STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF ALAMO PERMIAN RESOURCES, LLC FOR APPROVAL OF THE HIGH LONESOME QUEEN UNIT, ESTABLISHMENT OF A WATERFLOOD PROJECT, AND CERTIFICATION OF THE WATERFLOOD PROJECT AS AN ENHANCED OIL RECOVERY PROJECT PURSUANT TO THE ENHANCED OIL RECOVERY ACT, EDDY COUNTY, NEW MEXICO.

CASE NO. 15116

APPLICATION

ALAMO PERMIAN RESOURCES, LLC ("Alamo"), through its undersigned attorneys, files this application with the New Mexico Oil Conservation Division, along with a complete Form C-108, for an order approving (1) unitization of the High Lonesome Queen Unit Area, (2) a corresponding waterflood project for the unit area, and (3) certification of the waterflood project as an enhanced oil recovery project. In support of this application, Alamo states:

1. The proposed Unit Area for the High Lonesome Queen Unit consists of 680 acres, more or less, of state lands comprising all of Section 16 and the NW/4SW/4 of Section 15, Township 16 South, Range 29 East, N.M.P.M., Eddy County, New Mexico.

2. The unitized interval will be between the surface to a point one-hundred (100) feet below the base of the Penrose Sand in the Queen formation.

3. Alamo is the only interest owner within the High Lonesome Queen Unit.

4. The New Mexico State Land Office has provided preliminary approval of the Unit Agreement and of Alamo as the designated operator.

5. Alamo also seeks establishment of a waterflood project within the High Lonesome Queen Unit and authorization to implement secondary recovery operation in the Unit Area by the injection of produced and make-up water into the Penrose sandstone of the Queen

formation. A copy of Alamo's Application for Authorization to Inject (Form C-108) through six injection wells in the waterflood project area has been filed in conjunction with this application.

6. The proposed waterflood project area consists of all the lands identified above.

7. Applicant requests that the Division establish a procedure for the administrative approval of additional injection wells within the waterflood project area without the necessity for further hearings.

8. Alamo seeks to qualify this project for the recovered oil tax rate pursuant to the New Mexico Enhanced Oil Recovery Act (Laws 1992, Chapter 38, Section 1 through 5).

9. In accordance with the Rules and Procedures for Qualification of Enhanced Oil Recovery Projects and Certification for the Recovered Oil Tax Rate adopted under Division Order R-9708, the following is submitted with this Application:

a. Operator's name and address:

Alamo Permian Resources, LLC
820 Gessner, Suite 1650
Houston, TX 77024

b. Description of the Project Area:

(1) **Exhibit A** is a plat outlining the High Lonesome Queen Unit Waterflood Project Area.

(2) Legal description of the High Lonesome Queen Unit Waterflood Project Area:

TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM
Section 15: NW/4SW/4
Section 16: All

(3) Total acres: 680 more or less

(4) Name of the subject Pool and formation:

High Lonesome; Queen Pool (30780)
Queen Formation

c. Status of operation in the project area:

(1) (If unitized, name, date and Division Order) N/A

(2) Alamo seeks approval of the High Lonesome Queen Unit with this application.

(3) The leases within the project area:
State Lease E-134-5
State Lease B-2885-17
State Lease V-6499-3

d. Method of recovery to be used

A secondary recovery process involving the application of produced and make-up water.

e. Description of the project:

(1) **Exhibit B** is a list of producing wells.

(2) **Exhibit C** is a list of proposed injection wells.

(3) Capital cost of facilities: $700,000.00

(4) Total Project Capital Costs: $4,000,000.00

(5) Estimated total value of the additional production that will be recovered as a result of the expansion of this secondary recovery project:

An additional 836,000 barrels of oil at a gross revenue estimated at $59,000,000.00 over the life of the project (approximately 38 years).

(6) Anticipated date of commencement of injection:

Third quarter 2014.

(7) The type of fluid to be injected and the anticipated volumes:

Produced and make-up water at 150 BWPD/well on average to a maximum of 200 BWPD/well.

(8) (If application is for an expansion) N/A

f. Production data:

Exhibit D is a graph showing the production history and production forecast.

10. Notice of this application has been provided as required by Division Rules.

11. Approval of this application will afford Alamo the opportunity to produce its just and equitable share of the remaining reserves in the High Lonesome Queen Unit and will otherwise be in the best interest of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Alamo requests that this application be set for hearing before the Oil Conservation Division on April 17, 2014, and after notice and hearing as required by law, the Division enter its order granting this application.

Respectfully submitted,

HOLLAND & HART LLP

By: _____

Michael H. Feldewert
Adam G. Rankin
Post Office Box 2208
Santa Fe, New Mexico 87504
Telephone: (505) 988-4421

ATTORNEYS FOR
ALAMO PERMIAN RESOURCES, LLC

Case No. 15116: **Application Of Alamo Permian Resources, LLC For Approval Of The High Lonesome Queen Unit, Establishment Of A Waterflood Project, And Certification Of The Waterflood Project As An Enhanced Oil Recovery Project Pursuant To The Enhanced Oil Recovery Act, Eddy County, New Mexico.** Applicant seeks an order approving (1) unitization of the High Lonesome Queen Unit Area, (2) a corresponding waterflood project for the unit area, and (3) certification of the waterflood project as an enhanced oil recovery project. The project area consists of state lands comprising all of Section 16 and the NW/4SW/4 of Section 15, Township 16 South, Range 29 East, N.M.P.M., Eddy County, New Mexico. Any further information about this Application can be obtained from Alamo representative: Tyler Woodruff, 415 W. Wall Street, Suite 500, Midland, Texas 79701, twoodruff@alamoresources.com, (713) 224-2500.

CERTIFICATION

STATE OF TEXAS §
§
COUNTY OF HARRIS §

I, Tyler Woodruff, having been first duly sworn, state that I am a senior landman, a duly authorized representative of Alamo Permian Resources, LLC, have knowledge of the facts herein and therefore certify that the facts set forth in this Application are true and accurate to the best of my own knowledge and belief.

Tyler Woodruff

Alamo Permian Resources, LLC

High Lonesome Queen Unit Waterflood Project

Sections 15 & 16, T-16-S, R-29-E

Eddy County, New Mexico

T-16-S, R-28E

T-16-S, R-29E

Tract #1
State Lease E-134-5

West High Lonesome Penrose Sand Unit

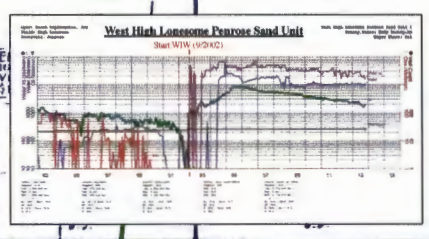
High Lonesome Queen Unit

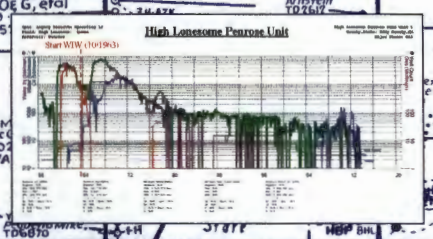
High Lonesome Penrose Unit

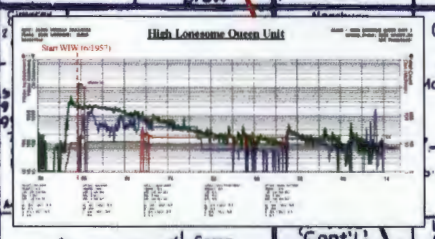
East High Lonesome Penrose Sand Unit

Tract #2
State Lease B-2885-17

Tract #3
State Lease V-6499-3







High Lonesome (Queen) Legend

- ● - Active Well
- ◬ - Producing Well Converted to WIW
- ▲ - Well Drilled as WIW
- ◢ - Plugged Well
- ◢ - Plugged Water Injection Well
- ○ - Planned Producing Well
- ◬ - Planned Water Injection Well

N

Map Scale:
One Mile

T. Fekete
October 28, 2013

tabbies

EXHIBIT

A

EXHIBIT B

Producing Wells

1. Skelly State #001 (API 30-015-02736)
2. Skelly State #003 (API 30-015-02744)
3. Skelly State #008 (API 30-015-02748)
4. Skelly State #009 (API 30-015-02749)
5. Skelly State #010 (API 30-015-02735)
6. Atkins State #001 (API 30-015-02739)
7. Atkins State #002 (API 30-015-02741)

EXHIBIT C

Proposed Injection Wells

1. High Lonesome Queen Unit #001 (D-16-16S-29E)
2. High Lonesome Queen Unit #002 (B-16-16S-29E)
3. High Lonesome Queen Unit #007 (H-16-16S-29E)
4. High Lonesome Queen Unit #008 (L-16-16S-29E)
5. High Lonesome Queen Unit #014 (N-16-16S-29E)
6. High Lonesome Queen Unit #016 (P-16-16S-29E)

Oper: Alamo Permian Resources, LLC
Field: High Lonesome: Queen
Reservoir: Penrose

ALAMO - HIGH LONESOME QUEEN UNIT WF
County,State: Eddy County,NM
API Formatted:

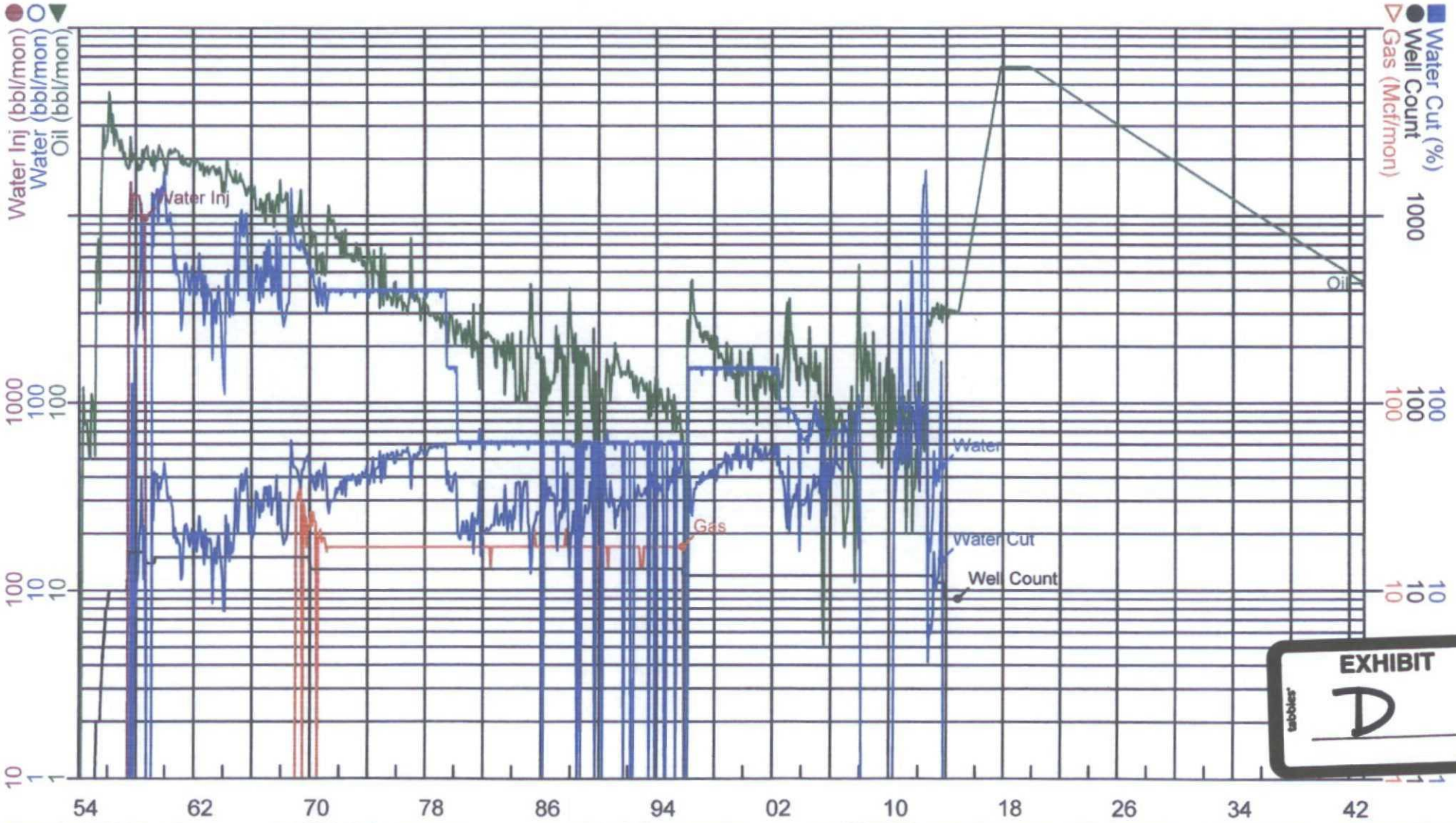


EXHIBIT
D

HPS 2013-12-31 Oil(ARPs)
Segment: 1 of 4
Cum: 444,038 bbl
Rem: 855,962 bbl
EUR: 1,300,000 bbl
01/01/2014 - 10/31/2014
Qi: 317 / Qact: 317
Qf: 304
D: 5.000 / Dmin: N/A

HPS 2013-12-31 Gas(ARPs)
Segment: N/A
Cum: 5,496 Mcf
Rem: 0 Mcf
EUR: 5,496 Mcf
/ / - / /
Qi: N/A / Qact: N/A
Qf: N/A
D: N/A / Dmin: N/A

HPS 2013-12-31 Water(ARPs)
Segment: N/A
Cum: 165,659 bbl
Rem: 0 bbl
EUR: 165,659 bbl
/ / - / /
Qi: N/A / Qact: N/A
Qf: N/A
D: N/A / Dmin: N/A

HPS 2013-12-31 Well Count(ARPs)
Segment: N/A
Cum: N/A
Rem: N/A
EUR: N/A
/ / - / /
Qi: N/A / Qact: N/A
Qf: N/A
D: N/A / Dmin: N/A

HPS 2013-12-31 Water Inj(ARPs)
Segment: N/A
Cum: 163,259 bbl
Rem: 0 bbl
EUR: 163,259 bbl
/ / - / /
Qi: N/A / Qact: N/A
Qf: N/A
D: N/A / Dmin: N/A

HPS 2013-12-31
({Water} / ({O
100
Cum: N/A
Rem: N/A
EUR: N/A
01/01/1950 - 1
Qi: 0 / Qact:
Qf: 0

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

Case 15116

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Alamo Permian Resources, LLC

ADDRESS: 415 W. Wall Street, Suite 500, Midland, Texas 79701

CONTACT PARTY: Tyler Woodruff PHONE: 713-224-2500

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 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: Tyler Woodruff TITLE: Senior Landman

SIGNATURE: _____ DATE: March 14, 2014

E-MAIL ADDRESS: twoodruff@alamoresources.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: _____

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

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

FORM C-108

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

APPLICATION FOR AUTHORIZATION TO INJECT

ALAMO PERMIAN RESOURCES, LLC
HIGH LONESOME QUEEN UNIT
Eddy County, New Mexico

LIST OF WELLS INCLUDED IN THIS APPLICATION

High Lonesome Queen Unit #001
Section 16, T-16S, R-29E
Location: 1310' FNL & 10' FWL
API No.: pending
Eddy County, NM

High Lonesome Queen Unit #002
Section 16, T-16S, R-29E
Location: 1,310' FNL & 1,650' FEL
API No.: pending
Eddy County, NM

High Lonesome Queen Unit #007
Section 16, T-16S, R-29E
Location: 1,980' FNL & 330' FEL
API No.: pending
Eddy County, NM

High Lonesome Queen Unit #008
Section 16, T-16S, R-29E
Location: 1,980' FSL & 10' FWL
API No.: pending
Eddy County, NM

High Lonesome Queen Unit #014
Section 16, T-16S, R-29E
Location: 660' FSL & 1,980' FWL
API No.: pending
Eddy County, NM

High Lonesome Queen Unit #016
Section 16, T-16S, R-29E
Location: 660' FSL & 660' FEL
API No.: pending
Eddy County, NM

Requirements as per FORM C-108

I. PURPOSE:

The purpose of this Application is to create a Secondary Recovery waterflood project within the proposed High Lonesome Queen Unit ("HLQU"). This Unit will comprise all of Section 16 and the NW/SW of Section 15 in Township 16-South, Range 29-East, NMPM, Eddy County, New Mexico. Authorization is sought by Alamo Permian Resources, LLC ("Alamo Permian") to inject produced and make-up water into the Penrose sandstone unit of the Queen Formation.

II. OPERATOR:

Alamo Permian Resources, LLC
415 W. Wall Street, Suite 500
Midland, Texas 79701
Contact Party: Tyler Woodruff, Senior Landman
twoodruff@alamoresources.com
713-224-2500

III. WELL DATA:

A. The following well data must be submitted for each injection well covered by this application. 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.**
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.**
4) **The name, model, and setting depth of the packer used or a description of any other seal system or assembly to be used.**

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 repeated.

1) **The name of the injection formation and, if applicable, the field or pool name.**
2) **The injection interval and whether it is to perforated or open-hole.**
3) **State if the well was drilled for injection or, if not, the original purpose of the 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.**
5) **Give the depth to and the name of the next higher and next lower oil and gas zone in the area of the well, if any.**

All six (6) water injection wells covered by this Application in the High Lonesome Queen Unit will be drilled and completed specifically as water injection wells.

Please see the attached "High Lonesome Queen Unit – Typical Water Injection Well" wellbore diagram which illustrates Alamo Permian's plans for the drilling and completion of these water injection wells.

Design plans for these water injection wells are the following:

- Drill wells to a Total Depth of approximately 2,000'.
- Set 9-5/8" 36# J-55 Surface Casing at a depth of approximately 400' and cement to surface.
- Set 5-1/2" 15.5# J-55 Production Casing at Total Depth and cement to surface.
- Perforate Penrose sandstone in the Queen Formation at 4 shots/foot.
- Stimulate with an initial acid breakdown job using 15% NEFE HCl acid (approx. 75 gal/ft), followed by a gelled-water frac job with 30-40,000# of frac sand.
- Run 2-3/8" 4.7# J-55 internally plastic-coated (IPC) Injection Tubing on a Baker Model AD-1 tension packer set within 100' of the top injection perforation. Tubing/Casing annulus will be filled with corrosion-inhibiting packer fluid.

IV. EXPANSION OF AN EXISTING PROJECT:

Is this an expansion of an existing project?

No, this Application is not an Expansion of an Existing Project.

V. MAP

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.

Please see the attached Alamo Permian Resources "High Lonesome Queen Unit Waterflood Project" map which shows the location of the High Lonesome Queen Unit; the location of the six (6) High Lonesome Queen Unit water injection wells covered by this Application; the wells and leases within two (2) miles of the proposed High Lonesome Queen Unit water injection wells; and the one-half mile radius circles designating the Area of Review around each proposed High Lonesome Queen Unit water injection well in this project, covered by this Application.

VI. TABULATION OF DATA ON ALL WELLS WITHIN THE AREAS OF REVIEW:

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.

Attached are two (2) tables containing the "Tabulation of Data on Wells of Public Record Within the Area of Review".

- The first table contains well data on the sixteen (16) "Active Producing & Water Injection Wells" within the Area of Review of this Application.

- The second table contains well data on the twenty-six (26) "Plugged & Abandoned (P&A'd) Wells" within the Area of Review of this Application.

- Plugging Records found for twenty-five (25) of the P&A'd wells indicate that each of these wells was plugged and abandoned properly.

- The Plugging Record for 1 P&A'd well, the Davis Federal #001 (API 30-015-02719), found in the well file on the NMOCD website was illegible and provide no information on how this well was P&A'd by Moab Drilling Company in 1958.

- Moab Drilling Company, however, properly P&A'd the Skelly State #002 (API 30-015-02742) and the Skelly State #004 (API 30-015-02745) wells located in Section 16, three (3) years earlier in 1955.

- With the Top of Cement (TOC) depths calculated for the 8-5/8" surface casing (15') and the 5-1/2" production casing (474') in the Davis Federal #001 well, coupled with Moab Drilling Company's performance in plugging the earlier Skelly State wells, Alamo Permian Resources sees no reason to suspect that the Davis Federal #001 well was not properly P&A'd. We will continue to search for a source of the Plugging Records on this well.

Please see the attached Wellbore Diagrams on the twenty-six (26) plugged and abandoned wells identified within the Area of Review for this Application.

VII. DATA ON THE PROPOSED OPERATION:

Attach data on the proposed operation, including:

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

Alamo Permian Resources proposes average and maximum daily rates and volumes of water injection into each of the six (6) High Lonesome Queen Unit water injection wells of:

- Average: 150 BWPD/well ("Barrels of water per day per well")
- Maximum: 200 BWPD/well.

Total average and maximum daily water injection rates and volumes for the High Lonesome Queen Unit project when all six (6) water injection wells are fully operational of:

- Average: 900 BWPD
- Maximum: 1,200 BWPD.

2. **Whether the system is open or closed;**

The High Lonesome Queen Unit waterflood station will be a closed system. Plans are to consolidate the Skelly State and Atkins State batteries into a single Unit production battery at the current Skelly State battery site; with the construction of the adjoining High Lonesome Queen Unit waterflood station.

3. **Proposed average and maximum injection pressures;**

Alamo Permian Resources proposes average and maximum injection pressures for each of the High Lonesome Queen Unit water injection wells covered by this Application of:

- Average: 900 psig; and
- Maximum: 1,100 psig (0.585 psig/ft at 1,880': base of Queen formation).

4. **Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water;**

Alamo Permian Resources has identified the closest source of make-up water to be approximately six (6) miles south of the planned High Lonesome Queen Unit waterflood station. This source of produced water appears to meet all requirements of quantity, quality, and compatibility with water contained in the Penrose sandstone. See attached water analysis on samples from the water source, the Cimarex Spike Tale Battery, and field produced water from the Skelly State production battery. Preliminary analysis from these 2 samples indicate that although both waters possess calcium sulfate scaling tendencies and the high chlorides may lead to potential salt precipitation, there appears to be no problems with compatibility of the waters if treated for scaling tendencies due to the high calcium sulfate index readings. Our chemical service company is currently formulating the precise chemical treatments required and we should have the results within the next few weeks.

An estimated 31,000' water supply line is planned to connect the Unit water station to the Cimarex battery along with an intermediary booster station to insure transfer of water to the Unit waterflood station.

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 six (6) High Lonesome Queen Unit water injection wells covered by this Application are to be used for Secondary Recovery and not for Disposal purposes. This requirement does not apply to this Application.

VIII. GEOLOGIC DATA:

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 an such sources known to be immediately underlying the injection interval.

Please see the following "Sec. VIII: Geologic Summary" report, "High Lonesome Queen Unit Penrose" structure map, and Skelly State #3 Type Log for Penrose sandstone unit of the Queen Formation.

Alamo Permian's investigation of the surrounding area has found no fresh water wells or sources within one (1) mile of the proposed High Lonesome Queen Unit acreage.

IX. PROPOSED STIMULATION PROGRAM:

Describe the proposed stimulation program, if any.

In the High Lonesome Queen Unit new drill water injection wells, the Penrose sandstone will be perforated at perf density of 4 shots per foot. This injection interval will be stimulated with an initial acid breakdown job using 15% NEFE HCl acid (approx. 75 gal/ft), followed by a gelled-water frac job with 30-40,000# of frac sand. Future stimulation treatments will be based on well performance.

In the High Lonesome Queen Unit new drill producing wells, the Penrose sandstone will be perforated at a perf density of 4 shots per foot. This production interval will be stimulated with an initial acid breakdown job using 15% NEFE HCl acid (approx. 75 gal/ft), followed by either a gelled-water frac job with 30-40,000# of frac sand or a CO_2 foam frac job with 30-40,000# of frac sand. Future stimulation treatments will be based on well performance.

X. LOGGING AND WELL TEST DATA:

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

All well logs from the planned six (6) High Lonesome Queen Unit water injection wells covered by this Application will be submitted to the Division once the injection wells are drilled and the logs become available.

XI. FRESH WATER WELL DATA:

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

Alamo Permian Resources has investigated the area surrounding the High Lonesome Queen Unit and have determined that there are no fresh water wells located within one (1) mile of any water injection well covered by this Application.

XII. AFFIRMATIVE STATEMENT FOR DISPOSAL WELLS:

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

All of the wells covered by this Application in the High Lonesome Queen Unit are water injection wells in a Secondary Recovery oil project. None are disposal wells and are exempt from this requirement.

XIII. 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 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Alamo Permian Resources will notify surface owners and leasehold operators within one-half mile pursuant to NMOCD regulations and we will submit certified mail receipts at hearing.

This Application is not subject to administrative approval, therefore, Alamo Permian Resources is not obligated to publish notice.

XIV. CERTIFICATION:

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

NAME: Tyler W. Woodruff TITLE: Sr. Landman

SIGNATURE: [signature] DATE: 14-Mar-2014

E-MAIL ADDRESS: twoodruff@alamoresources.com

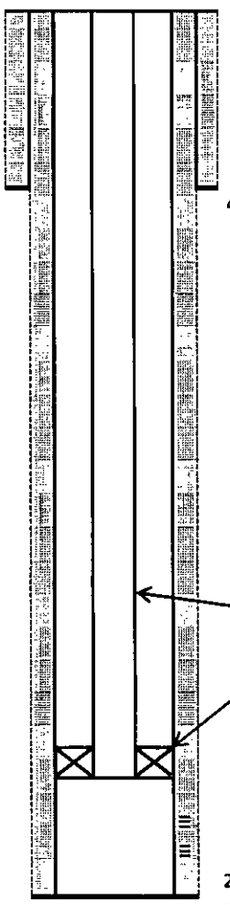
PHONE: 713-224-2500

ALAMO PERMIAN RESOURCES, LLC

HIGH LONESOME QUEEN UNIT -- TYPICAL WATER INJECTION WELL

Lease &Well No.: **HIGH LONESOME QUEEN UNIT #001 WIW** ELEVATION, GL: 3,693 ft
Location: 1,310' FNL & 10' FWL
UL: D, SEC: 16, T: 16-S, R:29-E FIELD: HIGH LONESOME - QUEEN
EDDY County, NM
LEASE No.: State E-134 Spudded:
API No. : 30-015-xxxxx Drlg Stopped:
Completed:

ROTARY DRILLING RIG



12-1/4" HOLE

TOC (12-1/4" Csg) = Surface
Circulated Cement to Surface

Surface Csg:
9-5/8" 36# J-55
Csg Set @ 400'
Cmt'd to Surface

400' Csg

TOC (5-1/2" Csg) = Surface
Circulated Cement to Surface

7-7/8" HOLE

2-3/8" 4.7# J-55 Internally Plastic-Coated Injection Tubing Set on Baker Model AD-1 Tension Pkr (or equivalent), set within 100' of the top injection perforation.

Production Csg:
5-1/2" 15.5# J-55
Csg Set @ 2,000'
Cmt'd to Surface

PERFS (Ft-#):	Zone	Completion
INJECTION PERFS	QN-Penrose	Acid Job - 15% NEFE HCl
AT 4 SHOTS/FT	QN-Penrose	Gel-Water Frac Job with
2,000' Csg		30-40,000# Sand
2,000' PBTD		
2,000' TD		

Alamo Permian plans to drill 6 Water Injection Wells and 3 Producing Wells in the development of the High Lonesome Queen Unit. All of these wells will be drilled & completed in the same manner shown here. Each WIW will be drilled to a depth of approx. 2,000' with 9-5/8" surface casing set at approx. 400' and 5-1/2" production casing set at TD. Both casing strings will be cemented to the surface. The Queen (Penrose Sand) will be perforated at 4 shots/foot and stimulated with a Gel-Water Frac Job & 30-40,000# of sand after a perf breakdown acid job.

HPS: 03/11/2014

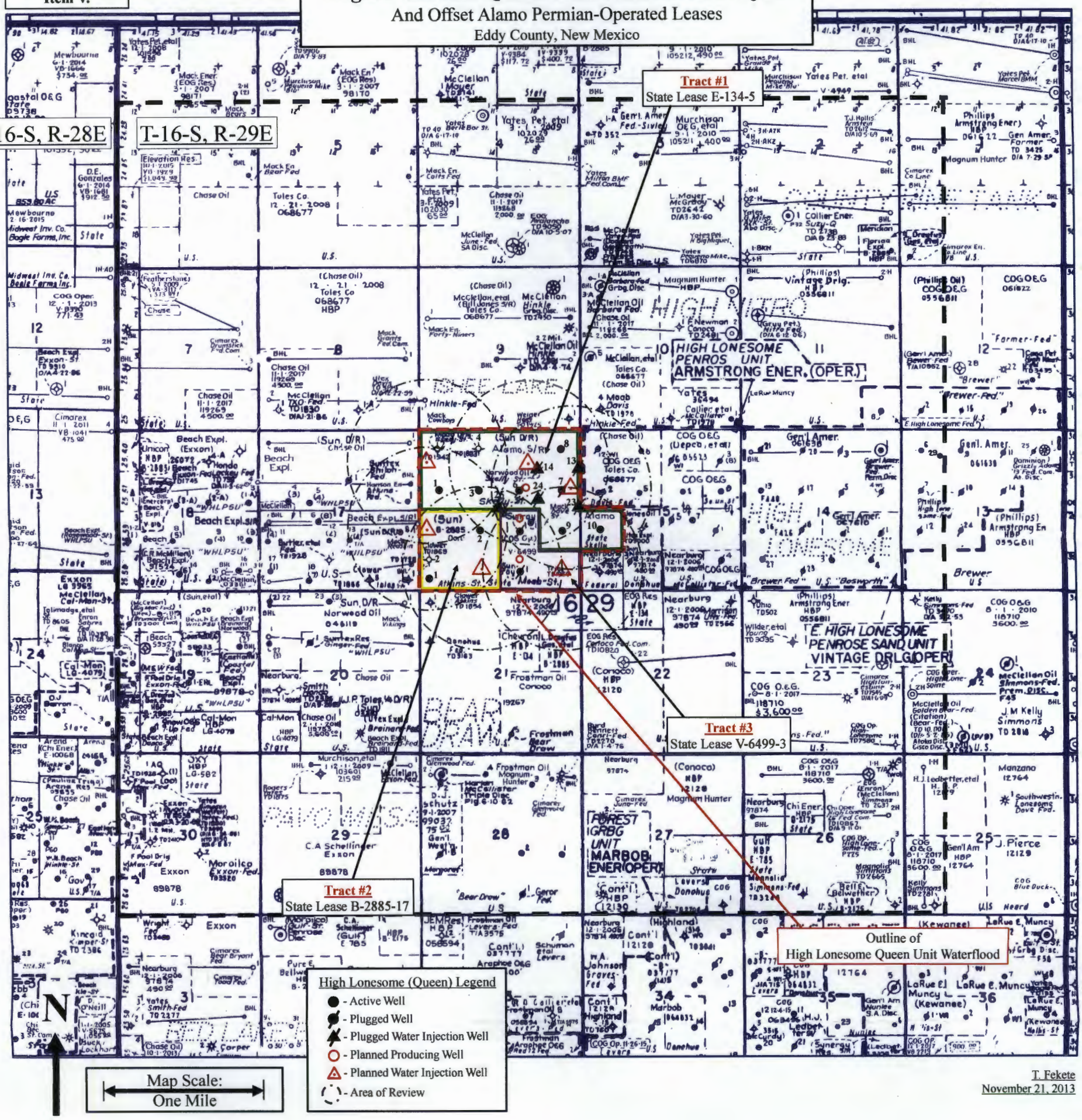
NMOCD
FORM C-108
Item V.

Alamo Permian Resources, LLC

High Lonesome Queen Unit Waterflood Project

And Offset Alamo Permian-Operated Leases

Eddy County, New Mexico



T. Fekete
November 21, 2013

ALAMO PERMIAN RESOURCES, LLC
PROPOSED WEST HIGH LONESOME QUEEN UNIT
NMOCD Form C-108 VI: Tabulation of Data on Wells of Public Record Within the Area of Review

Sorted by Section & UL

16 ACTIVE PRODUCING & WATER INJECTION WELLS

	1	2	3	4
Well Name & No. Current / Last Operator API Number	Oilers Federal #001 Mack Energy Corp. 30-015-36413	Davis Federal #002 Legacy Reserves Operating 30-015-02726	Davis Federal #005 Legacy Reserves Operating 30-015-02732	Skelly State #008 Alamo Permian Resources 30-015-02478
Location (footage calls)	965' FSL & 330' FWL	1980' FNL & 770' FWL	1980' FNL & 1980' FWL	660' FNL & 660' FEL
Section-Unit, Twp, Rge	09-M, 16S, 29E	15-E, 16S, 29E	15-F, 16S, 29E	16-A, 16S, 29E
Well Type	Oil - Horizontal	Oil	Oil	Oil
Well Status	Producing	Producing	Producing	Producing
Original Well Name & No.	Oilers Federal #001	Davis-Federal #2	Davis-Federal #5	Skelly-State #8
Original Operator	Mack Energy Corp.	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.
Spud Date	19-Aug-2008	31-Oct-1955	11-Mar-1956	30-Nov-1955
Date Drilling Ceased	27-Sep-2008	14-Nov-1955	18-Apr-1956	16-Dec-1955
Rig Type Used	Rotary	Rotary	Cable Tools	Rotary
GL Elevation	3,683'	3,695'	3,695'	3,702'
SURFACE CASING:				
Hole Size	17-1/2"	12-1/4"	10"	12-1/4"
Size & Depth of Csg.	13-3/8" 48# H-40 @ 376'	8-5/8" 24# @ 410'	8-5/8" 24#&32# @ 418'	8-5/8" 24# J-55 @ 398'
Sacks of Cement	420 sx	150 sx	150 sx	150 sx
Top of Cement	Surface	78'	Surface	38'
TOC Determined By	Circ'd 62 sx	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*
INTERMEDIATE CASING:				
Hole Size	12-1/4"			
Size & Depth of Csg.	8-5/8" 32# J-55 @ 1818'			
Sacks of Cement	685 sx			
Top of Cement	Surface			
TOC Determined By	Circ'd 48 sx			
PRODUCTION CASING:				
Hole Size	7-7/8"	7-7/8"	6-1/2"	7-7/8"
Size & Depth of Csg.	5-1/2" 17# @ 0-6498'	5-1/2" 14# @ 1930'	5-1/2" 14# @ 1956'	5-1/2" 14# J-55 @ 1911'
	4-1/2" 11.6# @ 6498-11275'			
Sacks of Cement	1,125 sx	75 sx	160 sx	150 sx
Top of Cement	Surface	1,502'	Surface	1,054'
TOC Determined By	Circ'd 155 sx	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*
COMPLETION(S):				
Pool	Ishee Lake: ABO	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	ABO	Penrose	Penrose	Penrose
Overall Perf Interval (#)	7971-11275' MD	1900'-1924'	1932'-1953'	1879-92' (60 Jets+54 Bullets)
				1896'-1902' (24 Jets+24 Bullets)
Stimulation Performed	110,250 gal 20% HCl	15,000 gal gelled Oil	Sand Frac'd	500 gal MCA
	392,040 gal SlickWater	+ 22,500# Sand	Size Unknown	10,000 gal gelled Oil
	67,752# 30/50 Sand			+ 15,000# Sand
	193,746 gal 40# Gel			+ 1,500# Adomite
INITIAL POTENTIAL:				
Date of Test	1-Dec-2008	5-Dec-1955	18-Apr-1956	3-Jan-1956
OIL, BOPD	157	45	55	22
WATER, BWPD	103	0	0	0
GAS, MCFD	166	0	0	0
API Gravity of Oil	n/a	34	34	34
Production Method	Pump	n/a	n/a	n/a
Total Depth	11,430' MD / 7,083' TVD	1,930'	1,956'	1,915'
Plug-Back Depth	11,275' MD / 7,083' TVD	1,930'	1,956'	1,911'
P&A'd Date				
COMMENTS				

ALAMO PERMIAN RESOURCES, LLC
PROPOSED WEST HIGH LONESOME QUEEN UNIT
NMOCD Form C-108 VI: Tabulation of Data on Wells of Public Record Within the Area of Review
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16 ACTIVE PRODUCING & WATER INJECTION WELLS

	5	6	7	8
Well Name & No. Current / Last Operator API Number	**Skelly State #001** **Alamo Permian Resources** **30-015-02736**	**Skelly State #003** **Alamo Permian Resources** **30-015-02744**	**Skelly State #009** **Alamo Permian Resources** **30-015-**	**Dove State #001** **Legacy Reserves Operating** **30-015-34157**
Location (footage calls)	1980' FSL & 660' FWL	1980' FNL & 1980' FWL	1980' FSL & 660' FEL	2310' FSL & 1650' FEL
Section-Unit, Twp, Rge	16-E, 16S, 29E	16-F, 16S, 29E	16-I, 16S, 29E	16-J, 16S, 29E
Well Type	Oil	Oil	Oil	Oil
Well Status	Producing	Producing	Producing	Producing
Original Well Name & No.	Skelly-State #1	Skelly-State #3	Skelly-State #9	Dove State #001
Original Operator	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.	Mack Energy Corp.
Spud Date	31-Jan-1955	13-Jun-1955	9-Sep-1955	8-Jul-2005
Date Drilling Ceased	13-Mar-1955	3-Jul-1955	23-Sep-1955	20-Jul-2005
Rig Type Used	Rotary	Rotary	Rotary	Rotary
GL Elevation	3,663'	3,672'	3,683'	3,660'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	12-1/4"	17-1/2"
Size & Depth of Csg.	9-5/8" 32# H-40 @ 200'	7" 20# J-55 @ 351'	8-5/8" 32# J-55 @ 417'	13-3/8" 41# J-55 @ 313'
Sacks of Cement	100 sx	350 sx	150 sx	375 sx
Top of Cement	Surface	Surface	57'	Surface
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Calculation (75% SF)*	Circ'd 125 sx
INTERMEDIATE CASING:				
Hole Size	8-1/2"			12-1/4"
Size & Depth of Csg.	7" 20# J-55 @ 420'			8-5/8" 24# J-55 @ 910'
Sacks of Cement	15 sx			500 sx
Top of Cement	303'			Surface
TOC Determined By	*Calculation (75% SF)*			Circ'd 34 sx
PRODUCTION CASING:				
Hole Size	6-3/4"	7-7/8"	7-7/8"	7-7/8"
Size & Depth of Csg.	5-1/2" 15.5# J-55 @ 1750'	5-1/2" 15.5# J-55 @ 1745'	5-1/2" 14# J-55 @ 1863'	5-1/2" 15.5# J-55 @ 4557'
Sacks of Cement	50 sx	100 sx	100 sx	1,455 sx
Top of Cement	1,157'	1,340'	1,292'	Surface
TOC Determined By	*Calculation (75% SF)*	*CBL run 07/27/11*	*Calculation (75% SF)*	*Circ'd*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	Bear Draw: QN, GB, SA
Zone	Penrose	Penrose	Penrose	San Andres
Overall Perf Interval (#)	03/55: 1750'-1810' (Openhole)	1745'-1870' (Openhole)	1863'-1933' (Openhole)	2814'-3074' (OA-39 perfs)
	01/56: 1750'-1831' (Openhole)			
Stimulation Performed	**03/13/55:** 10,000 gal gel Oil	10,000 gal gelled Oil	10,000 gal gelled Oil	2,500 gal 15% HCl
	+ 2,000# Sand	+ 15,000# Ottawa Sand	+ 10,000# Sand	24,860 gal 9.5# Brine
	01/29/56: 15,000 gal gel Oil		+ 1,000# Adomite	+ 8,000# 14/30 Lite Prop
	+ 22,500# 20/40 & 10/20 Sd			+ 54,978 gal 40# gel
	+ 1,500# Adomite			+ 91,350# 16/30 Sand
	+ 400# T.L.C. 15			
INITIAL POTENTIAL:				
Date of Test	18-Mar-1955	13-Jul-1955	1-Nov-1955	29-Aug-2005
OIL, BOPD	48	66	43	20
WATER, BWPD	0	0	0	517
GAS, MCFD	0	0	0	0
API Gravity of Oil	n/a	33	n/a	n/a
Production Method	n/a	n/a	n/a	n/a
Total Depth	1,831'	1,870'	1,933'	4,570'
Plug-Back Depth	1,831'	1,870'	1,933'	4,535'
P&A'd Date				
COMMENTS	01/29/56: Deepened to 1831'			
	Test 03/15/55: 50 BOPD			

ALAMO PERMIAN RESOURCES, LLC
PROPOSED WEST HIGH LONESOME QUEEN UNIT
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Sorted by Section & UL
16 ACTIVE PRODUCING & WATER INJECTION WELLS

	9	10	11	12
Well Name & No. Current / Last Operator API Number	Atkins State #002 Alamo Permian Resources 30-015-02741	Skelly State #010 Alamo Permian Resources 30-015-02735	Atkins State #001 Alamo Permian Resources 30-015-0239	Cowboys Federal #001 Mack Energy Corp. 30-015-36526
Location (footage calls)	1980' FSL & 1980' FWL	1980' FSL & 660' FWL	330' FSL & 330' FWL	335' FNL & 330' FWL
Section-Unit, Twp, Rge	16-K, 16S, 29E	16-L, 16S, 29E	16-M, 16S, 29E	17-A, 16S, 29E
Well Type	Oil	Oil	Oil	Oil - Horizontal
Well Status	Producing	Producing	Producing	Producing
Original Well Name & No.	Atkins-State #2	Skelly-State #10	State #1	Cowboys Federal Com #1
Original Operator	Charles A. Steen	Moab Drilling Co.	Pittman & Atkins	Mack Energy Corp.
Spud Date	5-Mar-1959	16-Dec-1955	17-Nov-1939	20-Mar-2009
Date Drilling Ceased	9-Apr-1959	10-Jan-1956	10-Jan-1940	22-Apr-2009
Rig Type Used	Rotary	Rotary	Cable Tools	Rotary
GL Elevation	3,674'	3,689'	3,654'	3,671'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	10"	12-1/4"
Size & Depth of Csg.	8-5/8" 24# H-40 @ 395'	8-5/8" 24# J-55 @ 385'	8-5/8" 32# @ 342'	8-5/8" 24# J-55 @ 379'
Sacks of Cement	450 sx	150 sx	50 sx	640 sx
Top of Cement	Surface	25'	Surface	Surface
TOC Determined By	*Circulated*	*Calculation (75% SF)*	*Calculation (75% SF)*	Circ'd 30 sx
INTERMEDIATE CASING:				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	7-7/8"	7-7/8"	8"	6-1/8"
Size & Depth of Csg.	4-1/2" 9.5# BCW @ 1958'	5-1/2" 14# J-55 @ 1950'	7" 24# Lap-Weld @ 1724'	5-1/2" 17# @ 0-7341'
				4-1/2" 11.6# @ 7341-11235'
Sacks of Cement	75 sx	100 sx	50 sx	1,025 sx
Top of Cement	1,746'	1,290'	1,119'	Surface
TOC Determined By	*CBL run 06/14/11*	*CBL run 07/21/11*	*Calculation (75% SF)*	*Calculation (75% SF)*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	Ishee Lake: ABO
Zone	Penrose	Penrose	Penrose	ABO
Overall Perf Interval (#)	05/12/59: 1849'-1859'	**01/09/56:** 1902'-1934'	1724'-1845' (Openhole)	7591'-11235' MD
	06/14/11: 1845'-1872'	**05/20/11:** 1912'-1932'		
Stimulation Performed	**05/12/59:** 250 gal MCA	**01/19/56:** 5,000 gal gelled Oil	Initial Completion: None	87,654 gal 20% HCl
	+ 15,000 gal gelled Oil	+ 7,500# Sand	01/31/47: 80 qts Nitro	220,836 gal SlickWater
	+ 40,000# 20/40 Sand	+ 500# Adomite		787,412# 30/50 Sand
	09/21/87: 1,000 gal 10% HCl	**05/24/11:** 53,500 gal gel Brine		874,774 gal 40# Gel
	+ 30,000 gal Gel Wtr	+ 17,500# 20/40 Sand		
	+ 50,000# Sand			
	06/14/11: 55,280 gal gel Brine			
	+ 31,740# 20/40 Sand			
INITIAL POTENTIAL:				
Date of Test	12-May-1959	19-Jan-1956	1-Feb-1940	16-Jul-2009
OIL, BOPD	15	45	55	102
WATER, BWPD	0	0	0	418
GAS, MCFD	0	0	0	99
API Gravity of Oil	n/a	34	34	n/a
Production Method	n/a	n/a	n/a	Pump
Total Depth	3,120'	1,955'	1,845'	11,434' MD / 7,027' TVD
Plug-Back Depth	1,959'	1,950'	1,845'	11,235' MD / 7,027' TVD
P&A'd Date				
COMMENTS	Coaster Frac: 06/16/2011	Coaster Frac: 05/24/2011	Test 01/31/47: 25 BOPD	

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16 ACTIVE PRODUCING & WATER INJECTION WELLS

	13	14	15	16
Well Name & No. Current / Last Operator API Number	**Atkins Federal #001 Alamo Permian Resources 30-015-02751**	**Redskins Federal Com #001 Mack Energy Corp. 30-015-36511**	**WHLPSU #013 WIW Beach Exploration, Inc. 30-015-01438**	**Iles Federal #001Y Beach Exploration, Inc. 30-015-02754**
Location (footage calls)	2310' FNL & 330' FEL	2285' FSL & 40' FEL	1650' FSL & 2310' FEL	330' FSL & 345' FEL
Section-Unit, Twp, Rge	17-H, 16S, 29E	17-I, 16S, 29E	17-J, 16S, 29E	17-P, 16S, 29E
Well Type	Oil	Oil - Horizontal	Oil / Injection	Oil
Well Status	Producing	Producing	Active WIW	Producing
Original Well Name & No.	Atkins-Federal #1	Redskins Federal Com #001	Iles-Federal #4	Iles-Federal #1Y
Original Operator	Charles A. Steen	Mack Energy Corp.	J.C. Clower	General Wester Petroleum
Spud Date	11-Apr-1956	27-May-2009	7-Mar-1952	28-Aug-1939
Date Drilling Ceased	14-May-1956	24-Jun-2009	6-Jan-1954	20-Nov-1939
Rig Type Used	Cable Tools	Rotary	Cable	Cable Tools
GL Elevation	3,659'	3,655'	3,644'	3,655'
SURFACE CASING:				
Hole Size	10"	12-1/4"	10"	10"
Size & Depth of Csg.	8-5/8" @ 490'	8-5/8" 24# J-55 @ 385'	8-5/8" 28# @ 298'	8-5/8" @ 291'
Sacks of Cement	100 sx	400 sx	50 sx	70 sx
Top of Cement	Surface	Surface	Surface	Surface
TOC Determined By	*Calculation (75% SF)*	Circ'd 100 sx	*Calculation (75% SF)*	*Calculation (75% SF)*
INTERMEDIATE CASING:				
Hole Size			8"	8"
Size & Depth of Csg.			7" 20# @ 1740'	7" @ 1620'
Sacks of Cement			50 sx	100 sx
Top of Cement			1,135'	410'
TOC Determined By			*Calculation (75% SF)*	*Calculation (75% SF)*
PRODUCTION CASING:				
Hole Size	6-1/2"	6-1/8"	5-1/2" Liner - Run 08/09/2002	6-1/2"
Size & Depth of Csg.	5/1/2" 14# J-55 @ 1825'	5-1/2" 17# @ 0-6306'	5-1/2" 15.5# @ 0'-1757'	5-1/2" Liner @ 1470'-1735'
		4-1/2" 11.6# @ 6306-11560'		
Sacks of Cement	100 sx	1,325 sx	135 sx	85 sx
Top of Cement	1,340'	Surface	Surface	1540'
TOC Determined By	*CBL run 07/28/11*	*Calculation (75% SF)*	Circulated	*Temperature Survey*
COMPLETION(S):				
Pool	High Lonesome: QN	Ishee Lake: ABO	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	ABO	Penrose	Penrose
Overall Perf Interval (#)	1774'-1799' (100 Bullets)	7906-11560' MD	1757'-1815' (Openhole)	1735'-1835' (Openhole)
Stimulation Performed	11,970 gal gelled Oil	249,794 gal 15% NEFE HCl	Original O/H: Shot w/ Nitro	90 qts Nitro Glycerin
	+ 10,000# 10/20 Sand	88,158 gal Divert S 20%	08/2002 O/H: None	1801'-1821'
	+ 400# Adomite	149,436 gal SlickWater		
INITIAL POTENTIAL:				
Date of Test	1-Jun-1956	13-Oct-2009	12-Feb-1954	n/a
OIL, BOPD	45	69	25	45
WATER, BWPD	0	475	0	0
GAS, MCFD	0	124	0	0
API Gravity of Oil	34	41.1	0	n/a
Production Method	n/a	n/a	Pump	Pump
Total Depth	1,825'	11,711' MD / 7,016' TVD	1,815'	1,835'
Plug-Back Depth	1,805'	11,560' MD / 7,016' TVD	1,815'	1,835'
P&A'd Date				
COMMENTS	Well Cored: 1783-1801'		Unitized: 12/21/2001 Converted to WIW: 08/27/02	Replacement Well for Iles Federal #001

ALAMO PERMIAN RESOURCES, LLC
PROPOSED WEST HIGH LONESOME QUEEN UNIT
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26 PLUGGED & ABANDONED (P&A'd) WELLS

	1	2	3	4
Well Name & No. Current / Last Operator API Number	Davis Federal #006 Sun Oil Co. 30-015-0273	Davis Federal #003 COG Operating LLC 30-015-02727	Davis Federal #012 WIW COG Operating LLC 30-015-05906	Davis Federal #001 Moab Drilling Co. 30-015-02719
Location (footage calls)	660' FNL & 1980' FWL	660' FNL & 660' FWL	1310' FNL & 1310' FWL	1980' FNL & 660' FWL
Section-Unit, Twp, Rge	15-C, 16S, 29E	15-D, 16S, 29E	15-D, 16S, 29E	15-E, 16S, 29E
Well Type	Oil	Oil	Injection	Oil
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	Davis-Federal #6	Davis-Federal #3	Davis-Federal #12W	Davis-Federal #1
Original Operator	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.
Spud Date	7-Sep-1956	17-Nov-1955	5-May-1957	19-Oct-1955
Date Drilling Ceased	14-Sep-1956	28-Nov-1955	21-May-1957	30-Oct-1955
Rig Type Used	Rotary	Rotary	Rotary	Rotary
GL Elevation	3,701'	3,699'	3,701'	3,695'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	12-1/4"	12-1/4"
Size & Depth of Csg.	8-5/8" 28#&32# @ 481'	8-5/8" 24# @ 390'	8-5/8" 36# @ 134'	8-5/8" 24# @ 375'
Sacks of Cement	150 sx	150 sx	150 sx	150 sx
Top of Cement	58'	30'	Surface	15'
TOC Determined By	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*
INTERMEDIATE CASING:				P&A Records on the NMOCD
Hole Size				Website are illegible - NO P&A
Size & Depth of Csg.				Data available for this well.
Sacks of Cement				Moab Drlg properly P&A'd the
Top of Cement				Skelly State #2 & #4 in sec 16.
TOC Determined By				Assume same for this well.
PRODUCTION CASING:				
Hole Size	7-7/8"	7-7/8"	7-7/8"	7-7/8"
Size & Depth of Csg.	4-1/2" 9.6# @ 1999'	5-1/2" 14# @ 1885'	4-1/2" 9.5# @ 1966'	5-1/2" 14# @ 1902'
Sacks of Cement	385 sx	100 sx	500 sx	250 sx
Top of Cement	326'	1,314'	Surface	474'
TOC Determined By	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: 7R
Zone	Penrose	Penrose	Penrose	Seven Rivers
Overall Perf Interval (#)	1930-50'	1886'-1951' (Openhole)	1920-46'	1219-1388'
Stimulation Performed	4,600 gal gelled Oil + 9,000# Sand +300# Adomite	15,000 gal gelled Oil +20,000# Sand	n/a	Sand Frac Size Unknown
INITIAL POTENTIAL:				
Date of Test	20-Oct-1956	13-Dec-1955	Drilled as WIW	3-Apr-1956
OIL, BOPD	50	46		2
WATER, BWPD	0	0		0
GAS, MCFD	0	0		0
API Gravity of Oil	34	34		32.1
Production Method	n/a	n/a		n/a
Total Depth	2,000'	1,951'	1,970'	1,902'
Plug-Back Depth	1,958'	1,951'	1,970'	1,902'
P&A'd Date	8-Jul-2012	5-Jul-2012	28-Apr-2008	??? 1958
COMMENTS			High Lonesome Penrose Pilot Project WIW	Original hole junked with Core Barrel - compl in 7R

ALAMO PERMIAN RESOURCES, LLC
PROPOSED WEST HIGH LONESOME QUEEN UNIT
NMOCD Form C-108 VI: Tabulation of Data on Wells of Public Record Within the Area of Review
Sorted by Section & UL
26 PLUGGED & ABANDONED (P&A'd) WELLS

	5	6	7	8
Well Name & No. Current / Last Operator API Number	Davis Federal #022 WIW Aceco Petroleum Co. 30-015-05905	Donohue Federal #002 Sun Oil Co. 30-015-02724	Donohue Federal #004 Sun Oil Co. 30-015-02730	Federal "H" #1-15 John H. Trigg 30-015-02723
Location (footage calls)	2630' FNL & 1310' FWL	2310' FSL & 1650' FWL	1980' FSL & 1980' FWL	660' FSL & 660' FWL
Section-Unit, Twp, Rge	15-E, 16S, 29E	15-K, 16S, 29E	15-K, 16S, 29E	15-M, 16S, 29E
Well Type	Oil	Oil	Oil	Oil
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	Davis-Federal #22-W	Donohue-Federal #2	Donohue-Federal #4	Federal "H" #1-15
Original Operator	Moab Drilling Co.	Edward C. Donohue	Utex Exploration Co.	John H. Trigg
Spud Date	21-Jun-1957	18-Dec-1955	6-Feb-1958	10-Mar-1956
Date Drilling Ceased	29-Jun-1957	14-Jan-1956	25-Feb-1958	30-Apr-1956
Rig Type Used	Rotary	Cable Tools	Rotary	Cable Tools
GL Elevation	3,680'	3,687'	3,688'	3,689'
SURFACE CASING:				
Hole Size	12-1/4"	10"	12-1/4"	10"
Size & Depth of Csg.	8-5/8" 36# @ 150'	8-5/8" @ 407'	8-5/8" 36# @ 393'	8-5/8" 24# @ 408'
Sacks of Cement	60 sx	50 sx	75 sx	50 sx
Top of Cement	6'	53'	213'	54'
TOC Determined By	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*
INTERMEDIATE CASING:				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	7-7/8"	7"	7-7/8"	6-1/2"
Size & Depth of Csg.	4-1/2" 9.5# @ 1953'	5-1/2" @ 1897'	5-1/2" 14# @ 2003'	5-1/2" 15.5# @ 1903'
Sacks of Cement	485 sx	100 sx	150 sx	100 sx
Top of Cement	Surface	1,359'	1,600'	391'
TOC Determined By	*Calculation (75% SF)*	*Calculation (75% SF)*	*CBL log*	*Calculation (75% SF)*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (#)	1904'-1922'	1897'-1944' (Openhole)	1929'-1940'	1903'-1959' (Openhole)
Stimulation Performed	n/a	Sand Frac'd Size Unknown	24,000 gal gelled Water 24,200# 20/40 Sand	n/a
INITIAL POTENTIAL:				
Date of Test	Drilled as WIW	24-Jan-1956	18-Mar-1958	DRY HOLE
OIL, BOPD		168	0	
WATER, BWPD		0	125	
GAS, MCFD		0	0	
API Gravity of Oil		n/a	n/a	
Production Method		Flowing	n/a	
Total Depth	1,957'	1,944'	3,000'	1,959'
Plug-Back Depth	1,953'	1,944'	2,003'	1,959'
P&A'd Date	21-Feb-1986	April 1969	April 1960	4-Apr-1956
COMMENTS	High Lonesome Penrose Pilot Project WIW		T&A'd 1958-1969	

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	9	10	11	12
Well Name & No. Current / Last Operator API Number	Donohue Federal #003 WIW General Western Pet. Corp. 30-015-02725	Skelly State #013 WIW Norwood Oil Company 30-015-05904	Skelly State #014 WIW Norwood Oil Company 30-015-05903	Skelly State #004 Moab Drilling Co. 30-015-02745
Location (footage calls)	990' FSL & 1650' FWL	1310' FSL & 10' FEL	1310' FNL & 1310' FEL	660' FNL & 1980' FWL
Section-Unit, Twp, Rge	15-N, 16S, 29E	16-A, 16S, 29E	16-B, 16S, 29E	16-C, 16S, 29E
Well Type	Oil / Injection	Injection	Injection	Oil
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	Donohue-Federal #3	Skelly-State #13-W	Skelly-State #14-W	Skelly-State #4
Original Operator	Edward C. Donohue	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.
Spud Date	27-Jan-1956	17-Apr-1957	1-Apr-1957	7-Jul-1955
Date Drilling Ceased	24-Feb-1956	12-May-1957	15-Apr-1957	17-Jul-1955
Rig Type Used	Cable Tools	Rotary	Rotary	Rotary
GL Elevation	3,682'	3,693'	3,686'	3,674'
SURFACE CASING:				
Hole Size	10"	12-1/4"	12-1/4"	12-1/4"
Size & Depth of Csg.	8-5/8" @ 410'	8-5/8" 36# @ 398'	8-5/8" 36# @ 355'	8-5/8" J-55 @ 340'
Sacks of Cement	50 sx	175 sx	200 sx	150 sx
Top of Cement	56'	Surface	Surface	Surface
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Circulated*	*Circulated*
INTERMEDIATE CASING:				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	6-1/2"	7-7/8"	7-7/8"	7-7/8"
Size & Depth of Csg.	5-1/2" @ 1905'	4-1/2" 9.5# J-55 @ 1939'	4-1/2" 9.5# J-55 @ 1918'	5-1/2" 15.5# J-55 @ 1782'
Sacks of Cement	90 sx	575 sx	500 sx	100 sx
Top of Cement	544'	Surface	Surface	1,211'
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Circulated*	*Calculation (75% SF)*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (#)	1905'-1959' (Openhole)	1892'-1907', 1912'-1915'	1877'-1888', 1891'-1893'	1782'-1890' (Openhole)
Stimulation Performed	15,000 gal gelled Oil + 22,500# Sand	None	10,000 gal gelled Water + 8,000# 20/40 & 10/20 Sd in 2 Stages w/22 ball sealers	None
INITIAL POTENTIAL:				
Date of Test	12-Mar-1956	Drilled as WIW	Drilled as WIW	**DRY HOLE**
OIL, BOPD	72			
WATER, BWPD	0			
GAS, MCFD	0			
API Gravity of Oil	*n/a*			
Production Method	*n/a*			
Total Depth	1,959'	1,939'	1,920'	1,890'
Plug-Back Depth	1,959'	1,924'	1,918'	1,890'
P&A'd Date	February 1963	21-Aug-1985	22-Aug-1985	8-Aug-1955
COMMENTS	Converted to WIW: 05/1958 High Lonesome Penrose Pilot Project WIW	High Lonesome Penrose Pilot Project WIW Initial WI: June 1957	High Lonesome Penrose Pilot Project WIW Initial WI: June 1957	Drilled & Abandoned

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26 PLUGGED & ABANDONED (P&A'd) WELLS

	13	14	15	16
Well Name & No. Current / Last Operator API Number	**Skelly State #002 Moab Drilling Co. 30-015-02742**	**Skelly State #025 WIW Norwood Oil Company 30-015-02750**	**Skelly State #006 Alamo Permian Resources 30-015-02746**	**Skelly State #024 WIW Norwood Oil Company 30-015-05902**
Location (footage calls)	660' FNL & 660' FWL	2630' FNL & 2630' FEL	1980' FNL & 1980' FEL	2630' FNL & 1330' FEL
Section-Unit, Twp, Rge	16-D, 16S, 29E	16-F, 16S, 29E	16-G, 16S, 29E	16-G, 16S, 29E
Well Type	Oil	Injection	Oil	Injection
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	Skelly-State #2	Skelly-State #25-W	Skelly-State #6	Skelly-State #24-W
Original Operator	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.	Moab Drilling Co.
Spud Date	31-Mar-1955	21-Feb-1959	26-Jul-1955	23-May-1957
Date Drilling Ceased	13-Apr-1955	4-Mar-1959	1-Aug-1955	30-May-1957
Rig Type Used	Rotary	Rotary	Rotary	Rotary
GL Elevation	3,671'	3,675'	3,682'	3,678'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	12-1/4"	12-1/4"
Size & Depth of Csg.	8-5/8" 28# J-55 @ 407'	8-5/8" 36# @ 179'	8-5/8" 28# J-55 @ 333'	8-5/8" 36# @ 131'
Sacks of Cement	350 sx	100 sx	200 sx	75 sx
Top of Cement	Surface	Surface	Surface	Surface
TOC Determined By	*Circulated*	*Circulated*	*Calculation (75% SF)*	*Circulated*
INTERMEDIATE CASING:				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	7-7/8"	6-3/4"	7-7/8"	7-7/8"
Size & Depth of Csg.	5-1/2" 15.5# J-55 @ 1749'	4-1/2" 9.5# J-55 @ 1933'	5-1/2" 15.5# J-55 @ 1803'	4-1/2" 9.5# J-55 @ 1911'
Sacks of Cement	100 sx	270 sx	100 sx	570 sx
Top of Cement	1,179'	Surface	1,232'	Surface
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Calculation (75% SF)*	*Circulated*
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (#)	1749'-1942' (Openhole)	1858'-1872'	1803'-1893' (Openhole)	1873'-1888', 1893'-1895'
Stimulation Performed	None	10,000 gal gelled Water + 10,000# 20/40 Sand	10,000 gal gelled Oil + 15,000# Ottawa Sand + 1,000# Adomite	10,000 gal gelled Water + 10,000# 20/40 Sand
INITIAL POTENTIAL:				
Date of Test	DRY HOLE	Drilled as WIW	27-Aug-1955	Drilled as WIW
OIL, BOPD			50	
WATER, BWPD			0	
GAS, MCFD			0	
API Gravity of Oil			32	
Production Method			Pump	
Total Depth	1,942'	1,933'	1,893'	1,911'
Plug-Back Depth	1,942'	1,933'	1,893'	1,901'
P&A'd Date	18-May-1955	23-Aug-1985	22-Jan-2013	22-Aug-1985
COMMENTS	Drilled & Abandoned	High Lonesome Penrose Pilot Project WIW Initial WI: March 24, 1959	Casing Failure	High Lonesome Penrose Pilot Project WIW Initial WI: June 1957

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26 PLUGGED & ABANDONED (P&A'd) WELLS

	17	18	19	20
Well Name & No. Current / Last Operator API Number	**Skelly State #007** **Mack Energy Corp.** **30-015-02747**	**Skelly State #023 WIW** **Norwood Oil Company** **30-015-05901**	**Moab - State #001** **Sun Oil Co.** **30-015-02738**	**Atkins State #002** **J.C. Clower** **30-015-02740**
Location (footage calls)	1980' FNL & 660' FEL	2630' FNL & 10' FEL	1980' FSL & 1980' FEL	990' FSL & 330' FWL
Section-Unit, Twp, Rge	16-H, 16S, 29E	16-H, 16S, 29E	16-J, 16S, 29E	16-M, 16S, 29E
Well Type	Oil	Injection	Oil	Oil
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	Skelly-State #?	Skelly-State #23-W	State #1	Atkins State #2
Original Operator	Moab Drilling Co.	Moab Drilling Co.	Moab Drillling Co.	J.C. Clower
Spud Date	3-Aug-1955	31-May-1957	26-Aug-1955	30-Jul-1954
Date Drilling Ceased	24-Aug-1955	7-Jun-1957	5-Sep-1955	14-Aug-1954
Rig Type Used	Rotary	Rotary	Rotary-Air	Cable Tools
GL Elevation	3,691'	3,694'	3,673'	3,654'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	12-1/4"	10"
Size & Depth of Csg.	8-5/8" 32# J-55 @ 335'	8-5/8" @ 157'	8-5/8" 32# @ 400'	8-5/8" 32# @ 410'
Sacks of Cement	150 sx	75 sx	75 sx	Pulled
Top of Cement	Surface	Surface	220'	
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Calculation (75% SF)*	
INTERMEDIATE CASING:				
Hole Size				8"
Size & Depth of Csg.				7" 20# @ 1616'
Sacks of Cement				Pulled
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	7-7/8"	7-7/8"	7-7/8"	6"
Size & Depth of Csg.	5-1/2" 15.5# J-55 @ 1889'	4-1/2" 9.5# J-55 @ 1940'	5-1/2" 14# @ 1874'	Hole to 1969'
Sacks of Cement	100 sx	480 sx	100 sx	
Top of Cement	1,318'	Surface	1,303'	
TOC Determined By	*Calculation (75% SF)*	*Circulated*	*Calculation (75% SF)*	
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (#)	1889'-1920' (Openhole)	1890'-1911', 1914'-1921'	1854'-1864'	1616'-1969' (Openhole)
Stimulation Performed	10,000 gal gelled Oil	10,000 gal gelled Water	20,000 gal gelled Oil	n/a
	+ 15,000# Sand	+ 10,000# 20/40 & 10/20 Sd	+ 20,000# Sand	
	+ 1,500# Adomite		+ 2,000# Adomite	
INITIAL POTENTIAL:				
Date of Test	5-Sep-1955	Drilled as WIW	12-Oct-1955	DRY HOLE
OIL, BOPD	42		20	
WATER, BWPD	0		0	
GAS, MCFD	0		0	
API Gravity of Oil	32		34	
Production Method	n/a		Pump	
Total Depth	1,920'	1,943'	1,914'	1,969'
Plug-Back Depth	1,920'	1,930'	1,874'	1,969'
P&A'd Date	29-Mar-2001	22-Aug-1985	May 1982	14-Aug-1954
COMMENTS		High Lonesome Penrose Pilot Project WIW Initial WI: June 1957		Drilled & Abandoned

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	21	*22*	*23*	*24*
Well Name & No. **Current / Last Operator** **API Number**	**Moab - State #002** **Sun Oil Co.** **30-015-02743**	**Shiloh Federal #001** **Sun-Tex Resources, Inc.** **30-015-25525**	**Iles Federal #006** **Beach Exploration, Inc.** **30-015-02756**	**Iles Federal #005** **Beach Exploration, Inc.** **30-015-02755**
Location (footage calls)	660' FSL & 1980' FEL	1650' FNL & 2308' FEL	1980' FSL & 660' FEL	330' FSL & 1650' FEL
Section-Unit, Twp, Rge	16-O, 16S, 29E	17-G, 16S, 29E	17-I, 16S, 29E	17-O, 16S, 29E
Well Type	Oil	Oil	Oil	Oil
Well Status	P&A'd	P&A'd	P&A'd	P&A'd
Original Well Name & No.	State #2	Shiloh Federal #1	Iles-Federal #6	Iles-Federal #5
Original Operator	Moab Drillling Co.	Sun-Tex Resources, Inc.	Charles A. Steen	J.C. Clower / George Atkins
Spud Date	4-Oct-1955	3-Jan-1986	13-Mar-1957	11-Sep-1954
Date Drilling Ceased	14-Oct-1955	7-Jan-1986	29-Mar-1957	28-Sep-1954
Rig Type Used	Rotary-Air	Rotary	Cable Tools	Cable Tools
GL Elevation	3,672'	3,656'	3,648'	3,655'
SURFACE CASING:				
Hole Size	12-1/4"	12-1/4"	10"	10"
Size & Depth of Csg.	8-5/8" 32# @ 387'	8-5/8" 24# @ 305'	8-5/8" @ 315'	8-5/8" @ 446'
Sacks of Cement	150 sx	250 sx	150 sx	Pulled
Top of Cement	27'	Surface	Surface	
TOC Determined By	*Calculation (75% SF)*	Topped out w/50 sx RediMix	*Calculation (75% SF)*	
INTERMEDIATE CASING:				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
PRODUCTION CASING:				
Hole Size	7-7/8"	7-7/8"	6-1/2"	8"
Size & Depth of Csg.	5-1/2" 14# @ 1848'	4-1/2" 10.5# @ 1850'	4-1/2" @ 1825'	5-1/2" @ 1593'
Sacks of Cement	100 sx	450 sx	800 sx	Pulled
Top of Cement	1,277'	Surface	Surface	
TOC Determined By	*Calculation (75% SF)*	*Calculation (75% SF)*	*Calculation (75% SF)*	
COMPLETION(S):				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (ft)	1848'-1906' (Openhole)	1756'-1781'	1778-88', 1791-93', 1796-1802'	1593'-1866' (Openhole)
Stimulation Performed	10,000 gal gelled Oil + 15,000# Sand	1,000 gal 10% NEFE HCl 28,000 gal 40# X-Link Gel + 25,000# 20/40 Sand + 25,000# 12/20 Sand	15,000 gal gelled Oil + 15,000# Sand	n/a
INITIAL POTENTIAL:				
Date of Test	23-Nov-1955	15-Mar-1986	13-Apr-1957	DRY HOLE
OIL, BOPD	35	2	20	
WATER, BWPD	0	0	0	
GAS, MCFD	0	0	0	
API Gravity of Oil	34	28.8	34	
Production Method	Pump	n/a	n/a	
Total Depth	1,906'	1,850'	1,825'	1,866'
Plug-Back Depth	1,906'	1,836'	1,825'	1,866'
P&A'd Date	May 1972	March 1987	13-Apr-2009	Sept 1954 / June 17, 2002
COMMENTS				P&A'd by J.C. Clower - D&A in September 1954. Re-Plugged by Beach Expl. 17-June-2002

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26 PLUGGED & ABANDONED (P&A'd) WELLS

	25	*26*
Well Name & No. Current / Last Operator API Number	Iles Federal #001 Beach Exploration, Inc. 30-015-05968	Atkins #001 J.C. Clower 30-015-02762
Location (footage calls)	330' FSL & 330' FEL	330'.FNL & 330' FWL
Section-Unit, Twp, Rge	17-P, 16S, 29E	21-D, 16S, 29E
Well Type	Oil	Oil
Well Status	P&A'd	P&A'd
Original Well Name & No.	Abbie Iles - Nolen #1	Atkins-1
Original Operator	B.H. Nolen	J.C. Clower
Spud Date	15-Jul-1939	18-Aug-1954
Date Drilling Ceased	28-Aug-1939	6-Sep-1954
Rig Type Used	Cable Tools	Cable Tools
GL Elevation	3,655'	3,650'
SURFACE CASING:		
Hole Size	12"	10" (assumed)
Size & Depth of Csg.	10-3/4" 40.5# @ 305'	8-5/8" @ 476'
Sacks of Cement	40 sx	Pulled
Top of Cement	50'	
TOC Determined By	*Calculation (75% SF)*	
INTERMEDIATE CASING:		
Hole Size		
Size & Depth of Csg.		
Sacks of Cement		
Top of Cement		
TOC Determined By		
PRODUCTION CASING:		
Hole Size	10"	8" (assumed)
Size & Depth of Csg.	8-5/8" @ 1630'	7" @ 1626'
Sacks of Cement	100 sx	Pulled
Top of Cement	Surface	
TOC Determined By	*Calculation (75% SF)*	
COMPLETION(S):		
Pool	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose
Overall Perf Interval (#)	1630'-1821' (Openhole)	1626'-1854' (Openhole)
Stimulation Performed	30 qts Nitro Glycerin 1801'-1827'	n/a
INITIAL POTENTIAL:		
Date of Test	12-Apr-1957	DRY HOLE
OIL, BOPD	15	
WATER, BWPD	0	
GAS, MCFD	0	
API Gravity of Oil	n/a	
Production Method	Pump	
Total Depth	1,827'	1,854'
Plug-Back Depth	1,827'	1,854'
P&A'd Date	21-Jun-2002	8-Sep-1954
COMMENTS	Re-Plugged by Beach Expl. 21-June-2002	Drilled & Abandoned

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: DAVIS FEDERAL #006 (P&A'd) **ELEVATION, GL:** 3,709 ft

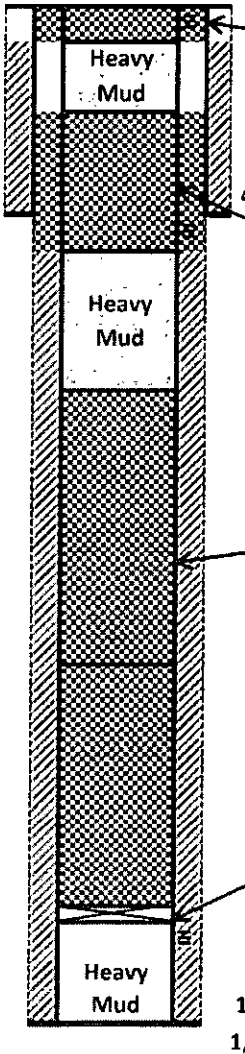
Location: 660' FNL & 1,980' FWL
UL: C, SEC: 15, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-068677 **Spudded:** 9/7/1956

API No. : 30-015-02733 **Drlg Stopped:** 6/14/1956

Completed: 10/20/1956

ROTARY TOOLS



12-1/4" HOLE

Surface Csg:
8-5/8" 28# & 32#
Csg Set @ 418'
Cmt'd w/ 150 sx

7-7/8" HOLE

Production Csg:
4-1/2" 9.6#
Csg Set @ 1999'
Cmt'd w/ 385 sx

Perf'd @ 63' & Circulated 40 sx Cmt to Surface
Filled Csg w/Cmt: Surface-63'. Set Marker.

TOC = 58'
Calc'd (75% SF)

418' Csg

Perf'd @ 468' & Sqz'd 40 sx Cmt
40 sx Cement Plug: 311'-468'

TOC = 326'
Calc'd (75% SF)

40 sx Cement Plug: 7488'-1278'

55 sx Cement Plug: 1278'-1900' (above CIBP)

CIBP Set @ 1,900' (set above Perfs)

PERFS (Ft-#):	Zone	Completion	Date
1930-1950' (20'-?)	QN-Penrose	Frac: 4600 gal gel Oil + 9600# 20/40 Sand	10/20/56

1,999' Csg
1,958' PBTD
2,000' TD

Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #6 in 1956.
IP Test - 10/20/1956: 50 BOPD.
P&A'd by COG Operating LLC - 07/08/2012.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: DAVIS FEDERAL #003 (P&A'd) **ELEVATION, GL:** 3,699 ft

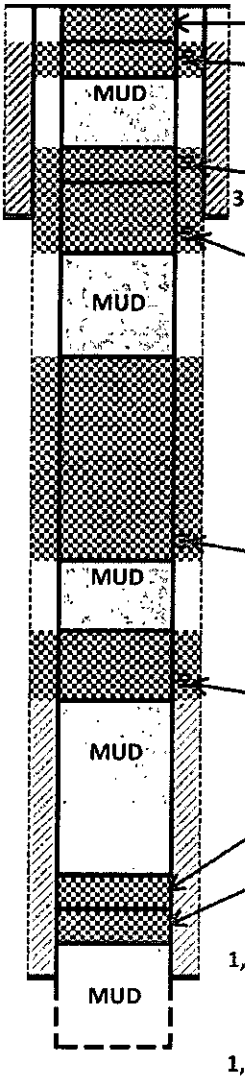
Location: 660' FNL & 660' FWL
UL: D, SEC: 15, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-068677 **Spudded:** 11/17/1955

API No. : 30-015-02727 **Drlg Stopped:** 11/28/1955

Completed: 11/29/1955

ROTARY RIG



12-1/4" HOLE

Surface Csg:
8-5/8" 24#
Csg Set @ 390'
Cmt'd w/ 150 sx

TOC = 30'
Calc'd (75% SF)

390' Csg

7-7/8" HOLE

TOC = 1,314'
Calc'd (75% SF)

Production Csg:
5-1/2" 14#
Csg Set @ 1885'
Cmt'd w/ 100 sx

Set 20 sx Surf Plug - Set D/H Marker
Perf @ 63' & Sqz'd 80 sx Cement
Set Cement Plug: 3'-63'.

Perf @ 338' & Sqz'd 5 sx Cement
Set Cement Plug: 298'-338'.

Perf @ 450' & Sqz'd 80 sx Cement
Set Cement Plug: 338'-450'.

Perf @ 1,000' & Sqz'd 85 sx Cement
Set Cement Plug: 678'-1,000'.

Perf @ 1,255' & Sqz'd 40 sx Cement
Set Cement Plug: 1,145'-1,255'.

Set 10 sx Cement Plug: 1,685'-1,765'.

Set 25 sx Cement Plug: 1,765'-1,850'.

Completion Interval	Zone	Completion	Date
1,885' Csg			
1885-1951' (Openhole)	QN-Penrose	Frac: 15,000 gal gel Oil + 20,000# Sand	11/29/55

1,951' PBTD
1,951' TD

Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #3 in 1955.
IP Test - 12/13/1955: 46 BOPD.
P&A'd by COG Operating LLC - 07/05/2012.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: DAVIS FEDERAL #012 WIW (P&A'd) **ELEVATION, GL:** 3,701 ft

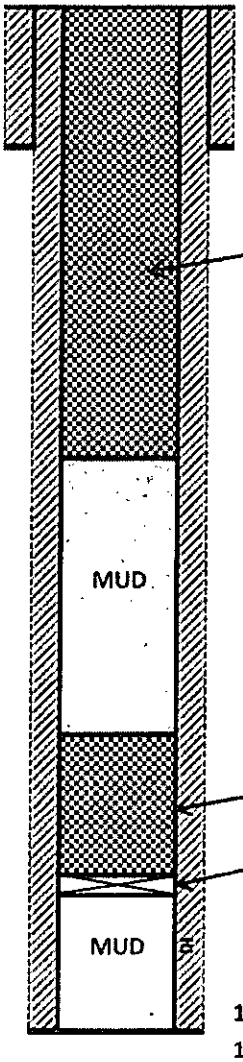
Location: 1,310' FNL & 1,310' FWL
UL: D, SEC: 15, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-068677 **Spudded:** 5/5/1957

API No. : 30-015-05906 **Drlg Stopped:** 5/21/1957

Completed: 7/23/1957

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Calc'd (75% SF)

Surface Csg:
8-5/8" 36#
Csg Set @ 134'
Cmt'd w/ 150 sx

134' Csg

Circulated 60 sx Cement from 865' to Surface
Set 10 sx Surface Cement Plug & set Marker.

TOC = Surface
Calc'd (75% SF)

7-7/8" HOLE

Set 25 sx Cement Plug: 1,527'-1,890'.

Set 4-1/2" CIBP @ 1,890'.

Production Csg:
4-1/2" 9.6#
Csg Set @ 1966'
Cmt'd w/ 500 sx

PERFS (Ft-#):	Zone	Completion	Date
1920-1946' (26'-?)	QN-Penrose	n/a	07/23/57

1,966' Csg
1,966' PBTD
1,970' TD

Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #12 W in 1957.
Drilled as Water Injection Well for HIGH LONESOME PENROSE PILOT PROJECT.

P&A'd by COG Operating LLC - 04/28/2008.

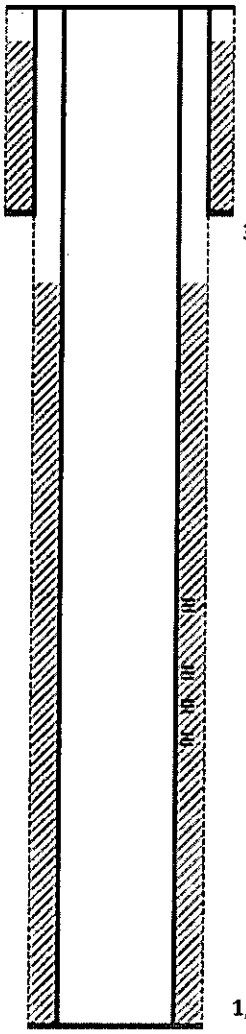
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**DAVIS FEDERAL #001 (P&A'd)**	**ELEVATION, GL:**	3,695 ft
Location:	1,980' FNL & 660' FWL		
	UL: E, SEC: 15, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - SEVEN RIVERS**
	EDDY County, NM		
LEASE No.:	Federal LC-068677	**Spudded:**	10/19/1955
API No. :	**30-015-02719**	**Drlg Stopped:**	10/30/1955
		Completed:	4/3/1956

ROTARY RIG



12-1/4" HOLE

TOC = 15'
Calc'd (75% SF)

Surface Csg:
8-5/8" 24#
Csg Set @ 375'
Cmt'd w/ 150 sx

375' Csg
TOC = 474'
Calc'd (75% SF)

The P&A Record for this well on the NMOCD Website is illegible. NO P&A records are available. Moab Drlg Co. also P&A'd the Skelly State #2 & #4 wells properly in Sec. 16 in 1955.
With high calculated TOC's for both surface & production casing strings - there is no reason to suspect that this well is not properly P&A'd, also.

PERFS (Ft-#):	Zone	Completion	Date
1219-1225' (6'-?)	Seven Rivers	Frac'd	04/03/56
1309-1315' (6'-?)	Seven Rivers	Frac'd	04/03/56
1372-1376' (4'-?)	Seven Rivers	Frac'd	04/03/56
1382-1388' (6'-?)	Seven Rivers	Frac'd	04/03/56

7-7/8" HOLE

Production Csg:
5-1/2" 14#
Csg Set @ 1,902'
Cmt'd w/ 250 sx

1,902' Csg
1,902' PBTD
1,902' TD

Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #1 in 1955.
On 10/27/55 - Dropped Core Barrel in Hole while attempting to Core the Penrose. Junked Hole below Casing. Completed Well in SEVEN RIVERS formation.

P&A'd by Moab Drilling Company in 1958. NO P&A RECORDS AVAILABLE FROM NMOCD WEBSITE.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: DAVIS FEDERAL #022 WIW (P&A'd) **ELEVATION, GL:** 3,680 ft

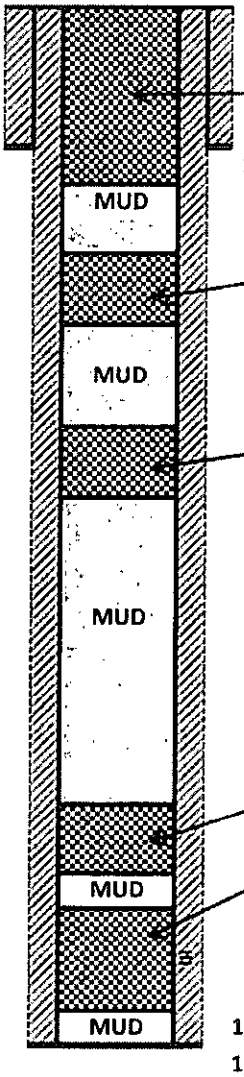
Location: 2,630' FNL & 1,310' FWL
UL: E, SEC: 15, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-068677 **Spudded:** 6/21/1957

API No. : 30-015-05905 **Drlg Stopped:** 6/29/1957

Completed: 7/23/1957

ROTARY RIG



PERFS (Ft-#):	Zone	Completion	Date
1904-1922' (18'-?)	QN-Penrose	N/A	07/23/57

Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #22-W in 1957.
Drilled as Water Injection Well for the HIGH LONESOME PENROSE PILOT PROJECT.

P&A'd by Aceco Petroleum Co. on February 21, 1986.

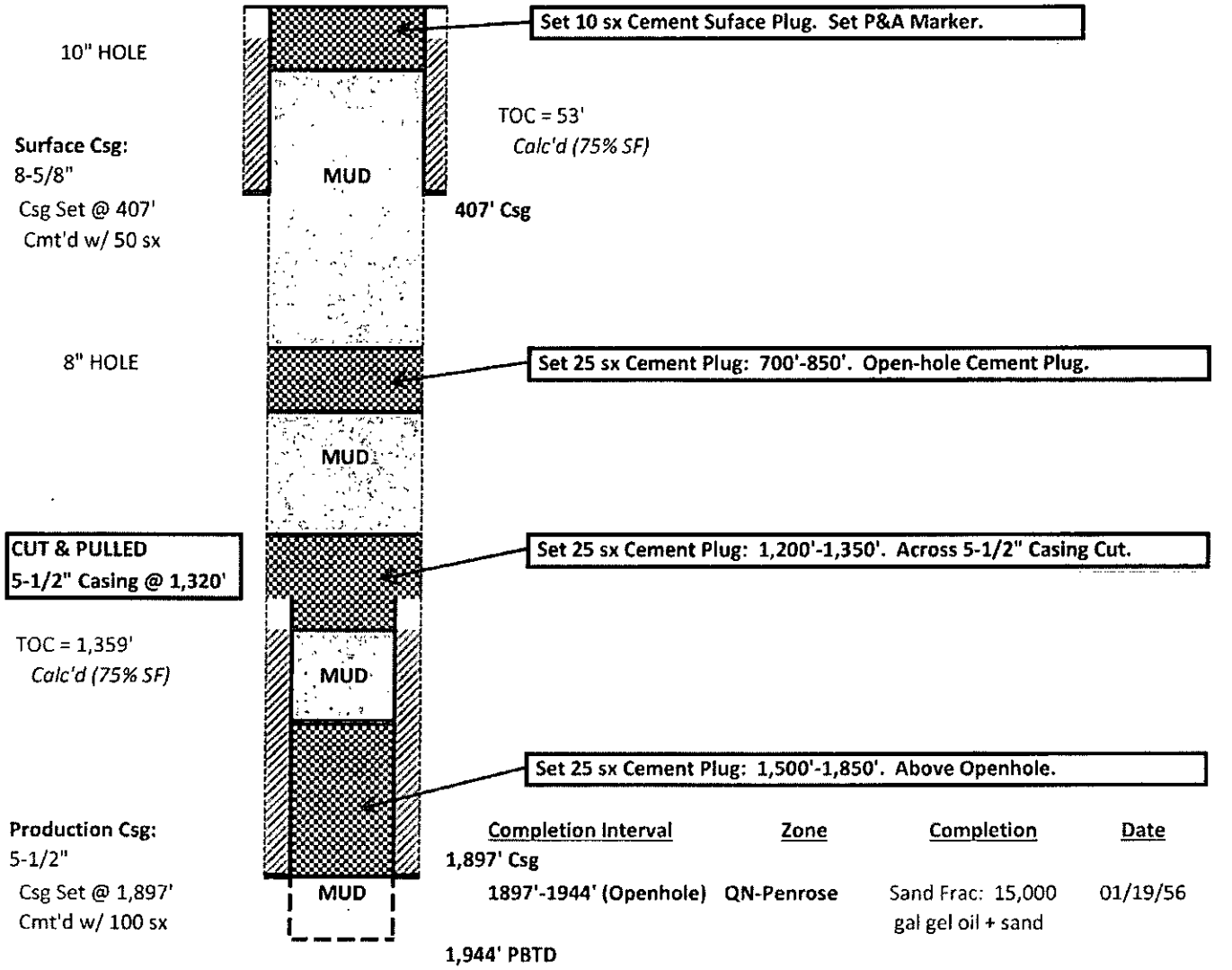
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**DONOHUE FEDERAL #002 (P&A'd)**	**ELEVATION, GL:**	3,687 ft
Location:	2,310' FSL & 1,650' FWL		
	UL: K, SEC: 15, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	Federal LC-068628	**Spudded:**	12/18/1955
API No. :	**30-015-02724**	**Drlg Stopped:**	1/4/1956
		Completed:	1/19/1956

CABLE TOOLS



Completion Interval	Zone	Completion	Date
1897'-1944' (Openhole)	QN-Penrose	Sand Frac: 15,000 gal gel oil + sand	01/19/56

Drilled by EDWARD C. DONOHUE as the DONOHUE-FEDERAL #2 in 1955. IP = 168 BOPD (01/24/56).

P&A'd by SUN OIL COMPANY - DX DIVISION: April, 1969.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: DONOHUE FEDERAL #004 (P&A'd) **ELEVATION, GL:** 3,688 ft

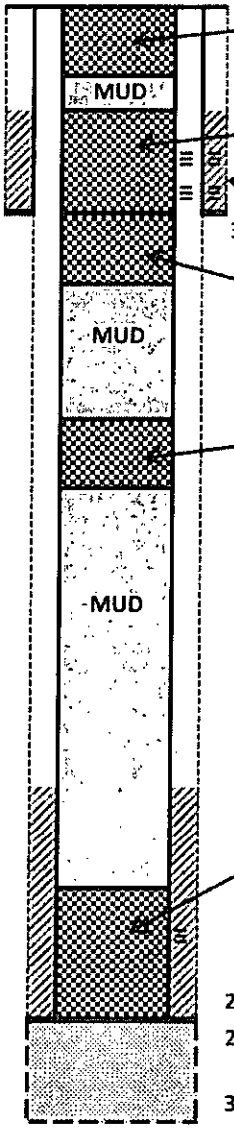
Location: 1,980' FSL & 1,980' FWL
UL: K, SEC: 15, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-068628 **Spudded:** 2/6/1958

API No. : 30-015-02730 **Drlg Stopped:** 2/25/1958

Completed: 3/17/1958

ROTARY RIG



12-1/4" HOLE

TOC = 213'
Calc'd (75% SF)

Surface Csg:
8-5/8" 36#
Csg Set @ 393'
Cmt'd w/ 75 sx

7-5/8" HOLE

Production Csg:
5-1/2" 14#
Csg Set @ 2,003'
Cmt'd w/ 150 sx

April 1969: Set 25 sx Cmt Plug: 0'-100'. Set Surface Dry Hole Marker.

April 1969: Set 25 sx Cmt Plug: 280'-380'. Across FW zone perfs.

Dec. 1962: Perf'd Fresh Water Sands 263'-273' & 362'-372'. Acidized w/200 gal HCl. Unsuccessful Water Source Well. TEMP. ABANDONED.

Dec. 1962: Set 70' Cmt Plug: 380'-450'. Across Surface Csg Shoe.

Dec. 1962: Set 100' Cmt Plug: 825'-925'. Across Base of Salt Section.

TOC = 1,600'
Specified UTEX Exploration Co.- 03/18/1958

Dec. 1962: Set 150' Cmt Plug: 1,853'-2,003'. Across Queen Perfs.

PERFS (Ft-#):	Zone	Completion	Date
1,929-1,940' (11'-44 perfs)	QN-Penrose	Frac: 24,000 gal gel water + 24,000# Sand	03/17/58

Drilled by UTEX EXPLORATION CO. as the DONOHUE-FEDERAL #4 in 1958. DRY HOLE - TEMP. ABANDONED.
December 1962: Great Western Petroleum Corp. PB'd well & completed as Fresh Water Supply Well for Unit. Produced insufficient Fresh Water for Supply Well - TEMP. ABANDONED.

P&A'd by SUN OIL COMPANY: April, 1969.

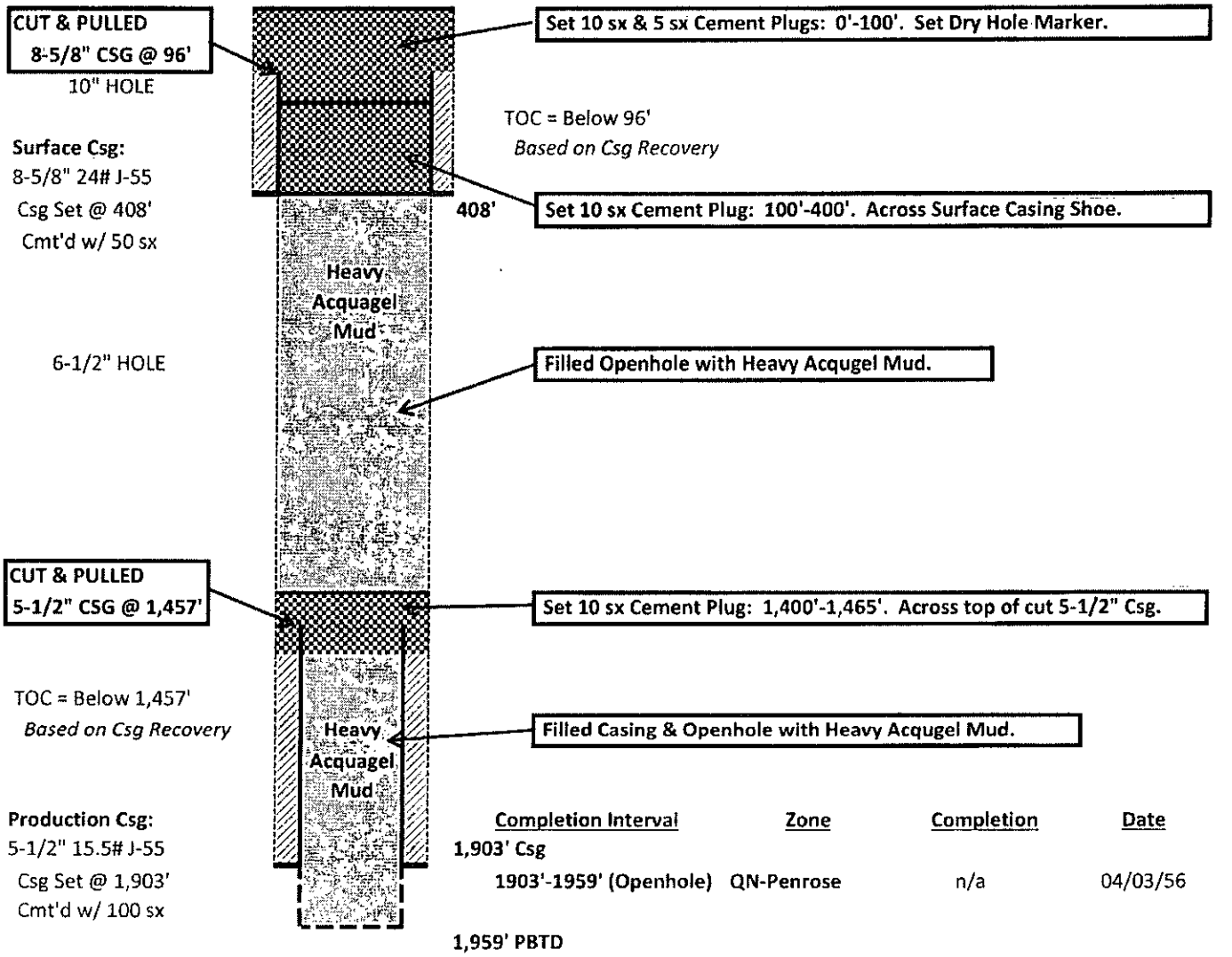
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**FEDERAL "H" #1-15 (P&A'd)**	**ELEVATION, GL:**	3,689 ft
Location:	660' FSL & 660' FWL		
	UL: M, SEC: 15, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	Federal NM-04711	**Spudded:**	3/10/1956
API No. :	**30-015-02723**	**Drlg Stopped:**	4/3/1956
		Completed:	4/3/1956

CABLE TOOLS



Completion Interval	Zone	Completion	Date
1,903' Csg			
1903'-1959' (Openhole)	QN-Penrose	n/a	04/03/56

1,959' PBTD
1,959' TD

Drilled by JOHN H. TRIGG as the FEDERAL "H" #1-15 in 1956.
DRY HOLE ---- DRILLED & ABANDONED.

P&A'd by JOHN H. TRIGG: April 04, 1966.

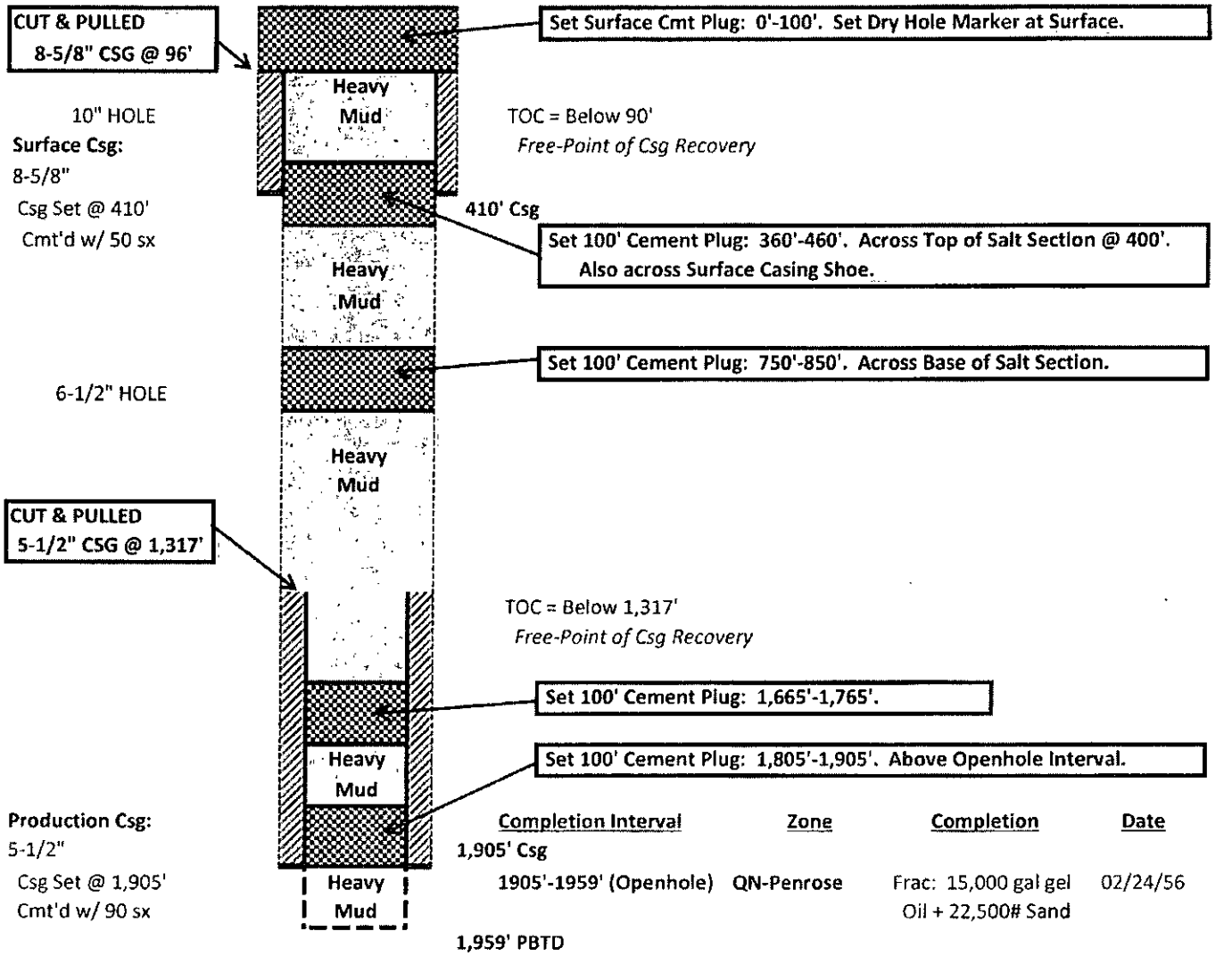
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**DONOHUE FEDERAL #003 WIW (P&A'd)**	**ELEVATION, GL:**	3,682 ft
Location:	990' FSL & 1,660' FWL		
	UL: N, SEC: 15, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	Federal LC-068628	**Spudded:**	1/27/1956
API No. :	**30-015-02725**	**Drlg Stopped:**	2/24/1956
		Completed:	2/24/1956

CABLE TOOLS



Completion Interval	Zone	Completion	Date
1,905' Csg			
1905'-1959' (Openhole)	QN-Penrose	Frac: 15,000 gal gel Oil + 22,500# Sand	02/24/56

1,959' PBTD
1,959' TD

Drilled by EDWARD C. DONOHUE as the DONOHUE #3 in 1956.
Part of the HIGH LONESOME PENROSE PILOT PROJECT: 1957-1959.
Converted to WATER INJECTION WELL: MAY 1958.

P&A'd by GENERAL WESTERN PETROLEUM CORP.: February 1963.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

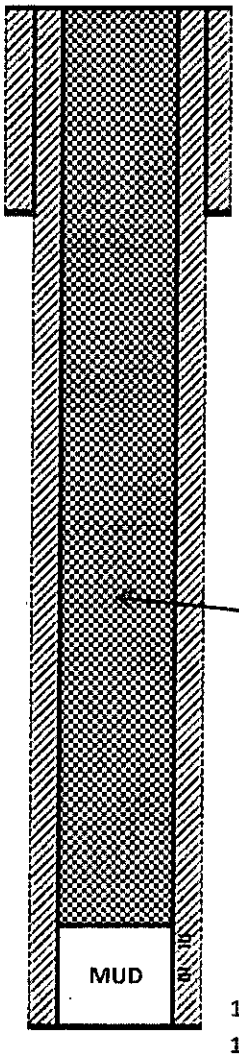
PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: SKELLY STATE #013 WIW (P&A'd) **ELEVATION, GL:** 3,693 ft

Location: 1,310' FNL & 10' FEL
UL: A, SEC: 16, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: State E-134 **Spudded:** 4/17/1957
API No. : 30-015-05904 **Drlg Stopped:** 5/12/1957
Completed: 5/12/1957

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 36#
Csg Set @ 398'
Cmt'd w/ 175 sx

398' Csg

TOC = Surface
Circulated Cement to Surface

Ran 2-3/8" Tubing to 1,750'.
Circulated Class C Cement to Surface inside 4-1/2" Casing.
POOH w/Tubing - Filled 4-1/2" Casing with Cement to Surface.
Weld Cap on well - Set Dry Hole P&A Marker at surface location.

7-5/8" HOLE

Production Csg:
4-1/2" 9.5#
Csg Set @ 1,939'
Cmt'd w/ 575 sx

PERFS (Ft-#):	Zone	Completion	Date
1892'-1907' (15'-60 perfs)	QN-Penrose	None	05/12/57
1912'-1915' (3'-12 perfs)	QN-Penrose	None	05/12/57

1,939' Csg
1,924' PBTD
1,939' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #13-W in 1957.
Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.
Initial Water Injection: June 1957.

P&A'd by NORWOOD OIL COMPANY -- August 21, 1985.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: SKELLY STATE #014 WIW (P&A'd) **ELEVATION, GL:** 3,686 ft

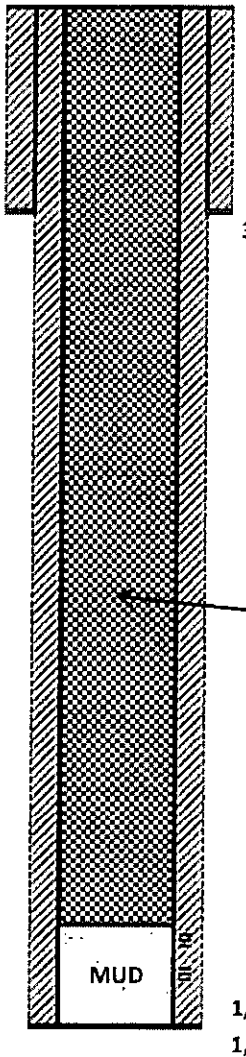
Location: 1,310' FNL & 1,330' FEL
UL: B, SEC: 16, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: State E-134 **Spudded:** 4/1/1957

API No. : 30-015-05903 **Drlg Stopped:** 4/15/1957

Completed: 5/10/1957

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 36#
Csg Set @ 355'
Cmt'd w/ 200 sx

355' Csg

TOC = Surface
Circulated Cement to Surface

Ran 2-3/8" Tubing to 1,782'.
Circulated Class C Cement to Surface inside 4-1/2" Casing.
POOH w/Tubing - Filled 4-1/2" Casing with Cement to Surface.
Weld Cap on well - Set Dry Hole P&A Marker at surface location.

6-3/4" HOLE

Production Csg:
4-1/2" 9.5#
Csg Set @ 1,918'
Cmt'd w/ 500 sx

PERFS (Ft-#):	Zone	Completion	Date
1877'-1888' (11'-44 perfs)	QN-Penrose	Frac: 10,000 gal gel	05/10/57
1891'-1893' (8'-8 perfs)	QN-Penrose	Water + 8,000# 20/40	05/10/57
		+ 8,000 10/20 in 2 stages	
		w/ 22 Ball Sealers	

1,918' Csg
1,918' PBTD
1,920' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #14-W in 1957.
Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.
Initial Water Injection: June 1957.

P&A'd by NORWOOD OIL COMPANY -- August 22, 1985.

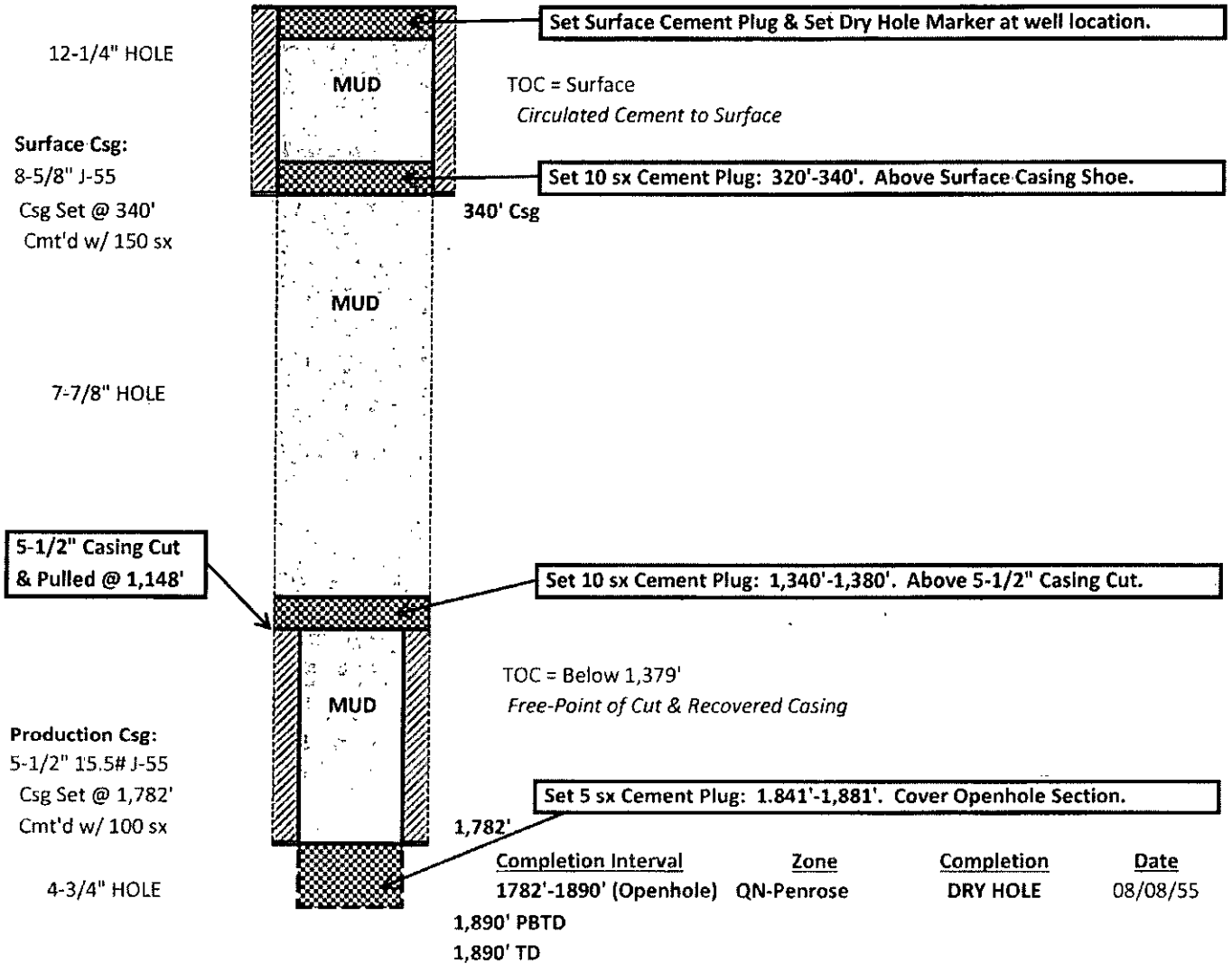
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SKELLY STATE #004 (D&A'd)**	**ELEVATION, GL:**	3,674 ft
Location:	660' FNL & 1,980' FWL		
	UL: C, SEC: 10, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-134	**Spudded:**	7/7/1955
API No. :	**30-015-02745**	**Drlg Stopped:**	7/17/1955
		Completed:	8/8/1955

ROTARY RIG



Completion Interval	Zone	Completion	Date
1782'-1890' (Openhole)	QN-Penrose	DRY HOLE	08/08/55

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #4 in 1955.
Penrose Sand porosity was found filled with anhydrite & salt - DRY HOLE.
P&A'd by MOAB DRILLING CO. -- August 8, 1955.

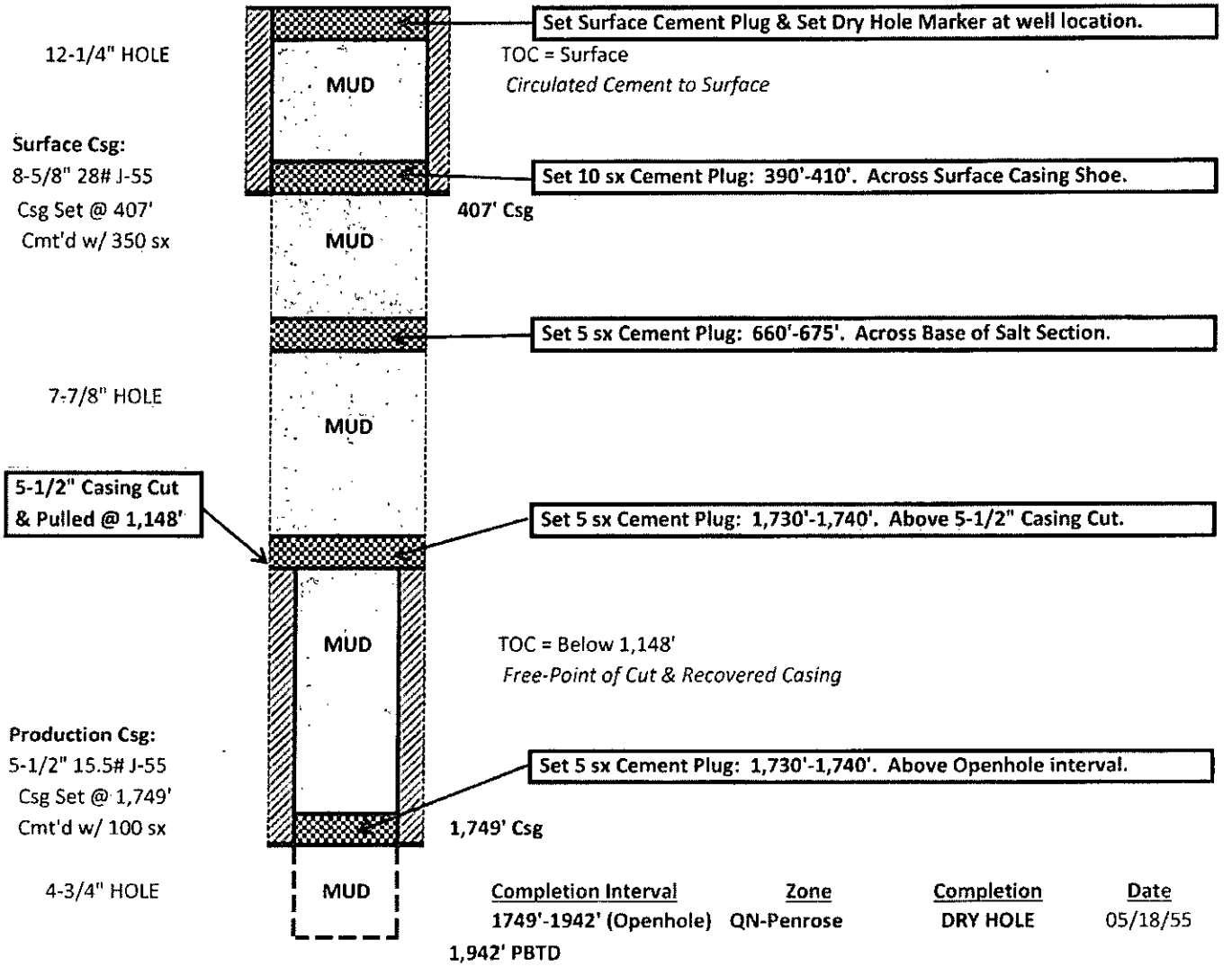
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SKELLY STATE #002 (D&A'd)**	**ELEVATION, GL:**	3,671 ft
Location:	660' FSL & 660' FWL		
	UL: D, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-134	**Spudded:**	3/31/1955
API No. :	**30-015-02742**	**Drlg Stopped:**	4/13/1955
		Completed:	5/18/1955

ROTARY RIG



Completion Interval	Zone	Completion	Date
1749'-1942' (Openhole)	QN-Penrose	DRY HOLE	05/18/55

1,942' PBTD
1,942' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #2 in 1955.
Penrose Sand porosity was found filled with anhydrite & salt - DRY HOLE.
P&A'd by MOAB DRILLING CO. -- May 18, 1955.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SKELLY STATE #025 WIW (P&A'd)**	**ELEVATION, GL:**	3,675 ft
Location:	2,630' FNL & 2,630' FEL		
	UL: F, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-134	**Spudded:**	2/21/1959
API No. :	**30-015-05900**	**Drlg Stopped:**	3/4/1959
		Completed:	3/24/1959

ROTARY RIG

12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 36#
Csg Set @ 179'
Cmt'd w/ 100 sx

179' Csg

TOC = Surface
Circulated Cement to Surface

6-3/4" HOLE

Ran 2-3/8" Tubing to 1,782'.
Circulated Class C Cement to Surface inside 4-1/2" Casing.
POOH w/Tubing - Filled 4-1/2" Casing with Cement to Surface.
Weld Cap on well - Set Dry Hole P&A Marker at surface location.

Production Csg:
4-1/2" 9.5#
Csg Set @ 1,933'
Cmt'd w/ 270 sx

MUD

PERFS (Ft-#):	Zone	Completion	Date
1858'-1872' (14'-56 perfs)	**QN-Penrose**	Frac: 10,000 gal gel	06/07/57
1,933' Csg		Water + 10,000#	
1,933' PBTD		20/40 Sand	
1,933' TD			

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #25-W in 1957.
Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.
Initial Water Injection: March 24, 1959.

P&A'd by NORWOOD OIL COMPANY -- August 23, 1985.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: SKELLY STATE #006 (P&A'd) **ELEVATION, GL:** 3,682 ft

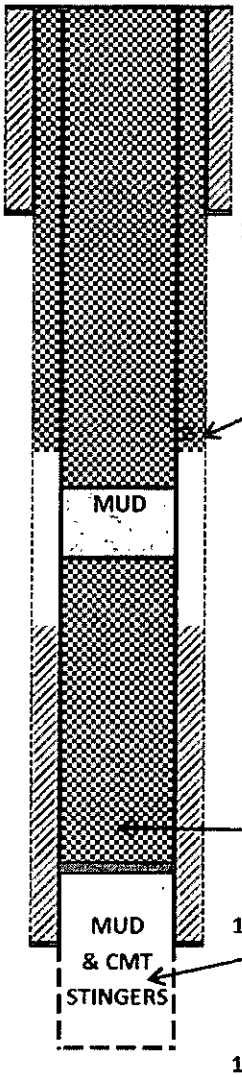
Location: 1,980' FNL & 1,980' FEL
UL: G, SEC: 16, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: State E-134 **Spudded:** 7/26/1955

API No. : 30-015-02746 **Drlg Stopped:** 8/1/1955

Completed: 8/27/1955

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 28# J-55
Csg Set @ 333'
Cmt'd w/ 200 sx

333' Csg

Perforated 5-1/2" Casing @ 873' (4 perfs) to circulate cement.
Pumped 295 sx Cement down Casing with no Cement returns on annulus - only water.
Pumped 121 sx Cement down tubing under packer & got Cement Returns on 5-1/2"x8-5/8" annulus. Shut down - WOC.
Filled 5-1/2" Casing with 84.5 sx Cement to Surface.
Set Dry Hole P&A Marker @ surface location - 01/22/2012.

7-7/8" HOLE

TOC = 1,232'
Calc'd (75% SF)

Production Csg:
5-1/2" 15.5# J-55
Csg Set @ 1,803'
Cmt'd w/ 100 sx

Set CIBP @ 1,735'. Set Cement Plug on top of CIBP: 1,135'-1,735'. Tagged top of cement plug @ 1,135'.

1,803'

Attempted to set 2 50 sx Cement Plugs in Openhole @ 1,878' without success. Got permission to set CIBP at bottom of Casing.

6" HOLE

Completion Interval	Zone	Completion	Date
1803'-1893' (Openhole)	QN-Penrose	Frac: 10,000 gal gel	08/27/55
1,893' PBTD		Oil + 15,000# Sand	
1,893' TD		+ 1,000# Adomite	

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #6 in 1955.
In 2012 - while attempting workover - found well to have a number of casing leaks in the 5-1/2" csg string.
Well was P&A'd by ALAMO PERMIAN RESOURCES, LLC -- January 22, 2012.

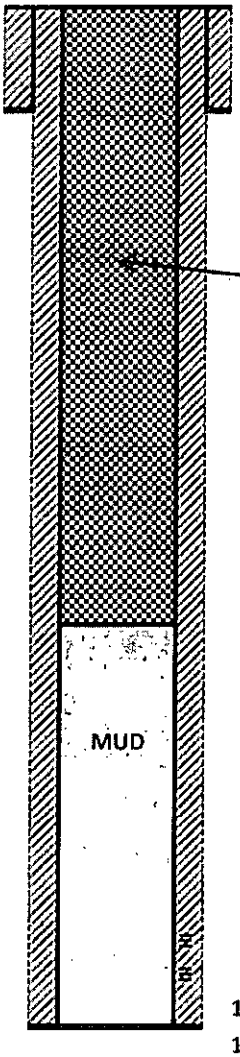
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SKELLY STATE #024 WIW (P&A'd)**	**ELEVATION, GL:**	3,678 ft
Location:	2,630' FNL & 1,330' FEL		
	UL: G, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-134	**Spudded:**	5/23/1957
API No. :	**30-015-05902**	**Drlg Stopped:**	5/30/1957
		Completed:	5/30/1957

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 36#
Csg Set @ 131'
Cmt'd w/ 75 sx

131' Csg

Ran 2-3/8" Tubing to 1,052'.
Circulated Class C Cement to Surface inside 4-1/2" Casing.
POOH w/Tubing - Filled 4-1/2" Casing with Cement to Surface.
Weld Cap on well - Set Dry Hole P&A Marker at surface location.

TOC = Surface
Circulated Cement to Surface

7-5/8" HOLE

Production Csg:
4-1/2" 9.5#
Csg Set @ 1,911'
Cmt'd w/ 570 sx

PERFS (Ft-#):	Zone	Completion	Date
1873'-1888' (15'-60 perfs)	**QN-Penrose**	Frac: 10,000 gal gel	05/30/57
1893'-1895' (2'-8 perfs)	**QN-Penrose**	Water + 10,000#	05/30/57
		20/40 Sand	

1,911' Csg
1,901' PBTD
1,911' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #24-W in 1957.
Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.
Initial Water Injection: June 1957.

P&A'd by NORWOOD OIL COMPANY -- August 22, 1985.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: SKELLY STATE #007 (P&A'd) **ELEVATION, GL:** 3,691 ft

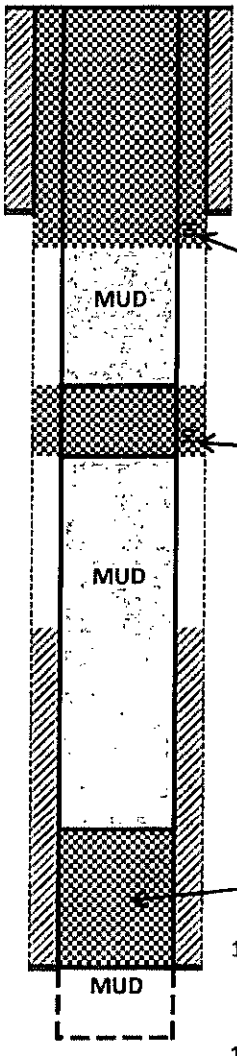
Location: 1,980' FNL & 660' FEL
UL: H, SEC: 16, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: State E-134 **Spudded:** 8/3/1955

API No. : 30-015-02747 **Drlg Stopped:** 8/24/1955

Completed: 9/5/1955

ROTARY RIG



12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 32# J-55
Csg Set @ 335'
Cmt'd w/ 150 sx

335' Csg

Perf'd 5-1/2" Casing at 405'.
Circulated 120 sx Cement thru perfs up 5-1/2"x8-5/8" annulus to Surface. Filled 5-1/2" Casing to Surface with Cement.
Set Dry Hole P&A Marker at surface.

Perf'd 5-1/2" Casing @ 900' for Squeeze.
Squeezed 50 sx Cement - Set Cement Plug: 798'-900' (tagged TOC).

7-7/8" HOLE

TOC = 1,318'
Calc'd (75% SF)

Production Csg:
5-1/2" 15.5# J-55
Csg Set @ 1,889'
Cmt'd w/ 100 sx

Set 25 sx Cement Plug: 1,680'-1,889' (tagged TOC). Above Openhole.

1,889' Csg

6" HOLE

Completion Interval	Zone	Completion	Date
1889'-1920' (Openhole)	**QN-Penrose**	Frac: 15,000 gal gel	09/05/55
		Oil + 15,000# Sand	
		+ 1,500# Adomite	

1,920' PBTD
1,920' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #7 in 1955.
Well developed Casing leaks & could not be repaired.
Well P&A'd by MACK ENERGY CORP. -- March 29, 2001.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SKELLY STATE #023 WIW (P&A'd)**	**ELEVATION, GL:**	3,694 ft
Location:	2,630' FNL & 10' FEL		
	UL: H, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-134	**Spudded:**	5/31/1957
API No. :	**30-015-05901**	**Drlg Stopped:**	6/7/1957
		Completed:	6/7/1957

ROTARY RIG

12-1/4" HOLE

TOC = Surface
Circulated Cement to Surface

Surface Csg:
8-5/8" 36#
Csg Set @ 157'
Cmt'd w/ 75 sx

157' Csg

TOC = Surface
Circulated Cement to Surface

7-5/8" HOLE

Ran 2-3/8" Tubing to 1,750'.
Circulated Class C Cement to Surface inside 4-1/2" Casing.
POOH w/Tubing - Filled 4-1/2" Casing with Cement to Surface.
Weld Cap on well - Set Dry Hole P&A Marker at surface location.

Production Csg:
4-1/2" 9.5#
Csg Set @ 1,940'
Cmt'd w/ 480 sx

MUD

PERFS (Ft-#):	Zone	Completion	Date
1890'-1911' (21'-84 perfs)	**QN-Penrose**	Frac: 10,000 gal gel	06/07/57
1914'-1924' (7'-28 perfs)	**QN-Penrose**	Water + 10,000#	06/07/57
		20/40 Sand	

1,940' Csg
1,930' PBTD
1,943' TD

Drilled by MOAB DRILLING CO. as the SKELLY-STATE #23-W in 1957.
Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.
Initial Water Injection: June 1957.

P&A'd by NORWOOD OIL COMPANY -- August 22, 1985.

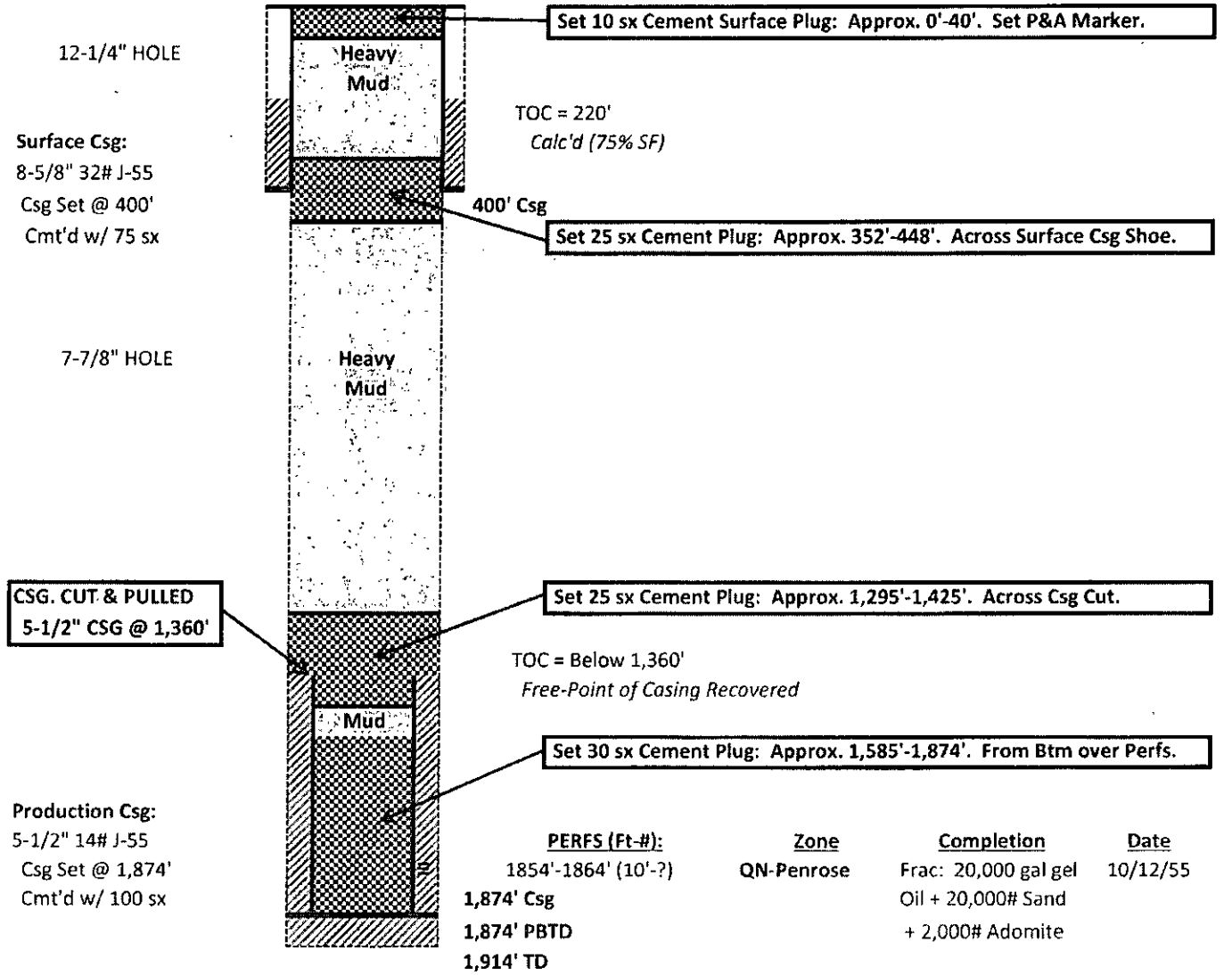
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**MOAB - STATE #001 (P&A'd)**	**ELEVATION, GL:**	3,673 ft
Location:	1,980' FSL & 1,980' FEL		
	UL: J, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-8889	**Spudded:**	8/26/1955
API No. :	**30-015-02738**	**Drlg Stopped:**	9/5/1955
		Completed:	10/12/1955

ROTARY RIG - AIR



PERFS (Ft-#):	Zone	Completion	Date
1854'-1864' (10'-?)	QN-Penrose	Frac: 20,000 gal gel	10/12/55
1,874' Csg		Oil + 20,000# Sand	
1,874' PBTD		+ 2,000# Adomite	
1,914' TD			

Drilled by MOAB DRILLING CO. as the STATE #1 in 1955.
Well Name Changed to MOAB - STATE #1 -- 02/10/1958.

P&A'd by SUN OIL COMPANY in May, 1982.

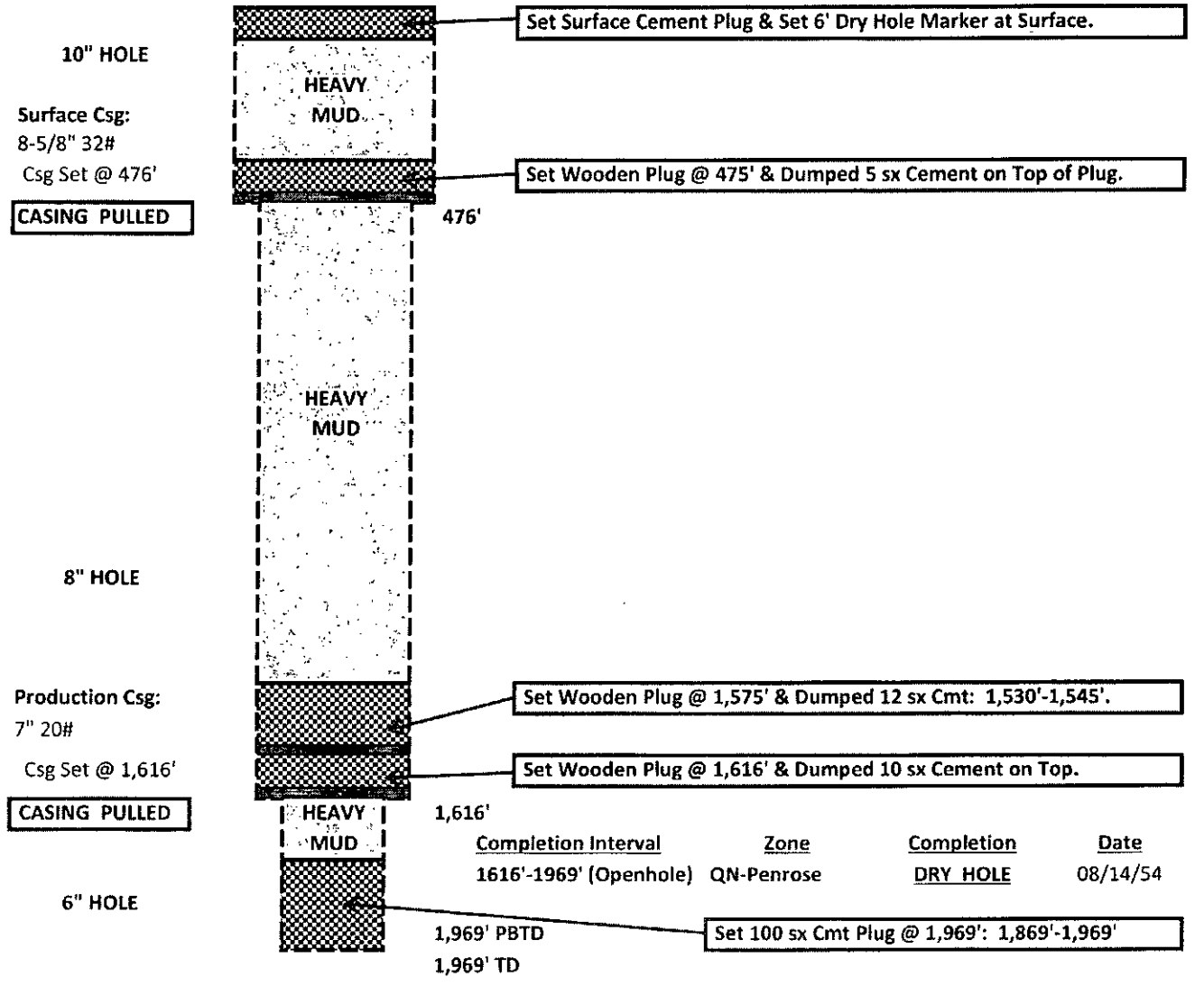
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**J.C. CLOWER - ATKINS STATE #002 (P&A'd)**	**ELEVATION, GL:**	3,654 ft
Location:	990' FSL & 330' FWL		
	UL: M, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State B-2885	**Spudded:**	7/30/1954
API No. :	**30-015-02740**	**Drlg Stopped:**	8/14/1954
		Completed:	8/14/1954

CABLE TOOLS



Completion Interval	Zone	Completion	Date
1616'-1969' (Openhole)	QN-Penrose	DRY HOLE	08/14/54

Drilled by J.C. CLOWER as the ATKINS-STATE #2 in 1954.
DRY HOLE --- P&A'd after initial tests in Openhole Section 1616'-1969'.

P&A'd by J.C. CLOWER in August, 1954.

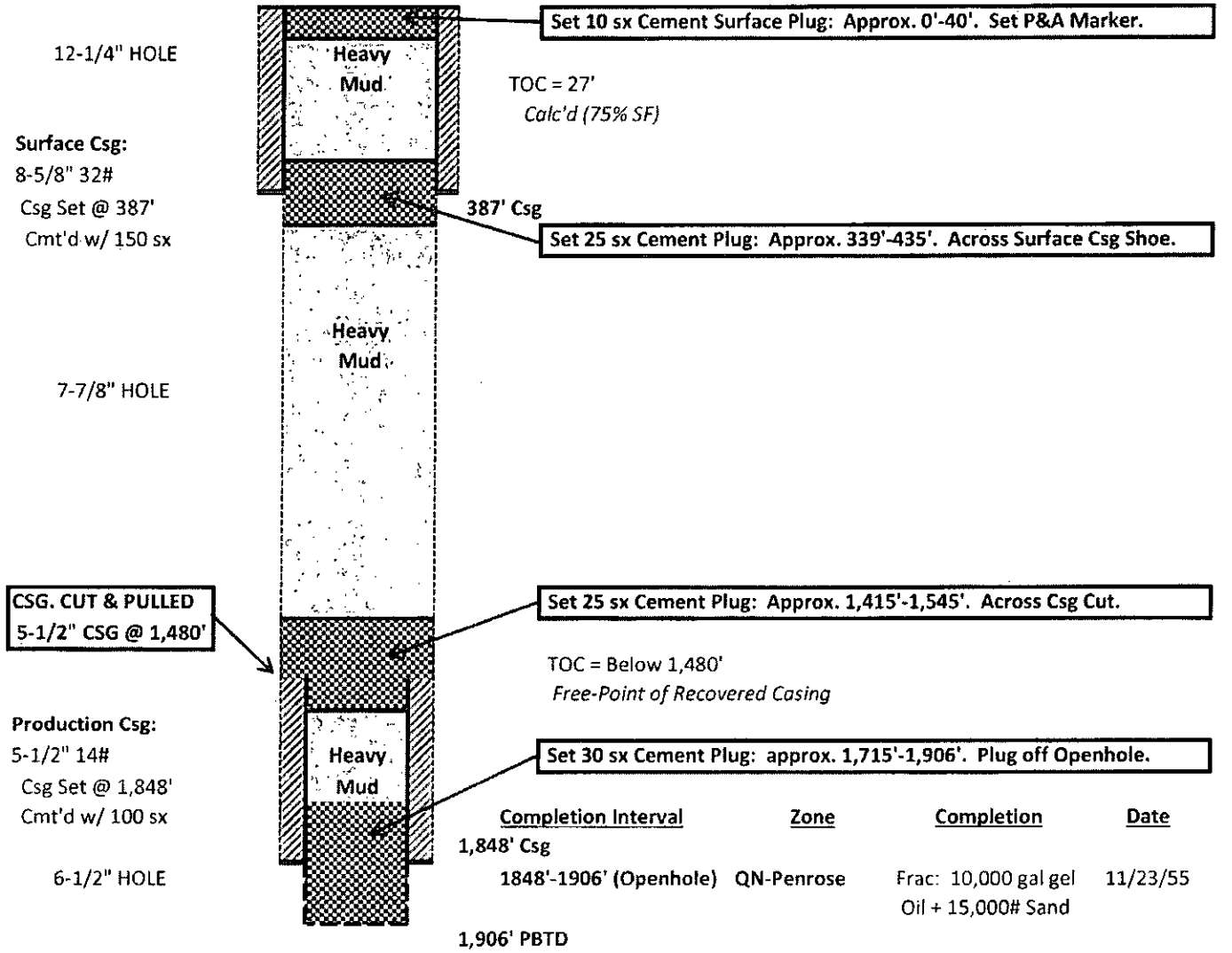
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**MOAB - STATE #002 (P&A'd)**	**ELEVATION, GL:**	3,672 ft
Location:	660' FSL & 1,980' FEL		
	UL: O, SEC: 16, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	State E-8889	**Spudded:**	10/4/1955
API No. :	**30-015-02743**	**Drlg Stopped:**	10/14/1955
		Completed:	11/23/1955

ROTARY RIG - AIR



Completion Interval	Zone	Completion	Date
1,848' Csg			
1848'-1906' (Openhole)	QN-Penrose	Frac: 10,000 gal gel Oil + 15,000# Sand	11/23/55

1,906' PBTD
1,906' TD

Drilled by MOAB DRILLING CO. as the STATE #2 well in 1955.
Well Name Changed to MOAB - STATE #2 -- 02/10/1958.

P&A'd by SUN OIL COMPANY in May, 1972.

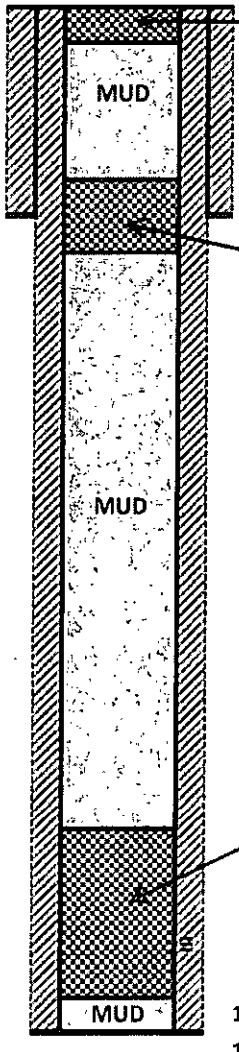
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**SHILOH FEDERAL #001 (P&A'd)**	**ELEVATION, GL:**	3,656 ft
Location:	1,650' FNL & 2,308' FEL		
	UL: G, SEC: 17, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	Federal LC-062996-B	**Spudded:**	1/3/1986
API No. :	**30-015-25525**	**Drlg Stopped:**	1/7/1986
		Completed:	1/22/1986

ROTARY RIG



Set 4 sx Cement Plug @ Surface. Set P&A Surface Marker.

TOC = Surface
Topped of at Surface

12-1/4" HOLE

Surface Csg:
8-5/8" 24# J-55
Csg Set @ 305'
Cmt'd w/ 250 sx
+ 50 sx RediMix

305' Csg

Set 30 sx Cement Plug: 240'-350'. Across 8-5/8" Surface Csg Shoe.

TOC = Surface
Calc'd (75% SF)

7-7/8" HOLE

Set 25 sx Cement Plug: 1,517'-1,800' (tagged). Plug off perforations.

Production Csg:
4-1/2" 10.5# J-55
Csg Set @ 1,870'
Cmt'd w/ 450 sx

PERFS (Ft-#):	Zone	Completion	Date
1756'-1781' (26'-26 perfs)	**QN-Penrose**	1,000 gal 10% HCl	01/17/86
		1/17/86 - Frac:	
1,850' Csg		28,000 gal 40# X-linked gel	
1,836' PBTD		+ 25,000# 20/40 Sand	
1,850' TD		+ 25,000# 12/20 Sand	

Drilled by SUN-TEX RESOURCES, INC. as the SHILOH FEDERAL #1 in 1986.

P&A'd by SUN-TEX RESOURCES, INC. in March 1987.

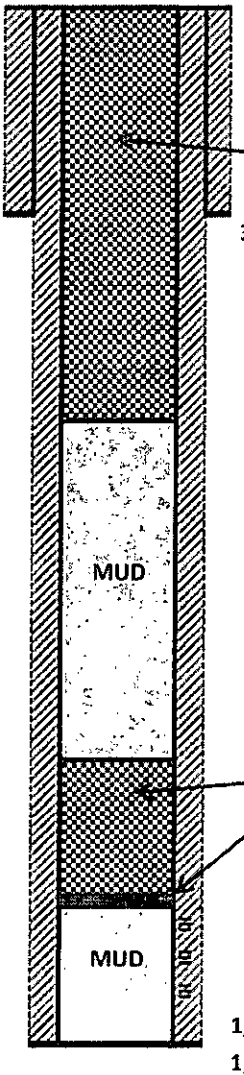
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**ILES FEDERAL #006 (P&A'd)**	**ELEVATION, GL:**	3,648 ft
Location:	1,980' FSL & 660' FEL		
	UL: I, SEC: 17, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**
	EDDY County, NM		
LEASE No.:	Federal LC-046119-A	**Spudded:**	3/13/1957
API No. :	**30-015-02756**	**Drlg Stopped:**	3/29/1957
		Completed:	3/31/1957

CABLE TOOLS



10" HOLE

TOC = Surface
Calc'd (75% SF)

Surface Csg:
8-5/8"
Csg Set @ 315'
Cmt'd w/ 750 sx

Set 60 sx Cement Plug from 0'-750. Set P&A Surface Marker.

315' Csg

TOC = Surface
Calc'd (75% SF)

6-1/2" HOLE

Set 4-1/2" CIBP at 1,750' & Set 25 sx Cement Plug on top of CIBP from 1,381'-1,750' (tagged).

PERFS (Ft-#):	**Zone**	**Completion**	**Date**
1778'-1788' (10'-?)	**QN-Penrose**	ALL ZONES:	03/31/57
1791'-1793' (2'-?)	**QN-Penrose**	Frac - 15,000 gal	
1796'-1802' (6'-?)	**QN-Penrose**	Gel Oil + 15,000# Sd	

Production Csg:
4-1/2"
Csg Set @ 1,825'
Cmt'd w/ 800 sx

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

Drilled by CHARLES A. STEEN as the ILES-FEDERAL #6 in 1957.

P&A'd by BEACH EXPLORATION, INC. -- 04/13/2009.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: ILES FEDERAL #005 (D&A'd - P&A'd) **ELEVATION, GL:** 3,655 ft

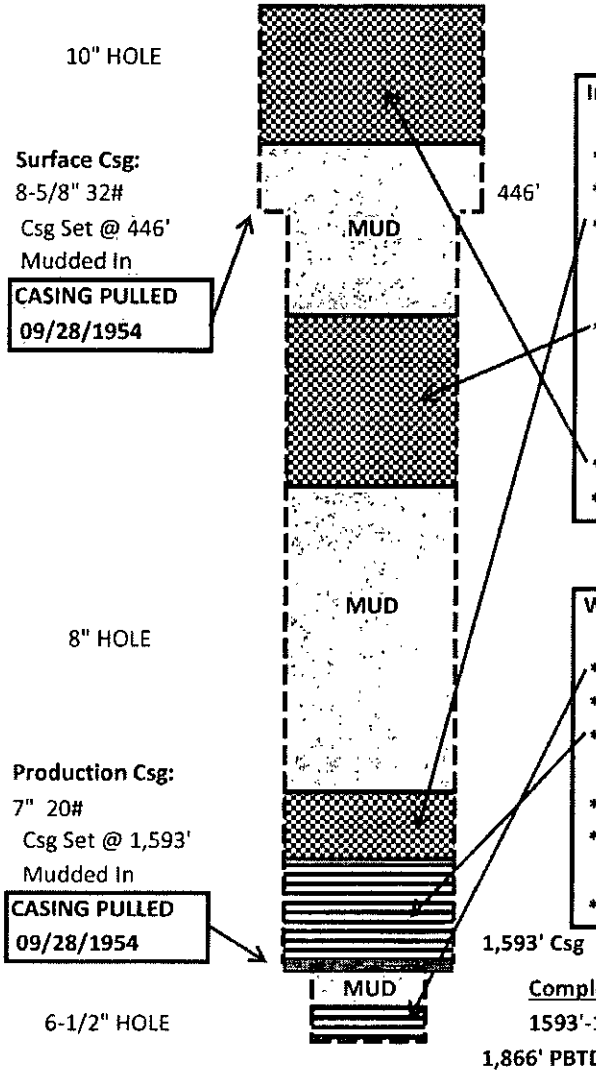
Location: 330' FSL & 1,650' FEL
UL: O, SEC: 17, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal LC-046119(a) **Spudded:** 9/11/1954

API No. : 30-015-02755 **Drlg Stopped:** 9/28/1954

Completed: 9/28/1954 **D&A'd**

CABLE TOOLS



In 2002, Beach Exploration, Inc. was required to Re-Enter the Iles Federal #005 Well & Re-Plug the Well.

* Drilled out Surface Plug & set 1 joint of 8-5/8" csg & cemented in.
* Re-Entered Original Wellbore & Cleaned-Out to 1,554'.
* Set 36 sx Cement Plug: 1,460'-1,554' (tagged TOC).
  * Set 28 sx Cement Plug: 600'-834' (tagged TOC).
  * Set 25 sx Cement Plug: 570'-600' (tagged TOC).
*** *Overall Cement Plug: 570'-834'.*
  * Set 100 sx Cement Plug: 270'-320' (tagged TOC).
  * Set 150 sx Cement Plug: 25'-270' (tagged TOC).
  * Set 10 sx Surface Plug: 0'-25'.
*** *Overall Cement Plug: 25'-320'.*
* Set P&A Marker.

Well was originally Drilled & Abandoned as a Dry Hole: 09/28/1954 by J.C. Clower - Agent for George Atkins.

* A 20 sx Cement Plug was set in Openhole: 1,770'-1,866'.
* Hole was filled with Mud & 7" 20# Casing was pulled from 1,593'.
* Set wooden bridge in hole @ 1,593' & Set 15 sx Cement Plug from 1,554'-1,593' (calculated).
* Pulled 8-5/8" 32# Casing from 446'.
* Set wooden bridge in hole @ 285' & Set 10 sx Cement Plug from 270'-285' (calculated).
* Set Surface Cement Plug & Dry Hole Marker.

Completion Interval	Zone	Completion	Date
1593'-1866' (Openhole)	QN-Penrose	DRY HOLE	09/28/54

1,866' PBTD
1,866' TD

DRILLED & ABANDONED

Drilled by J.C. CLOWER - AGENT FOR GEORGE ATKINS as the ILES-FEDERAL #5 in 1954.
Well was Abandoned as a DRY HOLE BY J.C. CLOWER -- 09/28/1954.

In 2002, BEACH EXPLORATION, INC. was required to Re-Entered the D&A'd well and Re-Plug.
Well was Re-Plugged by BEACH EXPLORATION, INC. -- 06/17/2002.

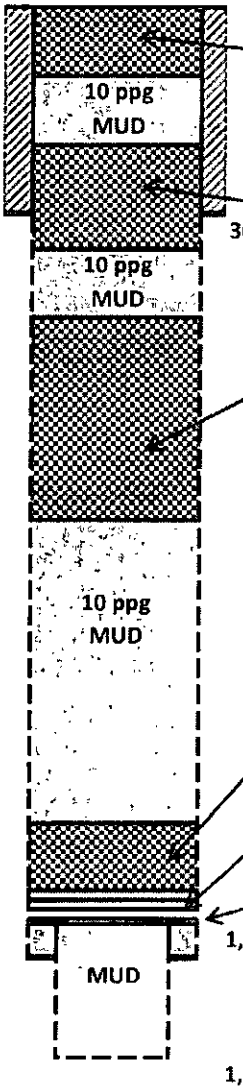
HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.:	**ILES FEDERAL #001 (P&A'd)**	**ELEVATION, GL:**	3,655 ft	
Location:	330' FSL & 330' FEL			
	UL: P, SEC: 17, T: 16-S, R:29-E	**FIELD:**	**HIGH LONESOME - QUEEN**	
	EDDY County, NM		Orig. Compln	Re-Entry
LEASE No.:	Federal LC-046119	**Spudded:**	7/15/1939	3/10/1947
API No. :	**30-015-05968**	**Drlg Stopped:**	8/28/1939	4/12/1947
		Completed:	8/28/1939	4/12/1947

CABLE TOOLS



Set 150 sx Cement Plug: 6'-120' (tagged TOC)
Set 5 sx Cement Plug: 0'-6'.
Set P&A Surface Marker on Well 06/21/02.

TOC = Surface
Circulated Cmt

Set 75 sx Cement Plug: 275'-355' (tagged TOC)
Set 25 sx Cement Plug: 245'-275'.
Overall Plug: 245'-355'.

Set 60 sx Cement Plug: 735'-854'
Set 45 sx Cement Plug: 544'-754' (tagged TOC)
Overall Plug: 544'-854'.

Set 60 sx Cement Plug: 1,425'-1,545'. Above Openhole completion.

Original Btm Cmt Plug: 20 sx set 1,554'-1,600' above openhole interval and collapsed csg @ 1,600'. Set in October 1941.

8-5/8" Csg Collapsed Below 1,630' after Well was Shot with Nitro for Completion. Casing was Cut @ 1,600' & Recovered - October 1941

1,630' Csg

Completion Interval	Zone	Completion	Date
1630'-1827' (Openhole)	QN-Penrose	Shot Openhole with 30 Qts Nitroglycerin 1801'-1827'	08/28/39

1,827' PBTD
1,827' TD

Drilled by B.H. NOLEN as the ABBIE ILES - NOLAN #1 in 1939. P&A'd by B.H. NOLEN in October 1941.
Well was Junked when btm 30' of 8-5/8" csg collapsed after shooting openhole with Nitro.
BEACH EXPLORARION, INC. was required to Re-Enter & Re-Plug this Well in 2002 -- All Cmt Plugs except bottom plug set during original P&A in October 1941 were drilled out & Replaced with the Cmt Plugs shown here.
Well was P&A'd by BEACH EXPLORATION, INC. -- June 21, 2002.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC

PLUGGED & ABANDONED WELLBORE DIAGRAM

Lease &Well No.: J.C. CLOWER - ATKINS #001 (P&A'd) **ELEVATION, GL:** 3,650 ft

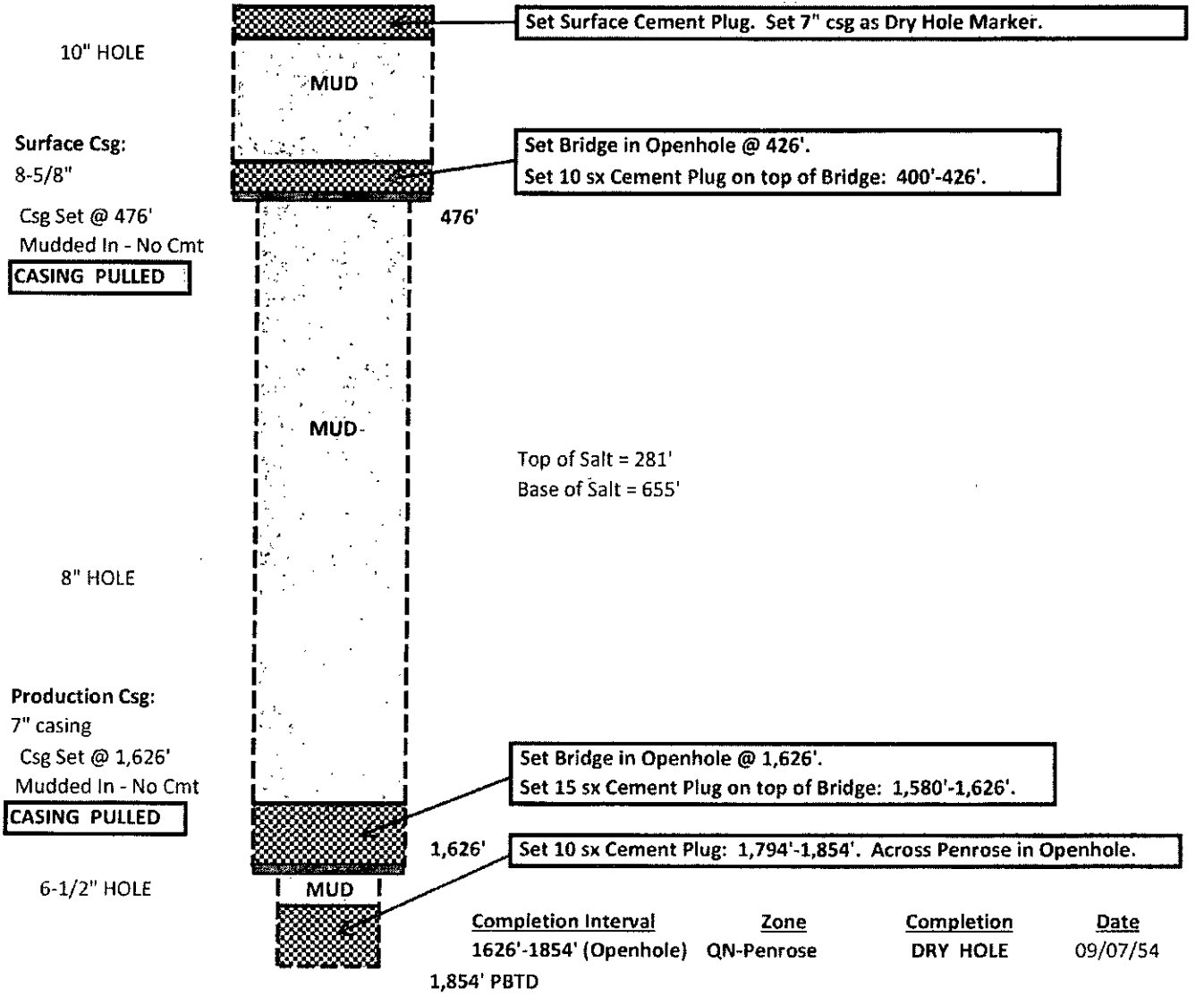
Location: 330' FSL & 330' FWL
UL: D, SEC: 21, T: 16-S, R:29-E **FIELD:** HIGH LONESOME - QUEEN
EDDY County, NM

LEASE No.: Federal -- Unknown **Spudded:** 8/18/1954

API No. : 30-015-02762 **Drlg Stopped:** 9/6/1954

Completed: 9/8/1954 **D&A'd**

CABLE TOOLS



Completion Interval	Zone	Completion	Date
1626'-1854' (Openhole)	QN-Penrose	DRY HOLE	09/07/54

1,854' PBTD
1,854' TD

Drilled by J.C. CLOWER as the ATKINS-FEDERAL #1 in 1954.
DRY HOLE
P&A'd by J.C. CLOWER -- September 8, 1954.

HPS: 01/28/2014

Impact Water Analysis Analytical Report

IMPACT! CHEMICAL TECHNOLOGIES, INC.

Company:	Alamo Permian	Location:	Skelly State
Source :	H2O Tank Valve	Date Sampled:	February 28, 2014
Number :	24063	Account Manager:	David Garcia
County:		Formation:	

	ANALYSIS	mg/L		EQ. WT.		MEQ/L
1.	pH	6.05				
2.	Specific Gravity 60/60 F	1.192				
3.	Hydrogen Sulfide	5.1	PPM			
4.	Carbon Dioxide	200.0	PPM			
5.	Dissolved Oxygen	ND				
6.	Hydroxyl (OH^-)	0	/	17.0	=	0.00
7.	Carbonate (CO_3^{-2})	0	/	30.0	=	0.00
8.	Bicarbonate (HCO_3^-)	122	/	61.1	=	2.00
9.	Chloride (Cl^-)	180,959	/	35.5	=	5,097.44
10.	Sulfate (SO_4^{-2})	3,800	/	48.8	=	77.87
11.	Calcium (Ca^{+2})	2,339	/	20.1	=	116.37
12.	Magnesium (Mg^{+2})	5,250	/	12.2	=	430.33
13.	Sodium (Na^+)	106,504	/	23.0	=	4,630.61
14.	Barium (Ba^{+2})	0.00				
15.	Total Iron (Fe)	34.57				
16.	Manganese	6.28				
17.	Strontium	47.20				
18.	Total Dissolved Solids	299,062				
19.	Resistivity @ 75 °F (calculated)	0.026	Ω-m			

20. $CaCO_3$ Saturation Index

@ 80 °F	-1.3320
@ 100 °F	-1.0220
@ 120 °F	-0.7620
@ 140 °F	-0.4020
@ 160 °F	-0.0520

21. $CaSO_4$ Supersaturation Ratio

@ 70 °F	0.9346
@ 90 °F	1.0374
@ 110 °F	0.9207
@ 130 °F	0.9077
@ 150 °F	0.9073

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
$Ca(HCO_3)_2$	81.04		2.00	162
$CaSO_4$	68.07		77.87	5,301
$CaCl_2$	55.50		36.50	2,026
$Mg(HCO_3)_2$	73.17		0.00	0
$MgSO_4$	60.19		0.00	0
$MgCl_2$	47.62		430.33	20,492
$NaHCO_3$	84.00		0.00	0
$NaSO_4$	71.03		0.00	0
NaCl	58.46		4,630.61	270,705

Analyst: Jeremy Lysinger Date: March 7, 2014

Impact Water Analysis Analytical Report

IMPACT! Chemical Technologies, Inc.

Company:	Cimarex	Location:	Spike Tale Battery
Source :	Pump	Date Sampled:	February 18, 2014
Number :	24064	Account Manager:	David Garcia
County:		Formation:	

	ANALYSIS	mg/L		EQ. WT.		MEQ/L
1.	pH	5.39				
2.	Specific Gravity 60/60 F	1.122				
3.	Hydrogen Sulfide	47.9 PPM				
4.	Carbon Dioxide	27.5 PPM				
5.	Dissolved Oxygen	ND				
6.	Hydroxyl (OH^-)	0	/	17.0	=	0.00
7.	Carbonate (CO_3^{-2})	0	/	30.0	=	0.00
8.	Bicarbonate (HCO_3^-)	2955	/	61.1	=	48.36
9.	Chloride (Cl^-)	127,971	/	35.5	=	3,604.82
10.	Sulfate (SO_4^{-2})	3,100	/	48.8	=	63.52
11.	Calcium (Ca^{+2})	4,124	/	20.1	=	205.17
12.	Magnesium (Mg^{+2})	928	/	12.2	=	76.04
13.	Sodium (Na^+)	79,016	/	23.0	=	3,435.49
14.	Barium (Ba^{+2})	0.00				
15.	Total Iron (Fe)	4.25				
16.	Manganese	0.18				
17.	Strontium	83.86				
18.	Total Dissolved Solids	218,182				
19.	Resistivity @ 75 °F (calculated)	0.037 Ω-m				

20. $CaCO_3$ Saturation Index

@ 80 °F	-0.3615
@ 100 °F	-0.0515
@ 120 °F	0.2085
@ 140 °F	0.5685
@ 160 °F	0.9185

21. $CaSO_4$ Supersaturation Ratio

@ 70 °F	1.0888
@ 90 °F	1.0902
@ 110 °F	1.0873
@ 130 °F	1.0799
@ 150 °F	1.0715

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
$Ca(HCO_3)_2$	81.04		48.36	3,919
$CaSO_4$	68.07		63.52	4,324
$CaCl_2$	55.50		93.29	5,178
$Mg(HCO_3)_2$	73.17		0.00	0
$MgSO_4$	60.19		0.00	0
$MgCl_2$	47.62		76.04	3,621
$NaHCO_3$	84.00		0.00	0
$NaSO_4$	71.03		0.00	0
NaCl	58.46		3,435.49	200,839

Analyst: Jeremy Lysinger Date: March 7, 2014

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

High Lonesome Queen Unit

All of Sec. 16 & NW/SW Sec. 15, Twp 16-S, Rge 29-E, Eddy County, NM

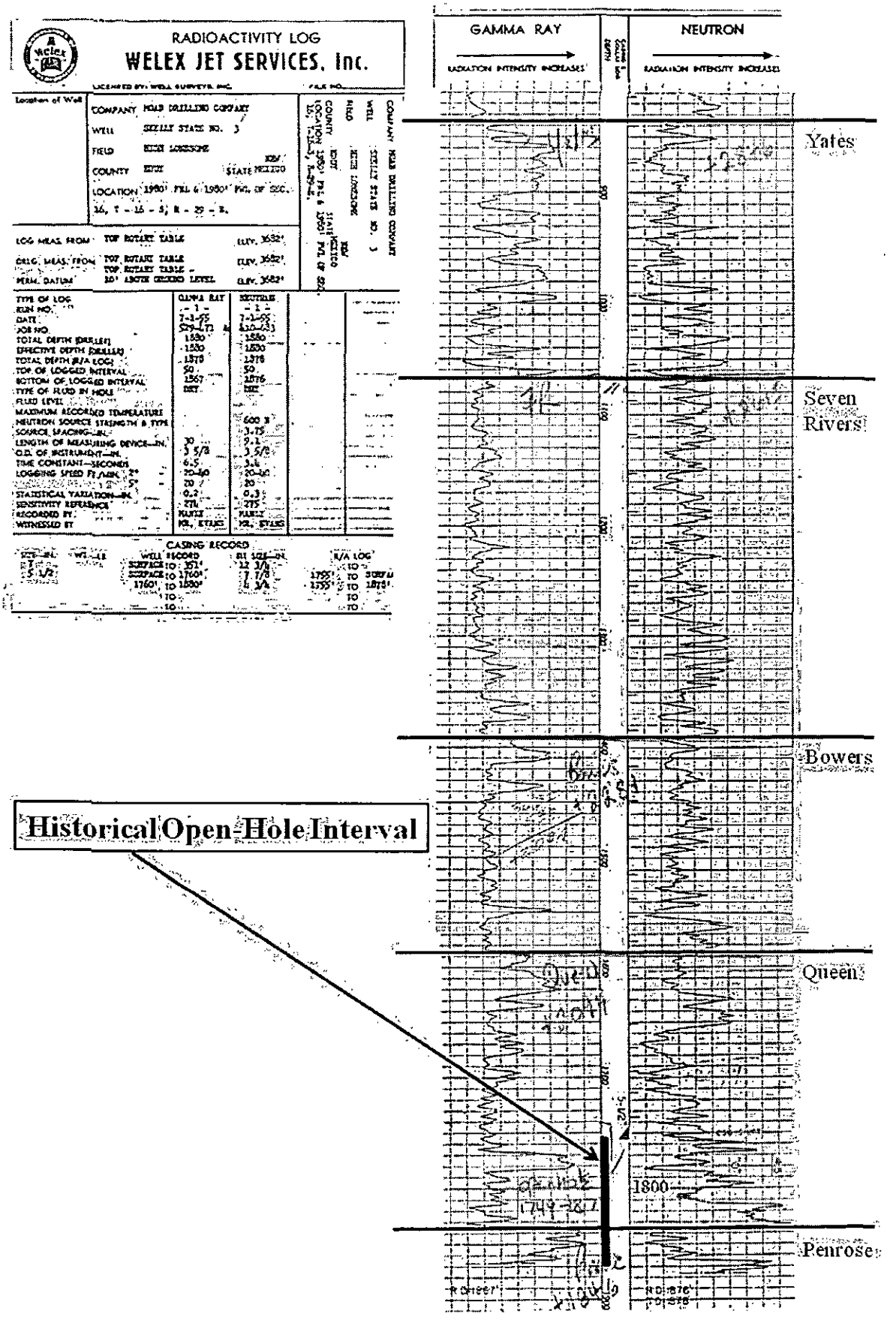
The High Lonesome Queen Unit produces hydrocarbons from the Penrose sandstone of the Permian-age (Guadalupian) Queen Formation. The arkosic Penrose sandstone is about 30 feet-thick and is situated about 250' above the base of the Queen Formation.

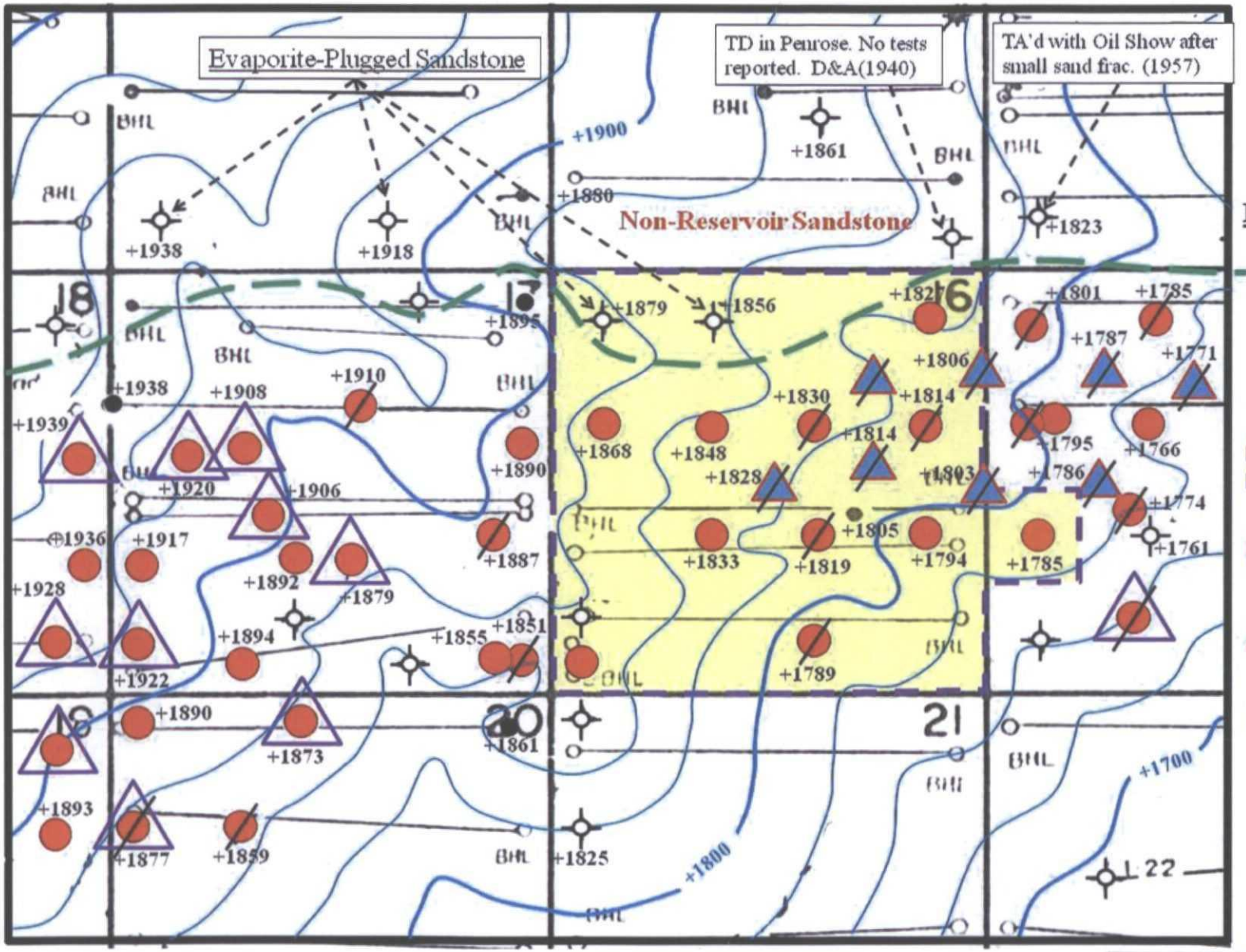
The High Lonesome Queen Unit is part of a continuous east-west trend of Penrose production that is at least 8 miles long. The productive trend is about 1 mile wide and is a large stratigraphic trap. Clean and porous hydrocarbon-producing sandstone is bounded to the north by an anhydrite-plugged and salt-plugged 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'). (See attached "High Lonesome Penrose Queen Unit Penrose Structure" map and Skelly State #3 Type Log for this area.) 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.

At least three (3) Penrose sandstone waterflood units (the West High Lonesome Penrose Sand Unit, the High Lonesome Penrose Unit, and the East High Lonesome Penrose Sand Unit) have successfully carried out waterflood operations along the 8-mile long trend of Penrose production. Additionally, the High Lonesome Penrose Pilot Project successfully demonstrated the potential of waterflood recovery in the Penrose sandstone in the western half of the proposed High Lonesome Queen Unit from 1957-1959 under NMOCD Order No. R-975. All 3 waterfloods and the waterflood pilot project have been successful as shown by their respective production curves (see attached "High Lonesome Queen Unit Waterflood Project Map").

Skelly State #3 (T-16-S, R-29-E, Sec. 16, 1980'FS&WL)




Evaporite-Plugged Sandstone
TD in Penrose. No tests reported. D&A(1940)
TA'd with Oil Show after small sand frac. (1957)
Non-Reservoir Sandstone
+1900
+1880
+1861
+1823
+1938
+1918
+1895
+1879
+1856
+1827
+1801
+1785
+1787
+1771
+1806
+1910
+1908
+1939
+1830
+1814
+1814
+1868
+1848
+1795
+1766
+1828
+1803
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+1890
+1936
+1917
+1805
+1887
+1833
+1819
+1794
+1785
+1761
+1928
+1892
+1879
+1894
+1855
+1851
+1922
+1789
+1890
+1873
+1893
+1877
+1859
+1825
+1800
+1700
22
Alamo Permian Resources, LLC
T-16-S, R-29-E
Eddy County, N.M.
High Lonesome Queen Unit
Penrose Structure
C.I. = 25 feet
Top Penrose Interval
Structure Posted
-Alamo Permian Resources Acreage
-Penrose Producer
-Drilled Penrose WIW
-Originally a Penrose Producer, Converted to WIW
N
One Mile

Alamo Permian Resources, LLC

High Lonesome Queen Unit Waterflood Project

Sections 15 & 16, T-16-S, R-29-E

Eddy County, New Mexico

T-16-S, R-28E

T-16-S, R-29E

Tract #1
State Lease E-134-5

Tract #2
State Lease B-2885-17

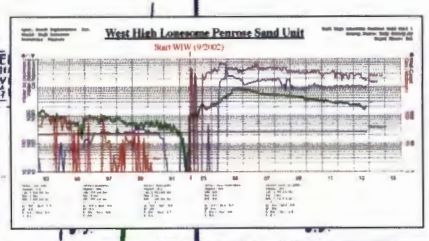
Tract #3
State Lease V-6499-3

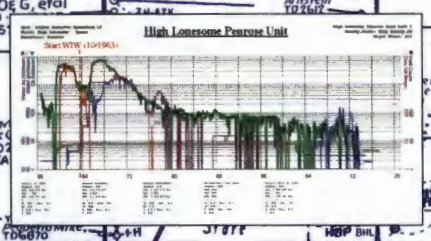
West High Lonesome Penrose Sand Unit

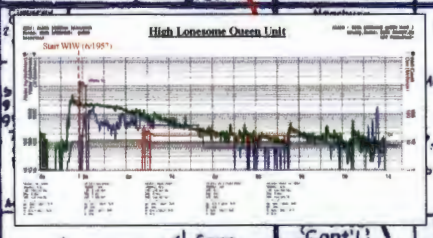
High Lonesome Penrose Unit

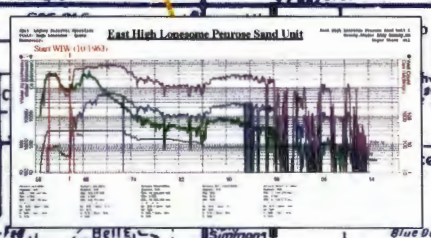
High Lonesome Queen Unit

East High Lonesome Penrose Sand Unit









High Lonesome (Queen) Legend

- ● - Active Well
- ◬ - Producing Well Converted to WIW
- ▲ - Well Drilled as WIW
- ⚷ - Plugged Well
- ⚷ - Plugged Water Injection Well
- ○ - Planned Producing Well
- ◬ - Planned Water Injection Well

N

Map Scale:
One Mile

T. Fekete
October 28, 2013