Initial

Application

Part I

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
05/06/2019		WFX	pMAM1913652738

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: Rover Operating, LLC **OGRID Number:** 371484
Well Name: High Lonesome Queen Unit #002 **API:** 30-015-02741 ; 30-015-02749
Pool: High Lonesome; Queen **Pool Code:** 30780

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☒ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☒ Surface owner
G. ☐ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

John Chadwick, COO
Print or Type Name

Signature

04/30/2019
Date

214-234-9115
Phone Number

jchadwick@roverpetro.com
e-mail Address

MAY 06 2019 PM01:27

April 29, 2019

New Mexico Oil & Gas Division
Geological & Engineering Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: C-108 Applications

Mr. Geotze,

Please see the enclosed C-108 applications for administrative approval of High Lonesome Queen #2 (API 30-015-02741) and #6 (30-015-02749). These were originally submitted without the admin approval requirements; however I have updated it to change the applications to such. If you need any additional information, please contact me at swatts@roverpetro.com or 214-234-9115 ext. 1032.

Sincerely,

Sami Watts
Land Assistant

Affidavit of Publication

No. 25079

State of New Mexico

County of Eddy:

Danny Scott Danny Scott

being duly sworn sayes that he is the **Publisher**

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication	April 19, 2019
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	

Subscribed and sworn before me this

19th day of April 2019

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2019

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

Notice of Application for Authorization to Inject
Rover Operating, LLC
17304 Preston Road, Suite 300
Dallas, TX 75252
is applying to the New Mexico Oil & Gas Division for a permit to inject water into a formation productive of oil or gas for secondary recovery.

The applicant proposes to inject fluid into the High Lonesome; Queen Field of the Penrose Sandstone formation into the High Lonesome Queen #002 Well. The proposed injection well is in the NE SW of 16-16S-29E in Eddy County. Lat 32.9199409, Long -104.0819855 (NAD83). Fluid will be injected to the subsurface depth interval from 1849' to 1859' TVD at average of 900 PSIG (1100 PSIG max) and 250 BWPD (300 BWPD max). Any question regarding the application contact Sami Watts at 214-234-9115.

LEGAL AUTHORITY: NM Administrative Code 19.15.26: Objection must be filed with 15 days to the NMOCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505.

Published in the Artesia Daily Press, Artesia, N.M., April 19, 2019 Legal No. 25079.

COPY

October 25, 2018

Delivered Via Certified Mail
7018 1130 0000 4095 4368

To: Mack Energy Corporation
11344 Lovington Hwy
Artesia, NM 88210

RE: Rover Petroleum, LLC.
C-108 Injection Application
High Lonesome Queen Unit #2
Section 16, Township 16S, Range 29E
Eddy County, New Mexico

To Whom It May Concern:

Please be advised that Rover Petroleum, LLC. is filling a C-108 Application to convert the High Lonesome Queen Unit #2, API 30-015-02741 to an injection well. You have been identified as an offset operator in the above referenced lands therefore, requiring notification of this application, a copy is included. Please be advised that any objections must be made in writing to the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days of this notice.

Please do not hesitate to contact us if you have any questions. Thank you for your attention to this matter.

Sincerely,

Sami Watts
Land Assistant

COPY

October 25, 2018

Delivered Via Certified Mail
7018 1130 0000 4095 4351

To: Sellers & Fulton Oil LLC
422 W Main Suite 5
Artesia, NM 88210

RE: Rover Petroleum, LLC.
C-108 Injection Application
High Lonesome Queen Unit #2 & #6
Section 16, Township 16S, Range 29E
Eddy County, New Mexico

To Whom It May Concern:

Please be advised that Rover Petroleum, LLC. is filling a C-108 Application to convert the High Lonesome Queen Unit #2, API 30-015-02741 and #6, API 30-015-2749 to injection wells. You have been identified as an offset operator in the above referenced lands therefore, requiring notification of these application, copies are included. Please be advised that any objections must be made in writing to the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days of this notice.

Please do not hesitate to contact us if you have any questions. Thank you for your attention to this matter.

Sincerely,

Sami Watts
Land Assistant

COPY

October 25, 2018

Delivered Via Certified Mail
7018 1130 0000 4095 4344

To: State of New Mexico
Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

RE: Rover Petroleum, LLC.
C-108 Injection Application
High Lonesome Queen Unit #2 & #6
Section 16, Township 16S, Range 29E
Eddy County, New Mexico

To Whom It May Concern:

Please be advised that Rover Petroleum, LLC. is filling a C-108 Application to convert the High Lonesome Queen Unit #2, API 30-015-02741 and #6, API 30-015-2749 to injection wells. You have been identified as a surface owner in the above referenced lands therefore, requiring notification of this application. Please be advised that any objections must be made in writing to the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days of this notice.

Please do not hesitate to contact us if you have any questions. Thank you for your attention to this matter.

Sincerely,

Sami Watts
Land Assistant

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ✓ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? ✓ Yes _____ No

II. OPERATOR: Rover Petroleum Operating, LLC

ADDRESS: 17304 Preston Road, Suite 300, Dallas, TX 75252

CONTACT PARTY: Sami Watts PHONE: 214-234-9115 ext 1032

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: R-13864

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: Sami Watts TITLE: Land Assistant

SIGNATURE: Sami Watts DATE: April 18, 2019

E-MAIL ADDRESS: swatts@roverpetro.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: Sumbitted Oct 29, 2018, reapplying for Administrative Approval

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

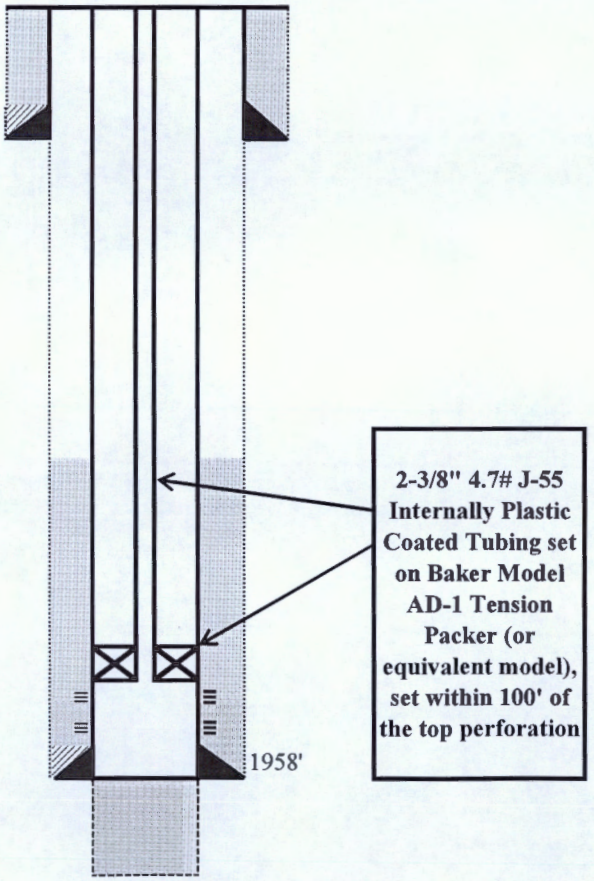
Side 1

OPERATOR: **ROVER OPERATING, LLC**

WELL NAME & NUMBER: **HIGH LONESOME QUEEN UNIT #2**

WELL LOCATION:	**1980' FNL & 1980' FWL**	**K**	**16**	**16S**	**29E**
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: **12-1/4"** Casing Size: **8-5/8"**

Cemented with: **200** sx. *or* _____ ft^3

Top of Cement: **Surface** Method Determined: **Circulated**

Intermediate Casing

Hole Size: **N/A** Casing Size: **N/A**

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: **7-7/8"** Casing Size: **4-1/2"**

Cemented with: **75** sx. *or* _____ ft^3

Top of Cement: **1563'** Method Determined: **Calc'd (25% SF)**

Total Depth: **1958'**

Injection Inverval

1849' feet to **1859' (PERFORATED)**

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: **2-3/8"** Lining Material: **IPC-1505**

Type of Packer: **Baker AD-1 (or equivilant)**

Packer Setting Depth: **+/- 1800'**

Other Type of Tubing/Casing Seal (if applicable): **N/A**

Additional Data

1. Is this a new well drilled for injection? _____ Yes **x** No

   If no, for what purpose was the well originally drilled? **Primary oil production**

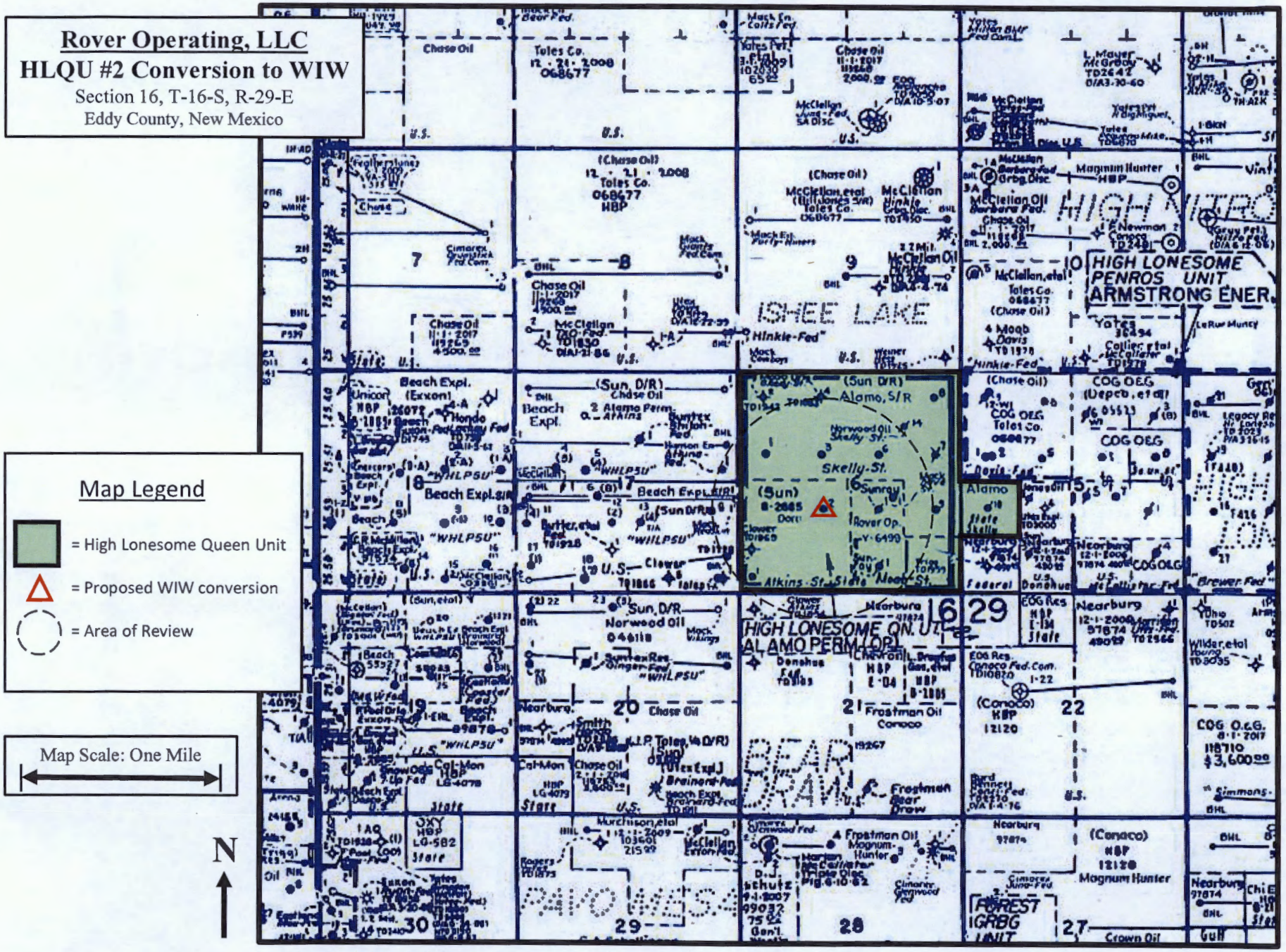
2. Name of the Injection Formation: **Penrose Sandstone**
3. Name of Field or Pool (if applicable): **High Lonesome; Queen [30780]**
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. **N/A**
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: **San Andres (1,300' above sea level), Glorieta (200' above sea level), Abo (2,150' below sea level), Wolfcamp (3,450' below sea level)**

Rover Operating, LLC

HLQU #2 Conversion to WIW

Section 16, T-16-S, R-29-E

Eddy County, New Mexico



Rover Petroleum, LLC: High Lonesome Queen Unit #2 - Form C-108 Application

VI. Tabulation of Data on All Wells of Public Record Within the Area of Review Which Penetrate the Proposed Injection Zone

					Location							Surface Casing					Production Casing				
No.	Well Name	Well No.	API No.	Operator	UL	Sec, Twp, Rge	Footage Calls	Well Type	Well Status	Spud Date	Total Depth	Hole Size	Casing Size	Setting Depth	Sacks Cmt	TOC	Hole Size	Casing Size	Setting Depth	Sacks Cmt	TOC
1	HIGH LONESOME QUEEN UNIT #002	2	30-015-02741	ROVER OPERATING, LLC	K	S:16, T:16S, R: 29E	1980 FSL, 1980 FWL	OIL	Active	3/14/1959	3120'	10-1/4"	8-5/8"	395'	200	Surface	7-7/8"	4-1/2"	1958'	76	1584' (calc)
2	ATKINS FEDERAL #001	1	30-015-02751	ROVER OPERATING, LLC	H	S:17, T:16S, R: 29E	2310 FNL, 330 FEL	OIL	Active	4/11/1956	1825'	12-1/4"	8-5/8"	450'	100	Surface	7-7/8"	5-1/2"	1825'	100	1215' (calc)
3	SKELLY-STATE #004	4	30-015-02745	MOAB DRILLING CO	C	S:16, T:16S, R: 29E	660 FNL, 1980 FWL	PLUGOIL	DRY	7/7/1955	1883'	12-1/4"	8-5/8"	340'	150	Surface	7-7/8"	5-1/2"	1782'	100	1136' (calc)
4	HIGH LONESOME QUEEN UNIT #003	3	30-015-02736	ROVER OPERATING, LLC	E	S:16, T:16S, R: 29E	1980 FNL, 660 FWL	OIL	Active	1/31/1955	1831'	12-1/4"	9-5/8"	200'	100	Surface	6-3/4"	5-1/2"	1750'	50	1380'
5	HIGH LONESOME QUEEN UNIT #004	4	30-015-02744	ROVER OPERATING, LLC	F	S:16, T:16S, R: 29E	1980 FNL, 1980 FWL	OIL	Active	6/13/1955	1870'	12-1/4"	8-5/8"	351'	150	Surface	7-7/8"	5-1/2"	1745'	100	1099' (calc)
6	SKELLY STATE #014	14	30-015-05903	NORWOOD OIL CORP	B	S:16, T:16S, R: 29E	1310 FNL, 1330 FEL	INJECT	P&A	4/1/1957	1920'	12-1/4"	8-5/8"	365'	200	Surface	6-3/4"	4-1/2"	1918'	500	Surface
7	SKELLY STATE #006	6	30-015-02746	ALAMO PERMIAN RESOURCES, LLC	G	S:16, T:16S, R: 29E	1980 FNL, 1980 FEL	PLUGOIL	P&A	7/26/1955	1893'	12-1/4"	8-5/8"	333'	200	Surface	7-7/8"	5-1/2"	1803'	100	1157 (calc)
8	SKELLY-STATE #024	24	30-015-05902	NORWOOD OIL CORP	G	S:16, T:16S, R: 29E	2630 FNL, 1330 FEL	INJECT	P&A	5/23/1957	1914'	12-1/4"	8-5/8"	131'	75	Surface	7-5/8"	4-1/2"	1911'	570	Surface
9	SKELLY-STATE #025	25	30-015-02750	NORWOOD OIL CORP	F	S:16, T:16S, R: 29E	2630 FNL, 2630 FWL	INJECT	P&A	2/21/1959	1933'	12-1/4"	8-5/8"	179'	100	Surface	6-3/4"	4-1/2"	1933'	270	Surface
10	DOVE STATE #001	1	30-015-34157	SELLERS&FULTON OIL LLC	J	S:16, T:16S, R: 29E	2310 FSL, 1650 FEL	OIL	Active	7/8/2005	4570'	17-1/2"	13-3/8"	313'	375	Surface	7-7/8"	5-1/2"	4557'	1455	Surface
11	MOAB-STATE #001	1	30-015-02738	SUN OIL CO.	J	S:16, T:16S, R: 29E	1980 FSL, 1980 FEL	PLUGOIL	P&A	8/26/1955	1914'	12-1/4"	8-5/8"	400'	75	Surface	7-7/8"	5-1/2"	1864'	100	1218' (calc)
12	ILES FEDERAL #006	6	30-015-02756	BEACH EXPLORATION INC	I	S:17, T:16S, R: 29E	1980 FSL, 660 FEL	PLUGOIL	P&A	3/19/1957	1825'	12-1/4"	8-5/8"	315'	150	Surface	7-7/8"	4-1/2"	1825'	800	Surface
13	REDSKINS FEDERAL COM #002	2	30-015-36587	MACK ENERGY CORP	M	S:17, T:16S, R: 29E	330 FSL, 280 FWL	OIL	Active	6/1/2009	11300'	12-1/4"	8-5/8"	381'	980	Surface	6-1/8"	4-1/2"	11300'	1415	Surface
14	HIGH LONESOME QUEEN UNIT #001	1	30-015-02739	ROVER OPERATING, LLC	M	S:16, T:16S, R: 29E	330 FSL, 330 FWL	OIL	Active	11/17/1939	1845'	10"	8"	342'	50	Surface	8"	7"	1784'	50	1100' (calc)
15	MOAB-STATE #002	2	30-015-02743	SUN OIL CO.	O	S:16, T:16S, R: 29E	660 FSL, 1980 FEL	PLUGOIL	P&A	10/4/1955	1906'	12-1/4"	8-5/8"	387'	150	Surface	7-7/8"	5-1/2"	1848'	100	1202' (calc)

Rover Petroleum, LLC: High Lonesome Queen Unit #2 - Form C-108 Application

VI. Tabulation of Data on All Wells of Public Record Within the Area of Review Which Penetrate the Proposed Injection Zone

No.	Well Name	Well No.	API No.	Overall Perf Interval	Comments
1	HIGH LONESOME QUEEN UNIT #002	2	30-015-02741	1849'-1859'	
2	ATKINS FEDERAL #001	1	30-015-02751	1774'-1799'	
3	SKELLY-STATE #004	4	30-015-02745	1782'-1883' (OPEN HOLE)	
4	HIGH LONESOME QUEEN UNIT #003	3	30-015-02736	1750'-1831' (OPEN HOLE)	
5	HIGH LONESOME QUEEN UNIT #004	4	30-015-02744	1749'-1870' (OPEN HOLE)	
6	SKELLY STATE #014	14	30-015-05903	1877'-1893'	P&A'd on 8/22/1985
7	SKELLY STATE #006	6	30-015-02746	1803'-93' (OPEN HOLE)	P&A'd on 1/25/2013
8	SKELLY-STATE #024	24	30-015-05902	1873'-1895'	P&A'd on 8/22/1985
9	SKELLY-STATE #025	25	30-015-02750	1858'-1872'	P&A'd on 8/23/1985
10	DOVE STATE #001	1	30-015-34157	2814'-3074'	
11	MOAB-STATE #001	1	30-015-02738	1864'-1914' (OPEN HOLE)	P&A'd on 5/11/1972
12	ILES FEDERAL #006	6	30-015-02756	1778'-1802'	P&A'd on 4/13/2009
13	REDSKINS FEDERAL COM #002	2	30-015-36587	7743'-11300'	
14	HIGH LONESOME QUEEN UNIT #001	1	30-015-02739	1784'-1845' (OPEN HOLE)	
15	MOAB-STATE #002	2	30-015-02743	1848'-1906' (OPEN HOLE)	P&A'd on 5/11/1972

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

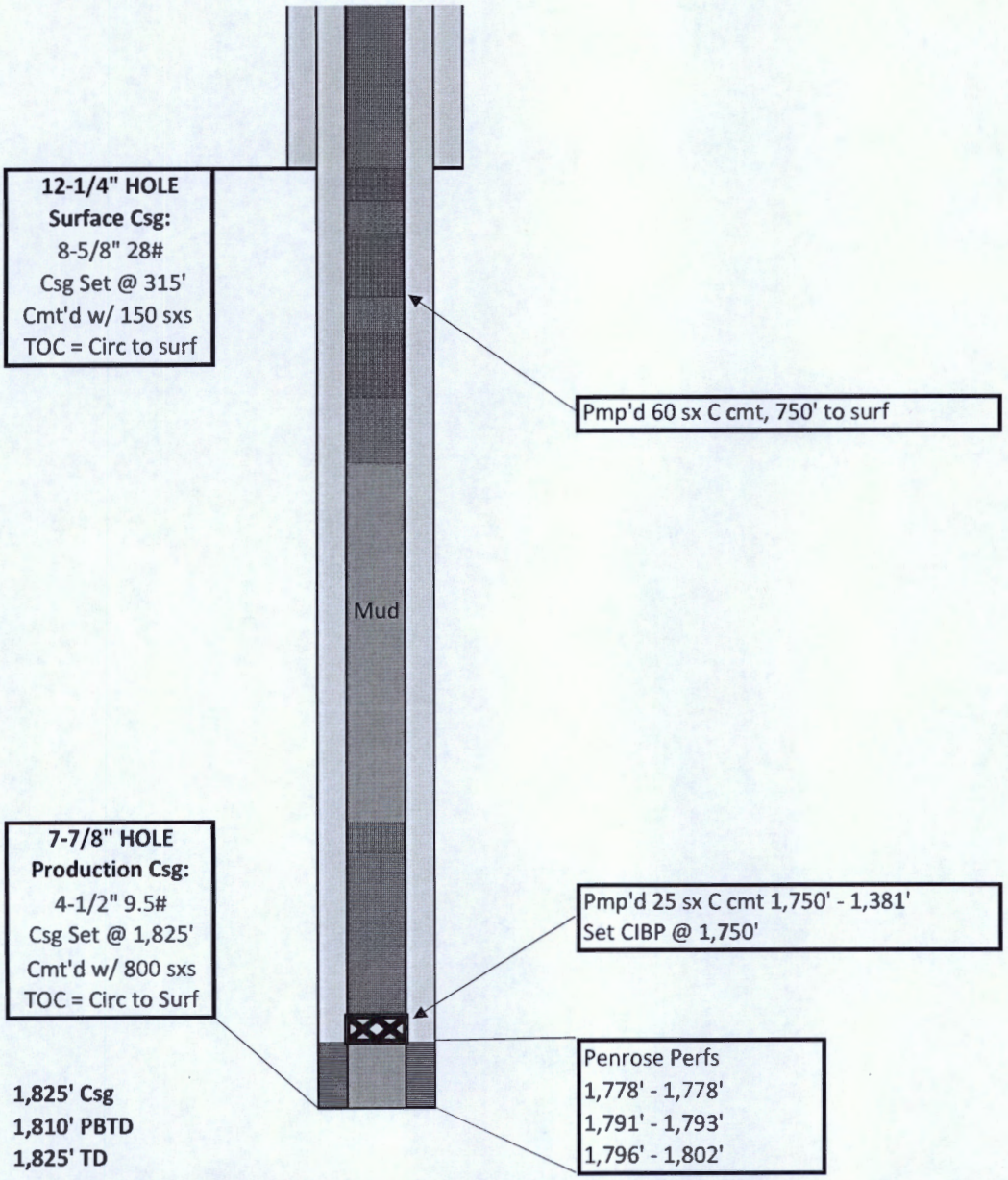
Lease &Well No.: BEACH EXPLORATION INC - ILES FEDERAL #006 (P&A'd)

Location: 1980' FSL & 660' FEL
UL: I, SEC: 17, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: NMLC046119A

API No. : 30-015-02756

ELEVATION, GL: 3,648'
FIELD: HIGH LONESOME; QUEEN
Well Type: OIL
Spudded: 3/13/1957
Drlg Stopped: 3/29/1957
Completed: 4/13/1957
Plugged: 4/13/2009



Drilled by CHARELS A. STEEN as the ILES FEDERAL #006 in 1957.

P&A'd by BEACH EXPLORATION INC in April, 2009.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

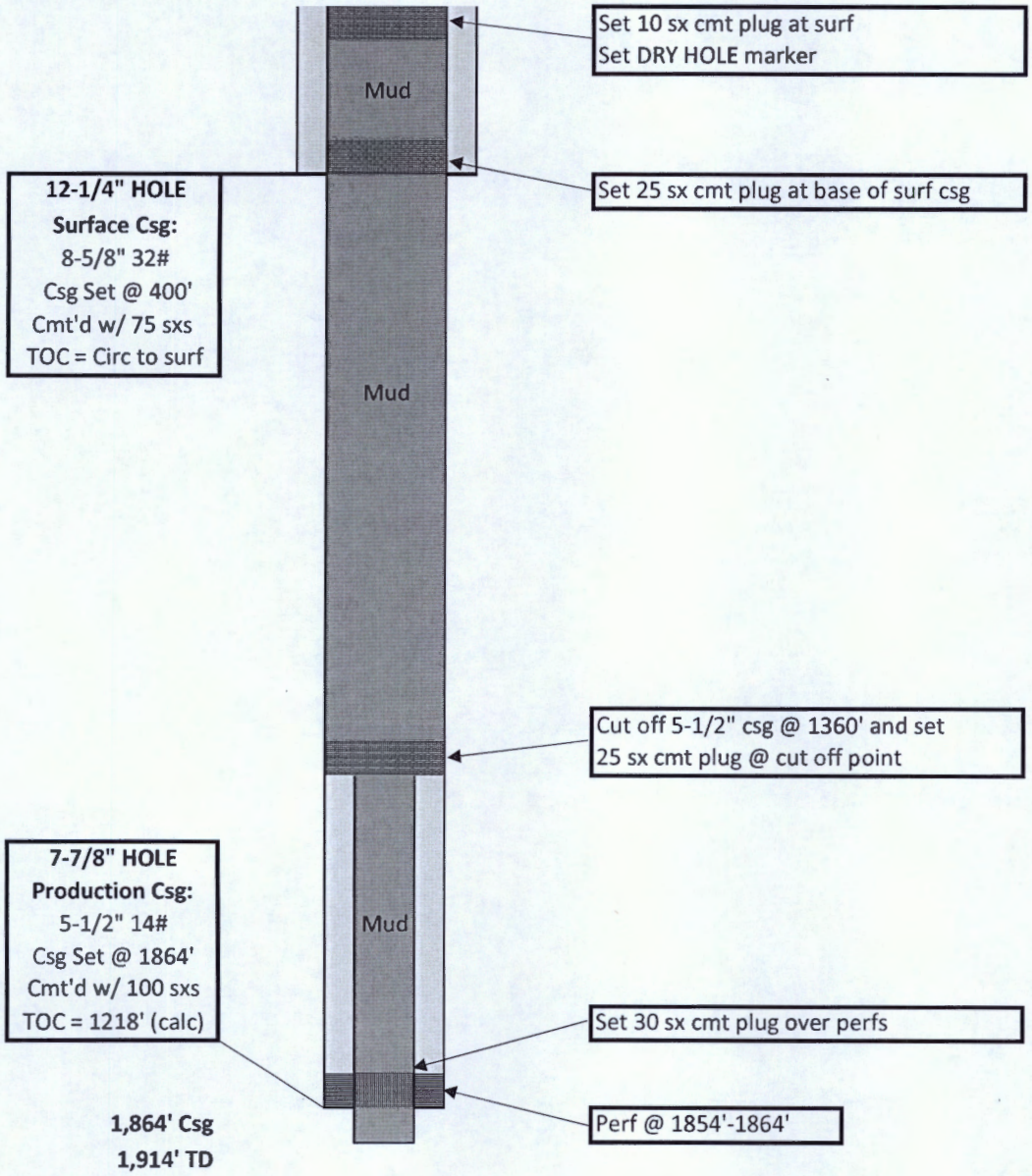
Lease &Well No.: SUN OIL CO. - MOAB-STATE #001 (P&A'd)

Location: 1980' FSL & 1980' FeL
UL: J, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-8889

API No. : 30-015-02738

ELEVATION, GL: 3673'
FIELD: HIGHLONESOME; QUEEN
Well Type: OIL
Spudded: 8/26/1955
Drlg Stopped: 9/5/1955
Completed: 9/12/1955
Plugged: 5/11/1972



Drilled by MOAB DRILLING CO. as the STATE #001 in 1955.
DRY HOLE
P&A'd by SUN OIL CO. in 5/11/1972.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

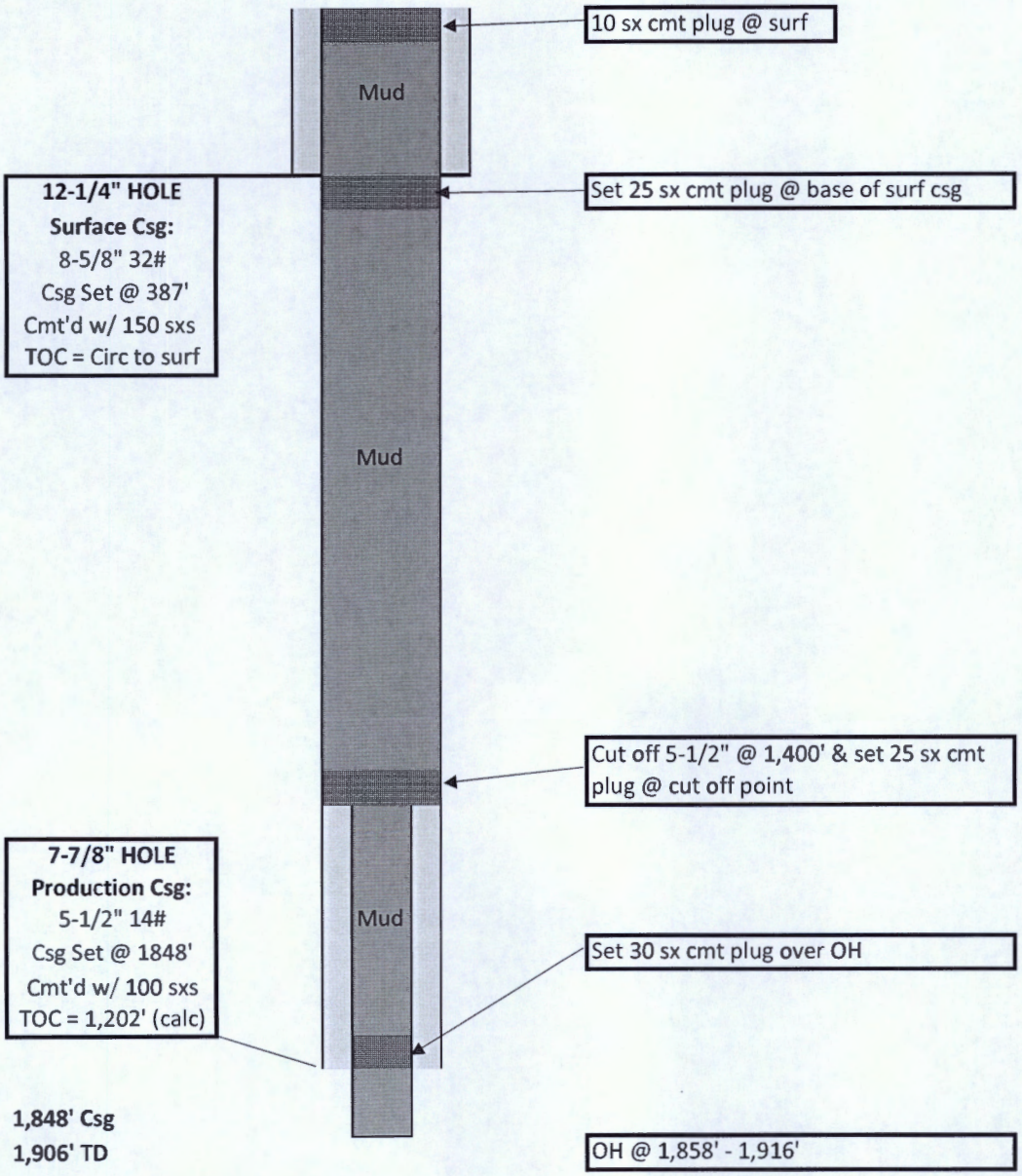
Lease &Well No.: SUN OIL CO. - MOAB-STATE #002 (P&A'd)

Location: 660' FSL & 1980' FWL
UL: O, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-8889

API No. : 30-015-02743

ELEVATION, GL: 3,672'
FIELD: HIGHLONESOME, QUEEN
Well Type: OIL
Spudded: 10/4/1955
Drlg Stopped: 10/14/1955
Completed: 11/23/1955
Plugged: 5/11/1972



Drilled by MOAB DRILLING CO. as the STATE #002 in 1955.
DRY HOLE
P&A'd by SUN OIL CO. in May, 1972.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

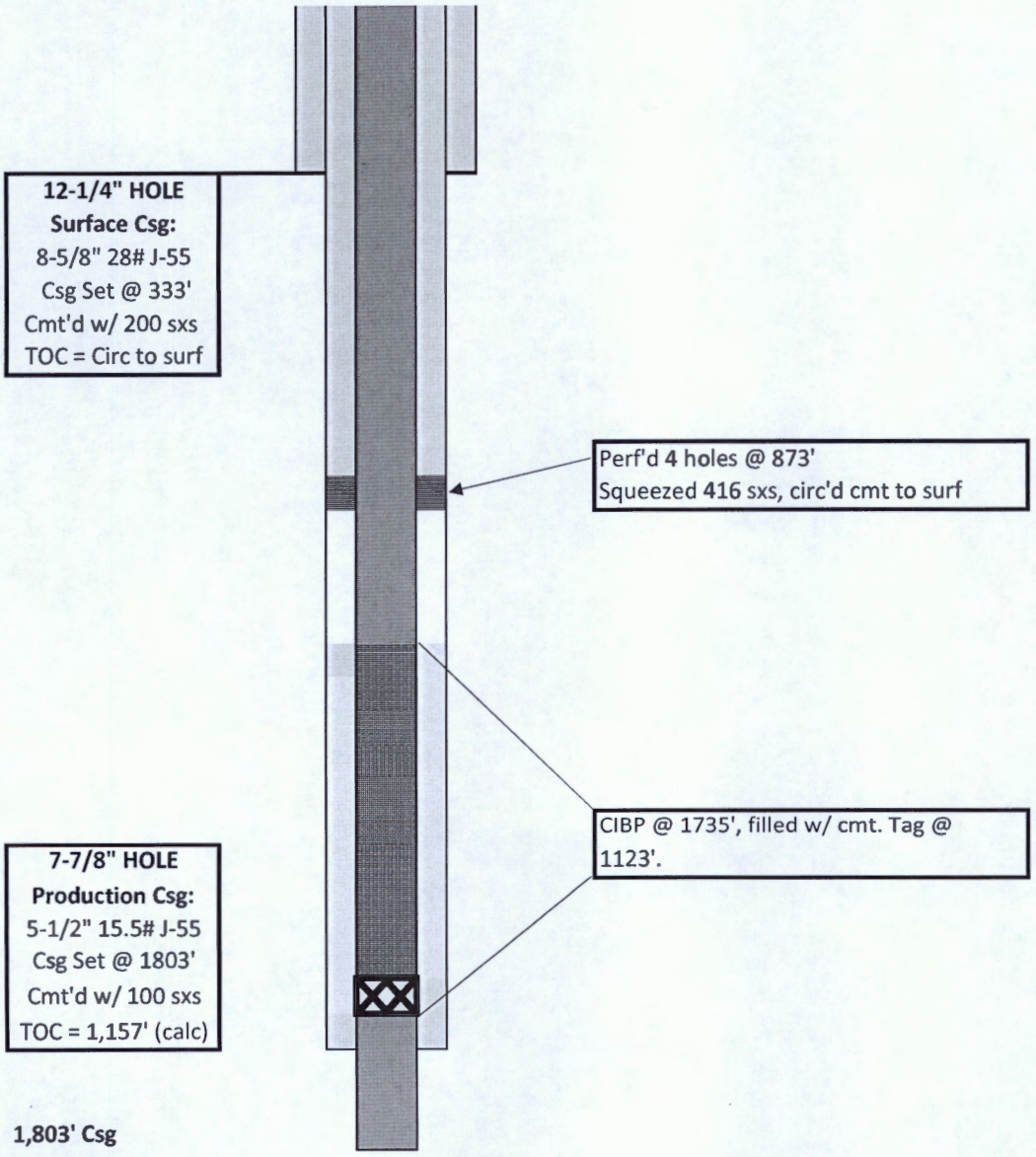
Lease &Well No.: ALAMO PERMIAN RESOURCES, LLC - SKELLY STATE #006 (P&A'd)

Location: 1980' FNL & 1980' FEL
UL: G, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02746

ELEVATION, GL: 3,582'
FIELD: HIGH LONESOME; QUEEN
Well Type: OIL
Spudded: 7/26/1955
Drlg Stopped: 8/1/1955
Completed: 8/27/1955
Plugged: 1/25/2013



Drilled by MOAB DRILLING CO. as the SKELLY-STATE #006 in 1955.

P&A'd by ALAMO PERMIAN RESOURCES, LLC in January, 2013.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

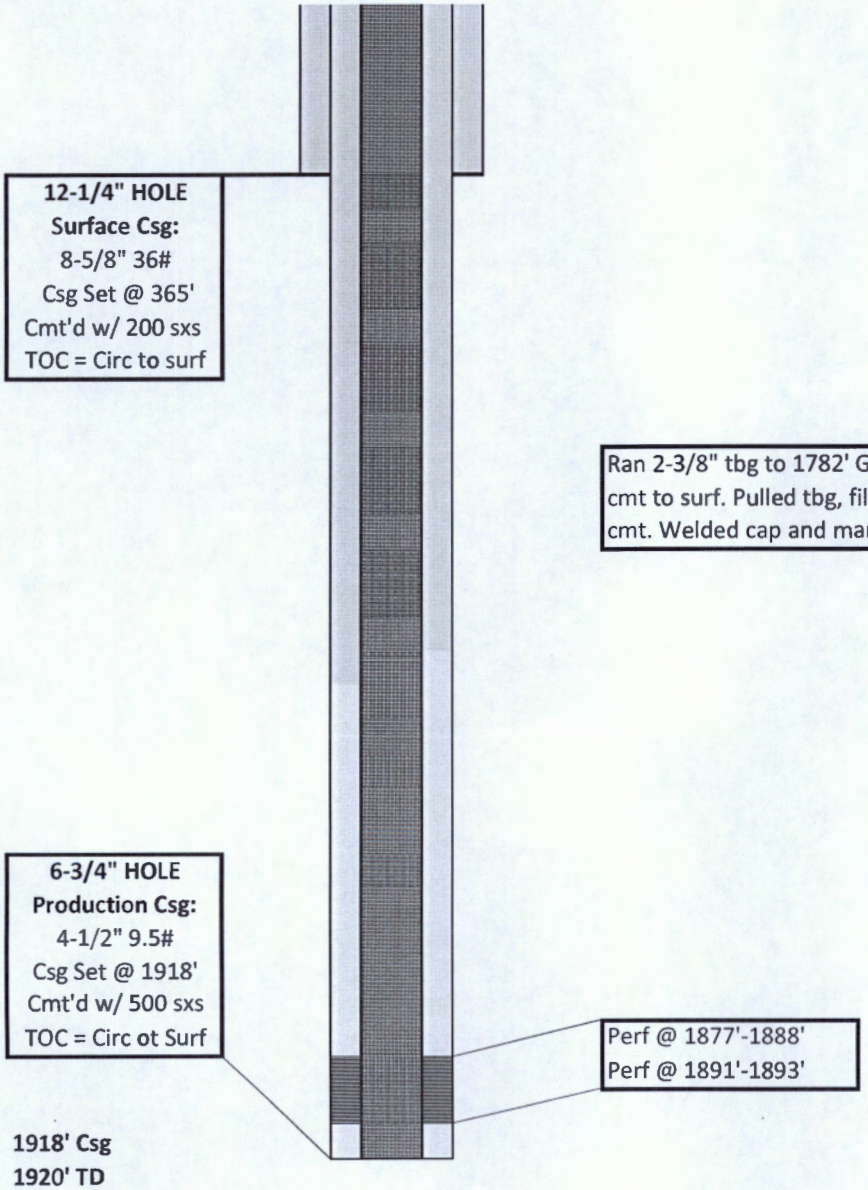
Lease &Well No.: NORWOOD OIL CORP - SKELLY STATE #014 (P&A'd)

Location: 1310' FNL & 1330' FEL
UL: B, SEC: 16, T: 16-S, R:-29E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-0590

ELEVATION, GL: 3679'
FIELD: HIGH LONESOME; QUEEN
Well Type: Injection
Spudded: 4/1/1957
Drlg Stopped: 4/15/1957
Completed: 4/15/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 365'
Cmt'd w/ 200 sxs
TOC = Circ to surf

Ran 2-3/8" tbg to 1782' G.L. Circ class C cmt to surf. Pulled tbg, filled wall w/ cmt. Welded cap and marker on well

6-3/4" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1918'
Cmt'd w/ 500 sxs
TOC = Circ ot Surf

Perf @ 1877'-1888'
Perf @ 1891'-1893'

1918' Csg
1920' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #014 in 1957.

P&A'd by NORWOOD OIL CORP in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

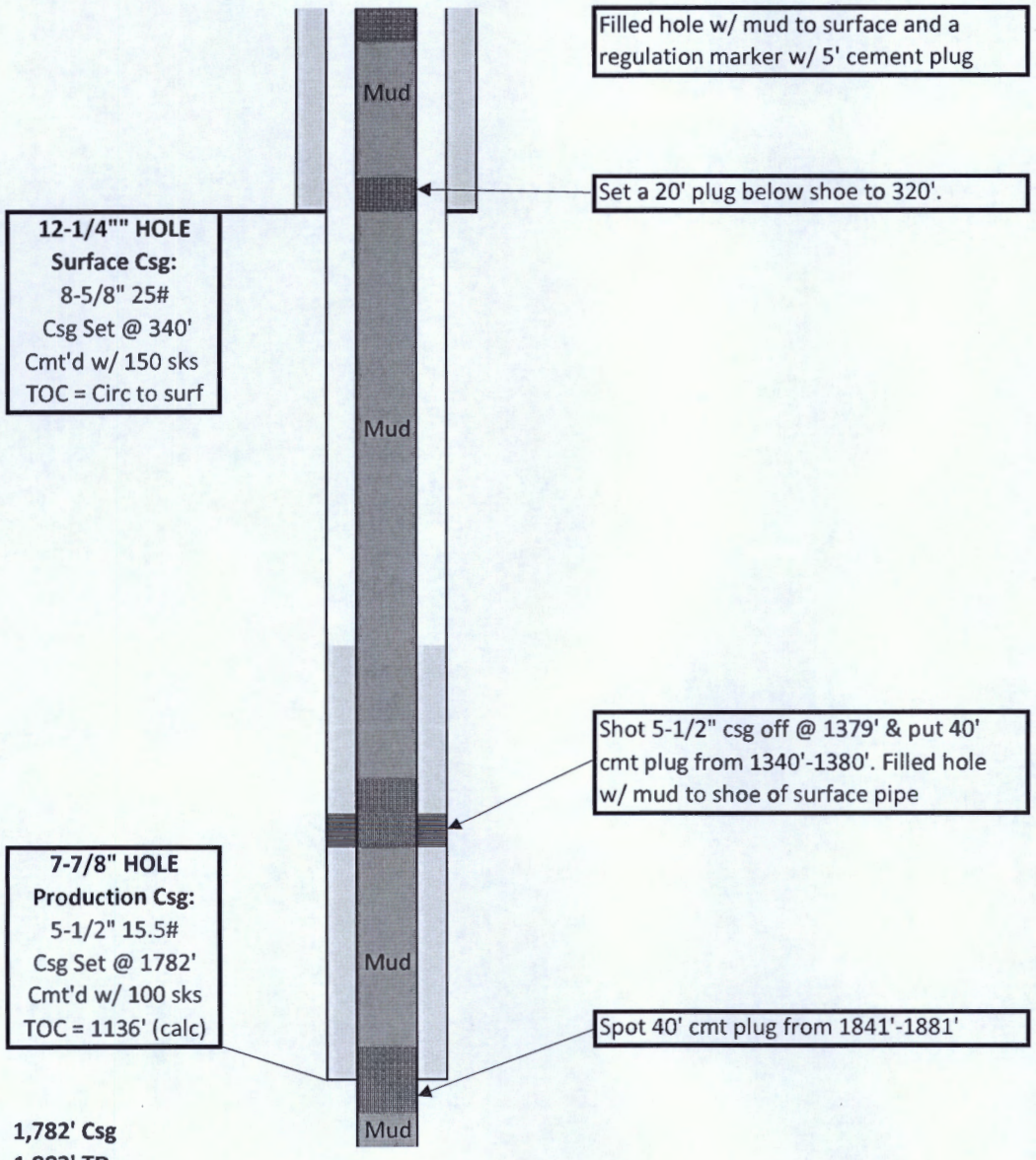
Lease &Well No.: MOAB DRILLING CO - SKELLY-STATE #004 (P&A'd)

Location: 660' FNL & 1980' FWL
UL: C, SEC: 16, T:16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02745

ELEVATION, GL: 3674'
FIELD: High Lonesome
Well Type: OIL
Spudded: 7/7/1955
Drlg Stopped: 7/17/1955
Completed: 8/1/1955
Plugged: 8/8/1955



Drilled by MOAB DRILLING CO as the SKELLY-STATE #004 in 1955.
DRY HOLE
P&A'd by MOAB DRILLING CO in August, 1955.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

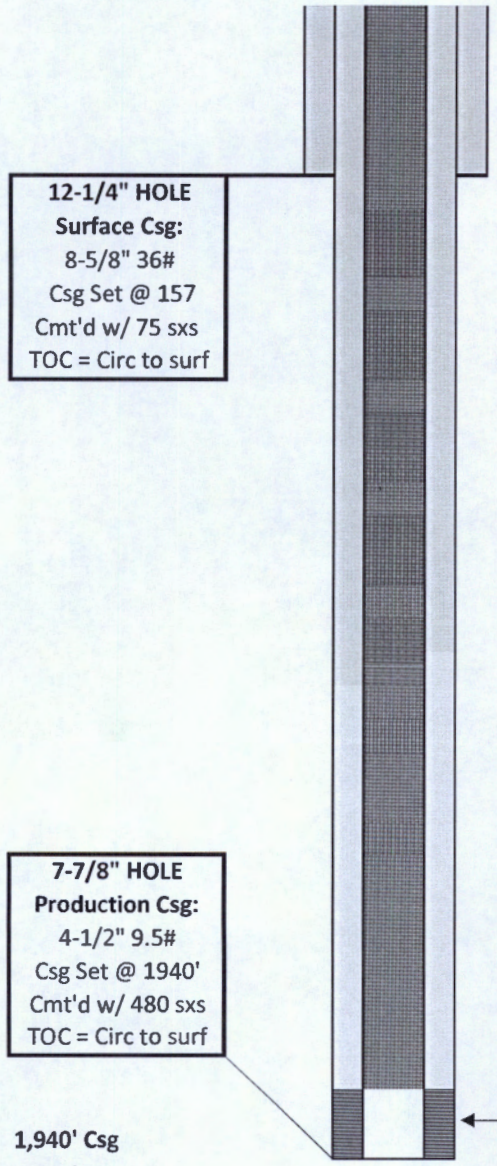
Lease &Well No.: NORWOOD OIL CO. - SKELLY-STATE #023 (P&A'd)

Location: 2630' FNL & 10' FEL
UL: H, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-05901

ELEVATION, GL: 3,688'
FIELD: HIGH LONESOME; QUEEN
Well Type: INJECTION
Spudded: 5/31/1957
Drlg Stopped: 6/7/1957
Completed: 6/7/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 157
Cmt'd w/ 75 sxs
TOC = Circ to surf

Ran tbg to 1,750' GL, circ class C cmt to surf. Pulled tbg, filled csg with cmt. Welded cap and marker on well.

7-7/8" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1940'
Cmt'd w/ 480 sxs
TOC = Circ to surf

Perf @ 1890' - 1911'
Perf @ 1914' - 1921'

1,940' Csg
1,943' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #023 in 1957.

P&A'd by NORWOOD OIL CO. in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

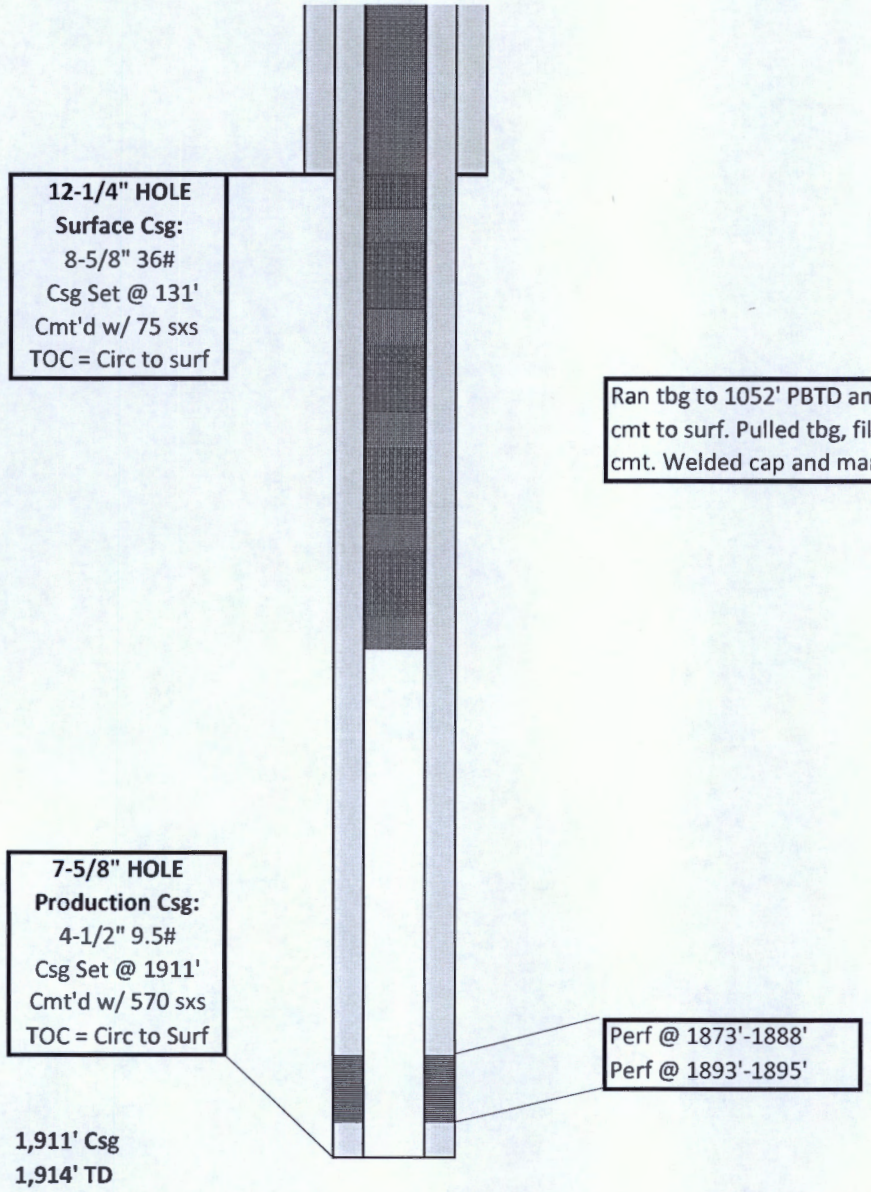
Lease &Well No.: NORWOOD OIL CORP - SKELLY-STATE #024 (P&A'd)

Location: 2630' FNL & 1330' FEL
UL: G, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-05902

ELEVATION, GR: 3,678'
FIELD: HIGHLONESOME; QUEEN
Well Type: INJECTION
Spudded: 5/23/1957
Drlg Stopped: 5/30/1957
Completed: 5/30/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 131'
Cmt'd w/ 75 sxs
TOC = Circ to surf

Ran tbg to 1052' PBTD and circ class C cmt to surf. Pulled tbg, filled well w/ cmt. Welded cap and marker on well

7-5/8" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1911'
Cmt'd w/ 570 sxs
TOC = Circ to Surf

Perf @ 1873'-1888'
Perf @ 1893'-1895'

1,911' Csg
1,914' TD

Drilled by MOAB DRILLING CO. as the SKELLY - STATE #024 in 1957.

P&A'd by NORWOOD OIL CORP in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

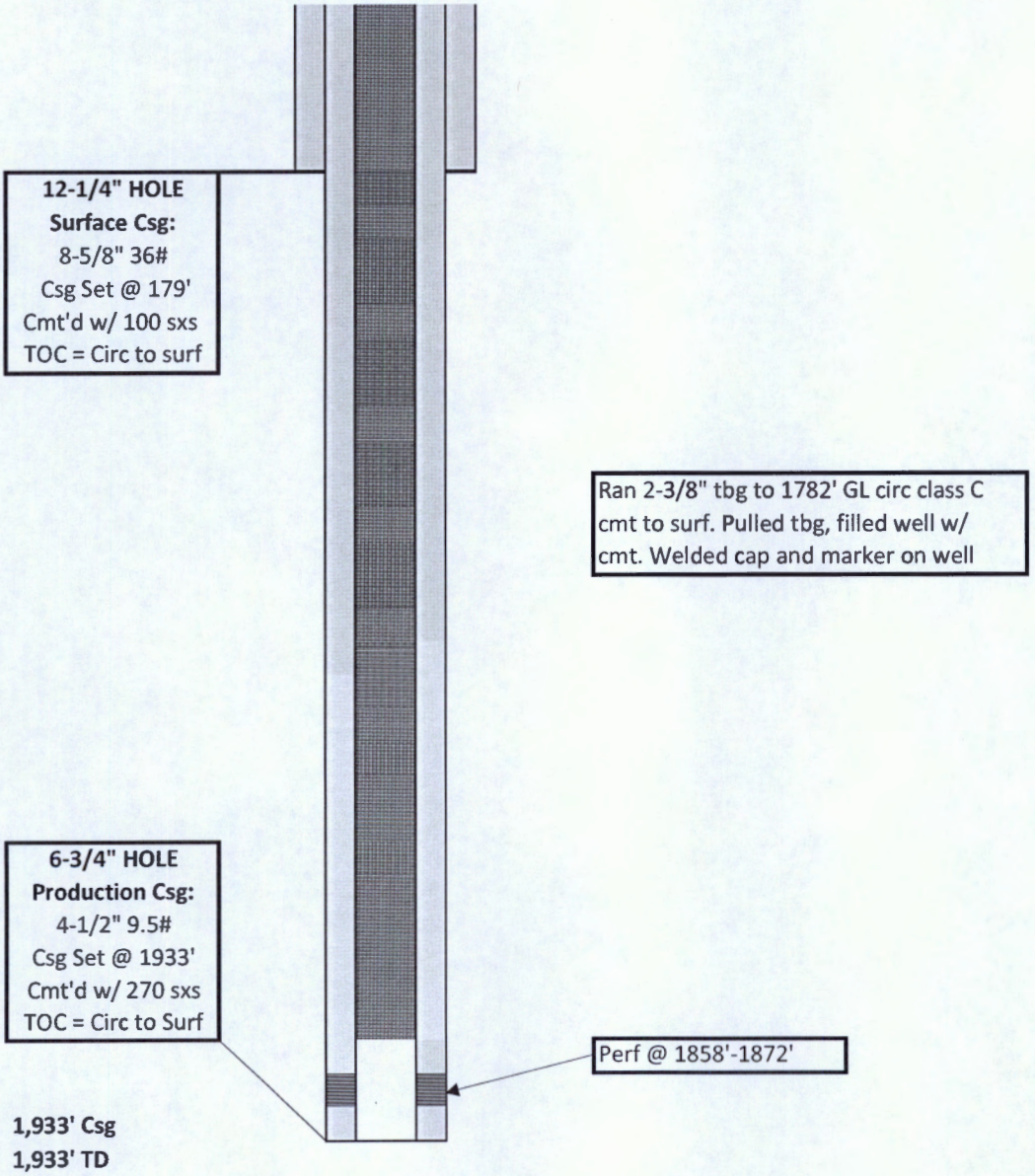
Lease &Well No.: NORWOOD OIL CORP - SKELLY-STATE #025 (P&A'd)

Location: 2630' FNL & 2630' FWL
UL: F, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02750

ELEVATION, KB: 3,682'
FIELD: HIGHLONESOME; QUEEN
Well Type: INJECTION
Spudded: 2/21/1959
Drlg Stopped: 3/4/1959
Completed: 3/24/1959
Plugged: 8/23/1985



Drilled by MOAB DRILLING CORP as the SKELLY-STATE #025 in 1959.

P&A'd by NORWOOD OIL CORP in August, 1985.

VII). Attach data on the proposed operation, including:

1) **Proposed average and maximum daily rate and volume of fluids to be injected**

   Rover Petroleum proposes average and maximum daily rates and volumes of water injection into the High Lonesome Queen #2 water injection well of:

   - Average: 250 BWPD ("barrels of water per day per well")
   - Maximum: 300 BWPD

2) **Whether the system is open or closed**

   The High Lonesome Queen unit waterflood station is a closed system in which make-up water and produced water from the High Lonesome Queen Unit wells are commingled, treated, and injected.

3) **Proposed average and maximum injection pressure**

   Rover Petroleum, LLC, proposes average and maximum injection pressures for the High Lonesome Queen Unit water injection well of:

   - Average: 900 psig
   - Maximum: 1100 psig

4) **Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water**

   Rover Petroleum, LLC has entered into a Water Transfer Agreement in which Rover is provided make-up water which currently being produced from the San Andres formation by Mack Energy Corporation. See the attached compatibility test and water analyses of the two waters.

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.)**

   The High Lonesome Queen Unit #2 water injection well covered by this application is to be used for Secondary Recovery and not for disposal purposes. This requirement does not apply to this application.

NMOCD Form C-108 – Sec. VIII: Geologic Summary

High Lonesome Queen Unit #2

Sec. 16, Twp 16-S, Rge 29-E, Eddy County, NM
1980 FSL, 1980 FWL

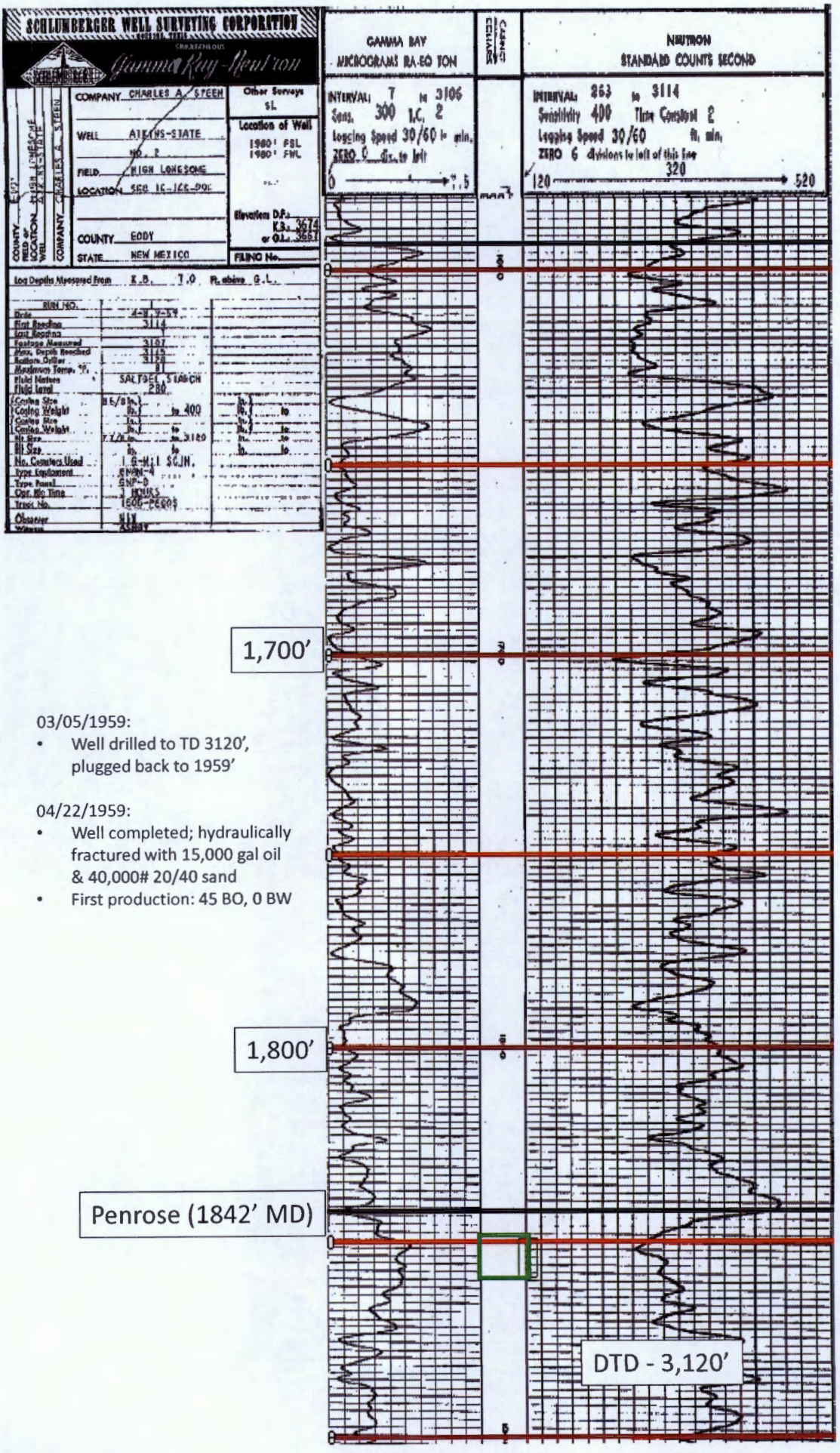
The High Lonesome Queen Unit produces hydrocarbons from the Penrose sandstone of the Permian-age (Guadalupian) Queen Formation. The arkosic Penrose sandstone is about 30 feet-thick and is situated about 250' above the base of the Queen Formation.

The High Lonesome Queen Unit is part of a continuous east-west trend of Penrose production that is at least 8 miles long. The productive trend is about 1 mile wide and is a large stratigraphic trap. Clean and porous hydrocarbon-producing sandstone is bounded to the north by an anhydrite-plugged and salt-plugged sandstone facies with poor permeability. South of the reservoir sandstone the rock quality degrades into shaly sandstone with poor permeability. The entire depositional system is interpreted to represent a high-energy beach or barrier bar (the reservoir), flanked by a periodically-exposed evaporitic tidal flat depositionally up-dip and poorly winnowed shaly sand accumulating in a low energy shallow marine environment depositionally down-dip.

In the area of the High Lonesome Queen Unit the top of the Penrose sandstone is at an average drill depth of 1,850 feet (+1,830'). The interval has a gross thickness of about 30 feet. In the Penrose interval, usually about 10-15 feet of the gross 30 feet of interval develops the threshold porosity of 8% required for economic reservoir permeability. The reservoir sandstone is fine grained and reaches an average porosity of about 11%. Structure mapping indicates that the reservoir dips gently from northwest to southeast across the unit, losing about 135 feet of subsea elevation. The Penrose reservoir sandstone is directly both underlain and overlain by layers of low porosity anhydritic dolostone. These low permeability upper and lower bounding layers, combined with the northern evaporate-plugged reservoir boundary, should serve to strongly contain secondary reservoir energy introduced by means of water-injection.

IX). Describe the proposed stimulation program, if any.

The High Lonesome Queen Unit #2 water injection well will be acidized in the current perforation (1849' – 1859') with 3000 gal 15% NEFE HCl (75 gal/perf). If sufficient volumes of water are unable to injected at the approved surface injection pressure, a step-rate test will be performed to determine if the surface injection pressure can be increased without damaging the formation or if a gelled water fracture stimulation will needed to increase injectivity. If it is determined that a fracture treatment is needed, the fracture stimulation will be a gelled-water frac job with approximately 30,000-40,000# of 20/40 frac sand.



03/05/1959:

- Well drilled to TD 3120', plugged back to 1959'

04/22/1959:

- Well completed; hydraulically fractured with 15,000 gal oil & 40,000# 20/40 sand
- First production: 45 BO, 0 BW

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.

Rover Petroleum, LLC, has investigated the area within a one-mile radius of the proposed High Lonesome Queen Unit #2 water injection well and has determined there to be no fresh water wells currently producing within the area.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ✓ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? ✓ Yes _____ No

II. OPERATOR: Rover Petroleum Operating, LLC

ADDRESS: 17304 Preston Road, Suite 300, Dallas, TX 75252

CONTACT PARTY: Sami Watts PHONE: 214-234-9115 ext 1032

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: R-13864

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: Sami Watts TITLE: Land Assistant

SIGNATURE: Sami Watts DATE: April 18, 2019

E-MAIL ADDRESS: swatts@roverpetro.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: Sumbitted Oct 29, 2018, reapplying for Administrative Approval

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

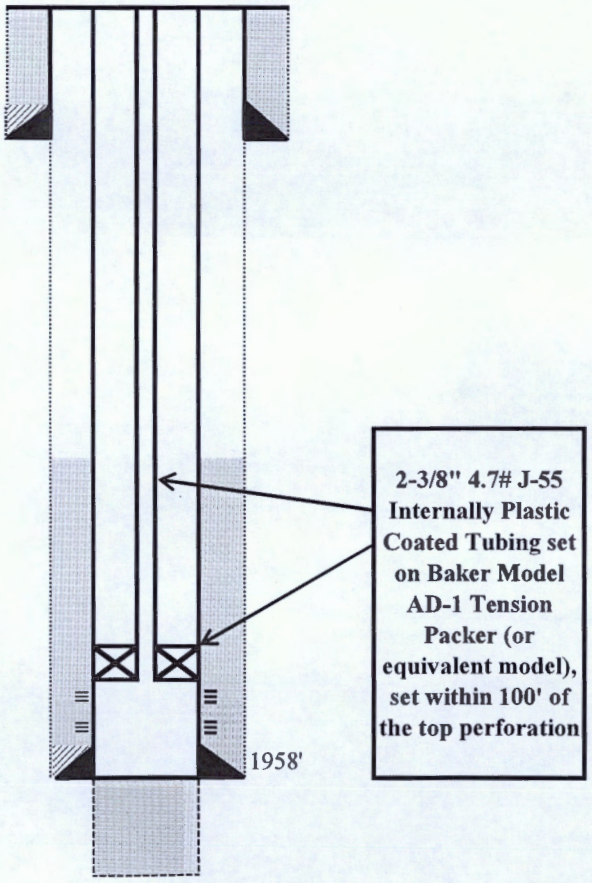
Side 1

OPERATOR: **ROVER OPERATING, LLC**

WELL NAME & NUMBER: **HIGH LONESOME QUEEN UNIT #2**

WELL LOCATION:	**1980' FNL & 1980' FWL**	**K**	**16**	**16S**	**29E**
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: **12-1/4"** Casing Size: **8-5/8"**

Cemented with: **200** sx. *or* _____ ft^3

Top of Cement: **Surface** Method Determined: **Circulated**

Intermediate Casing

Hole Size: **N/A** Casing Size: **N/A**

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: **7-7/8"** Casing Size: **4-1/2"**

Cemented with: **75** sx. *or* _____ ft^3

Top of Cement: **1563'** Method Determined: **Calc'd (25% SF)**

Total Depth: **1958'**

Injection Inverval

1849' feet to **1859' (PERFORATED)**

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: **2-3/8"** Lining Material: **IPC-1505**

Type of Packer: **Baker AD-1 (or equivilant)**

Packer Setting Depth: **+/- 1800'**

Other Type of Tubing/Casing Seal (if applicable): **N/A**

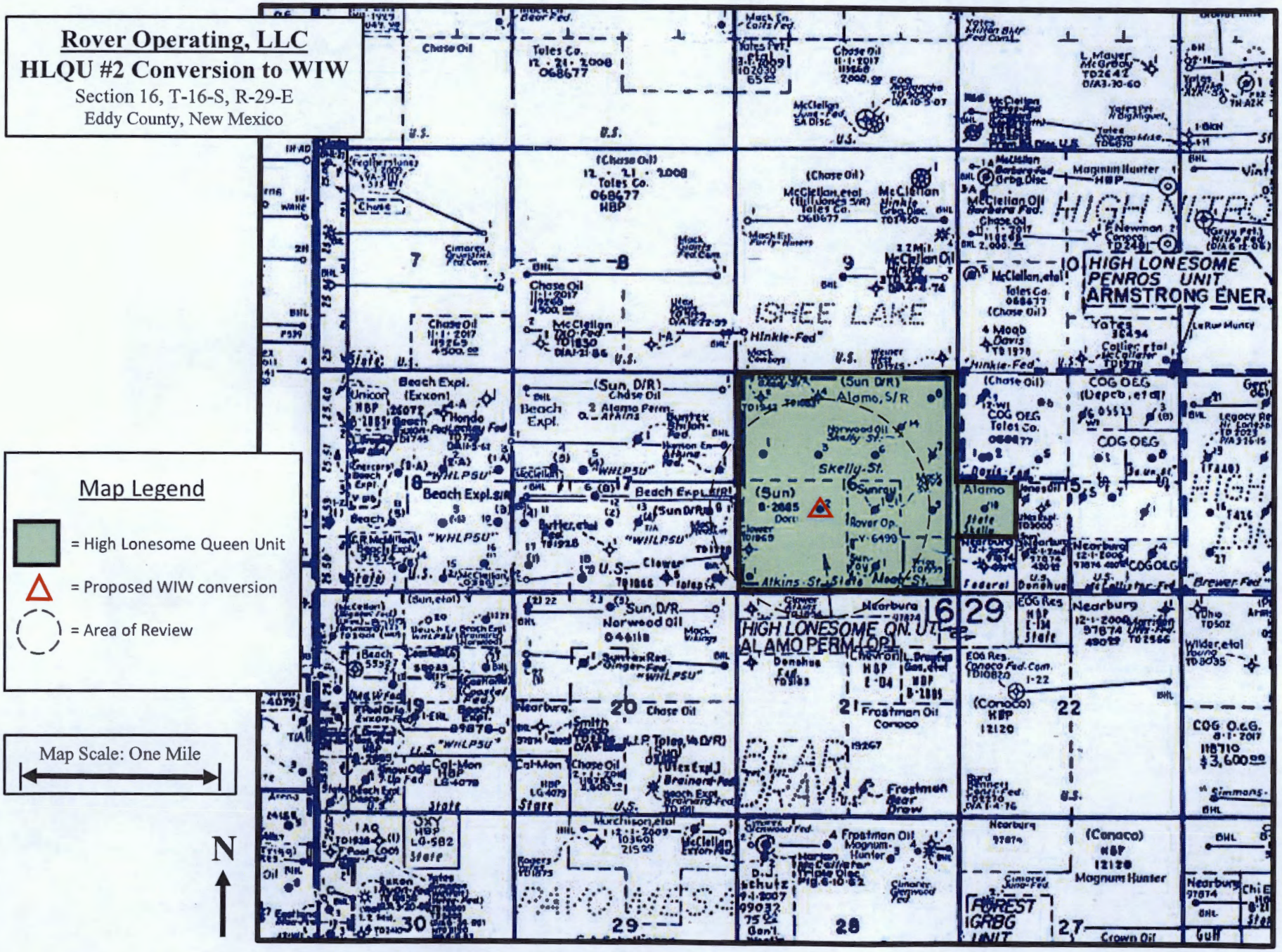
Additional Data

1. Is this a new well drilled for injection? ____ Yes **x** No

   If no, for what purpose was the well originally drilled? **Primary oil production**

2. Name of the Injection Formation: **Penrose Sandstone**
3. Name of Field or Pool (if applicable): **High Lonesome; Queen [30780]**
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. **N/A**
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: **San Andres (1,300' above sea level), Glorieta (200' above sea level), Abo (2,150' below sea level), Wolfcamp (3,450' below sea level)**

Rover Operating, LLC
HLQU #2 Conversion to WIW
Section 16, T-16-S, R-29-E
Eddy County, New Mexico



Rover Petroleum, LLC: High Lonesome Queen Unit #2 - Form C-108 Application

VI. Tabulation of Data on All Wells of Public Record Within the Area of Review Which Penetrate the Proposed Injection Zone

No.	Well Name	Well No.	API No.	Operator	Location			Well Type	Well Status	Spud Date	Total Depth	Surface Casing					Production Casing				
					UL	Sec, Twp, Rge	Footage Calls					Hole Size	Casing Size	Setting Depth	Sacks Cmt	TOC	Hole Size	Casing Size	Setting Depth	Sacks Cmt	TOC
1	HIGH LONESOME QUEEN UNIT #002	2	30-015-02741	ROVER OPERATING, LLC	K	S:16, T:16S, R: 29E	1980 FSL, 1980 FWL	OIL	Active	3/14/1959	3120'	10-1/4"	8-5/8"	395'	200	Surface	7-7/8"	4-1/2"	1958'	76	1584' (calc)
2	ATKINS FEDERAL #001	1	30-015-02751	ROVER OPERATING, LLC	H	S:17, T:16S, R: 29E	2310 FNL, 330 FEL	OIL	Active	4/11/1956	1825'	12-1/4"	8-5/8"	450'	100	Surface	7-7/8"	5-1/2"	1825'	100	1215' (calc)
3	SKELLY-STATE #004	4	30-015-02745	MOAB DRILLING CO	C	S:16, T:16S, R: 29E	660 FNL, 1980 FWL	PLUGOIL	DRY	7/7/1955	1883'	12-1/4"	8-5/8"	340'	150	Surface	7-7/8"	5-1/2"	1782'	100	1136' (calc)
4	HIGH LONESOME QUEEN UNIT #003	3	30-015-02736	ROVER OPERATING, LLC	E	S:16, T:16S, R: 29E	1980 FNL, 660 FWL	OIL	Active	1/31/1955	1831'	12-1/4"	9-5/8"	200'	100	Surface	6-3/4"	5-1/2"	1750'	50	1380'
5	HIGH LONESOME QUEEN UNIT #004	4	30-015-02744	ROVER OPERATING, LLC	F	S:16, T:16S, R: 29E	1980 FNL, 1980 FWL	OIL	Active	6/13/1955	1870'	12-1/4"	8-5/8"	351'	150	Surface	7-7/8"	5-1/2"	1745'	100	1099' (calc)
6	SKELLY STATE #014	14	30-015-05903	NORWOOD OIL CORP	B	S:16, T:16S, R: 29E	1310 FNL, 1330 FEL	INJECT	P&A	4/1/1957	1920'	12-1/4"	8-5/8"	365'	200	Surface	6-3/4"	4-1/2"	1918'	500	Surface
7	SKELLY STATE #006	6	30-015-02746	ALAMO PERMIAN RESOURCES, LLC	G	S:16, T:16S, R: 29E	1980 FNL, 1980 FEL	PLUGOIL	P&A	7/26/1955	1893'	12-1/4"	8-5/8"	333'	200	Surface	7-7/8"	5-1/2"	1803'	100	1157 (calc)
8	SKELLY-STATE #024	24	30-015-05902	NORWOOD OIL CORP	G	S:16, T:16S, R: 29E	2630 FNL, 1330 FEL	INJECT	P&A	5/23/1957	1914'	12-1/4"	8-5/8"	131'	75	Surface	7-5/8"	4-1/2"	1911'	570	Surface
9	SKELLY-STATE #025	25	30-015-02750	NORWOOD OIL CORP	F	S:16, T:16S, R: 29E	2630 FNL, 2630 FWL	INJECT	P&A	2/21/1959	1933'	12-1/4"	8-5/8"	179'	100	Surface	6-3/4"	4-1/2"	1933'	270	Surface
10	DOVE STATE #001	1	30-015-34157	SELLERS&FULTON OIL LLC	J	S:16, T:16S, R: 29E	2310 FSL, 1650 FEL	OIL	Active	7/8/2005	4570'	17-1/2"	13-3/8"	313'	375	Surface	7-7/8"	5-1/2"	4557'	1455	Surface
11	MOAB-STATE #001	1	30-015-02738	SUN OIL CO.	J	S:16, T:16S, R: 29E	1980 FSL, 1980 FEL	PLUGOIL	P&A	8/26/1955	1914'	12-1/4"	8-5/8"	400'	75	Surface	7-7/8"	5-1/2"	1864'	100	1218' (calc)
12	ILES FEDERAL #006	6	30-015-02756	BEACH EXPLORATION INC	I	S:17, T:16S, R: 29E	1980 FSL, 660 FEL	PLUGOIL	P&A	3/19/1957	1825'	12-1/4"	8-5/8"	315'	150	Surface	7-7/8"	4-1/2"	1825'	800	Surface
13	REDSKINS FEDERAL COM #002	2	30-015-36587	MACK ENERGY CORP	M	S:17, T:16S, R: 29E	330 FSL, 280 FWL	OIL	Active	6/1/2009	11300'	12-1/4"	8-5/8"	381'	980	Surface	6-1/8"	4-1/2"	11300'	1415	Surface
14	HIGH LONESOME QUEEN UNIT #001	1	30-015-02739	ROVER OPERATING, LLC	M	S:16, T:16S, R: 29E	330 FSL, 330 FWL	OIL	Active	11/17/1939	1845'	10"	8"	342'	50	Surface	8"	7"	1784'	50	1100' (calc)
15	MOAB-STATE #002	2	30-015-02743	SUN OIL CO.	O	S:16, T:16S, R: 29E	660 FSL, 1980 FEL	PLUGOIL	P&A	10/4/1955	1906'	12-1/4"	8-5/8"	387'	150	Surface	7-7/8"	5-1/2"	1848'	100	1202' (calc)

VI. Tabulation of Data on All Wells of Public Record Within the Area of Review Which Penetrate the Proposed Injection Zone

No.	Well Name	Well No.	API No.	Overall Perf Interval	Comments
1	HIGH LONESOME QUEEN UNIT #002	2	30-015-02741	1849'-1859'	
2	ATKINS FEDERAL #001	1	30-015-02751	1774'-1799'	
3	SKELLY-STATE #004	4	30-015-02745	1782'-1883' (OPEN HOLE)	
4	HIGH LONESOME QUEEN UNIT #003	3	30-015-02736	1750'-1831' (OPEN HOLE)	
5	HIGH LONESOME QUEEN UNIT #004	4	30-015-02744	1749'-1870' (OPEN HOLE)	
6	SKELLY STATE #014	14	30-015-05903	1877'-1893'	P&A'd on 8/22/1985
7	SKELLY STATE #006	6	30-015-02746	1803'-93' (OPEN HOLE)	P&A'd on 1/25/2013
8	SKELLY-STATE #024	24	30-015-05902	1873'-1895'	P&A'd on 8/22/1985
9	SKELLY-STATE #025	25	30-015-02750	1858'-1872'	P&A'd on 8/23/1985
10	DOVE STATE #001	1	30-015-34157	2814'-3074'	
11	MOAB-STATE #001	1	30-015-02738	1864'-1914' (OPEN HOLE)	P&A'd on 5/11/1972
12	ILES FEDERAL #006	6	30-015-02756	1778'-1802'	P&A'd on 4/13/2009
13	REDSKINS FEDERAL COM #002	2	30-015-36587	7743'-11300'	
14	HIGH LONESOME QUEEN UNIT #001	1	30-015-02739	1784'-1845' (OPEN HOLE)	
15	MOAB-STATE #002	2	30-015-02743	1848'-1906' (OPEN HOLE)	P&A'd on 5/11/1972

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

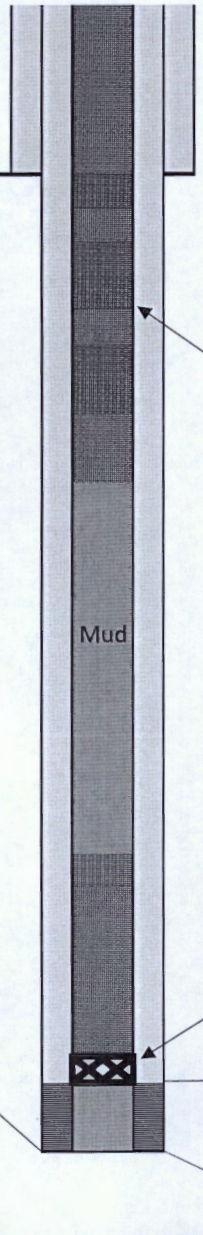
Lease &Well No.: BEACH EXPLORATION INC - ILES FEDERAL #006 (P&A'd)

Location: 1980' FSL & 660' FEL
UL: I, SEC: 17, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: NMLCO46119A

API No. : 30-015-02756

ELEVATION, GL: 3,648'
FIELD: HIGH LONESOME; QUEEN
Well Type: OIL
Spudded: 3/13/1957
Drlg Stopped: 3/29/1957
Completed: 4/13/1957
Plugged: 4/13/2009



12-1/4" HOLE
Surface Csg:
8-5/8" 28#
Csg Set @ 315'
Cmt'd w/ 150 sxs
TOC = Circ to surf

Pmp'd 60 sx C cmt, 750' to surf

Mud

7-7/8" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1,825'
Cmt'd w/ 800 sxs
TOC = Circ to Surf

Pmp'd 25 sx C cmt 1,750' - 1,381'
Set CIBP @ 1,750'

Penrose Perfs
1,778' - 1,778'
1,791' - 1,793'
1,796' - 1,802'

1,825' Csg
1,810' PBTD
1,825' TD

Drilled by CHARELS A. STEEN as the ILES FEDERAL #006 in 1957.

P&A'd by BEACH EXPLORATION INC in April, 2009.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

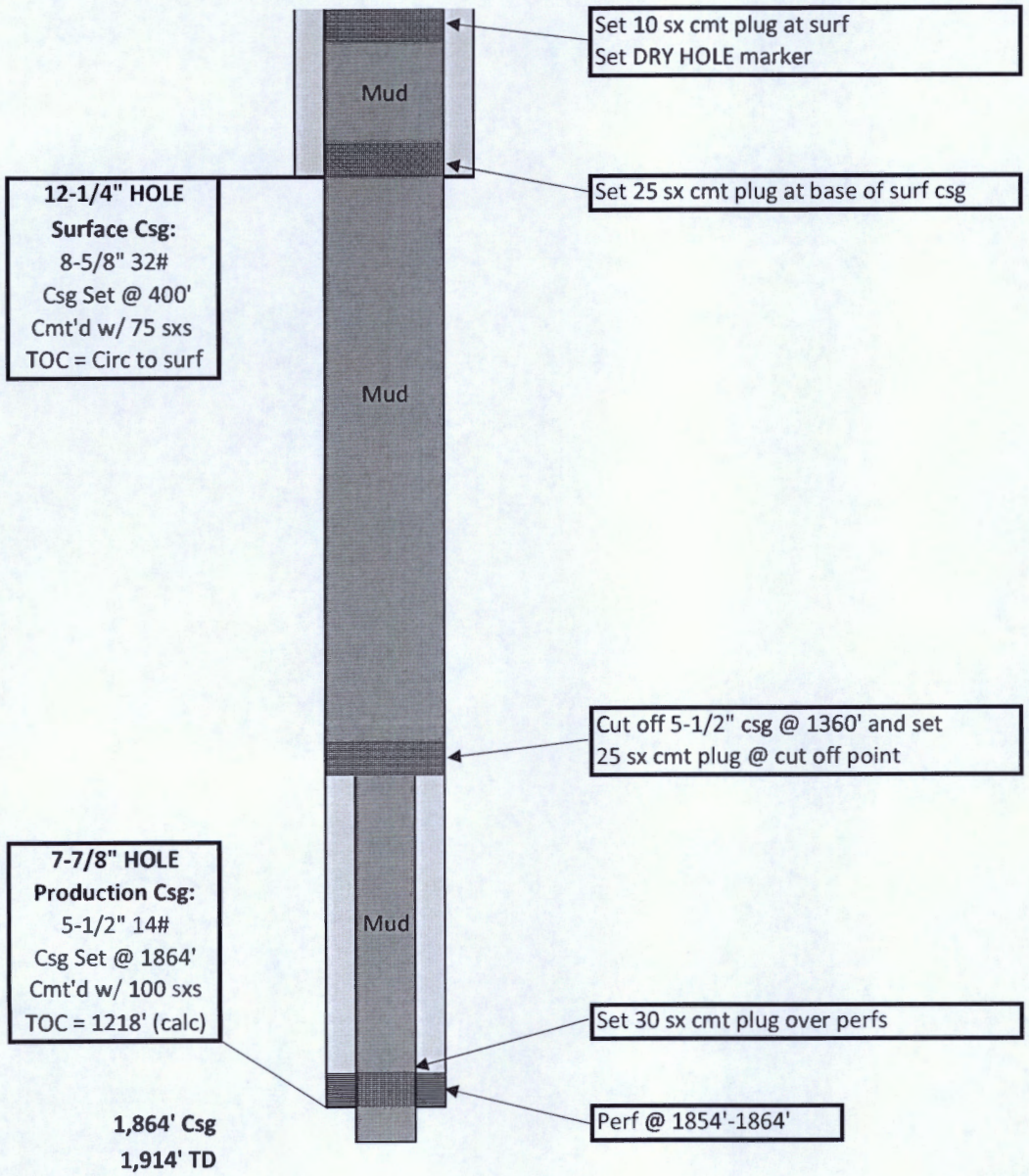
Lease &Well No.: SUN OIL CO. - MOAB-STATE #001 (P&A'd)

Location: 1980' FSL & 1980' FeL
UL: J, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-8889

API No. : 30-015-02738

ELEVATION, GL: 3673'
FIELD: HIGHLONESOME; QUEEN
Well Type: OIL
Spudded: 8/26/1955
Drlg Stopped: 9/5/1955
Completed: 9/12/1955
Plugged: 5/11/1972



Drilled by MOAB DRILLING CO. as the STATE #001 in 1955.
DRY HOLE
P&A'd by SUN OIL CO. in 5/11/1972.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

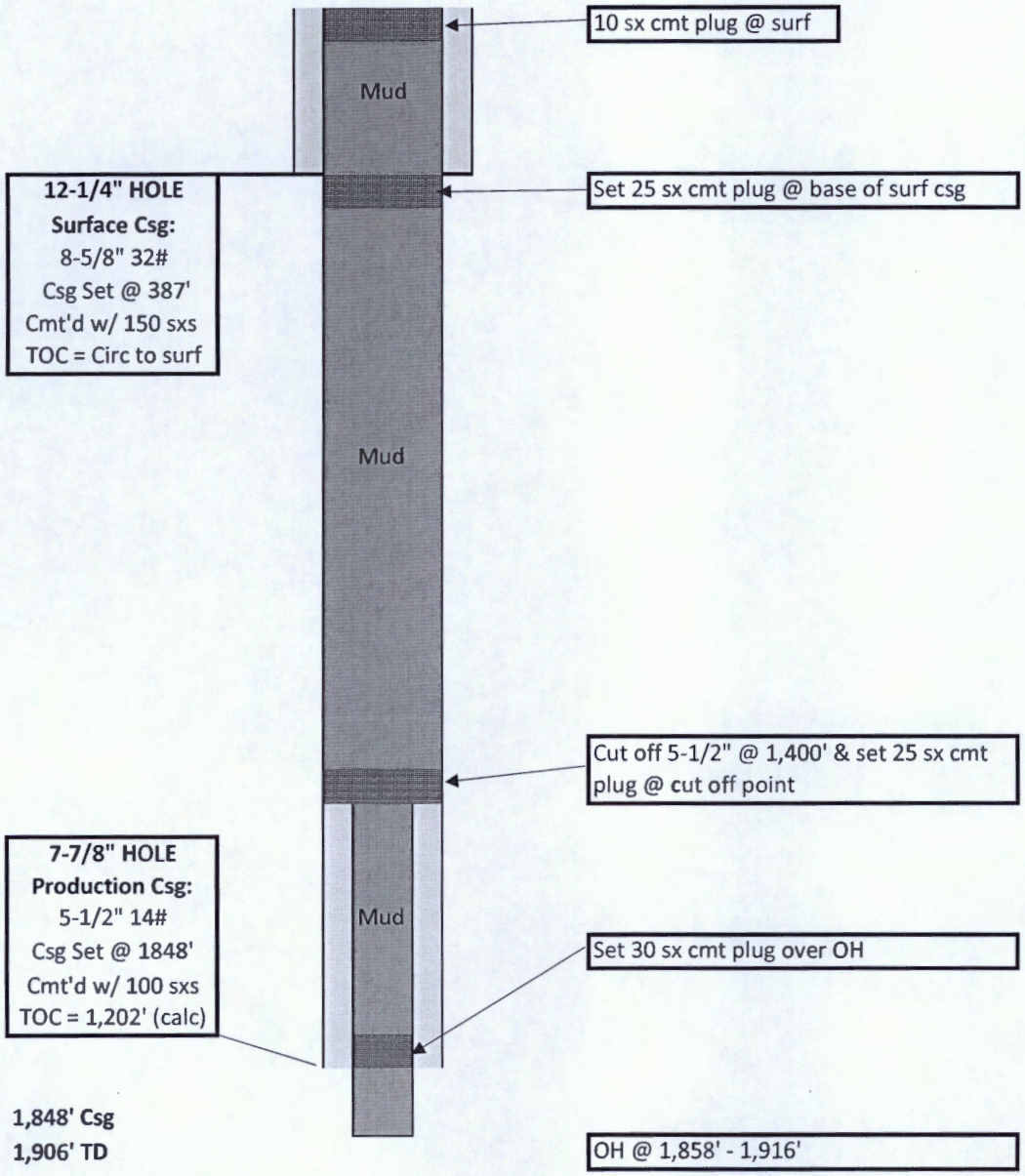
Lease &Well No.: SUN OIL CO. - MOAB-STATE #002 (P&A'd)

Location: 660' FSL & 1980' FWL
UL: O, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-8889

API No. : 30-015-02743

ELEVATION, GL: 3,672'
FIELD: HIGHLONESOME, QUEEN
Well Type: OIL
Spudded: 10/4/1955
Drlg Stopped: 10/14/1955
Completed: 11/23/1955
Plugged: 5/11/1972



Drilled by MOAB DRILLING CO. as the STATE #002 in 1955.
DRY HOLE
P&A'd by SUN OIL CO. in May, 1972.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

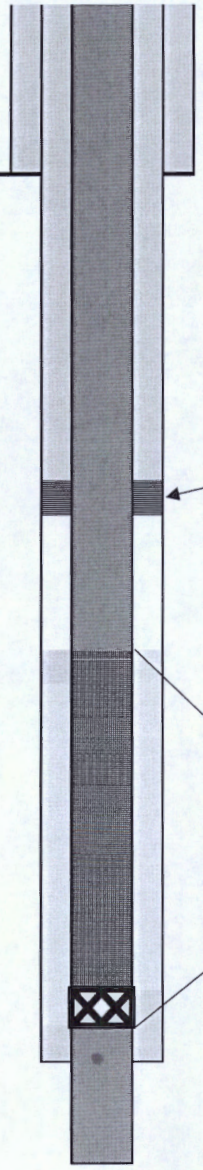
Lease &Well No.: ALAMO PERMIAN RESOURCES, LLC - SKELLY STATE #006 (P&A'd)

Location: 1980' FNL & 1980' FEL
UL: G, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02746

ELEVATION, GL: 3,582'
FIELD: HIGH LONESOME; QUEEN
Well Type: OIL
Spudded: 7/26/1955
Drlg Stopped: 8/1/1955
Completed: 8/27/1955
Plugged: 1/25/2013



12-1/4" HOLE
Surface Csg:
8-5/8" 28# J-55
Csg Set @ 333'
Cmt'd w/ 200 sxs
TOC = Circ to surf

Perf'd 4 holes @ 873'
Squeezed 416 sxs, circ'd cmt to surf

CIBP @ 1735', filled w/ cmt. Tag @ 1123'.

7-7/8" HOLE
Production Csg:
5-1/2" 15.5# J-55
Csg Set @ 1803'
Cmt'd w/ 100 sxs
TOC = 1,157' (calc)

1,803' Csg
1,893' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #006 in 1955.

P&A'd by ALAMO PERMIAN RESOURCES, LLC in January, 2013.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

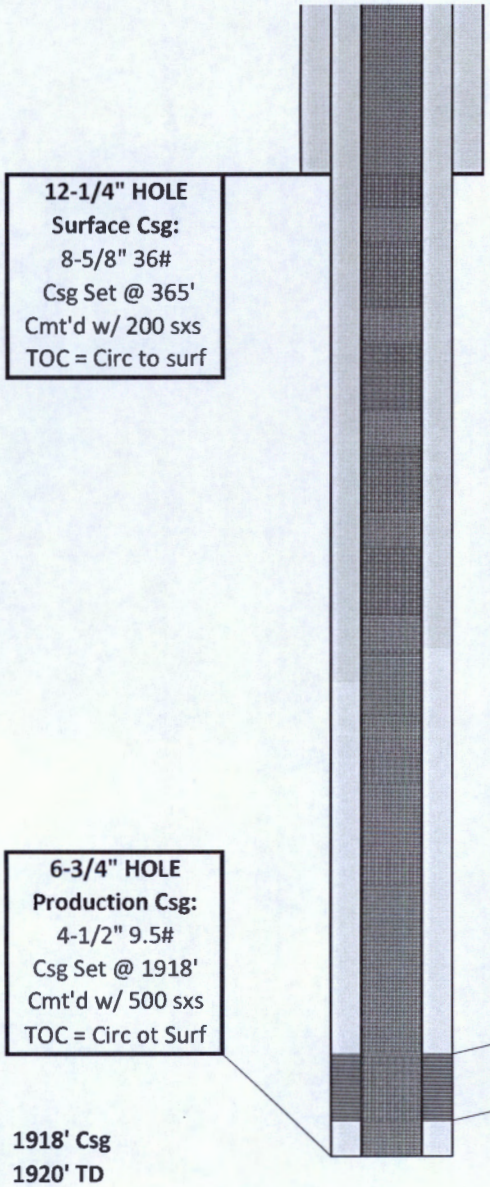
Lease &Well No.: NORWOOD OIL CORP - SKELLY STATE #014 (P&A'd)

Location: 1310' FNL & 1330' FEL
UL: B, SEC: 16, T: 16-S, R:-29E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-0590

ELEVATION, GL: 3679'
FIELD: HIGH LONESOME; QUEEN
Well Type: Injection
Spudded: 4/1/1957
Drlg Stopped: 4/15/1957
Completed: 4/15/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 365'
Cmt'd w/ 200 sxs
TOC = Circ to surf

Ran 2-3/8" tbg to 1782' G.L. Circ class C cmt to surf. Pulled tbg, filled wall w/ cmt. Welded cap and marker on well

6-3/4" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1918'
Cmt'd w/ 500 sxs
TOC = Circ ot Surf

Perf @ 1877'-1888'
Perf @ 1891'-1893'

1918' Csg
1920' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #014 in 1957.

P&A'd by NORWOOD OIL CORP in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

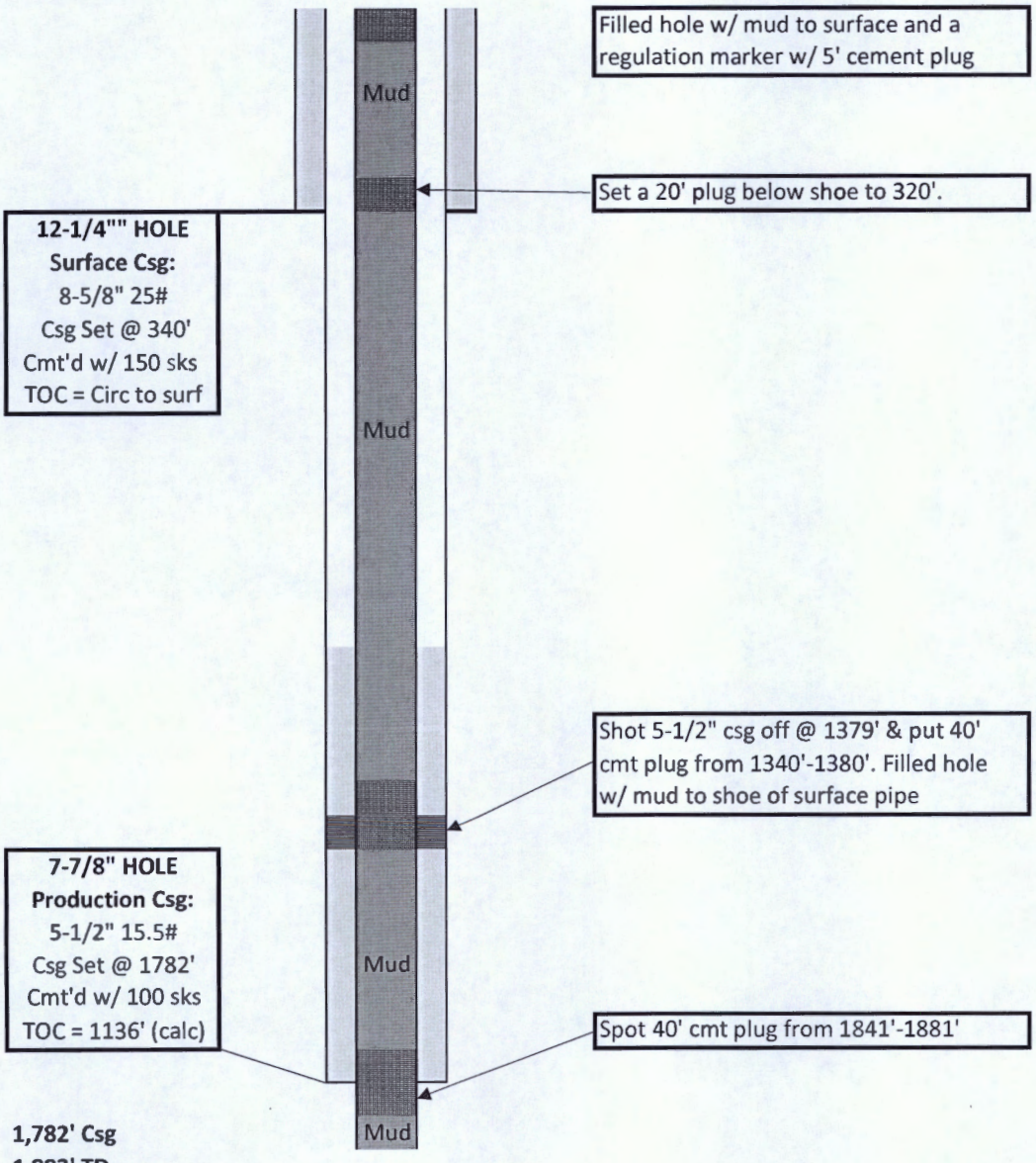
Lease &Well No.: MOAB DRILLING CO - SKELLY-STATE #004 (P&A'd)

Location: 660' FNL & 1980' FWL
UL: C, SEC: 16, T:16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02745

ELEVATION, GL: 3674'
FIELD: High Lonesome
Well Type: OIL
Spudded: 7/7/1955
Drlg Stopped: 7/17/1955
Completed: 8/1/1955
Plugged: 8/8/1955



Drilled by MOAB DRILLING CO as the SKELLY-STATE #004 in 1955.
DRY HOLE
P&A'd by MOAB DRILLING CO in August, 1955.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

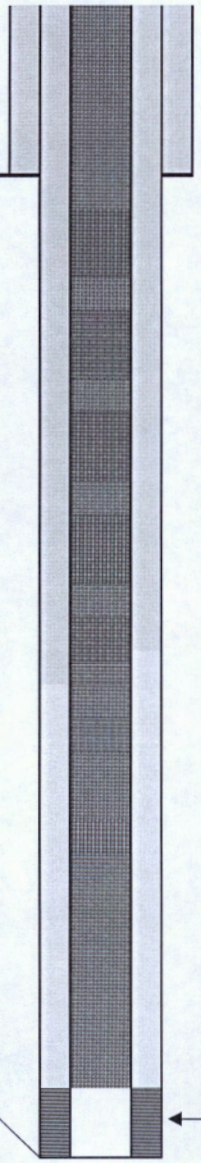
Lease &Well No.: **NORWOOD OIL CO. - SKELLY-STATE #023 (P&A'd)**

Location: 2630' FNL & 10' FEL
UL: H, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-05901

ELEVATION, GL: 3,688'
FIELD: HIGH LONESOME; QUEEN
Well Type: INJECTION
Spudded: 5/31/1957
Drlg Stopped: 6/7/1957
Completed: 6/7/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 157
Cmt'd w/ 75 sxs
TOC = Circ to surf

Ran tbg to 1,750' GL, circ class C cmt to surf. Pulled tbg, filled csg with cmt. Welded cap and marker on well.

7-7/8" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1940'
Cmt'd w/ 480 sxs
TOC = Circ to surf

Perf @ 1890' - 1911'
Perf @ 1914' - 1921'

1,940' Csg
1,943' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #023 in 1957.

P&A'd by NORWOOD OIL CO. in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

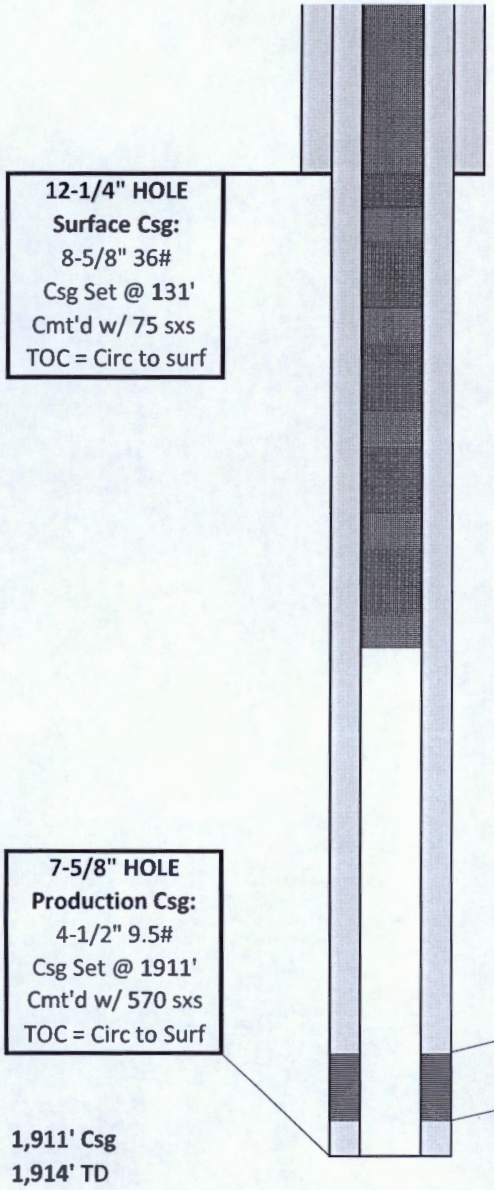
Lease &Well No.: NORWOOD OIL CORP - SKELLY-STATE #024 (P&A'd)

Location: 2630' FNL & 1330' FEL
UL: G, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-05902

ELEVATION, GR: 3,678'
FIELD: HIGHLONESOME; QUEEN
Well Type: INJECTION
Spudded: 5/23/1957
Drlg Stopped: 5/30/1957
Completed: 5/30/1957
Plugged: 8/22/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 131'
Cmt'd w/ 75 sxs
TOC = Circ to surf

Ran tbg to 1052' PBTD and circ class C cmt to surf. Pulled tbg, filled well w/ cmt. Welded cap and marker on well

7-5/8" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1911'
Cmt'd w/ 570 sxs
TOC = Circ to Surf

Perf @ 1873'-1888'
Perf @ 1893'-1895'

1,911' Csg
1,914' TD

Drilled by MOAB DRILLING CO. as the SKELLY - STATE #024 in 1957.

P&A'd by NORWOOD OIL CORP in August, 1985.

ROVER PETROLEUM, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

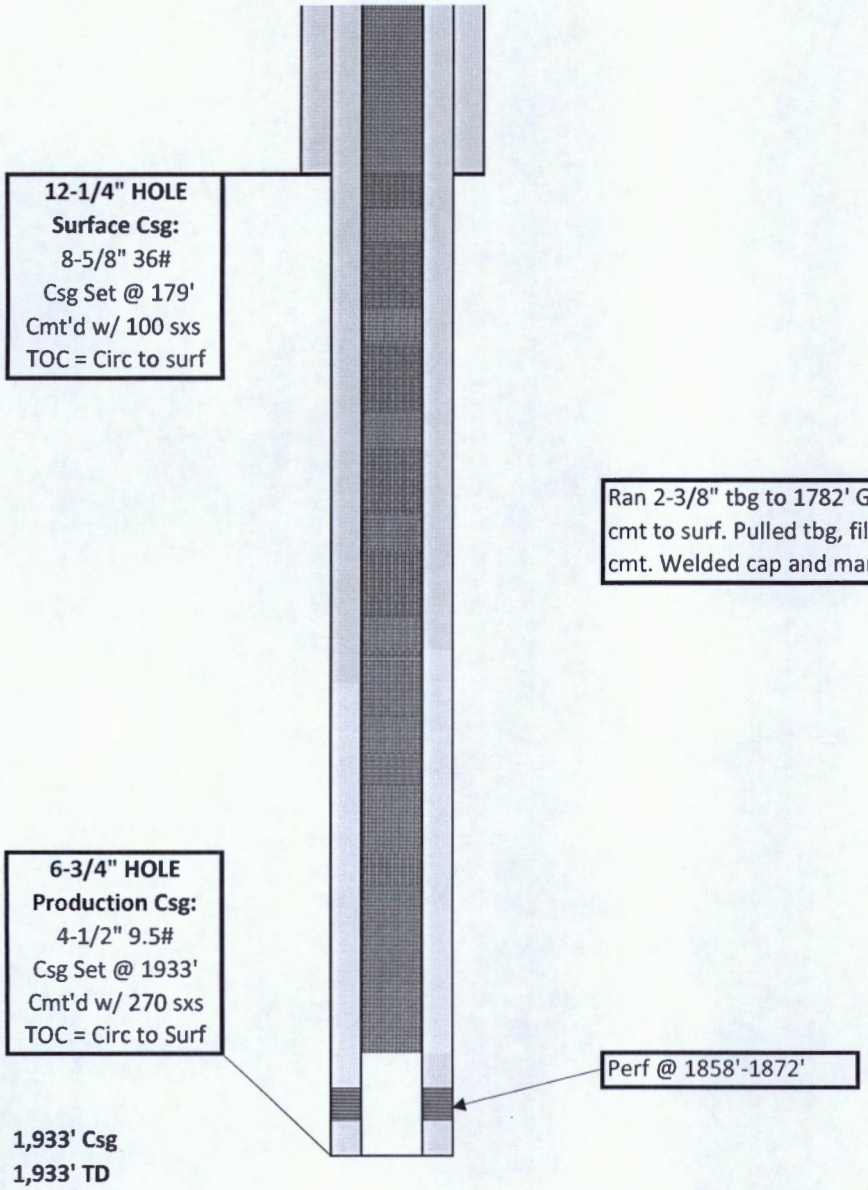
Lease &Well No.: NORWOOD OIL CORP - SKELLY-STATE #025 (P&A'd)

Location: 2630' FNL & 2630' FWL
UL: F, SEC: 16, T: 16-S, R:29-E
EDDY County, NM

LEASE No.: E-134

API No. : 30-015-02750

ELEVATION, KB: 3,682'
FIELD: HIGHLONESOME; QUEEN
Well Type: INJECTION
Spudded: 2/21/1959
Drlg Stopped: 3/4/1959
Completed: 3/24/1959
Plugged: 8/23/1985



12-1/4" HOLE
Surface Csg:
8-5/8" 36#
Csg Set @ 179'
Cmt'd w/ 100 sxs
TOC = Circ to surf

Ran 2-3/8" tbg to 1782' GL circ class C cmt to surf. Pulled tbg, filled well w/ cmt. Welded cap and marker on well

6-3/4" HOLE
Production Csg:
4-1/2" 9.5#
Csg Set @ 1933'
Cmt'd w/ 270 sxs
TOC = Circ to Surf

Perf @ 1858'-1872'

1,933' Csg
1,933' TD

Drilled by MOAB DRILLING CORP as the SKELLY-STATE #025 in 1959.

P&A'd by NORWOOD OIL CORP in August, 1985.

VII). Attach data on the proposed operation, including:

1) **Proposed average and maximum daily rate and volume of fluids to be injected**

Rover Petroleum proposes average and maximum daily rates and volumes of water injection into the High Lonesome Queen #2 water injection well of:

- Average: 250 BWPD ("barrels of water per day per well")
- Maximum: 300 BWPD

2) **Whether the system is open or closed**

The High Lonesome Queen unit waterflood station is a closed system in which make-up water and produced water from the High Lonesome Queen Unit wells are commingled, treated, and injected.

3) **Proposed average and maximum injection pressure**

Rover Petroleum, LLC, proposes average and maximum injection pressures for the High Lonesome Queen Unit water injection well of:

- Average: 900 psig
- Maximum: 1100 psig

4) **Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water**

Rover Petroleum, LLC has entered into a Water Transfer Agreement in which Rover is provided make-up water which currently being produced from the San Andres formation by Mack Energy Corporation. See the attached compatibility test and water analyses of the two waters.

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.)**

The High Lonesome Queen Unit #2 water injection well covered by this application is to be used for Secondary Recovery and not for disposal purposes. This requirement does not apply to this application.

NMOCD Form C-108 – Sec. VIII: Geologic Summary

High Lonesome Queen Unit #2

Sec. 16, Twp 16-S, Rge 29-E, Eddy County, NM
1980 FSL, 1980 FWL

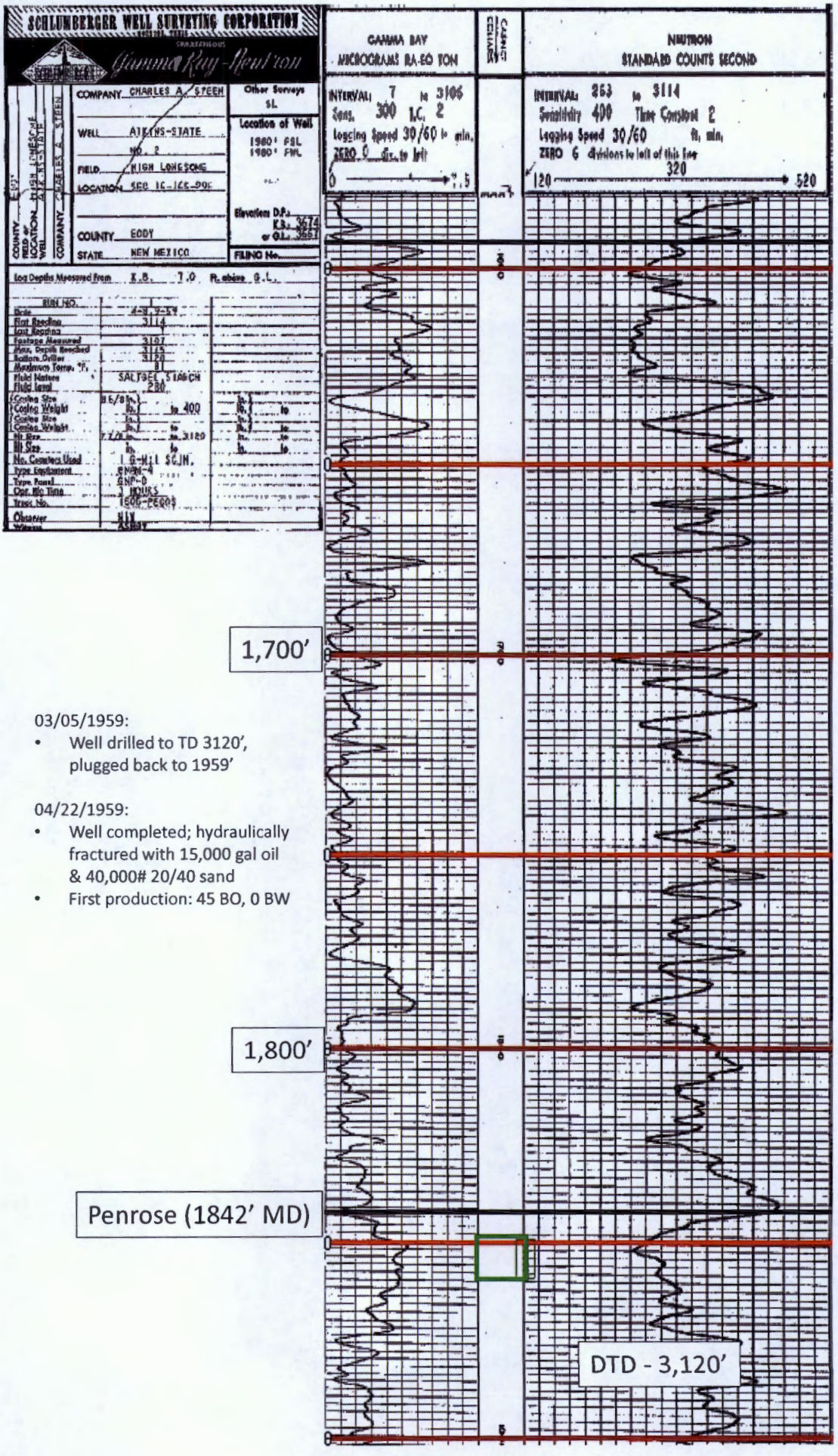
The High Lonesome Queen Unit produces hydrocarbons from the Penrose sandstone of the Permian-age (Guadalupian) Queen Formation. The arkosic Penrose sandstone is about 30 feet-thick and is situated about 250' above the base of the Queen Formation.

The High Lonesome Queen Unit is part of a continuous east-west trend of Penrose production that is at least 8 miles long. The productive trend is about 1 mile wide and is a large stratigraphic trap. Clean and porous hydrocarbon-producing sandstone is bounded to the north by an anhydrite-plugged and salt-plugged sandstone facies with poor permeability. South of the reservoir sandstone the rock quality degrades into shaly sandstone with poor permeability. The entire depositional system is interpreted to represent a high-energy beach or barrier bar (the reservoir), flanked by a periodically-exposed evaporitic tidal flat depositionally up-dip and poorly winnowed shaly sand accumulating in a low energy shallow marine environment depositionally down-dip.

In the area of the High Lonesome Queen Unit the top of the Penrose sandstone is at an average drill depth of 1,850 feet (+1,830'). The interval has a gross thickness of about 30 feet. In the Penrose interval, usually about 10-15 feet of the gross 30 feet of interval develops the threshold porosity of 8% required for economic reservoir permeability. The reservoir sandstone is fine grained and reaches an average porosity of about 11%. Structure mapping indicates that the reservoir dips gently from northwest to southeast across the unit, losing about 135 feet of subsea elevation. The Penrose reservoir sandstone is directly both underlain and overlain by layers of low porosity anhydritic dolostone. These low permeability upper and lower bounding layers, combined with the northern evaporate-plugged reservoir boundary, should serve to strongly contain secondary reservoir energy introduced by means of water-injection.

IX). Describe the proposed stimulation program, if any.

The High Lonesome Queen Unit #2 water injection well will be acidized in the current perforation (1849' – 1859') with 3000 gal 15% NEFE HCl (75 gal/perf). If sufficient volumes of water are unable to injected at the approved surface injection pressure, a step-rate test will be performed to determine if the surface injection pressure can be increased without damaging the formation or if a gelled water fracture stimulation will needed to increase injectivity. If it is determined that a fracture treatment is needed, the fracture stimulation will be a gelled-water frac job with approximately 30,000-40,000# of 20/40 frac sand.



03/05/1959:

- Well drilled to TD 3120', plugged back to 1959'

04/22/1959:

- Well completed; hydraulically fractured with 15,000 gal oil & 40,000# 20/40 sand
- First production: 45 BO, 0 BW

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.

Rover Petroleum, LLC, has investigated the area within a one-mile radius of the proposed High Lonesome Queen Unit #2 water injection well and has determined there to be no fresh water wells currently producing within the area.