**

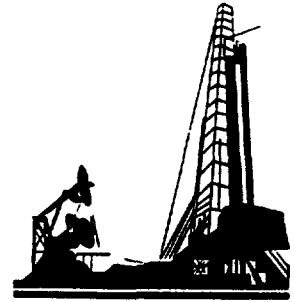
### **HEARING EXHIBITS**

AMO-11  
AMO-12  
AMO-13  
AMO-14  
AMO-15  
AMO-16  
AMO-17  
AMO-18  
AMO-19

AMO-20  
AMO-21  
AMO-22  
AMO-23  
AMO-24  
AYERS-2  
AYERS-3  
BROWN-5  
BROWN-6  
BROWN-7  
BROWN-15  
BROWN-16  
BROWN-17  
BROWN-18  
BR-31  
M-25  
N-7-1  
N-7-A-3  
N-50-1  
ROBINSON-1  
ROBINSON-2  
ROBINSON-B  
ROBINSON-C  
W-1  
W-2  
W-3  
W-4  
W-5  
W-6  
W-7  
W-7-A  
W-8  
W-9  
W-9-A  
W-10  
W-28-A  
W-30  
W-35  
W-39  
W-40  
W-41

# OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505  
(505) 827-7133  
Fax: (505) 827-8177



**(PLEASE DELIVER THIS FAX)**

**To:** Scott Hall (989-9857)

**From:** Stephen Row

**Date:** 7/2/00

**Number of Pages (Includes Cover Sheet)** 9

**Message:** \_\_\_\_\_  
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(505) 827-7133**

# OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505  
(505) 827-7133  
Fax: (505) 827-8177



**(PLEASE DELIVER THIS FAX)**

**To:** J. E. Gallegos, Michael Condon (986-1367)

**From:** Stephen Ross

**Date:** 7/3/00

**Number of Pages (Includes Cover Sheet)** 9

**Message:** \_\_\_\_\_  
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\_\_\_\_\_

**If you have any trouble receiving this, please call:  
(505) 827-7133**



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
**Oil Conservation Division**

June 28, 2000

J.E. Gallegos  
The Gallegos Law Firm  
460 St. Michael's Drive, Suite 300  
Santa Fe, New Mexico 87505

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504-1986

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Gentlemen,

Please find enclosed a copy of my Entry of Appearance in this matter. Please feel free to give me a call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen C. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission



**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

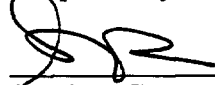
**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ENTRY OF APPEARANCE**

COMES NOW Stephen C. Ross, Special Assistant Attorney General, and hereby enters his appearance in this matter on behalf of the Appellee, the New Mexico Oil Conservation Commission.

Respectfully Submitted.



---


Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 28<sup>th</sup> day of June, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505

  
\_\_\_\_\_  
Stephen C. Ross



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**

Governor

**Jennifer A. Salisbury**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

June 28, 2000

Jo Anne Vigil Quintana  
District Court Clerk  
First Judicial District Court  
P.O. Box 2268  
Santa Fe, New Mexico 87504

Re: *Pendragon Energy Partners et al. v The New Mexico Oil Conservation Commission*;  
First Judicial District Cause No. D-0117-CV-2000-1449

Dear Ms. Quintana,

Please find enclosed the original and one copy of my Entry of Appearance in this matter. Would you be so kind as to file the Entry of Appearance and return an endorsed copy to me at the address shown below?

Thank you very much for your assistance. Please feel free to give me a call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen C. Ross".

Stephen C. Ross  
Assistant General Counsel  
Oil Conservation Commission

Enclosures as noted

**FIRST JUDICIAL DISTRICT COURT  
STATE OF NEW MEXICO  
COUNTY OF SANTA FE**

**PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION,**

**Appellants,**

**No. D 0117-CV-2000-1449**

**vs.**

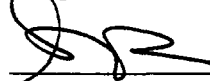
**THE NEW MEXICO OIL CONSERVATION COMMISSION,**

**Appellee.**

**ENTRY OF APPEARANCE**

COMES NOW Stephen C. Ross, Special Assistant Attorney General, and hereby enters his appearance in this matter on behalf of the Appellee, the New Mexico Oil Conservation Commission.

Respectfully Submitted.



---

Stephen C. Ross  
Special Assistant Attorney General  
Oil Conservation Commission  
2040 S. Pacheco  
Santa Fe, New Mexico 87505  
(505) 827-8156 (telephone)  
(505) 827-8177 (facsimile)

**Certificate of Service**

I, Stephen C. Ross, hereby certify that a copy of the foregoing pleading was mailed to counsel listed below, this 28<sup>th</sup> day of June, 2000:

J. Scott Hall  
Miller, Stratvert & Torgerson, P.A.  
P.O. Box 1986  
Santa Fe, New Mexico 87504

J.E. Gallegos  
Michael J. Condon  
Gallegos Law Firm  
460 St. Michael's Drive, Building 300  
Santa Fe, New Mexico 87505

  
\_\_\_\_\_  
Stephen C. Ross

## **GALLEGOS LAW FIRM**

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460 St. Michael's Drive  
Building 300  
Santa Fe, New Mexico 87505  
Telephone No. (505) 983-6686  
Telefax No. (505) 986-0741 or (505) 986-1367

**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** June 14, 2000  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 827-8177  
**FROM:** J.E. Gallegos

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 2**

### **IMPORTANT**

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# GALLEGOS LAW FIRM

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460 St. Michael's Drive  
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Telefax No. 505-986-1367  
Telefax No. 505-986-0741

June 14, 2000  
(Our File No. 98-266.00)

J.E. GALLEGOS \*

## VIA TELECOPY

J. Scott Hall  
Miller, Stratvert, Torgerson  
& Schlenker, P.A.  
150 Washington, Suite 300  
Santa Fe, New Mexico 87501

Re: Pendragon Energy Partners, Inc. et al. v. New Mexico Oil Conservation  
Commission Application; Santa Fe County Cause No. CV 2000-1449

Dear Scott:

My mail today included a copy of a Notice of Peremptory Excusal in a case referred to above, which I had never heard of. Evidently, you have filed a judicial appeal of the Commission Order in the dispute between Whiting and Pendragon. **We have never been served with any pleading that initiated that case.**

NMSA Section 70-2-25B. and Rule 1-74F. require that Whiting and Maralex be served with a Notice of Appeal. Please provide that immediately with information as to when the case was filed.

Sincerely,

GALLEGOS LAW FIRM, P.C.

BY:

  
J.E. GALLEGOS

JEG:sa

fx: Steve Ross  
John Hazlett  
Mickey O'Hare  
ioc: Michael J. Condon

\* New Mexico Board of Legal Specialization  
Recognized Specialist in the area of  
Natural Resources-Oil and Gas Law

**MILLER, STRATVERT & TORGERSON, P.A.**  
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JENNIFER L. STONE  
ANDREW M. SANCHEZ  
M. DYLAN O'REILLY  
AMINA QUARGNALI-LINSLEY  
BEATE BOUDRO

COUNSEL

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ROSS B. PERKAL  
JAMES J. WIDLAND  
BRADLEY D. TEPPER  
GARY RISLEY

OF COUNSEL

WILLIAM K. STRATVERT  
RALPH WM. RICHARDS

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LAS CRUCES, NM 88004-1209  
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FACSIMILE: (505) 526-2215

PLEASE REPLY TO SANTA FE

June 13, 2000

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505

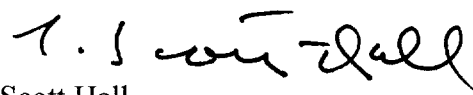
Re: Pendragon Energy Partners, Inc., Pendragon Resources, LP, and Edwards Energy Corporation v. New Mexico Oil Conservation Commission;  
No. D-0117-CV-2000-1449

Dear Mr. Ross and Mr. Gallegos:

Enclosed is an endorsed copy of the Notice of Appeal, NMRA 1-072.F(3) Certificate and the Certificate of Service in the above-referenced matter.

Please give me a call if you have any questions.

Very truly yours,

  
J. Scott Hall

JSH/rab  
Enclosures



**MILLER, STRATVERT & TORGERSON, P.A.**  
LAW OFFICES

RANNE B. MILLER  
ALAN C. TORGERSON  
ALICE T. LORENZ  
GREGORY W. CHASE  
LYMAN G. SANDY  
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COUNSEL

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PLEASE REPLY TO SANTA FE

June 13, 2000

Mr. Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos, Esq.  
Gallegos Law Firm  
460 St. Michael's Drive, #300  
Santa Fe, New Mexico 87505

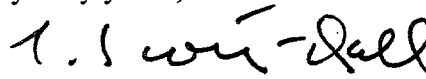
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Please give me a call if you have any questions.

Very truly yours,



J. Scott Hall

JSH/rab  
Enclosures

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellant,

vs.

NEW MEXICO OIL CONSERVATION  
COMMISSION

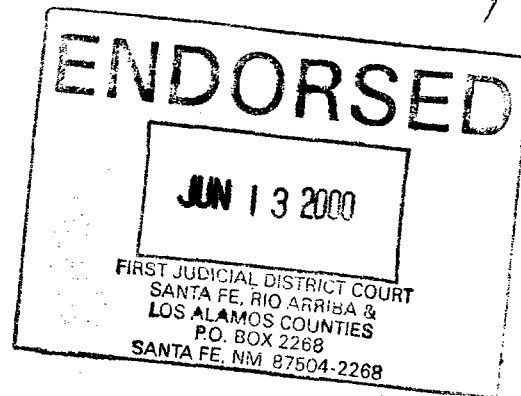
Appellee.

IN RE:

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO

No. D-0117-CV-2000- 1449

NMOCC CASE NO. 11996  
Order No. R-11133-A *De Novo*



NMRA 1-072.F(3) CERTIFICATE

Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation, through counsel, hereby certify that satisfactory arrangements have been made with the New Mexico Oil Conservation Commission for the preparation and payment for the transcript of proceedings.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, PA.

By



J. Scott Hall, Esq.  
Post Office Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614

ATTORNEYS FOR PENDRAGON ENERGY PARTNERS,  
PENDRAGON RESOURCES, L.P. AND EDWARDS ENERGY  
CORPORATION

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing NMRA 1-074.F(3) Certificate was mailed on this 13 day of June, 2000 to the following:

Steve Ross  
New Mexico Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87505

J.E. Gallegos  
460 St. Michaels Drive, #300  
Santa Fe, New Mexico 87505  
Attorney for Whiting Petroleum Corporation and Maralex Resources, Inc.



J. Scott Hall, Esq.

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellant,

vs.

NEW MEXICO OIL CONSERVATION  
COMMISSION

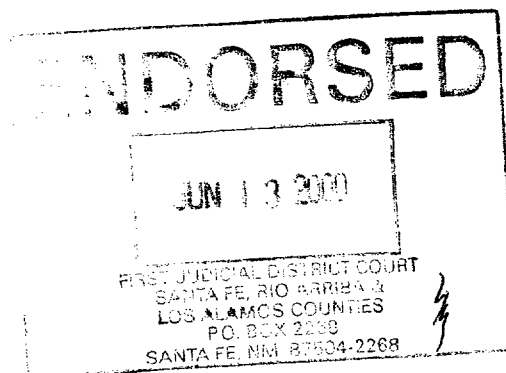
Appellee.

IN RE:

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO

No. D-0117-CV-2000- 1449

NMOCC CASE NO. 11996  
Order No. R-11133-A *De Novo*



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Notice of Appeal was served upon Steve Ross, New Mexico Oil Conservation Commission, 2040 South Pacheco, Santa Fe, New Mexico 87505 and J.E. Gallegos, Esq., 460 St. Michaels Drive, #300, Santa Fe, New Mexico 87505, Attorney for Whiting Petroleum Corporation and Maralex Resources, Inc. by U.S. Mail on this 13 day of June, 2000.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, PA.

By J. Scott Hall  
J. Scott Hall, Esq.  
Post Office Box 1986  
Santa Fe, New Mexico 87504  
(505) 989-9614

ATTORNEYS FOR PENDRAGON ENERGY PARTNERS,  
PENDRAGON RESOURCES, L.P. AND EDWARDS ENERGY  
CORPORATION

CAROL J. VIL

FIRST JUDICIAL DISTRICT COURT  
COUNTY OF SANTA FE  
STATE OF NEW MEXICO

PENDRAGON ENERGY PARTNERS, INC.,  
PENDRAGON RESOURCES, LP, AND  
EDWARDS ENERGY CORPORATION

Appellant,

vs.

NEW MEXICO OIL CONSERVATION  
COMMISSION

Appellee.

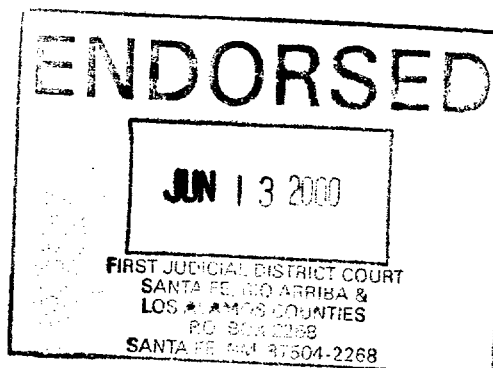
IN RE:

APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO

NMOCC CASE NO. 11996  
Order No. R-11133-A *De Novo*

NOTICE OF APPEAL


Pendragon Energy Partners, Inc., Pendragon Resources, LP, and Edwards Energy Corporation, (f/k/a J.K. Edwards Associates, Inc.), ("Appellants"), through their counsel of record, Miller, Stratvert & Torgerson, P.A. (J. Scott Hall), pursuant to NMSA 1978 Section 70-2-25 of the New Mexico Oil and Gas Act and Section 39-3-1.1 (Repl. Pamp. 1995), hereby files this Notice of Appeal from Order No. R-11133-A issued by the New Mexico Oil Conservation Commission on April 26, 2000 and from the Commission's disposition of Appellants' Application For Rehearing filed on May 16, 2000. Pursuant to Section 70-2-25, the Application for Rehearing is deemed denied by the Commission as of May 26, 2000.



Appeal is made to the District Court for the County of Santa Fe, New Mexico. The Appeal is taken against the Commission and against Whiting Petroleum Corporation and Maralex Resources, Inc. Copies of Order No. R-11133-A and the Application For Rehearing are attached hereto.

Respectfully submitted,

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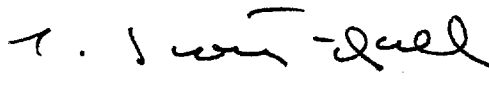
ATTORNEYS FOR PENDRAGON ENERGY PARTNERS,  
PENDRAGON RESOURCES, L.P. AND EDWARDS ENERGY  
CORPORATION

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing Notice of Appeal was mailed on this 13 day of June, 2000 to the following:

Steve Ross  
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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION FOR THE PURPOSE OF  
CONSIDERING:

De Novo  
Case No. 11996  
Order No. R-11133-A

APPLICATION OF PENDRAGON ENERGY PARTNERS, INC.  
AND J. K. EDWARDS ASSOCIATES, INC.  
TO CONFIRM PRODUCTION FROM  
THE APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This case came on for hearing at 9:00 a.m. on August 12, 1999, at Santa Fe, New Mexico, before the New Mexico Oil Conservation Commission ("Commission") and continued on August 13, 19, 20 and 21, 1999.

NOW, on this 26<sup>th</sup> day of April, 2000, the Commission, a quorum being present and having considered the record,

FINDS THAT:

(1) Due public notice has been given and the Commission has jurisdiction of this case and its subject matter.

(2) The applicants, Pendragon Energy Partners, Inc. and J. K. Edwards Associates, Inc. (hereinafter referred to as "Pendragon"), pursuant to Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in Oil Conservation Division (hereinafter referred to as "the Division") Order No. R-8768, as amended, seek an order confirming that the following described wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool ("Pendragon Chaco and Chaco Limited Wells") or the Basin-Fruitland Coal Gas Pool ("Whiting Fruitland Coal Wells"), are producing from the appropriate common source of supply and for such further relief as the Commission deems necessary:

Pendragon Chaco and Chaco Limited Wells

<u>Operator</u>	<u>Well Name &amp; API Number</u>	<u>Well Location</u>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W



CASE NO. 11996

Order No. R-11133-A

Page 3

(4) All eleven wells that are the subject of this application are located within an area (hereinafter referred to as the "Subject Area") that comprises:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM

Section 6: W/2

Section 7: W/2

Section 18: NW/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 1: All

Section 12: N/2

(5) The Subject Area is located within the horizontal boundaries of the Basin-Fruitland Coal Gas Pool created by Division Order No. R-8768 dated October 17, 1988. The vertical limits of this pool, as defined by Ordering Paragraph (1) of Order No. R-8768, encompass:

... all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2,450 feet to 2,880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(6) The Subject Area is also located within the horizontal boundaries of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. The vertical limits of this pool encompass all of the Pictured Cliffs Formation (Order No. R-4260 dated February 22, 1972) and all the sandstone intervals of the Fruitland Coal Formation (Order No. R-8769 dated October 17, 1988).

(7) Pendragon and Whiting received assignments of oil and gas leases in the Subject Area from common grantors, Robert Bayless ("Bayless") and Merrion Oil and Gas Corporation ("Merrion"), during the period from 1992 through 1994.

a) The assignments of rights, in pertinent part, to Whiting are as follows:

Operating rights from the surface of the earth to the base of the Fruitland (Coal Gas) Formation subject to the terms and provisions of that certain Farmout Agreement dated December 7, 1992 by and between Merrion Oil & Gas et al., Robert L. Bayless, Pitco Production Company, and Maralex Resources, Inc.

b) The assignment of rights to Pendragon, in pertinent part, are as follows:

Pendragon Energy Partners, Inc.	Chaco No. 2R (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.-	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

**Whiting Fruitland Coal Wells**

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(3) Whiting Petroleum Corporation and Maralex Resources, Inc. (hereinafter referred to as "Whiting") appeared at the hearing in opposition to the application. Whiting claimed that the Pendragon Chaco and Chaco Limited Wells are producing:

- a) gas from a sandstone interval located within the Fruitland Coal formation; and
- b) coal gas from the Basin-Fruitland Coal Gas Pool because of the establishment of communication between the Basin-Fruitland Coal and WAW Fruitland Sand-Pictured Cliffs Gas Pools.

Leases and lands from the base of the Fruitland Coal Formation to the base of the Pictured Cliffs Formation.

(8) A brief history of the Pendragon Chaco and Chaco Limited Wells follows:

- a) Merrion and Bayless drilled the Chaco Well No. 1 in February 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,113' to 1,139'. The well initially tested in this interval at a rate of approximately 342 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, J. K. Edwards & Associates, Inc. ("Edwards") became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January, 1996, Pendragon became operator of the well.
- b) Merrion and Bayless drilled the Chaco Well No. 2R in October 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,132' to 1,142'. The well initially tested in this interval at a rate of approximately 150 MCFGD, 0 BOPD and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was fracture stimulated in the perforated interval. In January 1996, Pendragon became operator of the well.
- c) Merrion and Bayless drilled the Chaco Well No. 4 in April 1977 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,163' to 1,189'. The well was initially tested in this interval at a rate of approximately 480 MCFGD, 0 BOPD, and 0 BWPD. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In May 1995, the well was re-perforated in the interval from 1,163' to 1,189' and fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.
- d) Merrion and Bayless drilled the Chaco Well No. 5 in April 1977, to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,165' to 1,192'. The well initially tested in this interval at a rate of approximately 1029 MCFGD, 0 BOPD and 0 BWPD. In May 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January 1995, the well was re-perforated in the interval from 1,165' to 1,192' and was

fracture stimulated in this interval. In January 1996, Pendragon became operator of the well.

- e) The Chaco Limited Well No. 1J was drilled by Merriam and Bayless in April 1982 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,200' to 1,209'. The well initially tested in this interval at a rate of approximately 10 MCFGD, 0 BOPD and a trace of water. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.
- f) The Chaco Limited Well No. 2J was drilled by Merriam and Bayless in September 1979 to test the Pictured Cliffs Formation. The well was perforated and completed in the Pictured Cliffs Formation from a depth of 1,186' to 1,202'. The well initially tested in this interval at a rate of approximately 208 MCFGD, 0 BOPD and 4 BWPD. In October, 1979, the well was fracture stimulated in this interval. In January, 1995, Edwards became operator of the well. In January, 1995, the well was acidized with 500 gallons 7 ½ percent HCl. In January 1996, Pendragon became operator of the well.

(9) A brief history of the Whiting Fruitland Coal Wells follows:

- a) Maralex drilled the Gallegos Federal 26-12-6 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,138' to 1,157'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- b) Maralex drilled the Gallegos Federal 26-12-7 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,131' to 1,150'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- c) Maralex drilled the Gallegos Federal 26-13-1 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,158' to 1,177'. The well was subsequently fracture

stimulated in this interval. In September 1995, Whiting became operator of the well.

- d) Maralex drilled the Gallegos Federal 26-13-1 No. 2 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,047' to 1,208'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.
- e) Maralex drilled the Gallegos Federal 26-13-12 No. 1 in December 1992 to test the Basin-Fruitland Coal Gas Pool. The well was perforated and completed in the Fruitland Coal Formation from a depth of 1,178' to 1,197'. The well was subsequently fracture stimulated in this interval. In September 1995, Whiting became operator of the well.

**Geologic Issues**  
**Fruitland Sand vs. Pictured Cliffs Sand**

(10) Related geologic issues are raised by the application: the proper means for determining the limits of the pools and formations at issue, and the effect on this analysis, if any, of integration or interfingering of different rock types.

(11) In its Chaco Wells No. 1, 4 and 5 and its Chaco Limited Well No. 2J, Pendragon is producing from two separate sandstone intervals, hereinafter referred to as the Upper Sandstone and Lower Sandstone intervals. In its Chaco Well No. 2R and Chaco Limited Well No. 1J, Pendragon is producing only from the Lower Sandstone interval. It is the position of Pendragon that the top of the Pictured Cliffs Formation occurs at or above the top of the Upper Sandstone.

(12) The perforated intervals in each of the Pendragon Chaco and Chaco Limited Wells are as follows:

<u>Well Name &amp; Number</u>	<u>"Upper Sandstone"</u> <u>Perforations</u>	<u>"Lower Sandstone"</u> <u>Perforations</u>
Chaco Well No. 1	1,113'-1,119'	1,134'-1,139'
Chaco Well No. 4	1,163'-1,166'	1,173'-1,189'
Chaco Well No. 5	1,165'-1,169'	1,174'-1,192'
Chaco Limited Well No. 2J	1,186'-1,188'	1,200'-1,202'
Chaco Well No. 2R	None	1,132'-1,143'
Chaco Limited Well No. 1J	None	1,200'-1,209'

(13) Whiting agrees that the Lower Sandstone interval is within the Pictured Cliffs Formation; however, it contends that the top of the Pictured Cliffs Formation is the top of the Lower Sandstone interval and the Upper Sandstone is within the Fruitland Coal Formation. It is on this basis that Whiting contends that Pendragon is producing from perforations in the Fruitland Coal Formation in its Chaco Wells Nos. 1, 4 and 5 and its Chaco Limited Well No. 2J.

(14) The parties have stipulated that the Pictured Cliffs Formation was deposited in a marine environment and the Fruitland Coal Formation was deposited in a non-marine or terrestrial environment.

(15) In its Order No. R-8768, the Division defined the vertical limits of the Basin Fruitland Coal Gas Pool as all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the well log from the Amoco Schneider Gas Com "B" Well No. 1. The pick for the base of the pool in Order No. R-8768 is the top of the Pictured Cliffs Formation. The pick is also the break between marine and non-marine sediments. It is undisputed that the coal or shale layers occurring below the stratigraphic pick set forth in Order No. R-8768 would not be included in the Basin Fruitland Coal Gas Pool or in the Fruitland Coal Formation.

(16) For the reasons set forth below, we find that the preponderance of the geologic evidence establishes that the Pendragon Chaco and Chaco Limited Wells are completed in the Pictured Cliffs Formation.

(17) The preponderance of the geologic evidence establishes that the Upper Sandstone is marine in origin and thus appropriately considered a part of the Pictured Cliffs Formation. The Upper Sandstone in the Subject Area cannot be differentiated from the main body of the Pictured Cliffs Formation.

(18) In the late Cretaceous period in what was to become the San Juan Basin, sediments were deposited contemporaneously in various environments. The Lewis Shale represents muds and storm-carried sands offshore of the barrier-beach setting. The Pictured Cliffs formation accumulated in primarily a barrier-beach setting. The Fruitland Coal formation accumulated on a coastal plain with swamps and bogs and the Kirtland Formation accumulated in an alluvial plain. As the ancient shoreline moved to the northeast, each of the environments of deposition shifted. At a single location a wellbore presents the familiar vertical sequence of Formations.

(19) Pendragon's isopach map of the Upper Sandstone, Exhibits 50 and 63, show this barrier-bar marine littoral environment with sandstone along the ancient shoreline trending in a northwest to a southeast direction. Pendragon's Exhibits 50 and 63 also show that the Upper Sandstone occurs in a continuous sheet that coalesces into the main body of the Pictured Cliffs Formation as it trends from the shoreline environment on the southwest toward the center of the San Juan basin to the northeast.

(20) In the Subject Area, tongues of Pictured Cliffs sandstone thin in a landward direction and thicken in a seaward direction and ultimately merge with the main body of the Pictured Cliffs Formation. These tongues "interfinger" or integrate with other rock types in the Subject Area.

(21) The interval between the top of the Upper Sandstone and the top of the main body of the Pictured Cliffs (the Lower Sandstone) is composed of a variety of rock types including marine sandstones, silt stones, shales, and thin coals. It has been the long-standing and accepted custom and practice of industry and the various regulatory agencies, including the Division in Order No. R-8768 and R-8769, to place this entire interval within the Pictured Cliffs Formation. This industry and regulatory agency practice conforms to the standards of the North American Stratigraphic Code and the International Stratigraphic Guide.

(22) The evidence presented by Pendragon establishes that over the years approximately 34 wells within approximately 2.5 miles of the Pendragon Chaco and Chaco Limited wells were actually perforated in the Upper Sandstone in conjunction with other Pictured Cliffs intervals and reported by the numerous different operators of those wells as Pictured Cliffs completions, consistent with the picks for the top of the Pictured Cliffs for the Chaco Plant No. 1 and the Pendragon Chaco and Chaco Limited Wells (Exhibit N-61). The evidence also establishes that those reported completions were accepted by the Division and the Bureau of Land Management and that industry and geologists have placed substantial reliance on those reported completions as Pictured Cliffs completions for nearly thirty years.

(23) In a written statement provided to the Commission during the hearing in this case, Merrion, the assignor of the interests in both the Fruitland Coal Formation to Whiting and Pictured Cliffs Formation to Pendragon, indicated it concurred with Pendragon in its identification of the Upper Sandstone interval and the historic recognition of that interval as Pictured Cliffs by Merrion and other operators in the area. (Exhibit N-43.) Merrion further stated that the Pendragon Chaco Wells are appropriately perforated in the Pictured Cliffs Formation and that it had no intention of conveying to Pendragon wells that were perforated in other zones. Merrion also stated that it never intended to farm-out to Whiting the rights to zones where the Pendragon Chaco Wells were perforated.

(24) Thus, identification and utilization of the Upper Sandstone tongues to establish the vertical boundaries of the Pictured Cliffs Formation by industry, governmental regulatory agencies and the parties or their predecessor-in-interest is a long-established custom and practice. Such custom and practice is to be accorded significant weight.

(25) Whiting asserted during the hearing of this matter that the Upper Sandstone interval was deposited in a non-marine, crevasse-splay deposit, resulting from a large, sediment-laden river breaking through its natural boundaries during a flood stage and spreading clean, well-sorted sand over an area more than sixteen-miles long and up to three-miles wide parallel to the shoreline. However, Whiting failed to establish by a preponderance of the evidence the existence of any crevasse splay or any depositional materials indicative of a sand-laden flood. Moreover, there is no evidence of the transporting river or river channel, the thinning of sand deposits in both directions at right angles to the river, adjacent deltaic deposits or any other non-marine mechanism with the capability of forming the thin, but areally extensive, sand of the dimensions seen in the Upper Sandstone.

(26) Whiting also asserted it was possible that the disputed interval was deposited as a washover fan. However, the washover fan depositional mechanism involves wave-dominated action, consistent with the accepted geologic definitions of a marine depositional mechanism. Such a theory also supports a conclusion that the Upper Sandstone was deposited in a marine environment.

(27) Pendragon presented aerial photographs of modern deposits of sands comparable in mode of deposition and areal extent to the Upper Sandstone located in the marine lagoonal areas behind barrier islands, thus demonstrating the validity of the depositional model. Pendragon demonstrated using these exhibits that these sands are wave and tidal-current dominated deposits, and further showed that the seaward beach of a barrier island is not to be confused with the true marine shoreline, which lies behind the island.

(28) The core analysis for the Lansdale Federal No. 1 located in the SE/4 of Sec. 7, T-26-N, R-12-W establishes that grain size and sorting throughout the Upper Sandstone is uniform, consistent with a marine depositional environment. The physical descriptions of the sand appearing in the Upper Sandstone and the Lower Sandstone are grey, fine-grained with little variation in clay content, consistent with a marine sand that has been laterally transported by currents and waves to the point where the energy available sorts the sand into uniform size. Sand-sorting characteristics of this sort are not consistent with a fluvial deposit with graded bedding coarsening downward.

(29) Pendragon presented evidence that the Spontaneous Potential ("SP") readings on electrical logs are much greater in the Pictured Cliffs Formation, which was deposited in a marine setting, than in the Fruitland sands, which were deposited in a fluvial, fresh water environment. Pendragon demonstrated that the SP readings for the Upper Sandstone were comparable or identical to those of the Lower Sandstone and were much greater than those of the Fruitland sands.



(30) The SP map of the Pictured Cliffs Formation introduced by Whiting, Exhibit WA-9, showed 40 to 80 millivolt SP development in the Chaco area. The cross-section exhibit demonstrated that the disputed interval also showed 40 to 80 millivolts SP, even though it was interpreted by Whiting to be Fruitland sandstone, and all other Fruitland sands on his cross-section showed only zero to less than 10 millivolts. Additional testimony established that 40 to 80 millivolts is a significantly higher range than is typically associated with SP development in a fresh-water depositional environment and is more characteristic of the SP development in the Pictured Cliffs intervals observed on the well logs and cross-sections for the Pendragon Chaco Wells.

(31) Whiting contends that the top of the first "massive" sandstone below the lowermost coal of the Fruitland Coal Formation should be the basis for picking the top of the Pictured Cliffs formation. Whiting contends that the operators of approximately one hundred additional wells outside the Subject Area identified the top of the massive Pictured Cliffs Sandstone as the vertical boundary between the Pictured Cliffs and Fruitland Coal Formations. However, Whiting failed to present evidence establishing that the Upper Sandstone interval was present in any of the wells identified. Similarly, Whiting failed to show that any operator identified the top of the Pictured Cliffs sandstone as the massive sand in those areas where tongues of the Pictured Cliffs are known to exist. The geologic testimony and evidence shows that such a definition has little support in the geologic literature and that the arbitrary and undefined term "massive" makes its application impractical.

#### **Engineering Issue**

(32) Whiting, the owners and operators of the Whiting Fruitland Coal Wells, and Pendragon, the owner and operator of the Pendragon Chaco and Chaco Limited Wells, each contend that the other's well stimulation treatments established communication between their separately owned formations. Both parties contend that, as a result, their wells are experiencing interference and that gas is being produced out of zone.

(33) The preponderance of the engineering evidence established that the fracture stimulation treatments performed on both the Pendragon Chaco Wells by Pendragon and the Whiting Fruitland Coal Wells by Whiting established communication between the Fruitland Coal Formation and the Pictured Cliffs Formation.

(34) The treatment performed on the Whiting Fruitland Coal Wells after they were drilled created near-wellbore communication channels between the Fruitland Coal and Pictured Cliffs Formations. At the time, the gas in the Pictured Cliffs Formation was nearly depleted and very little gas could escape to the Fruitland Coal Formation, unless the Whiting Fruitland Coal Wells were operated under extremely low pressures. On the other hand, the adsorbed gas in the Fruitland Coal Formation stayed within the coal matrices until the pressure was lowered enough through the dewatering process for the gas to desorb.

(35) After the dewatering process, substantial amounts of adsorbed gas escaped from the coal matrices, especially in the near-wellbore region where pressure was lowest. As a result, the Whiting Fruitland Coal Wells began their commercial gas production. The desorbed gas moving toward the Whiting Fruitland Coal Wells may have migrated to the Pictured Cliffs Formation through the communication channels near the Whiting Fruitland Coal Wells if the local pressure in the Pictured Cliffs Formation was lower than that in the Fruitland Coal Formation. Gas in the Pictured Cliffs Formation may have migrated to the Fruitland Coal Formation through the communication channels if the production pressures at the Whiting Fruitland Coal Wells were low. However, these possible gas migrations were not significant, as evidenced by steady gas production from the Pendragon Chaco Wells.

(36) In 1995, after three years of the dewatering process, the region in which decreased pressures allowed gas to desorb from the coal matrices had grown toward the Pendragon Chaco Wells. At the edge of the resulting gas bubble, the gas pressure in the Fruitland Coal Formation was probably higher than the adjacent pressure in the Pictured Cliffs Formation. In the area of this relatively high-pressure contrast, the thin capillary barrier may have been broken, allowing gas migration between the two zones.

(37) Pendragon performed fracture stimulation treatments on the Pendragon Chaco Wells in 1995. The post-treatment gas production from the Pendragon Chaco Wells indicates that the stimulation work performed by Pendragon successfully broke into some high-pressure gas compartments.

(38) The production history of the Pendragon Chaco and Chaco Limited Wells is summarized as follows:

Well No.	Initial Production (Original Completion)	Pre-Acidization or Fracture Stimulation Production	Post-Acidization or Fracture Stimulation Production	Last Production
Chaco No. 1	80 MCF/D	0 MCF/D	250 MCF/D	165 MCF/D
Chaco No. 2R	70 MCF/D	0-15 MCF/D	90 MCF/D	120 MCF/D
Chaco No. 4	200 MCF/D	0 MCF/D	425 MCF/D	200 MCF/D
Chaco No. 5	190 MCF/D	0 MCF/D	370 MCF/D	210 MCF/D
Chaco Ltd. 1J	11 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D
Chaco Ltd. 2J	30 MCF/D	0-10 MCF/D	0-10 MCF/D	0-10 MCF/D

(39) One possibility is that the hydraulic fractures were extended upward to the Fruitland Coal Formation and generated a gas highway to the gas bubble. Pendragon's experts vigorously denied this possibility. Instead, they asserted that an additional gas compartment, the so-called "third bench," exists below the perforations in the Pendragon Chaco Wells. The evidence does not support this assertion. No "third bench" has been reported previously throughout the San Juan region, and there is no geological evidence of this kind of formation. Furthermore, there is no scientific basis for believing that fractures moved downward into the "third bench" but not upward into the Fruitland Coal

Formation. Therefore, the most reasonable explanation of the sudden significant increases in production following the fracture stimulation treatments on the Pendragon Chaco Wells was that the hydraulic fractures penetrated into the gas bubble established in the Fruitland Coal Formation.

(40) Pendragon also asserted that the fracture stimulation treatments increased production in the Pendragon Chaco Wells by counteracting the effects of reservoir damage caused by (a) scale precipitation, (b) water blockage, and (c) migration of clay fines. As the original Pictured Cliffs gas was relatively dry, however, it is unlikely that the Pendragon Chaco Wells suffered from significant reservoir damage of this type.

(41) The BTU analysis of the gas from the Pendragon Chaco Wells supports the conclusion that the fracture stimulation treatments of these wells in 1995 established communication with the Fruitland Coal Formation. Whiting showed that the hydrocarbon liquids content of the gas from the Pendragon Chaco Wells was slightly reduced from 1988 to 1995 and significantly reduced from 1995 to 1997.

(42) Expert witnesses for both Pendragon and Whiting presented their opinions on the effects of the fracture stimulation treatments in the Whiting Fruitland Coal Wells and the Pendragon Chaco Wells based on their own theories and models. Many input values for key parameters were questionable. Both simulators used in their testimony have a good reputation for assisting in the design of fracturing jobs, but it is easy to manipulate them incorrectly. In a case like this, their results are too exaggerated to be reliable.

(43) The acid stimulation treatments performed by Pendragon on the Chaco Limited Wells No. 1J and 2J in 1995 did not alter these wells' rates of production. These treatments did not establish communication between the Pictured Cliffs Formation and the Fruitland Coal Formation.

(44) The gas now capable of production from the Pendragon Chaco Wells No. 1, 2R, 4, and 5 is: (1) gas originally in place in the Pictured Cliffs Formation; (2) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Pendragon Chaco Wells; and (3) gas from the Fruitland Coal Formation that has migrated to the Pictured Cliffs Formation through fractures around the Whiting Fruitland Coal Wells.

(45) The Pendragon Chaco Wells depleted the Pictured Cliffs Formation prior to the fracture stimulation treatments performed on the wells in 1995.

(46) Pendragon Chaco Wells No. 1, 2R, 4, and 5 have already produced their fair share of the gas in the Pictured Cliffs Formation.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Pendragon Energy Partners, Inc., and J. K. Edwards Associates, Inc., it is determined that the following described wells are perforated within the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool. It is further determined that the following described wells are producing from both the WAW Fruitland Sand-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool, San Juan County, New Mexico:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco No. 1 (API No. 30-045-22309)	1846' FNL & 1806' FWL, Unit F, Section 18, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 2R (API No. 30-045-23691)	1850' FSL & 1850' FWL, Unit K, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 4 (API No. 30-045-22410)	790' FNL & 790' FWL, Unit D, Section 7, T-26N, R-12W
Pendragon Energy Partners, Inc.	Chaco No. 5 (API No. 30-045-22411)	790' FSL & 790' FEL, Unit P, Section 1, T-26N, R-13W

(2) It is further determined that the following described wells are perforated within and producing solely from the Pictured Cliffs Formation, WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Pendragon Energy Partners, Inc.	Chaco Limited No. 1J (API No. 30-045-25134)	1850' FSL & 1750' FWL, Unit K, Section 1, T-26N, R-13W
Pendragon Energy Partners, Inc.	Chaco Limited No. 2J (API No. 30-045-23593)	790' FNL & 1850' FEL, Unit B, Section 1, T-26N, R-13W

(3) It is further determined that the following described wells are producing from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool:

<b><u>Operator</u></b>	<b><u>Well Name &amp; API Number</u></b>	<b><u>Well Location</u></b>
Whiting Petroleum Corp.	Gallegos Fed 26-12-6 No. 2 (API No. 30-045-28898)	886' FSL & 1457' FWL, Unit N, Section 6, T-26N, R-12W

**CASE NO. 11996**

**Order No. R-11133-A**

**Page 14**

Whiting Petroleum Corp.	Gallegos Fed. 26-12-7 No. 1 (API No. 30-045-28899)	2482' FSL & 1413' FWL, Unit K, Section 7, T-26N, R-12W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 1 (API No. 30-045-28881)	828' FNL & 1674' FEL, Unit B, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-1 No. 2 (API No. 30-045-28882)	1275' FSL & 1823' FWL, Unit N, Section 1, T-26N, R-13W
Whiting Petroleum Corp.	Gallegos Fed. 26-13-12 No. 1 (API No. 30-045-28903)	1719' FNL & 1021' FEL, Unit H, Section 12, T-26N, R-13W

(4) Pendragon is hereby ordered to shut-in its Chaco Wells No. 1, 2R, 4 and 5 until such time as the Division approves a method for either putting them back into production or plugging them.

(5) Inasmuch as Whiting's wells may produce only minor amounts of gas from the already depleted WAW Fruitland Sand-Pictured Cliffs Pool, Whiting's wells are not to be shut-in.

(6) Jurisdiction is hereby retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION**



JAMI BAILEY, Member



ROBERT L. LEE, Member



LORI WROTENBERY, Chairman

S E A L

OIL CONSERVATION DIV.  
OCT 16 11 2 11

STATE OF NEW MEXICO  
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

**APPLICATION OF PENDRAGON ENERGY  
PARTNERS, INC., PENDRAGON RESOURCES,  
L.P., AND EDWARDS ENERGY CORPORATION, INC.  
TO CONFIRM PRODUCTION FROM THE  
APPROPRIATE COMMON SOURCE OF SUPPLY,  
SAN JUAN COUNTY, NEW MEXICO**

**OCD CASE NO. 11996**

**APPLICATION FOR REHEARING**

Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation, (collectively referred to as "Pendragon"), move pursuant to NMSA 1978 Section 70-2-25 of the New Mexico Oil & Gas Act and 19 NMAC 15.N.1222 for rehearing on the issuance of Order No. R-11133-A issued by the Commission on April 26, 2000.

**BACKGROUND FACTS**

On August 12 – 21<sup>st</sup>, 1999, the New Mexico Oil Conservation Commission convened a hearing on Pendragon's Application brought pursuant to, inter alia, Rule (3) of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool set forth in NMOCD Order No. R-8768, as amended, seeking a determination that its Chaco wells, completed within the vertical limits of the WAW Fruitland Sand-Pictured Cliffs Gas Pool, and that Whiting Petroleum's Gallegos Federal wells completed within the Basin-Fruitland Coal Gas Pool were producing from the appropriate common source of supply. Pendragon also sought further relief, including an order bringing Whiting's non-conforming wells back into compliance with the Division's rules, regulations and orders. At the hearing, both parties contended that the other's well stimulation treatments caused their separately owned formations to come into communication. Both sides

also contended that their wells experienced interference and that gas was being produced out of formation as a result. Significantly, at the hearing, Whiting's witnesses admitted that the high volume, high pressure and high injection rate fracture stimulation treatments performed on the Gallegos Federal wells by Maralex Resources likely caused their wells to come into communication with the Pictured Cliffs formation owned by Pendragon. Conversely, Pendragon asserted and presented evidence that the acid jobs and relatively mild fracture stimulation treatments performed on its Chaco wells remained contained within the Pictured Cliffs formation and did not communicate with the Fruitland Coal Formation owned by Whiting.

On April 26, 2000, after hearing, the Commission issued Order No. R-11133-A which found that all of Pendragon's subject Chaco wells were perforated within the Pictured Cliffs formation of the WAW Fruitland Sand-Pictured Cliffs Gas Pool. By so finding and concluding, the Commission reaffirmed the long-standing interpretation of industry, regulatory agencies and the larger geologic community establishing the vertical boundaries of the Pictured Cliffs formation. The Order also effectively rejected the request of Whiting and Maralex to re-define and re-establish those boundaries. Order R-11133-A affirmed that the vertical boundaries between the Pictured Cliffs and Fruitland Coal formations conformed to the respective lease ownership of Pendragon and Whiting.<sup>1</sup>

In addition, Order R-11133-A found that the fracture stimulation treatments Maralex performed on five of the Whiting Fruitland Coal wells in 1992 established communication with the Pictured Cliffs formation. (Finding 32.) The Order also found that the fracture treatments

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<sup>1</sup> Pendragon does not challenge the geologic findings and decretal portions of Order R-11133-A.

performed on four of the Chaco wells in 1995 communicated with the Fruitland Coal formation.<sup>2</sup> As a result of this communication between the separately owned formations, the Order identified three categories of gas capable of being produced from the Chaco 1, 2R, 4 and 5 wells: Category I: Gas originally in place in the Pictured Cliffs formation; Category II: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through fractures around the Pendragon Chaco wells; and Category III: Gas from the Fruitland Coal formation that has migrated to the Pictured Cliffs formation through fractures around the Whiting Fruitland Coal wells. (Finding 44.) The Order then requires further proceedings before the Division to place these wells back on production. (Decretal Paragraph 4.)

Pendragon respectfully submits that portions of Order No. R-11133-A are erroneous for the following reasons:

In many respects, Order No. R-11133-A is an order that is at war with itself. A number of the Order's findings and conclusions are inconsistent or are in direct conflict. Other findings are contradicted by the evidence or, in some cases, have no evidentiary basis at all. Certain provisions of the Order exceed the agency's authority while others indicate the agency's statutory mandates under the New Mexico Oil and Gas Act have been disregarded. Most importantly, the Order fails to resolve fully a number of the issues that were brought before the Commission for determination. Until these matters are addressed, the future drilling, production and development by these parties and by other operators in the WAW field or in areas of similar geologic composition will be clouded by uncertainty. The Division's ability to meaningfully regulate drilling and development in accordance with its rules, regulations and orders is similarly

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<sup>2</sup> Pendragon continues to dispute this particular finding.



impaired. In many cases, the findings contravene the public interest. These particular matters must be resolved by a rehearing before either the parties or the Division is able to move forward. All of these matters are discussed in greater detail as follows:

1. Order R-11133-A fails to afford meaningful regulatory relief in accordance with the applications before the Commission and the Division's statutes, regulations and prior orders. Pendragon specifically sought regulatory relief under the following authority: 19 NMAC 15,C,106,A; 19 NMAC 15,C,113; 19 NMAC 15.E.303A; NMSA 1978 Sections 70-2-2, 70-2-11 and 70-2-12B(2),(4),(7) and (8); and, Order No. R-8768. The findings and decretal portions of Order R-11133-A make the affirmative determination that the Whiting Fruitland Coal wells are not producing from their "appropriate common source of supply" as required under, inter alia, Order No. R-8768. Order R-11133-A expressly determined that the Whiting coal wells are producing gas from both the Basin-Fruitland Coal Gas Pool and the WAW Fruitland Sand-Pictured Cliffs Gas Pool. Production from the Pictured Cliffs formation by the offending coal wells would include Category I, II and III gas identified in the Order. Such production is in ongoing violation of Section 70-2-12(B)(7) of the Oil and Gas Act, as well as the statutes, regulations and order cited above, and consequently, the Order fails to "afford such relief as necessary to bring the wells into compliance with the Division's rules, regulations and orders."
2. Although Order R-11133-A allows the Division to approve restoring the four Chaco wells to producing status, the Order omits any similar provision requiring Whiting to demonstrate how its five Fruitland Coal wells may be produced without interfering with the Chaco wells or otherwise producing gas out of the separately owned Pictured Cliffs formation. The

omission is an inconsistency and further demonstrates how the Order fails to afford meaningful regulatory relief. In this regard, the practical effect of the Order reaches beyond the Subject Area. In 1992 and 1993, Maralex performed similarly aggressive fracture stimulation treatments on a number of other Fruitland Coal wells outside the Subject Area that are also underlain by separately owned drilled and undrilled Pictured Cliffs reserves.<sup>3</sup> In view of the findings in the Order, it is likely that those other coal wells are in communication with the Pictured Cliffs formation.

3. The policy implications of Order R-11133-A are also broad reaching by effectively preempting the use of heretofore accepted fracture stimulation completion technology. Pendragon submits that the preponderance of evidence in this case establishes that properly designed and controlled fracture treatments can be successfully contained within a formation. However, because the Order fails to take such evidence into consideration, the use of hydraulic fracture stimulation treatments by operators in either the Fruitland Coal formation or in adjacent sandstone formations is now precluded in the Subject Area and the remainder of the WAW field and most likely anywhere else in the San Juan Basin with similar geologic composition. Although certainly unintended, the chilling effect of the Order on drilling and development in these areas is likely immediate. The public interest is contravened as a consequence. This important issue deserves further consideration.
4. Findings 34, 45 and 46 in Order R-11133-A state that the unspecified Pendragon Chaco wells “nearly depleted” or “depleted” the Pictured Cliffs formation prior to 1995 and that the Chaco Wells No. 1, 2R, 4 and 5 have produced their “fair share” of gas. Yet, at the same time, the Order provides that the Chaco 1J and 2J may proceed to produce and that the Chaco 1, 2R, 4 and 5 wells may be restored to production. While the overwhelming preponderance of

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<sup>3</sup> Some of these wells were the subject of the Whiting/Maralex Application in NMOCD Case No. 11921.

the pressure and production data evidence establishes that the Pictured Cliffs is not depleted, findings 34, 45 and 46 pre-suppose that all the Chaco wells are uneconomic. Pendragon presented evidence that the wells continue to be economic with production as low as 30 mcfpd, and at pressures falling below 50 psi. Moreover, there is no evidentiary basis supporting these findings that effectively pre-judge future economic conditions. Once again, the Order has a chilling effect on the recovery of additional Pictured Cliffs reserves in the Subject Area and elsewhere. The order has the further unintended effect of condemning the Pictured Cliffs reserves of a number of interest owners in the area.

5. Finding 46 of the Order provides that the Chaco No. 1, 2R, 4 and 5 wells have produced their "fair share" of the gas in the Pictured Cliffs. However, there is neither a definition or quantification of what may constitute the "fair share" of gas. Moreover, the Commission is without the statutory authority, either express or implied, to determine that an owner may recover only a "fair" share of its reserves in circumstances such as these. Here, Pendragon owns one hundred percent of the Pictured Cliffs; it does not "share" ownership with anyone. Consequently, it is entitled to produce one-hundred percent of the gas reserves it owns.<sup>4</sup> The legal basis for the "fair share" finding in this case is not clear. The finding may have analogous support in Sections 70-2-16(C), 70-2-17(A) and 70-2-33(B) and (H) where correlative rights may be at issue, but the parties agree that such is not the case here. This dispute involves wholly separate pools created by the Division in Orders R-8768 and R-8768-A, R-8769 and R-4260. Consequently, finding 46 is either a misapplication of law to the facts, or was made in excess of the agency's authority.

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<sup>4</sup> Under the law, Pendragon owns and is entitled to produce all the recoverable Category I and Category III gas in the Pictured Cliffs formation, at the least.

6. Of all the evidence presented, the most meaningful and the most probative of the various engineering issues are the pressure data. These data are directly relevant to the communication and gas migration issues, as well as to the “depletion” and remaining recoverable reserves issues. However, it is apparent the Order gave little or no consideration to the considerable reservoir and well pressure data presented. The pre- and post-fracture treatment pressure data appear to have been wholly disregarded. Until the pressure data are addressed, the remaining findings are not meaningful.
7. Finding 33: The preponderance of evidence does not support the finding that the fracture treatments on the Chaco 1, 2R, 4 and 5 wells extended into the Fruitland Coal formation. The finding is further erroneous as it disregards the evidence presented establishing that fractures extending upwards would not have effectively communicated with the coal formation due to the downward settlement of proppants.
8. Finding 35: The finding of “steady gas production” from the Chaco wells is directly inconsistent with the depletion finding (45).
9. Finding 37: Neither side presented any evidence of the existence of any “high-pressure gas compartments.” This finding is wholly unsupported by the evidence. Moreover, the finding that the fracture stimulation treatments on the Chaco wells broke into such “compartments” is directly at odds with the tracer survey exhibits and testimony on the Bartlesville well and the Dome Federal well establishing that such fracture treatments were successfully contained within the appropriate zone.
10. Findings 36 and 39: There was no evidence presented establishing the existence of a “gas bubble”. Moreover, the finding is inconsistent with the evidence on the Chaco Plant No. 5 well originally completed in the Pictured Cliffs in 1975 and successfully fracture stimulated

in 1993. A number of Fruitland Coal wells were located in the area of the Chaco Plant No. 5. At the time of the fracture treatment of the Chaco Plant No. 5, those coal wells were only in the initial stages of dewatering and were producing minimal amounts of gas. Yet, the pressure and production data from the Chaco Plant No. 5 shows no indication that the fractures from the 1993 stimulation treatment encountered any “gas bubble” or “gas compartment.” In fact, no such “gas bubbles” existed anywhere near the Chaco Plant 5 wellbore, if at all.

11. Finding 39: The Order erroneously finds that no “third bench” of the Pictured Cliffs formation has been reported and that there is “no geological basis for this kind of formation.”<sup>5</sup> These findings are directly inconsistent with the substantial amount of testimony and exhibits that clearly establish the existence of the third bench and that the zone contributes considerable Pictured Cliffs reserves. Among other things, the evidence included geologic “literature”, cross-sections, well completion information, production data and calculations based on actual well logs. These materials conclusively established the existence of the third bench. There is ample evidence that this zone contributed Pictured Cliffs reserves to the Chaco wells.
12. Finding 39: The finding raises “the possibility” that the hydraulic fractures extended upward from the Chaco wells to the Fruitland Coal formation. This “possible” finding disregards the tangible evidence presented identifying the existence of shale and stress barriers between the formations, as well as actual tracer surveys showing fracture treatments remain contained within the Pictured Cliffs formation in such conditions. Moreover, Pendragon presented ample evidence establishing that fractures extend downward. The finding otherwise

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<sup>5</sup> Significantly, the Third Bench is a zone of the Pictured Cliffs formation. The bench, itself, may not be properly classified as a “formation”.

disregards the actual tracer survey evidence and the considerable testimony and literature evidence presented on fracture technology. The finding that there is “no scientific basis” for believing the fractures moved downwards is clear error.

13. Finding 40: The Order finds it is “unlikely” that the Chaco wells had suffered from significant reservoir damage. Yet, Pendragon presented unrefuted testimony and exhibit evidence establishing scale damage, water blockage and clay migration into rock pores. Indeed, the Maralex witness testified that the volumetric and material balance analyses on the Chaco Plant 5 and the Chaco No. 4 indicated those wells had substantially under-produced the recoverable gas in place. This testimony substantiates the existence of damage and further contradicts the conclusion that the formation was depleted.
14. Finding 41: The finding that the BTU analysis supports the conclusion that these wells communicated with the Fruitland Coal formation is in error. The finding is not supported by the BTU data presented by both parties which shows post-shut in BTU values for the Chaco wells to be well within the range of values measured for those wells when they were originally completed in the 1970’s. The finding also ignores the data presented for the Chaco 2R which showed high BTU values and increasing pressure during the period the coal wells were producing. In addition, the erroneous finding is at odds with the BTU data for the Chaco 1J and 2J wells. These wells, which were found not to have communicated with the Fruitland Formation (Finding 44) showed lower BTU values.
15. Finding 43: The Order finds that the acid jobs on the Chaco 1J and 2J wells did not establish communication with the Fruitland Coal formation and that these treatments “did not alter these wells’ rates of production.” This finding is not in error, but demonstrates why the failure to address the well and reservoir pressure data is so significant. If these two wells did

not connect with the Fruitland Coal formation, then the pressures reported for the wells are true Pictured Cliffs reservoir pressures, both before and after the acid treatments. Consequently, the finding that the Pictured Cliffs is a depleted reservoir is contra-indicated by Finding 43, as well as by the clearly relevant pressure data. In this regard, the pressure data for the Chaco No. 4 well is equally compelling: The high pressures measured immediately after the January, 1995 acid job and before the subsequent fracture treatment in May of 1995 also establish that (1) the Pictured Cliffs was not depleted, and (2) the pressures (and production) in the Pictured Cliffs were not a result of any communication with the Fruitland Coal formation. (Unless, of course, the Gallegos Federal coal wells that were previously fractured in 1992 established the communication.)

16. Finding 44: The finding establishes that three categories of gas exist in the Pictured Cliffs formation that is “now capable of production” from the Chaco Wells No. 1, 2R, 4 and 5.<sup>6</sup> At the same time, the Order provides for ongoing production from the Whiting Gallegos Federal wells that affects production from the Chaco wells, while simultaneously providing for restoring four of the Chaco wells back to production. However, the finding is erroneous and is not meaningful in practical effect without a determination of the volumes of gas that exist in the Pictured Cliffs formation attributable to each of the three categories.

17. Finding 46: As discussed above, the finding that the Chaco wells have produced their “fair share” is an apparent misapplication of the law and is also inconsistent with those findings contemplating further production from the Pictured Cliffs formation. The “fair share” is undetermined. In addition, as the evidence and findings of this Order establish that the Whiting Fruitland Coal wells are producing from the Pictured Cliffs formation, the Order

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<sup>6</sup> Again, Pendragon asserts that the finding with respect to Category II gas is in error.


cannot be meaningfully applied unless the "fair share" of production attributable to these wells is also determined.

WHEREFORE, Pendragon Energy Partners, Inc., Pendragon Resources, LP and Edwards Energy Corporation respectfully request the Commission set this matter for rehearing for the purposes of taking additional evidence and argument on the matters set forth above.

Respectfully submitted,

MILLER, STRATVERT & TORGERSON, P.A.

By

  
\_\_\_\_\_  
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ATTORNEYS FOR PENDRAGON ENERGY  
PARTNERS, PENDRAGON RESOURCES, L.P.  
AND EDWARDS ENERGY CORPORATION



CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Application for Rehearing was mailed on this 16 day of May, 2000 to the following:

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New Mexico Oil Conservation Commission  
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Petroleum Resource Recovery Center  
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**CLIENT: WHITING**  
**CLIENT NO.: 98-266.00**

**DATE:** June 8, 2000  
**TO:** Steve Ross  
**COMPANY:** New Mexico Oil Conservation Division  
**TELEFAX NO.:** (505) 827-8177  
**FROM:** J.E. Gallegos

**MESSAGE:**

**NUMBER OF PAGES INCLUDING COVER SHEET: 51**

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## **Ross, Stephen**

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**From:** Robert Lee[SMTP:lee@prrc.nmt.edu]  
**Sent:** Friday, May 19, 2000 6:05 PM  
**To:** Ross, Stephen  
**Subject:** Re: Pendragon's Request for Rehearing

Steve,

I do not agree with Pengragon's arguement. I strongly suggest that we do not grant a rehearing unless Lori and Jamie want to have one.

Robert

At 12:00 PM 5/19/00 -0600, you wrote:

>Dr. Lee,

>

>By now you should have received Pendragon's Request for Rehearing in this  
>matter.

>

>We don't have to grant a rehearing, but we should probably consider doing so  
>if the application for rehearing demonstrates that the order was somehow  
>erroneous.

>

>In reviewing the request, I identified several paragraphs which contain  
>assertions of a technical nature which I am unable to interpret. Would you  
>look at paragraphs 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 and see if  
>these assertions raise any doubts in your mind about the order?

>

>Thanks a lot.

>

>Thanks again for the hospitality during the Departmental retreat. People  
>are still talking about it!

>

>See you soon. If you want to talk about this, give me a call at 827-8156.

>

>Stephen Ross

>

TF R. Lec 5.22

10. no gas in Fruitland coal - establish bubble -  
remove water - gas desorbed from coal matrix

12. "shared layers" - shale or stress barriers  
"may not" be impediment to fracturing - in  
use PC - frac into Fruitland coal <sup>any</sup> <sup>exists,</sup>  
<sup>pressure in</sup>

13. scale damage - <sup>production data</sup>  
water blockage - <sup>support theory</sup>  
clay migration - <sup>that communication</sup>  
<sup>assumed</sup>  
inconsistent w/ pressure data / production data

why production so greater

won't happen

in PC (no water) (NO acid) - need to mobilize  
clay - normally just swells in presence of  $H_2O$

14. BTU analysis

Fruitland coal - gas lighter

PC - heavier - (BTU go down if hit Fruitland)

PC wells BTU values trending down over time!

"Pressure compartment" - cut into high pressure  
area -

<sup>volumetric</sup>  
all pressure calculations assume  
that ~~pressure~~ formations are intact - if  
communication exists, then volumetric  
calculations completely inaccurate