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April 19, 1995

**HAND DELIVERED**

Mr. David R. Catanach  
Hearing Examiner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

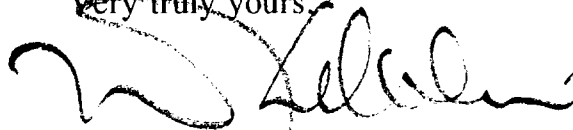
**Re: NMOCD Case 11235**  
***Application of Yates Petroleum Corporation for***  
***an Unorthodox Well Location, Eddy County, New Mexico***

Dear Mr. Catanach:

On behalf of Conoco Inc., please find enclosed our proposed order for your consideration in this matter which was presented to you at the hearing held on April 5, 1995.

At the Hearing, Conoco requested this application be denied because we were unable to determine how you could grant the Yates' request without violating Conoco's correlative rights. Since then, I have proposed to Conoco and it concurs that Yates' problem can be solved by creating a 40-acre NSP with an allowable of 175 BOPD for the encroaching well and a 120-acre NSP with an allowable of 525 BOPD for the remaining three wells. That solution is draft in the enclosed proposed order.

Very truly yours,



W. Thomas Kellahin

cc: Ernest Carroll, Esq.  
Attorney for Yates Petroleum Corporation  
cc: Conoco Inc.  
Attn: Jerry Hoover

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

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 11235  
Order No. R-\_\_\_\_\_**

**APPLICATION OF YATES PETROLEUM CORPORATION  
FOR AN UNORTHODOX GAS WELL LOCATION,  
EDDY COUNTY, NEW MEXICO.**

**CONOCO'S PROPOSED  
ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on April 6, 1995, at Santa Fe, New Mexico before Examiner David R. Catanach.

NOW, on this \_\_\_\_ day of April, 1995, 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.

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(2) The applicant, Yates Petroleum Corporation ("Yates"), seeks authorization to drill its proposed Aspden "AOH" Federal Com Well No. 2 ("Aspden Well") at an unorthodox oil location 330 feet from the South line and 1980 feet from the West line (Unit N) of Section 29, Township 19 South, Range 25 East, in the North Dagger Draw-Upper Pennsylvanian Pool with a standard 160-acre spacing and proration unit consisting of the SW/4 of said Section 29 to be simultaneously dedicated to said well and to the existing Boyd "X" State Com Well No. 4 (Unit K), the Boyd "X" State Com Well No. 2 (Unit L), and the Aspden Well No. 1 (Unit M).

(3) This location is within the North Dagger Draw-Upper Pennsylvanian Pool which is subject to Special Rules and Regulations as set forth in Division Order R-4691, as amended, which provide, among other things:

(a) for 160-acre proration and spacing units for oil production with a maximum of 700 barrels of oil per day with a limited 10,000 to 1 GOR per unit; and

(b) for wells located no closer than 660 feet to the nearest side boundary of the unit.

(4) Yates' requested unorthodox well location encroaches towards an offsetting 160-acre spacing unit consisting of the NW/4 of Section 32, T19S, R25E, operated by Conoco Inc. ("Conoco") and currently dedicated to North Dagger Draw-Upper Pennsylvanian Pool production from its Joyce Federal Well No. 1 (Unit D) which is located at a standard well location.

(5) Yates' requested unorthodox well location also would directly encroach towards Conoco's proposed Joyce Federal Well No. 2 to be drilled at a standard location in Unit C of Section 32 which would then leave the Yates and Conoco wells only 990 feet apart.

(6) Conoco appeared at the hearing in opposition to the applicant and sought to have the requested location DENIED.

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(7) Yates sought approval of the unorthodox location WITHOUT a penalty based upon the following arguments and evidence:

(a) Yates preferred to drill the Aspden Well at a standard location 660 feet from the south and 1980 feet from the west lines of Section 29 which would have placed the surface location of the well in the Seven Rivers Draw, a surface feature in a portion of the SW/4 of Section 29;

(b) Mr. Barry Hunt, as the surface inspection officer for the U. S. Bureau of Land Management (the surface/mineral agency for the southern 80-acres of this particular spacing unit) rejected the proposed standard location because it was located in the Seven Rivers Draw; (See Yates' testimony of Ken Baerdemphl)

(c) an unorthodox well location 330 feet from the south line and 1980 feet from the west line would serve to avoid the Seven Rivers Draw;

(d) that unless the unorthodox well location was approved, its correlative rights would be impaired because it would be denied the opportunity to have four wells in the spacing unit; and

(e) that any other location in the spacing unit would put the subject well too close to other wells operated by Yates and therefore would not be an efficient pattern for its wells to effectively produce Yates' share of reservoir hydrocarbons thus causing waste.

(8) Yates' presented geologic evidence which demonstrated that:

(a) the proposed unorthodox location is geologically inferior to the proposed standard location because the proposed unorthodox location (-4200 feet subsea) is 25 feet lower structurally than the closest standard location (-4175 feet

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subsea) and that the Cisco dolomite thickness at the unorthodox location should be 220 feet versus 240 feet at the standard location;

(d) based upon geological considerations, it is most favorable for Yates to encroach towards the north, the northwest or the northeast and it is most disadvantageous to encroach towards Conoco's operated spacing unit to the south;

(9) Yates' petroleum engineering witness contended that Yates' correlative rights would be impaired and waste would occur unless the location was approved without a penalty BUT:

(a) failed to present any production data, pressure data, initial potential test for any well in the spacing unit or any well in the immediate area;

(b) failed to present any drainage calculation to demonstrate that a well at the unorthodox location would not unduly impair the correlative rights of Conoco;

(c) failed to present any pressure/interference studies to demonstrate that the proposed Yates well and the offsetting proposed Conoco well being only 990 feet apart would not be too close together; and

(d) did testify that North Dagger Draw Cisco wells drain more than 40-acres.

(10) Yates, while opposed to any penalty, argued that if a penalty was adopted it should be consistent with that proposed by Yates in NMOCD Case 10519, Order R-9731 in which:

(a) Yates had proposed the initial well at an unorthodox location 360 feet FSL and 2080 feet FWL to be dedicated to a W/2 section 320-acre gas spacing and proration unit in the South Dagger Draw-Upper Pennsylvanian Associated Pool;

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(b) where the Yates' proposed penalty consisted of three factors being a north/south footage, an east/west footage and a double circle acreage encroachment factor; and

(c) was applied against the subject well's initial potential production.

(11) Conoco sought to have the unorthodox location DENIED based upon the following arguments and evidence that:

(a) Yates' topographical limitations imposed by the BLM should not be solved at the expense of Conoco's correlative rights;

(b) the BLM inspector provided Yates with the option to locate the well at least 500 feet north of its original proposed standard location and for other alternative locations in the SW/4 of Section 29 for this well to the north, east and west, (See Conoco Exhibits 10 and 11);

(c) the alternative BLM suggested location 500 feet north of the original proposed standard location would then only be 170 feet variance instead of the 330 foot variance Yates sought;

(d) locations appear to be available to Yates in the SW/4 of Section 29 which would not encroach towards Conoco and would meet the BLM topographic constraints, (See Conoco Exhibit 2);

(e) Conoco's geologic expert, using subsurface data and seismic information, contoured the Cisco dolomite thickness with its corresponding structural position and reached the geologic conclusion that Yates' proposed location would give Yates' an unfair competitive advantage over Conoco's proposed Joyce Federal Well No. 2 which would be farther downstructure, contain less dolomite and would be closer to

the edge of the pool and nearer the potential water encroachment than the Yates' location;

(f) approval of Yates' requested unorthodox location would likely cause Conoco's proposed Joyce Federal Well No. 2 to be uneconomic due to severe production interference from the Yates' well in a thinner pay section on the edge of the reservoir; and

(g) Conoco's geologic expert further concluded that almost any other location in the SW/4 of Section 29 is better than the proposed unorthodox location and would provide Yates with better structural position and greater dolomite thickness than its proposed unorthodox well location.

(12) Conoco's expert petroleum engineering witness presented a production interference study which demonstrated that:

(a) well interference can commonly be observed between North Dagger Draw wells drilled at standard locations on 40-acre density since they typically drain more than 40-acres;

(b) in each of the six specific examples involving Cisco wells drilled at standard well locations near the edge of the reservoir such that the paired wells were at least 1320 feet apart interference appears to be more severe in thinner pay around the perimeter of the reservoir;

(c) in each instance the first well in a pair demonstrated a dramatic acceleration in its decline in oil production, which in each case, exactly matched the established decline rate of the second well;

(d) the decline in oil production from the first well typically occurred from one to three months after the commencement of production from the second well in the pair;

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(e) wells at standard locations in adjoining 40-acre tracts were significantly interfering with each other;

(f) if Yates was allowed to drill its proposed unorthodox location then there would be a Yates well and a proposed Conoco well only 990 feet apart;

(h) there is no precedent in the North Dagger Draw-Upper Pennsylvanian Pool for allowing a well to encroach closer than 660 feet to an adjoining spacing unit with different ownership;

(i) there are apparent available alternative locations in the SE/4SW/4 which represent viable, economic opportunities to recover the oil reserves underlying Yates' acreage in this spacing unit.

(13) Conoco argued that the Yates proposed "Diamond Well" penalty **cannot** be used in the subject case because:

(a) the Yates' proposed three factor formula was **rejected** by the Division in that case (See Order R-9731-A, issued September 22, 1992) and no precedent was established for using the Yates' formula;

(b) production penalties must be applied to the spacing unit and cannot be applied to an individual well in a multiple well spacing unit;

(c) the Diamond case involved only one well in a spacing unit while the subject case will involve up to four wells;

(d) the initial potential of a well in the North Dagger Draw-Upper Pennsylvanian Pool is customarily two to three times greater than the well's actual producing rate after the first few months of initial production;



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(e) any penalty based upon either the initial potential or initial production rate of a well in the North Dagger Draw will result in that penalty having no impact upon the subject well after the first few months of production;

(f) in a 160-acre spacing unit with multiple wells it is impossible to ensure that the unorthodox well will be properly penalized;

(g) under the existing Division's regulatory scheme that in a 160-acre spacing unit with multiple wells it is impossible to enforce any penalty against the unorthodox well;

(h) subsequent to the Diamond Case, Yates appeared in Case 10731 and detailed its unsuccessful attempts to develop a meaningful penalty for an unorthodox well location within a multiple well spacing unit in North Dagger Draw and expressed its ultimate conclusions that such applications be denied because "of the problems of implementing a penalty" (Page 174, transcript for Case 10731, (testimony of Yates' witness Dr. David Boneau).

(14) Conoco argued that the approval of Yates' application WITH OR WITHOUT A PENALTY would establish a precedent for the North Dagger Draw-Upper Pennsylvanian Pool because:

(a) 149 of 150 wells drilled in North Dagger Draw have been drilled at least 660 feet from the outer boundary of a spacing unit. (The single exception is where Texaco without objection encroached towards another spacing unit it operated).

(b) Yates had previously presented sworn testimony of Dr. David Boneau, Yates' petroleum engineering expert, who testified in Case 10731 heard on June 18, 1993 that it was impossible to develop an effective penalty for encroaching well locations in this pool;

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(c) Yates' proposed unorthodox well location cannot be justified based upon either geologic or topographical reasons;

(d) Yates' requested unorthodox well location if approved even with a penalty will give Yates an unfair advantage over the offsetting interest owners and will violate correlative rights;

(e) that any production penalty imposed on the Yates spacing and proration unit because of this wells' unorthodox location will not be effective because there is no practical means for enforcing compliance in a spacing unit which has multiple wells and all production goes into a common battery without measurement for each well;

(f) Yates is using an unjustified topographical excuse to gain an unfair and unnecessary advantage over Conoco;

(g) Yates' unorthodox location will disrupt established drainage patterns in the immediate area as illustrated by Conoco's well location map;

(h) that Yates' request represents a precedent in this pool which was been developed with wells located at least 660 feet from the outer boundaries of their units.

(15) The Division finds that:

(a) Yates' failed to meet its burden of proof to established that approval of this application will prevent waste and protect the correlative rights of all parties;

(b) Yates' failed to establish that there was no other location in the SE/4SW/4 of Section 29 for the subject well;

(c) Yates' proposed penalty method presented by Mr. Bob Fant is directly contrary to and inconsistent with the prior sworn testimony of Dr. David Boneau on behalf of Yates in a previous Division case involving similar relevant facts;

(d) the penalty imposed on the "Diamond Well" by Order R-96731 in Case 10519 was for an initial well in a spacing unit and cannot be applied in this case where there already exist two other wells in the subject spacing unit;

(e) Division Case 10731 contains detailed recommendations and conclusions from Yates on how to process this type of case and should be taken as a precedent by the Division for deciding the subject case;

(f) to approve Yates' application without a penalty would resolve Yates' topographical problem solely at the expense of Conoco as the offsetting operator;

(g) approval of Yates' application without a penalty would afford Yates' an unfair competitive advantage over Conoco and would violate the correlative rights of Conoco;

(h) approval of the Yates' application can only be accomplished if it is practicable to adopt a meaningful penalty which would protect the correlative rights of Conoco;

(i) to establish a precedent for the pool which would be effective and efficient it would be necessary to adopt provisions to prevent the operator from producing most or all of the penalized unit's allowable from the encroaching well;

(j) to adopt the penalty method utilized in the Diamond case as argued by Yates would result in the adoption of a meaningless and ineffective penalty for the subject well;

(k) because of multiple wells already existing in the spacing unit, it is not possible to adopt a meaningful and appropriate penalty for a 160-acre spacing unit within this pool;

(l) that there are other locations available to Yates within its proposed spacing unit which will provide to Yates an adequate and efficient opportunity to produce its share of recoverable hydrocarbons without adversely affecting Conoco's correlative rights;

(m) that Yates failed to apply to the BLM for any other location in its spacing unit and therefore has failed to demonstrate the necessity for the unorthodox well location;

(n) the Conoco's geologic interpretations which included seismic data should be adopted by the Division as the most probably interpretation because it was far more detailed and comprehensive than Yates' geologic interpretation.

(16) It is not a justification to allow wells at unorthodox well location simply because offsetting wells at standard location may be draining a portion of the spacing unit. Granting approval of an application based upon that position would circumvent well spacing rules and lead to unrestricted competitive drilling at multiple unorthodox well locations all to the damage of correlative rights and prevention of waste.

(17) A review of Division records reflects that the Division has already established a precedent for how to penalize an unorthodox well in a multiple well spacing unit in the Eumont and Jalmat pools by refusing to approve such applications;

(18) The Division's regulatory scheme for managing producing allowables in this pool is not designed to track production on an individual well basis and it is therefore impossible to monitor compliance of a well's specific production penalty should such a penalty be adopted;

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(19) This application should be denied and Yates' afforded the following alternative:

(a) to apply to the Division for the creation of two non-standard proration and spacing units one consisting of 120-acres being the N/2 and SW/4 of SW/4 and the other consisting of 40-acres being the SE/4SW/4; and

(b) with the 120-acre unit receiving a maximum daily oil allowable of 525 BOPD (75 % of 700 BOPD) and the 40-acre unit receiving a maximum daily oil allowable of 175 BOPD (25 % of 700 BOPD).

(20) The adoption of a 40-acre non-standard oil proration unit for the subject well and the corresponding approval of the unorthodox location with the imposition of an allowable limitation of not more than 175 BOPD would afford to Yates the opportunity to drill the subject well while at the same time providing for the protection of Conoco's correlative rights.

(21) The applicant's request for an unorthodox well location is not justified and should therefore be denied.

IT IS THEREFORE ORDERED THAT:

(1) The application of Yates Petroleum Corporation for approval of its proposed Aspden "AOH" Federal Com Well No. 2 to be located at an unorthodox location 330 feet FSL and 1980 feet FWL (Unit M) of Section 29, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, is hereby DENIED.

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(2) 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.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

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