



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

April 4, 1994

Arco Oil and Gas Company  
P.O. Box 1610  
Midland, Texas 79702

Attention: Mr. Gary B. Smallwood

Dear Mr. Smallwood:

Pursuant to Division Order No. R-9984 dated October 5, 1993, Arco Oil and Gas Company is required, prior to commencing injection operations within certain wells in the Empire Abo Unit Pressure Maintenance Project, to conduct repairs on five active producing wells and re-plug five PA'd wells.

My staff has received and reviewed your revised wellbore diagrams submitted in order to demonstrate that these wellbores will not serve as a conduit for migration of injected fluid. After examination of the revised wellbore schematics, the Division finds that the following wells are constructed and/or plugged and abandoned adequately to confine the injected fluid to the injection zone, and therefore no additional work is necessary:

<u>WELL NAME</u>	<u>WELL LOCATION</u>
Empire Abo Unit No. M-10	Unit O, 10-18S-27E
Empire Abo Unit No. M-12	Unit A, 10-18S-27E
Empire Abo Unit No. M-15	Unit B, 11-18S-27E
Empire Abo Unit No. N-12	Unit A, 10-18S-27E
State "BL" No. 1	Unit B, 4-18S-28E
Chalk Bluff Draw Ut. No. 18	Unit M, 16-18S-27E
Chalk Bluff Draw Ut. No. 12	Unit A, 17-18S-27E
Chalk Bluff Draw Ut. No. 20	Unit N, 17-18S-27E

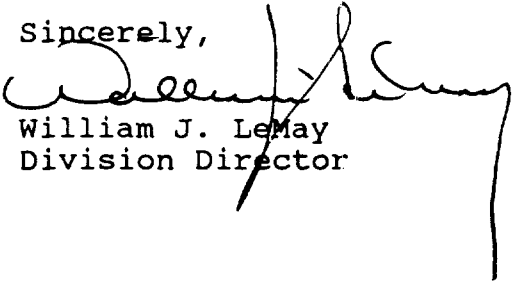
The Federal "EA" Well No. 1, located in Unit D of Section 12, Township 18 South, Range 27 East, NMPM, does not appear to be presently constructed so as to confine the injected fluid to the injection zone, and therefore, no injection within one half mile of this well shall take place until such time as Arco repairs or plugs this well.

Arco shall consult with the supervisor of the Artesia district office of the Division to determine whether the State Well No. 1,

located in Unit D of Section 3, Township 18 South, Range 28 East, NMPPM, is adequately plugged. Such determination may require that Arco provide the Division additional geologic information with regards to the location of the Abo formation within the wellbore.

If you should have additional questions, please contact Mr. David Catanach at (505) 827-5800.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', is written over the typed name and title.

William J. LeMay  
Division Director

xc: OCD-Artesia  
Case File-10813

ARCO Oil and Gas Company ◆

Western Division  
600 N. Main  
Midland, Texas  
Post Office Box 100  
Midland, Texas  
Telephone 941-1111

Oil Conservation Division  
1994 Jan 7 51

January 6, 1994

Attention: Mr. David R. Catanach  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87504

Attention: Mr. Ray Smith  
New Mexico Oil Conservation Division  
P. O. Drawer DD  
Artesia, New Mexico 88210

Re: Order No. R-9984  
Arco Operated Empire Abo Unit  
Gas Injection Expansion

Gentlemen,

The Arco Operated Empire Abo Unit was created under voluntary unitization in 1973 with Order No. 4548. The Empire Abo Unit is a gas cycling project. Produced gas is delivered to two gasoline plants. Liquids are stripped from the produced gas at the plants and then the liquids are sold. The dry residue gas, primarily methane, from the plants is returned to the unit for injection. Order No. 4549 approved this gas cycling project and officially titled it a Partial Pressure Maintenance Project.

Gas injection at the Arco Operated Empire Abo Unit has occurred since 1974 in 18 gas injection wells. The attached map contoured on the top of the Abo Reef marks the original gas injection wells in red. Since injection started in 1974 over 272 BCF have been injected. Cumulative produced gas during this time has been 434 BCF. The produced minus injected difference represents gas consumed for fuel and shrinkage due to NGL recovery. All available residue gas has been reinjected.

Since this is a partial pressure maintenance project the average reservoir pressure has been on decline from the start of the project. As predicted the average pressure has declined from approximately 1300 psig in 1973 to **650 psig in 1993 at the average measured depth of approximately 5500'.**

Order No. R-9984 dated October 5, 1993 approved 16 additional gas injection wells for the Arco Operated Empire Abo Unit. The 16 wells are marked on the attached top of Abo Reef map in pink. The 16 new injection wells are for sweep efficiency improvement. The Arco Operated Empire Abo Unit remains a partial pressure maintenance project with the reservoir pressure on continual decline. The Order raised questions about ten wells located within one half mile of a few of the 16 new injection wells. Five of the ten wells are plugged and abandoned.

January 6, 1994

Page 2

Specifically, Order No. R-9984 stated that for the following five wells:

Arco EAU M-10

Arco EAU M-12

Arco EAU M-15

Arco EAU N-12

Rhonda Operating Federal EA No. 1

"the applicant shall cement the wells above, across and below the proposed injection interval in a manner acceptable to the supervisor of the Division's Artesia District Office, **or in the alternative, demonstrate by means of cement bond logs, temperature surveys or other appropriate data** that the wells are adequately cemented so as to confine the injected gas to the injection formation."

The Order stated for the following five plugged wells:

Pan American State "BL No. 1

Exxon-Chalk Bluff Draw Unit No. 18

Exxon-Chalk Bluff Draw Unit No. 12

Exxon-Chalk Bluff Draw Unit No. 20

James P. Dunigan State No. 1

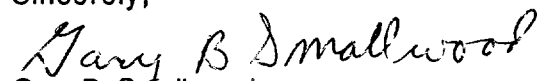
"the applicant should be required to replug the wells in a manner acceptable to the supervisor of the Division's Artesia District Office, **or in the alternative, demonstrate by other means** that the wells are adequately plugged and abandoned so as to confine the injected gas to the injection formation."

We have reviewed, revised and corrected the ten wellbore schematics since our conversation on December 8, 1993. The ten schematics are attached with the approved plugging reports for the five plugged wells. As we agreed on December 8, Arco has run a bond log on one of the three Arco wells where our well files indicated cement tops by temperature surveys, but our files no longer contained copies of the surveys. The bond log was run on the EAU M-15 and was witnessed by Mr. Smith. The log indicated the cement top to be nearly the same as our well file did at 5375'. The log is attached.

We believe the injected gas will be confined to the injected interval and that the attached data supports and clearly shows that it will be. Should you have any questions or comments please call me in Midland at 915-688-5359 or Derroll Wolfenbarger at our Empire Abo office 505-677-3642. Should you elect not to respond by March 1, 1994 we will assume that we have demonstrated confinement to your satisfaction and that injection may begin in all 16 of the injection wells identified in Order No. R-9984.

Thank you very much for your assistance.

Sincerely,



Gary B. Smallwood

Engineer

Arco Oil and Gas Co.

# WELLBORE SCHEMATIC

## Federal EA #1

Rhonda Operating Co - Operator

330' FNL & 330' FWL (D)

Sec 12, T-18S, R-27E, Eddy County, NM

API 30-015-00871

DR-3620'

Spudded 05/17/59

Completed 06/27/59

12-1/4" Hole.  
8-5/8" casing @ 1492'.  
Set w/920 sxs cmt.

No zones of shallow production  
in Sections 1 or 12 of 18S-27E.

Calc. Top of Cmt. @ 4519'.

RBP as per Don L. Benscatter

Sqz'd Perfs @ 6128' to 6150' w/100 sxs.

Perfs @ 6162' to 6180'.

BP @ 6190'.

PBD @ 6219'.

7-7/8" Hole.  
5-1/2" csg @ 6219' w/250 sxs cmt.

TD @ 6253'.

*Sqz'd perfs  
6128-6150*

**Rhonda Operating Co.  
Federal EA #1  
Summary**

1. This well was spud by Aztec Oil & Gas on 5-17-1959
2. Robert G. Cox reentered and deepened the well with a spud date 9-23-68
3. On 12-10-1979 the operator was changed from Robert Cox to Rhonda Operating Co. Ralph Viney signed the Sundry notice on behalf of Rhonda Operating Co.
4. The Midland phone directory lists Rhonda Operating Co.'s phone number as 915-682-5346. On December 13, 1993 the phone was answered "Ralph Viney & Associates. Mr. Viney indicated that the well was turned over to Don L. Benscotter in Scotsdale, Arizona.
5. On December 30, 1993 I called Don L. Benscotter at 602-947-7928. He indicated that he vaguely remembered the well and that he would check his files. On December 31, 1993 I received a voice mail message from Mr. Benscotter saying that his files had helped his memory of the well history and while he did not find it in his files he recalled that a RBP was set above the perforations and was tested. He felt the well was still capable of production and that it would be produced.

30-015-00271

County Eddy State N. M. Field Empire-A  
 Operator Artes O&G, et al Log No. \_\_\_\_\_  
 Farm Federal "EA" Well No. 1  
 Sec. 12 Twp. 18 S Rge. 27 E Elev. 3418  
 Block No. \_\_\_\_\_ Survey No. \_\_\_\_\_ Abst. No. 23  
 Location \_\_\_\_\_

Feet from \_\_\_\_\_  
 Lines \_\_\_\_\_ N. 330 E. \_\_\_\_\_ S. \_\_\_\_\_ W. 330

Spud <u>5-17-59</u>	Devel. _____	Contractor _____
Csg. Tbg. & Liner Record	Explor. _____	Rig _____
	Contract Depth <u>6200'</u>	
<u>512 1210 940</u>	<u>DP</u> <u>Abn - Permian</u> <u>1000</u>	
<u>512 6210 250</u>		
Perfs. <u>3/6122-50</u>		
T. D. <u>6210</u>		
T. P. <u>61</u> Chk.		
I. P. <u>61</u>		
C. P. _____ Tbg. P. <u>450</u>		
Ratio _____	Packer _____	
Ran Sch. _____	Grav. <u>422</u>	
Ran Jeep _____		
Cptd. <u>5-17-59</u>		
Prod. Before Acid		
Gal. Acid _____	A. T. _____	
Gal. Acid _____	A. T. _____	
Gal. Acid _____	A. T. _____	
Gal. Acid _____	A. T. _____	
Prod. Before Shot		
Shot qts. _____	Fr. _____	To _____
Shot qts. _____	Fr. _____	To _____

4-2-59 Location \_\_\_\_\_  
5-17 5 572  
5-17 1 572  
5-17 4 572  
5-17 7 502  
5-17 8 502

COUNTY	EDDY	FIELD	Empire	STATE	NM	OWDE
OPR	COX, ROBERT G.					MAP
1 Federal EA						
Sec. 12, T-18-S, R-27-E					CO-ORD	
330' FNL, 330' FWL of Sec.						
Re-Spd 9-23-68					CLASS	OWDE EL 3618E
Re-Cmp 10-16-68					FORMATION	DATUM
CSG & SX - TUBING					FORMATION	DATUM
8 5/8" 1490' 950						
5 1/2" 6210' 250						
LOGS EL GR RA IND HC A						
					TD 6253'	PED 6190'
IP Abo Perfs 6162-80' Pmpd 33 BOPD + 10 BW. Pot. Based on 24 hr test, gravity 42.						

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CONT	PROP DEPTH	6253'	TYPE	W/L
DATE				

F.R. 8-21-68; OWDE  
 PD 6200' - Abo  
 (Orig. Artec Oil & Gas Co. Inc. 6-13-59 test)  
 Abo perfs 6118-80' OGD 611' test up  
 7-14-61 thru Abo perfs 6118-80', OGD 611';  
 Depleted Producer 11-16-68  
 11-11-68 TD 6253', PED 6190', OWDE  
 Sqzd perfs 6128-50' W/10' test  
 Deepened 6210-53'  
 Had oil & wtr 6251-53'  
 Set EP 6190'




County Eddy Depth 6200' Pool Undesig. Empire Abo\*

*D*

**SCOUT REPORT**  
**NEW MEXICO OIL CONSERVATION COMMISSION**

Company Aztec Oil & Gas EtAl Well No. 1 Lease Federal "EA"

330 Feet from N Line 330 Feet from W Line, Sec. 12 Twp. 18S Rge.

<i>5/5</i> Land Federal Contractor <u>Lee Arly Co.</u>	
T. A	Elevation <u>3618'</u> Spudded <u>5-17-59</u> Completed <u>6-7</u>
T. X	
B. X	
T. Del Li	
T. Del Sd	
T. Y	
T. SR	
T. Q <u>1040</u>	
T. PR	
T. GB	
T. SA <u>1955</u>	
T. Glo	
T. Blby	
T. CF	

T. Tu	Total Depth <u>6210</u>	P. B.
T. Full	Top Pay <u>6128 (Abo)</u>	District <u>9</u>
T. DR	I.P. <u>120</u>	30FD
T. Wich A.	Base on <u>120</u>	BO <u>24:00</u> H
T. Abo <u>6124</u>	Choke: <u>1.4</u>	I
T. WC	Tubing	@
T. Hu	Press:	Tbg. <u>450</u> Csg. <u>pken</u>
T. Per-Pe	GOR	Gravity <u>42</u>
T. Penn	Effective Perfs.:	
T. Strawn	<u>88h 6128-50</u>	
T. Miss		
T. WF		

CSG. & CEMENTING RECORD		
Size	Feet	Sax Cement
<u>8 5/8</u>	<u>1492</u>	<u>940</u>
<u>5 1/2</u>	<u>6210</u>	<u>2501</u>

T. Dev	Acid. Frac & Shooting Record:
T. Sil	From To
T. Fuss	From To
T. Mon	<u>1000 A</u> From <u>6128</u> To <u>50</u>
T. Simp	From To
T. McK	
T. Ell	
T. G.W.	
T. Gr	SHOWS
T.	S/
T.	S/
T.	S/
T.	S/
T.	S/
T.	S/

4-8-59	Loc		
APR 15	<i>✓✓✓✓✓</i>	JUN 30	<u>Pay 88h 6128-50</u>
	<u>734 only</u>		<u>DE 6210 dolo</u>
MAY 26	<u>2030 only</u>		<u>1000 A to 6128-50</u>
JUN 3	<u>3915 li'</u>		
JUN 9	<u>5023 li'</u>		
JUN 17	<u>5847 dolo</u>		
JUN 24	<u>TD 6210 dolo Pup test</u>		

04/30/91  
NMOCD DIST II

TA WELLS REPORT FORM 30  
P.O. DRAWER DD

PAGE 1  
ARTESIA, NM 88210

\*\*\*\*\* OPERATOR: RHONDA OPERATING CO.

\*\*\*\*\*

===== POOL: EMPIRE ABO

FED. EA 1 D 12 18 27 LAND TYPE F ; LAST PROD DATE 03/01/76; EXPIR DATE / /

.....POOL TOTAL: EMPIRE ABO

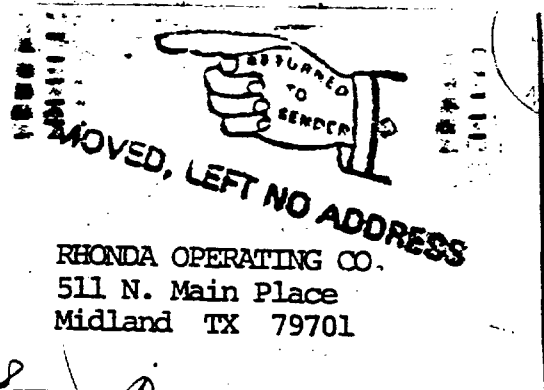
1

FEDERAL SUBTOTAL: 0; STATE & PATENT LAND SUBTOTAL: 0

.....OPERATOR TOTAL: RHONDA OPERATING CO.

1

TOTAL # TA WELLS FOR RHONDA OPERATING CO. ON: FED LAND 0; STATE & PATENT LAND 0





## STATE OF NEW MEXICO

### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

**BRUCE KING**  
GOVERNOR

OIL CONSERVATION DIVISION  
ARTESIA DISTRICT OFFICE

P.O. DRAWER DD  
ARTESIA, NEW MEXICO 88211  
(505) 748-1283

MEMORANDUM TO: RHONDA OPERATING CO.  
FROM: Mike Williams, OCD District II Supervisor  
DATE: May 2, 1991

The OCD has revised our rule on Temporarily Abandoned wells and is now in the process of implementing the new Order No. R-9210.

Essentially what the order says is that an operator can, with regulatory approval, shut in a producing well or an injection well for up to one year; after this period of time the operator must, within 90 days, implement one of the following:

- 1) The well be placed back into beneficial use.
- 2) The well be Temporarily Abandoned in accordance with Rule 203.
- 3) The well be Plugged & Abandoned in accordance with Rule 202.

Because of the number of wells in District II which have not been produced for over one (1) year (estimated number to be 1600), the Division realizes that the work cannot be done in 90 days. For this reason, after you receive the list of wells that have not produced for over a year, check your own manpower, rig availability and economics; then, request either a meeting with the District Supervisor or submit a time frame to bring the wells into OCD compliance. This time frame will include federal wells.

If possible, the Division would like to see all wells in compliance with OCD rules within a two-year period.

The Bureau of Land Management (BLM) has agreed to implement the OCD Rule 203 requiring well integrity testing before approving a well as temporarily abandoned. Any well listed that is on a Federal Oil and Gas Lease will need prior approval of the testing procedure from the BLM. Contact the appropriate BLM office for a description of what needs to be submitted. Take the wells on the list that are State or Fee

Page 2  
OCD T. A. Letter  
Mike Williams  
May 2, 1991

leases will need the testing procedures approved by the appropriate NMOCD office.

If the scheduling of wells to be brought into compliance involves both OCD Districts I & II, submit the schedule to either or both Districts for approval.

To give a brief review of the new Temporary Abandon Rule 203 - it is designed to make sure the mechanical integrity of the casing is such that the well can be shut in without problems occurring. After testing the well in the manner outlined in Rule 203, the BLM or OCD can give approval to T.A. the well for up to five (5) years.

Attached are: Rule 202 for Plugging & Abandonment

Rule 203 for Temporary Abandonment of wells

List of wells that our records show have not produced in over a year\*

MW:br

\*NOTE: This list of wells may not be complete. If there are additions or deletions, please let us know.



United States Department of the Interior

GEOLOGICAL SURVEY

P. O. Drawer U  
Artesia, New Mexico 88210

March 26, 1980

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RECEIVED

MAR 26 1980

O. C. D.  
ARTESIA, OFFICE

Rhonda Operating Company  
Attention: Mr. H. Scott Davis  
511 North Main Place  
Midland, Texas 79701

Gentlemen:

Our letter of February 8, 1980, advised that in the absence of an acceptable showing that the Federal "EA" well No. 1 in the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 18 S., R. 27 E., N.M.P.M., Eddy County, New Mexico, lease NM-6852, is capable of producing leasehold substances in paying quantities this office would consider the lease to have terminated. Such letter also suspended our January 2, 1980, approval to drill the Federal "EA" well No. 3 in the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13 until it is established to the satisfaction of this office that the Federal "EA" well No. 1 is capable of producing in paying quantities.

Your letter of March 24, 1980, provides test results showing an average production of 24 barrels of oil per day for the above mentioned well during the period from March 2, 1980, through March 10, 1980. These results are considered an acceptable showing that the well is capable of producing in paying quantities.

Accordingly, our suspension of your Application for Permit to Drill the Federal "EA" well No. 3 is terminated. This letter will confirm our telephone conversation of March 10, 1980, whereby you were advised that drilling of the Federal "EA" well No. 3 could be commenced.

Sincerely yours,

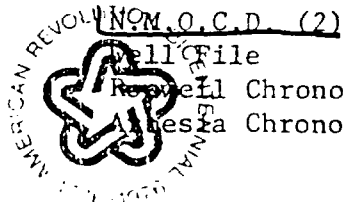
(Orig. Sgd.) ALBERT R. STALL

Albert R. Stall  
Acting District Engineer

cc:  
Acting Deputy Conservation Manager, SCR  
Lease File

NOM, O.C.D. (2)

Well File  
Revised Chrono  
Artesia Chrono



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)Form approved.  
Budget Bureau No. 42-R1424.  
5. LEASE DESIGNATION AND SERIAL NO.

NM-6852

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

---

7. UNIT AGREEMENT NAME

---

8. FARM OR LEASE NAME

Federal EA

9. WELL NO.

Federal EA 1

10. FIELD AND POOL, OR WILDCAT

Wildcat Emp. Abo

11. SEC., T., R., M., OR B.L. AND  
SURVEY OR AREA

NW/4, Sec 12, T18S, R27E

12. COUNTY OR PARISH

Eddy Co.

13. STATE

N. Mex.

## SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Rhonda Operating Company

3. ADDRESS OF OPERATOR

511 North Main, Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)

At surface 330N-330W

330 feet from Northwest corner

14. PERMIT NO.

Pending

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

## NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON\*

REPAIR WELL

CHANGE PLANS

(Other)

## SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) Change of Operator

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any  
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-  
nent to this work.) \*

Change of Operator from Robert G. Cox to Rhonda Operating Company.

RHONDA OPERATING COMPANY

APPROVED:

ROBERT G. COX

By:

Ralph Viney

SIGNED

C. E. Candwell Jr.

ATLANTIC RICHFIELD COMPANY

TITLE Attorney-in-Fact

DATE 12-10-79

18. I hereby certify that the foregoing is true and correct

SIGNED

C. E. Candwell Jr.

AMOCO PRODUCTION COMPANY

TITLE ATTORNEY-IN-FACT

DATE 12-10-79

(This space for Federal or State office use)

Accepted

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

## WELLBORE SCHEMATIC

Cmt Plug @ Surface.

11" Hole.  
8-5/8" casing @ 610'.  
Set w/350 sxs cmt.

### State #1

James P. Dunigan - Operator  
330' FNL & 345' FWL (D)  
Sec 3, T-18S, R-28E, Eddy County, NM  
API 30-015-05889  
DF-3664'  
Spudded 06/30/60  
Completed 07/16/60  
P&A'd 07/19/60

There appears to be production in the  
S/2 of Sec. 3-18S-28E @ the 2400'  
level coinciding with the cement  
plug in this well.

Cmt Plug 2300' to 2350'.

Top of Abo Reef @ 6394'.  
This well was drilled below the original  
w/o contact. Injection in the ARCO Empire  
Abo Unit is therefore not in communication  
with it.

Cmt Plug 6146' to 6405'.

TD @ 6405'.

## NEW MEXICO OIL CONSERVATION COMMISSION

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

FORM C-103  
RECEIVED

APR 7 1961

Name of Company <b>James P. Dunigan</b>		Address <b>415 Citizens Nat'l Bank Bldg. C. C. Abilene, Texas</b>				
Lease <b>State Lease</b>	Well No. <b>1</b>	Unit Letter <b>D</b>	Section <b>3</b>	Township <b>18 S</b>	Range <b>28 E</b>	
Date Work Performed <b>7-19-60</b>	Pool <b>Empire Abo</b>			County <b>Eddy</b>		

THIS IS A REPORT OF: (Check appropriate block)

- ☐ Beginning Drilling Operations    ☐ Casing Test and Cement Job    ☐ Other (Explain):  
☒ Plugging    ☐ Remedial Work

Detailed account of work done, nature and quantity of materials used, and results obtained.

Spotted 105 sacks of regular neat cement from 6146-6405 on 7-19-60.  
Spotted 15 sacks of regular neat cement from 2300-2350. Put 10 sacks of cement in top of surface casing, leveled location, and erected permanent marker.

Hole was filled with heavy mud prior to spotting plugs.

Witnessed by <b>Dan L. Ward</b>	Position <b>Geologist</b>	Company <b>James P. Dunigan</b>
------------------------------------	------------------------------	------------------------------------

## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

## ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval			Producing Formation(s)	

## RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

## OIL CONSERVATION COMMISSION

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

Approved by <i>Howard E. Lohley</i>	Name <i>[Signature]</i>
Title <b>OIL AND GAS INSPECTOR</b>	Position <b>Superintendent</b>
Date <b>AUG 30 1961</b>	Company <b>James P. Dunigan</b>



## WELLBORE SCHEMATIC

Cmt Plug surface to 30'.

Cmt Plug 1250' to 1350'.

11" Hole.  
8-5/8" casing @ 1516'.  
Set w/800 sxs cmt.

### Abo Chalk Bluff Draw Unit #20

Exxon - Operator

330' FSL & 1650' FWL (I)

Sec 17, T-18S, R-27E, Eddy County, NM

KB-3437'

Spudded 11/17/60

Completed 01/14/61

P&A'd 12/07/79

Calc. Top of cmnt. @ 1810'.

*No shoe  
plug*

No productive Abo perms in well. All  
perms were acidized and swabbed dry.  
Well is not in communication with the  
ARCO Empire Abo Gas Injection  
project.

7-7/8" hole.  
4-1/2" csg @ 5954' w/800 sxs cmt.

Cmnt. plug from 5400'-5625'.

Perfs @ 5526' to 5534'.

Perfs @ 5548' to 5562'.

BP @ 5625'.

Perfs @ 5672'-82', 90'-96', 5702'-16'.

TD @ 5970'.

9-331  
(1983)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEYSUBMIT IN TRIPPLICATE  
(Other instructions on reverse side)Form approved.  
Budget Bureau No. 42-R1424.

## SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT" for such proposals.)

FEB 5 1980

OIL WELL ☒ GAS WELL ☐ OTHER ☐

1. NAME OF OPERATOR

WILLIAM HUDSON

3. ADDRESS OF OPERATOR

DRAWER T, ARTESIA, NEW MEXICO 88210

4. LOCATION OF WELL (Report location clearly, and in accordance with any State requirements.  
See also space 17 below.)  
At surface

1650/S 330/E

SEP 3 1980

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, CR, etc.)

O. C. D.  
ARTESIA, OFFICE

5. LEASE DESIGNATION AND SERIAL NO.

N.M. 041756 (M-04175-B)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

CHALK BLUFF

9. WELL NO.

420

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

17-18S-27E

12. COUNTY OR PARISH

13. STATE

16.

## Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

## NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETION

ABANDON\*

CHANGE PLANS

## SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) \*

CUT OFF PIPE AT 1350'.

SET PLUG AT 1250' to 1350' WITH 30 SACKS OF CEMENT

FILLED 8" CASING WITH MUD TO 30' OF SURFACE

RAN 10 SACKS OF CEMENT TO SURFACE

SET 4-1/2" MARKER.

WORK DONE on 12/6/79 and 12/7/79 BY WHITE CASING COMPANY, HOBBS, NEW MEXICO.

U.S.G.S. REPRESENTATIVE WAS PRESENT WHEN THIS WORK WAS DONE.

LOCATION CLEANED UP AND READY FOR INSPECTION.

18. I hereby certify that the foregoing is true and correct

SIGNED

William Hudson

TITLE

Operator

DATE

1/23/80

(This space for Federal or State office use)

GEORGE H. STEWART

ACTING DISTRICT ENGINEER

APPROVED BY

TITLE

DATE

AUG 29 1980

CONDITIONS OF APPROVAL, IF ANY:

(SUBMIT IN TRIPLICATE)

LAND OFFICE NM-04175-BLEASE NO. 231616

UNIT \_\_\_\_\_

**RECEIVED**  
JAN 20 1961**D. C. F.**  
ARTESIA, OFFICEUNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL _____	SUBSEQUENT REPORT OF WATER SHUT-OFF _____
NOTICE OF INTENTION TO CHANGE PLANS _____	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING _____
NOTICE OF INTENTION TO TEST WATER SHUT-OFF _____	SUBSEQUENT REPORT OF ALTERING CASING _____
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL _____	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR _____
NOTICE OF INTENTION TO SHOOT OR ACIDIZE _____	SUBSEQUENT REPORT OF ABANDONMENT _____
NOTICE OF INTENTION TO PULL OR ALTER CASING _____	SUPPLEMENTARY WELL HISTORY _____
NOTICE OF INTENTION TO ABANDON WELL _____	<b>Temporary Abandoned</b> <b>x</b>

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Abo Chalk Bluff Draw Unit

January 16, 1961

WELL NO. 20 IS LOCATED 1650 FT. FROM {S} LINE AND 330 FT. FROM {E} LINE OF SEC. 17  
NE/4 of SE/4 17 18-S 27-E NMPM  
(1/4 SEC. AND SEC. NO.) (TWP.) (RANGE) (MERIDIAN)  
Empire Abo Eddy New Mexico  
(FIELD) (COUNTY OR SUBDIVISION) (STATE OR TERRITORY)

THE ELEVATION OF THE DERRICK FLOOR ABOVE SEA LEVEL IS 3437 FT.

## DETAILS OF WORK

(STATE NAMES OF AND EXPECTED DEPTHS TO OBJECTIVE SANDS; SHOW SIZES, WEIGHTS, AND LENGTHS OF PROPOSED CASINGS; INDICATE MUDDING JOBS, CEMENTING POINTS, AND ALL OTHER IMPORTANT PROPOSED WORK.)

Spotted plug from 5600-5400' w/75 sx neat cmt.  
Pulled tbg, xmas tree and wellhead.  
Installed 4"x2" XH Swage and 2" gate valve.  
Well temporarily abandoned.

Form 9-331a will be submitted when location is cleaned and leveled.

**CHANGE OPERATOR NAME FROM  
HUMBLE OIL & REFINING COMPANY  
TO EXXON CORPORATION  
EFFECTIVE JANUARY 1, 1973**

**RECEIVED**

JAN 17 1961

U. S. GEOLOGICAL SURVEY  
ARTESIA, NEW MEXICO

I UNDERSTAND THAT THIS PLAN OF WORK MUST RECEIVE APPROVAL IN WRITING BY THE GEOLOGICAL SURVEY BEFORE OPERATIONS MAY BE COMMENCED.

COMPANY Humble Oil & Refining CompanyADDRESS Box 2347, Hobbs, N.M.ORIGINAL  
SIGNED:

ARVIN D. EADY

BY \_\_\_\_\_

TITLE Agent

# WELLBORE SCHEMATIC

*Offset injection from well Nos. 111 and 901 occurs as follows.*

Surface Casing  
8-5/8" 24#  
w/675 sx cmt  
Circ or Surf.  
#111- 5699'-5970'  
# 901- 5699'-5994'

Shoe @ 1002'

Tubing  
2-3/8" w/Pkr @ 5861'

Production Casing  
5-1/2" 14# w/150 sx  
TOC @ 5300' by TS.  
Calc. Top of Cmmt = 5058'  
Top of Reef @ 5524'

Shoe @ 6079'

Open Hole f/6079'-6485'  
Sqzd w/100 sx

## Empire Abo Unit M-10

660' FNL & 1980' FWL  
Sec 10, T-18S, R-27E, Eddy County, NM  
Spudded 11/27/58  
Completed 12/29/58  
KB @ 3529'

No zones of shallow production in the  
S/2 of Sec. 3 or in Sec. 10 of 18S-27E

Perfs @ 5524'-50' (Sqzd w/125 sx)

Perfs @ 5890'-5920'

CIBP @ 5933'

Model D Pkr & DR Plug @ 5950'  
Cap 10' SN

Perfs @ 5982'-6008'

Bkr Mod K retainer plug @ 6049'  
w/2' cement cap

TD @ 6485'

# WELLBORE SCHEMATIC

*Offset injection  
into well No  
131 occurs at  
a depth of  
6058' - 6114'*

## Empire Abo Unit M-12

660' FNL & 560' FEL

Sec 10, T-18S, R-27E, Eddy County, NM

Spudded 06/23/58

Completed 07/29/58

T&A'd 04/02/93 w/Tbg & Pkr.

KB @ 3533'

Surface Casing  
8-5/8" 32#  
Circ w/1050 sx

Shoe @ 1008'

No zones of shallow production in the  
S/2 of Sec. 3 or in Sec. 10 of 18S-27E

Production Casing  
5-1/2" w/150 sx Cmt  
TOC @ 5140' by TS.  
Calc. TOC = 5052'  
Top of Reef @ 5817'

Tubing  
2-3/8" (188 Jts)  
w/Pkr @ 5892'

Perfs @ 5820'-40' (Sqzd) w/100 sx w/CR @ 576'  
then D.O.

Perfs @ 5902'-14' (Sqzd) CR 5797' 400 sx  
DO/NT/CR @ 5816' 35 sx DO tested OK

Perfs @ 5980'-90'

PBD @ 6030'  
TD @ 6074'

Shoe @ 6073'

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

8910138010

4. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

ARCO OIL AND GAS COMPANY

3. ADDRESS OF OPERATOR

BOX 1710, HOBBS, NEW MEXICO 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)  
At surface

660 FNL - 560 FEL (UNIT LETTER A)

14. PERMIT NO.

30-015-00852

15. ELEVATIONS (Show whether OF, RT, GR, etc.)

3517' GR

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

EMPIRE ABO UNIT "M"

9. WELL NO.

12

10. FIELD AND POOL, OR WILDCAT

EMPIRE ABO

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA

SEC. 10, T18S, R27E

12. COUNTY OR PARISH 13. STATE

EDDY

NM

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO

SUBSEQUENT REPORT OF:

TEMP. WATER SHUT-OFF ☐

PULL OR ALTER CASING ☐

FRACTURE TREATMENT ☐

MULTIPLE COMPLETION ☐

SHOOTING OR ACIDIZING ☐

ABANDON\* ☐

REPAIR, ETC. ☐

CHANGE LEASE ☐

WATER SHUT-OFF ☐

REPAIRING WELL ☐

FRACTURE TREATMENT ☐

ALTERING CASING ☐

SHOOTING OR ACIDIZING ☐

ABANDONMENT\* ☐

(Other) TEMPORARILY ABANDON ☒

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESIGNATION OF WELL OR COMPLETION OPERATOR: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting and completion of work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones penetrated in work.)

TA & HOLD WELL BORE FOR FIELD BLOW DOWN

TD 6074'; PBD 6030'; PERFS: 5980-5990'

3/31/92 MIRU DDPW WELL DEAD ND WH NU BOP RELEASED PKR POH w/96 JTS TBG. SDON.

4/01/92 RO POH w/REMAINDER OF TBG. RU TEST. BIH 5000# ABOVE SLIPS.

4/02/92 RO RU KILL TRUCK PUMP 70 BBLS 8.6# BRINE w/WT-675 CHEMICAL. SET PKR ABOVE SET OF PERFS: 5902-5914' THAT WERE SQUEEZED 4/10/78. ND BOP NU WH. LOAD AND PRESSURE UP CSG TO 500#. HELD FOR 15 MINS. GOOD. RDCL. WELL TA. PKR SET @ 5891.72'. PRESSURE TEST CHART ATTACHED.

APPROVED FOR 12 MONTH PERIOD

ENDING 4/1/93

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Operations Coordinator

DATE 5/7/92

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE 5/13/92

CONDITIONS OF APPROVAL, IF ANY:

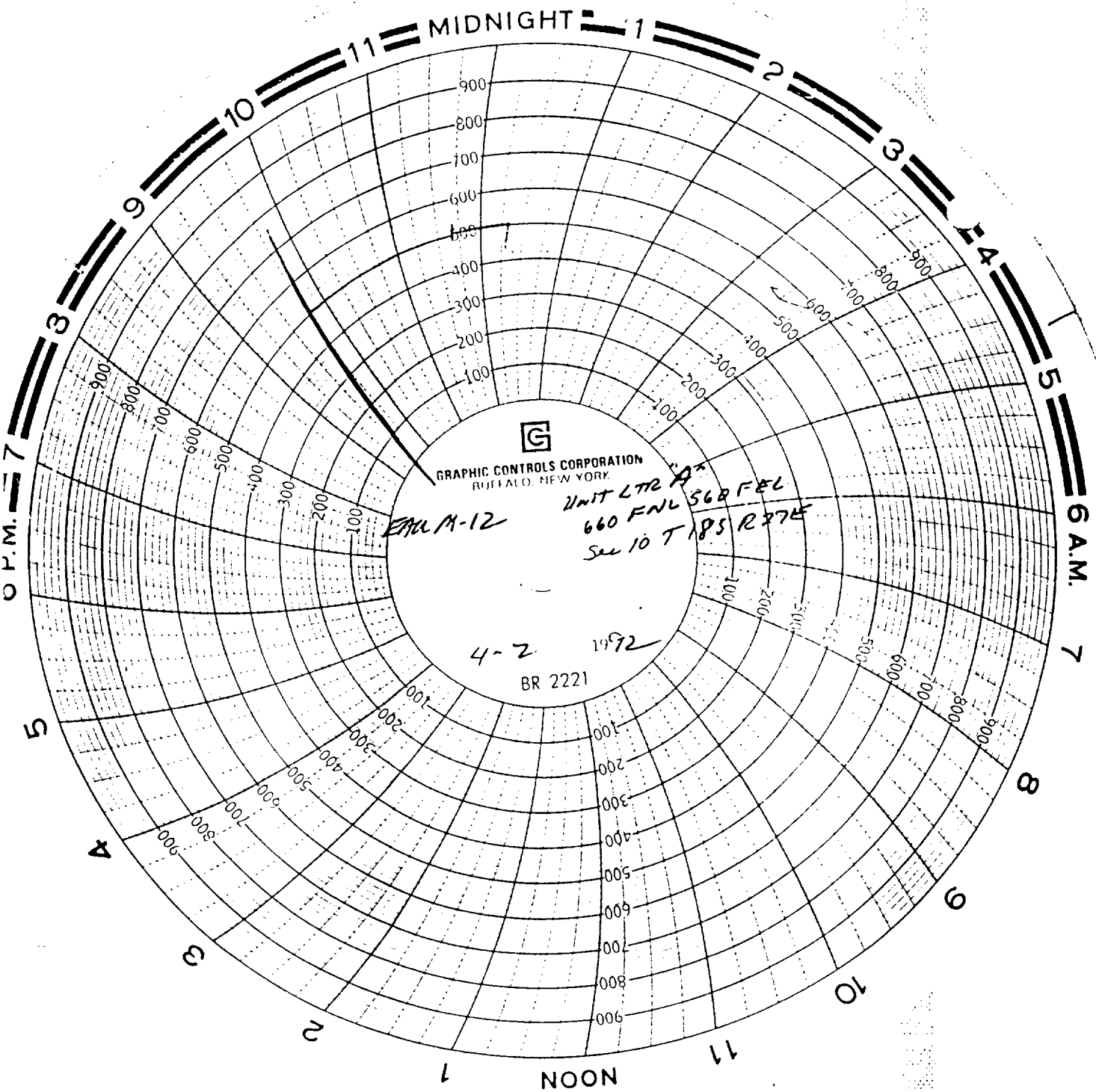
\*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

G. MIDLAND  
Artesia  
Coghlan (2)

APR 11 1992

RECEIVED



## WELLBORE SCHEMATIC

Surface Casing  
8-5/8" 24#  
Circ 400 sx cmt to Surf.

Shoe @ 950'

Production Casing  
5-1/2" 14# w/150 sx and  
TOC @ 5375' by TS.  
Calc. TOC = 5239'  
Top of Reef @ 6137'

### Empire Abo Unit M-15

660' FNL & 1980' FEL  
Sec 11, T-18S, R-27E, Eddy County, NM  
Spudded 04/06/58  
Completed 06/05/58  
T&A'd 12/04/92  
KB @ 3611'

No zones of shallow production in the  
S/4 of Sec. 2 or Sec. 11 of 18S-27E

Cmnt CAP @ 6070'

CIBP @ 6110'

CIBP @ 6120'

Perfs @ 6138'-6158'

PBTD @ 6212'

Shoe @ 6260'



# HOBBS OFFICE

Form 3160-5  
(June 1990)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

JAN 11 1993

DATE REC'D.

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

### SUBMIT IN TRIPLICATE

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
ARCO Oil and Gas Company

3. Address and Telephone No.  
P.O. Box 1710 - Hobbs, New Mexico 88241-1710

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
(Unit B)  
660' FNL & 1980' FEL, Section 11, T18S, R27E

5. Lease Designation and Serial No.

LC 067858

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8910138010

8. Well Name and No.

Empire Abo Unit "M" #1

9. API Well No.

30-015-00868

10. Field and Pool, or Exploratory Area

Empire Abo

11. County or Parish, State

Eddy County, New Mexico

### 12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

#### TYPE OF SUBMISSION

- ☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

#### TYPE OF ACTION

- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other Temporarily Abandon  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

TD 6260', PBD 6212', Perfs 6138-6158'

MIRU Scanalog OH. RIH w/CIBP and set at 6119.84'. Load casing w/8.6# brine packer fluid. Test casing to 500# for 30 minutes. OK.

Witnessed by J. Robinson - NMOCD

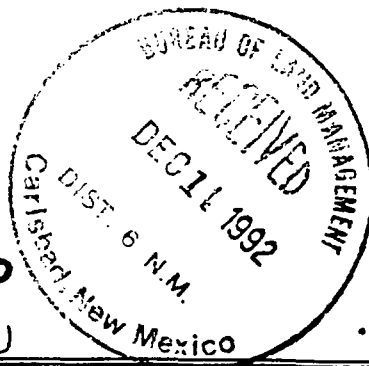
Well TA 12/04/92

APPROVED FOR 12 MONTH PERIOD

ENDING 01-01-94

Chart Attached

CF-MIDLAND  
ARTESIA  
COGBURN (2)



14. I hereby certify that the foregoing is true and correct

Signed [Signature]

Title Operations Coordinator

Date 12/11/92

(This space for Federal or State official use)

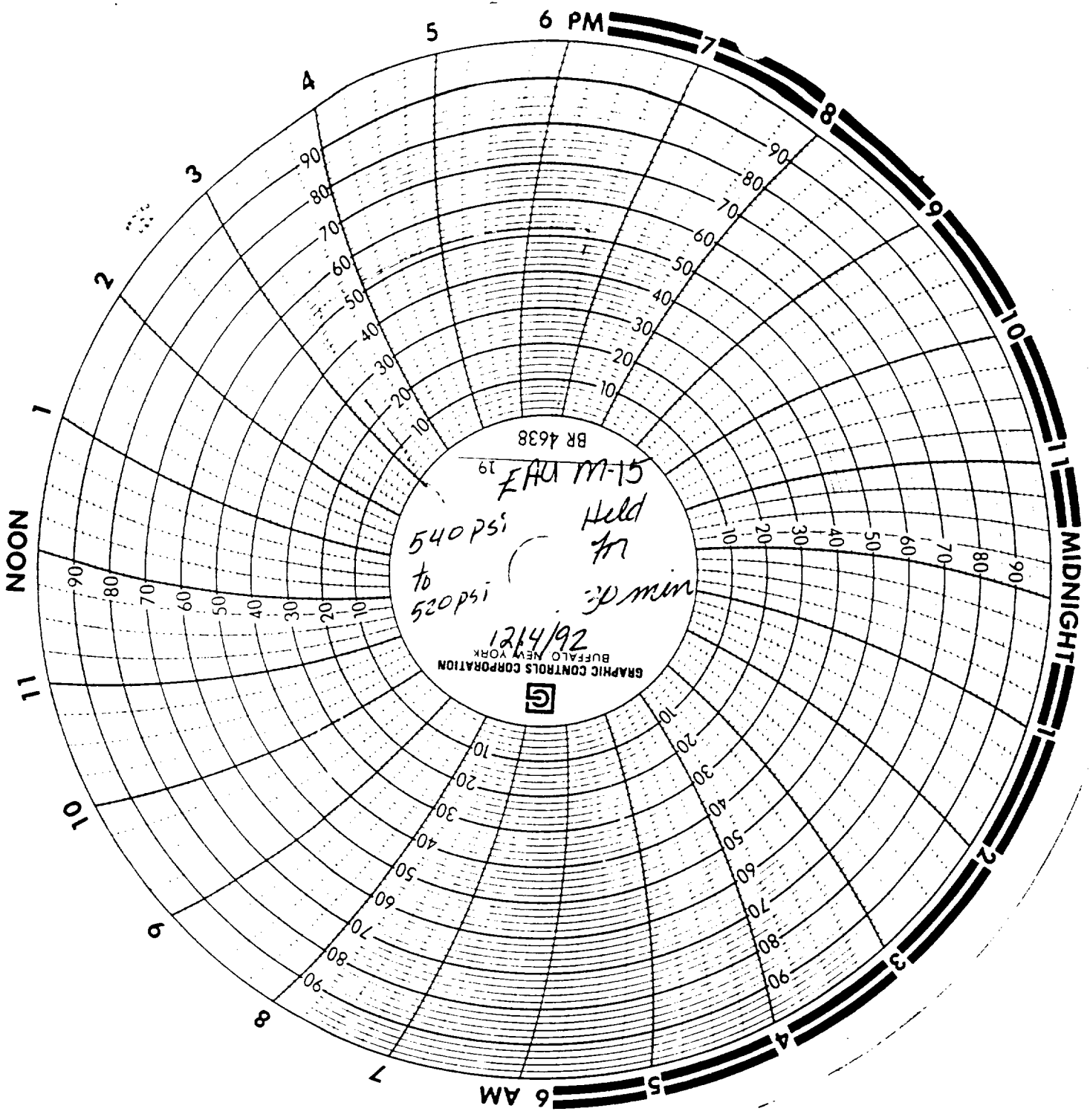
Approved by [Signature]  
Conditions of approval, if any:

Title OPERATIONS ENGINEER

Date 1-7-93

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*See Instruction on Reverse Side





**BLACK WARRIOR  
WIRELINE CORP.**

P. O. Drawer 9188  
Columbus, MS 39705-9188

**CEMENT BOND  
GAMMA RAY**

**VARIABLE DENSITY LOG**

9200

COUNTY: EDDY  
FIELD: EMPIRE ABO  
LOCATION: 660' FNL & 1980' FEL  
WELL: EMPIRE ABO UNIT #M-15  
COMPANY: ARCO OIL AND GAS CO.

**COMPANY** ARCO OIL AND GAS CO.

**WELL** EMPIRE ABO UNIT #M-15

**FIELD** EMPIRE ABO

**COUNTY** EDDY **STATEN. M.**

**LOCATION**

660' FNL & 1980' FEL

Other Services

Sec. 11

Twp. 18-S

Rge. 27-E

Permanent datum

G. L.

Elev. 3599'

Elev. K. B. 3611'

Log Measured From

K. B. OR 12'

Above Perm. Datum

D. F. 3610'

Drilling Measured From K. B.

G. L. 3599'

Date	12/21/93		Type Fluid in Hole		WATER	
Job Tkt I Run No.		ONE	Dens. I Visc.		-----	-----
Depth-Driller	6067'		Est. Cement Top		5350'	
Depth-Logger	6068'		Max. Rec. Temp.		-----	
Btm. Log Interval	6063'		Equip. I Location		5610	HOBBS, N.M.
Top Log Interval	5000'		Recorded By		ROGER HAGAN	
Open Hole Size	7 7/8"		Witnessed By		WOLFENBARGER	
CASING REC.	Size	Wt/Ft	Grade	Type Joint	Top	Bottom
Surface String	8 5/8"				SURFACE	950'
Prot. String						
Prod. String	5 1/2"	14#	J-55		SURFACE	6260'
Liner						

**PRIMARY CEMENTING DATA**

STRING	Surface	Protection	Production	Liner
Vol. of Cement				
Type of Cement				
Additive				
Additive by Z				
Retarder				
Retarder by Z				
Wt. of Slurry				
Water Loss				
Drill. mud type				
Drilling mud wt.				

# WELLBORE SCHEMATIC

## Empire Abo Unit N-12

1616' FNL & 330' FEL (A)

Sec 10, T-18S, R-27E, Eddy County, NM

Spudded 11/26/59

Completed 01/04/60

Surface Casing  
8-5/8"  
Cmt to Surface 790 sx

Shoe @ 1,470'

No zones of shallow production in  
Sections 10 or 11 of 18S-27E

Tubing  
2-3/8" w/TAC, SN,  
PN, & MA @ 6,093'

TAC @ 6,093'

Production Casing  
4-1/2"  
Cement 135 sx

Shoe @ 6,143'

Perfs @ 6,043'-6,080'  
PBD @ 6,115'  
7-7/8" hole TD @ 6,143'

*TOC @ 5475'  
Perf 4 holes 5450  
Spaced w/ 1100 SX  
TOC @ 511'  
Perf 450  
Sg w/ 200 SX  
Circulated cement*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
OPERATOR'S COPY

SUBMIT IN TRIPPLICATE  
(Other instruction on re-  
verse side)

Expires August 31, 1985

LEASE DESIGNATION AND SERIAL

LC 065478 (b)

IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐  
2. NAME OF OPERATOR  
ARCO Oil and Gas Company  
3. ADDRESS OF OPERATOR

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.  
See also space 17 below.)  
At surface

1616 FNL & 330 FEL, Unit Letter H

7. UNIT AGREEMENT NAME

Empire Abo Unit "N"

8. FARM OR LEASE NAME

9. WELL NO.

10. FIELD AND POOL OR WILDCAT  
12

Empire Abo  
11. SEC., T., R., M., OR BLE. AND  
SURVEY OR AREA

10-18S-27E

12. COUNTY OR PARISH 13. STATE

Eddy

NM

14. PERMIT NO. 15. ELEVATIONS (Show whether OP, RT, GR, etc.)

30-015-00855

GR 3528

16

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETION

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANE

(Other)

(Other)

(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.\*

- 9-12-86 RU PU. Kill well. POH w/rods.  
9-13-86 NU BOP. POH w/CA. Tag TOF @ 6095.  
9-15-86 Set RBP @ 5999. Ran free pipe log f/5800-surf. Indic TOC @ 5475.  
9-16-86 Perf 4 holes @ 5450. RIH w/pkr. Establish PIR.  
9-17-86 Re-perf @ 5450. Set CICR @ 5322. Sqz w/1000 sx "H" w/4% gel followed w/100sx "H" neat. Lost returns. Did not circ cmt. Ran temp survey. TOC @ 511.  
9-18-86 Perf 4 holes @ 450. Set pkr @ 372. Estab RIR. POH. Sqz w/200sx "C" neat. Circ cmt to surf out 4-1/2 X 8-5/8. Closed BH valve. Cmtd outside 8-5/8" csg. w/30sx "C" neat. Circ cmt.  
9-20-86 DO to 490. Test csg to 1000#. Bled off to 925# in 30 min. DO CICR @ 5322.  
9-22-86 DO to 5499. Test csg to 1000#. Bled off to 925# in 30 min.  
9-23-86 POH w/RBP. RIH w/CA.  
9-24-86 RDPU. Return to Production.

Orig - CF  
xc S. Smith - Hobbs  
- KWG-1448

ACCEPTED FOR RECORD

MAR 25 1987

CARLSBAD, NEW MEXICO

18. I hereby certify that the foregoing is true and correct

915-688-5672

SIGNED

Ken W. Gosnell

TITLE Engr. Tech. Spec.

DATE

3-23-87

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

## WELLBORE SCHEMATIC

Cmt Plug @ Surface w/10 sxs cmt.

### State BL #1

Pan American - Operator

330' FNL & 2272' FEL (B)

Sec 4, T-18S, R-28E, Eddy County, NM

API 30-015-02588

DF-3669'

Spudded 02/26/60

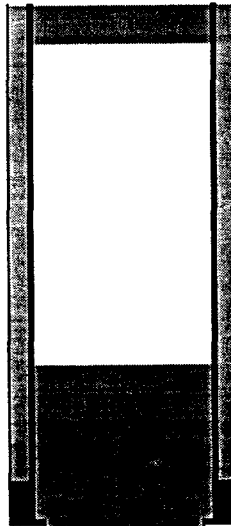
Completed & P&A'd 03/22/60

Cmt Plug 1187' to 1235'.

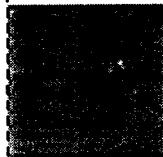
11" Hole.

8-5/8" casing @ 1233'.

Set w/700 sxs cmt. Circ.



Cmt Plug 2263' to 2425'.



Top of Abo Reef @ 6320'.

DST 6313'-334'.  
Rec. 4954' sulfur water.



Cmt plug 6152' to 6334'.

TD @ 6334'.

RECEIVED

## NEW MEXICO OIL CONSERVATION COMMISSION

MAR 28 1960

FORM C-103  
(Rev. 3-55)

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 10-1-55, OFFICE

O. C. C.

Name of Company <b>Pan American Petroleum Corporation</b>				Address <b>Box 68, Hobbs, New Mexico</b>			
Lease <b>State "BL"</b>	Well No. <b>1</b>	Unit Letter <b>B</b>	Section <b>4</b>	Township <b>18-S</b>	Range <b>28-E</b>		
Date Work Performed <b>3-21 &amp; 22-60</b>	Pool <b>Undesignated</b>			County <b>Eddy</b>			

THIS IS A REPORT OF: (Check appropriate block)

- ☐ Beginning Drilling Operations
 ☐ Casing Test and Cement Job
 ☐ Other (Explain):
- ☒ Plugging
 ☐ Remedial Work

Detailed account of work done, nature and quantity of materials used, and results obtained.

This Abo test well was drilled to a total depth of 6334. Top of Abo reef 6320. On drill stem test 6313-6334, tool open 4 1/2 hours. Fair blow of air to surface immediately, gradually weakened and died in 4 1/2 hours. Gas to surface in 3 hours 15 min. Amount too small to measure. Recovered 4954' sulfur water and slight rainbow oil on top. No measurable amount of oil recovered. Ran logs. No indication of productive pay. Dry Hole. Authority to PxA telephone conversation approval M. L. Armstrong to J. W. Meek 3-21-60. Cement plugs set at 6334-6152 W/50 Sx; 2425-2263 W/50 Sx; 1235-1187 W/15 Sx, 10 Sx plug at surface in 8 5/8" casing. All intervals filled with heavy mud laden fluid. Erected PxA marker. Subsequent report to be submitted after final cleanup.

Witnessed by <b>R. J. Tweedy</b>	Position <b>Field Foreman</b>	Company <b>Pan American Petroleum Corporation</b>
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## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

## ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

## RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION

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

Approved by <i>W. A. Gussert</i>	Name <b>J. W. BROWN</b>
Title <b>OIL AND GAS INSPECTOR</b>	Position <b>Area Superintendent</b>
Date <b>APR 29 1960</b>	Company <b>Pan American Petroleum Corporation</b>

## WELLBORE SCHEMATIC

Cmt Plug surface to 29'.

### Abo Chalk Bluff Draw Unit #12

Exxon - Operator

550' FNL & 350' FEL (A)

Sec 17, T-18S, R-27E, Eddy County, NM

KB-3843'

Spudded 06/08/60

Completed & P&A 'd 09/12/60

11" Hole.  
8-5/8" casing @ 1513'.  
Set w/800 sxs cmt.

Cmt Plug 1543' to 1643'.

Calc. Top of Cmmt. 5176'.  
Tbg. cut off @ 5375' w/CR @ 5400'.

No productive Abo in well. All perfs  
were acidized and swabbed dry. Well  
is not in communication with the ARCO  
Empire Abo Gas Injection project.

Sqz'd Perfs @ 5470' to 5482'.

Sqz'd Perfs @ 5486' to 5500'.

Sqz'd Perfs @ 5506' to 5522'.

Sqz'd Perfs @ 5535' to 5557'.

7-7/8" hole.  
4-1/2" csg @ 5694' w/100 sxs cmt.

PBD 5600'.  
TD @ 5694'.



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

LAND OFFICE H.M. 04175

LEASE NO. 23161

UNIT

JAN 23 1961

D. C. C.  
MINING OFFICE

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT	X
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

ABO CHALK BLUFF DEAN UNIT

HOBBS, NEW MEXICO SEPTEMBER 12, 1960

WELL NO. 12 IS LOCATED 550' FT FROM ~~11~~ LINE AND 350' FT. FROM ~~11~~ LINE OF SEC. 17

NE/4 of NE/4 of SEC. 17 18-S 27-E  
(1/4 SEC. AND SEC. NO.) (TWP.) (RANGE) (MERIDIAN)

EMPIRE ADO CDDY NEW MEXICO  
(FIELD) (COUNTY OR SUBDIVISION) (STATE OR TERRITORY)

THE ELEVATION OF THE DERRICK FLOOR ABOVE SEA LEVEL IS 3463 FT.

DETAILS OF WORK

(STATE NAMES OF AND EXPECTED DEPTHS TO COLLECTIVE SANDS; SHOW SIZES, WEIGHTS, AND LENGTHS OF PROPOSED CASINGS; INDICATE MIDDING JOBS, CEMENTING POINTS, AND ALL OTHER IMPORTANT PROPOSED WORK.)

Set cement plug in 4-1/2" (oil string) casing from 1643 to 1543' with 15 sacks cement. Cut off wellhead. Set cement plug from 29' to surface with 10 sacks. Welded cap on top and install dry hole marker as required by NMOC. Verbal approval per J. A. Knauf 9-20-60. Well plugged & abandoned.

I UNDERSTAND THAT THIS PLAN OF WORK MUST RECEIVE APPROVAL IN WRITING BY THE GEOLOGICAL SURVEY BEFORE OPERATIONS MAY BE COMMENCED.

Company Fumble Oil & Refining Company

Address Box 1347, Hobbs, New Mexico

By

Title Agent

LOG OF OIL OR GAS WELL (Cont.)

Humble Oil & Refining Company

Abo Chalk Bluff Draw Unit, Well No. 1, Empire Abo Field, Eddy County, New Mexico

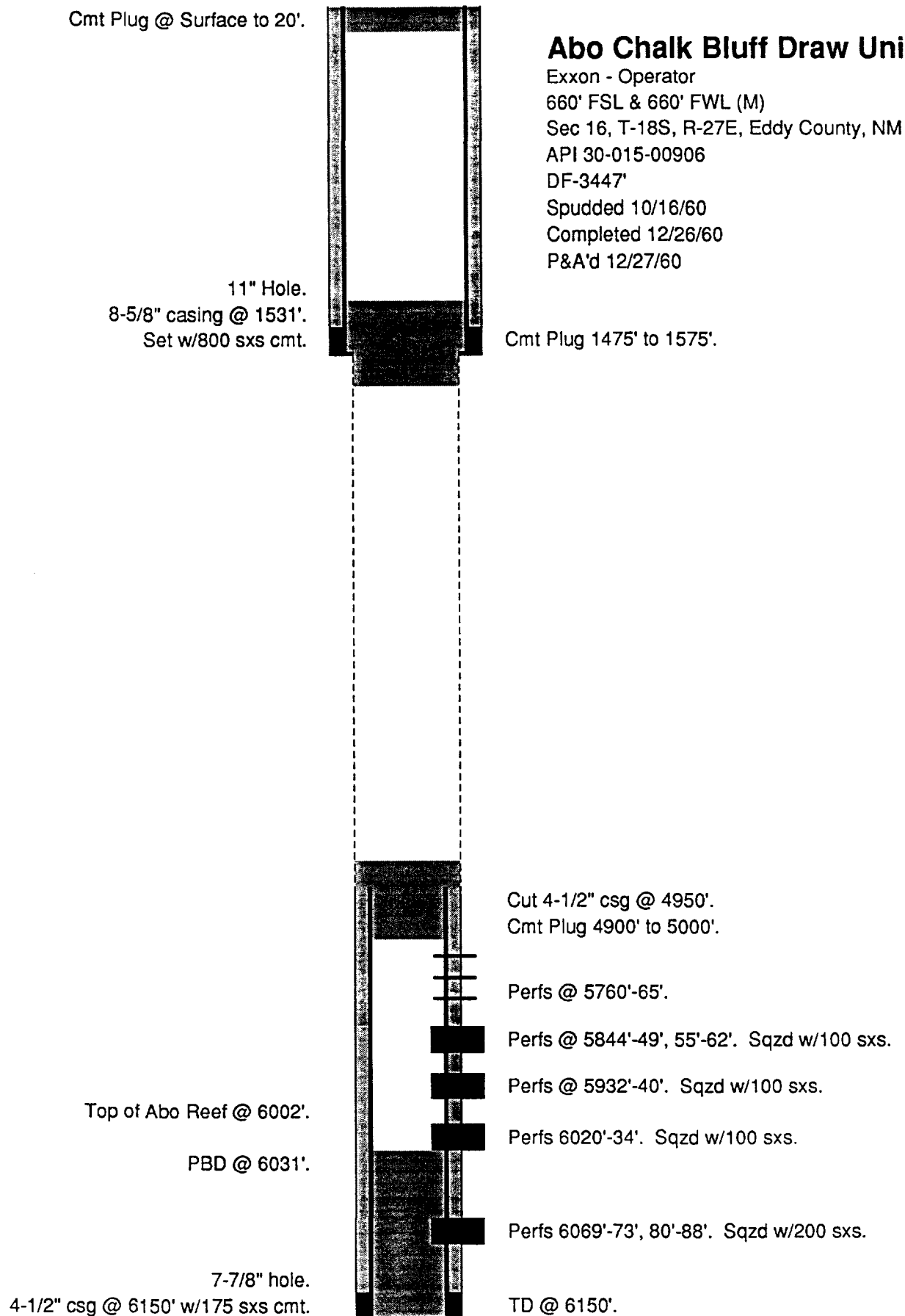
History Of Oil Or Gas Well-

Spudded 11" hole at 7:00 AM, 6/8/60. Set 1500' of 8 5/8 csg at 1513'. Drld to total depth of 5694 and set 5683' of 4 1/2" csg set at 5694'. Perf 4 1/2" csg from 5535 to 5557' w/2 shots per ft. Acidized perfs 5535-5557 w/6000 gals acid. Well swbd dry. Spotted Dowell Jel X-82 over perfs from 5535-5557. Perf 4 1/2" csg from 5470-5483, 5486-5500, 5506-5522 w/2 shots per ft. Acidized perfs 5470-5522 w/6000 gals acid. Well failed to produce.

Set packer at 5528', pressured up between tbg & csg, circulated fluid @ 500#. Indicated channel behind 4 1/2" csg. Set cmt retainer at 5528, circulated behind 4 1/2" csg through perfs. Squeeze cmt perf from 5470-5557 w/ 150 sx cmt. Drld cmt from 5430-5525, tested csg w/1000# - held. Perf 4 1/2" csg from 5486-5500 & 5506-5522 w/2 shots per ft. Swabbed dry. Acidized perf from 5486-5522 w/12,000 gal reg 15% acid, swabbed dry. Squeezed perf 5486-5500 & 5506-5522 w/55 sx Dowell D-23 Flac cmt. Drld cmt from 5438-5528. Pressure tested squeezed perfs - broke down. Set retainer at 5408 & squeeze cmt w/75 sx Dowell Flac cmt, squeezed out 45 sx into formation. Found retainer at 5481, drilled out to 5528, tested w/4000#, failed to hold. Drilled bridge plug & cmt to 5600, perfs from 5535-5557 broke down, squeeze cmt with 75 sx Dowell Flac cmt. Drld cmt & retainer to 5600'. Set retainer at 5528, cmt w/75 sx Dowell Flac cmt first stage, squeezed another 75 sx, squeeze obtained with 55 sx in formation at 4000 psi. Drld cmt & retainer to 5600'. Set packer at 5440', pmpd in 1500 gals 15% reg acid followed by 150 sx slo-set neat cmt. 142 sx into formation thru perf 5535-5557 w/5500#, reversed out 8 sx. Drld retainer & cmt to 5600. Pressured up csg to 2000# - held. Perf 4 1/2" csg at 5569 w/4 holes. Spotted 250 gals 15% acid on perf at 5569, pressured to 2600# on tbg & 2000# on csg, pumped into formation @ 1 BPM. Pressure broke to 5000#, pmpd into formation at 5800# at rate of 4 1/2 BPM. Communications between perforations. Set cmt retainer at 5430, pmpd into formation w/water at 2 BPM, pmpd 5 bbls acid and 80 sx cmt into tbg, cmt retainer failed. Reversed out cmt and 1 bbl acid. Set retainer at 5400', pmpd in 200 sx reg neat cmt, did not squeeze. WOC 6 hrs, pmpd 200 sx neat cmt at 2800#. Did not squeeze. WOC 7 hrs. Pmpd 200 sx neat cmt at 3000#. Did not squeeze, WOC 8 hrs. Pmpd 200 sx neat cmt at 3100#. Did not squeeze. Set retainer at 5400'. Squeezed perf in 4 1/2" csg at 5569 w/50 sx reg neat cmt & 100 sx reg w/5# gilsonite per sk & 50 sx reg neat cmt. After pmpd in 180 sx at 5600 to 5800, tbg pressure & 2400# csg pressure, cmt retainer failed. Circ out cmt. No free movement. Cut tbg at 5375 w/chemical cutter. Jarred packer loose. Ran Klustrite shoe #1, milled 3 hrs, made 1' of hole, rec steel cuttings & cmt. Ran Klustrite shoe #2 w/inside cutting edge built up 3" ID, milled 2 hrs unable to make hole. Pulled tbg out of hole. Well temporarily abandoned.

Set cmt plug in 4 1/2" csg 1643-1543 w/15 sx cmt. Cut off wellhead. Set cmt plug from 29' to surface w/10 sx. Welded cap on top & installed dry hole marker. Well plugged & abandoned 9/11/60.

## WELLBORE SCHEMATIC



## NEW MEXICO OIL CONSERVATION COMMISSION

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

FORM C-103  
(Rev 3-5)RECEIVED  
JAN 16 1961  
D. C. C.  
DISTRICT OFFICE

Name of Company Humble Oil & Refining Company		Address Box 2347, Hobbs, N.M.			
Lease Abo Chalk Bluff Draw Unit	Well No. 18	Unit Letter M	Section 16	Township 18-S	Range 27-E
Date Work Performed 12-23, 12-27-60	Pool Empire Abo	County Eddy			
THIS IS A REPORT OF: (Check appropriate block)					
<input type="checkbox"/> Beginning Drilling Operations	<input type="checkbox"/> Casing Test and Cement Job	<input type="checkbox"/> Other (Explain):			
<input type="checkbox"/> Plugging	<input type="checkbox"/> Remedial Work				

Detailed account of work done, nature and quantity of materials used, and results obtained.

Move in Lea County Casing Pullers. Pulled tbgs. Shot off csg at 4950. Pulled 4 1/2" csg. Set plug #1 from 5000' to 4900' w/50 sx cmt. Plug #2 from 1575 - 1475' w/50 sx cmt. Plug #3 from 20' to 0' w/10 sx cmt. Mud laden fluid between all plugs. Installed dry hole marker as required by NMCCC. Plugged and Abandoned.

C-103 will be submitted when location is cleaned and leveled.

Witnessed by <i>J. C. Sherrill</i>	Position Field Supt	Company Humble Oil & Refining Co.
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FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

## ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

## RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

## OIL CONSERVATION COMMISSION

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

Approved by <i>M. L. Armstrong</i>	Name <i>Armstrong</i>
Title OIL AND GAS INSPECTOR	Position Agent
Date JUN 6 1961	Company Humble Oil & Refining Co.

Abo Chalk Bluff Draw Unit, Well #18 - Humble Oil & Refining Company, Box 2347, Hobbs, N.M.

Perforated  $4\frac{1}{2}$ " csg from 6069 - 6073, 6080-6088'. Acidized from 6069-6073, 6080-6088, w/ 500 gal 15% HCL acid, inj rate 3 BPM. Acidized perf from 6069-6088 w/6000 gal reg 15% acid, inj rate 4.6 BPM. Swab 15 hrs rec 103 bbls load & acid water. Swab 15 hrs rec 113 bbls acid and salt water. Swab 6 hrs rec 60 bbl formation water, lowered fluid level from 2500' to 5500'. Squeezed perf from 6069-6073 and 6080-6088 w/ $4\frac{1}{2}$ " dist. pkr set at 6032, w/100 sx, failed to get squeeze. Resqueeze perf from 6069-6073, 6080-6088 w/100 sx cmt. Drilled cmt from 5988-6036. Perf  $4\frac{1}{2}$ " csg from 6020-6034 w/2 shots per ft. Acidized perf from 6020-6034 w/500 gals reg acid at the rate of 3 BPM. Flowed back 61 bbls water in  $5\frac{1}{2}$  hrs. Swabbed  $3\frac{1}{2}$  hrs rec 14 bbls water - swabbed dry. Acidized perf from 6020-6034 w/6000 gals reg acid, avg inj rate 5 BPM. Well flowed back 5 bbls water. Swabbed 76 bbls load and acid water in  $5\frac{1}{2}$  hrs. Swabbed 82 bbls acid and load water. Squeezed perf from 6020-6034 w/100 sx cmt. Perf  $4\frac{1}{2}$ " csg from 5932-5940, w/2 shots per ft. Acidized w/500 gal reg acid, avg inj rate 3.5 BPM. Swabbed 62 bbls load and acid water. Swabbed  $7\frac{1}{2}$  hrs rec 87 bbls acid water. Acidized perf from 5932-5940, w/6000 gal reg acid, avg inj rate 5.0 BPM. Flowed 2 bbls water. Swabbed 1 hr, rec 23 bbls load and acid water. Swabbed 96 bbls load and acid water in 10 hrs. Swabbed dry. Squeezed perf 5932-5940' w/100 sx reg neat cmt. Perf  $4\frac{1}{2}$ " csg from 5844-5849, 5855-5862, w/2 shots per ft. Acidized w/500 gal reg 15% acid from 5844-5849, 5855-5862, avg inj rate 3BPM. Swabbed 81 bbls acid water in 5 hrs, swabbed dry. No show oil or gas. Acidized perf 5844-5862 w/6000 gal acid, avg inj rate 4.8 bbls per min. Swabbed 53 bbls load and acid water. Swabbed 23 bbls load and acid water. Swabbed dry. Squeezed perf from 5844-5849, 5855-5862 w/100 sx cmt. Perf  $4\frac{1}{2}$ " csg from 5760-5765 w/2 shots per ft. Acidized perf from 5760-5765 w/500 gal 15% acid, avg inj rate 5BPM. Swabbed 67 bbls acid water, swabbed dry. No oil or gas. Swabbed  $4\frac{1}{2}$  hrs rec 9 bbls acid water. Swabbed dry. Acidized perf 5760-5775 w/4000 gal 15% acid, avg inj rate 4.6 BPM. Rec 31 bbls acid wtr in  $1\frac{1}{2}$  hrs. Fluid level 2500' w/small show of oil. Swabbed 12 hrs, rec 77 bbls acid water, swabbed dry. Swabbed 12 hrs, rec 15 bbls load and acid water. Swabbed dry. No show oil or gas. Swabbed 20 bbls water. No show oil or gas.

## HUMBLE OIL &amp; REFINING CO.

## West Texas Division

County Eddy, New Mexico Field Empire Abo Lease Abo Chalk Bluff Draw Unit Well No. 18Location 660 F 3 660 F WL Sec 16 Twp 18-S Rge 27-E Block \_\_\_\_\_ Sur \_\_\_\_\_Spudded 10-16-60 Elev 3447 ft Drilled by Lea drlg Co Tools RotComp. Date 12-27-60 T. D. 6150 P. B. D. \_\_\_\_\_ Prod. Fmtn. P & A

## FORMATION DATA

Samples			Survey	
Name	Depth	Subsea	Depth	Subsea
Rustler				
Yates				
San Andres				
San Angelo				
Clear Fork				
Wichita				
Wolfcamp				
Penn				
Miss.				
Dev.				
Silurian				
Foss.				
Montoya				
Simpson				
Ellenb.				
Pre.C.				

## CORRELATION WELLS

Name	Location

## CASING RECORD

Size	Set @	1st Cem	2nd Cem	3rd Cem	T. C.
8 5/8	1531	800SX	reg neat		Circ
	1 1/2" hole				
4 1/2	6150	175 SX	reg 4% gel	5100	
		(Cmt. trucked csg on bottom)			
		Pulled 4 1/2" csg, shot off @ 4950			

## ELECTRIC LOGS

No.	Date	From	To	Co.

## SPECIAL LOGS

Type	From	To	No.	Co.
Dipmeter-Sch.				
Dipmeter-HOR				
Micro Log				
Micro Latero	2900	6085		Wetex
Gamma Ray	2900	6085		Wetex
Neutron	Surface	6085		Wetex
Gamma Ray	Surface	6085		Wetex
Mud Logger				

## INITIAL PRODUCTION

B. O. P. D. \_\_\_\_\_ Flwg. Pmpg. \_\_\_\_\_ thru \_\_\_\_\_

Based on \_\_\_\_\_ hour test of \_\_\_\_\_

Prod. Section \_\_\_\_\_

Gas \_\_\_\_\_ G. O. R. \_\_\_\_\_ C. Gr. \_\_\_\_\_

T. P. \_\_\_\_\_ C. P. \_\_\_\_\_ B. S. W. \_\_\_\_\_

## PERFORATING DATA

Csg.	From	To	Shots	By
4 1/2	6069-73	6080-88	2j	McC
	squeezed			
4 1/2	6020	6034	2j	McC
	squeezed			
4 1/2	5932	5940	2j	McC
	squeezed			
4 1/2	5844-4944	5855-60	2j	Wetex
	squeezed			
4 1/2	5760	5765	2j	Sch

## FLOW TESTS AND TREATMENTS

SECTION	TREATMENT
	Drilled well to 6085 & ran logs. On Gulf orders well was deepened to 6150. The section 6085-6150 was not logged.
1-19-60	Set 2" Hbg @ 6032 w/Halliburton Squeeze tool @ 6032 Acidize pts 6069-73 & 6080-88 w/500 gal 15% HCl @ 38/m IP 2800 FP 2400
1-20-60	Acidize pts w/6000 gal reg 15% acid @ 4-6 B/m IP 2400 FP after 5 min 1000
	Sub'd well 6 hrs, rec'd 50 BAW
10-21-60	Sub'd 103 bbls load & acid wtr. Little gas following each run
11-22-60	15 hr sub test rec'd 113 bbls acid & SW
11-23-60	On 9 hr flow test no fluid recovered Sub'd 60 bbls wtr in 6 hrs
	Attempted to squeeze pts 6069-73 & 6080-88 Failed to get squeeze
11-24-60	WOC 14 hrs - broke fm w/1800 #; Resqueezed w/1000 # neat @ 3400
11-25-60	WOC
11-26-60	Found top cmt @ 6026
11-27-60	Drilled cmt 5988-6036 Perf 4 1/2" CSG 6020-6034 w/2 MC; shots/ft
11-28-60	Acidized pts 6020-6034 w/500 gal reg acid @ 30 bbls/min IP 2800 FP 2600 10 min SIP 1400 Flowed back 6 bbls wtr Sub'd 61 bbls wtr in 5 1/2 hrs
11-29-60	Sub'd 3 1/2 hrs, rec'd 14 bbls wtr, sub'd dry loaded hole w/90 bbls wtr Acidized pts 6020-6034 w/6,000 gal reg acid @ 5 bbls/min; ave press 2700, Break down 2800 after 10 min 1000
	Opened well, Flowed back 5 bbls wtr Sub'd 76 bbls load & acid wtr in 5 1/2 hrs
11-30-60	Sub'd 10 hrs, rec'd 82 bbls acid & load wtr - No show oil or gas Attempted to squeeze cmt pts 6020-6034. Did not take
12-1-60	Squeezed pts 6020-6034 w/1000 # reg neat cmt
12-2-60	Perf 4 1/2" CSG 5932-5940 w/2 1/4" 300 gal reg acid Opened well, Flowed back 3 bbls Sub'd 62 bbls acid wtr in 4 hrs

## DISCUSSION

Lease Alca C.B.D.U.Well No. 18

Date

- 12-3-60 Sub'd 7 1/2 hrs rec 87 bbls load & acid wtr  
Acid pfs 5932-5940 w/6,000 gal reg acid @ 5.0 bbls/min  
I.P. 2400# FP 2400# SIP after 10 min 700#  
Flowed back 2 bbls  
Sub'd 23 Bbls load & acid wtr in 1 hr
- 12-4-60 Sub'd 10 hrs, rec 96 bbls load & acid wtr. No show
- 12-5-60 Sub'd 4 bbls load & acid wtr & sub'd dry  
Squeezed perf 5932-5940 w/100 st reg neat cnt  
@ 1750#
- 12-6 PERF 4 1/2 csg 5844-5849 & 5855-5862 w/2 Weller jet/ft
- 12-7 Spotted 500 gals acid, IP 2800#, 3 bbls/min, Min P 1800#  
1000# after 10 min  
Sub'd 81 BAW, dry, no show
- 12-8 6,000 gal 15% HCl @ 4.8 bbls/min IP 2800#, FP 2200#  
10 min SIP 1000#  
Sub'd 53 bbls load & acid wtr in 3 hrs
- 12-9 Ran suab, found fluid level @ 2900, Sub'd 53 bbls acid wtr
- 12-10 Shut in, bad weather
- 12-11 Sub'd 23 bbls load & acid wtr
- 12-12 Squeezed pfs 5844-49 & 5855-62 (see report for squeeze job)
- 12-13 PERF 4 1/2 csg 5760-5765 w/2 j/ft (Schlumberger) (Top plug @ 5836)
- 12-14 Acidized pfs 5760-65 w/500 gal 15% acid @ 5 bbls/min  
IP 3500# FP 1500#, SIP after 10 min 700#, Flowed 2  
bbls & died  
Sub'd 67 bbls acid wtr, sub'd dry, no show
- 12-15 Sub'd 4 1/2 hr rec 9 BAW, sub'd dry  
Acidized pfs 5760-5765 w/4000 gal 15% @ 4.6 B/m  
IP 2600# FP 2200#. Dropped to 500# after 10 min  
Ran suab, rec 31 bbl acid wtr in 1 1/2 hrs w/small show of  
oil
- 12-16 On 12 hr soak tst, rec 77 bbls load & acid wtr, Sub'd dry
- 12-17 ✓ - - - 15 - - -
- 12-18 closed well in
- 12-19 Sub'd 20 BW, no oil or gas
- 12-20-12-23 Shut in
- 12-24 Moved in csg pullers, shot csg off @ 4950, pulled 156 jts  
4 1/2 9.50# J-55 SS csg.
- 12-25 Shut down for Xmas

(OVER)



12-26 Ran 2" tbg in hole, set cmt plug  
4900-5000' (50 sx) 1475-1575 (50 sx)  
cmt'd top 20' of hole w/10 sx cmt  
P&A 12-27-60



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

October 6, 1993

CAMBELL, CARR, BERGE  
& SHERIDAN  
Attorneys at Law  
P. O. Box 2208  
Santa Fe, New Mexico 87504

RE: CASE NO. 10813  
ORDER NO. R-9984

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

A handwritten signature in cursive script that reads "Sally Martinez".

Sally E. Martinez  
Administrative Secretary

cc: BLM Carlsbad Office  
Rick Brown - OCD  
Donna McDonald - OCD