

should file with the Division a final report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

(5) That the proposed drainhole, if successfully completed as proposed, should make possible the production of an volume of oil from the subject well without coning of gas into the wellbore, thereby preventing waste, will not impair but will protect correlative rights, and should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, ARCO Oil and Gas Company, is hereby authorized to complete its Empire Abo Unit Well No. K-142, the surface location of which is 1700 feet from the South line and 1400 feet from the West line of Section 2, Township 18 South, Range 27 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico, in such a manner as to provide a 200-foot horizontal drainhole beneath the gas-oil contact in the Abo Reef, extending in a southeasterly direction from the surface location.

(2) That the applicant shall constantly monitor the pitch and direction of the drainhole as it is being drilled, and shall file a report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

(3) That 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
JOE D. RAMEY
Director

S E A L

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6572
Order No. R-6044

APPLICATION OF ARCO OIL AND GAS
COMPANY TO DRILL A HORIZONTAL
DRAINHOLE, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 13, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 26th day of June, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

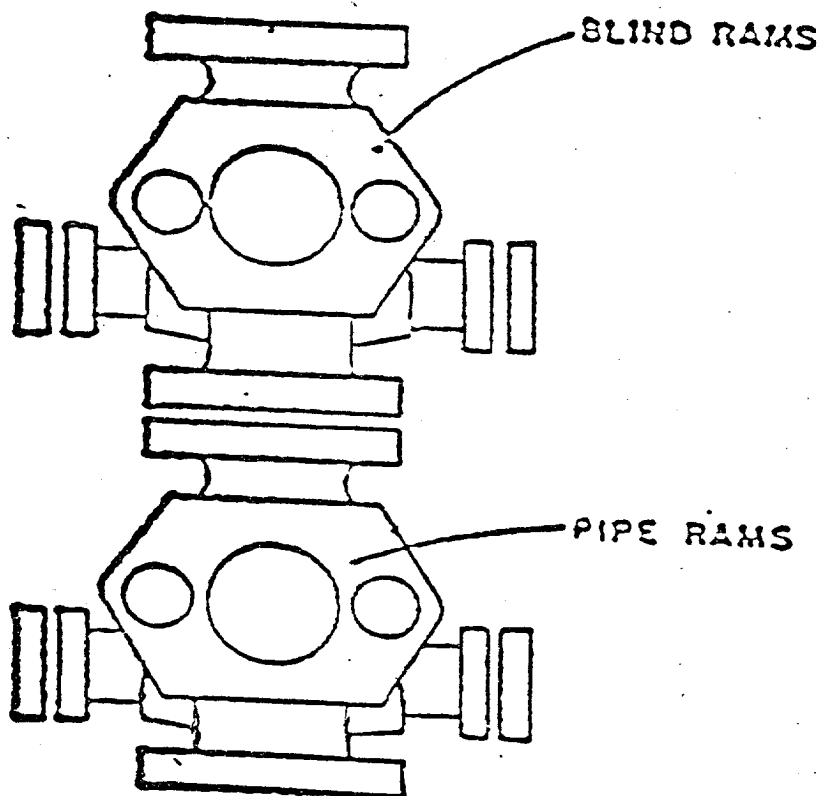
FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, ARCO Oil and Gas Company, seeks approval to drill and complete its Empire Abo Unit Well No. K-142, the surface location of which, previously approved by Administrative Order NSL-999, is 1700 feet from the South line and 1400 feet from the West line of Section 2, Township 18 South, Range 27 East, Empire-Abo Pool, with a single horizontal drainhole of about 200 feet in length in the Abo formation.

(3) That the applicant proposes to vertically drill said well through the Abo Reef in a conventional manner, set down below the gas-oil contact, and by means of a specially constructed whipstock and knuckle-joint drill collars, turn said well in a southeasterly direction at the rate of approximately 5 degrees per foot, continuing such drilling until horizontal, and then drill in a southeasterly direction to complete the drainhole some 200 feet South and East of the kick-off point.

(4) That the applicant should constantly monitor the pitch and direction of the drainhole as it is being drilled, and



ATLANTIC RICHFIELD COMPANY
Blow Out Preventer Program

Lease Name Empire Abo Unit "K"

Well No. 142

Location 1700 FSL & 1400 FWL, Section 2,
T18S, R27E

BOP to be tested before installed on well and will be maintained in good working condition during drilling. All wellhead fittings to be of sufficient pressure to operate in a safe manner.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-122
Supersedes O-122A
Effective 1-1-65

All distances must be from the outer boundaries of the Section

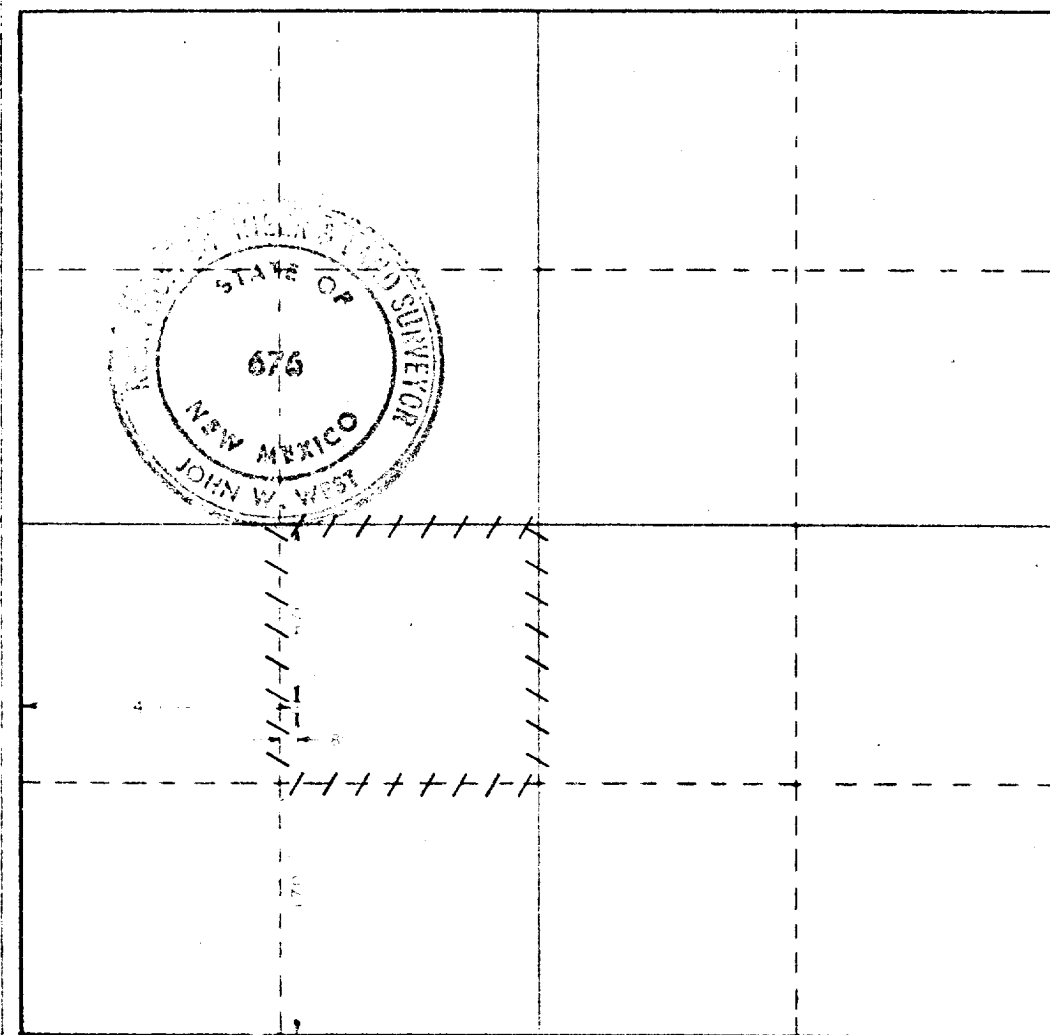
Owner <i>ARCO Oil & Gas Co. - Div. of Atlantic Richfield Co.</i>		Lease <i>Empire Abo Unit K</i>		Well No. <i>142</i>
Section <i>K</i>	Section <i>2</i>	Township <i>18-S</i>	Range <i>27-E</i>	County <i>Eddy</i>
Approximate Location of Well: <i>1700</i> feet from the <i>South</i> line and <i>1400</i> feet from the <i>West</i> line				
Ground Elev. <i>3523.4</i>	Producing Formation <i>Abo Reef</i>	Pool <i>Empire Abo</i>	Dedicated Acreage <i>40</i>	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable 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 interests, has been approved by the Commission.



CERTIFICATION

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

John W. West
Dist. Drlg. Supt.

Company *ARCO Oil & Gas Company*
Div. Of Atlantic Richfield Co.

Date *5-7-79*

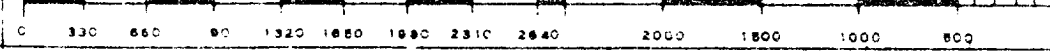
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed *October 31, 1978*

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. *John W. West* *676*
Ronald J. Eidson *3239*



NO. OF COPIES RECEIVED	6
DISTRIBUTION	
SANTA FE	1
FILE	1
U.S.G.S.	2
LAND OFFICE	1
OPERATOR	1

NEW MEXICO OIL CONSERVATION COMMISSION

MAY 9 1979

O. C. C.
ARTESIA, OFFICE

30-015-22952

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease	
STATE <input checked="" type="checkbox"/>	FEE <input type="checkbox"/>
5. State Oil & Gas Lease No. B-8814-12	
7. Unit Agreement Name Empire Abo Pressure Maintenance Project	
8. Farm or Lease Name Empire Abo Unit "K"	
9. Well No. 142	
10. Field and Pool, or Wildcat Empire Abo	
12. County Eddy	
13. Proposed Depth 6150'	19A. Formation Abo Reef
20. Rotary or C.T. Rotary	
21. Elevations (Show whether DE, RT, etc.) 3523.4' GR	22. Approx. Date Work will start 7-10-79

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work	
DRILL <input checked="" type="checkbox"/>	DEEPEN <input type="checkbox"/>
b. Type of Well	
OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input type="checkbox"/>
2. Name of Operator ARCO Oil & Gas Company Division of Atlantic Richfield Company	
3. Address of Operator P. O. Box 1710, Hobbs, New Mexico 88240	
4. Location of Well UNIT LETTER <u>K</u> LOCATED <u>1700</u> FEET FROM THE <u>South</u> LINE AND <u>1400</u> FEET FROM THE <u>West</u> LINE OF SEC. <u>2</u> TWP. <u>18S</u> RGE. <u>27E</u> NMPM	
5. Proposed Depth 6150'	
6. Formation Abo Reef	
7. Rotary or C.T. Rotary	
8. Elevations (Show whether DE, RT, etc.) 3523.4' GR	
9. Kind & Status Plug. Bond GCA #8	
10. Drilling Contractor Hondo Drilling Company	
11. Approx. Date Work will start 7-10-79	

PROPOSED CASING AND CEMENT PROGRAM					
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
14-3/4"	10-3/4" OD	40.5# K-55	1000'	825	Circ to surf
9-1/2"	7-7/8" OD	26.4# K-55	5600'	1425	Circ to surf

Propose to drill a single 200' horizontal drainhole in order to minimize gas coning by dispersing the pressure drop across the producing interval and improving oil recovery in the following manner: *order R. 6644 6-26-79* *NSL 999*

1. Drill 6" hole 5600'-6150' TD. Run logs. Run orientation for kickoff.
2. Determine kickoff-point & ream 6" hole to 9-1/2" hole from 5600'--25' above kickoff point. Directional surveys to be run thru out drainhole drilling.
3. DST to locate gas cap estimated @ 5750'.
4. Run 7-5/8" OD csg w/pkr shoe & cmt to surf.
5. Drill out DV tool & pkr shoe w/6-3/4" bit. Run CBL.
6. Set whipstock & drill 4-3/4" drainhole using 12' radius @ point of departure from vertical & continue to drill drainhole to 200'.
7. Leave whipstock in well to use for future work on well.

Blowout preventer program attached.

IN 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 BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed *LD Lane* Title Dist. Drlg. Supt. Date 5-8-79

(This space for State Use)

SUPERVISOR, DISTRICT II

APPROVED BY *W. A. Gressett* TITLE DATE JUL 2 1979

CONDITIONS OF APPROVAL, IF ANY:

Cement must be circulated to surface behind 10 3/4" casin