OIL CONSERVATION DIV.
99 SEP 14 PM 1:12

Case 12162 :

PROPOSED ADVERTISEMENT

Application of Burk Royalty Co. for approval of a waterflood project and to qualify the project for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico. Applicant seeks approval to institute a waterflood project in the Lynch Yates-Seven Rivers Pool on its Neal Fee Lease, comprising the NE¼ of Section 35, Township 20 South, Range 34 East, NMPM, by the injection of water at pressures of up to 1500 psi into the Neal Well No. 3, located in Unit A of Section 35. Applicant further seeks to qualify the project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5). The project is located approximately 16 miles west-northwest of Oil Center, New Mexico.

OIL CONSERVATION DIV.

99 SEP 14 PM 1:12

Case 12262:

PROPOSED ADVERTISEMENT

Application of Burk Royalty Co. for approval of a waterflood project and to qualify the project for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico. Applicant seeks approval to institute a waterflood project in the Lynch Yates-Seven Rivers Pool on its Neal Fee Lease, comprising the NE¼ of Section 35, Township 20 South, Range 34 East, NMPM, by the injection of water at pressures of up to 1500 psi into the Neal Well No. 3, located in Unit A of Section 35. Applicant further seeks to qualify the project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5). The project is located approximately 16 miles west-northwest of Oil Center, New Mexico.

OIL CONSERVATION DIV.
12262
2005 SEP 14 PM 1:12

Case :

PROPOSED ADVERTISEMENT

Application of Burk Royalty Co. for approval of a waterflood project and to qualify the project for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico. Applicant seeks approval to institute a waterflood project in the Lynch Yates-Seven Rivers Pool on its Neal Fee Lease, comprising the NE¼ of Section 35, Township 20 South, Range 34 East, NMPM, by the injection of water at pressures of up to 1500 psi into the Neal Well No. 3, located in Unit A of Section 35. Applicant further seeks to qualify the project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5). The project is located approximately 16 miles west-northwest of Oil Center, New Mexico.

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)

OIL CONSERVATION DIV.

99 SEP 14 PM 1:12

September 14, 1999

Case 12262

Hand Delivered

Florene Davidson
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Dear Florene:

Enclosed are an original and two copies of an application by Burk Royalty Co. for a waterflood project, together with a proposed advertisement. Please set this matter for the October 7, 1999 Examiner hearing. Thank you.

Very truly yours,

James Bruce

Attorney for Burk Royalty Co.

cc: Hobbs District Office (w/encl.)

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF BURK ROYALTY CO. FOR APPROVAL OF A WATERFLOOD PROJECT AND TO QUALIFY THE PROJECT FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO. **Case No.** 12262

APPLICATION

Burk Royalty Co. ("Burk") applies for an order approving a waterflood project, including approval to inject at pressures of up to 1500 psi, and qualifying the project for the recovered oil tax rate. In support thereof, Burk states:

1. Burk is the operator of the Neal Lease, a fee lease covering the NE¼ of Section 35, Township 20 South, Range 34 East, N.M.P.M., containing 160 acres of land.

2. Burk proposes to institute a waterflood project on the subject lease, designated the Neal Lease Waterflood Project. Burk's address is P.O. Box 94903, Wichita Falls, Texas 76308 (Attention: Charles Gibson).

3. Burk proposes to inject water into the Yates-Seven Rivers formation (Lynch Yates-Seven Rivers Pool) through the Neal Well No. 3, located 330 feet from the north line and 993 feet from the east line (Unit A) of Section 35.[1] The project area will comprise the NE¼ of Section 35. A plat outlining the project area, and marking the locations of the initial injection and producing wells, is attached hereto as Exhibit A.

4. Burk requests that the Neal Lease Waterflood Project be qualified for the recovered oil tax rate, pursuant to the Enhanced

---

[1]The Neal Well No. 3 was approved for salt water disposal in the Lynch Yates-Seven Rivers Pool by Commission Order No. R-4283.

Oil Recovery Act (L. 1992, Ch. 38) and Division Rule 30. Project data includes:

(a) Number of initial producing wells: 3.

(b) Number of initial injection wells: 1.

(c) Capital cost of additional facilities: $0.00.

(d) Estimated total project cost: $0.00.

(e) Anticipated injection commencement date: November 1, 1999.

(f) Type of fluid injected: Produced water.

(g) Anticipated injection volumes: 750 BWPD maximum.

5. A Form C-108 for the injection well and project is attached hereto as Exhibit B.

6. Water will be injected at pressures of up to 1500 psi, which is in excess of 0.2 psi/foot of depth, and Burk requests approval thereof.

WHEREFORE, Burk requests that the Division approve the injection application and the Neal Lease Waterflood Project, including permission to inject at pressures of up to 1500 psi, qualify the project as an enhanced oil recovery project, and certify the project for the recovered oil tax rate.

Respectfully submitted,

James Bruce
P.O. Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043

Attorney for Burk Royalty Co.

VERIFICATION

STATE OF TEXAS)
)
COUNTY OF Wichita)

Charles Gibson, being duly sworn upon his oath, deposes and states that: He is a petroleum engineer employed by Burk Royalty Co., he is familiar with the matters set forth in the foregoing Application, and the statements therein are true and correct to the best of his knowledge.

Charles Gibson

SUBSCRIBED AND SWORN TO before me this 14th day of September, 1999 by Charles Gibson.

Tammie Lewis
Notary Public

My Commission Expires:
3-7-2000

TAMMIE R. LEWIS
NOTARY PUBLIC
STATE OF TEXAS
My Comm. Exp. 03-07-2000

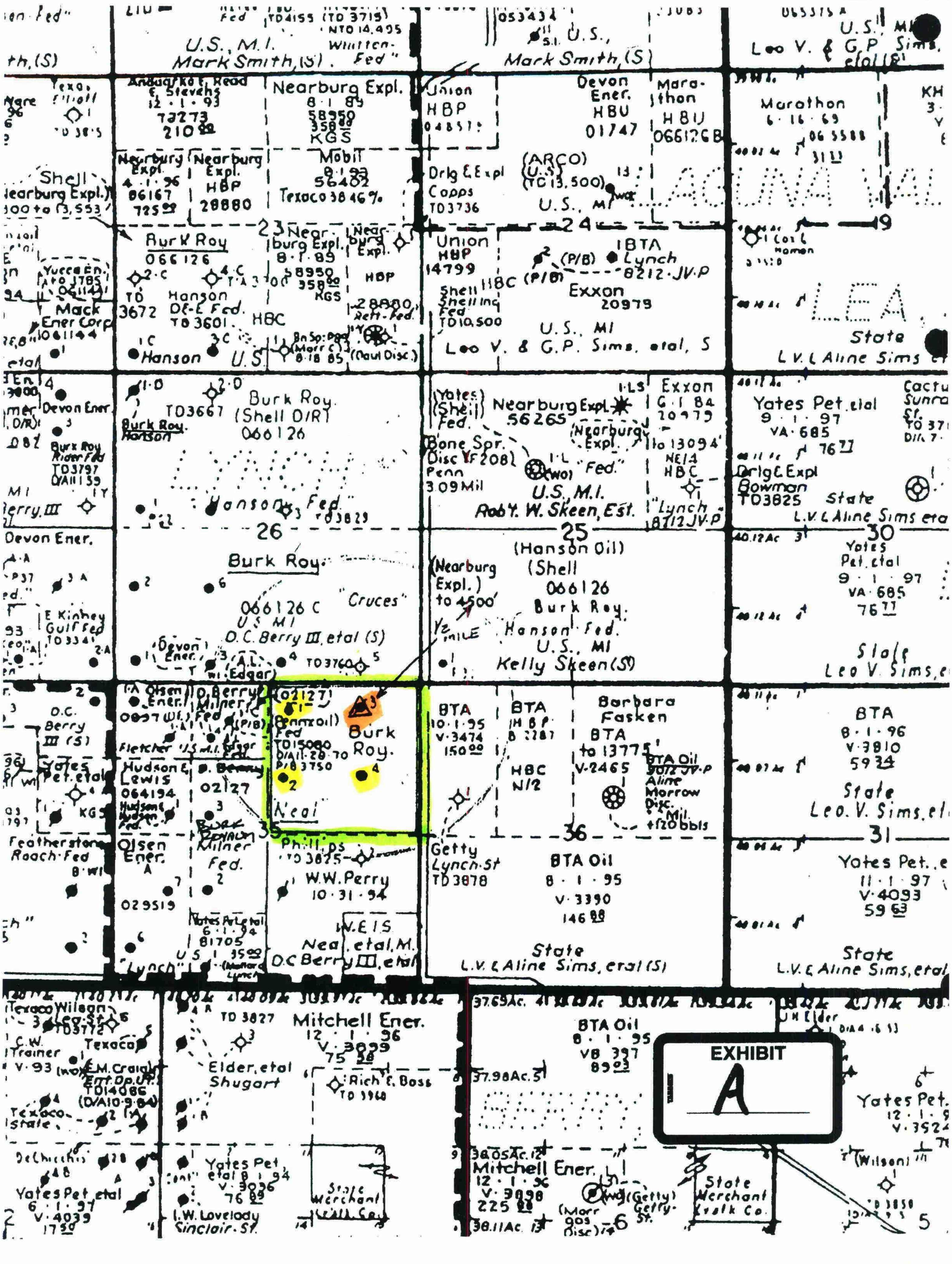
EXHIBIT
A
U.S., M.I.
Mark Smith, (S)
U.S.
Leo V. & G.P. Sims, etal (S)
Nearburg Expl.
8 · 1 · 89
KGS
Union
HBP
Devon Ener.
HBU
01747
Marathon
HBU
Marathon
6 · 16 · 69
Mobil
Texaco 38.46%
Drlg & Expl
Copps
TD 3736
(ARCO)
U.S., MI
Shell
Nearburg Expl.
HBP
28880
23
24
19
Burk Roy
066126
Hanson
TD 3601
HBC
Union
HBP
14799
BTA
Lynch
8212 JV-P
Exxon
20979
U.S., MI
Leo V. & G.P. Sims, etal, S
State
Mack Ener Corp
Devon Ener
Burk Roy
(Shell O/R)
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TD 3667
Burk Roy
Hanson
Nearburg Expl.
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Exxon
Yates Pet. etal
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VA · 685
Bone Spr.
Disc
Penn
3.09 Mil
U.S. M.I.
Robt. W. Skeen, Est.
"Lynch
8712 JV-P
Drlg & Expl
Bowman
TD 3825
State
L.V. & Aline Sims etal
Hanson Fed.
TD 3829
26
25
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Devon Ener.
(Hanson Oil)
(Shell
066126
Burk Roy
Hanson Fed.
U.S., MI
Kelly Skeen (S)
Burk Roy
066126 C
U.S. MI
O.C. Berry III, etal (S)
"Cruces"
(Nearburg
Expl.)
to 4500'
1/2 MILE
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Leo V. Sims, etal
A.L.
Edgar
TD 3760
02127
(Penzoil)
Fed
TD 15000
Burk
Roy
Neal
O.C.
Berry
III (S)
Yates
Pet. etal
Hudson & Lewis
064194
02127
BTA
10 · 1 · 95
V · 3474
BTA
HBP
HBC
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Barbara
Fasken
BTA
to 13775'
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BTA Oil
Aline
Morrow
Disc.
BTA
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State
Leo V. Sims, etal
35
36
31
Featherstone
Roach Fed
Olsen
Ener.
Milner
Fed.
029519
Phillips
TD 3825
W.W. Perry
10 · 31 · 94
Getty
Lynch St
TD 3878
BTA Oil
8 · 1 · 95
V · 3390
Yates Pet.
11 · 1 · 97
V · 4093
Yates Pet etal
6 · 1 · 94
81705
"Lynch"
Neal
O.C. Berry III, etal
State
L.V. & Aline Sims, etal (S)
State
L.V. & Aline Sims, etal
Texaco Wilson
Leo St
Texaco
C.W. Trainer
V · 93
E.M. Craig
TD 3827
Mitchell Ener.
12 · 1 · 96
V · 3099
Elder, etal
Shugart
Rich & Boss
BTA Oil
8 · 1 · 95
VB 397
Yates Pet.
Texaco
State
Yates Pet
etal
8 · 1 · 94
V · 3036
DeChicchis
Yates Pet etal
6 · 1 · 97
V · 4039
I.W. Lovelady
Sinclair St
State
Merchant
Mitchell Ener.
12 · 1 · 96
V · 3098
(Getty)
Getty
St.
State
Merchant
(Wilson)
5
6

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Neal #3
Case 12262

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [ ] no

II. Operator: Burk Royalty Co.

Address: P. O. Box BRC, Wichita Falls, Texas 76307

Contact party: Charles Gibson Phone: 940/322-5421

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [ ] yes [X] no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Charles Gibson Title Petroleum Engineer

Signature: _____ Date: 7-7-99

* If the information required under Sections VI, VIII, [illegible] been previously submitted, it need not be duplicated and resubmitted. [illegible]te and circumstance of the earlier submittal.

EXHIBIT B

DISTRIBUTION: Original and one copy to Santa Fe with [illegible]ropriate Division district office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this applicatic The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section. Neal #3, 35-T20S,R34E 330' FNL & 990' FEL

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth. 2 3/8" EUE Tubing, plastic coated 3,532'

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used. Totem Tension at 3,532'

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repected.

(1) The name of the injection formation and, if applicable, the field or pool name. Yates Formation - Lynch Pool

(2) The injection interval and whether it is perforated or open-hole. 3,590'-3,610'; 3,703'-3,717' perforated

(3) State if the well was drilled for injection or, if not, the original purpose of the well Well was drilled originally as an oil well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations. N/A

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any. None above, Seven River below 3,740'

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

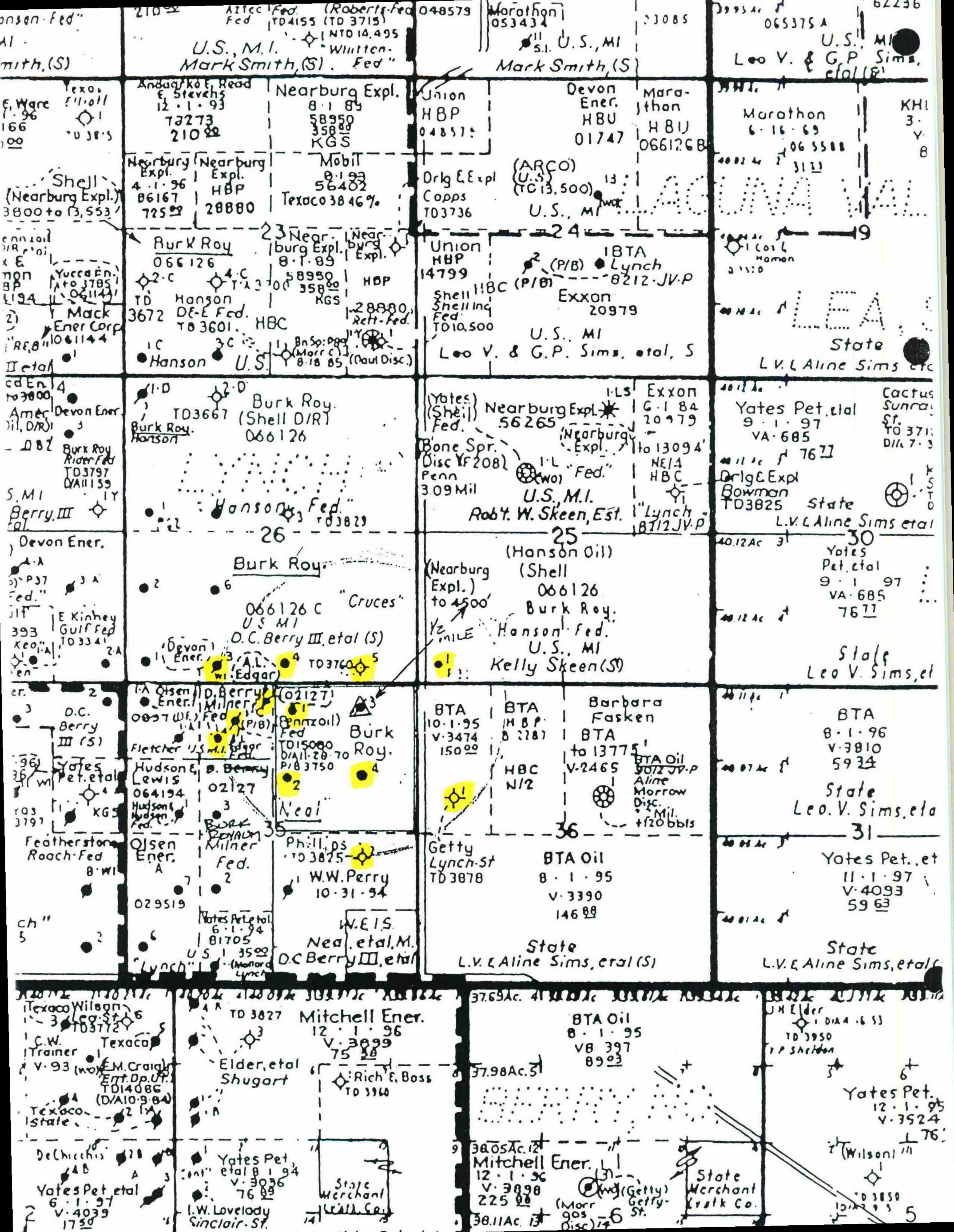
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.


U.S., M.I.
Mark Smith, (S)
Marathon
U.S., MI
Mark Smith, (S)
Leo V. & G.P. Sims, etal (S)
Nearburg Expl.
Devon Ener. HBU 01747
Union HBP
Marathon HBU 066126B
Marathon 6-16-69
Shell (Nearburg Expl.)
Nearburg Expl. HBP 28880
Mobil
Texaco 38.46%
Drlg & Expl Copps TD 3736
(ARCO) (U.S.) (TD 13,500)
U.S., MI
23
24
19
Burk Roy 066126
Hanson DE-E Fed. TD 3601
HBC
Union HBP 14799
BTA Lynch 8212-JV-P
Exxon 20979
U.S. MI
Leo V. & G.P. Sims, etal, S
LEA
State
L.V. & Aline Sims etc
Mack Ener Corp
Hanson
U.S.
(Paul Disc.)
Devon Ener.
Burk Roy (Shell O/R) 066126
TD 3667
Burk Roy Hanson
Burk Roy Rider Fed TD 3797
Hanson Fed.
Yates Shell Fed.
Nearburg Expl. 56265
Bone Spr. Disc YF 208 Penn 3.09 Mil
U.S. M.I.
Rob't. W. Skeen, Est.
Exxon 6-1-84 20979
Lynch 8212 JV-P
Yates Pet. etal 9-1-97 VA-685
Drlg & Expl Bowman TD 3825
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D.C. Berry III, etal (S)
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(Hanson Oil) (Shell 066126
Burk Roy
Hanson Fed.
U.S., MI
Kelly Skeen (S)
Yates Pet. etal 9-1-97 VA-685
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Leo V. Sims, et
D.C. Berry III (S)
Olsen Ener.
D. Berry Milner Fed
Fletcher
Pennzoil Fed TD 15000
Burk Roy
Hudson & Lewis 064194
Neal
35
BTA 10-1-95 V-3474
BTA HBP
Barbara Fasken
BTA to 13775
BTA Oil 8012 JV-P
Aline Morrow Disc.
HBC N/2
36
BTA 8-1-96 V-3810
State
Leo. V. Sims, eta
31
Featherstone Roach-Fed
Olsen Ener.
Milner Fed.
Phillips TD 3825
W.W. Perry 10-31-94
029519
Yates Pet etal 6-1-94 81705
W.E.I.S. Neal etal, M.
D.C. Berry III, etal
"Lynch"
Getty Lynch-St TD 3878
BTA Oil 8-1-95 V-3390
State
L.V. & Aline Sims, etal (S)
Yates Pet. et 11-1-97 V-4093
State
L.V. & Aline Sims, etal
Texaco Wilson Leo St
C.W. Trainer V-93
Texaco
E.M. Craig Ent. Op. Ut. TD 14086
Texaco State
Mitchell Ener. 12-1-96 V-3899
Elder, etal Shugart
Rich & Boss TD 3960
BTA Oil 8-1-95 VB 397
Yates Pet. 12-1-95 V-3524
Yates Pet etal 6-1-97 V-4039
Yates Pet etal 8-1-94 V-3036
I.W. Lovelady Sinclair-St.
State Merchant Lvstk Co.
Mitchell Ener. 12-1-96 V-3898
(Getty) Getty-St.
State Merchant Lvstk Co.
(Wilson)

NEAL #3 AREA OF REVIEW

WELL NAME	WELL TYPE	DATE DRILLED	LOCATION	DEPTH	RECORD OF COMPLETION
Cruces #3	Oil	7-18-57	Sec. 26, 330' FSL & 1,655' FWL	3,730'	Attached
Cruces #4	Oil	7-15-59	Sec. 26, 330' FSL & 2,316' FEL	3,750'	Attached
Cruces #5	D&A	11-7-59	Sec. 26, 330' FSL & 992' FEL	3,760'	--
Hanson Fed #1	D&A	6-23-59	Sec. 25, 330" FSL & FWL	3,863'	--
Federal "C" #1	P&A	5-18-74	Sec. 35, 660' FNL & 1,980' FWL	15,080'	Attached
Milner #4	Oil	1-26-54	Sec. 35, 990' FNL & 1,650' FWL	3,736'	Attached
Neal #1	Oil	4-5-59	Sec. 35, 467' FNL & 2,315' FEL	3,752'	Attached
Neal #2	Oil	7-15-59	Sec. 35, 1,650' FNL & 2,316' FEL	3,819'	Attached
Neal #3	Oil	6-9-59	Sec. 35, 330' FNL & 993' FEL	3,805'	Attached
Neal #4	Oil	7-29-59	Sec. 35, 1,650' FNL & 900' FEL	3,822'	Attached
Neal etal #2	D&A	10-28-59	Sec. 35, 2,260' FSL & 992' FEL	3,825'	--
Lynch State #1	D&A	10-13-81	Sec. 36, 1,980' FNL & 660' FWL	3,878'	--

NEAL #3 PROPOSED INJECTION WELL OPERATIONS

1. Proposed Average Daily Rate
   250 barrels water per day

   Maximum Daily Rate
   750 barrels water per day

2. The system is closed.

3. Proposed Average Injection Pressure
   1000#

   Proposed Maximum Injection Pressure
   1500#

4. The source of injection fluid will be Yates Sand (Neal Lease) and Seven Rivers (Milner Lease). Analysis attached.

5. The injection zone is the Yates Sand. The field name is Lynch Field. It is Upper Permian in age. The top of the Yates in the Neal #3 is at 3,590' (136') with a thickness of 34'. There are no underground sources of drinking water below the Yates. Above the Yates, the Quaternary alluvium to a depth of 80' is the only source of groundwater in the area.

6. The well is currently classified as disposal. We do not plan to stimulate the well.

7. The logs are attached.

8. There are no fresh water wells within one mile of the proposed injection well.

9. I have examined public records and find no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

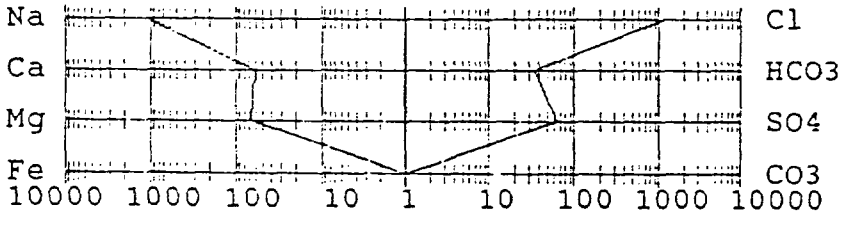
Oil Co. : Burk Royalty
Lease : Cruces
Well No.: # 4
Analysis:

Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

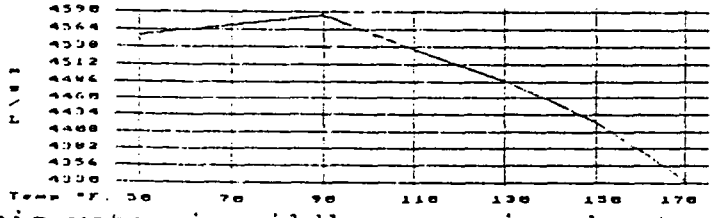
ANALYSIS

1.	pH			7.320	
2.	Specific Gravity 60/60 F.			1.045	
3.	$CaCO_3$ Saturation Index	@ 80 F.		+0.933	
		@ 140 F.		+1.853	
	Dissolved Gasses			**MG/L**	**EQ. WT.** ***MEQ/L**
4.	Hydrogen Sulfide			800	
5.	Carbon Dioxide			0	
6.	Dissolved Oxygen			Not Determined	
	Cations				
7.	Calcium	(Ca^{++})		1,202	/ 20.1 = 59.80
8.	Magnesium	(Mg^{++})		790	/ 12.2 = 64.75
9.	Sodium	(Na^{+})	(Calculated)	25,294	/ 23.0 = 1,099.74
10.	Barium	(Ba^{++})		Not Determined	
	Anions				
11.	Hydroxyl	(OH^{-})		0	/ 17.0 = 0.00
12.	Carbonate	($CO_3^{=}$)		0	/ 30.0 = 0.00
13.	Bicarbonate	(HCO_3^{-})		2,055	/ 61.1 = 33.63
14.	Sulfate	($SO_4^{=}$)		3,050	/ 48.8 = 62.50
15.	Chloride	(Cl^{-})		39,991	/ 35.5 = 1,126.51
16.	Total Dissolved Solids			72,382	
17.	Total Iron (Fe)			8	/ 18.2 = 0.44
18.	Total Hardness As $CaCO_3$			6,256	
19.	Resistivity @ 75 F. (Calculated)			0.139 /cm.	

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	33.63	2,726
$CaSO_4$	68.07	26.17	1,781
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	36.33	2,187
$MgCL_2$	47.62	28.42	1,353
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	1,098.09	64,194

*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Burk Royalty
Lease : Milner Federal
Well No.: # 4 SWD
Analysis:

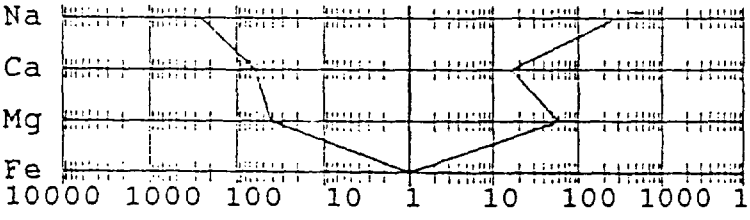
Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

ANALYSIS

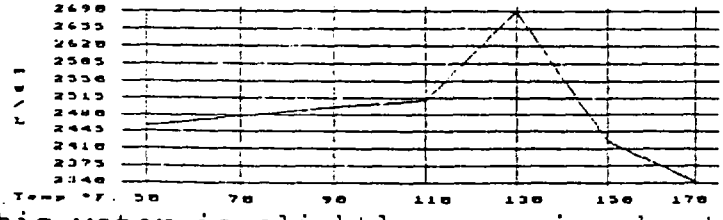
1.	pH		6.980	
2.	Specific Gravity 60/60 F.		1.009	
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.539	
		@ 140 F.	+1.449	

	Dissolved Gasses			MG/L	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide			350		
5.	Carbon Dioxide			300		
6.	Dissolved Oxygen			0.2		
	Cations					
7.	Calcium	(Ca^{++})		1,202	/ 20.1 =	59.80
8.	Magnesium	(Mg^{++})		486	/ 12.2 =	39.84
9.	Sodium	(Na^{+})	(Calculated)	5,860	/ 23.0 =	254.78
10.	Barium	(Ba^{++})		Not Determined		
	Anions					
11.	Hydroxyl	(OH^{-})		0	/ 17.0 =	0.00
12.	Carbonate	($CO_3^{=}$)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})		952	/ 61.1 =	15.58
14.	Sulfate	($SO_4^{=}$)		2,750	/ 48.8 =	56.35
15.	Chloride	(Cl^{-})		9,998	/ 35.5 =	281.63
16.	Total Dissolved Solids			21,248		
17.	Total Iron (Fe)			1	/ 18.2 =	0.03
18.	Total Hardness As $CaCO_3$			5,004		
19.	Resistivity @ 75 F. (Calculated)			0.308 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	15.58	1,263
$CaSO_4$	68.07	44.22	3,010
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	12.13	730
$MgCL_2$	47.62	27.70	1,319
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	253.93	14,845

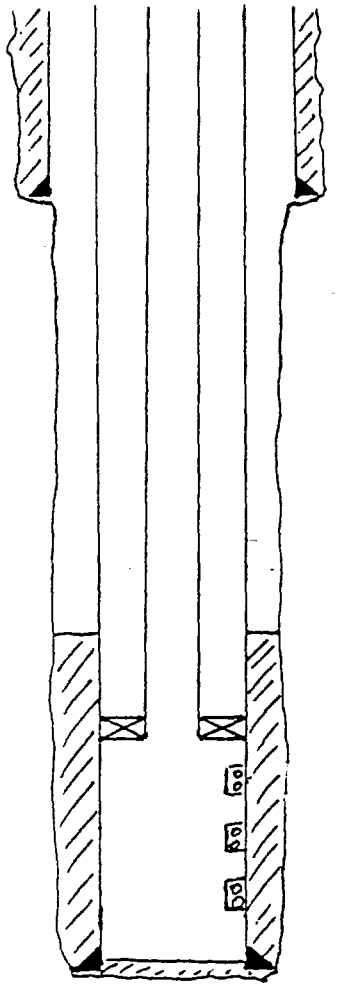
*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

NEAL #3 INJECTION PERMIT APPLICATION
T20S, R34E, SECTION 35
330' FNL, 990' FEL

7-7-99

CHARLES GIBSON



GL

TOP OF CEMENT: SURFACE (CIRCULATED)

8 5/8" CASING CEMENTED @ 190' W/100 SX

TOP OF CEMENT: 3148' (TEMP LOG)
2 3/8" INTERNALLY COATED TBG TO 3532'
2 3/8" x 5 1/2" TENSION PACKER @ 3532'

5 1/2" CASING CEMENTED @ 3804' W/200 SX
TD: 3805'

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Form C-101
Revised (12/1/55)

NOTICE OF INTENTION TO DRILL

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission. If State Land submit 6 Copies Attach Form C-128 in triplicate to first 3 copies of form C-101

Hobbs New Mexico (Place) June 5, 1959 (Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as

BURK ROYALTY COMPANY (Company or Operator)
Neal (Lease), Well No. 3, in A (Unit). The well is
located 330 feet from the North line and 990 feet from the
East line of Section 35, T. 20, R. 34, NMPM.
(GIVE LOCATION FROM SECTION LINE) Lynch Pool, Lea County

D	C	B	X A
E	F	G	H
L	K	J	I
M	N	O	P

If State Land the Oil and Gas Lease is No.....
If patented land the owner is Patented Neal
Address.....
We propose to drill well with drilling equipment as follows: Rotary

The status of plugging bond is $10,000 active Blanket

Drilling Contractor Alan Drilling Co.
Wichita Falls, Texas

We intend to complete this well in the Yates formation at an approximate depth of 3850' feet.

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
11"	8-5/8"	24#	N	175'	150 sx circ
7-7/8"	5-1/2"	14#	N	TD 3850'	*

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

* Will use 275 sx or return cement to back past the base of salt by temperature survey

C-128 attached JUN 8 1959
Approved....., 19.....
Except as follows:

OIL CONSERVATION COMMISSION
By ORIGINAL & THREE COPIES SIGNED BY [illegible]
ENGINEER DISTRICT No. 1

Sincerely yours,
BURK ROYALTY COMPANY (Company or Operator)
By [signature]
Position Agent
Send Communications regarding well to
Name A. J. Whelan 800 Oil & Gas Bldg.
Address Wichita Falls, Texas

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	Address
Burk Royalty Co.	800 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neal	3	A	35	20	34

Date Work Performed	Pool	County
6/9/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- [X] 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.

Ran and set 190' of 8-5/8" csg (seamless) 28# w/100 sx cement circulated

Tested w/600# pressure Tested OK

Witnessed by	Position	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

Approved by John W. Runyan

Title

Date

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

Name

Position Agent

Company Burk Royalty 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	Address
Burk Royalty Company	800 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neal	9	A	35	20	34

Date Work Performed	Pool	County
6/17/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- ☐ Beginning Drilling Operations
- ☒ Casing Test and Cement Job 5-1/2"
- ☐ Other *(Explain)*:
- ☐ Plugging
- ☐ Remedial Work

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

5-1/2" 14# casing set at 3804' w/200 sx cement, cement returned past base of salt by temperature survey, tested 600# pressure, tested OK

Witnessed by	Position	Company
A. J. Whelan	Drlg Supt.	Same

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

Approved by

Title

Date

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

Name
Agent

Position
Burk Royalty Company

Company

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

(Form C-104)
Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, N. M. (Place) 6/30/59 (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Burk Royalty Co. (Company or Operator) Neal (Lease), Well No. 3, in NE ¼ SE ¼,

Unit Letter A, Sec. 35, T. 20, R. 34, NMPM., Lynch Pool

Lea County. Date Spudded 6/9/59 Date Drilling Completed 6/28/59

Please indicate location:

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

330' fr N & 990' fr E

Elevation 3726 GL Total Depth 3805 PBTD

Top Oil/Gas Pay 3703 Name of Prod. Form. Yates

PRODUCING INTERVAL -

Perforations 3703-3714 w/ 84 shots

Open Hole Depth Casing Shoe 3804 Depth Tubing 3693

OIL WELL TEST -

Natural Prod. Test: 38 bbls.oil, 0 bbls water in 24 hrs, ppng min. Choke Size

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): bbls.oil, bbls water in hrs, min. Choke Size

GAS WELL TEST -

Natural Prod. Test: MCF/Day; Hours flowed Choke Size

Method of Testing (pitot, back pressure, etc.):

Test After Acid or Fracture Treatment: MCF/Day; Hours flowed

Choke Size Method of Testing:

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): None

Casing Press. 70# Tubing Press. - Date first new oil run to tanks 6/28/59

Oil Transporter Texas New Mexico Pipe Line Co.

Gas Transporter Eprc

Tubing, Casing and Cementing Record

Size	Feet	Sax
8-5/8"	190	100
5-1/2"	set at 3804'	w/200
2" tbg	at 3693	

Remarks:

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

Approved ..., 19...

OIL CONSERVATION COMMISSION

By:

Title

Burk Royalty Company
(Company or Operator)

By: (Signature)

Agent
Title

Send Communications regarding well to:
A. J. Whelan Burk Royalty Co.
Name

600 Oil & Gas Bldg., Wichita Falls, Tex.
Address

DRILLER'S LOG
NEAL # 3
IN LEA COUNTY, NEW MEXICO
6-26-59

Well Commenced: 6-9-59
Well Completed: 6-18-59

0-38'	Surface sand & Shale
38-200'	Sand, Shale, & Lime
200-673'	Shale
673-1265'	Shale & Sand
1265-1350'	Shale
1350-1468'	Shale & Lime Stks.
1468-1501'	Shale
1501-1651'	Shale
1651-1857'	Lime & Shale
1857-1962'	Shale & Lime Stks.
1962-2173'	Shale
2173-2185'	Lime
2185-2292'	Shale
2292-2315'	Shale & Lime Stks.
2315-2406'	Shale - Potash
2406-2413'	Shale - Potash & Lime Stks.
2413-2510'	Shale & Potash
2510-2590'	Salt, Shale, Potash
2590-2601'	Lime & Shale
2601-2856'	Shale & Salt
2856-2957'	Salt & Shale
2957-3008'	Shale & Potash
3008-3202'	Salt & Lime Stks.
3202-3221'	Lime
3221-3225'	Shale & Salt
3225-3280'	Shale
3280-3400'	Salt & Shale
3400-3416'	Anhydrite
3416-3439'	Lime & Anhydrite
3439-3518'	Lime
3518-3528'	Lime
3528-3557'	Lime
3557-3576'	Lime
3576-3606'	Sand
3606-3611'	Coring sand
3611-3805'	Coring sand
3805'	TD

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

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.
--

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 —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- **Water Disposal**

7. Unit Agreement Name
--

2. Name of Operator
Burk Royalty Co.

8. Farm or Lease Name
NEAL

3. Address of Operator
800 Oil & Gas Building, Wichita Falls, Texas 76301

9. Well No.
3

4. Location of Well
UNIT LETTER A , 330 FEET FROM THE North LINE AND 990 FEET FROM THE East LINE, SECTION 35 TOWNSHIP 20 RANGE 34 NMPM.

10. Field and Pool, or Wildcat
Lynch

15. Elevation *(Show whether DF, RT, GR, etc.)*
3729.5 GR

12. County
Lea

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☒	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

Permit to use as disposal well granted March 17, 1972.
Case #4679 Order #R-4283

4-3-74 pulled 143 5/8 rods and layed down, pulled 119 joints 2 3/3 EUE tubing.
Reran 119 joints 2-3/8 EUE plastic coated tubing with Totem tension packer.
Set packer at 3630. Well ready for injection.

4-5-74 Started Injection

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

SIGNED Jon R. Bear TITLE Engineer DATE November 20, 1974

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

LANDOWNER AND LEASEHOLD OPERATORS

LANDOWNER
Dan & Ron Berry
P. O. Box 67
Eunice, New Mexico 88231
Certified Mail #Z 240 122 239

LEASEHOLD OPERATORS
Shell Western Exploration & Production
Box 576
Houston, Texas 77001
Certified Mail #Z 240 122 240

Nearburg Producing Company
1819 North Turner
Hobbs, New Mexico 88240
Certified Mail #Z 240 122 241

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 7962
Certified Mail #Z 240 122 242

BTA Oil Producers
104 South Pecos
Midland, Texas 79701
Certified Mail #Z 240 122 243

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF BURK ROYALTY CO. FOR APPROVAL OF A WATERFLOOD PROJECT AND TO QUALIFY THE PROJECT FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO. **Case No.** 12262

APPLICATION

Burk Royalty Co. ("Burk") applies for an order approving a waterflood project, including approval to inject at pressures of up to 1500 psi, and qualifying the project for the recovered oil tax rate. In support thereof, Burk states:

1. Burk is the operator of the Neal Lease, a fee lease covering the NE¼ of Section 35, Township 20 South, Range 34 East, N.M.P.M., containing 160 acres of land.

2. Burk proposes to institute a waterflood project on the subject lease, designated the Neal Lease Waterflood Project. Burk's address is P.O. Box 94903, Wichita Falls, Texas 76308 (Attention: Charles Gibson).

3. Burk proposes to inject water into the Yates-Seven Rivers formation (Lynch Yates-Seven Rivers Pool) through the Neal Well No. 3, located 330 feet from the north line and 993 feet from the east line (Unit A) of Section 35.[1] The project area will comprise the NE¼ of Section 35. A plat outlining the project area, and marking the locations of the initial injection and producing wells, is attached hereto as Exhibit A.

4. Burk requests that the Neal Lease Waterflood Project be qualified for the recovered oil tax rate, pursuant to the Enhanced

[1]The Neal Well No. 3 was approved for salt water disposal in the Lynch Yates-Seven Rivers Pool by Commission Order No. R-4283.

Oil Recovery Act (L. 1992, Ch. 38) and Division Rule 30. Project data includes:

(a) Number of initial producing wells: 3.

(b) Number of initial injection wells: 1.

(c) Capital cost of additional facilities: $0.00.

(d) Estimated total project cost: $0.00.

(e) Anticipated injection commencement date: November 1, 1999.

(f) Type of fluid injected: Produced water.

(g) Anticipated injection volumes: 750 BWPD maximum.

5. A Form C-108 for the injection well and project is attached hereto as Exhibit B.

6. Water will be injected at pressures of up to 1500 psi, which is in excess of 0.2 psi/foot of depth, and Burk requests approval thereof.

WHEREFORE, Burk requests that the Division approve the injection application and the Neal Lease Waterflood Project, including permission to inject at pressures of up to 1500 psi, qualify the project as an enhanced oil recovery project, and certify the project for the recovered oil tax rate.

Respectfully submitted,

James Bruce
P.O. Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043

Attorney for Burk Royalty Co.

VERIFICATION

STATE OF TEXAS)
)
COUNTY OF Wichita)

Charles Gibson, being duly sworn upon his oath, deposes and states that: He is a petroleum engineer employed by Burk Royalty Co., he is familiar with the matters set forth in the foregoing Application, and the statements therein are true and correct to the best of his knowledge.

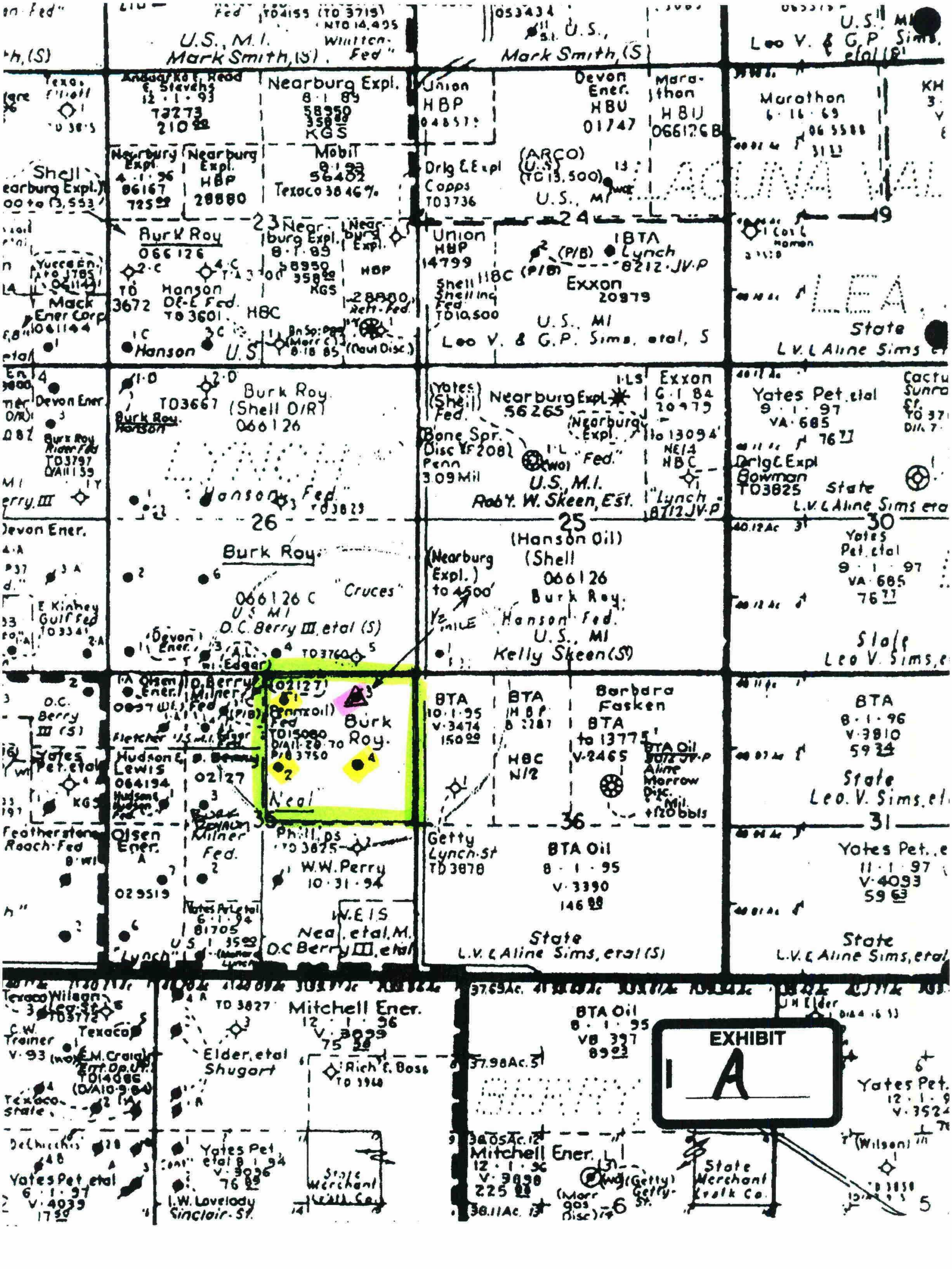
Charles Gibson

SUBSCRIBED AND SWORN TO before me this 14th day of September, 1999 by Charles Gibson.

Tammie Lewis
Notary Public

My Commission Expires:
3-7-2000

TAMMIE R. LEWIS
NOTARY PUBLIC
STATE OF TEXAS
My Comm. Exp. 03-07-2000


U.S., M.I.
Mark Smith, (S)
Nearburg Expl.
Union HBP
Devon Ener. HBU 01747
Marathon HBU 066126B
Marathon 6-16-69
Shell
Mobil
Texaco 38.46%
(ARCO) (U.S.) (TO 13,500)
Drlg & Expl Capps TD 3736
23
24
19
Burk Roy 066126
Hanson Oil-E Fed.
HBC
Union HBP 14799
BTA
Lynch 8212-JV-P
Exxon 20979
U.S. MI
Leo V. & G.P. Sims, etal, S
LEA
State
L.V. & Aline Sims
Devon Ener.
Burk Roy (Shell O/R) 066126
Hanson Fed.
Nearburg Expl. 56265
Bone Spr. Disc. F 2081
Penn 3.09 Mil
Exxon 6-1-84 20979
U.S. M.I.
Rob't. W. Skeen, Est.
Yates Pet. etal 9-1-97 VA-685 76 77
Drlg & Expl Bowman TD 3825
State
L.V. & Aline Sims etal
26
25
30
(Hanson Oil) (Shell 066126
Burk Roy
066126 C
"Cruces"
U.S. MI
O.C. Berry III, etal (S)
(Nearburg Expl.) to 4500'
1/2 MILE
Hanson Fed.
U.S., MI
Kelly Skeen (S)
State
Leo V. Sims, etal
Burk Roy
Neal
BTA 10-1-95 V-3474 150 00
BTA HBP
Barbara Fasken
BTA to 13775'
V-2465
BTA Oil 8012 JV-P
Aline Morrow Disc.
HBC N/2
BTA 8-1-96 V-3810 59 34
State
Leo V. Sims, etal
35
36
31
Phillips TD 3875
W.W. Perry 10-31-94
Getty Lynch St. TD 3878
BTA Oil 8-1-95 V-3390 146 88
Yates Pet. 11-1-97 V-4093 59 63
Neal etal, M.
O.C. Berry III, etal
State
L.V. & Aline Sims, etal (S)
State
L.V. & Aline Sims, etal
Mitchell Ener. 12-1-96 V-3899 75 38
Elder, etal Shugart
Rich & Boss
BTA Oil 8-1-95 VB 397 89 03
Texaco Wilson
C.W. Trainer
Texaco State
Yates Pet. etal 8-1-94 V-3036 76 85
Yates Pet. etal 6-1-97 V-4039 17 50
L.W. Lovelady Sinclair St.
Mitchell Ener. 12-1-96 V-3898 225 00
State Merchant Livestk Co.
Yates Pet.
EXHIBIT A

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Neal #3
Case 12262

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [ ] no

II. Operator: Burk Royalty Co.

Address: P. O. Box BRC, Wichita Falls, Texas 76307

Contact party: Charles Gibson Phone: 940/322-5421

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [ ] yes [X] no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reve[illegible].

EXHIBIT B

XIV. Certification

I hereby certify that the information submitted with this applicati[illegible]ct to the best of my knowledge and belief.

Name: Charles Gibson Title Petroleum Engineer

Signature: _____ Date: 7-7-99

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district offi[illegible]

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this applicatic The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section. Neal #3, 35-T20S,R34E 330' FNL & 990' FEL

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth. 2 3/8" EUE Tubing, plastic coated 3,532'

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used. Totem Tension at 3,532'

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repected.

(1) The name of the injection formation and, if applicable, the field or pool name. Yates Formation - Lynch Pool

(2) The injection interval and whether it is perforated or open-hole. 3,590'-3,610'; 3,703'-3,717' perforated

(3) State if the well was drilled for injection or, if not, the original purpose of the well Well was drilled originally as an oil well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations. N/A

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any. None above, Seven River below 3,740'

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

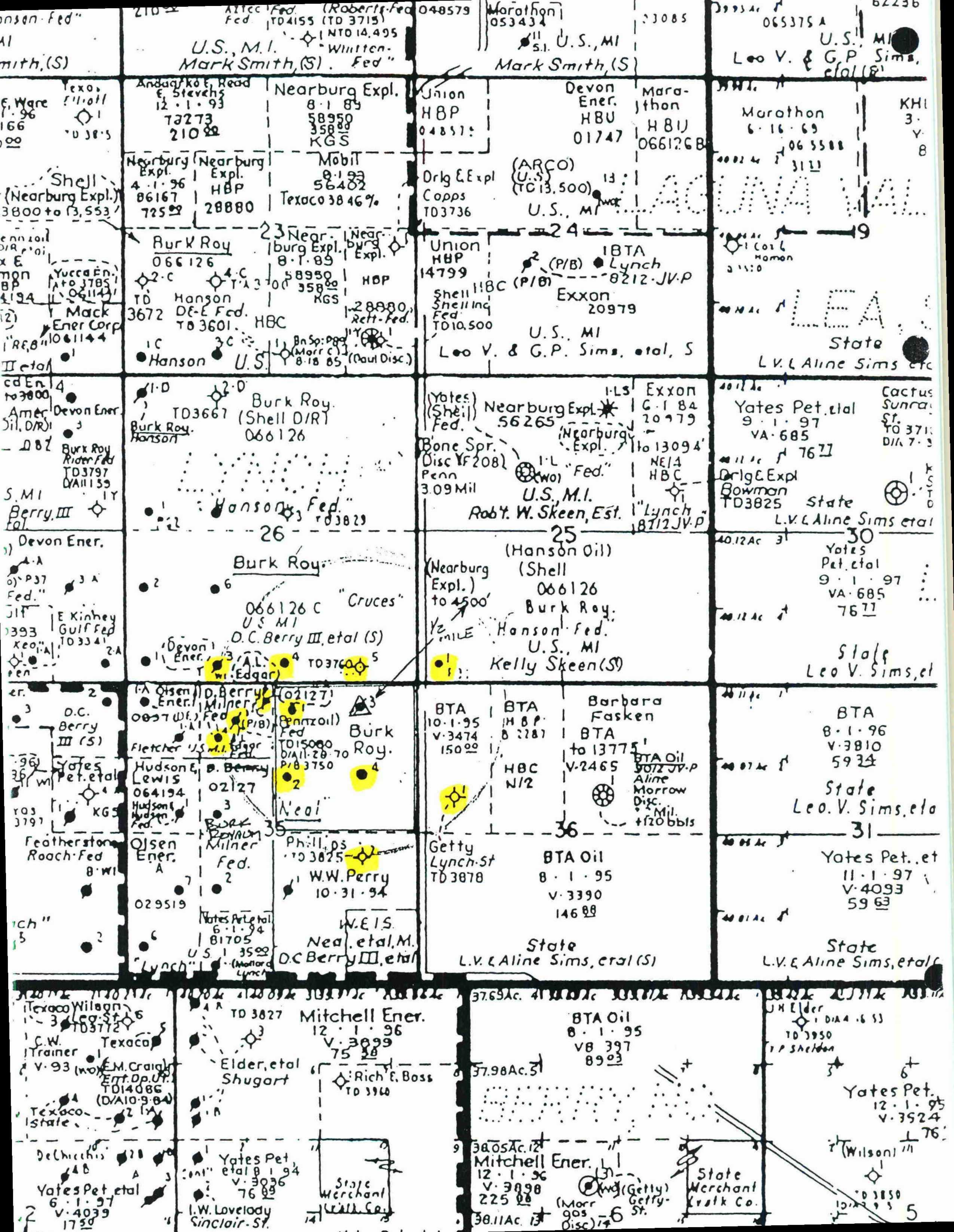
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



U.S., M.I.
Mark Smith, (S)
Marathon
053434
U.S., MI
Leo V. & G.P. Sims, etal (S)
Nearburg Expl.
8 · 1 · 89
58950
358 00
KGS
Devon Ener.
HBU
01747
Marathon
HBU
066126B
Marathon
6 · 16 · 69
Union
HBP
Shell
(Nearburg Expl.)
3800 to 13,553
Nearburg Expl.
4 · 1 · 96
86167
725 00
Nearburg Expl.
HBP
28880
Mobil
Texaco 38.46%
Drlg & Expl
Copps
TD 3736
(ARCO)
(U.S.)
(TD 13,500)
U.S., MI
23
24
19
Burk Roy
066126
Hanson
DE-E Fed.
TD 3601
HBC
Union
HBP
14799
BTA
Lynch
8212 · JV-P
Exxon
20979
U.S., MI
Leo V. & G.P. Sims, etal, S
Mack Ener Corp
061144
Hanson
U.S.
(Paul Disc.)
LEA
State
L.V. & Aline Sims etc
Burk Roy
(Shell D/R)
066126
Devon Ener.
Burk Roy
Rider Fed
TD 3797
D/A 11 · 39
Hanson Fed.
TD 3829
Nearburg Expl.
56265
(Nearburg Expl.)
"Fed."
Exxon
6 · 1 · 84
20979
to 13094'
NE/4
HBC
"Lynch"
8712 · JV-P
Bone Spr. Disc (F208)
Penn
3.09 Mil
U.S., M.I.
Rob't. W. Skeen, Est.
Yates Pet. etal
9 · 1 · 97
VA · 685
76 77
Drlg & Expl
Bowman
TD 3825
State
L.V. & Aline Sims etal
26
25
30
Devon Ener.
Burk Roy
066126 C
U.S. MI
D.C. Berry III, etal (S)
"Cruces"
(Hanson Oil)
(Shell
066126
Burk Roy.
Hanson Fed.
U.S., MI
Kelly Skeen (S)
(Nearburg Expl.)
to 4500'
1/2 MILE
E Kinney Gulf Fed
TD 3341
Yates Pet. etal
9 · 1 · 97
VA · 685
76 77
State
Leo V. Sims, et
D.C. Berry III (S)
Olsen Ener.
D. Berry Milner Fed
(Pennzoil)
Fed
TD 15000
D/A 11 · 28 · 70
P/B 3750
Burk Roy.
Neal
BTA
10 · 1 · 95
V · 3474
150 00
BTA
HBP
BTA
to 13775'
V · 2465
HBC
N/2
Barbara Fasken
BTA Oil
8012 JV-P
Aline Morrow Disc.
BTA
8 · 1 · 96
V · 3810
59 34
State
Leo. V. Sims, eta
Yates Pet. etal
KGS
Hudson & Lewis
064194
02127
Fletcher U.S. M.I.
35
36
31
Featherstone Roach Fed
Olsen Ener.
029519
Milner Fed.
Phillips
TD 3825
W.W. Perry
10 · 31 · 94
Getty
Lynch St
TD 3878
BTA Oil
8 · 1 · 95
V · 3390
146 88
Yates Pet.. et
11 · 1 · 97
V · 4093
59 63
Yates Pet etal
6 · 1 · 94
81705
35 00
W.E.I.S.
Neal etal, M.
D.C. Berry III, etal
State
L.V. & Aline Sims, etal (S)
State
L.V. & Aline Sims, etal
Texaco Wilson Leo St
TD 3772
C.W. Trainer
V · 93
Texaco
E.M. Craig
Ent. Op. Ut.
TD 14086
(D/A 10 · 9 · 84)
Texaco State
TD 3827
Mitchell Ener.
12 · 1 · 96
V · 3899
75 28
Elder, etal
Shugart
Rich & Boss
TD 3960
37.69 Ac.
37.98 Ac.
BTA Oil
8 · 1 · 95
VB 397
89 03
Yates Pet.
12 · 1 · 95
V · 3524
76
Yates Pet etal
6 · 1 · 97
V · 4039
175 00
Yates Pet
etal 8 · 1 · 94
V · 3036
76 88
State
Merchant Livestock Co.
I.W. Lovelady
Sinclair St.
38.05 Ac.
38.11 Ac.
Mitchell Ener.
12 · 1 · 96
V · 3898
225 00
(Getty)
Getty St.
State
Merchant Livestock Co.
(Wilson)
(Morr gas Disc)

NEAL #3 AREA OF REVIEW

WELL NAME	WELL TYPE	DATE DRILLED	LOCATION	DEPTH	RECORD OF COMPLETION
Cruces #3	Oil	7-18-57	Sec. 26, 330' FSL & 1,655' FWL	3,730'	Attached
Cruces #4	Oil	7-15-59	Sec. 26, 330' FSL & 2,316' FEL	3,750'	Attached
Cruces #5	D&A	11-7-59	Sec. 26, 330' FSL & 992' FEL	3,760'	--
Hanson Fed #1	D&A	6-23-59	Sec. 25, 330" FSL & FWL	3,863'	--
Federal "C" #1	P&A	5-18-74	Sec. 35, 660' FNL & 1,980' FWL	15,080'	Attached
Milner #4	Oil	1-26-54	Sec. 35, 990' FNL & 1,650' FWL	3,736'	Attached
Neal #1	Oil	4-5-59	Sec. 35, 467' FNL & 2,315' FEL	3,752'	Attached
Neal #2	Oil	7-15-59	Sec. 35, 1,650' FNL & 2,316' FEL	3,819'	Attached
Neal #3	Oil	6-9-59	Sec. 35, 330' FNL & 993' FEL	3,805'	Attached
Neal #4	Oil	7-29-59	Sec. 35, 1,650' FNL & 900' FEL	3,822'	Attached
Neal etal #2	D&A	10-28-59	Sec. 35, 2,260' FSL & 992' FEL	3,825'	--
Lynch State #1	D&A	10-13-81	Sec. 36, 1,980' FNL & 660' FWL	3,878'	--

NEAL #3 PROPOSED INJECTION WELL OPERATIONS

1. Proposed Average Daily Rate
   250 barrels water per day

   Maximum Daily Rate
   750 barrels water per day

2. The system is closed.

3. Proposed Average Injection Pressure
   1000#

   Proposed Maximum Injection Pressure
   1500#

4. The source of injection fluid will be Yates Sand (Neal Lease) and Seven Rivers (Milner Lease). Analysis attached.

5. The injection zone is the Yates Sand. The field name is Lynch Field. It is Upper Permian in age. The top of the Yates in the Neal #3 is at 3,590' (136') with a thickness of 34'. There are no underground sources of drinking water below the Yates. Above the Yates, the Quaternary alluvium to a depth of 80' is the only source of groundwater in the area.

6. The well is currently classified as disposal. We do not plan to stimulate the well.

7. The logs are attached.

8. There are no fresh water wells within one mile of the proposed injection well.

9. I have examined public records and find no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

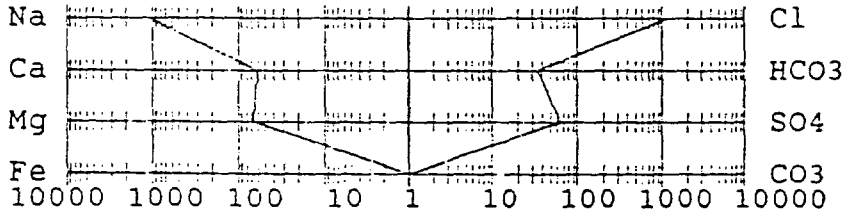
Oil Co. : Burk Royalty
Lease : Cruces
Well No.: # 4
Analysis:

Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

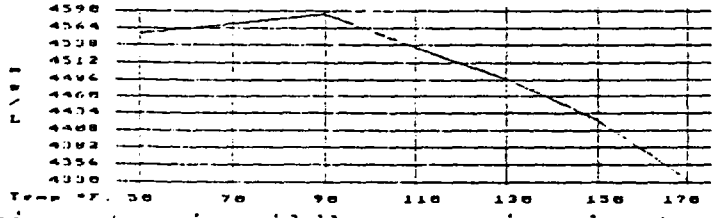
ANALYSIS

1.	pH		7.320		
2.	Specific Gravity 60/60 F.		1.045		
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.933		
		@ 140 F.	+1.853		
	Dissolved Gasses		**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide		800		
5.	Carbon Dioxide		0		
6.	Dissolved Oxygen		Not Determined		
	Cations				
7.	Calcium	(Ca^{++})	1,202	/ 20.1 =	59.80
8.	Magnesium	(Mg^{++})	790	/ 12.2 =	64.75
9.	Sodium	(Na^{+}) (Calculated)	25,294	/ 23.0 =	1,099.74
10.	Barium	(Ba^{++})	Not Determined		
	Anions				
11.	Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate	($CO_3^{=}$)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})	2,055	/ 61.1 =	33.63
14.	Sulfate	($SO_4^{=}$)	3,050	/ 48.8 =	62.50
15.	Chloride	(Cl^{-})	39,991	/ 35.5 =	1,126.51
16.	Total Dissolved Solids		72,382		
17.	Total Iron (Fe)		8	/ 18.2 =	0.44
18.	Total Hardness As $CaCO_3$		6,256		
19.	Resistivity @ 75 F. (Calculated)		0.139 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	33.63	2,726
$CaSO_4$	68.07	26.17	1,781
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	36.33	2,187
$MgCL_2$	47.62	28.42	1,353
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	1,098.09	64,194

*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

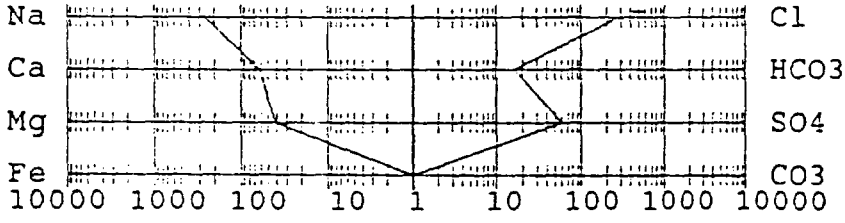
Oil Co. : Burk Royalty
Lease : Milner Federal
Well No.: # 4 SWD
Analysis:

Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

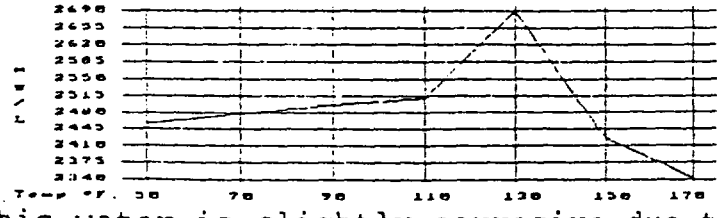
ANALYSIS

1.	pH		6.980		
2.	Specific Gravity 60/60 F.		1.009		
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.539		
		@ 140 F.	+1.449		
	Dissolved Gasses		**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide		350		
5.	Carbon Dioxide		300		
6.	Dissolved Oxygen		0.2		
	Cations				
7.	Calcium (Ca^{++})		1,202	/ 20.1 =	59.80
8.	Magnesium (Mg^{++})		486	/ 12.2 =	39.84
9.	Sodium (Na^{+})	(Calculated)	5,860	/ 23.0 =	254.78
10.	Barium (Ba^{++})		Not Determined		
	Anions				
11.	Hydroxyl (OH^{-})		0	/ 17.0 =	0.00
12.	Carbonate ($CO_3^{=}$)		0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})		952	/ 61.1 =	15.58
14.	Sulfate ($SO_4^{=}$)		2,750	/ 48.8 =	56.35
15.	Chloride (Cl^{-})		9,998	/ 35.5 =	281.63
16.	Total Dissolved Solids		21,248		
17.	Total Iron (Fe)		1	/ 18.2 =	0.03
18.	Total Hardness As $CaCO_3$		5,004		
19.	Resistivity @ 75 F. (Calculated)		0.308 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT. X	*meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	15.58	1,263
$CaSO_4$	68.07	44.22	3,010
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	12.13	730
$MgCL_2$	47.62	27.70	1,319
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	253.93	14,845

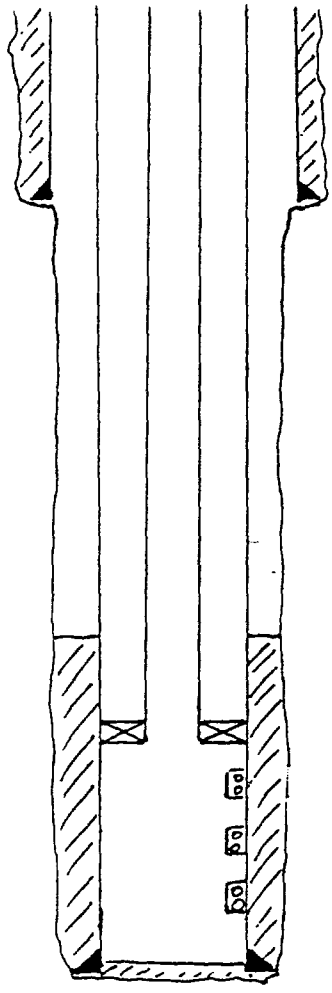
*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

NEAL #3 INJECTION PERMIT APPLICATION
T20S, R34E, SECTION 35
330' FNL, 990' FEL

7-7-99

CHARLES GIBSON



TOP OF CEMENT: SURFACE (CIRCULATED)

8 5/8" CASING CEMENTED @ 190' W/100 SX

TOP OF CEMENT: 3148' (TEMP LOG)
2 3/8" INTERNALLY COATED TBG, TO 3532'
2 3/8" x 5 1/2" TENSION PACKER @ 3532'

5 1/2" CASING CEMENTED @ 3804' W/200 SX
TD: 3805'

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Form C-101
Revised (12/1/55)

NOTICE OF INTENTION TO DRILL

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission. If State Land submit 6 Copies Attach Form C-128 in triplicate to first 3 copies of form C-101

Hobbs New Mexico (Place) June 5, 1959 (Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as

BURK ROYALTY COMPANY (Company or Operator)
Neal (Lease), Well No. 3, in A (Unit). The well is
located 330 feet from the North line and 995 feet from the
East line of Section 35, T. 20, R. 34, NMPM.
(GIVE LOCATION FROM SECTION LINE) Lynch Pool, Lea County

D	C	B	$\mathbf{x}_A$
E	F	G	H
L	K	J	I
M	N	O	P

If State Land the Oil and Gas Lease is No.....
If patented land the owner is Patented Neal
Address.....
We propose to drill well with drilling equipment as follows: Rotary

The status of plugging bond is $10,000 active Blanket

Drilling Contractor Alan Drilling Co.
Wichita Falls, Texas

We intend to complete this well in the Yates formation at an approximate depth of 3850' feet.

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
11"	8-5/8"	24#	N	175'	150 sx circ
7-7/8"	5-1/2"	14#	N	TD 3850'	*

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

* Will use 275 sx or return cement to back past the base of salt by temperature survey

C-128 attached JUN 8 1959

Approved....., 19.....
Except as follows:

OIL CONSERVATION COMMISSION
By ORIGINAL & THREE COPIES SIGNED BY ERNEST E. SERVICE
ENGINEER DISTRICT No. 1

Sincerely yours,
BURK ROYALTY COMPANY (Company or Operator)
By [signature]
Position Agent
Send Communications regarding well to
Name A. J. Whelan 800 Oil & Gas Bldg.
Address Wichita Falls, Texas

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	Address
Burk Royalty Co.	800 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neal	3	A	35	20	34

Date Work Performed	Pool	County
6/9/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- [X] 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.

Ran and set 190' of 8-5/8" csg (seamless) 28# w/100 sx cement circulated

Tested w/600# pressure Tested OK

Witnessed by	Position	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

Approved by John W. Runyan

Title

Date

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

Name

Position Agent
Burk Royalty Company

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	Address
Burk Royalty Company	600 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neal	3	I	35	20	34

Date Work Performed	Pool	County
6/17/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- ☐ Beginning Drilling Operations
- ☒ Casing Test and Cement Job 5-1/2"
- ☐ Other *(Explain)*:
- ☐ Plugging
- ☐ Remedial Work

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

5-1/2" 14# casing set at 3804' w/200 sx cement, cement returned past base of salt by temperature survey, Tested 600# pressure, tested OK

Witnessed by	Position	Company
A. J. Whelan	Drlg Supt.	Same

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

Approved by

Title

Date

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

Name
Agent

Position
Burk Royalty Company

Company

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

(Form C-104)
Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, N. M. 6/30/59
(Place) (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Burk Royalty Co. Neal, Well No. 3, in NE ¼ NE ¼,
(Company or Operator) (Lease)

Unit Letter A, Sec. 35, T. 20, R. 34, NMPM., Lynch Pool

Lea County. Date Spudded 6/9/59 Date Drilling Completed 6/28/59

Elevation 3726 GL Total Depth 3805 PBTD

Top Oil/Gas Pay 3703 Name of Prod. Form. Yates

PRODUCING INTERVAL -

Perforations 3703-3714 w/ 64 shots

Open Hole Depth Casing Shoe 3804 Depth Tubing 3693

OIL WELL TEST -

Natural Prod. Test: 38 bbls.oil, 0 bbls water in 24 hrs, ppng min. Choke Size

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): bbls.oil, bbls water in hrs, min. Choke Size

GAS WELL TEST -

Natural Prod. Test: MCF/Day; Hours flowed Choke Size

Method of Testing (pitot, back pressure, etc.):

Test After Acid or Fracture Treatment: MCF/Day; Hours flowed

Choke Size Method of Testing:

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): None

Casing Press. 708 Tubing Press. - Date first new oil run to tanks 6/28/59

Oil Transporter Texas New Mexico Pipe Line Co.

Gas Transporter Ecno

Please indicate location:

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

330' fr N & 990' fr E

Tubing, Casing and Cementing Record

Size	Feet	Sax
8-5/8"	190	100
5-1/2"	set at 3804'	w/200
2" tbg	at 3693	

Remarks:

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

Approved ....., 19.....

OIL CONSERVATION COMMISSION

By: .....

Title .....

Burk Royalty Company
(Company or Operator)

By: .....
(Signature)

Agent
Title

Send Communications regarding well to:
A. J. Wholen Burk Royalty Co.
Name

600 Oil & Gas Bldg., Wichita Falls, Tex.
Address

DRILLER'S LOG
NEAL # 3
IN LEA COUNTY, NEW MEXICO
6-26-59

Well Commenced: 6-9-59
Well Completed: 6-18-59

0-38'	Surface sand & Shale
38-200'	Sand, Shale, & Lime
200-673'	Shale
673-1265'	Shale & Sand
1265-1350'	Shale
1350-1468'	Shale & Lime Stks.
1468-1501'	Shale
1501-1651'	Shale
1651-1857'	Lime & Shale
1857-1962'	Shale & Lime Stks.
1962-2173'	Shale
2173-2185'	Lime
2185-2292'	Shale
2292-2315'	Shale & Lime Stks.
2315-2406'	Shale - Potash
2406-2413'	Shale - Potash & Lime Stks.
2413-2510'	Shale & Potash
2510-2590'	Salt, Shale, Potash
2590-2601'	Lime & Shale
2601-2896'	Shale & Salt
2896-2957'	Salt & Shale
2957-3008'	Shale & Potash
3008-3202'	Salt & Lime Stks.
3202-3221'	Lime
3221-3225'	Shale & Salt
3225-3280'	Shale
3280-3400'	Salt & Shale
3400-3416'	Anhydrite
3416-3439'	Lime & Anhydrite
3439-3518'	Lime
3518-3528'	Lime
3528-3557'	Lime
3557-3576'	Lime
3576-3606'	Sand
3606-3611'	Coring sand
3611-3805'	Coring sand
3805'	TD

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SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.: --

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 —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER. **Water Disposal**

7. Unit Agreement Name: --

2. Name of Operator: **Burk Royalty Co.**

8. Farm or Lease Name: **NEAL**

3. Address of Operator: **800 Oil & Gas Building, Wichita Falls, Texas 76301**

9. Well No.: **3**

4. Location of Well: UNIT LETTER **A**, **330** FEET FROM THE **North** LINE AND **990** FEET FROM THE **East** LINE, SECTION **35** TOWNSHIP **20** RANGE **34** NMPM.

10. Field and Pool, or Wildcat: **Lynch**

15. Elevation *(Show whether DF, RT, GR, etc.)*: **3729.5 GR**

12. County: **Lea**

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☒	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

Permit to use as disposal well granted March 17, 1972.
Case #4679 Order #R-4283

4-3-74 pulled 143 5/8 rods and layed down, pulled 119 joints 2 3/3 EUE tubing.
Reran 119 joints 2-3/8 EUE plastic coated tubing with Totem tension packer.
Set packer at 3630. Well ready for injection.

4-5-74 Started Injection

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

SIGNED Jon R. Bear TITLE Engineer DATE November 20, 1974

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

LANDOWNER AND LEASEHOLD OPERATORS

LANDOWNER
Dan & Ron Berry
P. O. Box 67
Eunice, New Mexico 88231
Certified Mail #Z 240 122 239

LEASEHOLD OPERATORS
Shell Western Exploration & Production
Box 576
Houston, Texas 77001
Certified Mail #Z 240 122 240

Nearburg Producing Company
1819 North Turner
Hobbs, New Mexico 88240
Certified Mail #Z 240 122 241

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 7962
Certified Mail #Z 240 122 242

BTA Oil Producers
104 South Pecos
Midland, Texas 79701
Certified Mail #Z 240 122 243

OIL CONSERVATION DIV.

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

99 SEP 14 PM 1:12

APPLICATION OF BURK ROYALTY CO. FOR APPROVAL OF A WATERFLOOD PROJECT AND TO QUALIFY THE PROJECT FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO. **Case No.** 12262

APPLICATION

Burk Royalty Co. ("Burk") applies for an order approving a waterflood project, including approval to inject at pressures of up to 1500 psi, and qualifying the project for the recovered oil tax rate. In support thereof, Burk states:

1. Burk is the operator of the Neal Lease, a fee lease covering the NE¼ of Section 35, Township 20 South, Range 34 East, N.M.P.M., containing 160 acres of land.

2. Burk proposes to institute a waterflood project on the subject lease, designated the Neal Lease Waterflood Project. Burk's address is P.O. Box 94903, Wichita Falls, Texas 76308 (Attention: Charles Gibson).

3. Burk proposes to inject water into the Yates-Seven Rivers formation (Lynch Yates-Seven Rivers Pool) through the Neal Well No. 3, located 330 feet from the north line and 993 feet from the east line (Unit A) of Section 35.[1] The project area will comprise the NE¼ of Section 35. A plat outlining the project area, and marking the locations of the initial injection and producing wells, is attached hereto as Exhibit A.

4. Burk requests that the Neal Lease Waterflood Project be qualified for the recovered oil tax rate, pursuant to the Enhanced

---

[1]The Neal Well No. 3 was approved for salt water disposal in the Lynch Yates-Seven Rivers Pool by Commission Order No. R-4283.

Oil Recovery Act (L. 1992, Ch. 38) and Division Rule 30. Project data includes:

(a) Number of initial producing wells: 3.

(b) Number of initial injection wells: 1.

(c) Capital cost of additional facilities: $0.00.

(d) Estimated total project cost: $0.00.

(e) Anticipated injection commencement date: November 1, 1999.

(f) Type of fluid injected: Produced water.

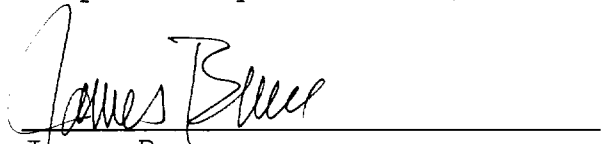
(g) Anticipated injection volumes: 750 BWPD maximum.

5. A Form C-108 for the injection well and project is attached hereto as Exhibit B.

6. Water will be injected at pressures of up to 1500 psi, which is in excess of 0.2 psi/foot of depth, and Burk requests approval thereof.

WHEREFORE, Burk requests that the Division approve the injection application and the Neal Lease Waterflood Project, including permission to inject at pressures of up to 1500 psi, qualify the project as an enhanced oil recovery project, and certify the project for the recovered oil tax rate.

Respectfully submitted,



James Bruce
P.O. Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043

Attorney for Burk Royalty Co.

VERIFICATION

STATE OF TEXAS)
)
COUNTY OF Wichita)

Charles Gibson, being duly sworn upon his oath, deposes and states that: He is a petroleum engineer employed by Burk Royalty Co., he is familiar with the matters set forth in the foregoing Application, and the statements therein are true and correct to the best of his knowledge.

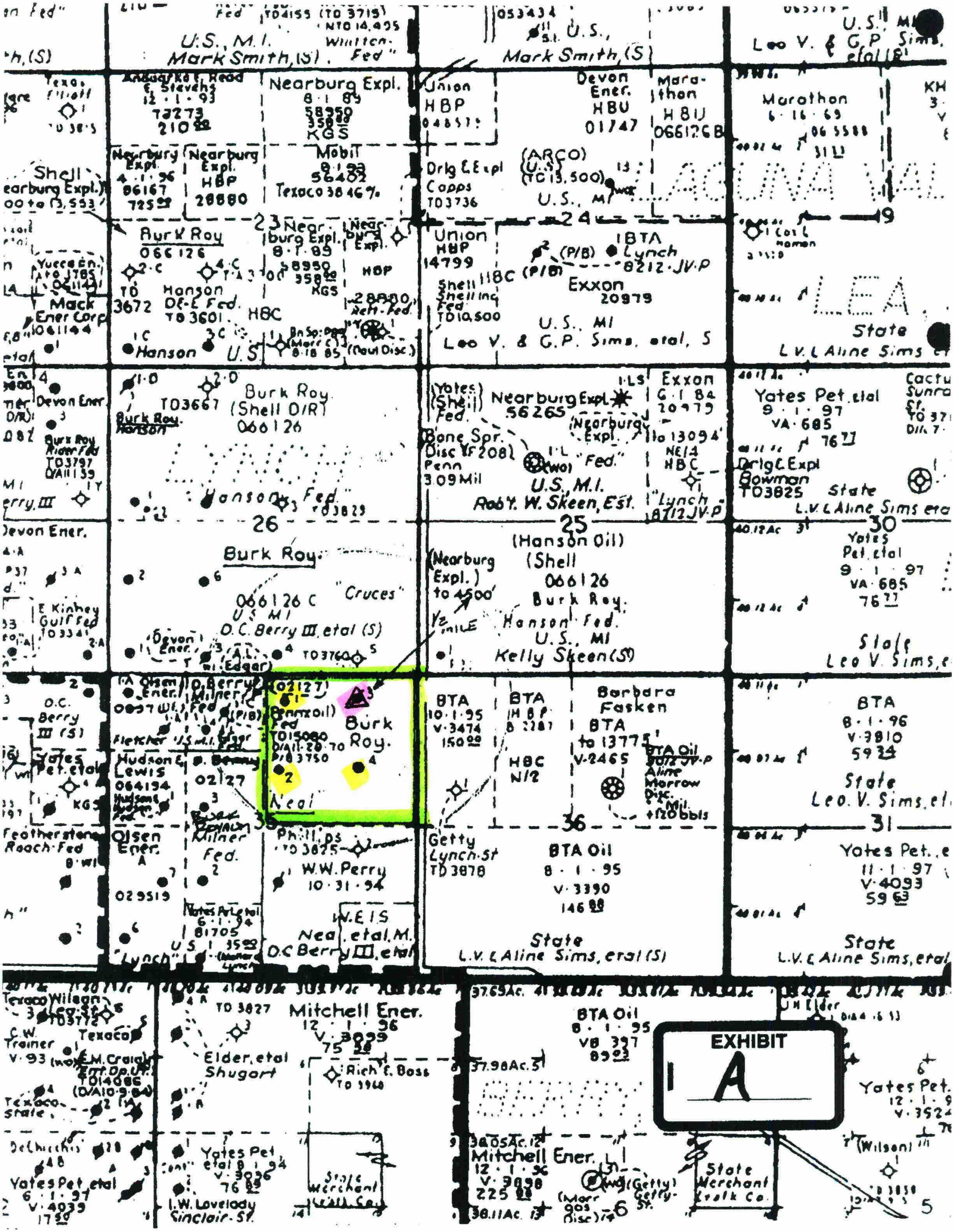
Charles Gibson

SUBSCRIBED AND SWORN TO before me this 14th day of September, 1999 by Charles Gibson.

Tammie Lewis
Notary Public

My Commission Expires:
3-7-2000

TAMMIE R. LEWIS
NOTARY PUBLIC
STATE OF TEXAS
My Comm. Exp. 03-07-2000


U.S., M.I.
Mark Smith, (S)
Nearburg Expl.
Devon Ener.
Marathon
Mobil
Shell
Texaco 38.46%
Drlg & Expl Capps
(ARCO)
Burk Roy
066126
Hanson
Union HBP 14799
Exxon
Lynch
U.S. MI
Leo V. & G.P. Sims, etal, S
State
L.V. & Aline Sims
Yates Pet. etal
Burk Roy (Shell O/R)
Hanson Fed.
Bone Spr. Disc
U.S. M.I.
Rob't W. Skeen, Est.
Drlg & Expl Bowman
Devon Ener.
Burk Roy
066126 C
"Cruces"
O.C. Berry III, etal (S)
(Hanson Oil)
(Shell
066126
Burk Roy
Hanson Fed.
Kelly Skeen (S)
Leo V. Sims
Burk Roy
Neal
BTA
Barbara Fasken
BTA Oil
Morrow Disc.
Leo V. Sims, et.
Featherstone Roach-Fed
Olsen Ener.
Milner Fed.
Phillips
W.W. Perry
Getty Lynch St
BTA Oil
Yates Pet.
State
L.V. & Aline Sims, etal (S)
L.V. & Aline Sims, etal
Mitchell Ener.
BTA Oil
Texaco
Elder, etal Shugart
Rich & Boss
EXHIBIT
A
Yates Pet.
Yates Pet etal
State Merchant
Mitchell Ener.
L.W. Lovelady Sinclair-St.
Yates Pet. etal
State Merchant

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Neal #3

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: Burk Royalty Co.

Address: P. O. Box BRC, Wichita Falls, Texas 76307

Contact party: Charles Gibson Phone: 940/322-5421

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the rev[illegible]rm.

EXHIBIT B

XIV. Certification

I hereby certify that the information submitted with this applica[illegible]rect to the best of my knowledge and belief.

Name: Charles Gibson Title Petroleum Engineer

Signature: _____ Date: 7-7-99

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this applicatic The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section. Neal #3, 35-T20S,R34E 330' FNL & 990' FEL

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth. 2 3/8" EUE Tubing, plastic coated 3,532'

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used. Totem Tension at 3,532'

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repected.

(1) The name of the injection formation and, if applicable, the field or pool name. Yates Formation - Lynch Pool

(2) The injection interval and whether it is perforated or open-hole. 3,590'-3,610'; 3,703'-3,717' perforated

(3) State if the well was drilled for injection or, if not, the original purpose of the well Well was drilled originally as an oil well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations. N/A

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any. None above, Seven River below 3,740'

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

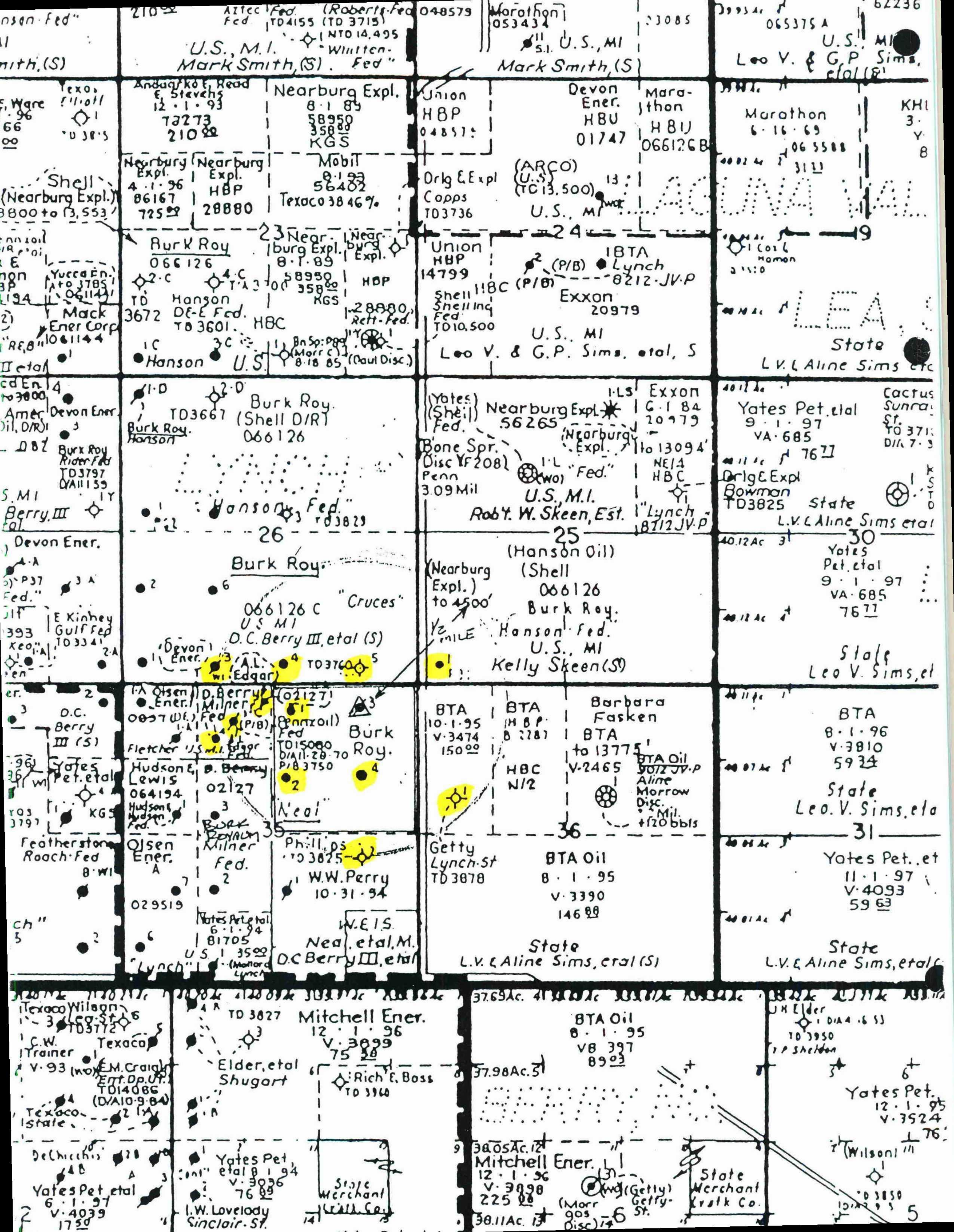
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



U.S., M.I.
Mark Smith, (S)
U.S., MI
Mark Smith, (S)
Leo V. & G.P. Sims, etal (S)
Marathon
053434
Nearburg Expl.
8 · 1 · 89
58950
358 00
KGS
Union
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Devon
Ener.
HBU
01747
Marathon
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066126B
Marathon
6 · 16 · 69
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(Nearburg Expl.)
Nearburg Expl.
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56402
Texaco 38.46%
Drlg & Expl
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(U.S.)
(TC 13,500)
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23
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Burk Roy
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Nearburg Expl.
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Ener Corp
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Shell Inc
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IBTA
Lynch
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Exxon
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Leo V. & G.P. Sims, etal, S
LEA
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L.V. & Aline Sims etc
Devon Ener.
Burk Roy
Rider Fed
TD 3797
Burk Roy
(Shell O/R)
066126
TD 3667
Burk Roy
Hanson
Hanson Fed.
TD 3829
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Yates
Shell
Fed.
Nearburg Expl.
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"Fed."
to 13094'
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Rob't. W. Skeen, Est.
"Lynch
8212 JV-P
Yates Pet. etal
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Drlg & Expl
Bowman
TD 3825
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L.V. & Aline Sims etal
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Sunray
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30
Devon Ener.
E Kinney
Gulf Fed
TD 3341
Burk Roy
066126 C
U.S. MI
D.C. Berry III, etal (S)
"Cruces"
Devon Ener.
A.L. Edgar
TD 3760
(Nearburg Expl.)
to 4500'
1/2 MILE
(Hanson Oil)
(Shell)
066126
Burk Roy
Hanson Fed.
U.S., MI
Kelly Skeen (S)
Yates
Pet. etal
9 · 1 · 97
VA · 685
76 77
State
Leo V. Sims, etal
D.C.
Berry
III (S)
Olsen
Ener.
D. Berry
Milner
Fed
Fletcher U.S. M.I. Edgar
(02127)
(Pennzoil)
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TD 15080
D/A 11-28-70
P/B 3750
Burk
Roy.
Yates
Pet. etal
Hudson & Lewis
064194
Hudson & Hudson
Fed.
B. Berry
02127
Neal
35
BTA
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V · 3474
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HBP
HBC
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Barbara
Fasken
BTA
to 13775'
V · 2465
BTA Oil
8012 JV-P
Aline
Morrow
Disc.
Mil.
+120 bbls
36
BTA
8 · 1 · 96
V · 3810
59 34
State
Leo. V. Sims, etal
31
Featherstone
Roach · Fed
Olsen
Ener.
Burk
Royalty
Milner
Fed.
029519
Phillips
TD 3825
W.W. Perry
10 · 31 · 94
Getty
Lynch · St
TD 3878
BTA Oil
8 · 1 · 95
V · 3390
146 88
Yates Pet. etal
11 · 1 · 97
V · 4093
59 63
Yates Pet etal
6 · 1 · 94
81705
U.S.
"Lynch"
W.E.I.S.
Neal etal, M.
D.C Berry III, etal
State
L.V. & Aline Sims, etal (S)
State
L.V. & Aline Sims, etal (S)
Texaco Wilson
Leo · St
TD 3772
C.W.
Trainer
V · 93
Texaco
E.M. Craig
Ent. Op. Ut.
TD 14086
(D/A 10-9-84)
Texaco
State
TD 3827
Mitchell Ener.
12 · 1 · 96
V · 3899
75 58
Elder, etal
Shugart
Rich & Boss
TD 3960
37.69 Ac.
37.98 Ac.
BTA Oil
8 · 1 · 95
VB 397
89 03
Elder
TD 3950
Yates Pet.
12 · 1 · 95
V · 3524
76
Yates Pet etal
6 · 1 · 97
V · 4039
17 50
Yates Pet
etal 8 · 1 · 94
V · 3036
76 88
I.W. Lovelady
Sinclair · St.
State
Merchant
Livest. Co.
38.05 Ac.
Mitchell Ener.
12 · 1 · 96
V · 3898
225 00
(Morr gas Disc)
(Getty)
Getty
St.
State
Merchant
Livestk Co.
(Wilson)
38.11 Ac.
6
5

NEAL #3 AREA OF REVIEW

WELL NAME	WELL TYPE	DATE DRILLED	LOCATION	DEPTH	RECORD OF COMPLETION
Cruces #3	Oil	7-18-57	Sec. 26, 330' FSL & 1,655' FWL	3,730'	Attached
Cruces #4	Oil	7-15-59	Sec. 26, 330' FSL & 2,316' FEL	3,750'	Attached
Cruces #5	D&A	11-7-59	Sec. 26, 330' FSL & 992' FEL	3,760'	--
Hanson Fed #1	D&A	6-23-59	Sec. 25, 330" FSL & FWL	3,863'	--
Federal "C" #1	P&A	5-18-74	Sec. 35, 660' FNL & 1,980' FWL	15,080'	Attached
Milner #4	Oil	1-26-54	Sec. 35, 990' FNL & 1,650' FWL	3,736'	Attached
Neal #1	Oil	4-5-59	Sec. 35, 467' FNL & 2,315' FEL	3,752'	Attached
Neal #2	Oil	7-15-59	Sec. 35, 1,650' FNL & 2,316' FEL	3,819'	Attached
Neal #3	Oil	6-9-59	Sec. 35, 330' FNL & 993' FEL	3,805'	Attached
Neal #4	Oil	7-29-59	Sec. 35, 1,650' FNL & 900' FEL	3,822'	Attached
Neal etal #2	D&A	10-28-59	Sec. 35, 2,260' FSL & 992' FEL	3,825'	--
Lynch State #1	D&A	10-13-81	Sec. 36, 1,980' FNL & 660' FWL	3,878'	--

NEAL #3 PROPOSED INJECTION WELL OPERATIONS

1. Proposed Average Daily Rate
   250 barrels water per day

   Maximum Daily Rate
   750 barrels water per day

2. The system is closed.

3. Proposed Average Injection Pressure
   1000#

   Proposed Maximum Injection Pressure
   1500#

4. The source of injection fluid will be Yates Sand (Neal Lease) and Seven Rivers (Milner Lease). Analysis attached.

5. The injection zone is the Yates Sand. The field name is Lynch Field. It is Upper Permian in age. The top of the Yates in the Neal #3 is at 3,590' (136') with a thickness of 34'. There are no underground sources of drinking water below the Yates. Above the Yates, the Quaternary alluvium to a depth of 80' is the only source of groundwater in the area.

6. The well is currently classified as disposal. We do not plan to stimulate the well.

7. The logs are attached.

8. There are no fresh water wells within one mile of the proposed injection well.

9. I have examined public records and find no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Burk Royalty
Lease : Cruces
Well No.: # 4
Analysis:

Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

ANALYSIS

1.	pH		7.320	
2.	Specific Gravity 60/60 F.		1.045	
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.933	
		@ 140 F.	+1.853	

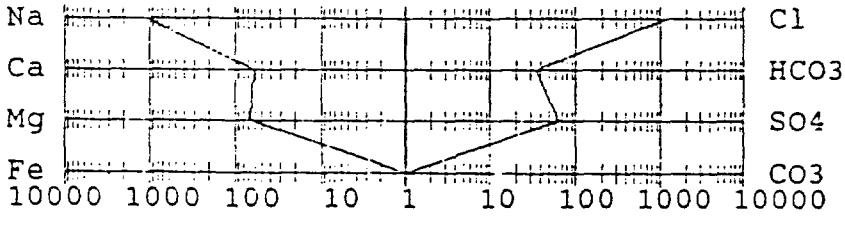
	Dissolved Gasses	MG/L	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide	800		
5.	Carbon Dioxide	0		
6.	Dissolved Oxygen	Not Determined		

	Cations			MG/L	EQ. WT.	*MEQ/L
7.	Calcium	(Ca^{++})		1,202	/ 20.1 =	59.80
8.	Magnesium	(Mg^{++})		790	/ 12.2 =	64.75
9.	Sodium	(Na^{+})	(Calculated)	25,294	/ 23.0 =	1,099.74
10.	Barium	(Ba^{++})		Not Determined		

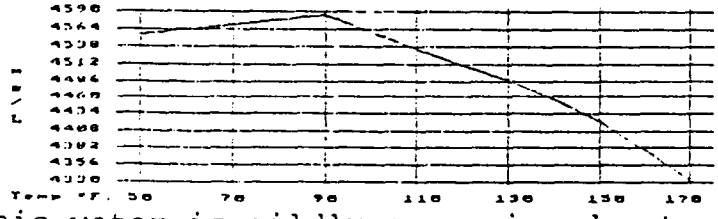
	Anions		MG/L	EQ. WT.	*MEQ/L
11.	Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate	($CO_3^{=}$)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})	2,055	/ 61.1 =	33.63
14.	Sulfate	($SO_4^{=}$)	3,050	/ 48.8 =	62.50
15.	Chloride	(Cl^{-})	39,991	/ 35.5 =	1,126.51

16.	Total Dissolved Solids	72,382		
17.	Total Iron (Fe)	8	/ 18.2 =	0.44
18.	Total Hardness As $CaCO_3$	6,256		
19.	Resistivity @ 75 F. (Calculated)	0.139 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	33.63	2,726
$CaSO_4$	68.07	26.17	1,781
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	36.33	2,187
$MgCL_2$	47.62	28.42	1,353
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	1,098.09	64,194

*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

H & H Chemical Enterprises

WATER ANALYSIS REPORT

SAMPLE

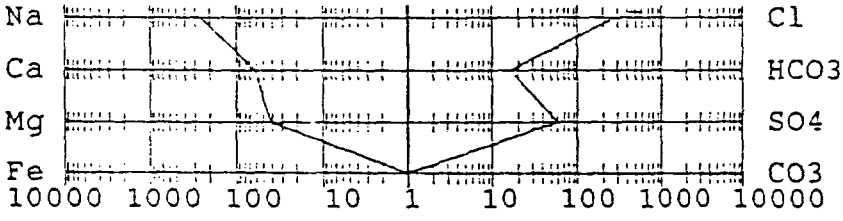
Oil Co. : Burk Royalty
Lease : Milner Federal
Well No.: # 4 SWD
Analysis:

Sample Loc. : Wellhead
Date Sampled : 13-September-1994
Attention :

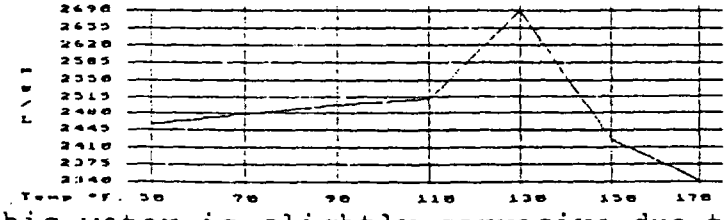
ANALYSIS

1.	pH			6.980	
2.	Specific Gravity 60/60 F.			1.009	
3.	$CaCO_3$ Saturation Index	@ 80 F.		+0.539	
		@ 140 F.		+1.449	
	Dissolved Gasses			**MG/L**	**EQ. WT.** ***MEQ/L**
4.	Hydrogen Sulfide			350	
5.	Carbon Dioxide			300	
6.	Dissolved Oxygen			0.2	
	Cations				
7.	Calcium	(Ca^{++})		1,202	/ 20.1 = 59.80
8.	Magnesium	(Mg^{++})		486	/ 12.2 = 39.84
9.	Sodium	(Na^{+})	(Calculated)	5,860	/ 23.0 = 254.78
10.	Barium	(Ba^{++})		Not Determined	
	Anions				
11.	Hydroxyl	(OH^{-})		0	/ 17.0 = 0.00
12.	Carbonate	($CO_3^{=}$)		0	/ 30.0 = 0.00
13.	Bicarbonate	(HCO_3^{-})		952	/ 61.1 = 15.58
14.	Sulfate	($SO_4^{=}$)		2,750	/ 48.8 = 56.35
15.	Chloride	(Cl^{-})		9,998	/ 35.5 = 281.63
16.	Total Dissolved Solids			21,248	
17.	Total Iron (Fe)			1	/ 18.2 = 0.03
18.	Total Hardness As $CaCO_3$			5,004	
19.	Resistivity @ 75 F. (Calculated)			0.308 /cm.	

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT. X	*meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	15.58	1,263
$CaSO_4$	68.07	44.22	3,010
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	12.13	730
$MgCL_2$	47.62	27.70	1,319
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	253.93	14,845

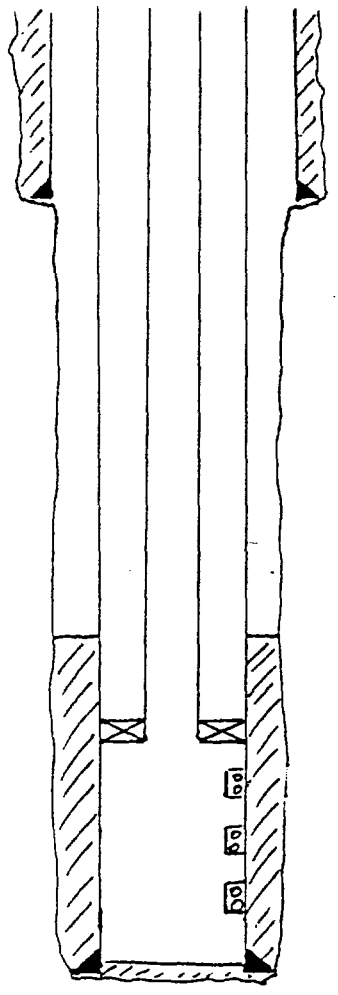
*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S, CO2, Oxygen in solution.

NEAL #3 INJECTION PERMIT APPLICATION
T20S, R34E, SECTION 35
330' FNL, 990' FEL

7-7-99

CHARLES GILES



TOP OF CEMENT: SURFACE (CIRCULATED)

8 5/8" CASING CEMENTED @ 190' W/100 SX

TOP OF CEMENT: 3148' (TEMP LOG)
2 3/8" INTERNALLY COATED TBG TO 3532'
2 3/8" x 5 1/2" TENSION PACKER @ 3532'

5 1/2" CASING CEMENTED @ 3804' W/200 SX
TD: 3805'

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Form C-101
Revised (12/1/55)

NOTICE OF INTENTION TO DRILL

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission. If State Land submit 6 Copies Attach Form C-128 in triplicate to first 3 copies of form C-101

Hobbs New Mexico (Place) June 5, 1959 (Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as

BURK ROYALTY COMPANY (Company or Operator)
Neal (Lease), Well No. 3, in A (Unit). The well is
located 330 feet from the North line and 993 feet from the
East line of Section 35, T. 20, R. 34, NMPM.
(GIVE LOCATION FROM SECTION LINE) Lynch Pool, Lea County

D	C	B	XA
E	F	G	H
L	K	J	I
M	N	O	P

If State Land the Oil and Gas Lease is No.....
If patented land the owner is Patented Neal
Address.....
We propose to drill well with drilling equipment as follows: Rotary
The status of plugging bond is $10,000 active Blanket
Drilling Contractor Alan Drilling Co. Wichita Falls, Texas
We intend to complete this well in the Yates formation at an approximate depth of 3850' feet.

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
11"	8-5/8"	24#	N	175'	150 sx circ
7-7/8"	5-1/2"	14#	N	TD 3850'	*

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

* Will use 275 sx or return cement to back past the base of salt by temperature survey

C-128 attached JUN 8 1959
Approved....., 19.....
Except as follows:

OIL CONSERVATION COMMISSION
By ORIGINAL & THREE COPIES SIGNED BY ELliOT B. ENGINEER
ENGINEER DISTRICT No. 1

Sincerely yours,
BURK ROYALTY COMPANY (Company or Operator)
By [signature]
Position Agent
Send Communications regarding well to
Name A. J. Whelan 800 Oil & Gas Bldg.
Address Wichita Falls, Texas

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	Address
Burk Royalty Co.	800 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neel	3	A	35	20	34

Date Work Performed	Pool	County
6/9/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- [x] 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.

Ran and set 190' of 8-5/8" csg (seamless) 28# w/100 sx cement circulated

Tested w/600# pressure Tested OK

Witnessed by	Position	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

Approved by John W. Runyan

Title

Date

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

Name

Position Agent

Company Burk Royalty 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	Address
Burk Royalty Company	800 Oil & Gas Bldg. Wichita Falls, Tex.

Lease	Well No.	Unit Letter	Section	Township	Range
Neal	9	A	35	20	34

Date Work Performed	Pool	County
6/17/59	Lynch	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

- ☐ Beginning Drilling Operations
- ☒ Casing Test and Cement Job 5-1/2"
- ☐ Other *(Explain)*:
- ☐ Plugging
- ☐ Remedial Work

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

5-1/2" 14# casing set at 3804' w/200 sx cement, cement returned past base of salt by temperature survey, Tested 600# pressure, tested OK

Witnessed by	Position	Company
A. J. Whelan	Drlg Supt.	Sam

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

Approved by

Title

Date

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

Name
Agent

Position
Burk Royalty Company

Company

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

(Form C-104)
Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, N. M. (Place) 6/30/59 (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Burk Royalty Co. (Company or Operator) Neal (Lease), Well No. 3, in SE ¼ SE ¼,

Unit Letter A, Sec. 35, T. 20, R. 34, NMPM., Lynch Pool

Lea County. Date Spudded 6/9/59 Date Drilling Completed 6/28/59

Please indicate location:

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

330' fr N & 990' fr E

Elevation 3726 GL Total Depth 3805 PBTD

Top Oil/Gas Pay 3703 Name of Prod. Form. Yates

PRODUCING INTERVAL -

Perforations 3703-3714 w/ 24 shots

Open Hole Depth Casing Shoe 3804 Depth Tubing 3693

OIL WELL TEST -

Natural Prod. Test: 38 bbls.oil, 0 bbls water in 24 hrs, ppmg min. Choke Size

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): bbls.oil, bbls water in hrs, min. Choke Size

GAS WELL TEST -

Natural Prod. Test: MCF/Day; Hours flowed Choke Size

Method of Testing (pitot, back pressure, etc.):

Test After Acid or Fracture Treatment: MCF/Day; Hours flowed

Choke Size Method of Testing:

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): None

Casing Press. 70# Tubing Press. - Date first new oil run to tanks 6/28/59

Oil Transporter Texas New Mexico Pipe Line Co.

Gas Transporter Eunice

Tubing, Casing and Cementing Record

Size	Feet	Sax
8-5/8"	190	100
5-1/2"	set at 3804'	w/200
2" tbg	at 3693	

Remarks:

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

Approved ....., 19.....

OIL CONSERVATION COMMISSION

By: .....

Title .....

Burk Royalty Company
(Company or Operator)

By: .....
(Signature)

Agent
Title

Send Communications regarding well to:

A. J. Whelan Burk Royalty Co.
Name

600 Oil & Gas Bldg., Wichita Falls, Tex.
Address

DRILLER'S LOG
NEAL # 3
IN LEA COUNTY, NEW MEXICO
6-26-59

Well Commenced: 6-5-59
Well Completed: 6-18-59

0-38'	Surface sand & Shale
38-200'	Sand, Shale, & Lime
200-673'	Shale
673-1265'	Shale & Sand
1265-1350'	Shale
1350-1468'	Shale & Lime Stks.
1468-1501'	Shale
1501-1651'	Shale
1651-1857'	Lime & Shale
1857-1962'	Shale & Lime Stks.
1962-2173'	Shale
2173-2185'	Lime
2185-2292'	Shale
2292-2315'	Shale & Lime Stks.
2315-2406'	Shale - Potash
2406-2413'	Shale - Potash & Lime Stks.
2413-2510'	Shale & Potash
2510-2590'	Salt, Shale, Potash
2590-2601'	Lime & Shale
2601-2896'	Shale & Salt
2896-2957'	Salt & Shale
2957-3008'	Shale & Potash
3008-3202'	Salt & Lime Stks.
3202-3221'	Lime
3221-3225'	Shale & Salt
3225-3280'	Shale
3280-3400'	Salt & Shale
3400-3416'	Anhydrite
3416-3439'	Lime & Anhydrite
3439-3518'	Lime
3518-3528'	Lime
3528-3557'	Lime
3557-3576'	Lime
3576-3606'	Sand
3606-3611'	Coring sand
3611-3805'	Coring sand
3805'	TD

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

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.: --

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 —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER. **Water Disposal**

7. Unit Agreement Name: --

2. Name of Operator: **Burk Royalty Co.**

8. Farm or Lease Name: **NEAL**

3. Address of Operator: **800 Oil & Gas Building, Wichita Falls, Texas 76301**

9. Well No.: **3**

4. Location of Well: UNIT LETTER **A**, **330** FEET FROM THE **North** LINE AND **990** FEET FROM THE **East** LINE, SECTION **35** TOWNSHIP **20** RANGE **34** NMPM.

10. Field and Pool, or Wildcat: **Lynch**

15. Elevation (*Show whether DF, RT, GR, etc.*): **3729.5 GR**

12. County: **Lea**

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☒	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

Permit to use as disposal well granted March 17, 1972.
Case #4679 Order #R-4283

4-3-74 pulled 143 5/8 rods and layed down, pulled 119 joints 2 3/3 EUE tubing.
Reran 119 joints 2-3/8 EUE plastic coated tubing with Totem tension packer.
Set packer at 3630. Well ready for injection.

4-5-74 Started Injection

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

SIGNED Jon R. Bear TITLE Engineer DATE November 20, 1974

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

LANDOWNER AND LEASEHOLD OPERATORS

LANDOWNER
Dan & Ron Berry
P. O. Box 67
Eunice, New Mexico 88231
Certified Mail #Z 240 122 239

LEASEHOLD OPERATORS
Shell Western Exploration & Production
Box 576
Houston, Texas 77001
Certified Mail #Z 240 122 240

Nearburg Producing Company
1819 North Turner
Hobbs, New Mexico 88240
Certified Mail #Z 240 122 241

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 7962
Certified Mail #Z 240 122 242

BTA Oil Producers
104 South Pecos
Midland, Texas 79701
Certified Mail #Z 240 122 243