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September 30, 1991

Mr. David R. Catanach
Oil Conservation Division
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87501

HAND DELIVERED

Re: McKay v. Yates
NMOCD Cases 10363 and 10386

Dear Mr. Catanach:

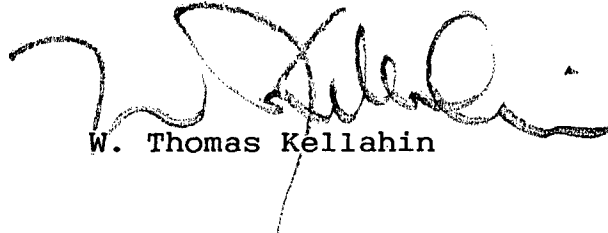
On behalf of McKay Oil Corporation, please find enclosed our proposed order for resolution of this matter. Our order affords you an opportunity to decide this case equitably and without having you chose which well will be drilled. While the technical case may have a certain complexity to it, the solution for you is brilliantly simple: lay the units down and then each applicant can drill its location of first choice. Any other choice requires you to bear the responsibility of deciding who has the better location.

While the proposed order on behalf of McKay has extensive findings, it was relatively easy to prepare because of the substantial evidence in support of its application.

There is no question that the Yates' Prickly Pear well will drain the oil underlying the McKay tract unless McKay is afforded a timely opportunity to drill. Accordingly, I would very much appreciate an order in this case at the earliest possible time. A copy of the order is on the enclosed floppy disk for your use.

Mr. David R. Catanach
September 30, 1991
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Very truly yours,

A handwritten signature in dark ink, appearing to read 'W. Thomas Kellahin', with a long horizontal flourish extending to the right.

W. Thomas Kellahin

WTK/jcl
Enclosures

cc: Roy McKay (w/encl.)
William F. Carr, Esq. (w/encl.)

ltrt930.330

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:

CASES NOS. 10386 & 10363
Order No. R-

APPLICATION OF MCKAY OIL CORPORATION
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO

APPLICATION OF YATES PETROLEUM CORPORATION
FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

MCKAY OIL CORPORATION'S
PROPOSED
ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on
September 19, 1991 at Santa Fe, New Mexico, before
Examiner David R. Catanach.

NOW, on this _____ day of October, 1991, The
Division Director, having considered the testimony, the
recorded 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) The applicant in Case 10386, McKay Oil
Corporation ("McKay"), seeks an order pooling all
mineral interests in the South Dagger Draw-Upper

Pennsylvanian Associated Pool underlying the N/2 of Section 25, T20S, R24E, forming a standard oil/gas spacing unit for said pool with the subject well to be drilled at a standard location 660 feet FNL and 660 feet FWL of said section, Eddy County, New Mexico.

(3) The applicant in Case 10363, Yates Petroleum Corporation ("Yates"), seeks an order pooling all mineral interests in the same pool but seeks a spacing unit consisting of the W/2 of said Section 25 with the subject well to be drilled at a standard location 660 feet from the South and West lines of said Section 25.

(4) McKay controls the working interest for 440 acres in this section being the E/2, N/2 NW/4 and SE/4 NW/4 while Yates controls the working interest for 200 acres in this section being the SE/4 and SW/4 NW/4. No portion of Section 25 is currently dedicated to production from this pool.

(5) The development of this section is subject to the Special Rules and Regulations of Associated Oil and Gas Pools in Southeast New Mexico (R-5353) as modified by the Special Rules for the South Dagger Draw-Upper Penn Associated Pool (R-4637, as amended).

(6) Each applicant (McKay and Yates) has the right to drill and each proposes to drill a well on their respective units, as described above in Findings (3) and (4), to a depth sufficient to test the Upper Pennsylvanian formation.

(7) Cases Nos. 10386 and 10363 were consolidated for the purpose of hearing and should be consolidated for purpose of issuing an order since the cases involve common acreage and the granting of one application would require the denial of the other.

(8) Because of the dispute over the location of the proposed well and the orientation of the spacing unit, McKay and Yates have been unable to agree on a voluntary basis for the pooling of their respective interests in either proposed well or spacing unit.

Case Nos. 10386 & 10363

Order No. R-

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(9) The primary objective of McKay's proposed well in the NW/4 NW/4 of this section would be a development oil well in this pool to offset Yates' recently completed Prickly Pear "AIE" Fed. Well No. 1 in the SE/4 SE/4 of said Section 23.

(10) The Prickly Pear Well, in which Yates' owns 100% working interest, produced 442 barrels of oil, 1652 barrels of water and 1876 MCF of gas per day on initial potential dated September 11, 1991. Yates' Exhibit 13 shows that the well performance improved to 657 barrels of oil, 1112 barrels of water and 1996 MCF of gas a day during September, 1991.

(11) The primary objective of Yates' proposed well in the SW/4 SW/4 of Section 25 would be an exploration well, a mile south of the nearest oil well in the pool, at a point in the section which Yates contends is the highest structural position and therefor farthest removed from what Yates characterizes as "Big Water."

(12) While the pool rules for the pool provide for 320-acre standard spacing and proration units, Yates as the principle operator in the pool has caused development to take place in Sections 14 and 23 by drilling to a density of 40 acres per oil well.

(13) Rule 5(b) of the Associated Rules prohibits the simultaneous dedication of an oil well and a gas well to the same spacing unit.

(14) It is not possible for a well located in the SW/4 of Section 25 to drain or protect from drainage the NW/4 of that section.

(15) Yates admits that it will take as many as three wells to adequately develop the W/2 of Section 25.

(16) In support of its application in Case No. 10386, McKay submitted the following information through its exhibits and the testimony of its witnesses:

- (a) McKay's proposed location for its Charolette McKay Fed Well No. 2 in the NW/4 NW/4 of said Section 25 would be a direct south diagonal offset to the Yates Prickly Pear Well. McKay believes this would provide better recovery at significantly less risk than Yates' location which would be a Southeast offset to Yates' two wells in Section 26 which we recently classified as gas wells.
- (b) Cross-sections, structure maps and net isopach maps were submitted to show the favorable conditions at the McKay location. Its geology divided the gross dolomite into three distinct carbonate zones and shows that the McKay proposed location would be slightly lower on the Upper Penn "A" carbonate structure and therefore more likely to avoid being a gas well.
- (c) The McKay location would have about 30 feet more thickness of net clean "C" dolomite than the Yates' location and therefor would be the best location in which to test the main producing interval in the pool.
- (d) McKay's geologic and engineering witnesses testified that its lower structural position would not necessarily result in increased risk of more water production from the pool in which all wells produce substantial amounts of water.
- (e) McKay's geologic witness demonstrated with water saturation calculations that Yates had attained commercial oil production from pool wells similar to

the Coquina R. S. Fed #1 well in Unit C of Section 25.

- (f) McKay's geologic witness demonstrated that the one hour, fifteen minute short term drill stem test of the Coquina R.S. Fed #1 Well in Unit C of Section 25 was an inadequate effort to test the ability of this well to produce commercial oil.
- (g) McKay's witnesses testified that the Yates' location was at a point in the pool which created a substantial probability of producing significant amounts of gas and little oil.
- (h) McKay's geologic and engineering witnesses testified that the McKay location was the optimum location to prevent Yates' Prickly Pear well from draining the NW/4 of Section 25.
- (i) Because of the low risk of drilling at its location, McKay requested a 125% penalty factor.
- (j) McKay's orientation of the spacing unit would provide an opportunity for both the Yates location and the McKay location to be drilled.
- (k) McKay's orientation would provide an opportunity for full development of Section 25 in this pool where the Yates orientation would create the probability that no well would be drilled in the E/2 of the section to recover those reserves.
- (l) McKay's engineering witness estimated that a well at the McKay location would recover 386,000 barrels of oil while the

Yates' location would only recover about 57,842 barrels of oil.

- (m) Based upon production decline curve analysis, McKay's engineering witness established that Yates' wells in Section 23 were draining the adjoining 40 acre tracts and by analogy predicted that the Yates' Prickly Pear well would drain the NW/4 NW/4 of Section 25 unless the McKay application was granted.
- (n) McKay's estimated cost for a completed well is \$480,440. with monthly overhead rates of \$5,400 while drilling and \$540 while producing.
- (o) McKay would have a 87.5% working interest and Yates would have a 12.25% working interest if the N/2 of Section 25 is approved as the spacing unit.

(17) To support its application in Case No. 10363, Yates presented the following information through its exhibits and the testimony of its witnesses:

- (a) a single combined structure and gross dolomite isopach map and a single cross-section were submitted to show that the Yates proposed location is the better choice. Its geology shows that the Yates location would be approximately 25 feet higher on the top of the pool's structure than McKay's location and be farthest from what Yates called "Big Water."
- (b) Yates' engineer testified that its Prickly Pear well was estimated to recover 375,000 barrels of oil.
- (c) Yates estimated that "Big Water" in this section was based upon the Coquina Fed.

#1 well in Unit C of Section 25 and is east of a line drawn condemning most of the NE/4 and part of the SE/4 of Section 25.

- (d) Yates testified that all of the pool wells produced substantial amount of water regardless of where they were located in the pool.
- (e) Because of the very high risk at its location, Yates requested a penalty factor of 200%
- (f) Yates estimated the cost of completing its well to be \$504,350 with monthly overhead charges while drilling of \$5,400 and while producing of \$540.
- (g) Yates argued that because it was the largest operator in the pool it should be allowed to operate the well.
- (h) Yates argued that it filed its compulsory pooling application first and therefore should be awarded operations.

(18) Yates' first written proposal to McKay for this well and this spacing unit was dated July 8, 1991

(19) On July 15, 1991, some seven days after first proposing the well to McKay, Yates filed for compulsory pooling with the Division.

(20) The Division should decide this case based upon its statutory obligation to prevent waste and protect correlative rights rather than based upon which proposed operator first filed its pooling application.

(21) Based on the evidence and testimony received in these cases, either the McKay, or the Yates location should result in a producing well in the pool. However,

evidence shows that McKay's location is the more appropriate location since it is located in a better position to protect Section 25 from drainage by the Yates Prickly Pear well and will result in better recovery of reserves.

(22) Yates' attempt to interpreted the location of "Big Water" based upon the DST from the Coquina R. S. Fed. Well #1 is flawed because Yates Exhibit #12 in this case shows the chloride content from this DST to be 67,000 parts per million which is some 13.4 times more than the average of the chloride content of the pool formation water as previously shown on Yates Exhibit 6 in Case 10108.

(23) It is reasonable to conclude that the drill stem test for the Coquina well simply recovered drilling fluids and is not reliable evidence of the absence of hydrocarbons for the presence of formation water.

(24) Yates' contention that the first well in Section 25 should be drilled at the highest point in the structure away from "Big Water" ignores the fact that Yates has been successful in drilling pool oil wells which produce substantial oil at locations closer to its "Big Water" and farther down structure than Yates' proposed location.

(25) Approval of the Yates' application will simply afford Yates the opportunity to drain the oil from under the NW/4 portion of the proposed McKay spacing unit in which Yates would have only 12.25% working interest with the Prickly Pear well in which Yates has 100% working interest thereby violating the correlative rights of McKay.

(26) Approval of the Yates' application would cause too few wells to be drilled in Section 25 and some of the reserves that might otherwise be recovered from that section would either be left in the reservoir causing waste or would allow those reserves to be

drained by offset wells thereby violating correlative rights.

(27) Yates' contention that the W/2 spacing unit should be approved because that orientation overlays the greatest amount of the reservoir in Section 25 is without merit.

(28) A review of Division records indicates that each of the three sections north of Section 25 previously has been developed by Yates using lay down units. None of Yates' spacing units have been oriented to correspond to the maximum reservoir volume as shown on Yates combined structure and gross thickness map. (Yates' Exhibit 9)

(29) The Division's responsibility is not to orient the spacing unit to fit the greatest volume of reservoir but rather to orient the spacing units so that waste is prevented and all interest owner's correlative rights are protected.

(30) An E/2-W/2 orientation would preclude the E/2 from having a well and would create the opportunity for the interest owners in the E/2 to have their share of recoverable reserves produced by offsetting wells in the W/2 of Section 25.

(31) While there may not be sufficient reserves in each quarter section of Section 25 to support the risk of drilling in each quarter section, there are sufficient recoverable reserves in each of the four quarter sections of Section 25 which can be recovered if the spacing units are oriented properly.

(32) Approval of the McKay orientation of the spacing unit will afford an opportunity for both McKay and Yates to each drill their preferred location.

(33) Approval of the McKay application will avoid the possibility of a gas well and an oil well being dedicated to the same spacing unit in violation of Rule 5(b) of the Associated Pool rules.

(34) Approval of the Yates' application would create the probability of its well being a gas well and therefore preclude an oil well from being drilled in the NW/4 of Section 25 to protect the section from drainage by the Yates' Prickly Pear well.

(35) McKay's application should be approved and it should be designated as operator. Overhead charges for supervision should be set at \$5,400 while drilling and \$540 while producing.

(36) Since risk of an unsuccessful completion at the McKay location is low, the risk penalty should be set at 125%.

(37) Approval as set out in the above findings and in the following order will avoid the drilling unnecessary wells, protect correlative rights, prevent waste and afford the owner of each interest in said unit the opportunity to recover or receive without unnecessary expense his just and fair share of the production in any pool resulting from this order.

IT IS THEREFORE ORDERED THAT:

(1) The application of McKay in Case No. 10386 as described in this order is hereby GRANTED.

(2) The application of Yates in Case 10363 as described in this order is hereby DENIED.

(3) All mineral interests, whatever they may be, in the South Dagger Draw-Upper Pennsylvanian Associated Pool underlying the N/2 of Section 25, Township 20 South, Range 24 East, NMPM, Eddy County, New Mexico, are hereby pooled to form an 320 acre oil spacing and proration unit to be dedicated to a well to be drilled at a standard oil well location 660 feet from the North line and 660 feet from the West line (Unit D) of said Section 25.

PROVIDED HOWEVER THAT, the operator of said unit shall commence the drilling of said well on or before the 15th day of January, 1992, and shall thereafter continue the drilling of said well with due diligence to a depth sufficient to test the Canyon formation of the subject pool.

PROVIDED FURTHER THAT, in the event said operator does not commence the drilling of said well on or before the 15th day of January, 1992, Decretory Paragraph No. (2) of this order shall be null and void and of no effect whatsoever, unless said operator obtains a time extension from the Division for good cause shown.

PROVIDED FURTHER THAT, should said well not be drilled to completion, or abandonment, within 120 days after commencement thereof, said operator shall appear before the Division Director and show cause why Decretory Paragraph No. (2) of this order should not be rescinded.

(4) McKay Oil Corporation is hereby designated the operator of the subject well and unit.

(5) After the effective date of this order and prior to commencing said well, the operator shall furnish the Division and each known working interest owner in the subject unit an itemized schedule of estimated well costs.

(6) Within 30 days from the date the schedule of estimated well costs is furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production, and any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(7) The operator shall furnish the Division and each known working interest owner an itemized schedule

of actual well costs within 90 days following completion of the well; if no objection to the actual well cost is received by the Division and the Division has not objected within 45 days following receipt of said schedule, the actual well costs shall be the reasonable well costs; provided however, if there is an objection to actual well costs within said 45-day period the Division will determine reasonable well costs after public notice and hearing.

(8) Within 60 days following determination of reasonable well costs, any non-consenting working interest owner who has paid his share of estimated costs in advance as provided above shall pay to the operator his pro rata share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operator his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(9) The operator is hereby authorized to withhold the following costs and charges from production:

- A. The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date of schedule of estimated well costs is furnished to him; and
- B. As a charge for the risk involved in the drilling of the well, 125 percent of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated costs is furnished to him.

(10) The operator shall distribute said costs and charges withheld from production to the parties who advanced the well costs.

(11) \$5,400 per month while drilling and \$540 per month while producing are hereby fixed as reasonable charges for supervision (combined fixed rates); the operator is hereby authorized to withhold from production the proportionate share of such supervision charges attributable to each non-consenting working interest, and in addition thereto, the operator is hereby authorized to withhold from production the proportionate share of actual expenditures required for operating such well, not in excess of what are reasonable, attributable to each non-consenting working interest.

(12) Any unleased mineral interest shall be considered a seven-eighths ($7/8$) working interest and a one-eighth ($1/8$) royalty interest for the purpose of allocating costs and charges under the terms of this order.

(13) Any well costs or charges which are to be paid out of production shall be withheld only from the working interest's share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(14) All proceeds from production from the subject well which are not disbursed for any reason shall be placed in escrow in Eddy County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; the operator shall notify the Division of the name and address of said escrow agent within 30 days from the date of first deposit with said escrow agent.

(15) Should all the parties to this force-pooling reach voluntary agreement subsequent to the entry of this order, this order shall thereafter be of no further effect.

(16) The operator of the subject well and unit shall notify the Director of the Division in writing of the subsequent voluntary agreement of all parties subject to the force-pooling provisions of this order.

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(17) 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

SEAL

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