

JAMES BRUCE

ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

3304 CAMINO LISA
SANTA FE, NEW MEXICO 87501

(505) 982-2043
(505) 982-2151 (FAX)

NOV 29 1999

CONSERVATION DIVISION

November 29, 1999

Hand Delivered

Michael E. Stogner
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Case No. 12262; Application of Burk Royalty Co.

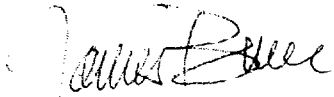
Dear Mr. Stogner:

Enclosed are the following:

1. Additional information on P&A wells in the area of review. The information includes wellbore sketches and data from the Division's files.
2. Information on recent disposal volumes and pressures in the Neal Well No. 3.
3. A copy of the hearing transcript in Case No. 4679, in which the applicant originally requested injection authorization. At page 7, the witness states that secondary recovery effects were anticipated. Copies of certain exhibits are also attached.
4. A draft order (hard copy and disk), which also references the statutes regarding expansion of an existing project.
5. A copy of Order No. R-10161, regarding a Burk Royalty Co. waterflood in the same pool, located a mile north of the proposed project. Although this case did not seek approval for the EOR credit, the project was subsequently qualified for the EOR credit by the Division (administratively, I believe).

Please call me if you need any further information.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James Bruce". The signature is written in dark ink and is positioned above the printed name.

James Bruce

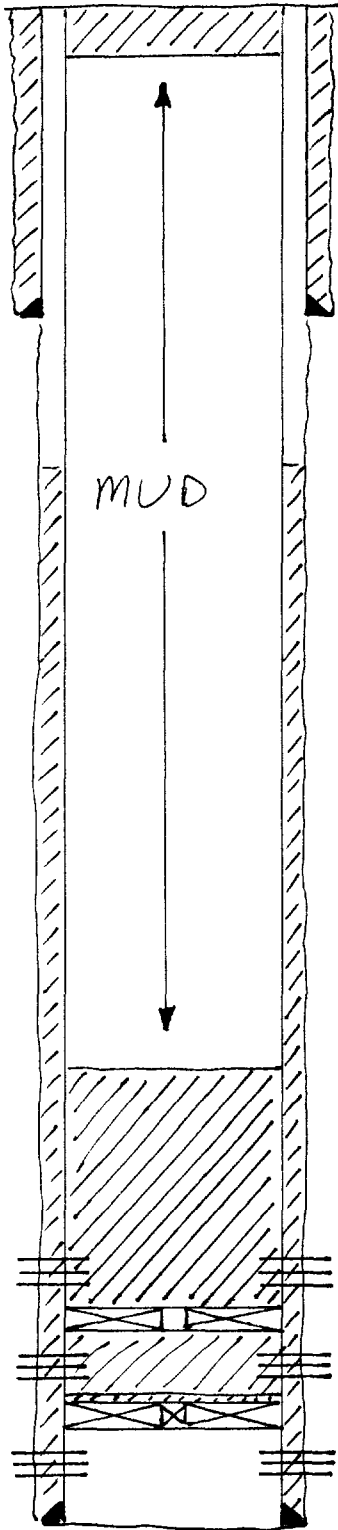
Attorney for Burk Royalty Co.

NEAL #3 - WELL DATA AREA OF REVIEW

	WELL	TOC	HOW DETERMINED
1.	Cruces #3	Surface	Cement circulated
2.	Cruces #4	Surface	Cement circulated
3.	Cruces #5	741'	Calculated-4 1/2" in 7" hole-328 sx X 1.44 cu ft/sx X 6.3773 lin ft/cu ft = 3018'; 3759'-3018' = TOC 741'
4.	Hanson Federal #1	2,651'	Calculated-5 1/2" in 7 7/8" hole-300 sx X 1.4 cu ft/sx X 5.7719 lin ft/cu ft x .5 (washout) = 1212'
5.	Federal "C" #1	2,000'	Calculated-9 5/8" in 12 1/2" hole-190 sx X 1.32 yield X 2.88 lin ft X .5 = 3600'; 5600'-3600' = 2000' TOC
6.	Milner #4	Surface	Circulated
7.	Neal #1	2,617'	Calculated-5 1/2" in 7 7/8" hole-300 sx X 1.3 yield X 5.7719 lin ft/ .5 = 1126'; 3743'-1126' = 2617' TOC
8.	Neal #2	2,776'	Calculated-4 1/2" in 7" hole-250 sx X 1.3 yield X 6.3773 lin ft/ .5 = 1036'; 3812'-1036' = 2776' TOC
9.	Neal #3	3,148'	Temperature log
10.	Neal #4	3,145'	Temperature log
11.	Neal et al #2	Surface	Circulated
12.	Lynch State #1	313'	Calculated-5 1/2" in 7 7/8" hole-950 sx X 1.3 yield X 5.7719 lin ft/ .5 = 3564'; 3877'-3564' = 313' TOC

CRUCES #5 WELLBORE DIAGRAM
TZOS, R348, SECTION 26

10-11-99
CHARLES GIBSON



CEMENT PLUG FROM 10' TO SURFACE

8 5/8" CSG CEMENTED @ 162' W/ 115 SK. CMT CIRCULATED TO THE SURFACE

TOP OF CEMENT @ 741'

HOLES LOADED W/ MUD 3210'-10'

4 1/2" CSG CEMENTED @ 3759' W/ 328 SK CMT.

SET 35 SK CEMENT PLUG 3624'-3210'

PERFORATED 3606'-22'

CEMENT RETAINER @ 3638', PUMPED 100 SK TO SQUEEZE PERFS 3646'-68'

PERFORATED 3646'-68'

CAST IRON BRIDGE PLUG @ 3700' W/ 1/2 SK CEMENT ON PLUG

PERFORATED 3712'-40'

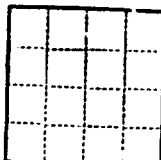
4 1/2" CSG SET @ 3759'

ILLEGIBLE

Form 9-502a
(Feb. 1961)

CRUCES 45

Budget Bureau No. 43 RAB
Approval expires 12 31 60



(SUBMIT IN TRIPLICATE)
APPROVED UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Local Office **Santa Fe**

Lease No. **10-04424-2**

Unit **Open Co. 3**

APR 19 1960

J. L. GORDON
ACTING DISTRICT ENGINEER

DEC 1 1959

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.....	

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

December 7, 19 59

Well No. **9** is located **330** ft. from **[M]** line and **998** ft. from **[E]** line of sec. **26**

SE 1/4 Sec. 26

T-20-S

R-34-E

(1/4 Sec. and Sec. No.)

(Twp.)

(Range)

(Meridian)

Lynch

Los Alamos

New Mexico

(Place)

(County or Subdivision)

(State or Territory)

The elevation of the derrick floor above sea level is **3733** ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudlogging jobs, cementing points, and all other important proposed work)

Perforated 4-1/2" casing, Intes 3713-3740' with 36 jet holes. Scrubbed dry, no show. Frased perforations with 10,000 gallons refined oil, 22,000' sand and 500 gallons 1% acid. Scrubbed dry, no show. Set cast iron bridge plug at 3700'; dumped 1/2 sack cement on plug. Perforated Middle Intes 3646-3668' with 44 holes. Scrubbed dry, no show. Set cast iron cement retainer at 3646'. Pumped in 100 sacks regular cement to squeeze off perforations 3646-3668'. Perforated Upper Intes 3606-3622' with 32 holes. Scrubbed dry, no show. Frased perforations 3606-3622' with 6000 gallons refined oil, 11,000' sand and 500 gallons 1% acid. Scrubbed dry, no show. Ran tubing to 3624'. Spotted 35 sacks cement 3624-3628'. WOG 8 hours. Checked top of cement at 3610'. Loaded hole with mud. Ran cement plug 10' to surface. Placed marker. Well plugged and abandoned.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company **Phillips Petroleum Company**

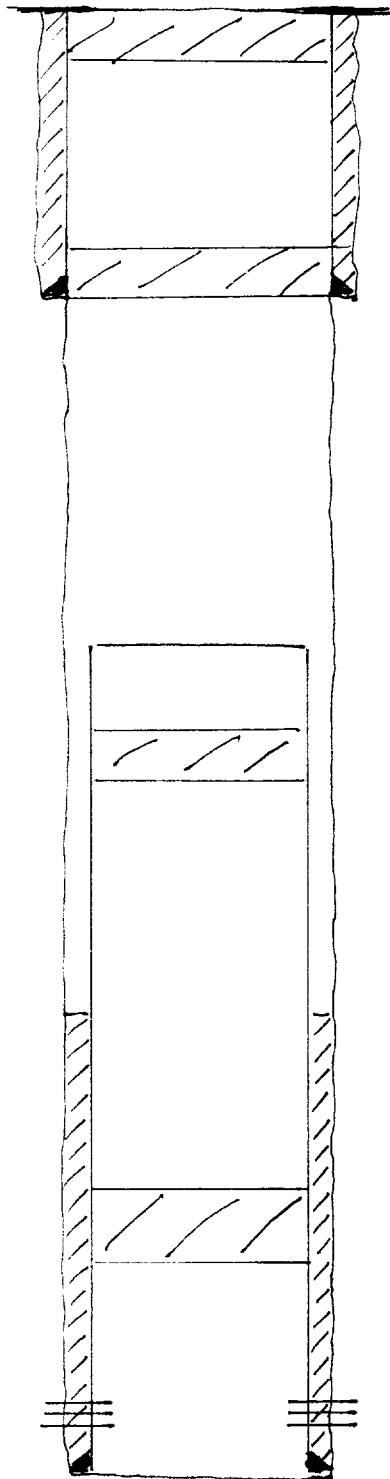
Address **Box 2165, Hobbs, New Mexico**

By **[Signature]**
Title **District Chief Clerk**

The production of the well for 24 hours was barrels of fluid of which % was oil; % emulsion; % water; and % sediment.

HANSON FEDERAL #1 WELLBORE DIAGRAM
TZDS, Z345, SECTIONS 25

10-11-99
CHARLES GIBSON



10 sacks @ surface (log attached)

10 sacks @ bottom of surface casing

8 5/8" CSG CMTD @ 195' W/ 225 SX CMT CIRCULATED TO SURFACE

5 1/2" PIPS CUT @ 1166' & 1166' RECOVERED FROM WELL

20 sacks @ 1650-1750 feet

TOP OF CEMENT @ 2651' (CALCULATED)

20 sacks @ 3450 feet (base of salt)

PERFORATIONS 3850'-3863'

5 1/2" CSG SET @ 3863' W/ 300 SX CMT

SCHLUMBERGER WELL SURVEYING CORP.



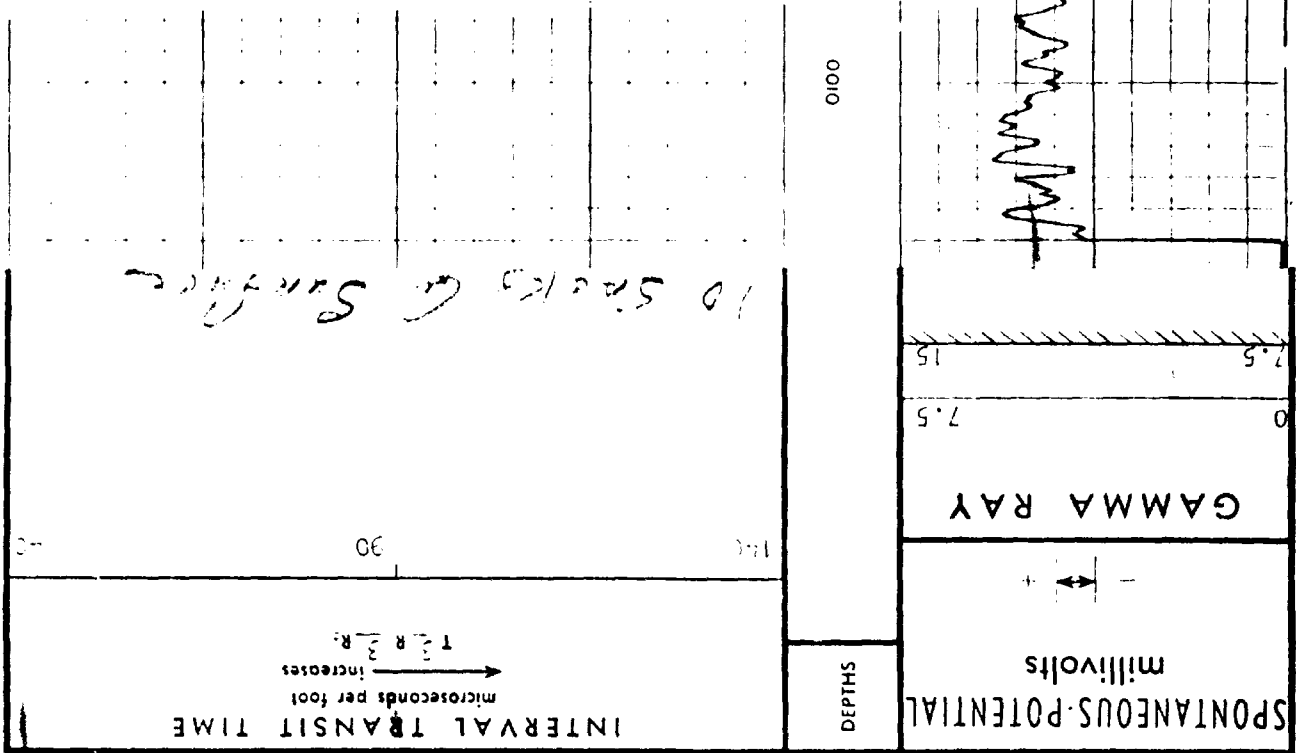
Sonic Log

COMPANY HANSON FEDERAL		COMPANY HANSON FEDERAL		Other Surveys	
WELL LYCH		LOCATION SEC. 25-20S-24E (13)		Location of Well 230' FROM S/L 310' FROM W/L	
COUNTY LEA		STATE NEW MEXICO		Elevation: K.B.: 3121 D.F.: 720 or G.L.:	

RUN No. 11-59		Date 11-59	
First Reading 230		Last Reading 230	
Feet Measured 230		Csg. Schlum. 130	
Csg. Driller 130		Depth Reached 230	
Bottom Driller 230		Mud Nat. 5-11	
Dens. 1.49		Visc. 90	
Mud Resist. 90		Res. BHT 90	
PH 90		Wtr. Loss 5	
Rmf 5		Bit Size 7/8"	
Span: To 2296 To 2800		To To	
Opr. Rig Time 14 HOURS		Truck No. 256-101ES	
Recorded By MATHIEY		Witness ALLESPIE	

ILLEGIBLE

REMARKS VLS No.: 15 VLP No.: 15 Interval Transit Time (microseconds per foot) 1,000,000 Velocity (feet per second)	
---	--



10 Sacks @ Bottom of Surface

Casing

190

0200

0300

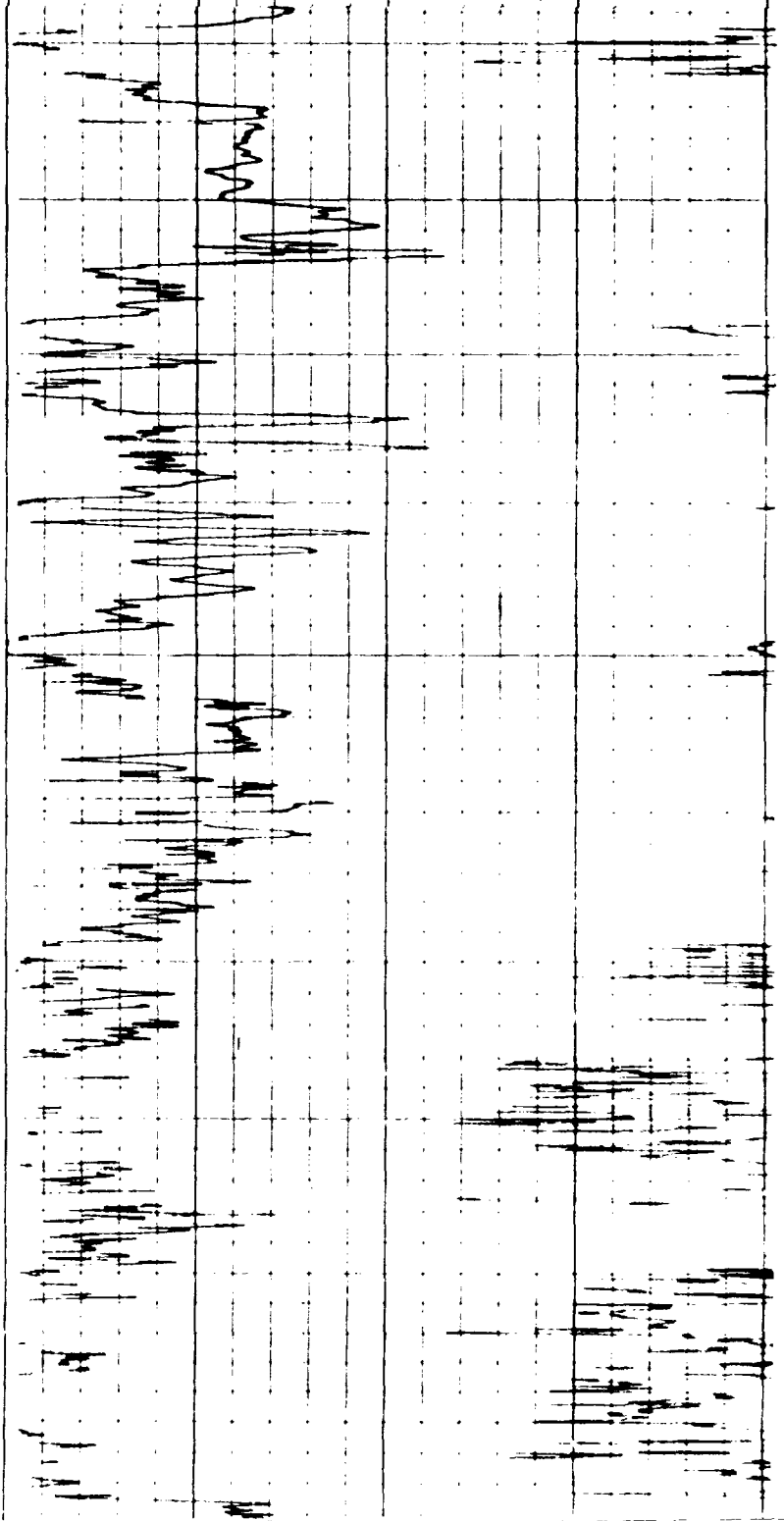
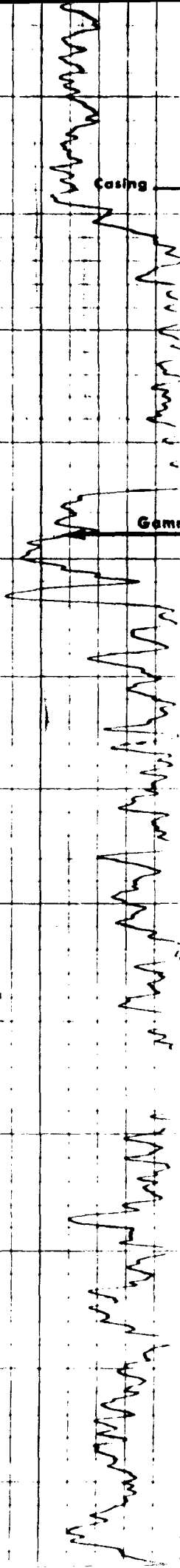
Gamma Ray

0400

0500

0600

0700



AAA

Hand-drawn gamma ray log on a grid. The log shows a fluctuating line representing gamma ray intensity. The line starts at approximately 0.15 at 0200, rises to 0.25 at 0300, drops to 0.15 at 0400, rises to 0.25 at 0500, drops to 0.15 at 0600, and rises to 0.25 at 0700. The line is labeled 'Gamma Ray' and 'Casing'.

1600

1700

1800

1900

2000

2100

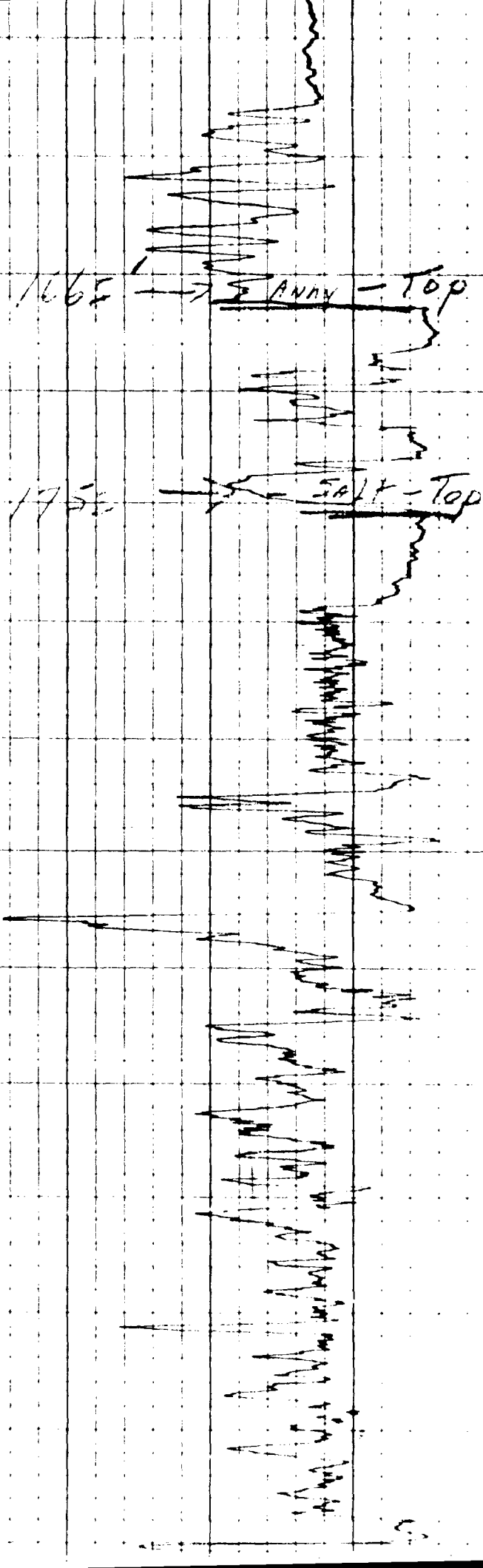
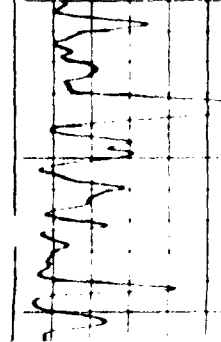
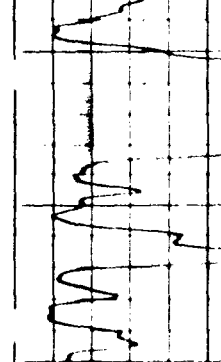
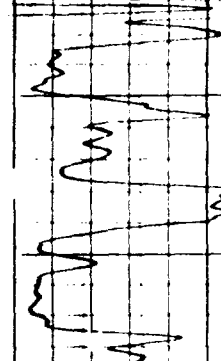
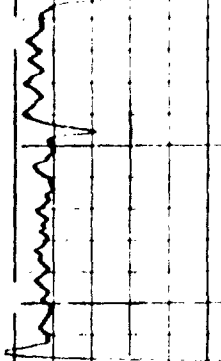
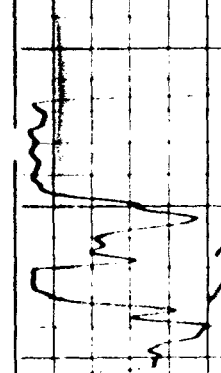
2200

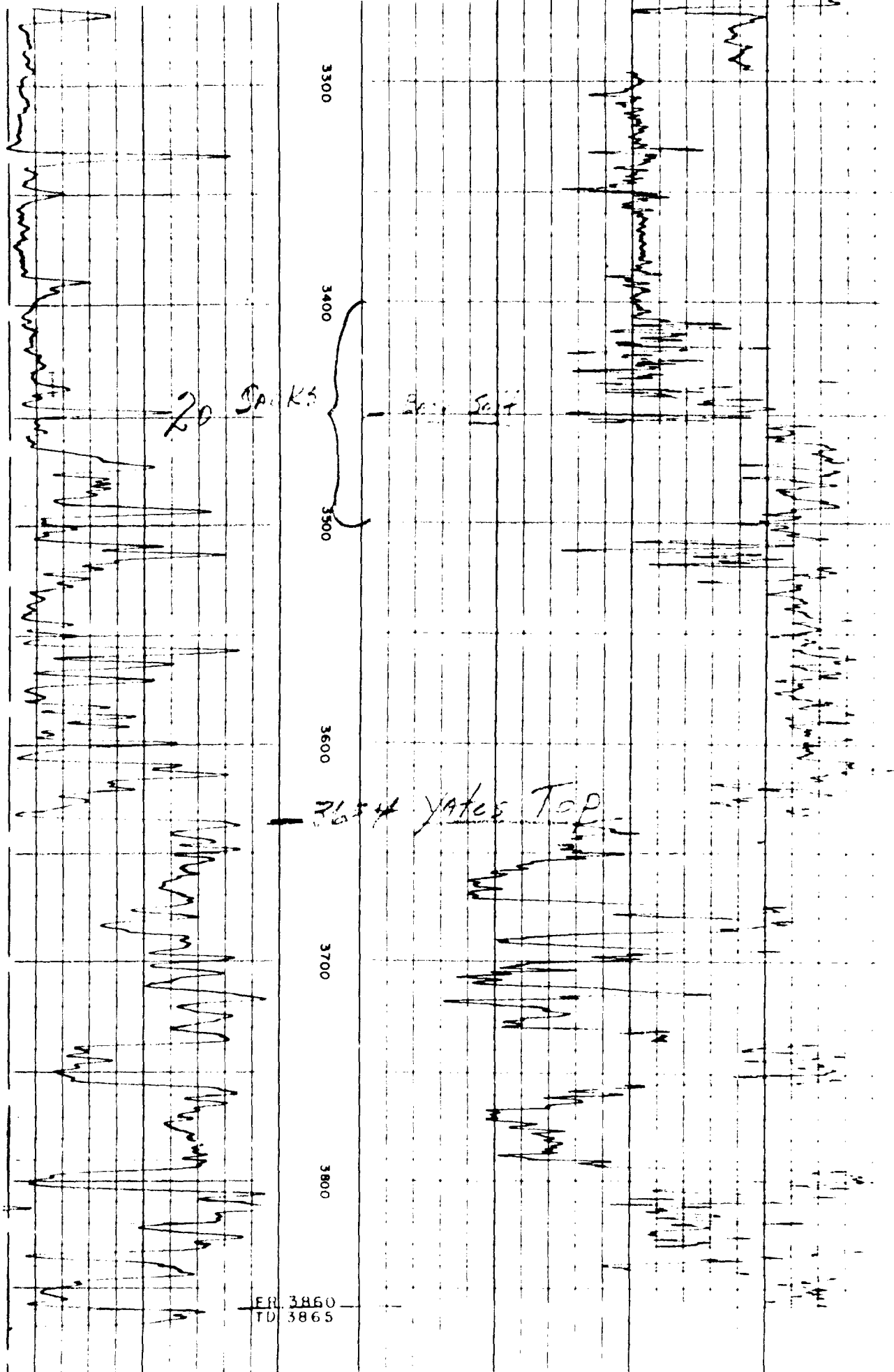
1665 - ANN - Top

1755 - SALT - Top

20 Sacks
1650-1750

Ann of Rock





DETAIL LOG

100

SPONTANEOUS POTENTIAL

DEPT

INTERVAL TRANSIT TIME

ILLEGIBLE

COPY TO OIL

Form 5-590

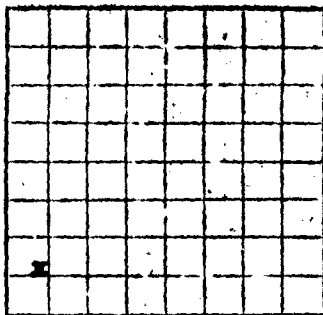
SANTA FE

Patent Bureau No. 12, 1934
Approved by law 12, 1934

U. S. LAND OFFICE

SERIAL NUMBER **AC-366126**

LEASE OR PERMIT TO PROSPECT



(3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NOV 17 1939

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company **BUNK ROYALTY COMPANY** Address **902 Oil & Gas Bldg., Wichita Falls, Tex.**
Lessor or Tract **Kansas Federal** Field **Undesignated** State **KAN**
Well No. **1** Sec. **25** T. **20** R. **14** Meridian **NPM** County **Law**
Location **330** ft. **N** of **2** Line and **330** ft. **E** of **25** Line of **Sec. 25** Elevation **3720** ft.

The information given herewith is a complete and correct record of the well and all work done thereon as far as can be determined from all available records.

Signed

Date **Nov. 11, 1939**

Title

The summary on this page is for the condition of the well at above date.

Commenced drilling **6/23/39**, 19... Finished drilling **7/13/39** **PM 10/10/39** 19...

OIL OR GAS SANDS OR ZONES

(Describe per by O)

No. 1, from **0** to... No. 4, from... to...
No. 2, from... to... No. 5, from... to...
No. 3, from... to... No. 6, from... to...

IMPORTANT WATER SANDS

No. 1, from... to... No. 3, from... to...
No. 2, from... to... No. 4, from... to...

CASING RECORD

Size casing	Weight per foot	Threads per foot	Make	Amount	Kind of shoe	Cut and pulled from	Perforated	Purpose
2-5/8"	22 1/2	8	-	195'				Surface
5-1/2"	1 1/2	12	-	207'	Recovery	2146'	5-1/2"	

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
2-5/8"	195'	125	400	Chem	
5-1/2"	207'	75 or Pounds 45 gal 75 or cement, 90 or later			

PLUGS AND ADAPTERS

Heaving plug—Material... Length... Depth set...
Adapters—Material... Size...

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleared out

TOOLS USED

Rotary tools were used from **0** feet to **2044** feet, **Allen, Drilling Co., Compton** to... feet
Cable tools were used from... feet to... feet, and from... feet to... feet

DATES

Dry and Abandoned, 19... Put to producing... 19...

The production for the first 24 hours was **0** barrels of fluid of which...

APPROVED

COPY TO SANTA FE

JUN 19 1959

A. P. KLEMAN
DISTRICT ENGINEER

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 46-5282-4
App. serial expires 12-31-60.

Lead Office
Lance No. **LC 064286**
Unit

SUNDRY NOTICES AND REPORTS ON WELLS

JUN 19 1959

U.S. GEOLOGICAL SURVEY
DOUGLAS, NEW MEXICO

NOTICE OF INTENTION TO DRILL.....	<input checked="" type="checkbox"/> 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.....	

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

JUN 18, 1959

Well No. **2** is located **300** ft. from **(N)** line and **300** ft. from **(E)** line of sec. **26**

Sec. 26, T. 1 N., R. 1 E., S. 10 N.
(Twp.) (Range) (Meridian)

Indian Wells (Creek)
(Name) (County or subdivision) (State or Territory)

The elevation of the derrick floor above sea level is _____ ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show logs, weights, and lengths of proposed casings; indicate mudlogging jobs, cementing points, and all other important proposed work)

Intend to drill with rotary tools (Alan Drilling Co.) to a depth of approximately 3000', to test zone

Will set 8-1/2" 24' csg at 1775', w/100' on circulated

Will use 875' on cement on 14' 5-1/2" or return cement past the base of salt by temperature survey.

Designation of operator(s) and 1 copy of bond attached
C-125 attached

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company **BORE ACME COMPANY**

Address **800 Oil & Gas Bldg.**

Midland Falls, Texas

By *John Smith*
Title **Agent**

ILLEGIBLE

LEA COUNTY

NEW MEXICO

UNDESIGNATED FLD

Well: BURK ROYALTY CO. #1-A Hanson-Federal

Result: DCA

Loc'n: Sec 25-20S-34E, 330' FSGWLs Sec.

Spud: 8-23-59; Comp: 10-28-59; Elev: 3725' DF; TD: 3863'; PBTD: 3697'

Casing: 8 5/8" 190'/225 ex, 5 1/2" 3863'/300 ex

Comp Info: Crd 3740-90', rec 50' w/sll show oil; Perf 3764-73', 3717-30', 3702-12' &
3654-72', A/250 gals, Frac w/31,000 gals.

Top: (EL) Yates 3632'.

The American
OIL REPORTS

Date: 11-11-59

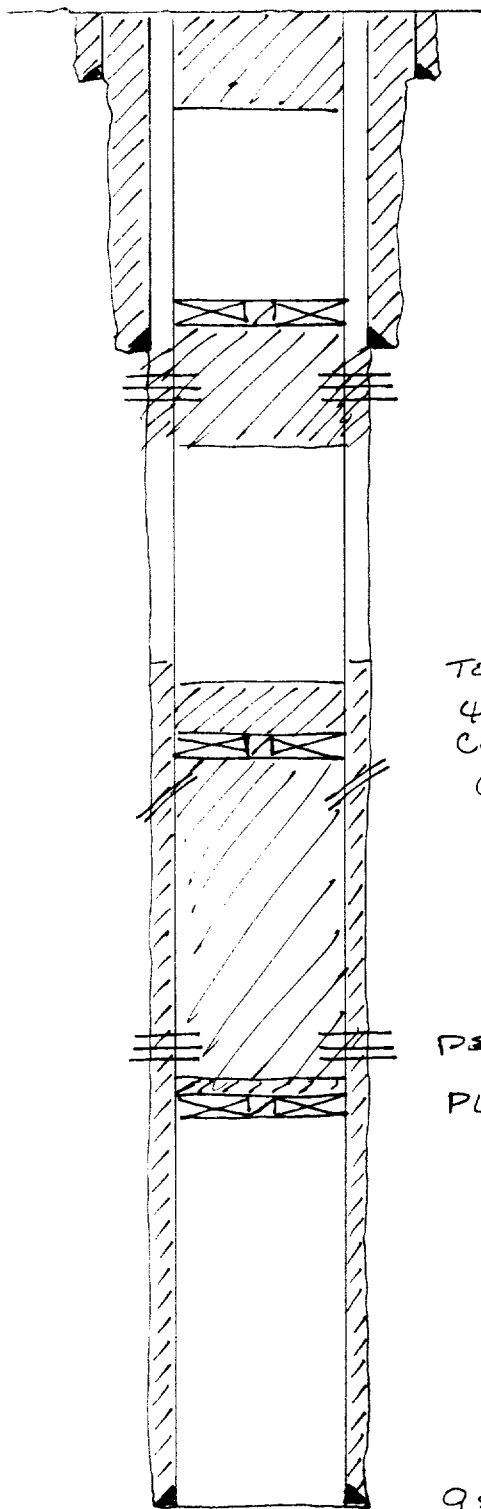
Card No.: 5 NM Jar'

FEDERAL C #1 WILBURS DIAGRAM

TZOS, R345, SECTION 35

10-11-99

CHARLES GIBSON



20" SET C 30' W/ 20 YDS CMT CIRCULATED TO SURFACE
90' OF CEMENT (42SK) FROM SURFACE TO 90'

CEMENT RETAINED C 800'; 12FSK CMT SQUEEZED THRU
13 7/8" SET C 866' W/ 800SK CMT CIRCULATED TO SURFACE
9 5/8" PERFORATED C 900'

TOP OF CEMENT C 2000' (CALCULATED)
44SK CMT ON TOP OF RETAINED
CEMENT RETAINED C 2350' W/ 325 SK CMT SQUEEZED THRU.
CASING PARTED C 2402'

PERFORATIONS 3577-3708

PLUG BACK DEPTH 3750

9 5/8" SET C 5600' W/ 1900SK

[illegible]

SUNDRY NOTICES AND REPORTS ON WELLS RECEIVE

(Do not use this form for proposals to drill or to plough or plug back or to different formations
Use "APPLICATION FOR PERMITS" for such proposals.)

ON <input checked="" type="checkbox"/> WFL <input checked="" type="checkbox"/> OAS <input type="checkbox"/> WBL <input type="checkbox"/> OTHER		AUG 10 2 43 PM '89	
1. NAME OF OFFICER Arlen L. Edgar		2. NAME OF LEASE FARM Federal C	
3. ADDRESS OF OFFICER 208 HBF Bldg. Midland, Texas 79701		4. WHERE DO 1	
5. LOCATION OF WELL (Specify location clearly and in accordance with any State requirements. See also map on 17 below) NE/4 NW/4 Section 35 T-20-S R-34-E Lea County, New Mexico		6. FROM ANY POOL OR WELLS AT Lynch (Yates-7 Rivers)	
7. PURPOSE NO.		8. REMARKS (SEE REVERSE OF 17, 18, 19) SANTA FE	
9. COUNTY OR PARISH Lea		10. STATE N. Mexico	

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

REPORT OF INSPECTION OF:		SUGGESTED ACTION OF:	
TEST WATER SECT-OFF	<input type="checkbox"/>	WELL OR ALTER CASING	<input type="checkbox"/>
FRACTURE TEST	<input type="checkbox"/>	MULTIPLE COMPLETES	<input type="checkbox"/>
SHEED OR ACTORS	<input type="checkbox"/>	ABANDON*	<input checked="" type="checkbox"/>
REFURB WELL	<input type="checkbox"/>	CHANGE PLANE	<input type="checkbox"/>
(Other)			

REPORT OF INSPECTION OF:		SUGGESTED ACTION OF:	
WATER SECT-OFF	<input type="checkbox"/>	WATER SECT-OFF	<input type="checkbox"/>
FRACTURE TEST	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
SHEED OR ACTORS	<input type="checkbox"/>	ABANDON*	<input type="checkbox"/>
REFURB WELL	<input type="checkbox"/>		
(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 data, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and given pertinent to this work.)

The Federal C was drilled by Penzoid United in 1970. It was plugged and abandoned. It was re-entered by Arlen Edgar in 1974 with a plug back depth of 3750. The casing left in the well was 20" @ 30' 13 3/8 @ 866' cmt w/ 900 aks., 9 5/8" @ 5600 cmt. top @ 1950. Perforations are from 3577 to 3708. The well was acidized, fraced and completed pumping for 11 BOPD and 6 BWID in August 1974. In November 1974 it was discovered that the casing had parted at 2402.

Approval is requested to plug and abandon the well as follows.

1. Run in hole with 8" impression block.
2. If image on block indicates we can get into parted casing, pick up bent joint of tubing and attempt to enter parted casing and run tubing to 3577. If successful pump 35 sacks of class C cement. If unsuccessful in attempt to enter parted casing, set 9 5/8" retainer on tubing at 2350' and pump 15 sacks of class C cmt. below retainer. Dump 10' of cmt. on retainer.
3. Perforate 9 5/8" casing at 900'. Set retainer at 800'. Pump 100 sks. of class C. Dump 10' of cmt. on retainer.
4. Set 10' of cmt. in top of 9 5/8" casing with marker.

changes as per B.M. Manus / S.J. Shaw / &
Bernard Lankford. (SJS) 8/10/89

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

SIGNED RR [Signature] TITLE AGENT DATE 7-2-89

(This space for Federal or State office use)

APPROVED BY [Signature] EPR: _____ DATE 8-15-89

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.

Form 1160-8
November 1983
(formerly 9-331)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

NM 02127-A

6. 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

Arlen L. Edgar

3. ADDRESS OF OPERATOR

414 W. Texas, Suite 208, Midland, TX 79701

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

NE/4 NW/4 Section 35 660/N + 1980/W
T-20S, R-34E

Lea County, New Mexico

14. PERMIT NO.

15. ELEVATIONS (Show whether OF, BY, OR, etc.)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal C

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Lynch (Yates-Seven River)

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

Sec. 35, T-20S, R-34E

12. COUNTY OR PARISH 13. STATE

Lea

NM

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

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

17. DENSURE PROPOSED OR COMPLETED OPERATIONS? (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting and 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.)

1. Run 9 5/8" Cement retainer to 2350'. Squeeze 325 sks. of cement with 44 sks. on top.
2. Perforate @ 900'. Set 9 5/8" cement retainer @ 800' & squeeze 125 sks. of cement
3. Spotted 42 sks. of cement @ 90' to surface.
4. Install P & A marker.

RECEIVED

AUG 31 1989

OIL CONSERVATION DIV.
SANTA FE

RECEIVED

I hereby certify that the foregoing is true and correct

SIGNED Raymond Maldonado

P & A Supervisor

TITLE Baber Well Servicing co.

DATE 8-18-89

(This space for Federal or State office use)

(ORIG. SGD) DAVID R. GLASS

TITLE

DATE

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

Approved for the well core,

Liberty for the well core,

surface region is completed,

ED1940 10-89

*See Instructions on Reverse Side

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in
structure on
reverse side)Form approved
Budget Bureau No. 42 1335.6

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> Other _____		2. NAME OF OPERATOR Pennzoil United, Inc.		3. ADDRESS OF OPERATOR P. O. Drawer 1828 - Midland, Texas 79701		4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 660 FNL & 1980 FWL of Sec. 35, T-20-S, R-34-E At top prod. interval reported below Same At total depth Same		5. FIELD AND POOL, OR WILDCAT Wildcat		6. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA Sec. 35, T-20-S, R-34-E		7. COUNTY OR PARISH Lea		8. STATE N. M.									
10. DATE ABANDONED 8-16-70		11. DATE T.D. REACHED 11-25-70		12. DATE COMPL. (Ready to prod.) 11-27-70		13. ELEVATIONS (DV, BND, RT, GR, ETC.)* 3734.7 GL		14. PERMIT NO. 8-14-70		15. DATE ISSUED 8-14-70		16. TYPE OF COMPLETION: NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. REVEAL <input type="checkbox"/> Other _____		17. INTERESTS 10-15,080'									
18. TOTAL DEPTH, MD & TVD 15,080'		19. PLUG BACK T.D., MD & TVD P&A		20. IF MULTIPLE COMPL., HOW MANY? P&A		21. INTERVALS DRILLED BY 10-15,080'		22. ROTARY TOOLS Same		23. CABLE TOOLS Same		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, RANGE (MD AND TVD)* None		25. WAS DIRECTIONAL SURVEY MADE No									
26. TYPE ELECTRIC AND OTHER LOGS RUN GR-S, DIL		27. WAS WELL CURED No		28. CARING RECORD (Report all strings set in well)		29. LINER RECORD		30. TUBING RECORD		31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.		33. PRODUCTION									
CARING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT FILLED		SIZE		DEPTH SET (MD)		PACKER SET (MD)							
20"		94#		30		26		5 yds. ready mix		0		None		None		None							
13 3/8"		48#		866		17 1/2"		800 sx		0		None		None		None							
9 5/8"		36# & 40#		5600		12 1/2"		1900 sx		0		None		None		None							
DATE FIRST PRODUCTION None		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) None		WATER REACTIONS (Producing or salt in) None		DATE OF TEST None		HOURS TESTED None		CHOKER SIZE None		PROD. FOR TEST PERIOD None		OIL—BBL. None		GAS—SCF. None		WATER—BBL. None		GAS—SCF. None		OIL GRAVITY API (COUNT) None	
FLOW, TUBING PRESS. None		CARING PRESSURE None		CALCULATED 24-HOUR RATE None		OIL—BBL. None		GAS—SCF. None		WATER—BBL. None		OIL GRAVITY API (COUNT) None		DATE TESTED None		LIST OF ATTACHMENTS Deviation Survey		SIGNATURE J. H. [Signature]		TITLE Drilling Superintendent		DATE 12-1-70	

* (See Instructions and Spaces for Additional Data on Reverse Side)

Form 10-211C
(May 1964)

SUBMIT IN TRIPlicate
(Other instructions on
reverse side)

Form approved
Budget Bureau No. 42 B1423

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

2. TYPE OF WELL
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐

3. NAME OF OPERATOR
Pennzoil United, Inc.

4. ADDRESS OF OPERATOR
P. O. Drawer 1828 - Midland, Texas 79701

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 660 FNL & 1980 FWL of Sec. 35, T-20-S, R-34-E
At proposed prod. zone Same

6. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE
19 miles south of Buckeye

7. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 660

8. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1st well

9. ELEVATIONS (Show whether DP, RT, OR, etc.) 3734.7 GL

10. NO. OF ACRES IN LEASE

11. NO. OF ACRES ASSIGNED TO THIS WELL 40

12. ROTARY OR CABLE TOOL

13. APPROX. DATE WORK WILL START
On approval

14. APPROVAL DATE WORK WILL START

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	850	750 sx - Circulate
12 1/4"	9 5/8"	36# & 40#	5000	1,000 sx - Est. top 3,000'
8 3/4"	7	26# & 29#	14500	700 sx
6 1/8"	4 1/2" liner	13.5	16000	400 sx

BOP will be rigged up on all strings below the surface. All BOP & choke manifolds will be 5,000# W.P.

AMENDMENT

8-5/8" casing to be cemented from casing seat to top of salt section, estimated top 1000 feet.

NOTED AND COMMENTED TO
WILL BE CEMENTED TO 1000' CASING.

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. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blow out prevention program, if any.

SIGNED [Signature] TITLE Drilling Superintendent DATE 8-17-70
(This space for Federal or State office use)

PERMIT NO.

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

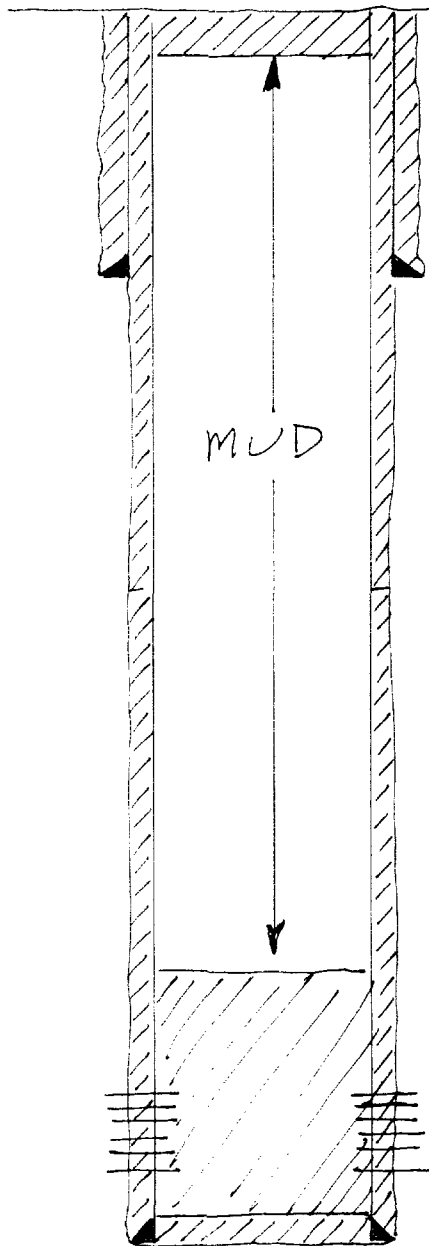
AS AMENDED

DATE

N5M 35 AL #2 WELL BORE DIAGRAM
T205, R345, SECTION 35

10-11-99

CHIEF 6165A



10' PLUG SURFACE

8 5/8" SET C/83' W/100SK CMT CIRCULATED TO SURFACE

CEMENT PLUG (35 SK) FROM 3304-3707

PERFS 3672' TO 3762'

PLUG TO 3812'
4 1/2" SET C/3824' W/385SK CMT CIRCULATED TO SURFACE

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

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

Name of Company Phillips Petroleum Company		Address Box 2105, Hobbs, New Mexico				
Lease Neal	Well No. 2	Unit Letter I	Section 35	Township 20S	Range 34E	
Date Work Performed 11-5/6-1959	Pool Lynch	County Lea				
THIS IS A REPORT OF: (Check appropriate block)						
<input type="checkbox"/> Beginning Drilling Operations <input checked="" 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.						
Cemented 4-1/2" (11.6#) casing at 3624' with 285 sacks regular mixed with 40% DD (1140 cu. ft.) followed by 100 sacks regular. Plug to 3812'. Cement circulated. WOC 19 hours, Tested casing with 1500# for 30 minutes, no pressure loss.						
Witnessed by D. M. Barton		Position Lease Foreman		Company Phillips Petroleum Company		
FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY						
ORIGINAL WELL DATA						
D F Elev.	TD	PBTD	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 John W. Remyan				Name J. W. Remyan		
Title Geologist				Position District Chief Clerk		
Date NOV 18 1959				Company Phillips Petroleum Company		

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

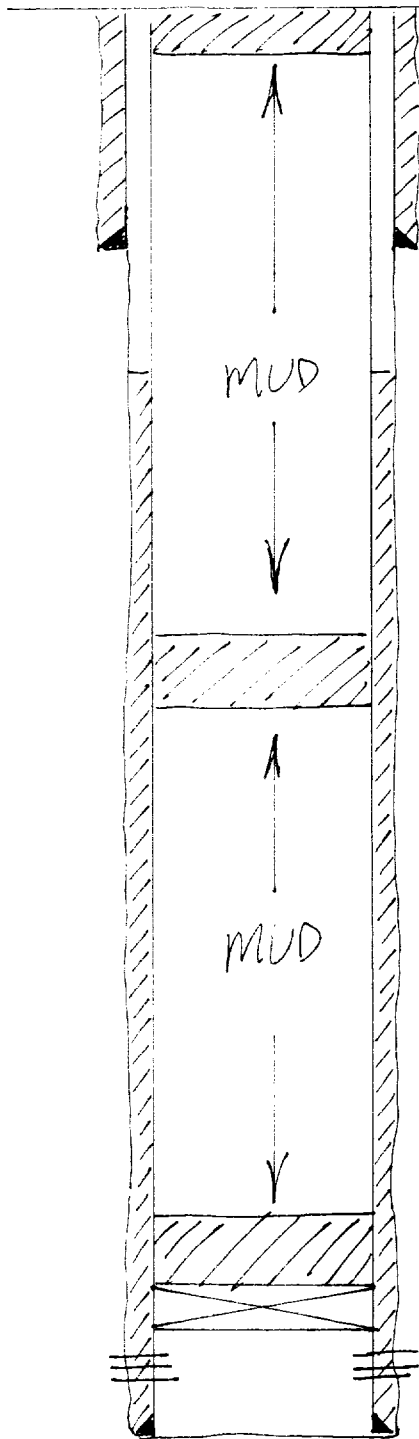
MISCELLANEOUS REPORTS ON WELLS

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

Name of Company Phillips Petroleum Company		Address Box 2105, Hobbs, New Mexico				
Lease Neal	Well No. 2	Unit Letter I	Section 35	Township 20S	Range 34E	
Date Work Performed 11-30, 12-1-2, 1959	Pool Lynch	County Lea				
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 checked="" type="checkbox"/> Plugging						
<input type="checkbox"/> Remedial Work						
Detailed account of work done, nature and quantity of materials used, and results obtained.						
Displaced hole with mud. Pumped in 35 sacks regular cement 3707-3304'. WOC 18 hours. Checked top of cement at 3304'. Pulled tubing. Set cement plug 10' to surface. Placed marker.						
Well plugged and abandoned.						
(Per verbal approval Engbrecht/Morgan 11-30-59)						
Witnessed by D. S. Barton		Position Lease Foreman		Company Phillips Petroleum Company		
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 Leslie A. Clements				Name W. E. Barton		
Title Oil & Gas Inspector				Position District Chief Clerk		
Date JUN 6 1960				Company Phillips Petroleum Company		

LYNCH STATE #1 WELLSBORE DIAGRAM
T30S, R34E, SEC. 36

10-11-99
CHARLES GIBSON



10 SK CMT 15' TO SURFACE

8 5/8 SST @ 525' W/ 350 SK CMT CIRCULATED TO SURFACE

TOP OF CEMENT @ 313' (CALCULATED)

25 SK CMT @ 1550'

20 SK CMT 3513'-3633'

CAST IRON BRIDGE PLUG @ 3633'

PERFS 3683-3769

5 1/2" SST @ 3871' W/ 950 SK CMT

NO. OF COPIES RECEIVED
DISTRIBUTION

SANTA FE

FILE

CARD OF FILE

COLLECTION

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5 - NMOCD - Hobbs ✓
1 - Admin Unit - Midland
1 - File
1 - Engr Tech - BR

1 - Foreman - CFM
1 - WIG
1 - Laura Richardson - Midland
1 - Engr. - DW

X
L - 6726

NAME OF WELL

TYPE OF COMPLETION
NEW WELL ☒ WORK OVER ☐
DEEPEN ☐ PLUG BACK ☐ REPAIR ☐

Getty Oil Company
P.O. Box 730 Hobbs, NM 88240

Lynch 36 State

Undesignated

UNIT: E LOCATED: 1980 NORTH 660
West 36 TWP. 20-S. R. 34E

10/13/81 10/23/81 plugged & abandoned 3746.6' GL
3878'
3603' - 3866' Yates

Lea

Dresser: Comp. Neu. Form. Density; DLL-MIL; GP; PFC;
and Cement Bond Log

CASING SIZE	WEIGHT LB. FT.	DEPTH SET	WELL SIZE	NO. SXS.
8 5/8"	24#	525	12 1/4"	350 SXS.
5 1/2"	17#	3877	7 7/8"	950 SXS.

70 SXS. CIRC.

SIZE	TOP	BOTTOM

11. Casing holes (date, size and number)
3838 - 3866' = 23 (.32") holes (CIBP @ 3828')
3800 - 3813' = 14 (.44") holes
3683 - 3669' = 37 (.44") holes (CIBP @ 3633')

3838 - 3866 1000 gals. 15# NE - 40 balls
3800 - 3813 1000 gals. 15# NE - 25 balls
3683 - 3769 2500 gals. 15# NE - 70 balls
3683 - 3813 3000 gals. 20-40 sand - 20 balls*

DATE	TIME	SWAB
11/23/81	4	
Flow Rate (gpm)	0	0

*Pulled tbq. & pkr. ran 5 1/2" CIBP; set @ 3633'. Displaced
hole w/mud; 20 sxs cmt. 3633-3513' 25 sxs. Class "C" cmt. 1050'; 10 sxs cmt.
15' - 0'

SIGNED Dale R. Crockett TITLE Area Superintendent

ILLEGIBLE

STRA #3 DISPOSAL VOLUMES & PRESSURES

MONTH/YR	VOLUME	PRESS
Mar-94	98	600
Apr-94	186	600
May-94	229	600
Jun-94		
Jul-94		
Aug-94		
Sep-94	2987	600
Oct-94	2987	600
Nov-94	5587	600
Dec-94	4165	600
Jan-95	2783	600
Feb-95	4692	600
Mar-95	3720	600
Apr-95	4056	600
May-95	4760	600
Jun-95	4500	600
Jul-95	5115	600
Aug-95	5270	600
Sep-95	4109	600
Oct-95	5633	600
Nov-95	4095	600
Dec-95	4925	600
Jan-96	4706	600
Feb-96	3582	600
Mar-96	3561	600
Apr-96	2863	1200
May-96	4888	1200
Jun-96	6257	1200
Jul-96	5984	1200
Aug-96	5512	1200
Sep-96	6279	1200
Oct-96	5220	1200
Nov-96	7380	1200
Dec-96	2965	1200
Jan-97	1895	1200
Feb-97	3350	1350
Mar-97	7610	1350
Apr-97	5600	1350
May-97	8243	1350
Jun-97	5145	1250
Jul-97	5825	1500
Aug-97	5850	1500
Sep-97	5500	1550
Oct-97	6000	1550
Nov-97	7770	1550
Dec-97	5380	1550
Jan-98	4100	1550
Feb-98	4600	1550
Mar-98	3785	1250
Apr-98	4355	1250
May-98	5930	1250
Jun-98	4250	1350
Jul-98	3035	1275

Site #3 Disposal Volumes & Pressures

MONTH/YR	VOLUME	PRESS
Aug-98	3405	1325
Sep-98	224	1325
Oct-98	2876	1400
Nov-98	4000	1400
Dec-98	3150	1400
Jan-99	5050	1400
Feb-99	2800	1200
Mar-99	3800	1200
Apr-99	4700	270
May-99	2900	950
Jun-99	3400	950
Jul-99	2950	1400
Aug-99	4750	1400
Sep-99		
Oct-99		



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 15, 1972

EXAMINER HEARING

IN THE MATTER OF:)

Application of Burk Royalty)

Company for salt water disposal,)

Lea County, New Mexico)

No. 4679

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

dearnley-meier reporting agency

1 MR. NUTTER: Case 4679.

2 MR. HATCH: Application of Burk Royalty
3 Company for salt water disposal, Lea County, New
4 Mexico.

5 MR. KELLAHIN: If the Examiner please,
6 Jason Kellahin of Kellahin and Fox, appearing for
7 the applicant. We have one witness.

8 (Whereupon the witness was sworn.)

9 (Whereupon, Exhibits 1 through 5
10 were marked for identification.)

11 TOM DARLING

12 A Witness, having been first duly sworn on oath, was
13 examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. KELLAHIN:

16 Q State your name?

17 A Tom Darling.

18 Q By whom are you employed and in what position?

19 A Burk Royalty Company, Vice President in charge
20 of Engineering.

21 Q Where are you located?

22 A Wichita Falls, Texas.

23 Q Have you ever testified before the Oil Commission
24 or this Examiner?
25

dearnley-meier reporting

1 A No, sir.

2 Q For the benefit of the Examiner, would you briefly
3 outline your education and experience that you have had?

4 A Graduate Petroleum Engineer, University of Oklahoma,
5 1949; Chief Engineer, Reno Oil Company, three years;
6 Engineer, Vice President in charge of Engineering, Burk
7 Royalty Company, 20 years.

8 Q In connection with your work for Burk Royalty
9 Company, have you done engineering work in Southeastern,
10 New Mexico?

11 A I have.

12 MR. KELLAHIN: Are the witness's
13 qualifications acceptable?

14 MR. NUTTER: Yes, they are.

15 Q Mr. Darling, briefly what is proposed by the
16 applicant in Case No. 4679?

17 A We are requesting permission to inject water
18 back into the lower Yates Formation. This water is being
19 produced from the Yates Formation.

20 Q So you are injecting Yates water back into the
21 same formation from which it was produced?

22 A That is correct, yes, sir.

23 Q Are you presently operating then under a temporary
24 authorization from the Oil Conservation Commission?
25

dearnley-meier reporting

1 A We are presently operating under a temporary
2 authority from the Commission.

3 Q Now, referring to what has been marked as Exhibit
4 NO. 1, would you identify that exhibit?

5 A Exhibit No. 1 is a plat showing the wells and
6 their locations on our leases. The No. 3 well which is
7 located in the northwest of the northeast of the northeast
8 of Section 35, Township 20 South, Range 34 East is the
9 proposed water injection well.

10 Q Now, are the other wells the source of the water
11 which you will be injecting into that well?

12 A Yes, the water is coming out of the No. 1 well.

13 Q On the same lease?

14 A On the same lease, yes, on the Neal lease.

15 Q Now, referring to what has been marked as
16 Exhibit No. 2, would you identify that exhibit?

17 A This is an exhibit which shows all of the wells
18 within a two-mile area, showing the various zones in which
19 these wells are completed.

20 Q Now, there are other Yates producing wells in
21 the vicinity of this well, is that correct?

22 A There is.

23 Q Has there been other salt water disposal wells
24 approved in this area similarly to the one for which you are
25

dearnley-meier reporting

1 applying?

2 A Yes, there was a well approved on the Phillips
3 Lease, I think they call that their Cruces Lease, Well
4 No. 5, which is located in the southwest of the southeast
5 of the southeast of Section 26.

6 Q Now, have they been injecting water into that
7 well for some time, or do you know?

8 A No, I do not know, but I do not think they are
9 injecting water into it. But Phillips did send a Waiver on
10 our temporary authority to inject water.

11 Q There are a number of Yates producers immediately
12 offsetting your well?

13 A Yes.

14 Q In your opinion, with the injection of water into
15 the Yates Formation cause any damage to these producing
16 wells?

17 A No, sir.

18 Q Referring to what has been marked as Applicant's
19 Exhibit No. 3, would you identify that exhibit?

20 A This is a sonic log run by Schlumberger, which
21 shows the zone into which we propose to inject water,
22 which is the lower Yates Sand.

23 Q What is the footage interval or the injection
24 interval?

25

dearnley-meier reporting

1 A It's perforated from 3703 to 3717.

2 Q Now, referring to the Applicant's Exhibit No. 4,
3 would you discuss the manner in which you have completed
4 or propose to complete this well?

5 A We propose to run a plastic coated packer which
6 we set at 3630 feet, with plastic coated two-inch tubing.
7 The top of the cement on the 5 1/2 casing is at 2944 and
8 this is taken from a temperature survey run on the well.
9 We propose to leave the annulus open to assure ourselves
10 that the water is going below the packer seat. Also, we
11 propose that from 90 to 120 days to run a tracer survey
12 which we will be happy to furnish to the Commission,
13 to be sure that the water is going where we want it to go.

14 Q Now, you don't propose to fill that casing tubing
15 annulus?

16 A No.

17 Q In your opinion, will leaving the casing tubing
18 annulus open give you a certain indication that there
19 is no leakage?

20 A Yes, it will; if it flows out of the valves, we
21 will know that it's leaking.

22 Q Referring to what has been marked as Exhibit No. 5,
23 would you identify that, please?

24 A This is a water analysis on the Neal No. 1 Well,
25

1 which is producing the water we propose to inject into
2 this well.

3 Q It's going into the same formation from which it
4 is produced, so there would be no problem of compatibility?

5 A No.

6 Q Will you use a closed system?

7 A Yes, we are using a closed system.

8 Q What volume of water will you be injecting into
9 this well?

10 A We have approximately 120 barrels a day.

11 Q Do you anticipate that that may be more or less
12 as the well continues to produce?

13 A I think it will remain approximately the same.
14 Of course, we are reinjecting 125 barrels a day which would
15 probably increase it to 250, as a maximum.

16 Q You are saying that if this has any effect on
17 the reservoir, it will be a secondary recovery operation?

18 A Right, that's absolutely correct.

19 Q Were Exhibits 1 through 4 prepared by you or under
20 your supervision?

21 A That's true.

22 Q And Exhibit 5 is a copy of the water analysis
23 made for your company?

24 A Right.
25

dearnley-meier reporting

1 MR. KELLAHIN: I would like to offer
2 into evidence Exhibits 1 through 5, inclusive.

3 MR. NUTTER: Exhibits 1 through 5 will
4 be admitted in evidence.

5 (Whereupon, Exhibits 1 through 5 were
6 offered and admitted into evidence.)

7 MR. KELLAHIN: That's all I have.

8 CROSS EXAMINATION

9 BY MR. NUTTER:

10 Q Mr. Darling, as I understand it, the 8 5/8ths
11 inch surface pipe was set at 190 feet and circulated to the
12 surface. Is that right?

13 A That's correct.

14 Q 5 1/2 is at 3804?

15 A Correct.

16 Q It was cemented with 200 sacks and the top of the
17 cement is 2944?

18 A That's correct, and that's from a temperature
19 survey.

20 Q Now, there was a condition to Phillips' Waiver, as
21 I recall, that the waters would be disposed of into the
22 equivalent zones that their well had been approved for?

23 A Yes.

24 Q Is this the equivalent zone as indicated on
25

dearnley-meier reporting services

dearnley-meier reporting

1 Exhibit No. 3 of the log?

2 A Yes, sir.

3 Q Thank you. And that tubing string you mentioned
4 would be plastic coated?

5 A It is plastic coated, yes, sir.

6 MR. NUTTER: Are there further questions
7 of Mr. Darling? You may be excused.

8 (Whereupon, the witness was excused.)

9 MR. NUTTER: Do you have anything
10 further, Mr. Kellahin?

11 MR. KELLAHIN: No, I haven't.

12 MR. NUTTER: All right, if no one has
13 anything they wish to offer in Case No. 4679, we
14 will take the case under advisement.
15
16
17
18
19
20
21
22
23
24
25

B. A. Kimbrell, President
Jon H. Bear, V. P.
J. C. Baker, Secy.-Treas.

Sam Worling, V. P. Eng.
Bill Duncan, V. P. Prod.

Burk Royalty Co.

800 Oil & Gas Building
Wichita Falls, Texas 76301

*File Case No
4679*

June 12, 1972

*OK
JHB*

Mr. A. L. Porter, Jr.
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Dear Mr. Porter:

In Case No. 4679, Order No. R-4283 Burk Royalty Co. was given permission to dispose of salt water in its Neal #3 located in Section 35 - T20S - R34E, Lea County, New Mexico. The Commission requested that after water had been injected for some period of time that a sub-surface tracer survey be made to determine where the water is being injected.

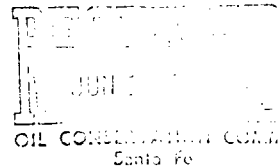
We, therefore, enclose a copy of the survey indicating that the water is entering the proper formation and there are no leaks.

Very truly yours,

BURK ROYALTY CO.

[Signature]
Jon H. Bear

JHB:js
Enc.



R34E

T
20
S

BURK ROYALTY CO.

160 Acres

1

4

Neal

35

ILLEGIBLE

BURK ROYALTY CO.

NEAL LEASE

NE/4 SEC. 35 T20S R34E

LEA COUNTY NEW MEXICO

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION

Burk EXHIBIT NO. 1

CASE NO. 4679

Submitted by Jon Darling

Hearing Date March 15, 1972

Scale: 1" = 1000'

[illegible]

① - - - - Upper Yates
 ② - - - - Middle Yates
 ③ - - - - Lower Yates
 ④ - - - - Reef
 ⑤ Respective zone tested
 not productive

BURK ROYALTY CO.
Neal #3
Lea County, New Mexico

SCHEMATIC DIAGRAM

Location: NW of NE of NE
Sec. 35 T20S R34E

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION

Burk EXHIBIT NO. 4

CASE NO. 4679

Submitted by Tom Darling

Hearing Date March 15, 1972

Pressure Gauge
1/4" Nipple
Bull Plug
2" Tee
2" Nipple
2" Gate Valve

Tubing Head

Braden Head

8 5/8" Csg.

5 1/2" Csg.

ILLEGIBLE

Bottom of 8 5/8" @ 190'
Cemented 100 sacks &
Circulated to surface

Top of Cement @ 2944'

5 1/2" Csg.
Cemented with 150 sacks
50/50 pozmix & 50 sacks
laytex cement
7 7/8" Hole

2" Tubing

Totem "L" Packer @ 3630'

Perforated 3730-3717

Bottom of 5 1/2" @ 3804'

TD 3804'

DOMESTIC SERVICE	
Check the class of service desired, otherwise this message will be sent as a fast telegram.	
TELEGRAM	<input type="checkbox"/>
DAY LETTER	<input type="checkbox"/>
NIGHT LETTER	<input type="checkbox"/>

WESTERN UNION TELEGRAM

INTERNATIONAL SERVICE	
Check the class of service desired, otherwise the message will be sent at the full rate.	
FULL RATE	<input type="checkbox"/>
LETTER TELEGRAM	<input type="checkbox"/>
SHORE SHIP	<input type="checkbox"/>

NO. WDS. CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED
	COLLECT		Case 4679	2:15 P.M.

Send the following message, subject to the terms on back hereof, which are hereby agreed to

FEBRUARY 16, 1972

BURK ROYALTY COMPANY
800 OIL & GAS BLDG.
WICHITA FALLS, TEXAS

TEMPORARY AUTHORITY HEREBY GRANTED PENDING HEARING AND PERMANENT ORDER TO DISPOSE SALT WATER INTO PERFORATIONS 3705-3714 FEET NEAL NUMBER 3 A-35-208-34E PROVIDED INJECTION THROUGH TUBING AND PACKER. THIS AUTHORITY EXPIRES APRIL 15, 1972.

A. L. PORTER, Jr.
SECRETARY-DIRECTOR
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

WU1206(R2-65)

TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WG 1-3500/TWK 810-760-1600/Texas 44 2417

WATER ANALYSIS REPORT

COMPANY Durk Royalty Oil Co. ADDRESS Hobbs N.M. DATE: 1-7-72
 SOURCE Well #1 (Lynch Field) DATE SAMPLED ANALYSIS NO. 5692
 Analysis Mg/L *Meq/L

1. PH 6.4
 2. H₂S (Qualitative) None
 3. Specific Gravity 1.055
 4. Dissolved Solids 85,317
 5. Suspended Solids
 6. Phenolphthalein Alkalinity (CaCO₃) 200
 7. Methyl Orange Alkalinity (CaCO₃)
 8. Bicarbonate (HCO₃) 244 ÷ 61 4.0 HCO₃
 9. Chlorides (Cl) 16,000 ÷ 35.5 1,296 Cl
 10. Sulfates (SO₄) 7,268 ÷ 48 151 SO₄
 11. Calcium (Ca) 1,760 ÷ 20 88 Ca
 12. Magnesium (Mg) 1,458 ÷ 12.2 120 Mg
 13. Total Hardness (CaCO₃) 10,400
 14. Total Iron (Fe) 97.6 ppm
 15. Barium (Qualitative)
 16.
- *Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

	Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
83	Ca (HCO ₃) ₂	81.04		4.0		324
120	Ca SO ₄	68.07		84		5,720
1,243	Ca Cl ₂	55.50				
	Mg (HCO ₃) ₂	73.17		67		4,033
	Mg SO ₄	60.19		53		2,520
	Mg Cl ₂	47.62				
	Na HCO ₃	84.00				
	Na ₂ SO ₄	71.03				
	Na Cl	58.46		1,243		72,720

Saturation Values Distilled Water 20°C
 Ca CO₃ 13 Mg/L
 Ca SO₄ • 2H₂O 2,090 Mg/L
 Mg CO₃ 103 Mg/L

REMARKS Mr. Dan Berry(1) Copy 800 Oil & Gas Bldg. Wichita Falls, Texas 76301CC: Ligon, Worsham, Farish, FileRespectfully submitted
TRETOLITE COMPANY
Ray Shaffner

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. 12262
Order No. R-

APPLICATION OF BURK ROYALTY CO. TO
QUALIFY A WATERFLOOD EXPANSION
PROJECT FOR THE RECOVERED OIL TAX
RATE PURSUANT TO THE "ENHANCED OIL
RECOVERY ACT," LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 7, 1999, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this _____ day of December, 1999, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this cause its subject matter.

(2) By Order No. R-4283, dated March 15, 1972, in Case No. 4679, the Division authorized the applicant, Burk Royalty Co., to dispose of produced salt water into the Yates formation (Lynch Yates-Seven Rivers Pool) through its Neal Well No. 3, located in the NE¼NE¼ of Section 35, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico.

(3) In this case the applicant seeks to expand the injection operations and convert the project to a waterflood project, and to qualify the Neal Lease, which covers the NE¼ of Section 35, for the recovered oil tax rate pursuant to Division Rule No. 30 (Enhanced Oil Recovery ("EOR") Project Tax Incentive), as promulgated the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(4) According to applicant's evidence and testimony, and the record in Case No. 4679:

(a) The approved injection interval in the Neal Well No. 3 is 3703-3713 feet.

- (b) Injection operations in the Neal Well No. 3 commenced in 1972, and have continued to date.
 - (c) The maximum amount injected into the Neal Well No. 3 has been 250 BWPD.
 - (d) The applicant anticipated a secondary recovery effect by disposing of produced water into the Yates formation.
 - (e) Disposal has had a secondary recovery effect on the producing wells on the Neal Lease, and production from the lease increased from approximately 250 BO per month in 1972 to 1000 BO per month in 1994.
 - (f) Since 1994, production from the lease has declined to approximately 600-700 BO per month.
 - (g) Cumulative production from the Neal Lease as of September 1999 is approximately 410,000 BO.
- (5) The applicant proposes to expand the existing project by adding perforations in the injection and producing wells in the upper Yates formation, and increasing injection rates. The evidence and testimony presented in this case also indicates that:
- (a) The Yates formation is continuous across the existing perforated interval, and across the proposed perforated interval, in the Neal Lease. The Yates formation is unproductive to the north and east of the Neal Well No. 3, as evidenced by several dry holes.
 - (b) There are currently two producing wells on the Neal Lease: The Neal Well No. 1 in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 35, and the Neal Well No. 4 in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 35. The Neal Well No. 2, in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 35, is currently shut-in.
 - (c) The Neal Well Nos. 1, 2, and 4 are currently perforated in the same correlative interval as the injection interval for the Neal Well No. 3.
 - (d) The applicant proposes to perforate the interval from 3590-3610 feet in the Neal Well No. 3, and correlative intervals in the producing wells on the Neal Lease. This interval has not produced from the Yates formation on the Neal Lease.
 - (e) The applicant proposes to inject water at maximum volumes of 750 BWPD, triple the previously approved rate.

- (f) Increased injection rates and the completion of zones not previously subject to waterflood operations will expand and enhance the efficiency of the project, resulting in the recovery of an additional 50,000 barrels of oil from the Neal Lease which would otherwise not be recovered.
 - (g) The Neal Lease has been so depleted that it is prudent to implement a waterflood expansion program to maximize the ultimate recovery of crude oil from said area.
 - (h) The proposed expansion is economically and technically feasible and has not been prematurely filed.
- (6) The Enhanced Oil Recovery Act applies to new projects and expansions of existing projects. NMSA 1978 §7-29A-3. "Expansion" means a significant change or modification from an existing use. NMSA 1978 §7-29A-2.D. The proposed increase in injection volumes and pressures, and the increase in the geological interval being flooded, constitutes a significant expansion of the existing project.
- (7) The Neal Lease Waterflood Project should be qualified as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).
- (8) To be eligible for the EOR credit, the operator should advise the Division when increased water injection will commence and at such time request that the Division certify the subject expansion project to the New Mexico Taxation and Revenue Department.
- (9) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.
- (10) The applicant also requests an increase in the authorized injection pressure of up to 1500 psi, which exceeds the Division's 0.2 psi/foot limitation. The applicant conducted step-rate tests which show that such pressure will not result in the fracturing of the injection formation or confining strata.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Burk Royalty Co., the Neal Lease Waterflood Project, described as follows, is hereby qualified as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5):

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM
Section 35: NE/4

(2) The approved "project area" shall comprise the entire Neal Fee Lease described in Paragraph No. (1) above.

(3) To be eligible for the EOR credit, the operator shall advise the Division when increased water injection will commence and at such time request that the Division certify the subject expansion project to the New Mexico Taxation and Revenue Department.

(4) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of a positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(5) The applicant is authorized to inject up to 750 BWPD into its Neal Well No. 3 at a maximum pressure of 1500 psi. The injection well shall be equipped with a pressure limitation device which will limit the surface injection pressure to no more than 1500 psi.

(6) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(7) The applicant shall conduct injection operations in accordance with Division Rule Nos. 710 through 708, and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

CASE NO. 12262
Order No. R-
Page -5-

(8) The injection authority hereby granted shall terminate one year after the date of this order if the operator has not commenced expanded injection operations into the subject well, provided that the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(9) 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

Lori Wrotenbery
Director

SEAL

(QUERRECHOPAINS-QUEEN ASSOCIATED (QUERRECHOPAINS
QUEEN ASSOCIATED SAND UNIT AREA WATERFLOOD
PROJECT) POOL - Cont'd.)

(15) The approved "project area" shall initially comprise that area described in Decretory Paragraph No. (3) above.

(16) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(17) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(18) The injection authority granted herein for the proposed injection wells shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(19) 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.

EXHIBIT "A"

CASE NO. 10960
ORDER NO. R-10151

Newbourne Oil Company
Proposed Injection Well Locations
Querecho Plains Queen Associated Sand Unit Waterflood Project Area

Township 18 South, Range 32 East, NMPM,
Lea County, New Mexico

Well Name and Number	Package Location	Section	Unit	Proposed Injection Interval (feet)
Cavalcade Federal Well No. 4	400' FSL & 660' FEL	21	P	4096 - 4130
Bennett Federal Well No. 1	660' FSL & 1650' FEL	22	O	3897 - 4138
Flip Federal Well No. 1	1650' FNL & 330' FWL	23	E	4143 - 4150
Edith Federal Well No. 2	1980' FSL & 1980' FEL	23	J	3953 - 4224
Marshall Federal Well No. 1	660' FSL & 1980' FWL	23	N	4176 - 4190
Walker Federal Well No. 1	330' FNL & 330' FWL	26	D	3914 - 3947
Federal "E" Well No. 8	1650' FNL & 660' FEL	27	H	3934 - 4198
Anadarko Federal Well No. 2	1650' FSL & 1980' FWL	27	K	3888 - 4025
Anadarko Federal Well No. 3	1650' FSL & 990' FWL	27	L	3930 - 4060
Federal "E" Well No. 9	1980' FNL & 330' FEL	28	H	3875 - 4152

LYNCH YATES-SEVEN RIVERS POOL
(Hanson "C" Federal Lease Waterflood Project)
Lea County, New Mexico

Order No. R-10161, Authorizing Burk Royalty Company to Institute a Waterflood Project on its Hanson "C" Federal Lease, in the Lynch Yates-Seven Rivers Pool, Lea County, New Mexico, August 4, 1994.

Application of Burk Royalty Company for a Waterflood Project, Lea County, New Mexico.

Case No. 10985
Order No. R-10161

ORDER OF THE DIVISION

BY THE DIVISION: This cause came on for hearing at 8:15 a.m. on July 7, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 4th day of August, 1994, 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) The applicant, Burk Royalty Company, seeks authority to institute a waterflood project on its Hanson "C" Federal Lease comprising the S/2 SW/4 and NE/4 SW/4 of Section 23, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, by the injection of water into the Yates formation, Lynch Yates-Seven Rivers Pool, through the perforated interval from approximately 3,564 feet to 3,585 feet in its Hanson "C" Well No. 4 located 1650 feet from the South and West lines (Unit K) of Section 23.

(3) The applicant proposes to use as producing wells within the waterflood project the Hanson "C" Well Nos. 1 and 3 located respectively in Units M and N.

(4) The Hanson "C" Well Nos. 1 and 3 are in an advanced state of depletion and should therefore be properly classified as "stripper wells".

(5) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) Testimony presented and Division records indicate that the Hanson "C" Well No. 4 was permitted for injection as a disposal well by Division Order No. R-3661 on January 13, 1969. The permitted injection interval was in the Yates formation at a depth of 3,564 feet to 3,570 feet.

(7) Division Order No. R-3661 should be superseded by this order.

(8) The injection of water into the proposed injection wells should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set at approximately 3,450 feet; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(LYNCH YATES-SEVEN RIVERS (HANSON "C" FEDERAL LEASE WATERFLOOD PROJECT) POOL - Cont'd.)

(9) Prior to commencing injection operations into the Hanson "C" Well No. 4, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(10) The injection well or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 713 psi.

(11) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(12) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(13) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(14) The injection authority granted herein for the proposed injection well should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

IT IS THEREFORE ORDERED THAT:

(1) The application of Burk Royalty Company for authority to institute a waterflood project on its Hanson "C" Federal Lease comprising the S/2 SW/4 and NE/4 SW/4 of Section 23, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, by the injection of water into the Yates formation, Lynch Yates-Seven Rivers Pool, through the perforated interval from approximately 3,564 feet to 3,585 feet in its Hanson "C" Well No. 4 located 1650 feet from the South and West lines (Unit K) of Section 23, is hereby approved.

(2) The applicant shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(3) Injection into the Hanson "C" Well No. 4 shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3,450 feet; the casing-tubing annulus shall be filled with an inert

fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(4) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 713 psi.

(5) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such high pressure will not result in the fracturing of the injection formation or confining strata.

(6) Prior to commencing injection operations, the casing in the Hanson "C" Well No. 4 shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(7) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(8) The applicant shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing, casing or packer in the injection well, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(9) The subject waterflood project is hereby designated the Hanson Yates Waterflood Project, and the applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(10) The injection authority granted herein for the proposed injection well shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(11) Division Order No. R-3661 is hereby superseded by this order.

(12) 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.