

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101  
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

**NM OIL CONSERVATION**  
**ARTESIA DISTRICT**

1220 South St. Francis Dr.

Santa Fe, NM 87505

MAY 07 2018

RECEIVED  
AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address Percussion Petroleum Operating, LLC 919 Milam, Ste.2475, Houston, TX 77002		2. OGRID Number 371755
* Property Code 321378 (TBD)		3. API Number 30-015-44948
3. Property Name Red Lake 32 State		6. Well No. 2H

7. Surface Location  
(To be verified by field survey)

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	32	17S	27E		292	FSL	155	FEL	EDDY

8. Proposed Bottom Hole Location  
(To be verified by field survey)

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	32	17S	27E		360	FSL	20	FWL	EDDY

9. Pool Information

Pool Name Red Lake Gloria Yeso	SWD, Devonian-Silurian	Pool Code 51120	97869
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Additional Well Information

11. Work Type N	12. Well Type O	13. Cable/Rotary R	14. Lease Type S	15. Ground Level Elevation 3515'
16. Multiple No	17. Proposed Depth 8060'	18. Formation Glorieta/ Yeso	19. Contractor Silver Oak	20. Spud Date 6/01/2018
Depth to Ground water 140'		Distance from nearest fresh water well 425'		Distance to nearest surface water n/a

We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26.5"	20.0"	94.0 lb/ft	80'	Ready-Mix	SURFACE
Surface	12.25"	9.875"	36.0 lb/ft	1250'	650	SURFACE
Production	8.75"	7.0"	32. lb/ft	2800'	500	SURFACE
Production	8.5	5.5"	17.0 lb/ft	2800'-8050'	1300	SURFACE

Casing/Cement Program: Additional Comments

Pilot hole to 5500' (top of Abo) plugback program included in operation narrative. KO @ ~2800' +/- . Prod CSG: 7.0"/5.5" tapered string.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	3M/ 5M Choke	3000	Shaffer or Equivalent

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.  
I further certify that I have complied with 19.15.14.9 (A) NMAC  and/or 19.15.14.9 (B) NMAC , if applicable.  
Signature: *Ben Stone*

Printed name: Ben Stone

Title: Agent for Percussion Petroleum Operating, LLC

E-mail Address: ben@sosconsulting.us

Date: 5/01/2018

Phone: 903-488-9850

OIL CONSERVATION DIVISION

Approved By:

*Raymond W. Podany*

Title: Geologist

Approved Date: 5-8-18

Expiration Date: 5-8-20

Conditions of Approval Attached

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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
ARTESIA DISTRICT  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

MAY 07 2018 AMENDED REPORT

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WELL LOCATION AND ACREAGE DEDICATION PLAN

API Number <b>30-015-44948</b>	Pool Code 51120	Pool Name Red Lake; Glorieta-Yeso
Property Code <b>321378</b>	Property Name <b>RED LAKE 32 STATE</b>	Well Number 2H
OGRID No. 371755	Operator Name <b>PERCUSSION PETROLEUM OPERATING, LLC</b>	Elevation 3515'

Surface Location

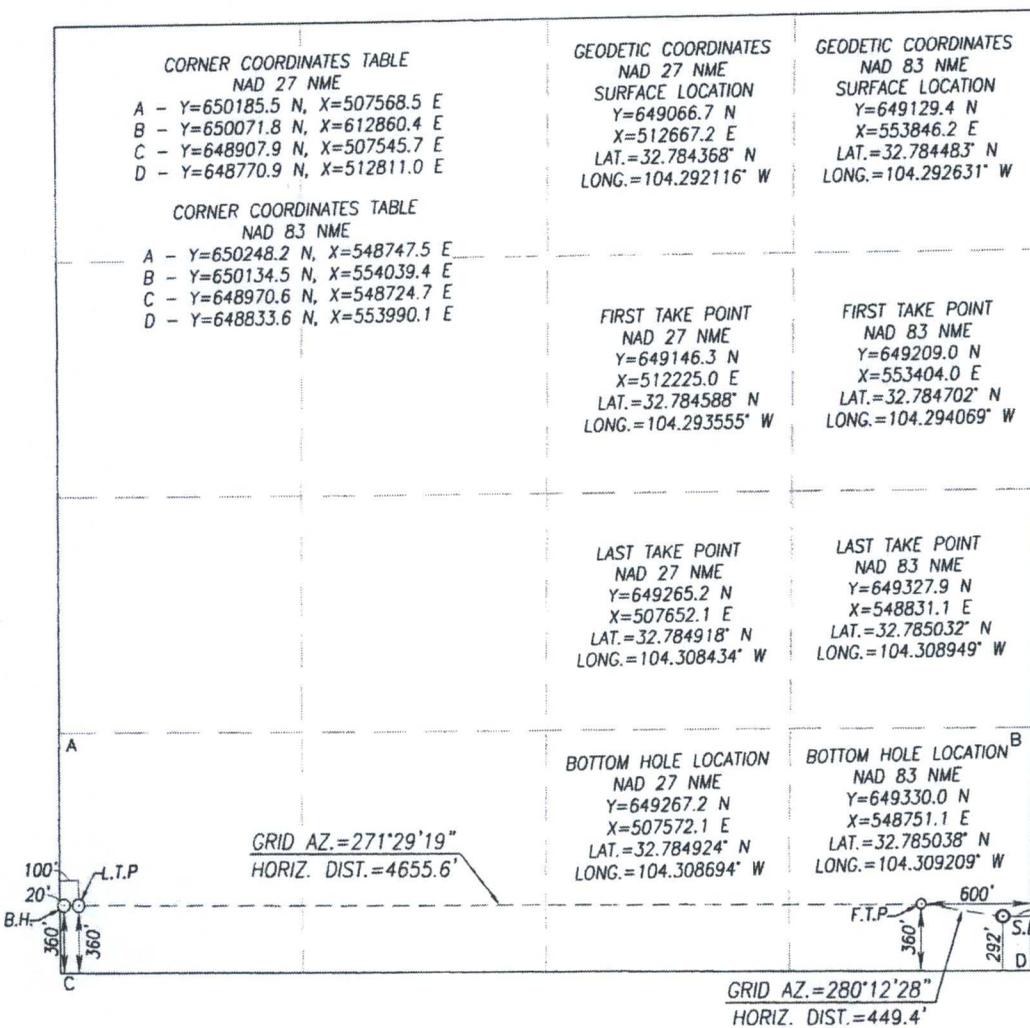
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	17-S	27-E		292	SOUTH	155	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	32	17-S	27-E		360	SOUTH	20	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Ben Stone* 5/01/18  
Signature Date  
Ben Stone  
Printed Name  
ben@sosconsulting.us  
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 22, 2017  
Date of Survey  
Signature & Seal of Professional Surveyor:  
*Ronald J. Eidson*  
Certificate Number 12641  
Ronald J. Eidson 3239  
ACK REL. W.O. 17111116 JWSC W.O. 18.13.0349

# Percussion Petroleum Operating, LLC

Red Lake 32 State Com Well No.2H

SL: 292' FSL & 155' FEL

BH: 360' FES & 20' FWL

Section 32, Twp 17-S, Rng 27-E

Eddy County, New Mexico

## Well Program - New Drill

**Objective: Drill New Horizontal Well for Red Lake, Glorieta-Yeso (51120) Pool Production.**

### 1. Geologic Information – Glorieta/ Yeso

The Glorieta/ Yeso formation consists of shales, sandstones, reddish colored siltstones and thin beds of limestone and gypsum. The Yeso and members (Glorieta, Paddock) vary in thickness; producing intervals are generally a few hundred feet. This well targets the interval in this area between approximately 3000' and 3100'.

#### Estimated Formation Tops:

Queen	750
Grayburg	1075
San Andres	1430
Glorieta	2760
Paddock	2815
Blinebry	3430
Tubb	4205
Abo	4900
*Pilot hole	5500

\*Please see narrative portion of drilling/pipe specs for plugging.

### 2. Drilling Procedure

- a. MIRU drilling rig and associated equipment. Set up H<sub>2</sub>S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
- b. All contractors conduct safety meeting prior to current task. All equipment inspected daily. Repair / replace as required.
- c. Well spud operations commence.
- d. Mud logger monitoring returns; cuttings & waste hauled to specified facility. (Sundance or other approved facility Eddy/ Lea County)
- e. After surface casing set/drilled; if H<sub>2</sub>S levels >20ppm detected, implement H<sub>2</sub>S Plan accordingly. (e.g., cease operations, shut in well, employ H<sub>2</sub>S safety trailer & personnel safety devices, install flare line, etc. - refer to plan.)
- f. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
- g. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

**Well Program - New Drill (cont.)**

**3. Casing program - Casing designed as follows:**

STRING	HOLE SZ	DEPTH	CSG SZ	COND	WT/GRD	CLLPS/BURST	
						API	Actual
Conductor	26.5"	0-80'	20.0"	New	94.0 lb. H-40	n/a	n/a
Surface	12.25"	0-1,250'	8.875"	New	36.0 lb. J-55 STC	1.125	3.3/1.16
Production	8.75"	0-2,800'	7.0"	New	32.0 lb. L-80 BTC	1.125	3.5/2.2
Production	8.5"	2,800'-8,050'	5.5"	New	17.0 lb. SEAH 90 BTC	1.125	3.75/2.47
Pilot (OH)*	8.75" hole	2,800'-5,500'	OH	n/a	n/a	n/a	n/a

**Notes:**

- ✓ On all casing strings, the cement will be designed to circulate to surface. Production string will have cement bond logs run (radial, CET or equivalent) to surface.
- ✓ While running all casing strings, the pipe will be kept a minimum of 1/3 full at all times to avoid approaching the collapse pressure of casing.
- ✓ \* Pilot hole will be drilled to approximately 5500'. After logging, the hole will be plugged back to approximately 2800' or appropriate kick-off point. Cement plug will extend from TD of pilot to kick-off point and the well redirected.

**4. Cementing Program:**

**Surface – LEAD Slurry:** 450 sacks of Class C containing additives (ex; 4% gel + 2% CaCl<sub>2</sub> + .4 pps defoamer + .125 pps cello flake + 3 pps Koal Seal. Weight 13.7 ppg, yield 1.68 ft<sup>3</sup>/sack);  
**TAIL Slurry:** 200 sacks of Class C Neet containing 2% CaCl<sub>2</sub>. Weight 14.8 ppg, yield 1.34 ft<sup>3</sup>/sack; 100% excess, circulate to surface.

**Production – LEAD Slurry:** 1,100 sacks of Class C containing additives (ex; 4% gel + .4 pps defoamer + .125 pps cello flake + 5% NaCl. Weight 13.2 ppg, yield 1.83 ft<sup>3</sup>/sack);  
**TAIL Slurry:** 200 sacks of Class C Neet. Weight 14.8 ppg, yield 1.32 ft<sup>3</sup>/sack; 50% excess, circulate to surface.

**5. Pressure Control - BOP diagram is attached to this application. All BOP and related equipment shall comply with well control requirements as described NMOCD Rules and Regulations and API RP 53,**

Section 17. Minimum working pressure of the BOP and related equipment required for the drilling shall be 3000 psi. The NMOCD Artesia district office shall be notified a minimum of 4 hours in advance for a representative to witness BOP pressure tests. The test shall be performed by an independent service company utilizing a test plug (no cup or J-packer). The results of the test shall be recorded on a calibrated test chart submitted to the OCD district office. Test shall be conducted at:

- a. Installation;
- b. after equipment or configuration changes;
- c. at 30 days from any previous test, and;
- d. anytime operations warrant, such as well conditions

## **Well Program - New Drill (cont.)**

6. **Mud Program & Monitoring** - Mud will be balanced for all operations as follows:

DEPTH	MUD TYPE	WEIGHT	Ph
0-80'	FW Gel	8.4	9.5-10.5
80'-1250*	FW Cut/ Brine Gel	8.3-9.2	9.5-10.5
1250'-8060**	FW/Gel	8.7-9.0	9.5-10.5

*\*Sweeps and LCM pills as needed. \*\*Acid soluble only.*

Mud and all cuttings monitored w/ cuttings recovered for disposal. Returns shall be visually and electronically monitored. In the event of H<sub>2</sub>S, mud shall be adjusted appropriately by weight and H<sub>2</sub>S scavengers.

7. **Auxiliary Well Control and Monitoring** - Hydraulic remote BOP operation, mudlogging to monitor returns.

8. **H<sub>2</sub>S Safety** - This well and related facilities are not expected to have H<sub>2</sub>S releases. However, there may be H<sub>2</sub>S in the area. There are no private residences or public facilities in the area but a contingency plan has been developed. Percussion Petroleum Operating, LLC will have a company representative available to personnel throughout all operations. If H<sub>2</sub>S levels greater than 10ppm are detected or suspected, the H<sub>2</sub>S Contingency Plan will be implemented at the appropriate level.

H<sub>2</sub>S Safety - There is a low risk of H<sub>2</sub>S in this area. The operator will comply with the provisions of NMAC 19.15.11 and BLM Onshore Oil and Gas Order #6.

- a) Monitoring - all personnel will wear monitoring devices.
- b) Warning Sign - a highly visible H<sub>2</sub>S warning sign will be placed for obvious viewing at the vehicular entrance point onto location.
- c) Wind Detection - two (2) wind direction socks will be placed on location.
- d) Communications - will be via cellular phones and/or radios located within reach of the driller, the rig floor and safety trailer when applicable.
- e) Alarms - will be located at the rig floor, circulating pump / reverse unit area and the flareline and will be set for visual (red flashing light) at 15 ppm and visual and audible (115 decibel siren) at 20 ppm.
- f) Mud program - If H<sub>2</sub>S levels require, proper mud weight, safe drilling practices and H<sub>2</sub>S scavengers will minimize potential hazards.
- g) Metallurgy - all tubulars, pressure control equipment, flowlines, valves, manifolds and related equipment will be rated for H<sub>2</sub>S service if required.

***The Percussion Petroleum Operating, LLC H<sub>2</sub>S Contingency Plan will be implemented if levels greater than 10ppm H<sub>2</sub>S are detected.***

9. **Logging, Coring and Testing** - Percussion Petroleum Operating expects to run;

- a. Mud logging through the pilot hole interval.
- b. CBL (Radial, CET or equivalent) on production casing strings.
- c. Standard porosity log suite from TD to approximately 2,500'
- d. No corings or drill tests will be conducted.

**Well Program - New Drill (cont.)**

**10. Potential Hazards** - No abnormal pressures or temperatures are expected.

No loss of circulation is expected to occur with the exception of drilling into the target disposal zone. All personnel will be familiar with the safe operation of the equipment being used to drill this well.

The maximum anticipated bottom-hole pressure is 2500 psi and the maximum anticipated bottom-hole temperature is 88° F.

**11. Waste Management** - All drill cuttings and other wastes associated with and drilling operations will be transported to the Lea County Sundance facility (or alternate), permitted by the Environmental Bureau of the New Mexico Oil Conservation Division.

**12. Anticipated Start Date** - Upon approval of all permits, operations would begin within 30 days. Completion of the well operations will take four weeks. Installation of the surface facilities including any berms, plumbing and other and associated equipment would be occurring during the same interval. In any event, it is not expected for the construction phase of the project to last more than six weeks, depending on availability of contractors and equipment. At the time of this submittal, and subject to the availability of the drilling contractor, the anticipated start date is:

**June 1, 2018.**

**13. Configure for Production** – Horizontal completion as shown:

First Take Point (NAD83 NME 3001)						Last Take Point (NAD83 NME 3001)					
Lat	Long	X	Y	TVD	TVDSS	Lat	Long	X	Y	TVD	TVDSS
32.784702	-104.294069	553404.00	649209.00	3067.00	465.00	32.785032	-104.308949	548831.10	649327.90	3032.00	500.00

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Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-44948</b>	Pool Code <b>51120</b>	Pool Name <b>Red Lake Glorita Yaso</b>
Property Code <b>321378</b>	Property Name <b>RED LAKE 32 STATE</b>	Well Number <b>2H</b>
OGRID No. <b>371755</b>	Operator Name <b>PERCUSSION PETROLEUM OPERATING, LLC</b>	Elevation <b>3515'</b>

Surface Location

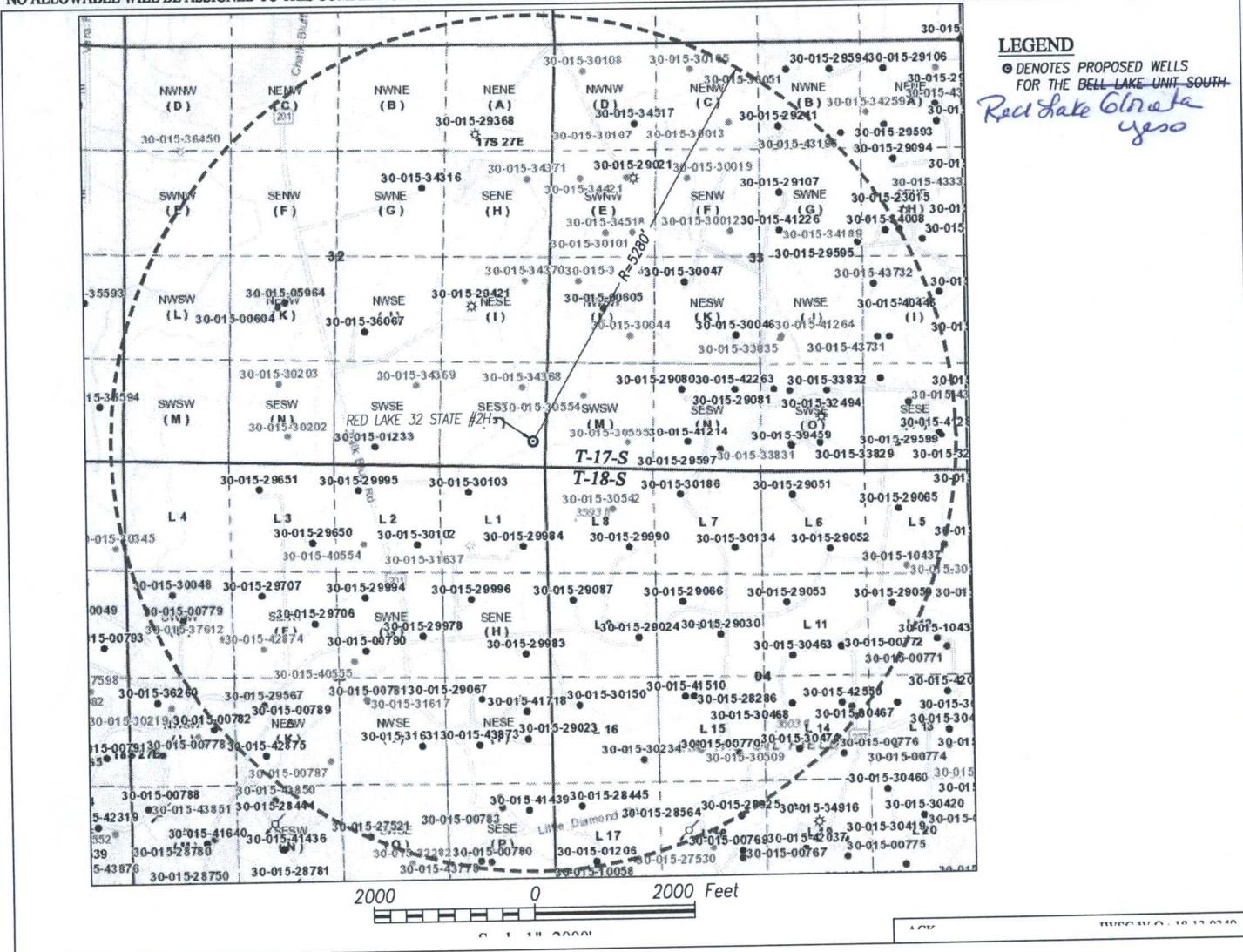
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>P</b>	<b>32</b>	<b>17-S</b>	<b>27-E</b>		<b>292</b>	<b>SOUTH</b>	<b>155</b>	<b>EAST</b>	<b>EDDY</b>

Bottom Hole Location If Different From Surface

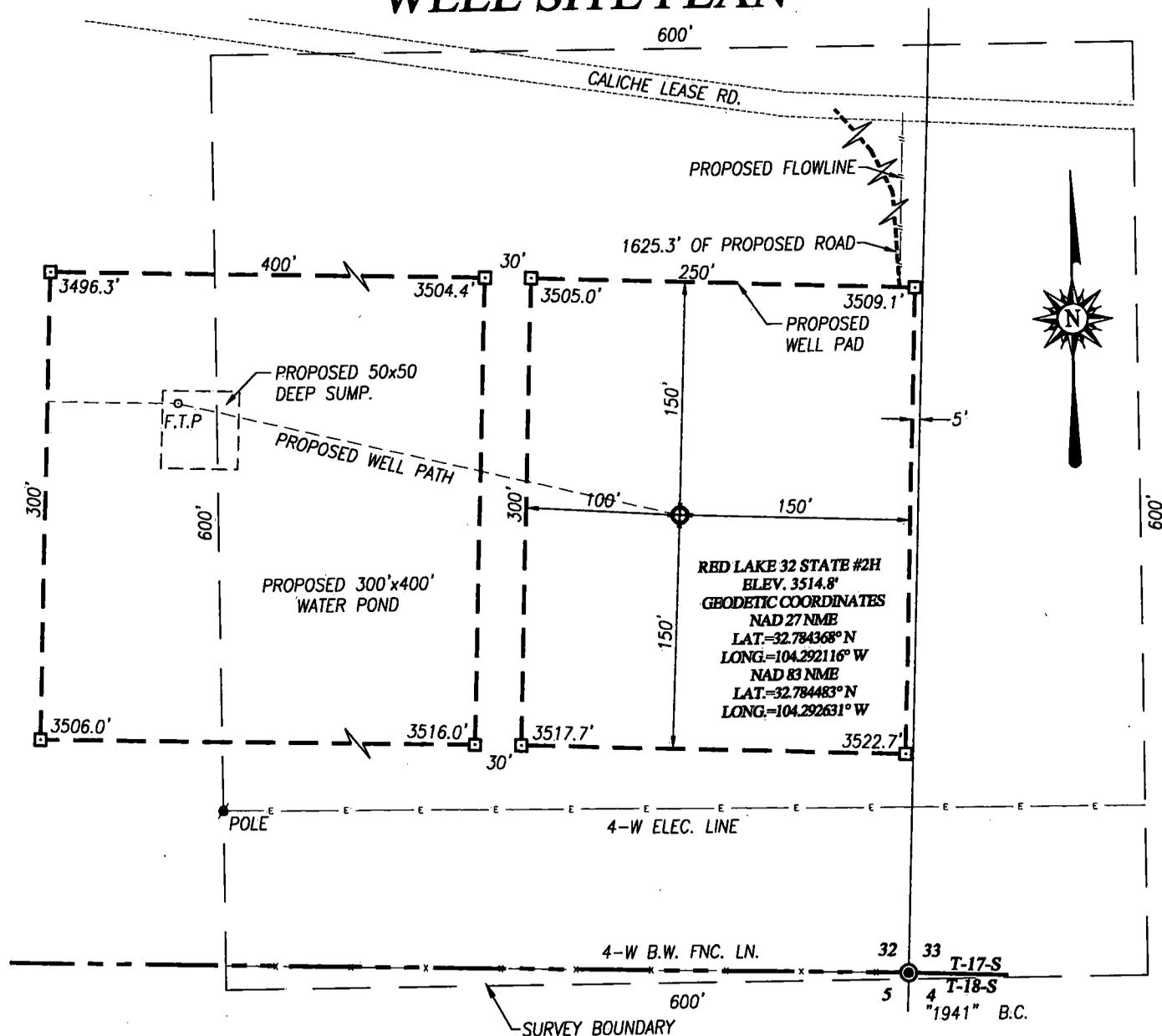
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>M</b>	<b>32</b>	<b>17-S</b>	<b>27-E</b>		<b>360</b>	<b>SOUTH</b>	<b>20</b>	<b>WEST</b>	<b>EDDY</b>

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



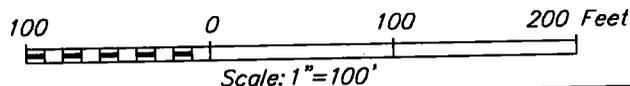
# WELL SITE PLAN



NOTE:  
SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP"  
FOR PROPOSED ROAD LOCATION.

## DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF ST. HWY. 82 (LOVINGTON HWY.) AND CO. RD. 201 (CHALK BLUFF RD.), GO SOUTH APPROX. 3.2 MILES. TURN LEFT AND GO EAST, NORTHEAST APPROX. 0.37 MILES TO PROPOSED ROAD SURVEY. FOLLOW STAKED ROAD SOUTHEAST APPROX. 0.15 MILES. THEN RIGHT AND GO SOUTH-SOUTHEAST 0.1 MILES. BEND RIGHT AND GO SOUTH APPROX. 273 FEET TO THE NORTHEAST PAD CORNER OF THIS LOCATION.



## PERCUSSION PETROLEUM OPERATING, LLC

RED LAKE 32 STATE #2H WELL LOCATED 292 FEET FROM THE SOUTH LINE AND 155 FEET FROM THE EAST LINE OF SECTION 32, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO



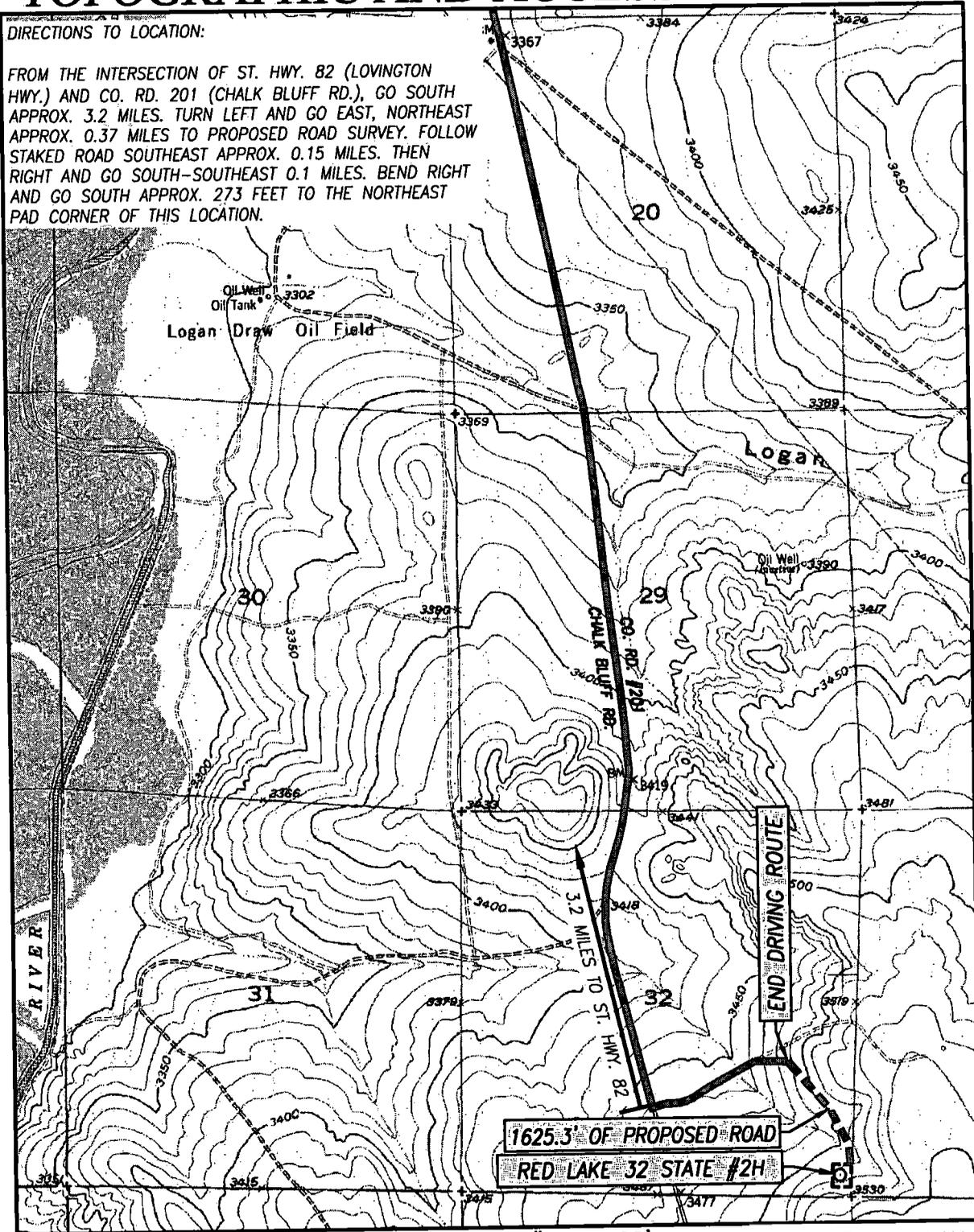
PROVIDING SURVEYING SERVICES  
SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO HOBBS, N.M. 88240  
(575) 393-3117 www.jwsc.biz  
TBPLS# 10021000

Survey Date: 3/20/18	CAD Date: 4/04/18	Drawn By: ACK
W.O. No.: 18110351	Rev.:	Rel. W.O.: 17111116
		Sheet 1 of 1

# TOPOGRAPHIC AND ACCESS ROAD MAP

## DIRECTIONS TO LOCATION:

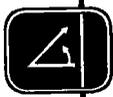
FROM THE INTERSECTION OF ST. HWY. 82 (LOVINGTON HWY.) AND CO. RD. 201 (CHALK BLUFF RD.), GO SOUTH APPROX. 3.2 MILES. TURN LEFT AND GO EAST, NORTHEAST APPROX. 0.37 MILES TO PROPOSED ROAD SURVEY. FOLLOW STAKED ROAD SOUTHEAST APPROX. 0.15 MILES. THEN RIGHT AND GO SOUTH-SOUTHEAST 0.1 MILES. BEND RIGHT AND GO SOUTH APPROX. 273 FEET TO THE NORTHEAST PAD CORNER OF THIS LOCATION.



SEC. 32 TWP. 17-S RGE. 27-E  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 292' FSL & 155' FEL  
 ELEVATION 3515'  
 OPERATOR PERCUSSION PETROLEUM OPERATING, LLC  
 EDDYSE RED LAKE 32 STATE  
 U.S.G.S. TOPOGRAPHIC MAP  
 SPRING LAKE, N.M. SURVEY N.M.P.M.

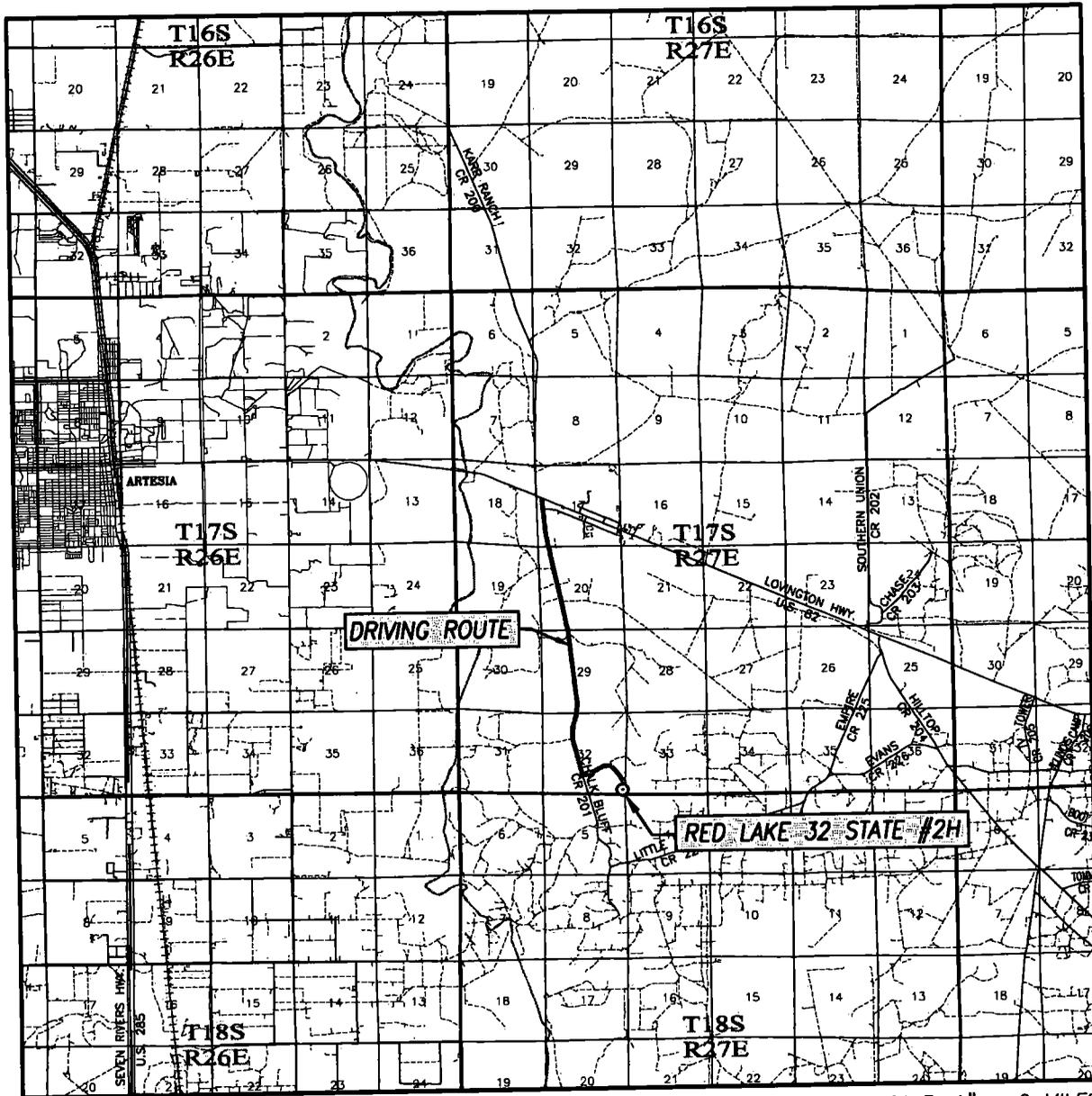
SCALE: 1" = 2000'

CONTOUR INTERVAL:  
 SPRING LAKE, N.M. - 10'



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 (575) 393-3117 [www.jwsc.biz](http://www.jwsc.biz)  
 TBPLS# 10021000

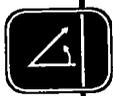
# VICINITY MAP



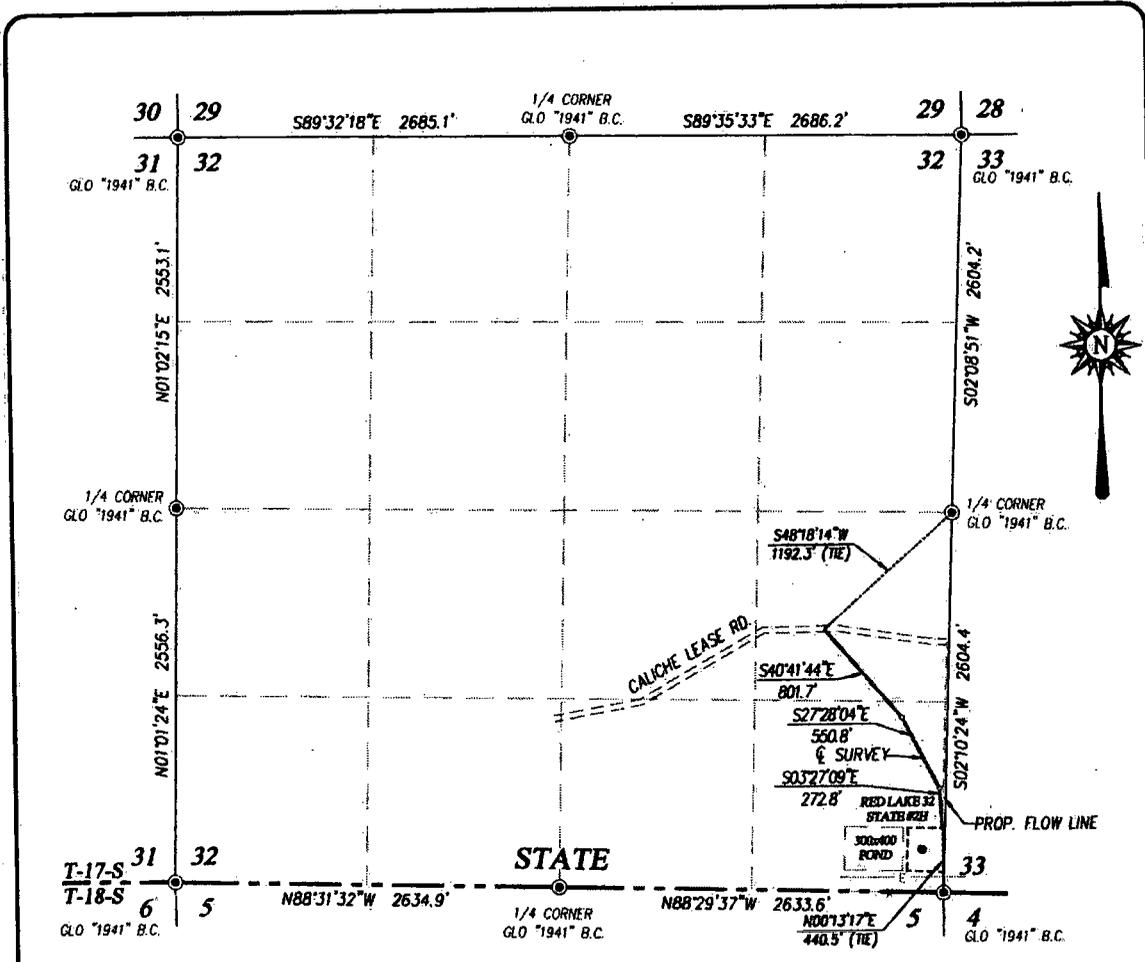
SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE TOPOGRAPHICAL AND ACCESS ROAD MAP

SEC. 32 TWP. 17-S RGE. 27-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 292' FSL & 155' FEL  
 ELEVATION 3515'  
 OPERATOR PERCUSSION PETROLEUM OPERATING, LLC  
 LEASE RED LAKE 32 STATE



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 TBPLS# 10021000



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 32, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT IN THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 32, WHICH LIES S48°18'14"W 1192.3 FEET FROM THE EAST QUARTER CORNER OF SAID SECTION; THEN S40°41'44"E 801.7 FEET; THEN S27°28'04"E 550.8 FEET; THEN S03°27'09"E 272.8 FEET TO A POINT IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER, WHICH LIES N00°13'17"E 440.5 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION.

SAID STRIP OF LAND BEING 1625.3 FEET OR 98.50 RODS IN LENGTH, CONTAINING 1.119 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

- NE/4 SE/4 39.91 RODS OR 0.453 ACRES
- SE/4 SE/4 58.59 RODS OR 0.666 ACRES

**NOTE**

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THE SURVEY PLAN AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON

DATE: 04/09/2018

**LEGEND**

⊙ DENOTES FOUND CORNER AS NOTED



**PERCUSSION PETROLEUM OPERATING, LLC.**

**SURVEY FOR A PROPOSED ROAD TO THE RED LAKE 32 STATE #2H WELL CROSSING SECTION 32, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO**

PROVIDING SURVEYING SERVICES SINCE 1946  
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 TBPLS# 10021000

Survey Date: 3/20/18	CAD Date: 4/04/18	Drawn By: ACK
W.O. No.: 18110351	Rev.:	Rel. W.O.:
		Sheet 1 of 1

NEW MEXICO SURFACE OWNERS ACT BOND

KNOW ALL MEN BY THESE PRESENTS, That we, Percussion Petroleum Operating, LLC and St. Devote LLC, of 919 Milam Street, Suite 2475, Houston, Texas 77002, as Principal, U.S. Specialty Insurance Company, of 13403 Northwest Freeway, Houston, Texas 77040, as Surety, are held and firmly bound unto the surface owners of the State of New Mexico, namely persons and/or entities to which the State of New Mexico's Surface Damage Protection Act (the "Act") applies, as Obligee, in the penalty sum of Twenty Five Thousand and 00/100 Dollars (\$25,000.00), lawful money of the United States of America, for the payment of which well and truly to be made, we hereby bind ourselves, our successors and assigns, firmly by these presents.

THE CONDITION OF THE obligation is such that this Bond shall only apply in the event 1) there is a legal judgment against the Principal under the Act and 2) the Principal is unable to satisfy such judgment.

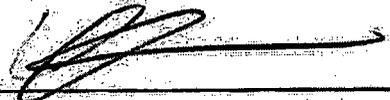
NOW, THEREFORE, this bond shall be null and void when 1) payment(s) under this bond equal the penalty sum of this Bond as stated above; 2) this bond is replaced by another bond, letter of credit, cash or certificate of deposit; or 3) six (6) years after the Principal has deposited with the Surety a certified statement from the Oil Conservation Division of the Energy, Minerals and Natural Resources Department that, according to the records of the division, the operator is not the operator of record of any well in the State of New Mexico and does not hold any outstanding drilling permits within the State of New Mexico.

FURTHERMORE, the aggregate liability of the Surety hereunder shall in no event exceed the penalty sum of this bond unless amended in writing by the Surety, and if at any time the amount of the penalty sum of this Bond is reduced by any payment(s) hereunder, the Surety shall publish notice to that effect in a paper of general circulation in each county of the state in which oil or gas is produced.

SIGNED, sealed and dated this 29<sup>th</sup> day of November, 2017.

Percussion Petroleum Operating, LLC  
and St. Devote LLC  
Principal

U.S. Specialty Insurance Company  
Surety

By: 

By: \_\_\_\_\_

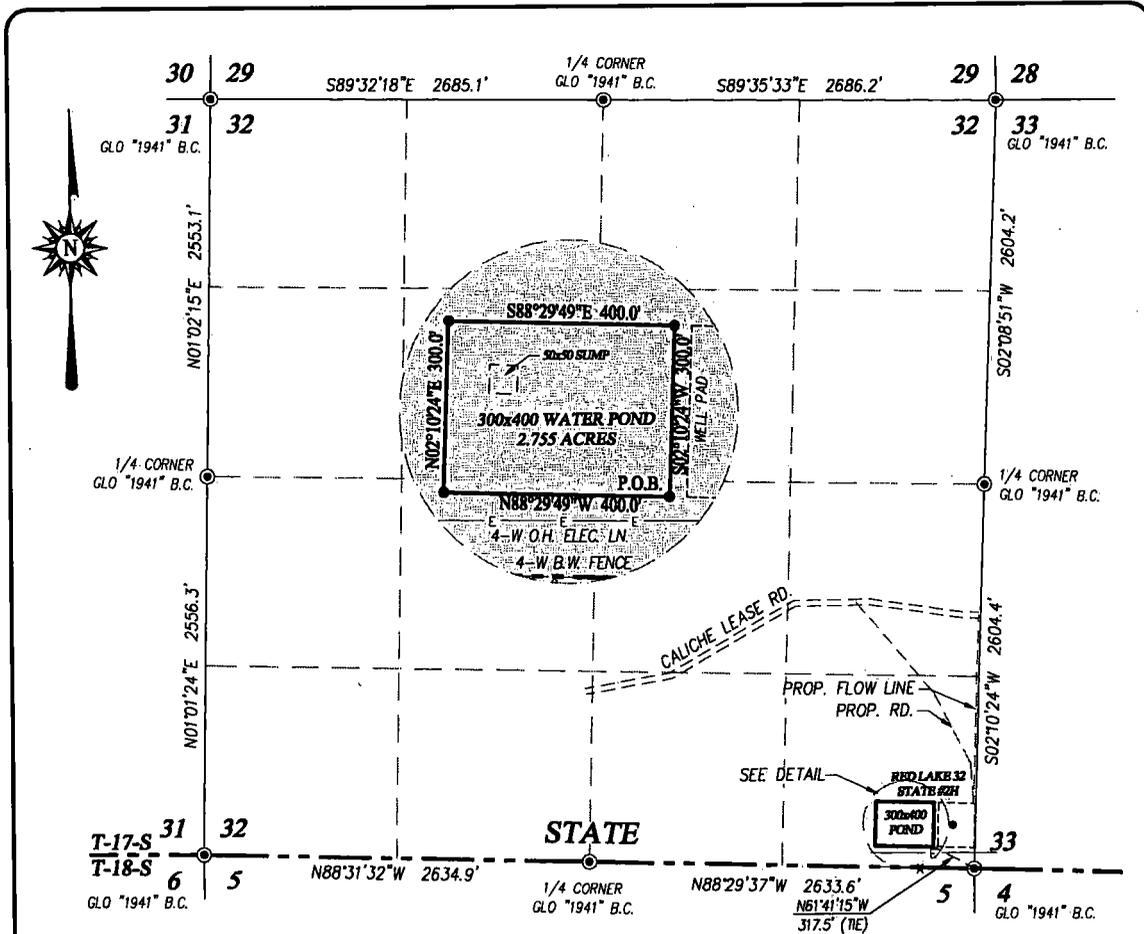
Lupa Carrillo  
(Printed Name)

Michele K. Tyson  
(Printed Name)

Authorized Person  
(Title)

Attorney-in-Fact  
(Title)





**DESCRIPTION:**

A TRACT OF LAND FOR A WATER POND ON STATE OF NEW MEXICO LAND IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHEAST QUARTER OF SAID SECTION 32, WHICH LIES N61°41'15"W 317.5 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION; THEN N88°29'49"W 400.0 FEET; THEN N02°10'24"E 300.0 FEET; THEN S88°29'49"E 400.0 FEET; THEN S02°10'24"W 300.0 FEET TO THE POINT OF BEGINNING.

SAID TRACT OF LAND CONTAINING 2.755 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4 2.755 ACRES

**NOTE**

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM, NEW MEXICO EAST ZONE, NORTH AMERICAN DATUM, 1983. DISTANCES ARE SURFACE VALUES.

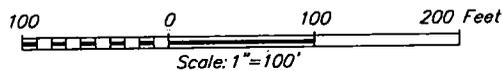
I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON

DATE: 04/09/2018

**LEGEND**

⊙ DENOTES FOUND CORNER AS NOTED



**PERCUSSION PETROLEUM OPERATING, LLC**

**SURVEY FOR A 300x400 WATER POND  
 SITUATED IN THE SE/4 SE/4 OF SECTION 32,  
 TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO**

Survey Date: 3/20/18	CAD Date: 4/04/18	Drawn By: ACK
W.O. No.: 18110351	Rev.:	Rel. W.O.:
		Sheet 1 of 1

PROVIDING SURVEYING SERVICES SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO HOBBS, N.M. 88240  
 (575) 393-3117 www.jwsc.biz  
 TPLSP 10021000



**PERCUSSION**  
PETROLEUM  
LLC

# **Percussion Petroleum, LLC**

**Eddy County, NM  
Red Lake 32 State  
2H**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**12 April, 2018**





# Wellbenders Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 2H
<b>Company:</b>	Percussion Petroleum, LLC	<b>TVD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Project:</b>	Eddy County, NM	<b>MD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Site:</b>	Red Lake 32 State	<b>North Reference:</b>	Grid
<b>Well:</b>	2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Eddy County, NM		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Red Lake 32 State				
<b>Site Position:</b>		<b>Northing:</b>	649,129.40 usft	<b>Latitude:</b>	32.784483
<b>From:</b>	Map	<b>Easting:</b>	553,846.20 usft	<b>Longitude:</b>	-104.292631
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.02 °

<b>Well</b>	2H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	649,129.40 usft	<b>Latitude:</b>	32.784483
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	553,846.20 usft	<b>Longitude:</b>	-104.292631
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,515.00 usft

<b>Wellbore</b>	OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>	
	IGRF2015	4/12/2018	7.24	60.45	48,107.25316630	

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	271.49	

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/12/2018			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	8,060.41 Plan #1 (OH)	MWD+IGRF	OWSG MWD + IGRF or WM	

<b>Plan Sections</b>											
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
973.00	0.00	0.01	973.00	0.00	0.00	0.00	0.00	0.00	0.01		
1,273.01	6.00	72.08	1,272.46	4.83	14.93	2.00	2.00	0.00	72.08		
2,444.93	6.00	72.08	2,437.96	42.53	131.49	0.00	0.00	0.00	0.00		
3,405.81	90.43	271.49	3,067.00	79.60	-442.20	10.00	8.79	-16.71	-160.47	Red Lake 32 State	
8,060.41	90.43	271.49	3,032.07	200.63	-5,095.10	0.00	0.00	0.00	0.00	Red Lake 32 State	



# Wellbenders Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 2H
<b>Company:</b>	Percussion Petroleum, LLC	<b>TVD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Project:</b>	Eddy County, NM	<b>MD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Site:</b>	Red Lake 32 State	<b>North Reference:</b>	Grid
<b>Well:</b>	2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
973.00	0.00	0.01	973.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.54	72.08	1,000.00	0.04	0.12	-0.12	2.00	2.00	0.00
1,100.00	2.54	72.08	1,099.96	0.87	2.68	-2.65	2.00	2.00	0.00
1,200.00	4.54	72.08	1,199.76	2.77	8.55	-8.48	2.00	2.00	0.00
1,273.01	6.00	72.08	1,272.46	4.83	14.93	-14.80	2.00	2.00	0.00
1,300.00	6.00	72.08	1,299.30	5.70	17.62	-17.46	0.00	0.00	0.00
1,400.00	6.00	72.08	1,398.76	8.91	27.56	-27.32	0.00	0.00	0.00
1,500.00	6.00	72.08	1,498.21	12.13	37.51	-37.18	0.00	0.00	0.00
1,600.00	6.00	72.08	1,597.66	15.35	47.46	-47.04	0.00	0.00	0.00
1,700.00	6.00	72.08	1,697.11	18.57	57.40	-56.90	0.00	0.00	0.00
1,800.00	6.00	72.08	1,796.56	21.78	67.35	-66.76	0.00	0.00	0.00
1,900.00	6.00	72.08	1,896.02	25.00	77.29	-76.62	0.00	0.00	0.00
2,000.00	6.00	72.08	1,995.47	28.22	87.24	-86.48	0.00	0.00	0.00
2,100.00	6.00	72.08	2,094.92	31.43	97.19	-96.34	0.00	0.00	0.00
2,200.00	6.00	72.08	2,194.37	34.65	107.13	-106.19	0.00	0.00	0.00
2,300.00	6.00	72.08	2,293.83	37.87	117.08	-116.05	0.00	0.00	0.00
2,400.00	6.00	72.08	2,393.28	41.08	127.02	-125.91	0.00	0.00	0.00
2,444.93	6.00	72.08	2,437.96	42.53	131.49	-130.34	0.00	0.00	0.00
2,450.00	5.52	70.32	2,443.01	42.69	131.97	-130.82	10.00	-9.37	-34.72
2,500.00	2.01	5.80	2,492.91	44.37	134.33	-133.13	10.00	-7.03	-129.03
2,550.00	5.25	293.89	2,542.82	46.17	132.33	-131.08	10.00	6.48	-143.83
2,600.00	10.05	282.88	2,592.36	48.07	125.98	-124.69	10.00	9.61	-22.01
2,650.00	14.98	279.01	2,641.16	50.06	115.34	-114.00	10.00	9.86	-7.74
2,700.00	19.95	277.03	2,688.84	52.12	100.48	-99.09	10.00	9.93	-3.96
2,750.00	24.93	275.82	2,735.04	54.23	81.53	-80.09	10.00	9.96	-2.43
2,800.00	29.91	274.99	2,779.41	56.38	58.61	-57.12	10.00	9.97	-1.66
2,850.00	34.90	274.38	2,821.61	58.56	31.91	-30.38	10.00	9.98	-1.22
2,900.00	39.89	273.90	2,861.32	60.75	1.64	-0.06	10.00	9.98	-0.95
2,950.00	44.88	273.52	2,898.24	62.92	-31.99	33.62	10.00	9.99	-0.77
3,000.00	49.88	273.19	2,932.08	65.07	-68.71	70.38	10.00	9.99	-0.65
3,050.00	54.87	272.91	2,962.60	67.17	-108.24	109.95	10.00	9.99	-0.56
3,100.00	59.87	272.67	2,989.55	69.22	-150.29	152.04	10.00	9.99	-0.49
3,150.00	64.87	272.44	3,012.73	71.19	-194.53	196.31	10.00	9.99	-0.45
3,200.00	69.86	272.24	3,031.97	73.08	-240.62	242.44	10.00	9.99	-0.41
3,250.00	74.86	272.05	3,047.11	74.86	-288.23	290.07	10.00	9.99	-0.39
3,300.00	79.86	271.86	3,058.05	76.52	-336.97	338.85	10.00	9.99	-0.37
3,350.00	84.85	271.69	3,064.70	78.06	-386.49	388.38	10.00	9.99	-0.36
3,400.00	89.85	271.51	3,067.01	79.45	-436.40	438.32	10.00	9.99	-0.35
3,405.81	90.43	271.49	3,067.00	79.60	-442.20	444.12	10.00	9.99	-0.35
3,500.00	90.43	271.49	3,066.29	82.05	-536.36	538.31	0.00	0.00	0.00
3,600.00	90.43	271.49	3,065.54	84.65	-636.32	638.31	0.00	0.00	0.00
3,700.00	90.43	271.49	3,064.79	87.25	-736.29	738.31	0.00	0.00	0.00
3,800.00	90.43	271.49	3,064.04	89.85	-836.25	838.30	0.00	0.00	0.00
3,900.00	90.43	271.49	3,063.29	92.45	-936.21	938.30	0.00	0.00	0.00

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<b>Well:</b>	2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

**Planned Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	90.43	271.49	3,062.54	95.05	-1,036.18	1,038.30	0.00	0.00	0.00
4,100.00	90.43	271.49	3,061.79	97.65	-1,136.14	1,138.30	0.00	0.00	0.00
4,200.00	90.43	271.49	3,061.04	100.25	-1,236.10	1,238.29	0.00	0.00	0.00
4,300.00	90.43	271.49	3,060.29	102.85	-1,336.07	1,338.29	0.00	0.00	0.00
4,400.00	90.43	271.49	3,059.54	105.45	-1,436.03	1,438.29	0.00	0.00	0.00
4,500.00	90.43	271.49	3,058.79	108.05	-1,535.99	1,538.28	0.00	0.00	0.00
4,600.00	90.43	271.49	3,058.04	110.65	-1,635.96	1,638.28	0.00	0.00	0.00
4,700.00	90.43	271.49	3,057.29	113.25	-1,735.92	1,738.28	0.00	0.00	0.00
4,800.00	90.43	271.49	3,056.54	115.85	-1,835.88	1,838.28	0.00	0.00	0.00
4,900.00	90.43	271.49	3,055.79	118.45	-1,935.85	1,938.27	0.00	0.00	0.00
5,000.00	90.43	271.49	3,055.04	121.05	-2,035.81	2,038.27	0.00	0.00	0.00
5,100.00	90.43	271.49	3,054.29	123.65	-2,135.77	2,138.27	0.00	0.00	0.00
5,200.00	90.43	271.49	3,053.53	126.25	-2,235.74	2,238.26	0.00	0.00	0.00
5,300.00	90.43	271.49	3,052.78	128.85	-2,335.70	2,338.26	0.00	0.00	0.00
5,400.00	90.43	271.49	3,052.03	131.45	-2,435.66	2,438.26	0.00	0.00	0.00
5,500.00	90.43	271.49	3,051.28	134.05	-2,535.63	2,538.26	0.00	0.00	0.00
5,600.00	90.43	271.49	3,050.53	136.65	-2,635.59	2,638.25	0.00	0.00	0.00
5,700.00	90.43	271.49	3,049.78	139.25	-2,735.55	2,738.25	0.00	0.00	0.00
5,800.00	90.43	271.49	3,049.03	141.85	-2,835.52	2,838.25	0.00	0.00	0.00
5,900.00	90.43	271.49	3,048.28	144.45	-2,935.48	2,938.25	0.00	0.00	0.00
6,000.00	90.43	271.49	3,047.53	147.05	-3,035.44	3,038.24	0.00	0.00	0.00
6,100.00	90.43	271.49	3,046.78	149.65	-3,135.41	3,138.24	0.00	0.00	0.00
6,200.00	90.43	271.49	3,046.03	152.25	-3,235.37	3,238.24	0.00	0.00	0.00
6,300.00	90.43	271.49	3,045.28	154.85	-3,335.33	3,338.23	0.00	0.00	0.00
6,400.00	90.43	271.49	3,044.53	157.45	-3,435.30	3,438.23	0.00	0.00	0.00
6,500.00	90.43	271.49	3,043.78	160.05	-3,535.26	3,538.23	0.00	0.00	0.00
6,600.00	90.43	271.49	3,043.03	162.65	-3,635.23	3,638.23	0.00	0.00	0.00
6,700.00	90.43	271.49	3,042.28	165.25	-3,735.19	3,738.22	0.00	0.00	0.00
6,800.00	90.43	271.49	3,041.53	167.85	-3,835.15	3,838.22	0.00	0.00	0.00
6,900.00	90.43	271.49	3,040.78	170.46	-3,935.12	3,938.22	0.00	0.00	0.00
7,000.00	90.43	271.49	3,040.03	173.06	-4,035.08	4,038.21	0.00	0.00	0.00
7,100.00	90.43	271.49	3,039.28	175.66	-4,135.04	4,138.21	0.00	0.00	0.00
7,200.00	90.43	271.49	3,038.53	178.26	-4,235.01	4,238.21	0.00	0.00	0.00
7,300.00	90.43	271.49	3,037.77	180.86	-4,334.97	4,338.21	0.00	0.00	0.00
7,400.00	90.43	271.49	3,037.02	183.46	-4,434.93	4,438.20	0.00	0.00	0.00
7,500.00	90.43	271.49	3,036.27	186.06	-4,534.90	4,538.20	0.00	0.00	0.00
7,600.00	90.43	271.49	3,035.52	188.66	-4,634.86	4,638.20	0.00	0.00	0.00
7,700.00	90.43	271.49	3,034.77	191.26	-4,734.82	4,738.19	0.00	0.00	0.00
7,800.00	90.43	271.49	3,034.02	193.86	-4,834.79	4,838.19	0.00	0.00	0.00
7,900.00	90.43	271.49	3,033.27	196.46	-4,934.75	4,938.19	0.00	0.00	0.00
8,000.00	90.43	271.49	3,032.52	199.06	-5,034.71	5,038.19	0.00	0.00	0.00
8,060.41	90.43	271.49	3,032.07	200.63	-5,095.10	5,098.59	0.00	0.00	0.00



# Wellbenders Planning Report



<b>Database:</b>	WBDS_SQL_2	<b>Local Co-ordinate Reference:</b>	Well 2H
<b>Company:</b>	Percussion Petroleum, LLC	<b>TVD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Project:</b>	Eddy County, NM	<b>MD Reference:</b>	RKB=17' @ 3532.00usft (Silver Oak 1)
<b>Site:</b>	Red Lake 32 State	<b>North Reference:</b>	Grid
<b>Well:</b>	2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

## Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Red Lake 32 State 2H - plan misses target center by 0.07usft at 8060.41usft MD (3032.07 TVD, 200.63 N, -5095.10 E) - Point	0.00	0.00	3,032.00	200.60	-5,095.10	649,330.00	548,751.10	32.785038	-104.309210
Red Lake 32 State 2H - plan misses target center by 0.05usft at 7980.38usft MD (3032.67 TVD, 198.55 N, -5015.10 E) - Point	0.00	0.00	3,032.67	198.50	-5,015.10	649,327.90	548,831.10	32.785033	-104.308950
Red Lake 32 State 2H - plan hits target center - Point	0.00	0.00	3,067.00	79.60	-442.20	649,209.00	553,404.00	32.784702	-104.294070



Company: Percussion Petroleum, LLC  
 Project: Eddy County, NM  
 Site: Red Lake 32 State  
 Well: 2H  
 Wellbore: OH  
 Rig: Silver Oak 1  
 Design: Plan #1 / 11-16, April 12 2018

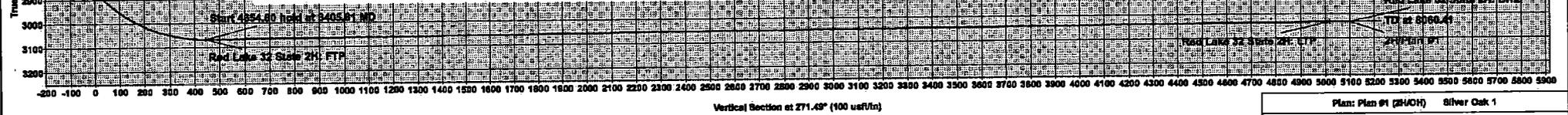
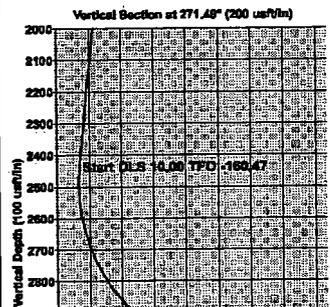
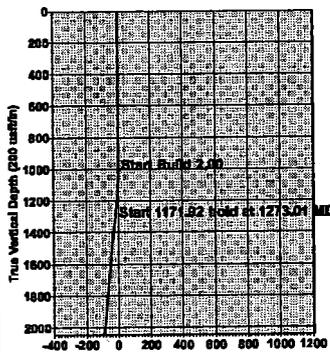
PROJECT DETAILS: Eddy County, NM

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level

**WELLBENDERS**  
 DIRECTIONAL SERVICES LLC



**TOTAL CORRECTION**  
 Magnetic North is 7.22° East of Grid North (Magnetic Convergence)  
 To convert a Magnetic Direction to a Grid Direction, Add 7.22°



**WELL DETAILS: 2H**

RKB=17° @ 3532.00usf (Silver Oak 1)

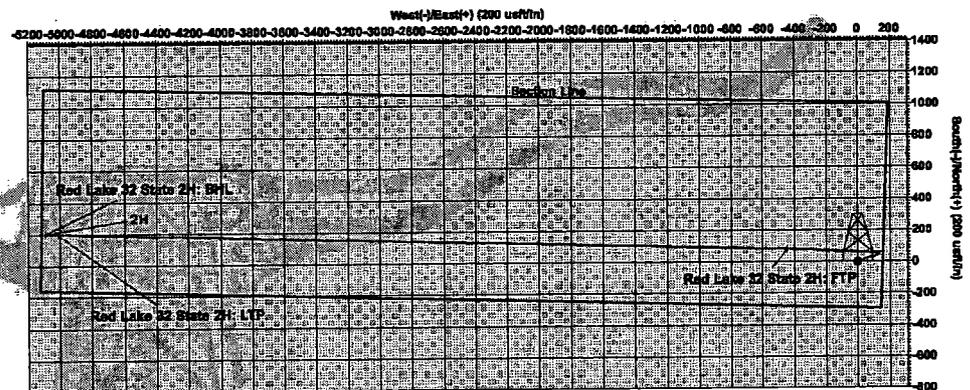
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	649129.40	653646.20	32.784483	-104.262631

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dlog	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	973.00	0.00	0.91	973.00	0.00	0.00	0.00	0.00
3	1273.01	0.00	72.08	1272.46	4.53	14.93	2.00	-14.80
4	2444.83	0.00	72.08	2437.96	42.53	131.49	0.00	-139.34
5	3405.81	90.43	271.49	3067.00	79.60	-442.20	10.00	444.12
6	6080.41	90.43	271.49	3032.07	200.63	-6098.10	0.00	6098.69

**WELLBORE TARGET DETAILS (MAP CO-ORDINATES)**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Red Lake 32 State 2H: BHL	2032.00	200.60	-6985.10	649330.00	648761.10	Point
Red Lake 32 State 2H: LTP	3032.07	193.90	-6018.10	649337.00	648531.10	Point
Red Lake 32 State 2H: FTP	3067.00	79.60	-442.20	648208.00	533404.00	Point



Azimuths to Grid North  
 True North: -0.02°  
 Magnetic North: 7.22°  
 Magnetic Field  
 Strength: 48107.3nT  
 Dip Angle: 60.45°  
 Date: 4/12/2018  
 Model: IGRF2015

**Disclaimer:**  
 All Plans and/or Well Sectional survey data is provided by customer and subject to customer approval.

Plan: Plan #1 (2H/OH) Silver Oak 1  
 Created By: Daniel Benn Date: 11-16, April 12 2018