



**BEFORE THE OIL CONSERVATION DIVISION  
SANTA FE, NEW MEXICO  
CASE NO. 15116  
EXHIBITS SUBMITTED BY:  
ALAMO PERMIAN RESOURCES, LLC  
HEARING DATE: APRIL 30, 2014**

**APPLICATION FOR AUTHORIZATION TO INJECT**

I. PURPOSE:  Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_ Disposal \_\_\_\_\_ Storage \_\_\_\_\_  
Application qualifies for administrative approval? \_\_\_\_\_ Yes  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  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.).

**BEFORE THE OIL CONSERVATION  
DIVISION**

Santa Fe, New Mexico

Exhibit No. 1

Submitted by: **ALAMO PERMIAN RESOURCES**

Hearing Date: April 30, 2014

\*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.

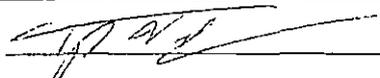
XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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

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](mailto: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 be 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% NEEF 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 any 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 a 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<sub>2</sub> 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.

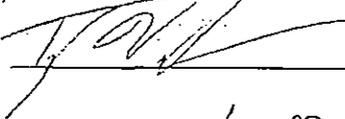
Alamo Permian Resources will notify surface owners and leasehold operators within one-half mile pursuant to NMOCDC regulations and we will submit certified mail receipts at hearing.

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:  DATE: 14-Mar-2014

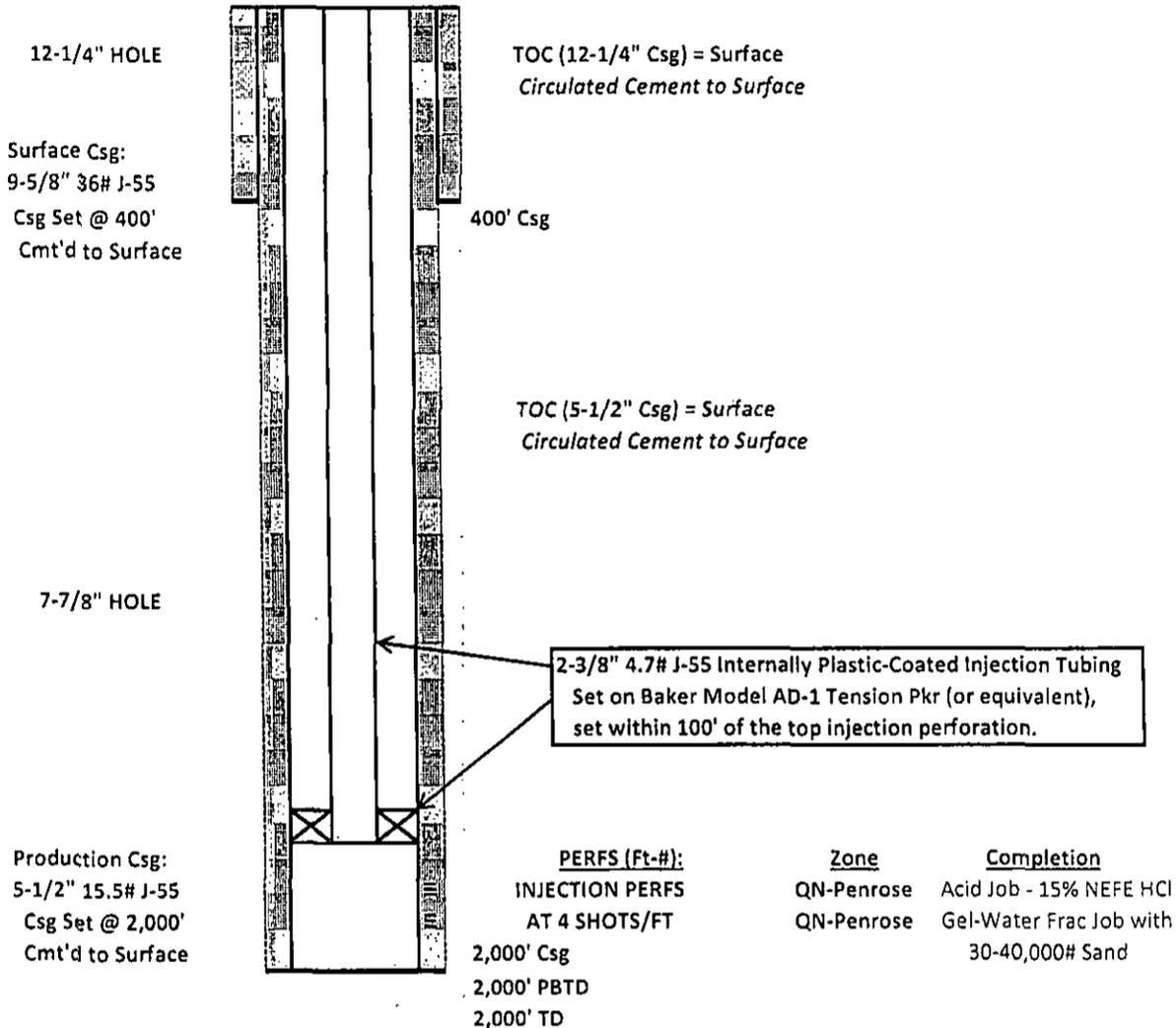
E-MAIL ADDRESS: twoodruff@alamoresources.com

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**



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

NMOC D  
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-16-S, R-28E

T-16-S, R-29E

Tract #1  
State Lease E-134-5

Tract #3  
State Lease V-6499-3

Tract #2  
State Lease B-2885-17

Outline of  
High Lonesome Queen Unit Waterflood

- High Lonesome (Queen) Legend**
- - Active Well
  - - Plugged Well
  - - Plugged Water Injection Well
  - - Planned Producing Well
  - - Planned Water Injection Well
  - - Area of Review

Map Scale:  
One Mile

T. Fekete  
November 21, 2013

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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. Original Operator	Oilers Federal #001 Mack Energy Corp.	Davis-Federal #2 Moab Drilling Co.	Davis-Federal #5 Moab Drilling Co.	Skelly-State #8 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'
<b>SURFACE CASING:</b>				
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)
<b>INTERMEDIATE CASING:</b>				
Hole Size	12-1/4"			
Size & Depth of Csg.	8-5/8" 32# J-55 @ 1818'			
Sacks of Cement	885 sx			
Top of Cement	Surface			
TOC Determined By	Circ'd 48 sx			
<b>PRODUCTION CASING:</b>				
Hole Size	7-7/8"	7-7/8"	6-1/2"	7-7/8"
Size & Depth of Csg.	5-1/2" 17# @ 0-6498' 4-1/2" 11.6# @ 6498-11275'	5-1/2" 14# @ 1930'	5-1/2" 14# @ 1956'	5-1/2" 14# J-55 @ 1911'
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)
<b>COMPLETION(S):</b>				
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 392,040 gal SlickWater 67,752# 30/50 Sand 193,746 gal 40# Gel	15,000 gal gelled Oil + 22,500# Sand	Sand Frac'd Size Unknown	500 gal MCA 10,000 gal gelled Oil + 15,000# Sand + 1,500# Adomite
<b>INITIAL POTENTIAL:</b>				
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				
<b>COMMENTS</b>				

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

	5	6	7	8
Well Name & No.	Skelly State #001	Skelly State #003	Skelly State #009	Dove State #001
Current / Last Operator	Alamo Permian Resources	Alamo Permian Resources	Alamo Permian Resources	Legacy Reserves Operating
API Number	30-015-02736	30-015-02744	30-015-	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'
<b>SURFACE CASING:</b>				
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
<b>INTERMEDIATE CASING:</b>				
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
<b>PRODUCTION CASING:</b>				
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
<b>COMPLETION(S):</b>				
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) 01/56: 1750'-1831' (Openhole)	1745'-1870' (Openhole)	1863'-1933' (Openhole)	2814'-3074' (OA-39 perfs)
Stimulation Performed	03/13/55: 10,000 gal gel Oil + 2,000# Sand	10,000 gal gelled Oil + 15,000# Ottawa Sand	10,000 gal gelled Oil + 10,000# Sand	2,500 gal 15% HCl 24,860 gal 9.5# Brine
	01/29/56: 15,000 gal gel Oil + 22,500# 20/40 & 10/20 Sd + 1,500# Adomite		+ 1,000# Adomite	+ 8,000# 14/30 Lite Prop + 54,978 gal 40# gel + 91,350# 16/30 Sand
	+ 400# T.L.C. 15			
<b>INITIAL POTENTIAL:</b>				
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			

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**ALAMO PERMIAN RESOURCES, LLC**  
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**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'
<b>SURFACE CASING:</b>				
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
<b>INTERMEDIATE CASING:</b>				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)
<b>COMPLETION(S):</b>				
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' 06/14/11: 1845'-1872'	01/09/56: 1902'-1934' 05/20/11: 1912'-1932'	1724'-1845' (Openhole)	7591'-11235' MD
Stimulation Performed	05/12/59: 250 gal MCA + 15,000 gal gelled Oil + 40,000# 20/40 Sand	01/19/56: 5,000 gal gelled Oil + 7,500# Sand + 500# Adomite	Initial Completion: None 01/31/47: 80 qts Nitro	87,654 gal 20% HCl 220,836 gal Slick Water 787,412# 30/50 Sand 874,774 gal 40# Gel
	09/21/87: 1,000 gal 10% HCl + 30,000 gal Gel Wtr + 50,000# Sand	05/24/11: 53,500 gal gel Brine + 17,500# 20/40 Sand		
	06/14/11: 55,280 gal gel Brine + 31,740# 20/40 Sand			
<b>INITIAL POTENTIAL:</b>				
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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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. Original Operator	Atkins-Federal #1 Charles A. Steen	Redskins Federal Com #001 Mack Energy Corp.	Iles-Federal #4 J.C. Clower	Iles-Federal #1Y 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'
<b>SURFACE CASING:</b>				
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)
<b>INTERMEDIATE CASING:</b>				
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)
<b>PRODUCTION CASING:</b>				
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' 4-1/2" 11.6# @ 6306-11560'	5-1/2" 15.5# @ 0'-1757'	5-1/2" Liner @ 1470'-1735'
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
<b>COMPLETION(S):</b>				
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 + 10,000# 10/20 Sand + 400# Adomite	249,794 gal 15% NEFE HCl 88,158 gal Divert S 20% 149,436 gal SlickWater	Original O/H: Shot w/ Nitro 08/2002 O/H: None	90 qts Nitro Glycerin 1801'-1821'
<b>INITIAL POTENTIAL:</b>				
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

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

Sorted by Section & UL

	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. Original Operator	Davis-Federal #6 Moab Drilling Co.	Davis-Federal #3 Moab Drilling Co.	Davis-Federal #12W Moab Drilling Co.	Davis-Federal #1 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'
<b>SURFACE CASING:</b>				
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)
<b>INTERMEDIATE CASING:</b>				
Hole Size				P&A Records on the NMOCD Website are available. NO P&A Data available for this well.
Size & Depth of Csg.				Moab Drilling Co. properly P&A'd the Skelly State #2 & #4 in section Assume same for this well.
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)
<b>COMPLETION(S):</b>				
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
<b>INITIAL POTENTIAL:</b>				
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

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	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. Original Operator	Davis-Federal #22-W Moab Drilling Co.	Donohue-Federal #2 Edward C. Donohue	Donohue-Federal #4 Utex Exploration Co.	Federal "H" #1-15 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'
<b>SURFACE CASING:</b>				
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)
<b>INTERMEDIATE CASING:</b>				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)
<b>COMPLETION(S):</b>				
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
<b>INITIAL POTENTIAL:</b>				
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.	Donohue Federal #003 WIW	Skelly State #013 WIW	Skelly State #014 WIW	Skelly State #004
Current / Last Operator	General Western Pet. Corp.	Norwood Oil Company	Norwood Oil Company	Moab Drilling Co.
API Number	30-015-02725	30-015-05904	30-015-05903	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-1958	12-May-1957	15-Apr-1957	17-Jul-1955
Rig Type Used	Cable Tools	Rotary	Rotary	Rotary
GL Elevation	3,682'	3,693'	3,688'	3,674'
<b>SURFACE CASING:</b>				
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
<b>INTERMEDIATE CASING:</b>				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)
<b>COMPLETION(S):</b>				
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
<b>INITIAL POTENTIAL:</b>				
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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Well Name & No.	Skelly State #002	Skelly State #025 WIW	Skelly State #006	Skelly State #024 WIW
Current / Last Operator	Moab Drilling Co.	Norwood Oil Company	Alamo Permian Resources	Norwood Oil Company
API Number	30-015-02742	30-015-02750	30-015-02746	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'
<b>SURFACE CASING:</b>				
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
<b>INTERMEDIATE CASING:</b>				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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
<b>COMPLETION(S):</b>				
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
<b>INITIAL POTENTIAL:</b>				
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

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

Sorted by Section & UL

	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. Original Operator	Skelly-State #7 Moab Drilling Co.	Skelly-State #23-W Moab Drilling Co.	State #1 Moab Drilling Co.	Atkins State #2 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'
<b>SURFACE CASING:</b>				
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)	
<b>INTERMEDIATE CASING:</b>				
Hole Size				8"
Size & Depth of Csg.				7" 20# @ 1616'
Sacks of Cement				Pulled
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)	
<b>COMPLETIONS:</b>				
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 + 15,000# Sand + 1,500# Adomite	10,000 gal gelled Water + 10,000# 20/40 & 10/20 Sd	20,000 gal gelled Oil + 20,000# Sand + 2,000# Adomite	n/a
<b>INITIAL POTENTIAL:</b>				
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

**ALAMO PERMIAN RESOURCES, LLC**  
**PROPOSED WEST HIGH LONESOME QUEEN UNIT**  
**NMOC 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**

	21	22	23	24
Well Name & No.	Moab - State #002	Shiloh Federal #001	Iles Federal #006	Iles Federal #005
Current / Last Operator	Sun Oil Co.	Sun-Tex Resources, Inc.	Beach Exploration, Inc.	Beach Exploration, Inc.
API Number	30-015-02743	30-015-25525	30-015-02756	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 Drilling 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'
<b>SURFACE CASING:</b>				
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)	
<b>INTERMEDIATE CASING:</b>				
Hole Size				
Size & Depth of Csg.				
Sacks of Cement				
Top of Cement				
TOC Determined By				
<b>PRODUCTION CASING:</b>				
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)	
<b>COMPLETION(S):</b>				
Pool	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN	High Lonesome: QN
Zone	Penrose	Penrose	Penrose	Penrose
Overall Perf Interval (#)	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
<b>INITIAL POTENTIAL:</b>				
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
<b>COMMENTS</b>				
				P&A'd by J.C. Clower - D&A in September 1954.
				Re-Plugged by Beach Expl. 17-June-2002

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

Sorted by Section & UL

25

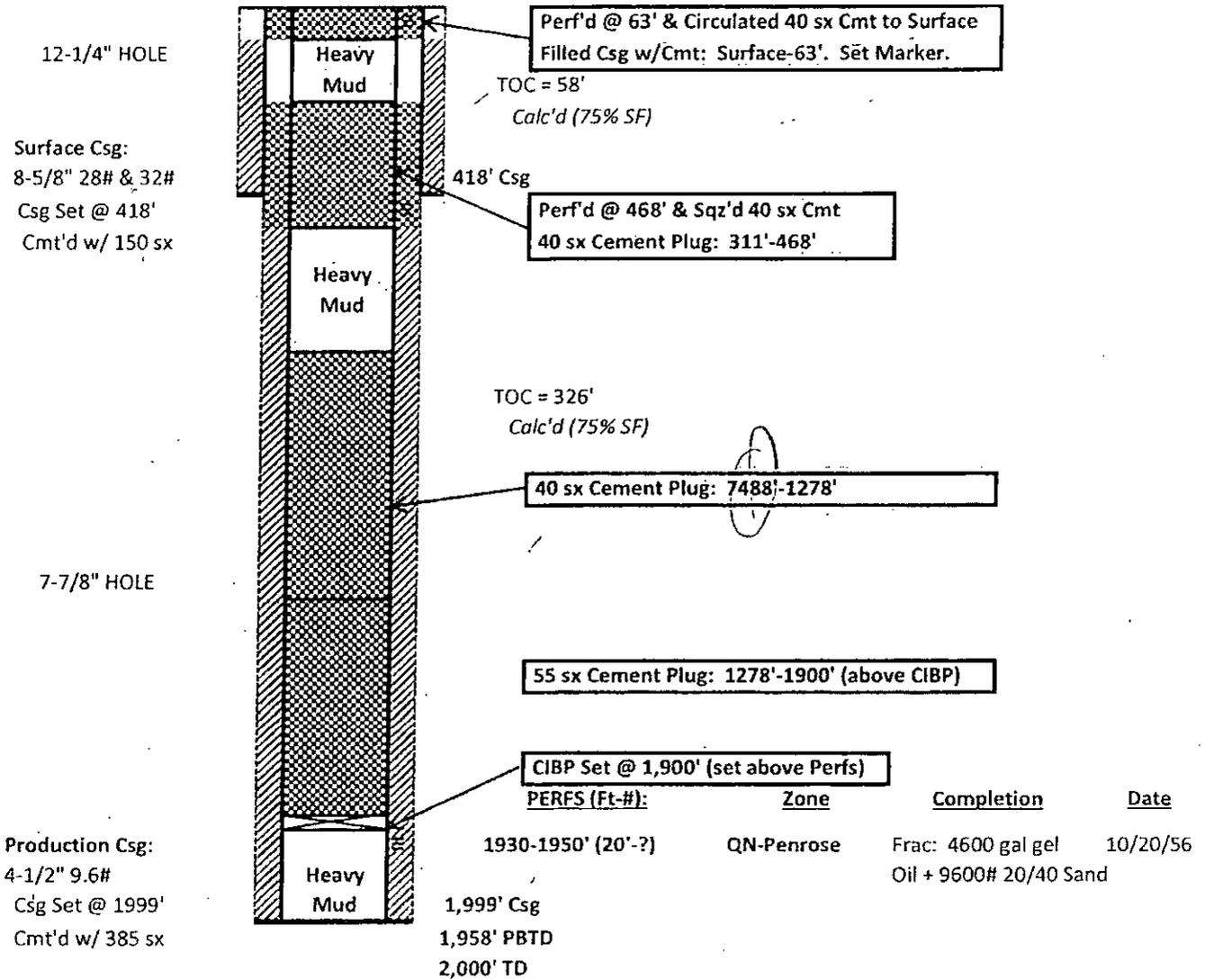
26

Well Name & No.	Iles Federal #001	Atkins #001
Current / Last Operator	Beach Exploration, Inc.	J.C. Clower
API Number	30-015-05968	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'
<b>SURFACE CASING:</b>		
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)	
<b>INTERMEDIATE CASING:</b>		
Hole Size		
Size & Depth of Csg.		
Sacks of Cement		
Top of Cement		
TOC Determined By		
<b>PRODUCTION CASING:</b>		
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)	
<b>COMPLETION(S):</b>		
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
<b>INITIAL POTENTIAL:</b>		
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 Drig Stopped: 6/14/1956  
 Completed: 10/20/1956

**ROTARY TOOLS**

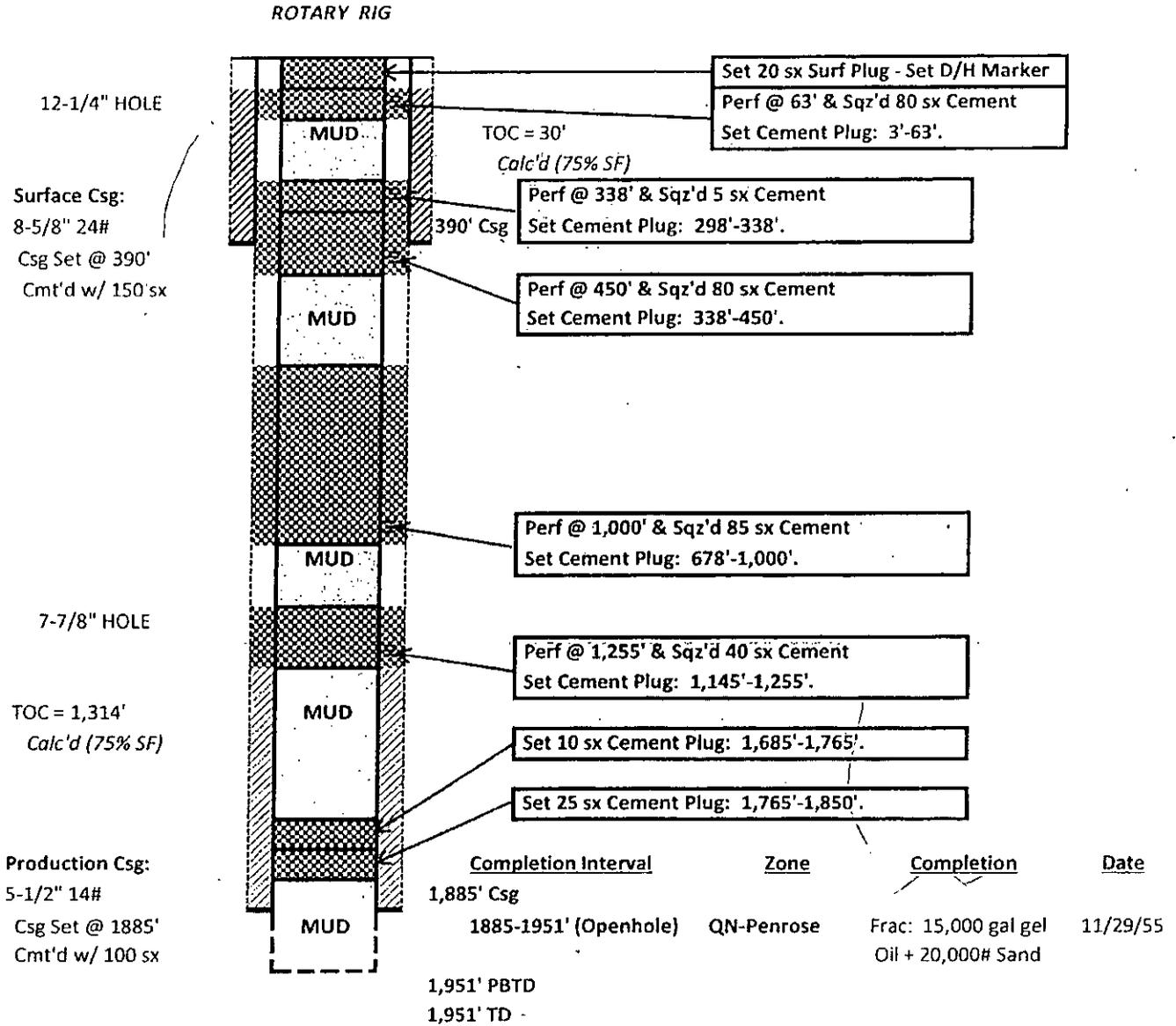


Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #6 in 1956.  
 IP Test - 10/20/1956: 50 BOPD.  
 P&A'd by COG Operating LLC - 07/08/2012.

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 Drg Stopped: 11/28/1955  
 Completed: 11/29/1955



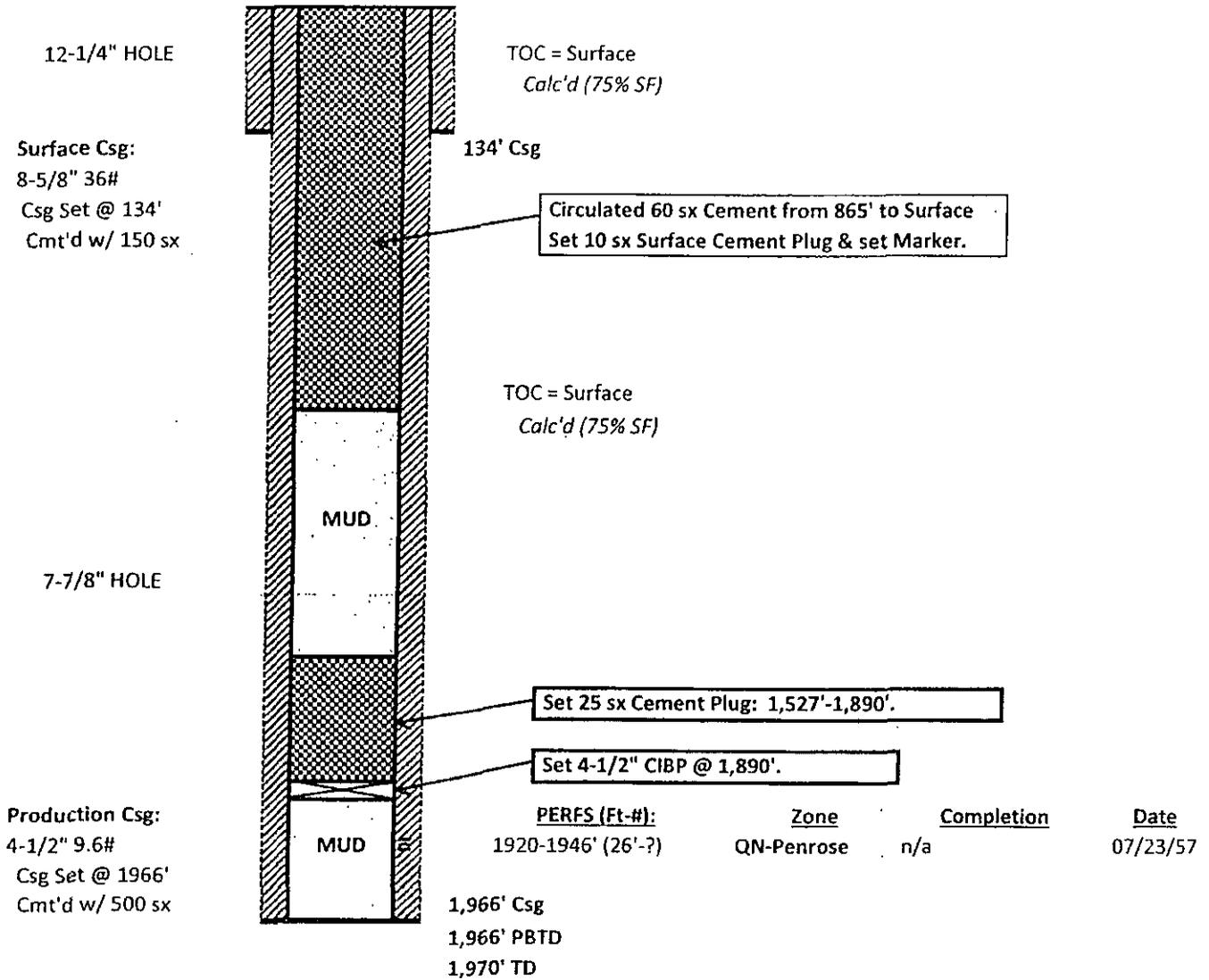
Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #3 in 1955.  
 IP Test - 12/13/1955: 46 BOPD.  
 P&A'd by COG Operating LLC - 07/05/2012.

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**



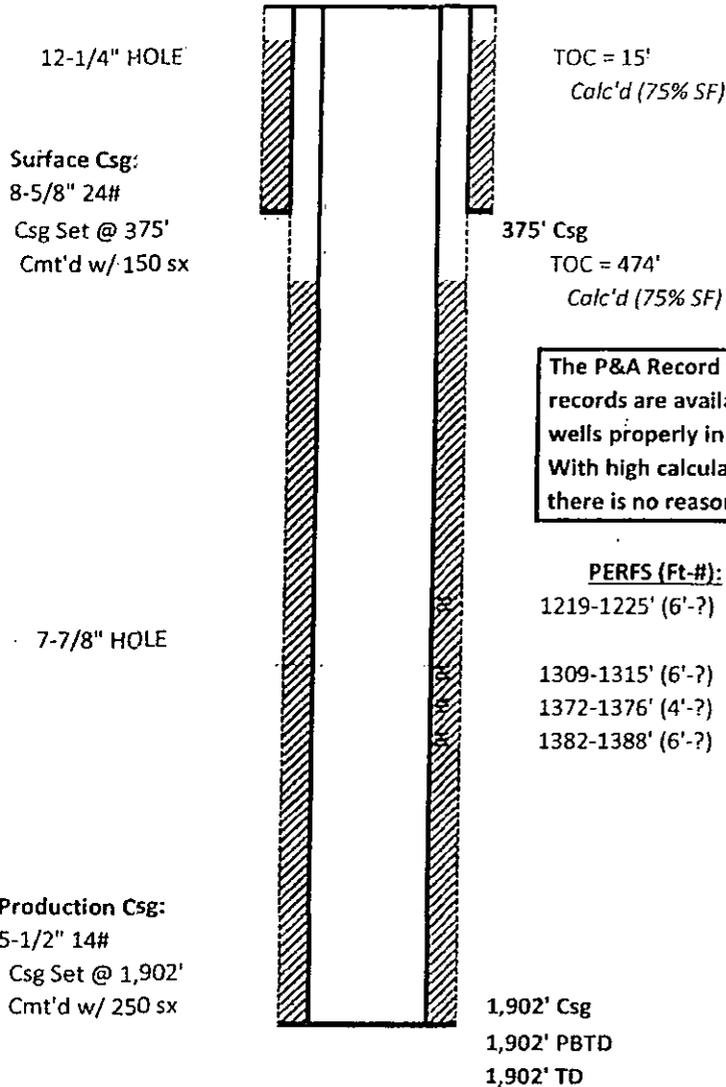
Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #12 W in 1957.  
 Drilled as Water Injection Well for HIGH LONESOME PENROSE PILOT PROJECT.  
 P&A'd by COG Operating LLC - 04/28/2008.

HPS: 01/28/2014

**ALAMO PERMIAN RESOURCES, LLC**  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.:	<b>DAVIS FEDERAL #001 (P&amp;A'd)</b>	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	Drig Stopped:	10/30/1955
		Completed:	4/3/1956

**ROTARY RIG**



The P&A Record for this well on the NMOCD Website is illegible. NO P&A records are available. Moab Drig 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.

<u>PERFS (Ft-#):</u>	<u>Zone</u>	<u>Completion</u>	<u>Date</u>
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

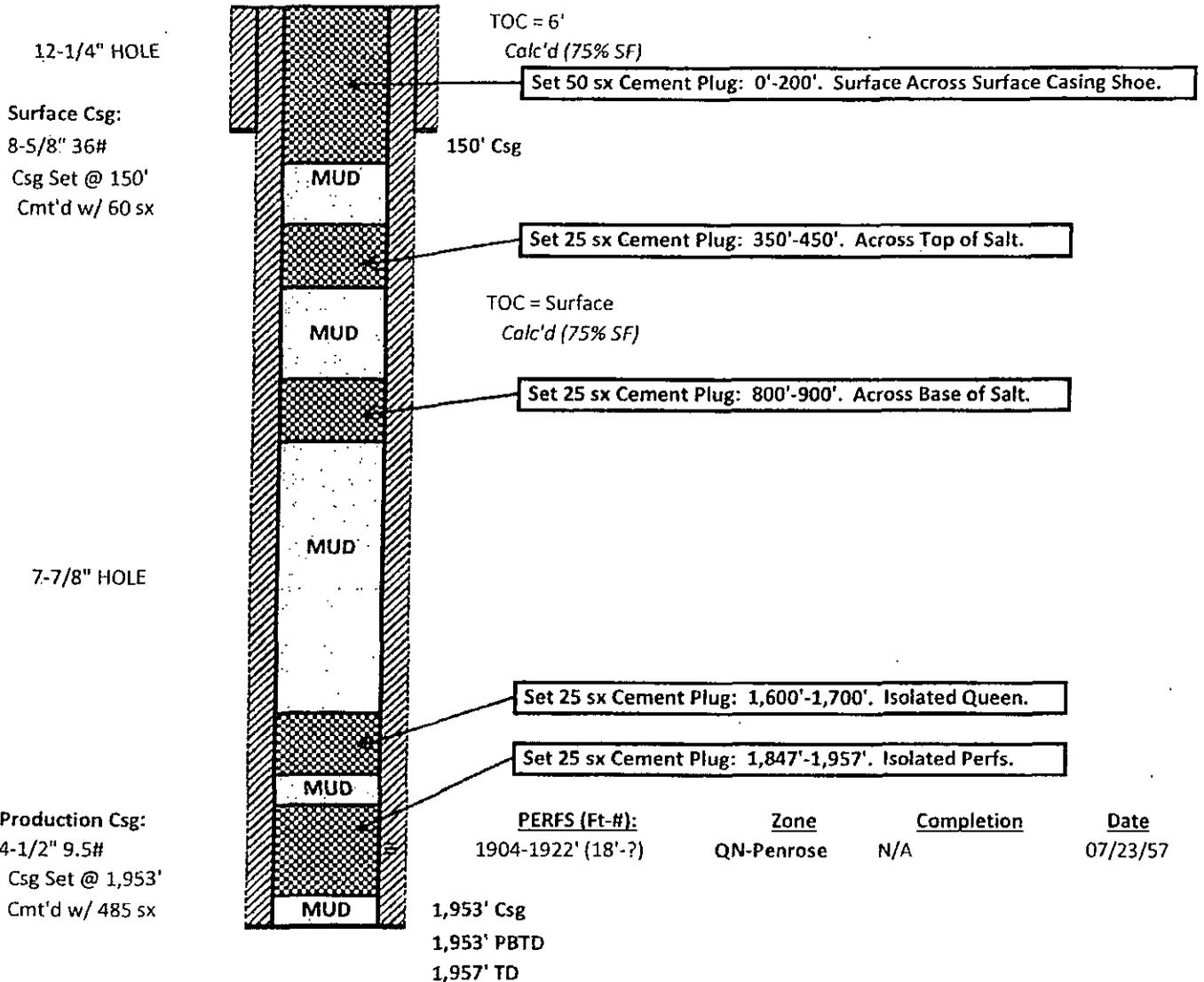
Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #1 in 1955.  
 On 10/27/55 - Dropped Core Barrel in Hole while attempting to Core the Penrose. Junked Hole below Casing.  
 Completed Well in SEVEN RIVERS formation.  
 P&A'd by Moab Drilling Company in 1958. NO P&A RECORDS AVAILABLE FROM NMOCD WEBSITE.

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**



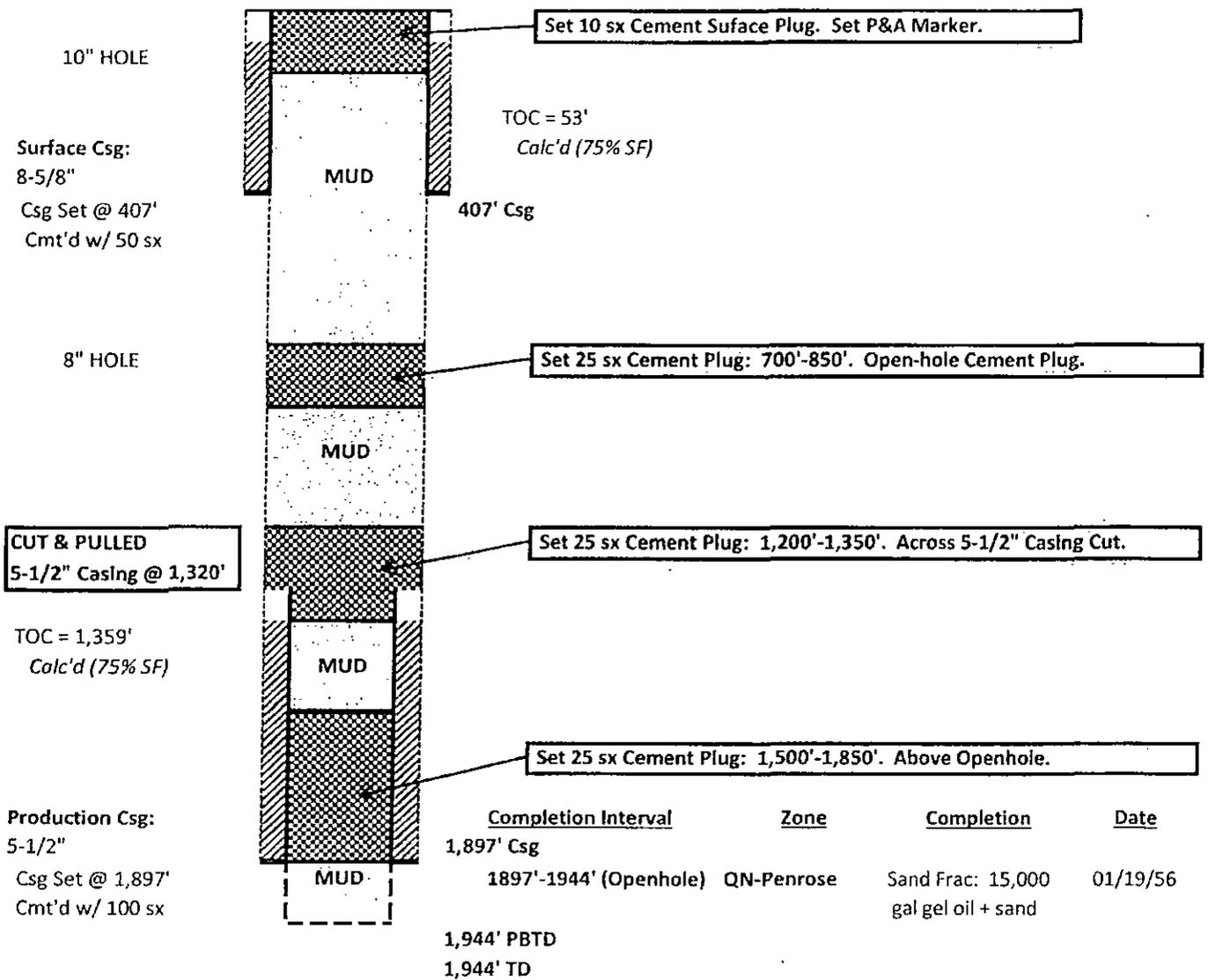
Drilled by MOAB DRILLING CO. as the DAVIS-FEDERAL #22-W in 1957.  
 Drilled as Water Injection Well for the HIGH LONESOME PENROSE PILOT PROJECT.  
 P&A'd by Aceco Petroleum Co. on February 21, 1986.

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**

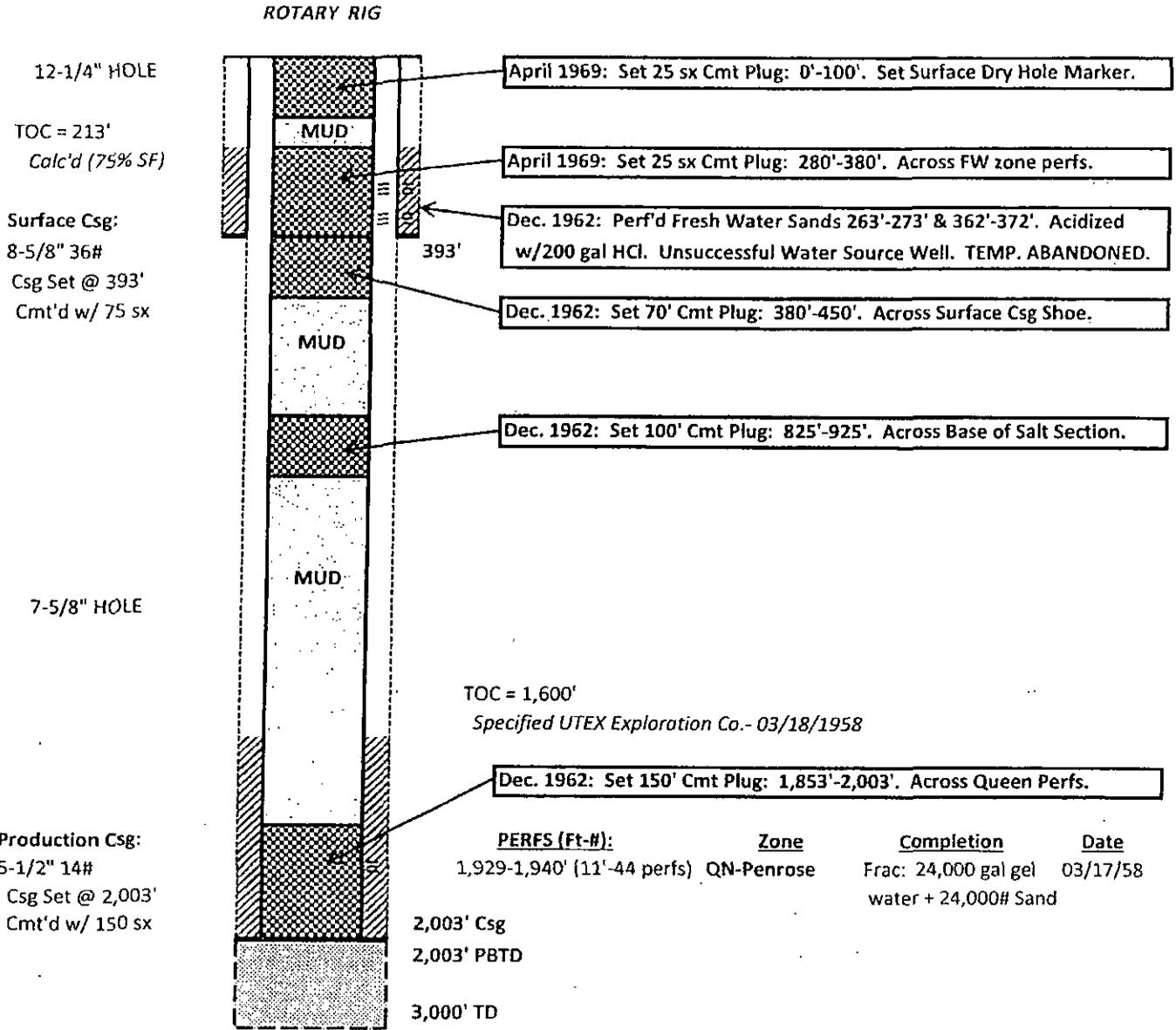


Drilled by EDWARD C. DONOHUE as the DONOHUE-FEDERAL #2 in 1955. IP = 168 BOPD (01/24/56).  
 P&A'd by SUN OIL COMPANY - DX DIVISION: April, 1969.

HPS: 01/28/2014

**ALAMO PERMIAN RESOURCES, LLC**  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.:	<b>DONOHUE FEDERAL #004 (P&amp;A'd)</b>	ELEVATION, GL:	3,688 ft
Location:	1,980' FSL & 1,980' FWL UL: K, SEC: 15, T: 16-S, R: 29-E EDDY County, NM	FIELD:	HIGH LONESOME - QUEEN
LEASE No.:	Federal LC-068628	Spudded:	2/6/1958
API No.:	<b>30-015-02730</b>	Drig Stopped:	2/25/1958
		Completed:	3/17/1958



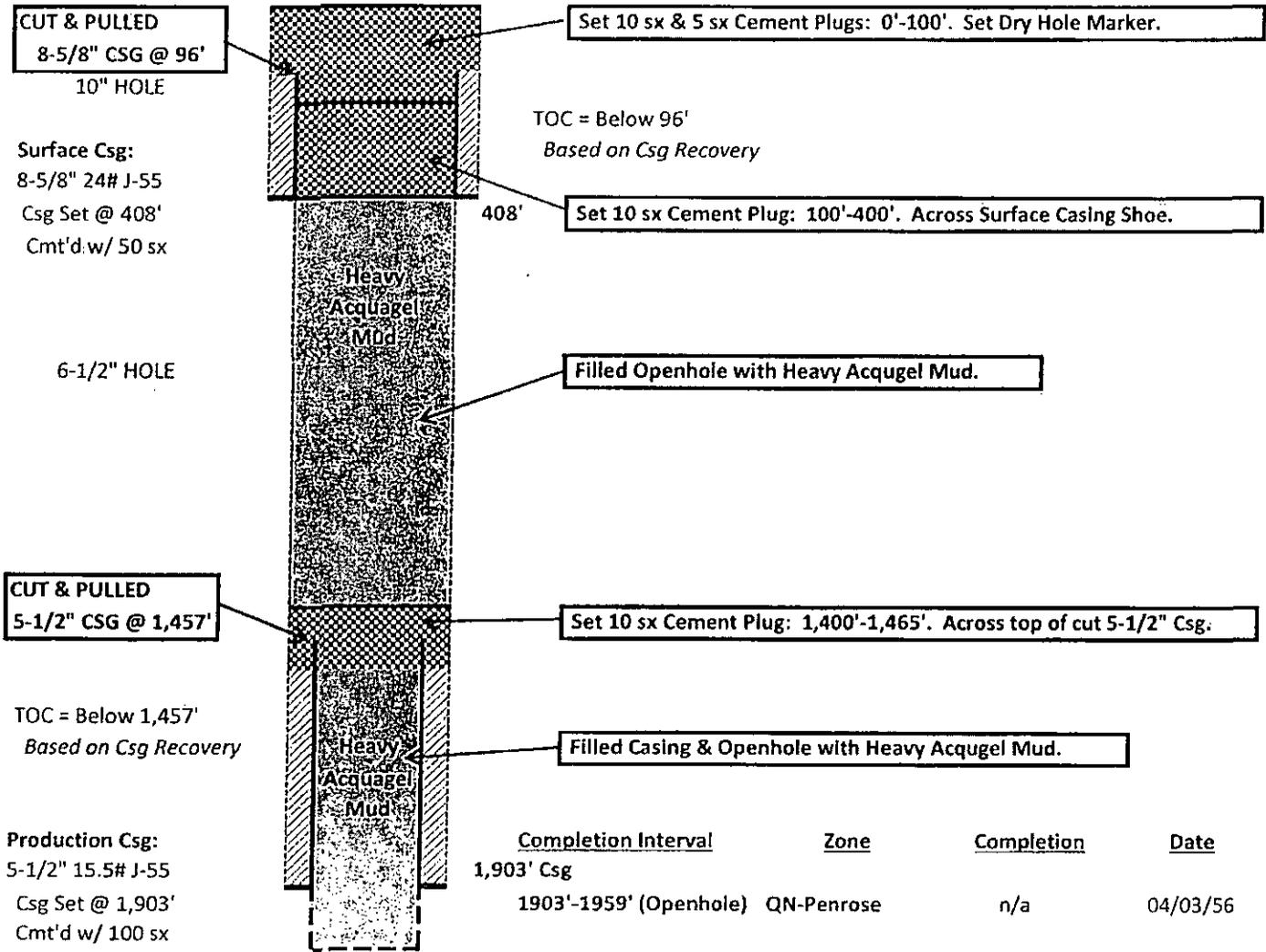
Drilled by UTEX EXPLORATION CO. as the DONOHUE-FEDERAL #4 in 1958. DRY HOLE - TEMP. ABANDONED.  
 December 1962: Great Western Petroleum Corp. PB'd well & completed as Fresh Water Supply Well for Unit.  
 Produced insufficient Fresh Water for Supply Well - TEMP. ABANDONED.  
 P&A'd by SUN OIL COMPANY: April, 1969.

HPS: 01/28/2014

**ALAMO PERMIAN RESOURCES, LLC**  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.:	<b>FEDERAL "H" #1-15 (P&amp;A'd)</b>	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	Orig 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' PBD			
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.

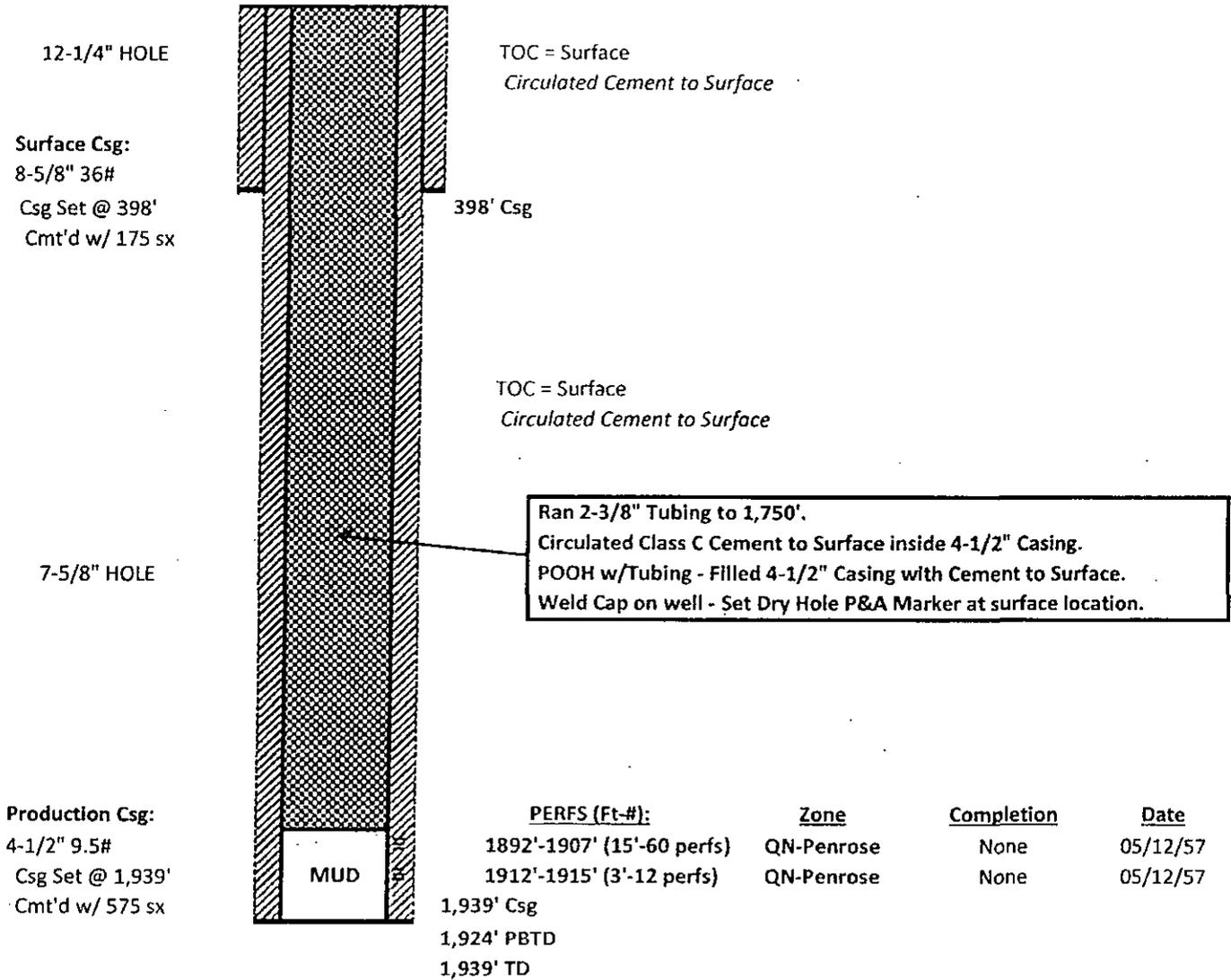
HPS: 01/28/2014



ALAMO PERMIAN RESOURCES, LLC  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.: 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**



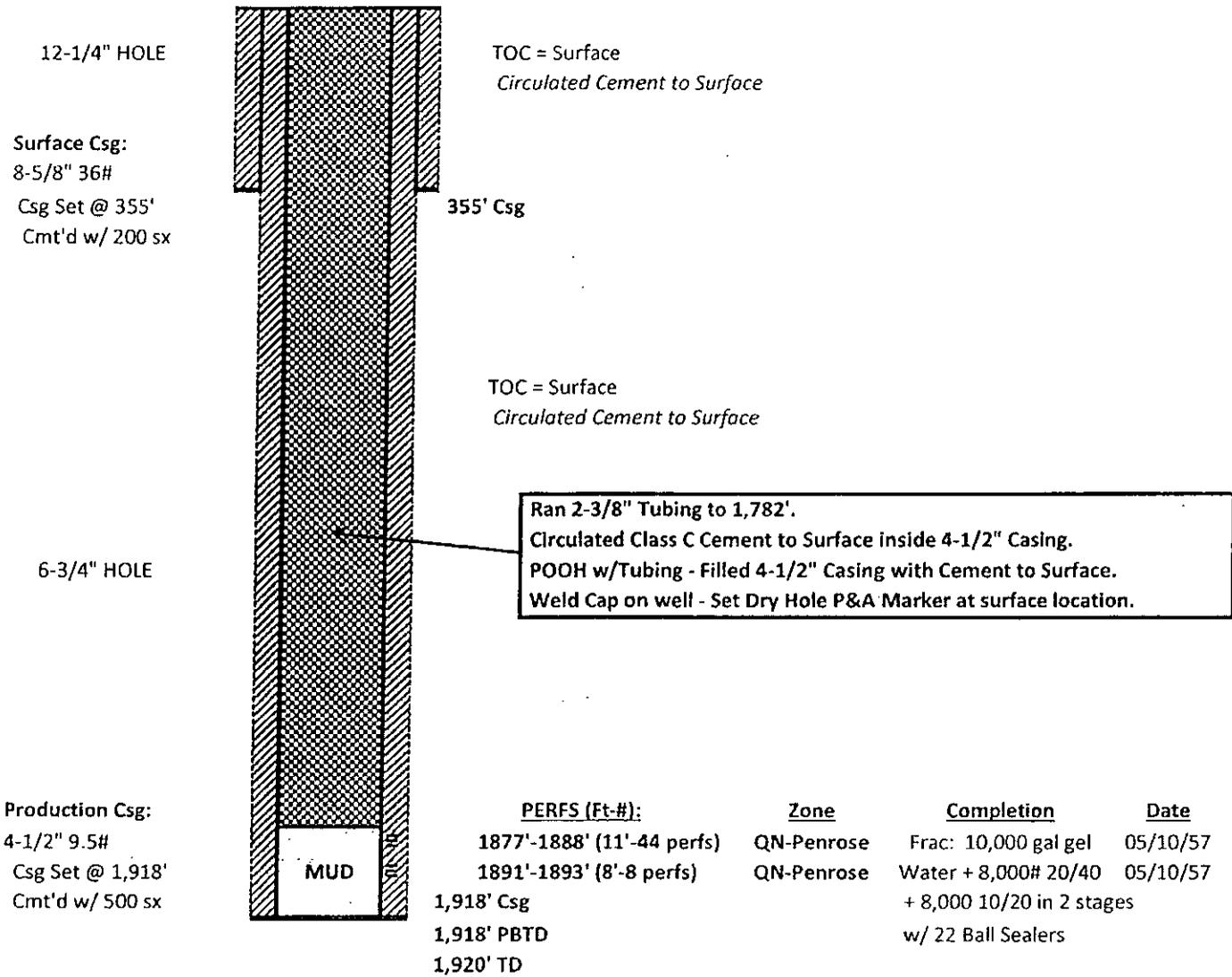
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #13-W in 1957.  
 Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.  
 Initial Water Injection: June 1957.  
 P&A'd by NORWOOD OIL COMPANY -- August 21, 1985.

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**

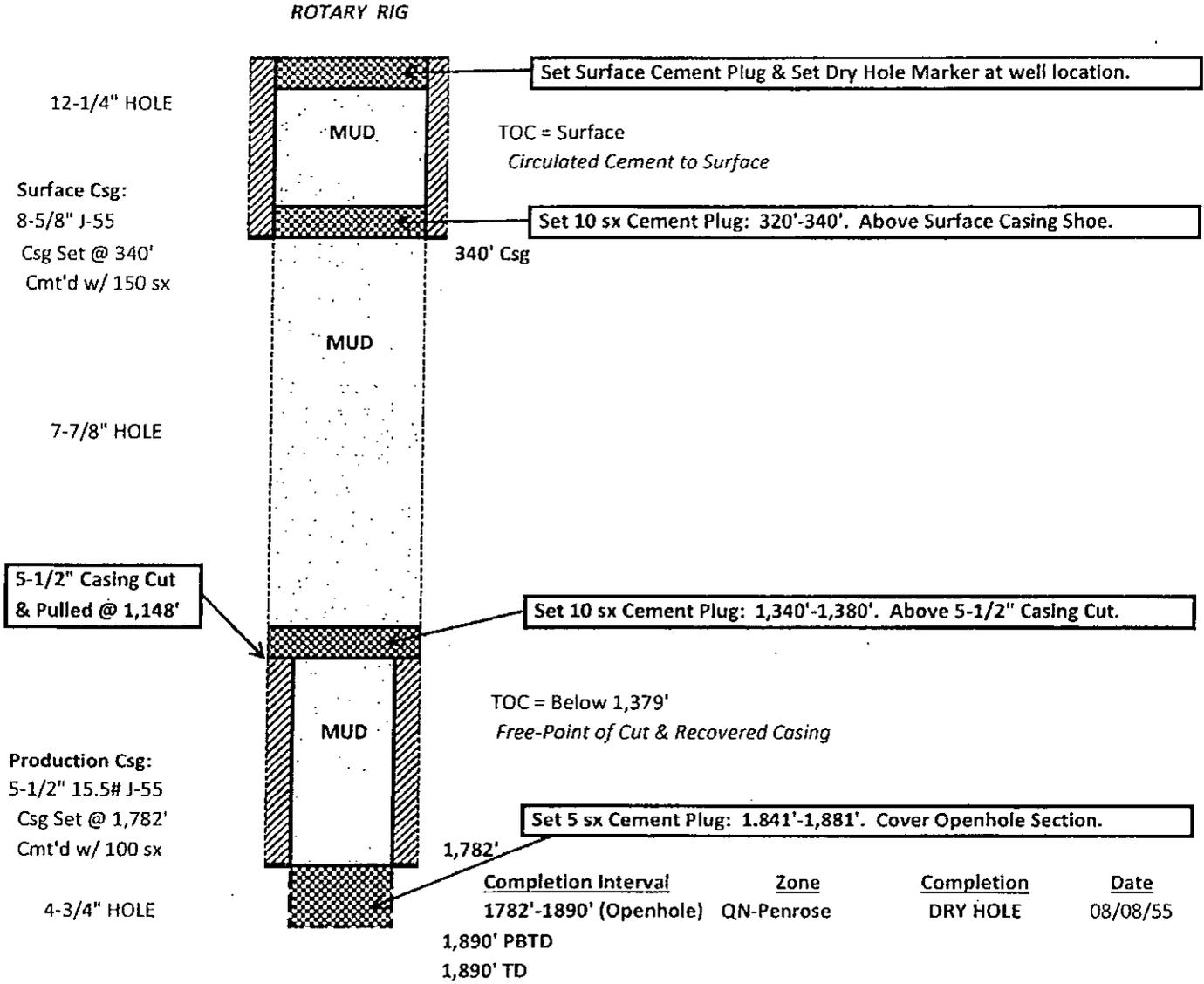


Drilled by MOAB DRILLING CO. as the SKELLY-STATE #14-W in 1957.  
 Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.  
 Initial Water Injection: June 1957.  
 P&A'd by NORWOOD OIL COMPANY -- August 22, 1985.

HPS: 01/28/2014

ALAMO PERMIAN RESOURCES, LLC  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

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

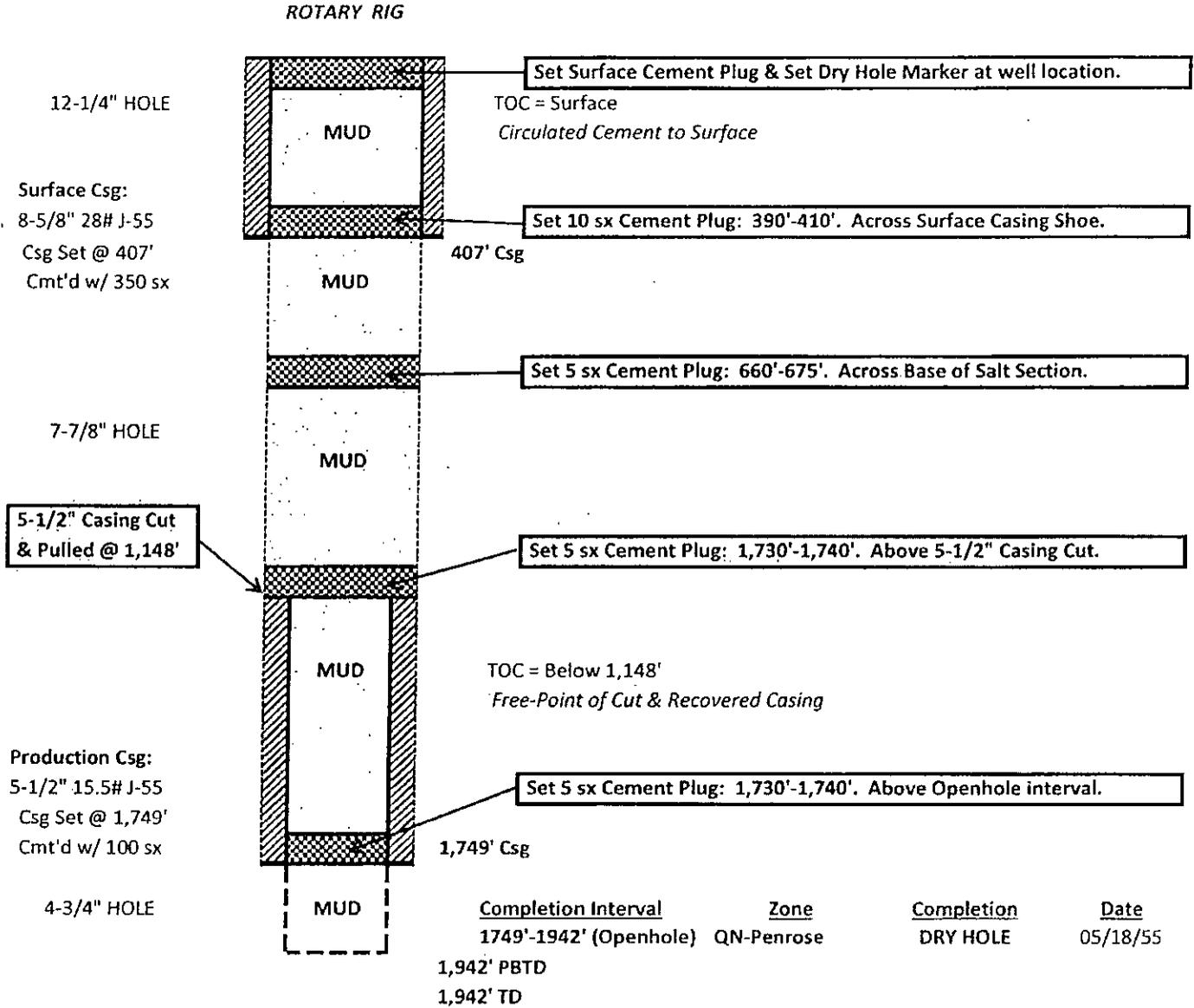


Drilled by MOAB DRILLING CO. as the SKELLY-STATE #4 in 1955.  
 Penrose Sand porosity was found filled with anhydrite & salt - DRY HOLE.  
 P&A'd by MOAB DRILLING CO. -- August 8, 1955.

HPS: 01/28/2014

**ALAMO PERMIAN RESOURCES, LLC**  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

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



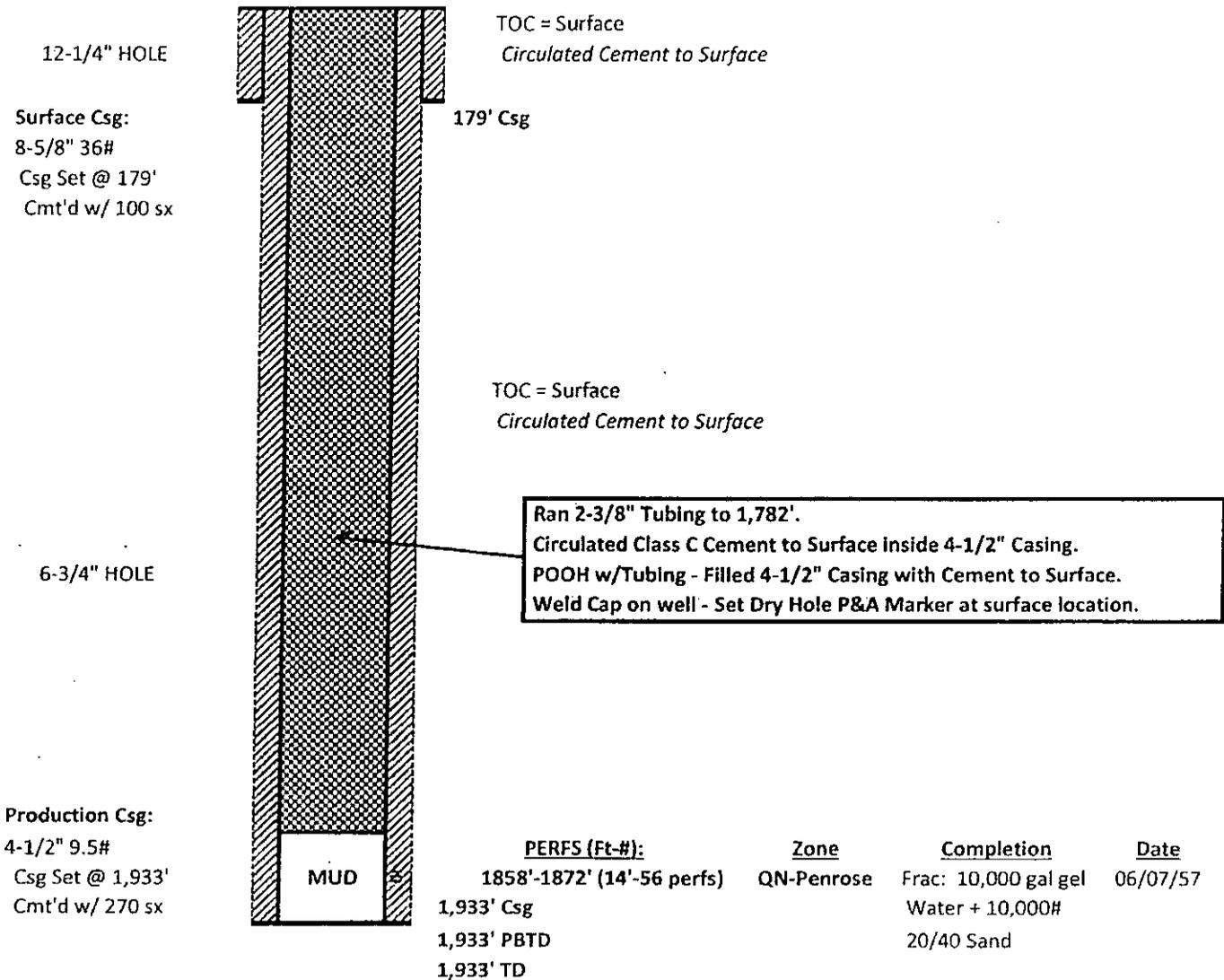
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #2 in 1955.  
 Penrose Sand porosity was found filled with anhydrite & salt - DRY HOLE.  
 P&A'd by MOAB DRILLING CO. -- May 18, 1955.

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**

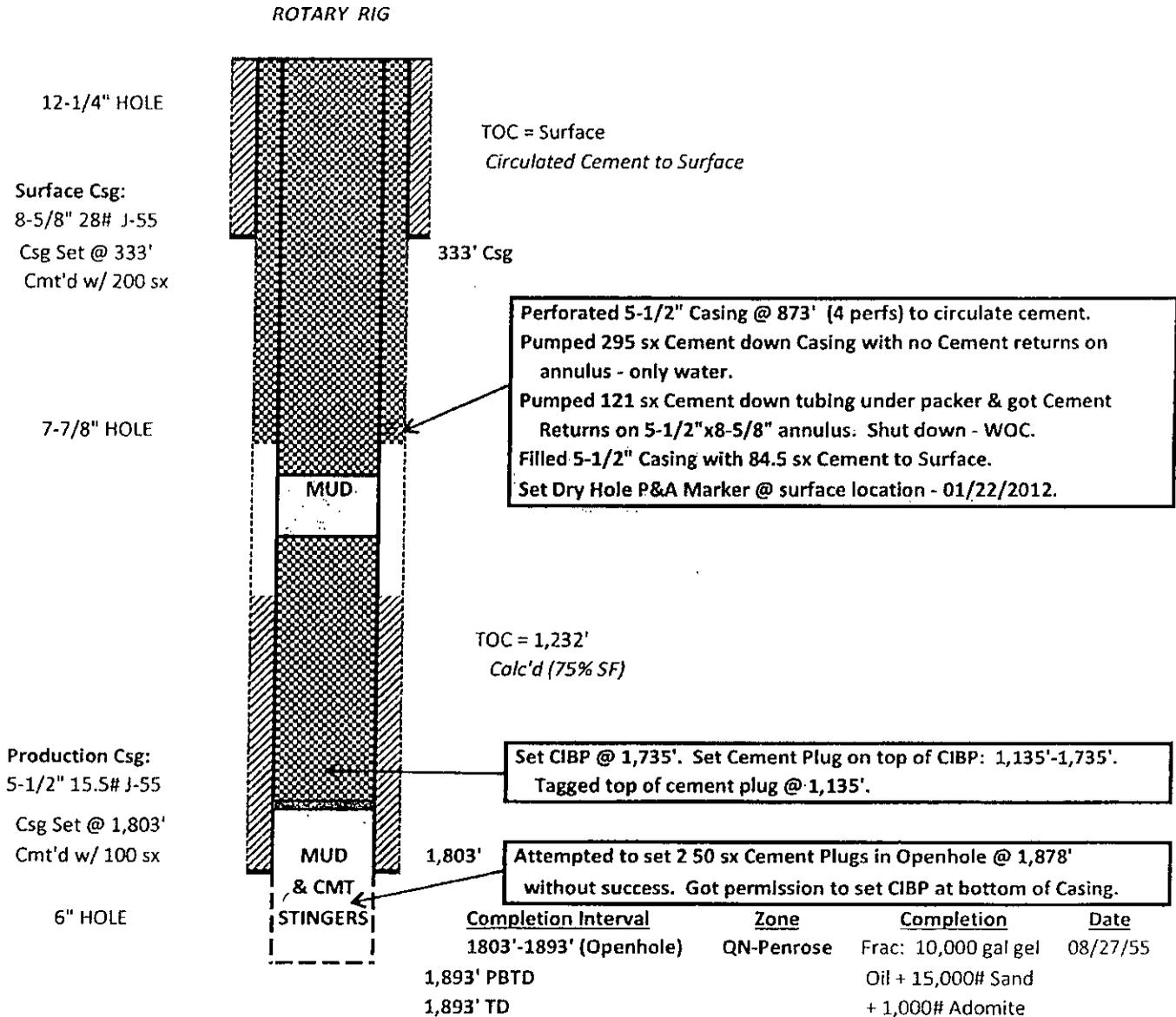


Drilled by MOAB DRILLING CO. as the SKELLY-STATE #25-W in 1957.  
 Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.  
 Initial Water Injection: March 24, 1959.  
 P&A'd by NORWOOD OIL COMPANY -- August 23, 1985.

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



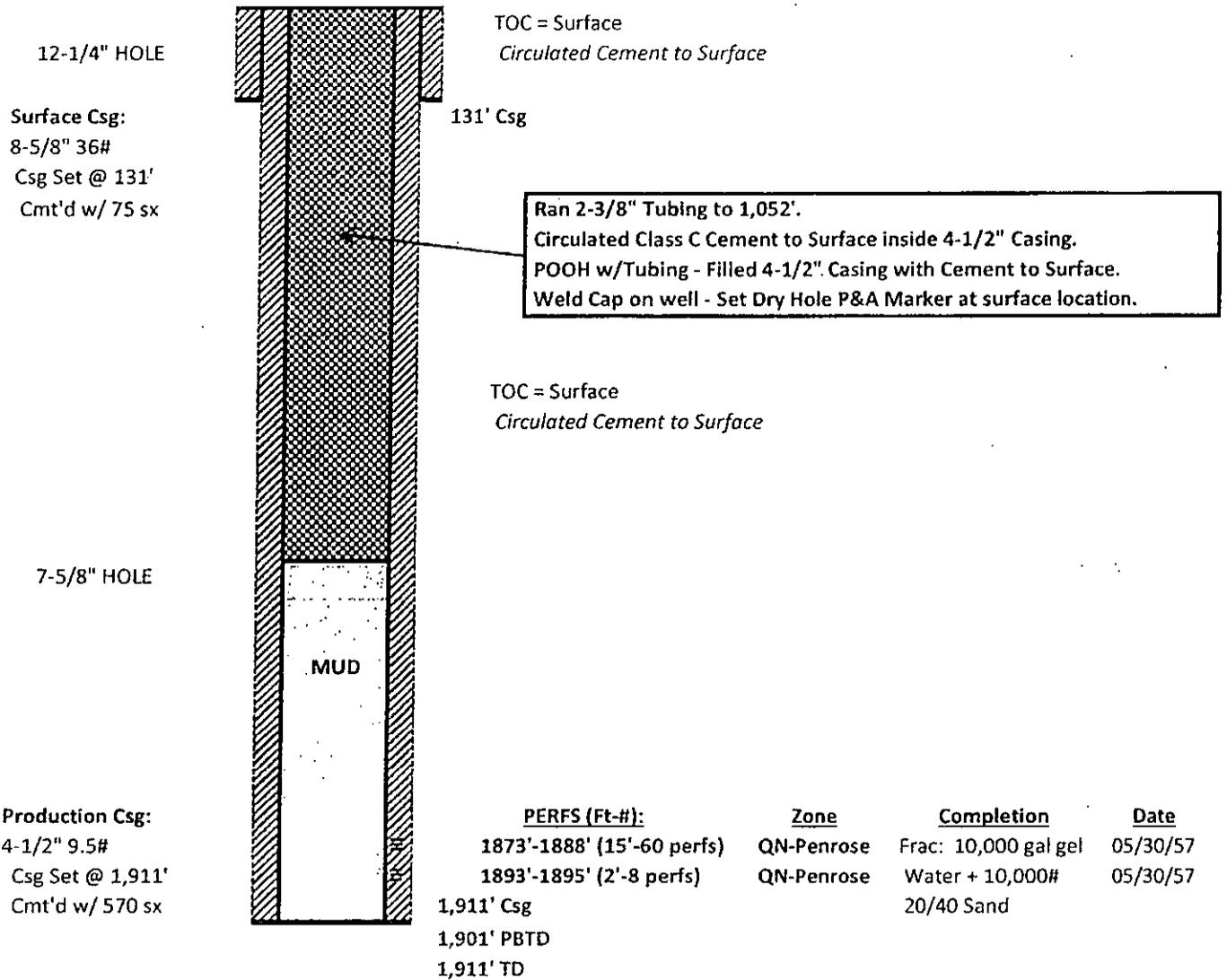
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #6 in 1955.  
 In 2012 - while attempting workover - found well to have a number of casing leaks in the 5-1/2" csg string.  
 Well was P&A'd by ALAMO PERMIAN RESOURCES, LLC -- January 22, 2012.

HPS: 01/28/2014

**ALAMO PERMIAN RESOURCES, LLC**  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.:	<b>SKELLY STATE #024 WIW (P&amp;A'd)</b>	ELEVATION, GL:	3,678 ft
Location:	2,630' FNL & 1,330' FEL UL: G, SEC: 16, T: 16-S, R: 29-E EDDY County, NM	FIELD:	HIGH LONESOME - QUEEN
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**



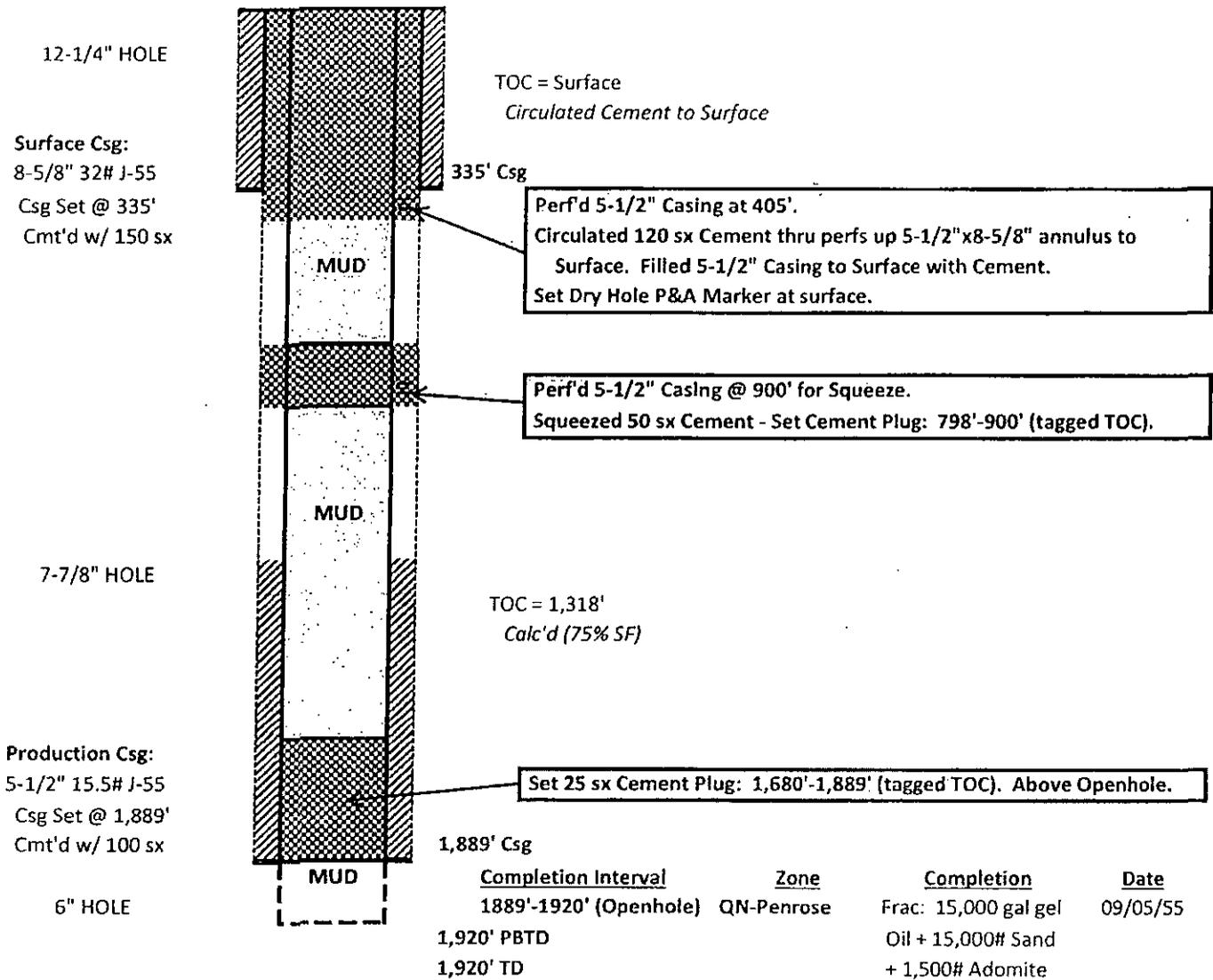
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #24-W in 1957.  
 Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.  
 Initial Water Injection: June 1957.  
 P&A'd by NORWOOD OIL COMPANY -- August 22, 1985.

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 Drig Stopped: 8/24/1955  
 Completed: 9/5/1955

**ROTARY RIG**



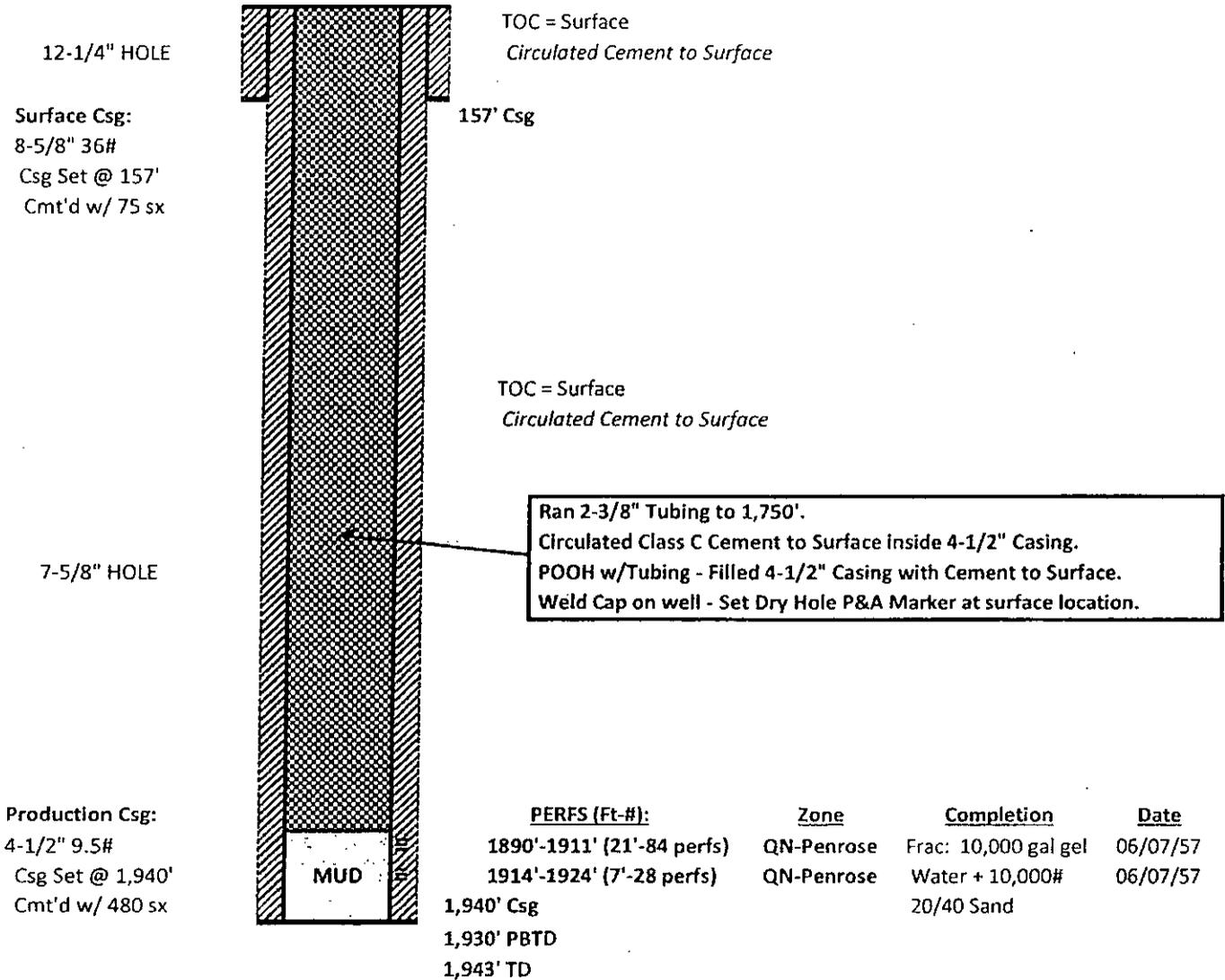
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #7 in 1955.  
 Well developed Casing leaks & could not be repaired.  
 Well P&A'd by MACK ENERGY CORP. -- March 29, 2001.

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**



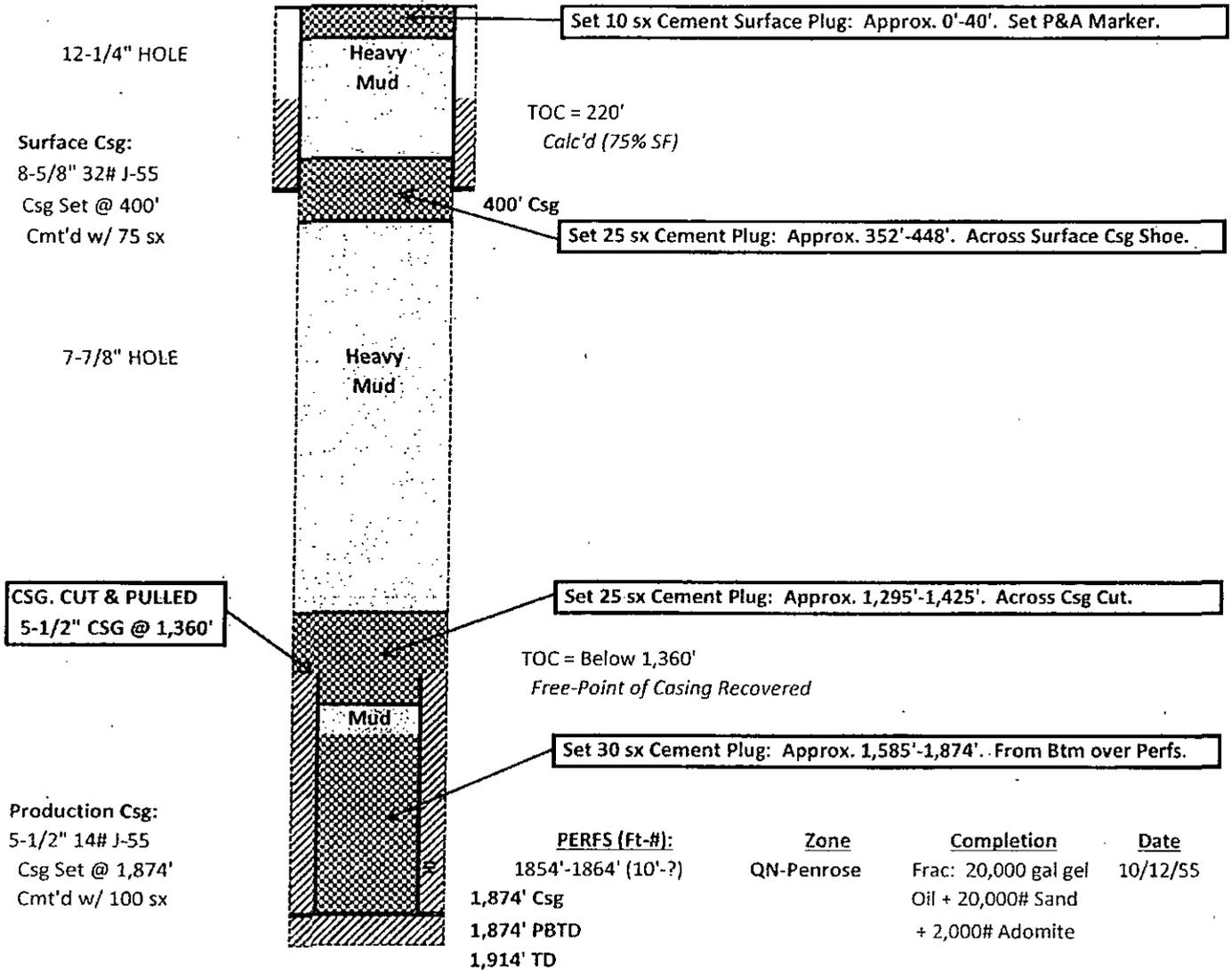
Drilled by MOAB DRILLING CO. as the SKELLY-STATE #23-W in 1957.  
 Well was Drilled as a WIW for the HIGH LONESOME PENROSE PILOT PROJECT: 1957 - 1959.  
 Initial Water Injection: June 1957.  
 P&A'd by NORWOOD OIL COMPANY - August 22, 1985.

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 Drig Stopped: 9/5/1955  
 Completed: 10/12/1955

ROTARY RIG - AIR

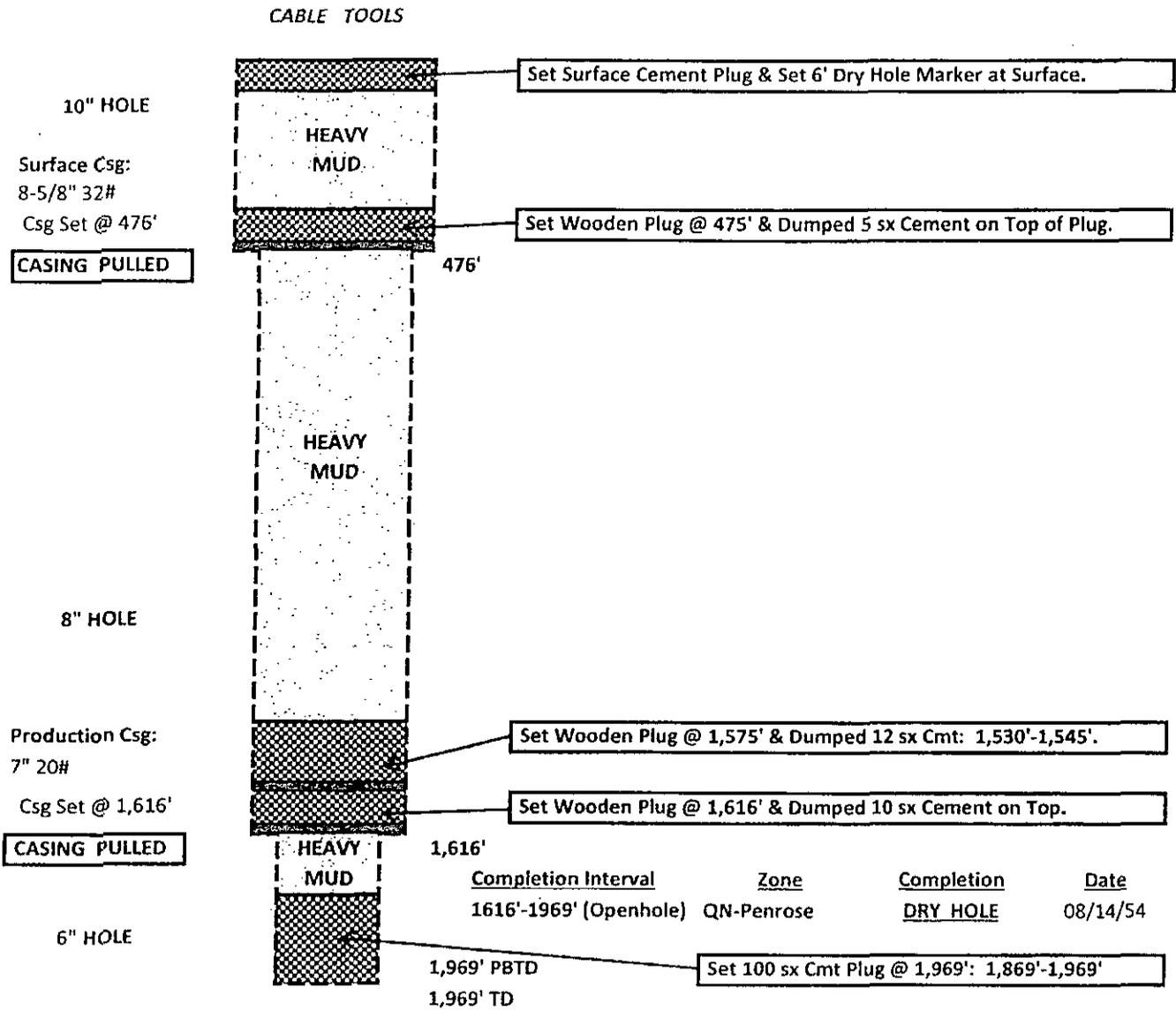


Drilled by MOAB DRILLING CO. as the STATE #1 in 1955.  
 Well Name Changed to MOAB - STATE #1 -- 02/10/1958.  
 P&A'd by SUN OIL COMPANY in May, 1982.

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 Drig Stopped: 8/14/1954  
 Completed: 8/14/1954



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.

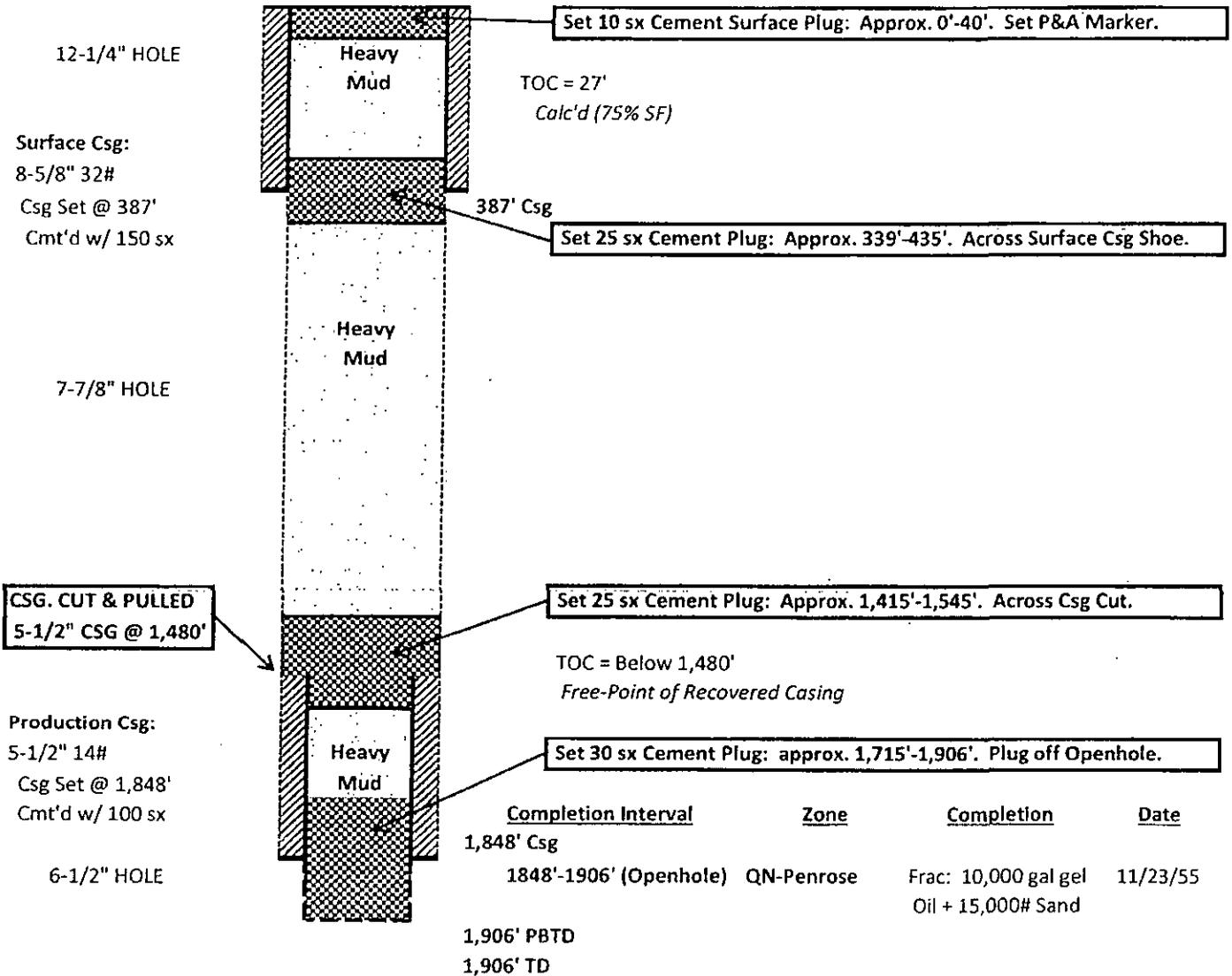
HPS: 01/28/2014



ALAMO PERMIAN RESOURCES, LLC  
**PLUGGED & ABANDONED WELLBORE DIAGRAM**

Lease & Well No.:	<b>MOAB - STATE #002 (P&amp;A'd)</b>	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	Drig Stopped:	10/14/1955
		Completed:	11/23/1955

ROTARY RIG - AIR



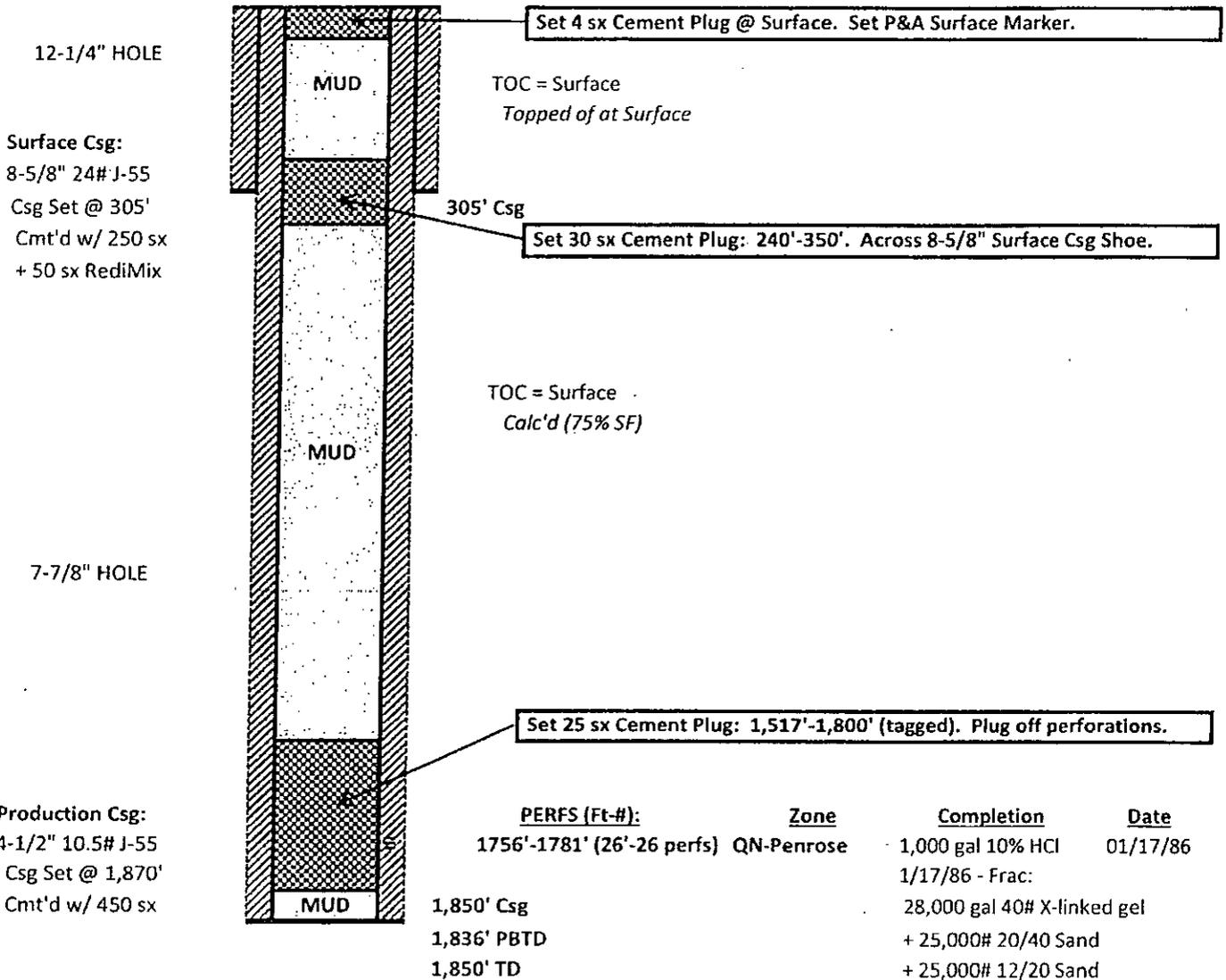
Drilled by MOAB DRILLING CO. as the STATE #2 well in 1955.  
Well Name Changed to MOAB - STATE #2 -- 02/10/1958.  
P&A'd by SUN OIL COMPANY in May, 1972.

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 Drig Stopped: 1/7/1986  
 Completed: 1/22/1986

**ROTARY RIG**



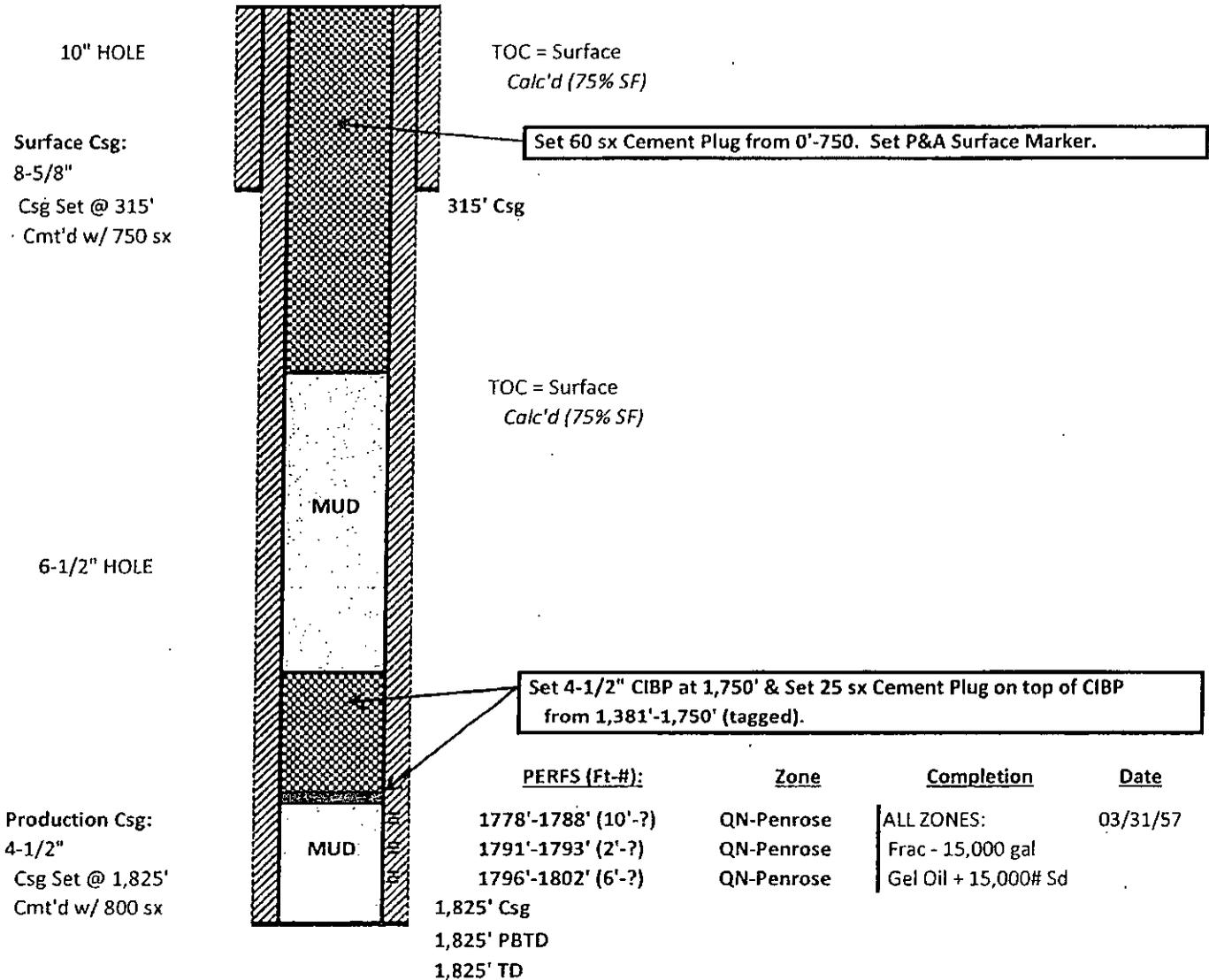
Drilled by SUN-TEX RESOURCES, INC. as the SHILOH FEDERAL #1 in 1986.  
 P&A'd by SUN-TEX RESOURCES, INC. in March 1987.

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**



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

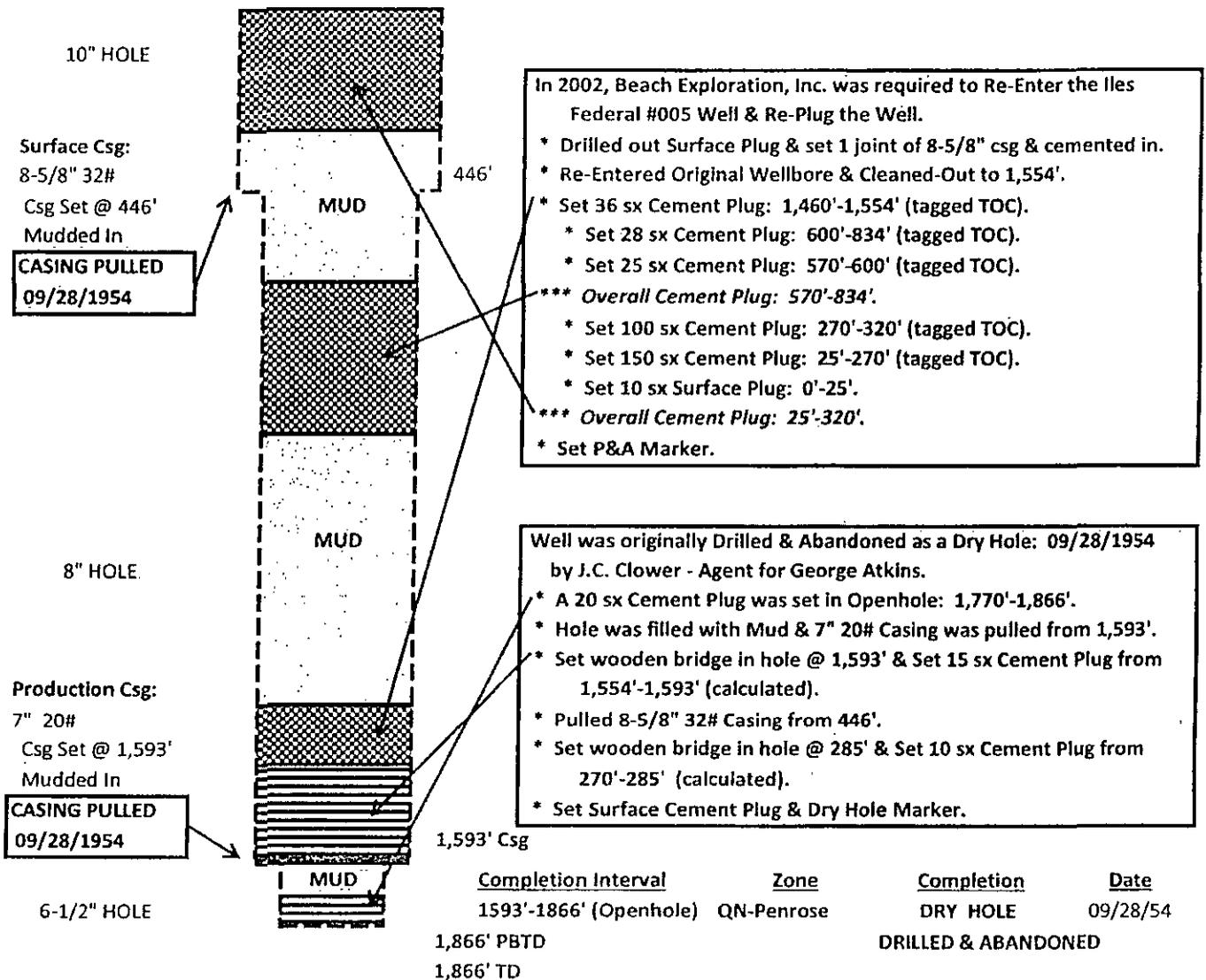
P&A'd by BEACH EXPLORATION, INC. -- 04/13/2009.

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 Drig Stopped: 9/28/1954  
 Completed: 9/28/1954 D&A'd

**CABLE TOOLS**



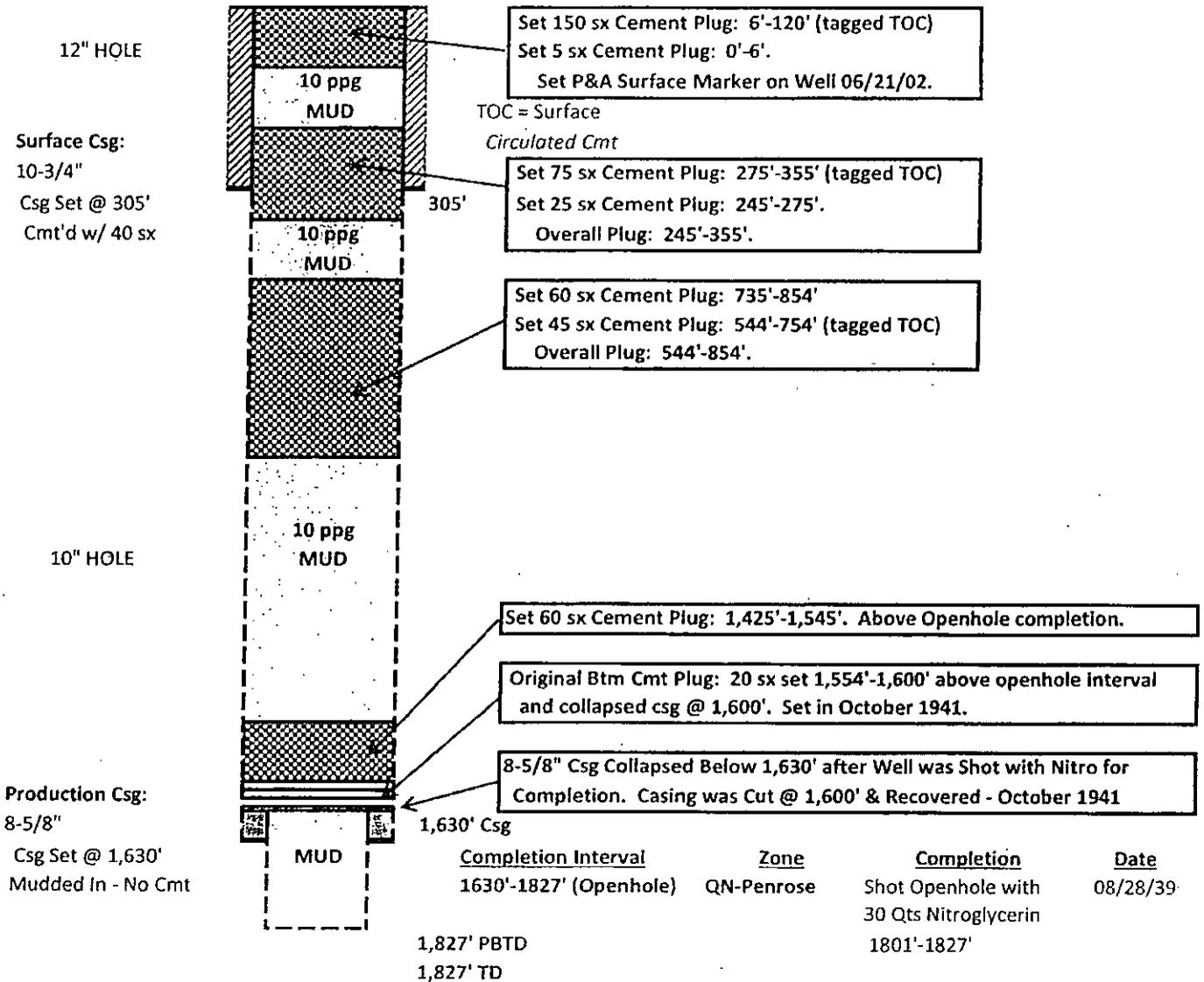
Drilled by J.C. CLOWER - AGENT FOR GEORGE ATKINS as the ILES-FEDERAL #5 in 1954.  
 Well was Abandoned as a DRY HOLE BY J.C. CLOWER -- 09/28/1954.  
 In 2002, BEACH EXPLORATION, INC. was required to Re-Entered the D&A'd well and Re-Plug.  
 Well was Re-Plugged by BEACH EXPLORATION, INC. -- 06/17/2002.

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  
 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

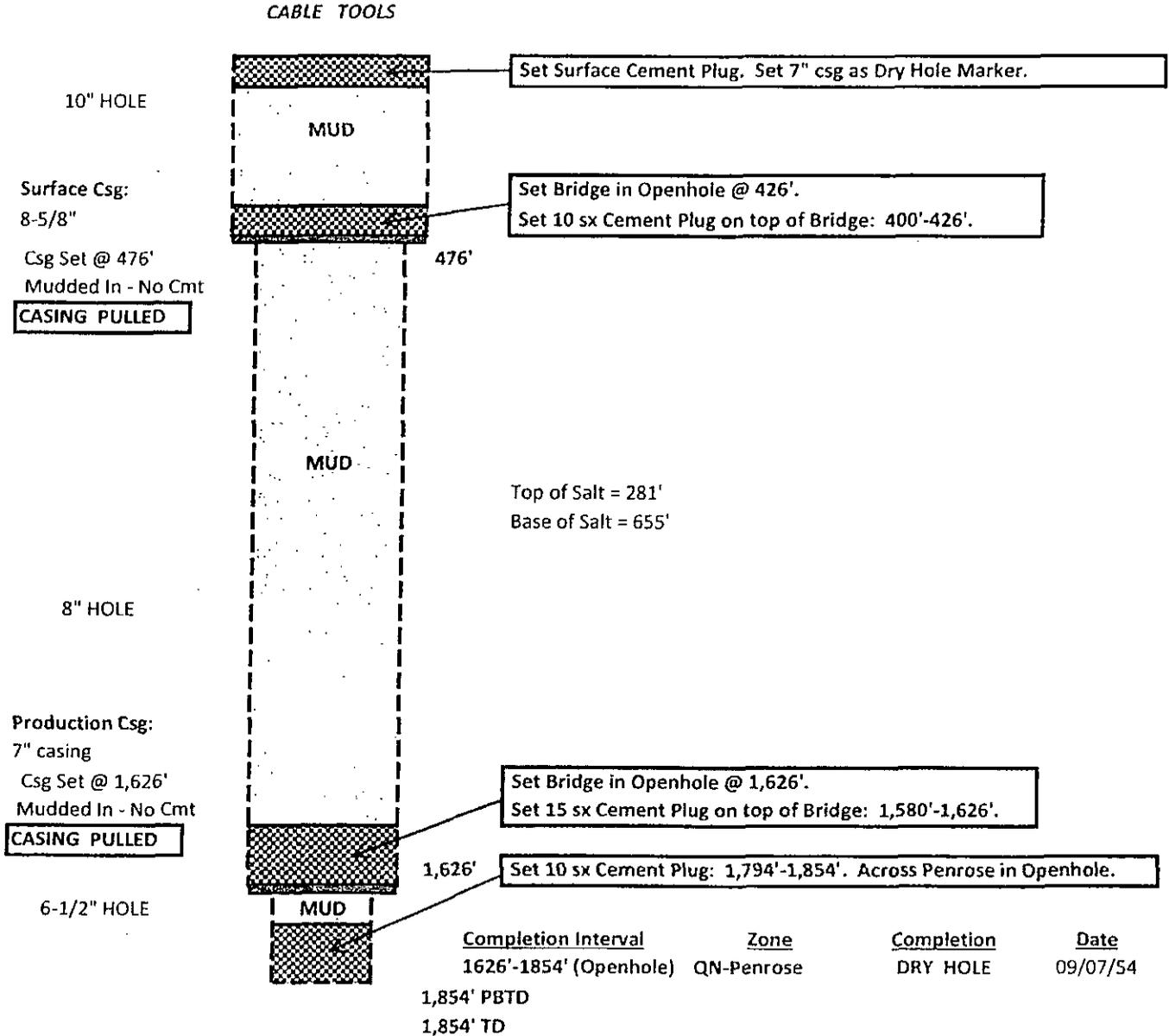


Drilled by B.H. NOLEN as the ABBIE ILES - NOLAN #1 in 1939. P&A'd by B.H. NOLEN in October 1941.  
 Well was Junked when btm 30' of 8-5/8" csg collapsed after shooting openhole with Nitro.  
 BEACH EXPLORARION, INC. was required to Re-Enter & Re-Plug this Well in 2002 -- All Cmt Plugs except bottom plug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



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



Company: Alamo Permian  
 Source : H2O Tank Valve  
 Number : 24063  
 County:

Location: Skelly State  
 Date Sampled: February 28, 2014  
 Account Manager: David Garcia  
 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 <sup>-</sup> )	0 /	17.0 =	0.00
7. Carbonate (CO <sub>3</sub> <sup>-2</sup> )	0 /	30.0 =	0.00
8. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	122 /	61.1 =	2.00
9. Chloride (Cl <sup>-</sup> )	180,959 /	35.5 =	5,097.44
10. Sulfate (SO <sub>4</sub> <sup>-2</sup> )	3,800 /	48.8 =	77.87
11. Calcium (Ca <sup>+2</sup> )	2,339 /	20.1 =	116.37
12. Magnesium (Mg <sup>+2</sup> )	5,250 /	12.2 =	430.33
13. Sodium (Na <sup>+</sup> )	106,504 /	23.0 =	4,630.61
14. Barium (Ba <sup>+2</sup> )	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<sub>3</sub> Saturation Index

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

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04		2.00	162
CaSO <sub>4</sub>	68.07		77.87	5,301
CaCl <sub>2</sub>	55.50		36.50	2,026
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17		0.00	0
MgSO <sub>4</sub>	60.19		0.00	0
MgCl <sub>2</sub>	47.62		430.33	20,492
NaHCO <sub>3</sub>	84.00		0.00	0
NaSO <sub>4</sub>	71.03		0.00	0
NaCl	58.46		4,630.61	270,705

21. CaSO<sub>4</sub> Supersaturation Ratio

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

Analyst: Jeremy Lysinger

Date: March 7, 2014

# Impact Water Analysis Analytical Report



Company: Cimarex  
 Source: Pump  
 Number: 24064  
 County:

Location: Spike Tale Battery  
 Date Sampled: February 18, 2014  
 Account Manager: David Garcia  
 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 <sup>-</sup> )	0 /	17.0 =	0.00
7. Carbonate (CO <sub>3</sub> <sup>-2</sup> )	0 /	30.0 =	0.00
8. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	2955 /	61.1 =	48.36
9. Chloride (Cl <sup>-</sup> )	127,971 /	35.5 =	3,604.82
10. Sulfate (SO <sub>4</sub> <sup>-2</sup> )	3,100 /	48.8 =	63.52
11. Calcium (Ca <sup>+2</sup> )	4,124 /	20.1 =	205.17
12. Magnesium (Mg <sup>+2</sup> )	928 /	12.2 =	76.04
13. Sodium (Na <sup>+</sup> )	79,016 /	23.0 =	3,435.49
14. Barium (Ba <sup>+2</sup> )	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<sub>3</sub> Saturation Index

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

PROBABLE MINERAL COMPOSITION				
COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04		48.36	3,919
CaSO <sub>4</sub>	68.07		63.52	4,324
CaCl <sub>2</sub>	55.50		93.29	5,178
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17		0.00	0
MgSO <sub>4</sub>	60.19		0.00	0
MgCl <sub>2</sub>	47.62		76.04	3,621
NaHCO <sub>3</sub>	84.00		0.00	0
NaSO <sub>4</sub>	71.03		0.00	0
NaCl	58.46		3,435.49	200,839

21. CaSO<sub>4</sub> Supersaturation Ratio

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

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)

**RADIOACTIVITY LOG**  
**WELEX JET SERVICES, Inc.**

LOGGED BY: WELLS SURVEY & INC. FILE NO. \_\_\_\_\_

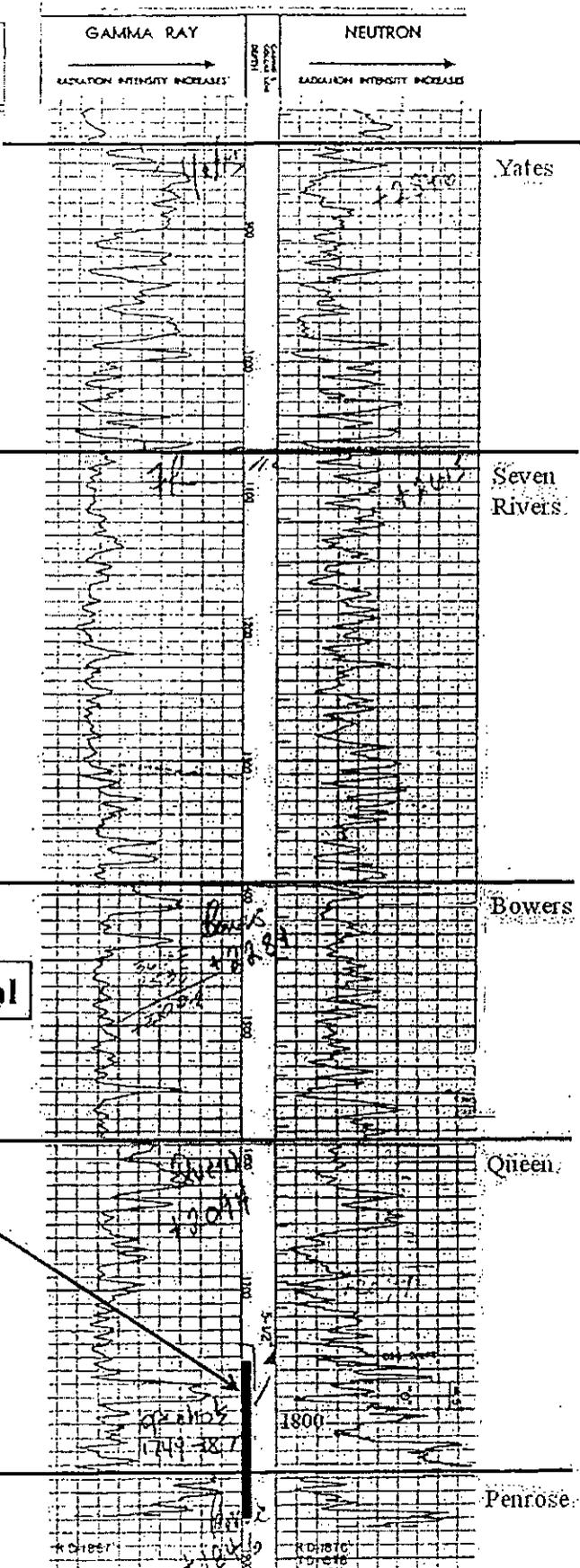
Location of Well: COMPANY: HOLS DRILLING COMPANY  
 WELL: SKELLY STATE NO. 3  
 FIELD: KING LAKEWATER  
 COUNTY: KING STATE: MISSISSIPPI  
 LOCATION: 1980' FIL & 1980' P.C. OF SEC. 16, T-16-S, R-29-E

LOG MEAS. FROM: TOP ROTARY TABLE (Elev. 3582')  
 ORIG. MEAS. FROM: TOP ROTARY TABLE (Elev. 3582')  
 MEAS. DATUM: 10' ABOVE GROUND LEVEL (Elev. 3582')

TYPE OF LOG	GAMMA RAY	NEUTRON
LOG NO.	1	1
DATE	7-1-55	7-1-55
JOB NO.	529-171	510-233
TOTAL DEPTH (FEET)	1530	1530
EFFECTIVE DEPTH (FEET)	1578	1578
TOTAL DEPTH (FEET) LOG	50	50
TOP OF LOGGED INTERVAL	1567	1576
BOTTOM OF LOGGED INTERVAL	1567	1576
TYPE OF FLUID IN HOLE	WT.	WT.
FLUID LEVEL		
MAXIMUM RECORDED TEMPERATURE		600 F
NEUTRON SOURCE STRENGTH & TYPE		3.75
SOURCE SPACING-IN.		9.1
LENGTH OF MEASURING DEVICE-IN.	30	3.5/8
G.D. OF INSTRUMENT-IN.	3 5/8	3 5/8
TIME CONSTANT-SECONDS	6.5	1.8
LOGGING SPEED FEET/HR.	20-40	20-40
STATISTICAL VARIATION-IN.	20	20
SENSITIVITY REFERENCE	0.2	0.3
RECORDED BY	WELLS	WELLS
WITNESSED BY	KEL. KELLS	MR. KELLS

**CASING RECORD**

WELL NO.	WELL DEPTH	BY LOG	N/A LOG
3-1/2	12 1/2'	12 1/2'	10
	1760'	7 7/8'	1755'
	1760'	4 1/2'	1755'
	10		10



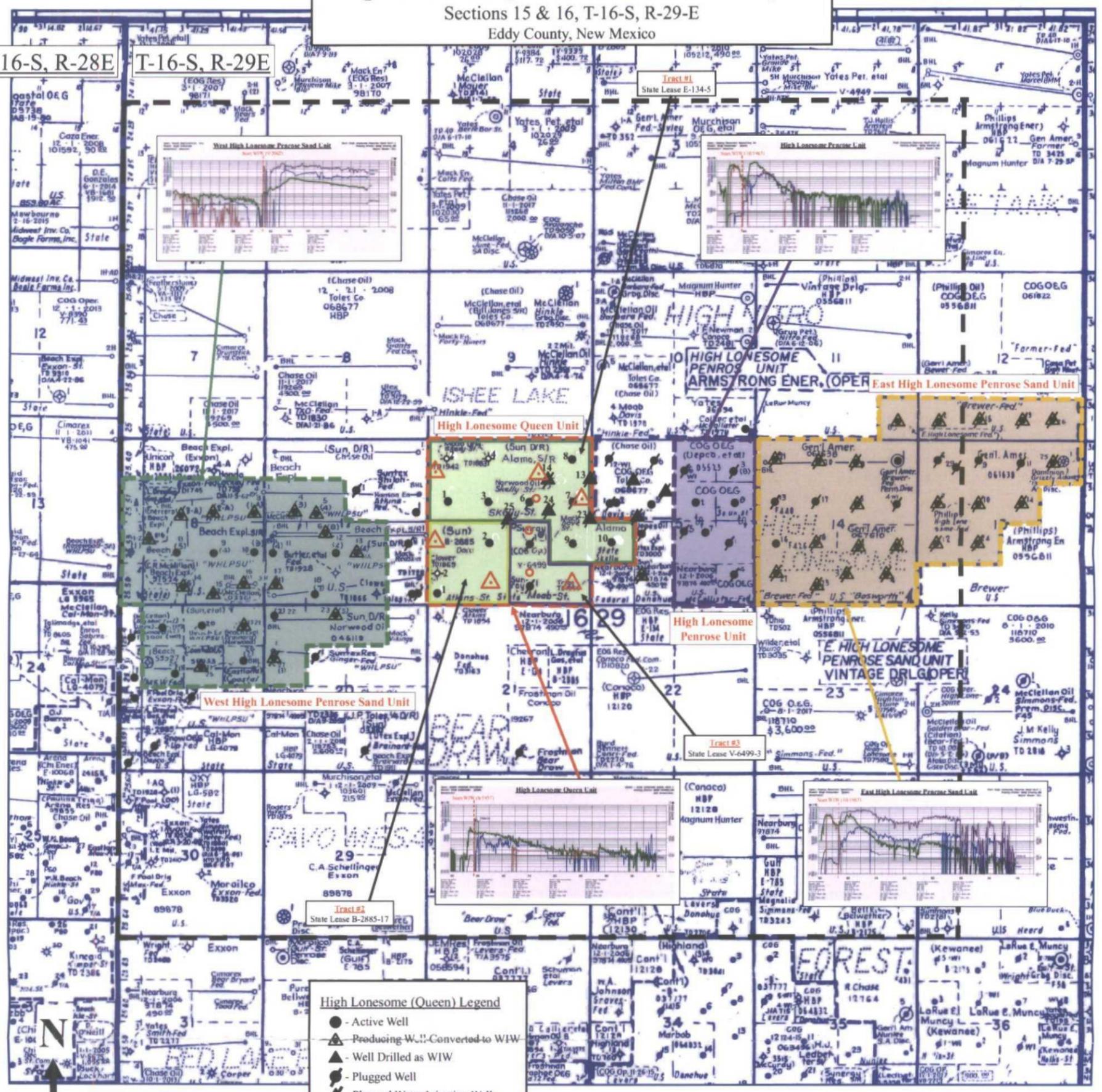
**Historical Open-Hole Interval**



**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



- 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

Man Scale: One Mile

I. Fekete  
 October 28, 2013