

**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

1. Licensee Name  
2. Licensee Address  
3. Licensee City  
4. Licensee State  
5. Licensee Zip  
6. Licensee Phone  
7. Licensee Fax  
8. Licensee E-mail  
9. Licensee Website  
10. Licensee Other

AJ# NO. (assigned by OCD on New Wells)

3. Indicate Type of Lease  
STATE  FEE

6. State Oil & Gas Lease No.  
IG-5555

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

a. Type of Work  
DRILL  RE-ENTER  DEEPEN  PLUG BACK   
b. Type of Well  
GAS WELL  OIL WELL  OTHER   
SINGLE ZONE  MULTIPLE ZONE

7. Lease Name or Unit Agreement Name  
West Fork Unit

2. Name of Operator  
Mckay Oil Corporation

8. Well No.  
4

3. Address of Operator  
P.O. Box 2011, Roswell, NM 88202

9. Pool name or Wildcat  
W. Pecos Slope Abo

4. Well Location  
Unit Letter K : 1650 Feet From The West Line and 1650 Feet From The South Line

Section 52 Township 4S Range 22E NMPM Chaves County

10. Proposed Depth 3400' 11. Formation Abo 12. Rotary or C.T. Rotary

13. Elevations (Show whether DP, RT, GR, etc.) 1571 GR 14. Kind & Status Plug. Boon Blanket 15. Drilling Contractor Exploration Drilling 16. Approx. Date Work will start asap

**PROPOSED CASING AND CEMENT PROGRAM**

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
9 7/8"	7.0"	20.#	700 ±	500 sax	Circ
6 1/4"	4 1/2"	10.5#	TD	325 sax	600' above 1/pay

- Drill 9 7/8" hole to 700' ± and run 7.0" casing and cement to surface.
- Wait on cement for 18 hours.
- Shuttle up on 7.0" casing using a double ram type B.O.P. and pressure test casing to 1000 psi for 30 minutes.
- Drill 6 1/4" hole to 3100' to adequately test the Abo formation.
- (optional) If warranted, cement back to 40' above pay zone and begin horizontal drilling for approximately 500'. (This drilling is contingent upon approval of the OCD in Santa Fe and the amount of pay zone encountered upon reaching TD.)
- Run 4 1/2" casing if warranted and cement to isolate all oil, gas and water zones.

BE ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE PLUG BACK PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

APPROVED: James L. Schultz TITLE V.P. Land & Legal DATE 11-26-90  
TELEPHONE NO. (505) 625-4755

APPROVED: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE PLUG BACK PREVENTER PROGRAM, IF ANY.

Submit to Appropriate District Office  
 State Lease - 4 copies  
 Fee Lease - 3 copies

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Form C-102  
 Revised 1-1-89

**OIL CONSERVATION DIVISION**  
 P.O. Box 2088  
 Santa Fe, New Mexico 87504-2088

DISTRICT I  
 P.O. Box 1980, Hobbs, NM 88240

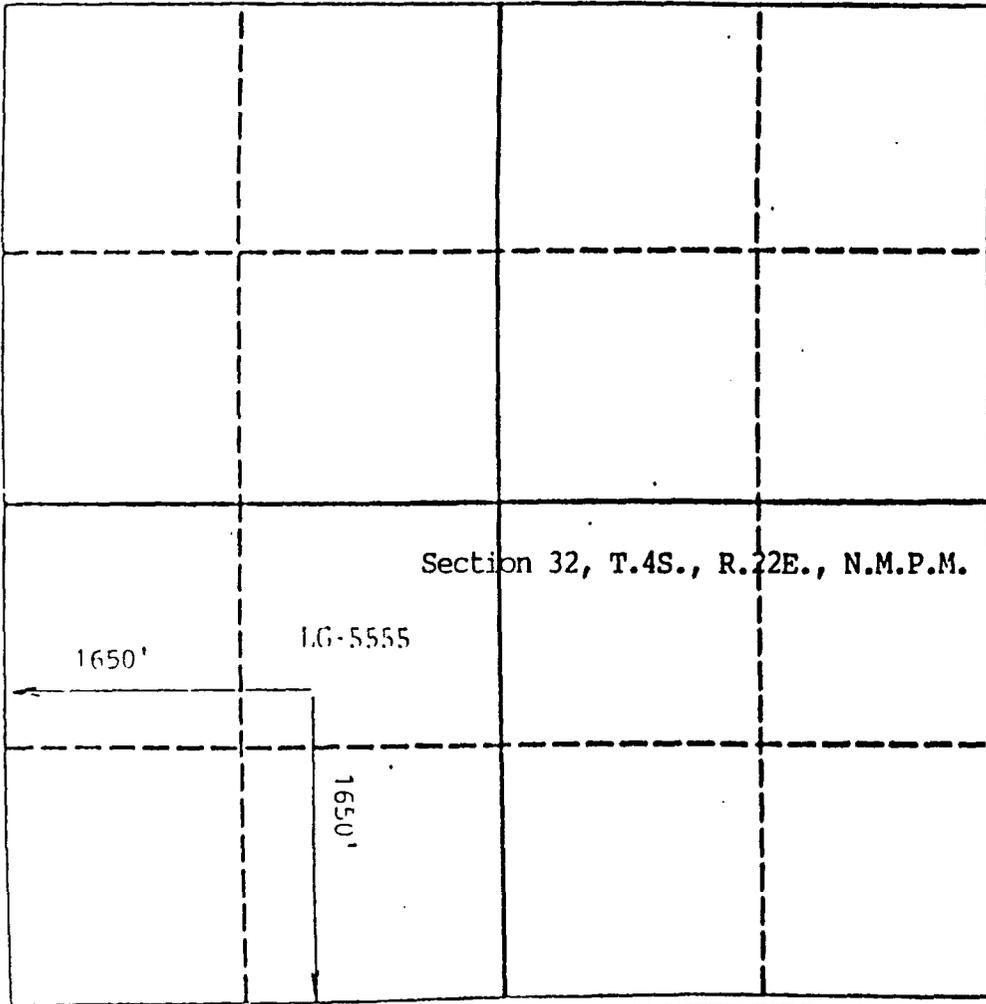
DISTRICT II  
 P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
 1000 Rio Brisco Rd., Aztec, NM 87410

**WELL LOCATION AND ACREAGE DEDICATION PLAT**  
 All Distances must be from the outer boundaries of the section

Operator McKay Oil Corporation			Lease West Fork Unit		Well No. 4
Well Letter K	Section 32	Township 4S.	Range 22E.	County Chaves	
Actual Footage Location of Well: 1650 feet from the West line and 1650 feet from the South line					
Ground level Elev. 4374	Producing Formation Abo		Pool W. Pecos Slope Abo		Dedicated Acreage: 160 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hatch marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
 Yes  No If answer is "yes" type of consolidation \_\_\_\_\_  
 If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
 No allowance will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

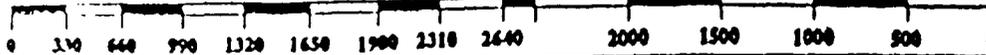


**OPERATOR CERTIFICATION**  
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature *James L. Schultz*  
 Printed Name James L. Schultz  
 Position V.P. Land & Legal  
 Company McKay Oil Corp.  
 Date 11-26-90

**SURVEYOR CERTIFICATION**  
 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed 11/21/90  
 Signature & Seal of: *JACQUES*  
 Professional Surveyor  
 Certificate No. 6290  
 PROFESSIONAL ENGINEER



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. 10207  
Order No. R-9424

APPLICATION OF MCKAY OIL CORPORATION  
FOR A HORIZONTAL DIRECTIONAL DRILLING  
PROJECT AND SPECIAL OPERATING RULES  
THEREFOR, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 10, 1991, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 25<sup>th</sup> day of January, 1991, 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. 10190, 10205, 10206, 10207 and 10208 were consolidated at the time of the hearing for the purpose of testimony.

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Order No. R-9424  
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(3) The applicant, McKay Oil Corporation, seeks authority to initiate a horizontal directional drilling project in the SW/4 of Section 32, Township 4 South, Range 22 East, NMPM, Chaves County, New Mexico, being a standard 160-acre gas spacing and proration unit in the Undesignated North Pecos Slope-Abo Gas Pool. The applicant proposes to drill its West Fork Unit Well No. 4 located at a standard surface location 1650 feet from the South and West lines (Unit K) of said Section 32 in the following manner:

Drill vertically to a depth of approximately 3400 feet through the Abo formation, log well, plug back and set production casing, kick off from vertical at a depth of approximately 2924 feet and commence a short radius curve in an undetermined direction building angle to approximately 90 degrees, commence drilling horizontally at a depth of approximately 2984 feet a distance of approximately 500 feet.

(4) The applicant further seeks special rules and provisions within the project area including the designation of a prescribed area limiting the horizontal displacement of the wellbore such that the well can be no closer than 660 feet to the outer boundary of its assigned spacing and proration unit.

(5) The evidence and testimony presented indicates that the proposed horizontal wellbore, which is experimental in nature, should encounter a greater amount of natural fractures within the Abo formation than would a conventional wellbore, which should ultimately result in the recovery of a greater amount of gas from the proposed proration unit, thereby preventing waste.

(6) According to evidence presented, the subject well is located within the applicant's West Fork Unit Area which contains therein all offset acreage surrounding the SW/4 of said Section 32.

(7) According to further evidence the proposed surface location is such that there is a possibility, depending on the kick off direction, that the horizontal portion of the wellbore may encroach upon the 660 foot setback requirement described in Finding No. (4) above.

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(8) Should the horizontal portion of the wellbore encroach upon the 660 foot setback requirement and commercial gas production is established within the well, the applicant should be required to reopen this case and appear and present evidence and testimony in order to demonstrate that correlative rights will be protected.

(9) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(10) Approval of the proposed horizontal directional drilling project should result in the recovery of an additional amount of gas from the proposed proration unit which may not otherwise be recovered, thereby preventing waste, and will not violate correlative rights provided that the proposed horizontal drainhole is in compliance with the setback requirements described in Finding No. (4) above.

(11) The applicant should be required to conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore during or subsequent to completion of directional drilling operations in order that the direction, extent and terminus of said horizontal drainhole may be determined to be in compliance with the terms of this order.

(12) The applicant should further be required to submit copies of said directional surveys to the Santa Fe and Artesia offices of the Division.

(13) The applicant should notify the supervisor of the Artesia district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

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IT IS THEREFORE ORDERED THAT:

(1) The application of McKay Oil Corporation for a horizontal directional drilling project in the SW/4 of Section 32, Township 4 South, Range 22 East, NMPM, Undesignated North Pecos Slope-Abo Gas Pool, Chaves County, New Mexico, is hereby approved.

(2) The applicant is further authorized to drill its West Fork Unit Well No. 4 located at a standard surface location 1650 feet from the South and West lines (Unit K) of said Section 32 in the following manner:

Drill vertically to a depth of approximately 3400 feet through the Abo formation, log well, plug back and set production casing, kick off from vertical at a depth of approximately 2924 feet and commence a short radius curve in an undetermined direction building angle to approximately 90 degrees, commence drilling horizontally at a depth of approximately 2984 feet a distance of approximately 500 feet.

(3) The SW/4 of said Section 32 shall be dedicated to the above-described well forming a standard 160-acre gas spacing and proration unit for the North Pecos Slope-Abo Gas Pool.

(4) No part of the horizontal wellbore shall be located closer than 660 feet from the outer boundary of the proration unit.

(5) Should the horizontal portion of the wellbore encroach upon the 660 foot setback requirement and commercial gas production is established within the well, the applicant shall be required to reopen this case and appear and present evidence and testimony in order to demonstrate that correlative rights will be protected.

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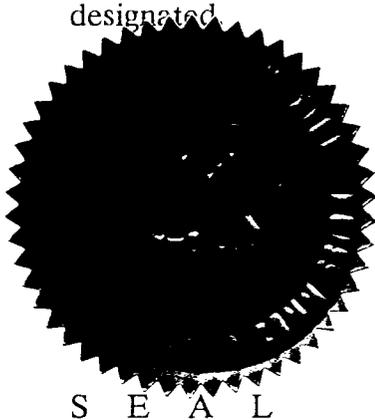
(6) The applicant shall be required to conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore during or subsequent to completion of directional drilling operations in order that the direction, extent and terminus of said horizontal drainhole may be determined to be in compliance with the terms of this order.

(7) The applicant shall further be required to submit copies of said directional surveys to the Santa Fe and Artesia offices of the Division.

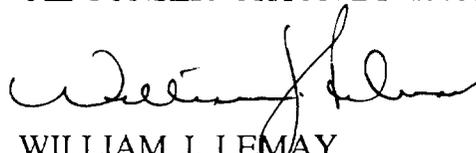
(8) The applicant shall notify the supervisor of the Artesia district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

(9) Jurisdiction is hereby 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