

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

**APPLICATION OF SAPIENT ENERGY CORP. FOR  
UNORTHODOX WELL LOCATION AND: (i) TWO  
NON-STANDARD 160-ACRE GAS SPACING AND  
PRORATION UNITS; OR IN THE ALTERNATIVE  
(ii) ONE NON-STANDARD 160-ACRE GAS  
PRORATION AND SPACING UNIT,  
LEA COUNTY, NEW MEXICO**

**CASE NO. 12587  
DeNovo**

**APPLICATION OF SAPIENT ENERGY CORP.  
FOR SPECIAL POOL RULES FOR THE  
WEST MONUMENT-TUBB GAS POOL  
LEA COUNTY, NEW MEXICO.**

**CASE NO. 12605  
DeNovo**

**REVISED  
PRE-HEARING STATEMENT**

This pre-hearing statement is submitted by SAPIENT ENERGY CORP., as required by the Oil Conservation Commission.

**APPEARANCE OF PARTIES**

**APPLICANT**

Sapient Energy Corp.  
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**ATTORNEY**

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**OPPOSITION OR OTHER PARTY**

Chevron USA Production Company  
Conoco Inc.

**ATTORNEY**

William F. Carr, Esq.

Amarada Hess Corporation

James Bruce, Esq.

## **ISSUES**

(1) This case involves the Tubb formation in the Monument Area of Lea County, New Mexico which, with the exception of Sapient's Barber 12 Well, has been developed with Tubb gas and oil wells on 80-acre spacing.

(2) The fundamental issues involved in this case are (i) what spacing unit size and accompanying well location should be approved for Sapient's Barber 12 Well which can only drain 60-acres or less, and (ii) should that assignment of an appropriate spacing unit be made retroactively to the date of first production.

## **PARTIES**

### **Applicant:**

(3) In July, 2000, Sapient Energy Corp. ("Sapient") acquired the Bertha J. Barber 12 Well (the Barber 12 Well") located 330 feet from the north line and 660 feet from the east line of Section 7, T20S, R37E, Lea County, New Mexico, from Falcon Creek Resources, Inc. who, in April 2000, had acquired the well from Cross Timbers Oil Company who originally recompleted the well into the Tubb formation and commenced production in August, 1999.

### **Opposition:**

(4) Chevron USA Production Company ("Chevron") is the north offsetting operator with 100% of the Tubb gas rights in the SE/4 of Section 6, T20S, R37E and also an offsetting working interest owner with an 18.71% interest in the W/2E/2 of Section 7.

(5) After waiting more than a year to offset the Barber 12 Well, Chevron filed an administrative application with the Division seeking approval of an unorthodox gas well location for its G. C. Matthews Well No. 12 located 330' FSL & 990' FEL (Unit P) Section 6, T20S, R37E. Its unorthodox well location was approved on January 24, 2001. Chevron is currently attempting to recomplete its Matthews 12 Well.

(6) Conoco Inc. ("Conoco") is an offsetting working interest owner with a 37.42% interest in the W/2E/2 of Section 7.

(7) Both Chevron and Conoco appeared in opposition to the applicant and requested that Sapient's Barber 12 well be shut-in, that Sapient's application be denied, that Sapient be required to form a standard 160-acre GPU consisting of the NE/4 of Section 7 and pay 50% of the well's proceeds to the owners in the W/2NE/4 of Section 7.

(8) Amerada Hess has a working interest in the S/2SW/4 of Section 5 in the Monument Tubb Oil Pool in which Amerada Hess could have drilled a Tubb gas well 467 feet from Sapient's spacing unit without notice to Sapient. However, Amerada Hess now objects to the fact that Sapient's Barber 12 Well is 738 feet from the Amerada Hess tract.

### **SAPIENT'S REQUEST TO THE COMMISSION**

#### **Request to the Commission:**

(9) Sapient seeks the following relief from the Commission:

(a) adopt rules for the West Monument-Tubb Gas Pool ("The Gas Pool") which are identical to the existing rules for the Monument Tubb Oil Pool ("The Oil Pool"), including a provision for standard 80-acre spacing units and 330 foot well set back requirement for both oil wells and gas wells;

(b) whether spacing is 80-acre or 160-acres, production from the discovery well be allocated retroactive to the date of first production from its Barber 12 Well for any production from The Gas Pool; and

(c) in the event Sapient's request for 80-acres spacing is granted, then its Barber 12 Well will be at a standard well location. However, in the event the Commission adopts 160-acre spacing with 660 foot well setback requirements, then Sapient's location is unorthodox and Sapient requests approval of the Well Location for its Barber 12 retroactive to date of first production, without any penalty

#### **Establish 80-acre spacing:**

#### **Commission authority:**

(10) NMSA 1978 Section 70-2-17, obligates the Commission:

"A. is required, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce its just and equitable share of the oil or gas, or both, in the pool, being the 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...**" [emphasis added]

"B. ...may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well...."

(11) NMSA 1978 Section 70-2-12 (10) empowers the Commission "To fix the spacing of wells".

(12) The Commission is authorized to adopt special pool rules which can be different from the "general statewide" spacing rules set forth in Division Rule 104. 19 NMAC 15.C.104.

### **The Monument Tubb Oil Pool:**

(13) On November 10, 1964, at the request of Conoco, the Division entered Order R-2800 which granted Conoco application for 80-acre spacing for the Monument Tubb Oil Pool ("The Oil Pool").

(14) The Monument Tubb Oil Pool ("The Oil Pool"), which abuts the NE/4 of Section 7 in which Sapient's Barber 12 Well is located, has gas wells dedicated to 80-acre spacing units for gas production from the Tubb formation. The Oil Pool makes no distinction in the size of a spacing unit assigned to a well regardless of whether it is classified as a gas well or an oil well.

(15) In June, 1994 by Order R-10128 and at the request of Texaco Exploration and Production Inc., increased the GOR in the Oil Pool to 10,000 to 1 and stated that there is no correlation between a given well's producing GOR and its location structurally within the reservoir **and** there is no evidence which would indicate the presence of a gas cap within the reservoir.

(16) While Sapient's Barber 12 Well has been placed in the Gas Pool, it is an extension of the same Tubb gas/oil accumulation established for the Oil Pool and is located immediately adjacent to the western boundary of the Oil Pool,

(17) Sapient's Barber 12 Well:

(a) cannot be distinguished from gas wells in the Oil Pool,  
and

(b) there is no geologic or petroleum engineering reason for treating it differently

(18) It is arbitrary and capricious to treat the Barber 12 Well any differently from the gas wells in the Oil Pool.

**The Barber 12 Well's drainage area:**

(19) Sapient's net pay isopach shows the distribution of the Tubb reservoir as it relates to the NE/4 of Section 7 and the SE/4 of Section 6 and demonstrates that distribution is not uniform. **See Exhibit 28**

(20) Sapient estimates that the drainage area from the Barber 12 Well will be approximately 60 acres or less. **Exhibit 18, 21**

(21) Sapient's material balance and volumetric calculations demonstrate that its estimate of ultimate recovery (60-acres) fits within the size, volume and shape of the Tubb reservoir in the E/2NE/4 of Section 7 as depicted on Sapient's net pay isopach. **See Exhibits 15, 16, 18, 26**

**Allocation of reservoir share:**

(22) Sapient's geologic and petroleum engineering evidence demonstrates that the E/2NE/4 of Section 7 has the greatest volume of productive acreage when compared to either the SE/4 of Section 6 or the W/2NE/4 of Section 7. **See Exhibit 16**

(23) The distribution of productive acres including the calculated drainage area of the Barber 12 Well requires the Commission to adopt rules for the Gas Pool which are consistent with the Tubb Oil Pool such that 80-acre spacing is appropriate for Tubb gas wells in this circumstance. **See Exhibit 15, 16, 18, 21, 23**

(24) While the limits of the Gas Pool have not yet been defined, there is substantial evidence within the NE/4 of Section 7 and the SE/4 of Section 6 to decide on the most equitable distribution of productive acres and the size of the spacing units for those areas. **See Exhibit 16, 23**

(25) Sapient's substantial geological and petroleum engineering evidence demonstrates that it is necessary to create special rules for the West Monument Tubb Gas Pool which are the same as created for the Monument Tubb Oil Pool and thereby prevent waste and protect correlative rights. **See Exhibits 13-31**

**Approve the Barber 12 Well's location:**

(26) Barber 12 Well's location would be a standard well location for The Oil Pool.

(27) Barber 12 Well's location would be standard well location for many pools spaced on 80-acre spacing;

(28) Because the Barber 12 Well drains approximately 60-acres, its location 330 feet from the north line and 660 feet from the east line of Section 7 does not impair correlative rights.

(29) The location of the Barber 12 Well should be approved to the date of first production without penalty.

**OLD DATA**

(30) At the Division hearing, the data indicated a range of drainage from 103 acres to more than 160 acres.

(31) At the Examiner hearing, the following calculated bottom hole pressure ("BHP") were used from which calculated EUR and drainage areas were determined as follows:

Sapient at 2570 psi for an EUR of 2.3 to 2.4 Bcf and a drainage area of 103 to 107 acres;

Conoco at 2462 psi for an EUR of 2.88 Bcf and a drainage area in excess of 160 acres;

Chevron at 2800 psi. for an EUR of 2.05 to 2.53 Bcf and a drainage area of approximately 160 acres.

**NEW DATA**

(32) In accordance with the Division's order, Sapient shut-in the Barber 12 Well.

(33) Since the Examiner hearing, Sapient conducted a 7 day shut-in test, ran a bottom hole pressure bomb in the well and measured the bottom hole pressure (BHP) at 1235 psi (adjusted for depth). **See Exhibit 17**

(34) This new pressure point:

(a) significantly reduces the volumetrically calculated estimated ultimate recovery (EUR) from 2.3-2.4 Bcf to 1.326 Bcf; and **See Exhibits 18 & 21**

(b) updated decline curve analysis of the EUR closely matches the volumetric calculation of EUR. **See Exhibit 19**

(35) With the new bottom hole pressure data and detailed log analysis, Sapient will demonstrate to the Commission that the Barber 12 Well is only capable of draining 60 acres or less. **See Exhibit 18**

### **THE HISTORY OF BARBER 12 WELL<sup>1</sup>**

#### **Background:**

(36) In 1964, Conoco obtained a Division order adopting special rules for the Monument Tubb Pool including 80-acre spacing for BOTH gas and oil wells. R-2800 (10/31/64 Elvis Utz).

(37) In June, 1994 by Order R-10128 and at the request of Texaco Exploration and Production Inc., increased the GOR in the Oil Pool to 10,000 to 1 and stated that there is no correlation between a given well's producing GOR and its location structurally within the reservoir **and** there is no evidence which would indicate the presence of a gas cap within the reservoir.

(38) In August and September, 1999, Cross Timbers Oil Company, with the assistance of the OCD-Hobbs created the following regulatory problems:

(a) In August, 1999, Cross Timbers requested OCD-Hobbs approval to re-enter the Barber 12 Well and attempt to re-complete it in the Tubb formation (C-103 sundry notice) **and** included a C-102 acreage dedication plat dedicating the E/2E/2 of Section 7 to the well at a location 330 feet from the north line;

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<sup>1</sup> Sapient's Chronology of Events is attached as Exhibit "A" to this prehearing statement

(b) The OCD-Hobbs, instead of requiring Cross Timbers to comply with either Rule 104 for a 160-acre square spacing unit consisting of the NE/4 and an unorthodox well location of 330 feet, in September, 1999, the OCD approved Cross Timbers C-104 request an allowable and authorized Cross Timbers to produced the well.

(39) This resulted in three problems:

(a) first, the proposed well dedication is inconsistent with the Monument Tubb Oil Pool rules or the statewide 160-acre shallow gas rules (Rule 104) because Cross Timbers was using a non-standard 160-acres consisting of the E/2E/2 of Section 7;

(b) the well is 330 feet from the north line of Section 7 and would be a standard location in the Monument Tubb Oil Pool (330 from 1/41/4 line) but would be unorthodox under the 160-acre statewide shallow gas rules (Rule 104)

(c) and in either event, the OCD did not tell Cross Timbers, does not reject Cross Timber's C-104, but instead authorized Cross Timbers to produce the well.

(40) The problem gets worse:

(a) In January, 2000, some six months after the Barber 12 Well starts producing, the Division declares it to be in a new gas pool called the West Monument Tubb Gas Pool (R-11034)

(b) Despite Conoco and Chevron's experience in the area and offsetting ownership to the Barber 12 Well, neither does anything about the fact that this well is not dedicated to a 160-acre square and is 330 feet from Chevron's tract.

(c) the Division does nothing.

(d) Cross Timbers then sells the well and on July 14, 2000, almost a year after it first started producing, Sapient buys the well.



(e) Finally, in January, 2001, almost 17 months after first producing, Chevron finally decides to file for approval of an NSL to offset the Barber 12 Well;

(41) Sapient, having acted in good faith and having relied upon past approvals by the Division, assumes its Barber 12 Well is in full compliance until October, 2000 when the following occurred:

(a) as a result of the Chevron application, Sapient on its own and without action by Conoco, Chevron or the Division, applied to the Division to determine the proper spacing unit for the Barber 12 Well and to approve its location should the Division determine it to be unorthodox.

(b) at a Prehearing conference held before Mr. Stogner on January 24, 2001, Sapient withdrew its objection to the Chevron location. As a result, Mr. Stogner **denied** Conoco/Chevron's request to shut-in the Sapient well and approved the Chevron NSL but later vacated that approval on March 1, 2001 because Chevron had failed to notify the proper parties.

(42) It was not until August 9, 2001 that Chevron cured its defect and obtained an NSL.

(43) As of November 1, 2001 Chevron had not yet tested the Tubb in its well.

(44) Any delay associated with Chevron's well was caused by Chevron for which it is solely responsible.

(45) Correlative rights are defined as "the opportunity" afforded each interest owner to recover his share of the recoverable hydrocarbons apportioned to his tract. That opportunity is not an absolute entitlement to a certain volume of hydrocarbons. That opportunity can be lost or waived by an interest owner failing to act. **See 19 NMAC 15.A (22).**

### COMMISSION ACTION

(46) In accordance with NMSA 1978 Section 70-2-17, NMSA 1978 Section 70-2-12(c), and Division Rule 104, the Commission should find that:

(a) in order to provide an opportunity for each interest owner to produce its share of the Tubb gas reserves underlying its tract the Division should adopt special rules and regulations for the West Monument Tubb Gas Pool;

(b) should establish proration units in the pool of 80-acres as the area that can be most efficiently and economically drained and developed by one well and is the area that most closely fits Sapient's drainage calculations; and

(c) to adopt 160-spacing units would result in too few wells being drilled.

(47) It is most reasonable and practicable to adopt 80-acre spacing units as follows

(a) Chevron S/2SE/4 of Section 6

(b) Conoco/Chevron W/2NE/4 of Section 7

(c) Sapient E/2NE/4 of Section 7

(48) These three spacing units will afford each owner the opportunity to recover and produce its just and equitable share of the oil or gas, or both, in the pool, being the 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.

(49) Correlative rights are defined as "the opportunity" afforded each interest owner to recover his share of the recoverable hydrocarbons apportioned to his tract. That opportunity is not an absolute entitlement to a certain volume of hydrocarbons. That opportunity can be lost or waived by an interest owner failing to act. **See 19 NMAC 15.A (22).**

(50) In this case, both Conoco and Chevron either knew or should have known that Cross Timbers had recompleted the Barber 12 Well as a new Tubb gas well immediately adjacent to their property and failed to timely act.

(51) Therefore Conoco and Chevron each waived their correlative rights in this matter.

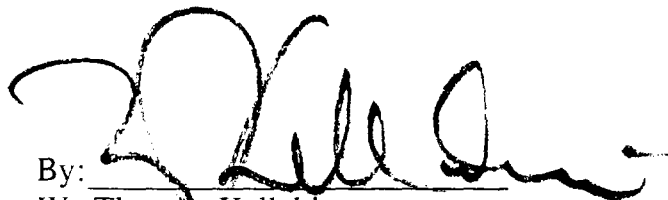
### WITNESSES

WITNESSES	EST. TIME	EXHIBITS
Kyle Travis (land & regulatory)	60 min.	1-12
Kyle Travis (P.E.)	60-90 Min.	13-21
Bob Von Rhee (geologist)	60-90 Min.	22-30
supporting data		31

### PROCEDURAL MATTERS

In Case 12587, Sapient will withdraw its request for a De Novo hearing except for that portion of Sapient's application which seeks the assignment of an 80-acre spacing unit to be made effective retroactive to the date of first production from the West Monument Tubb Gas Pool for its Barber 12 Well. Sapient requests that the Commission affirm that portion of Order R-11652 which approved Salient's well location.

KELLAHIN AND KELLAHIN



By: \_\_\_\_\_  
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**EXHIBIT "A"**  
**SAPIENT ENERGY CORP.'S**  
**CHRONOLOGY OF EVENTS**

(1) November 10, 1964:

At the request of Conoco, the Division entered Order R-2800 which granted Conoco application for 80-acre spacing for the Monument Tubb Oil Pool.

(2) June, 1994:

By Order R-10128 and at the request of Texaco Exploration and Production Inc., increased the GOR in the Oil Pool to 10,000 to 1 and stated that there is no correlation between a given well's producing GOR and its location structurally within the reservoir **and** there is no evidence which would indicate the presence of a gas cap within the reservoir.

(3) August, 1999:

Cross Timbers filed a C-103 (Sundry Notice) dated August 10, 1999, being a notice of intention to recomplete the Bertha J. Barber Well No. 12 in Tubb formation. **Approved** by Paul Kautz (OCD-Hobbs on September 20, 1999); **See Exhibit 3**

(4) September 1999:

Cross Timbers filed a C-105 dated September 9, 1999, being a Tubb gas well recompletion report; **See Exhibit 4**

Cross Timbers filed a C-103 (Sundry Notice) dated September 9, 1999, being a report that it had recompleted the Bertha J. Barber Well No. 12 in Tubb formation. **Approved** by Paul Kautz (OCD-Hobbs on September 20, 1999); **See Exhibit 5**

Cross Timbers filed a C-102 dated September 9, 1999, showing an unorthodox Tubb gas well location and the dedication of a non-standard 160-acre spacing unit consisting of the E/2E/2 of Section 7;  
**See Exhibit 6**

On September 20, 1999, the OCD-Hobbs **approved** Cross Timbers' C-104 (allowable request) which shows this well as a Wildcat Tubb gas well; **See Exhibit 7**

(5) September, 1999:

Chevron, as an offset operator to the Cross Timber's Barber 12 Well, became aware that Cross Timbers had recompleted this well only 330 feet from the common boundary as a new gas well in the Tubb formation. However, Chevron waited until October, 2000 to complain about Cross Timber's well location and spacing unit.

(8) January 6, 2000:

In Case 12321, the Division issued Order R-11304 which approved the creation of the West Monument-Tubb Gas Pool, designated the E/2 of Section 7 as the acreage for the new pool and approved the Barber 12 Well as the discovery well for this pool. Chevron and Conoco failed to appear or object.

(9) April 1, 2000:

Falcon Creek Resources, Inc. ("Falcon Creek") acquired the Bertha J. Barber Well No. 12 from Cross Timbers Operating Company ("Cross Timbers").

(10) April 14, 2000:

The OCD-Hobbs **approved** Falcon Creek's C-104 (allowable request) which shows this well to be in the West Monument Tubb Gas Pool. **See Exhibit 9**

(11) July, 2000:

On July 14, 2000, Sapient Energy Corp. ("Sapient") acquired this well from Falcon Creek.

In July, 2000, Chevron decided to recomplete its Matthews Well No 6, located some 1650 feet north of the common boundary between Cross Timbers and Chevron (SE/4 of Section 6, T20S, R37E) in an attempt to produce from the same Tubb Gas Pool as the Cross Timber's well was producing. That effort was not successful because the Tubb formation in Chevron's wellbore was too tight to produce.

(12) October 11, 2000:

After waiting more than a year to offset the Cross Timbers well, Chevron filed an administrative application with the Division seeking approval of an unorthodox gas well location for its G. C. Matthews Well No. 12 located 330' FSL & 990' FEL (Unit P) Section 6, T20S, R37E, to be dedicated to a 160-acre gas spacing consisting of the SE/4 of this section for production from the West Monument-Tubb Gas Pool.

Despite the fact that by July 14, 2000, Sapient was the Division designated operator of record for the Barber 12 Well, Chevron sent notification of its application to Cross Timbers and then to Falcon Creek Resources, Inc. as the offsetting operator of the Bertha J. Barber Well No. 12 towards whom the Chevron well will encroach.

(13) January 24, 2001:

The Division **denied** Conoco/Chevron's request to have the Sapient Barber 12 Well shut-in and entered Administrative Order NSL-3752-A approving Chevron's application.

(14) March 1, 2001:

At the Examiner's hearing for the Sapient case, and upon discovering that Chevron had not notified the proper parties, the Division suspended its approval of Chevron's well location for its Matthews 12 Well.

(15) August 9, 2001:

The Division reinstated its approval for Chevron's Matthews 12 Well

(16) September, 2001:

On September 13, 2001, Division entered Order R-11652 denying Sapient's application and requires its well to be shut-in

On September 19, 2001, Sapient request a DeNovo hearing and seeks a stay of the shut-in of its well.

(17) October, 2001:

On October 4, 2001, the Division holds a hearing on Sapient's request

On October 15, 2001, the Division denies Sapient's request

On October 17, 2001 Sapient shuts in the Barber 12 Well