

LAPSE 1  
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  
Energy Minerals and Natural Resources

RECEIVED

Form C-101  
Revised July 18, 2013

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

☐ AMENDED Report  
JUN 25 2018

DISTRICT II-ARTESIA O.C.D.

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

Operator Name and Address Lime Rock Resources II-A, L.P. 1111 Bagby Street, Suite 4600 Houston, Texas 77002		OGRID Number 277558
Property Code 316765	Property Name Leavitt 13	API Number 30-015-45051
		Well No #3H

7 Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	18	18S	27E		660	S	330	W	Eddy

8 Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	13	18S	26E		330	S	100	W	Eddy

9 Pool Information

Red Lake Glorieta-Yeso	5/120 3230
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Additional Well Information

Work Type N	Well Type O	Cable/Rotary R	Lease Type P	Ground Level Elevation 3291.2
Multiples N	Proposed Depth 8000' MD / 3500' TVD	Formation Yeso	Contractor Trinidad Drilling	Spud Date After 8/1/2018
Depth to Ground Water: 80 Ft.		Distance from nearest fresh water well: 0.38 Miles		Distance from nearest surface water: 0.63 Miles

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

19 Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Conductor	26"	20"	91.5	80	80	Surface
Surface	12.25"	9-5/8"	36	1230	600	Surface
Production	8 3/4"	5-1/2"	20	8000	2300	Surface

Casing/Cement Program: Additional Comments

Artesian Aquifer Porosity 1160'-1170'
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Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
XLT 11"	5000	2000	National Varco

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 0, if applicable. ☒

Signature: *Eric P. McClusky*

Printed Name: Eric McClusky

Title: Operations Engineer

E-mail Address: emcclusky@limerockresources.com

Date: 6/11/2018

Phone: 713-360-5714

OIL CONSERVATION DIVISION

Approved By:

*Raymond N. Todman*

Title:

*Geologist*

Approved Date:

*6-28-18*

Expiration Date:

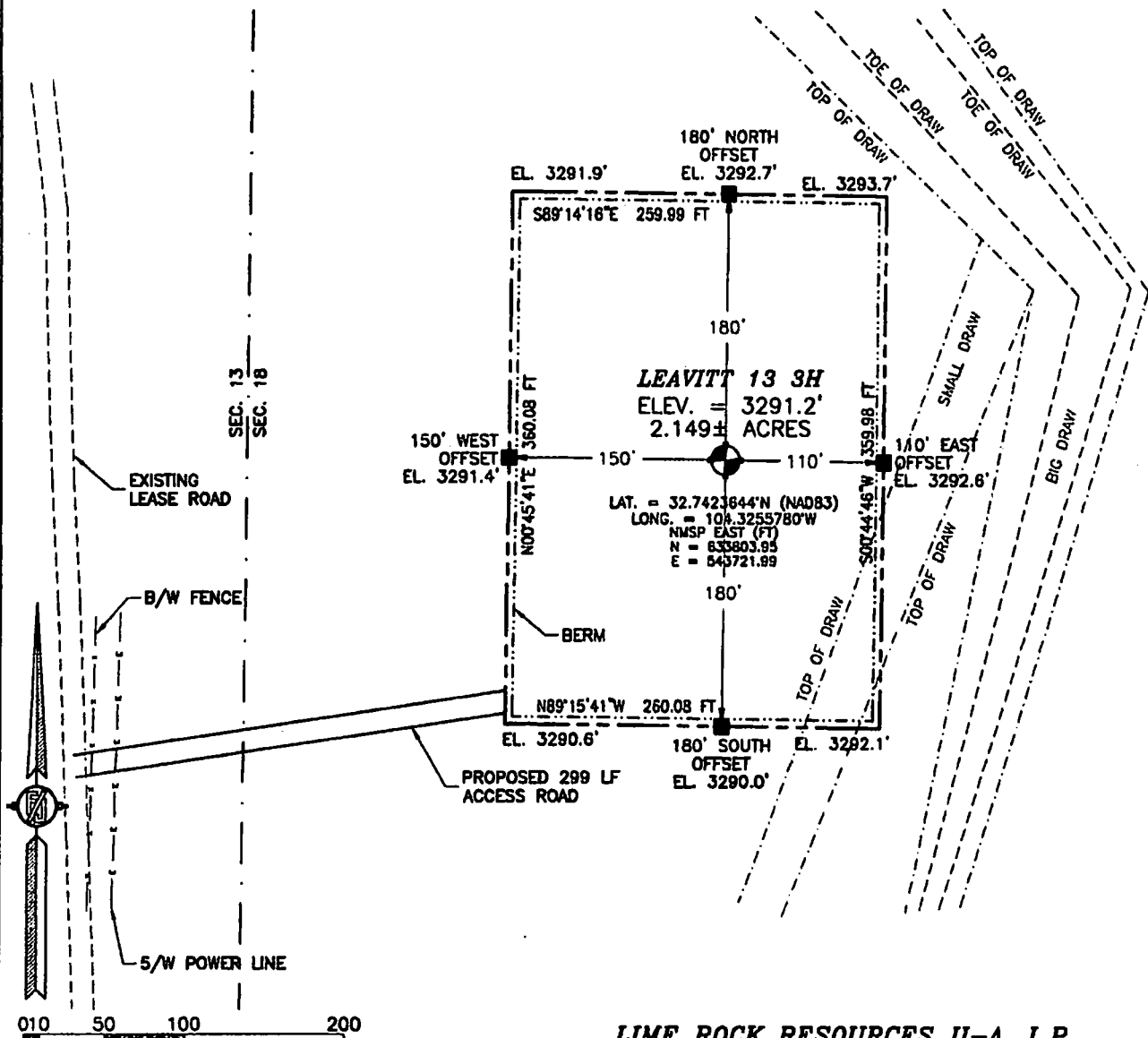
*6-28-20*

Conditions of Approval Attached

*Circ CMT on Conductor + Surface Csg.*

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
**SITE MAP**

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM CR 44 (FANNING) AND CR 43 (THISTLE) GO EAST ON CR 43 (TURNS TO RIVER ROCK ROAD) A TOTAL OF 1.23 MILES, BEND LEFT AND GO NORTH 430' TO ROAD SURVEY AND FOLLOW FLAGS EAST 289' TO SOUTHWEST PAD CORNER FOR THIS LOCATION.

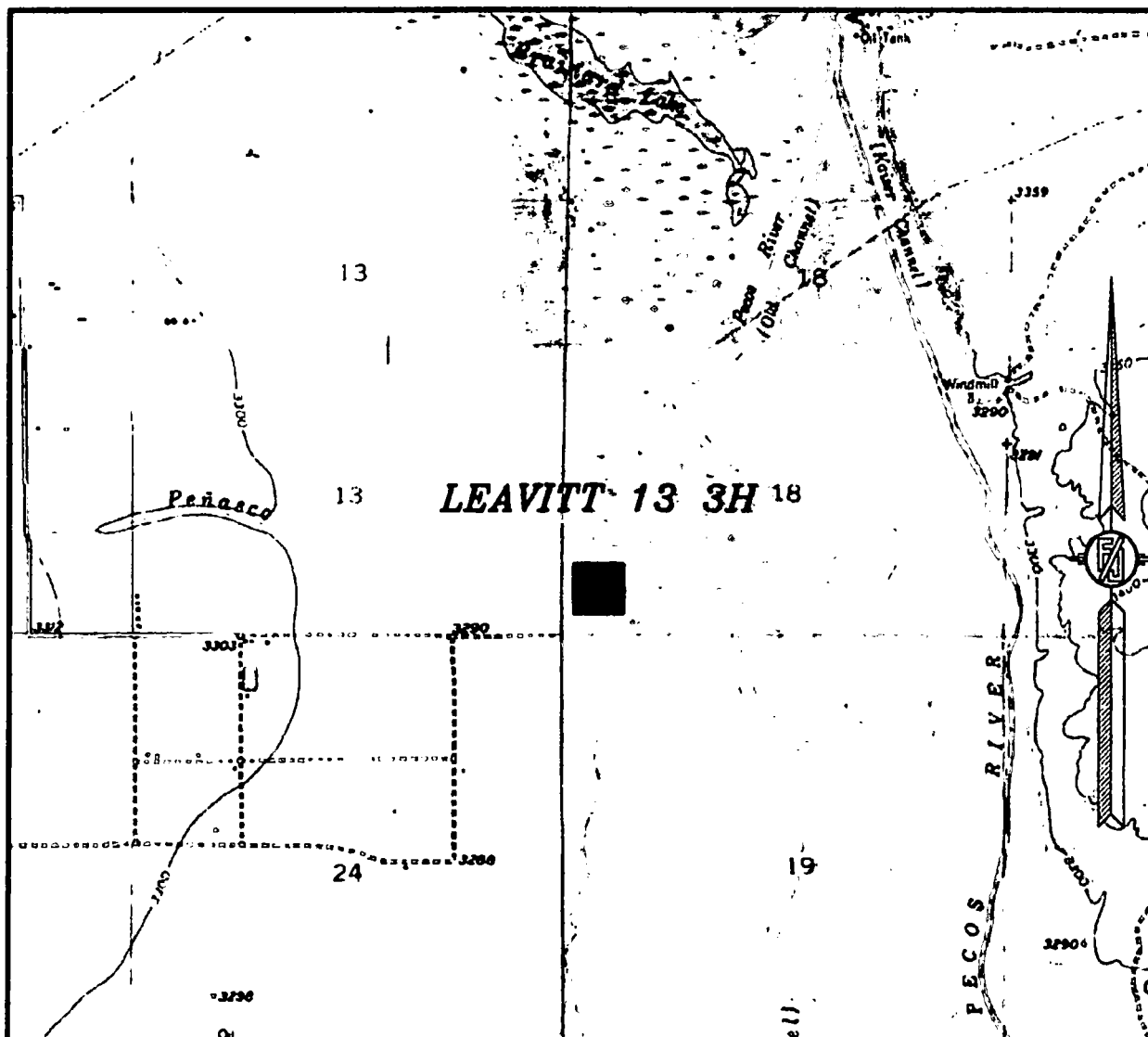
LIME ROCK RESOURCES II-A, L.P.  
**LEAVITT 13 3H**  
LOCATED 660 FT. FROM THE SOUTH LINE  
AND 330 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 18 SOUTH,  
RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 19, 2018

SURVEY NO. 6202A

MADRON SURVEYING, INC. 301 SOUTH CANAL (375) 234-3341 CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
SPRING LAKE

NOT TO SCALE

LIME ROCK RESOURCES II-A, L.P.  
LEAVITT 13 3H

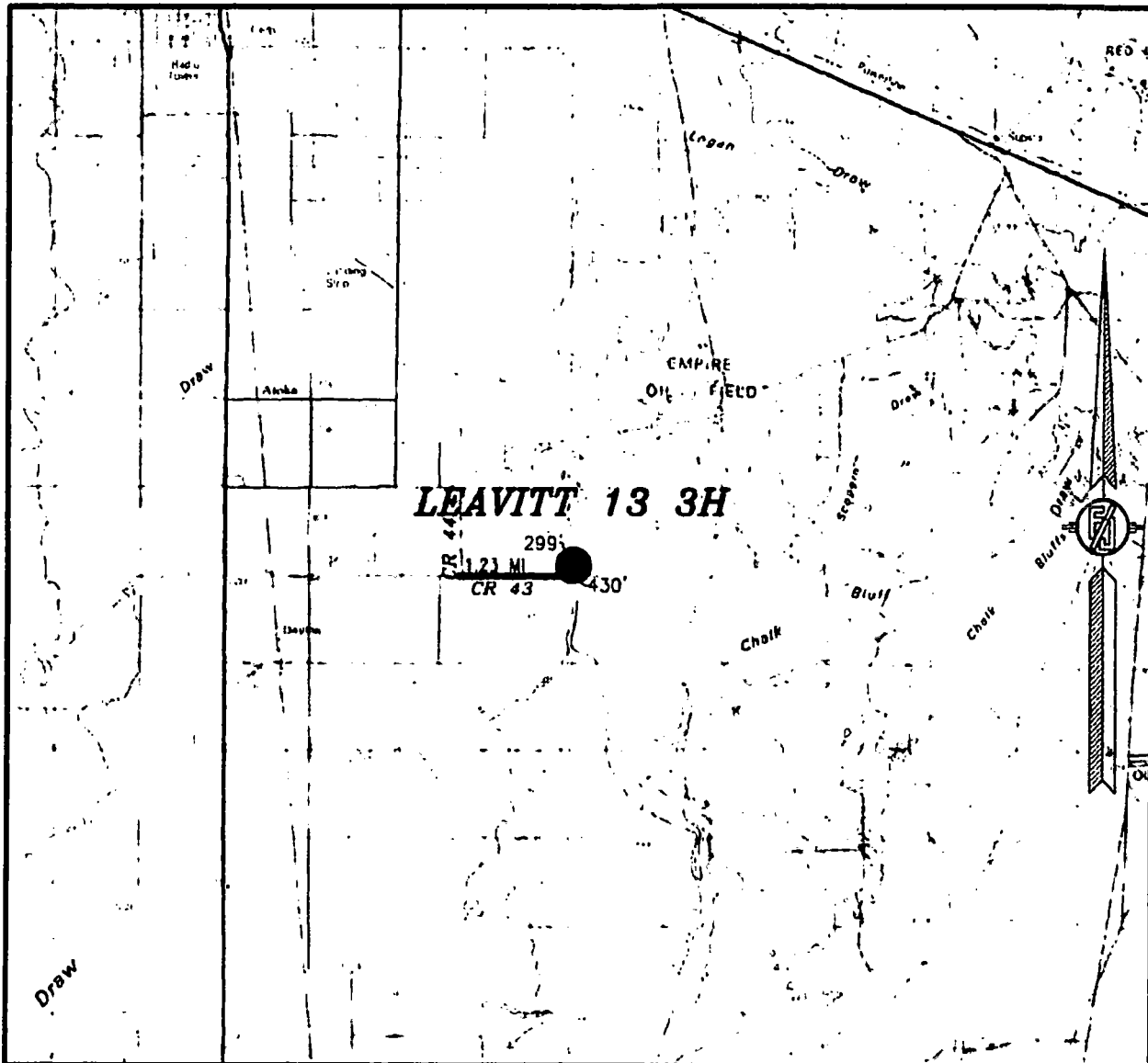
LOCATED 660 FT. FROM THE SOUTH LINE  
AND 330 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 18 SOUTH,  
RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 19, 2018

SURVEY NO. 6202A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-1341 CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

LIME ROCK RESOURCES II-A, L.P.  
LEAVITT 13 3H  
LOCATED 660 FT. FROM THE SOUTH LINE  
AND 330 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 18 SOUTH,  
RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

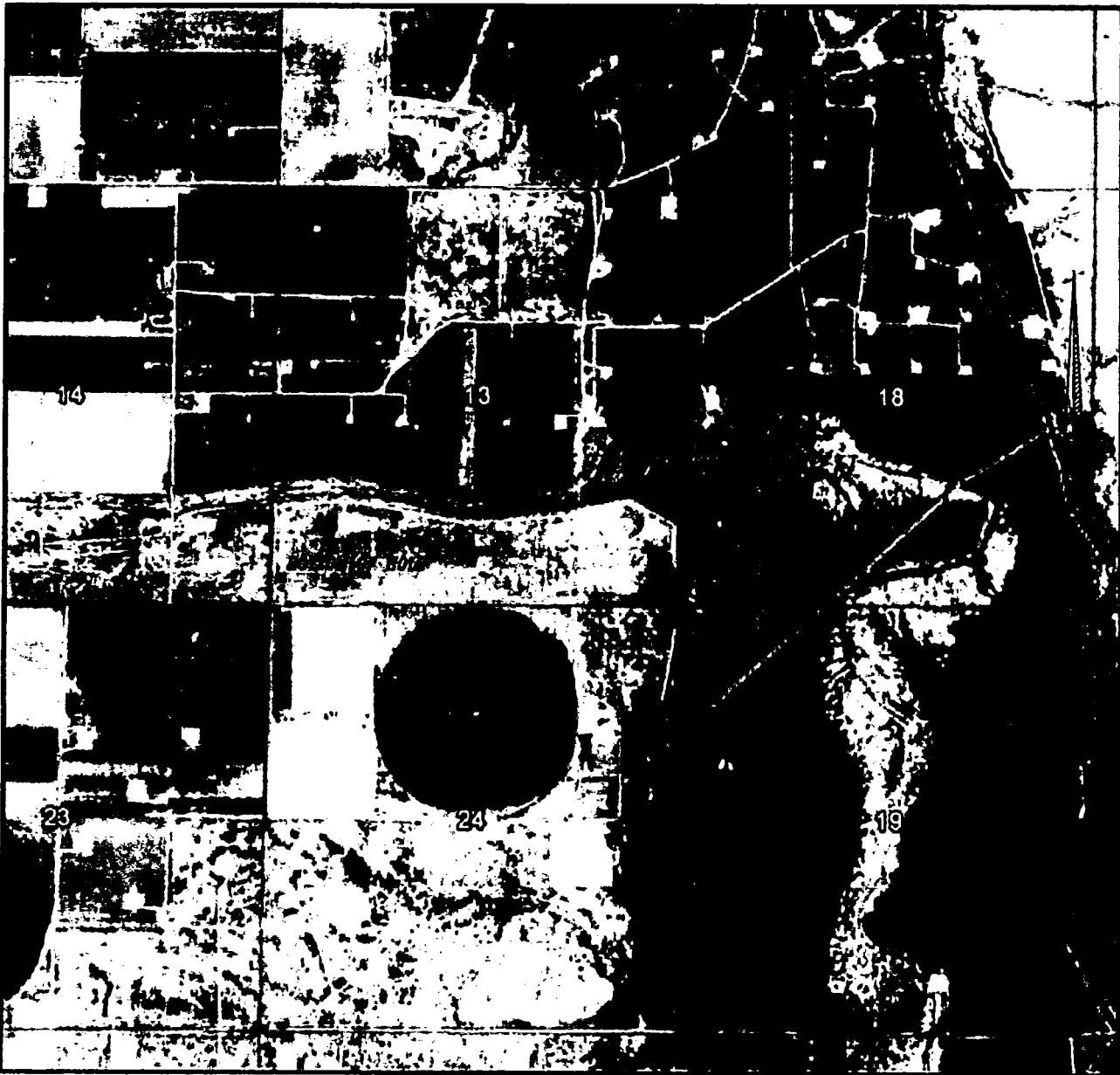
DIRECTIONS TO LOCATION  
FROM CR 44 (FANNING) AND CR 43 (THISTLE) GO EAST ON CR 43  
(TURNS TO RIVER ROCK ROAD) A TOTAL OF 1.23 MILES, BEND LEFT  
AND GO NORTH 430' TO ROAD SURVEY AND FOLLOW FLAGS EAST  
299' TO SOUTHWEST PAD CORNER FOR THIS LOCATION.

JUNE 19, 2018

SURVEY NO. 6202A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
MARCH 2016

LIME ROCK RESOURCES II-A, L.P.  
LEAVITT 13 3H

LOCATED 660 FT. FROM THE SOUTH LINE  
AND 330 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 18 SOUTH,  
RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 19, 2018

SURVEY NO. 6202A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 734-3341 CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
ACCESS AERIAL ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
MARCH 2016

*LIME ROCK RESOURCES II-A, L.P.  
LEAVITT 13 3H*

LOCATED 660 FT. FROM THE SOUTH LINE  
AND 330 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 18 SOUTH,  
RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 19, 2018

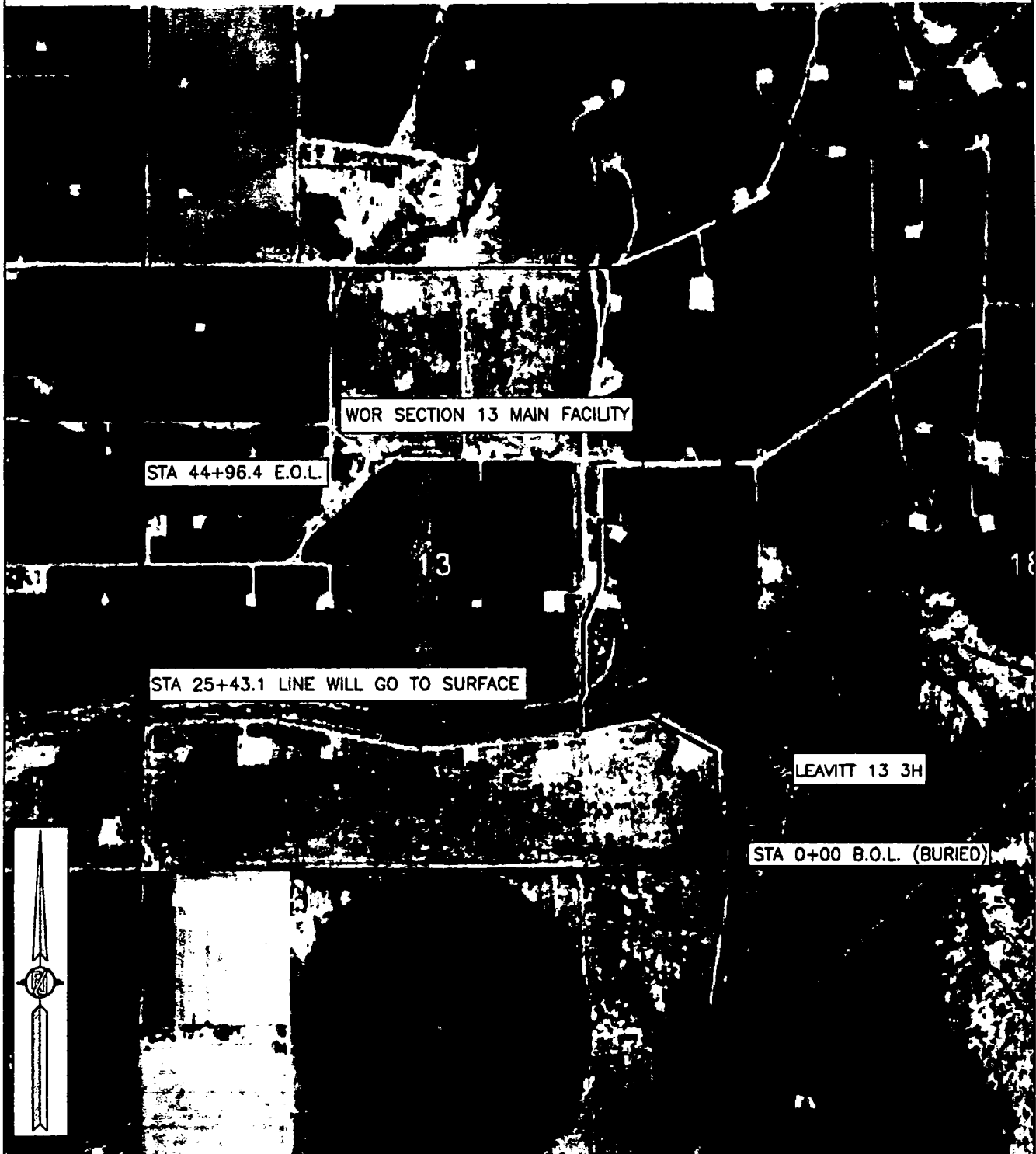
SURVEY NO. 6202A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 734-3341 CARLSBAD, NEW MEXICO

**FLOWLINE PLAT**

**4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE  
LEAVITT 13 3H TO THE WOR SECTION 13 MAIN FACILITY**

**LIME ROCK RESOURCES II-A, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 1, 2018**



**SHEET: 6-6**

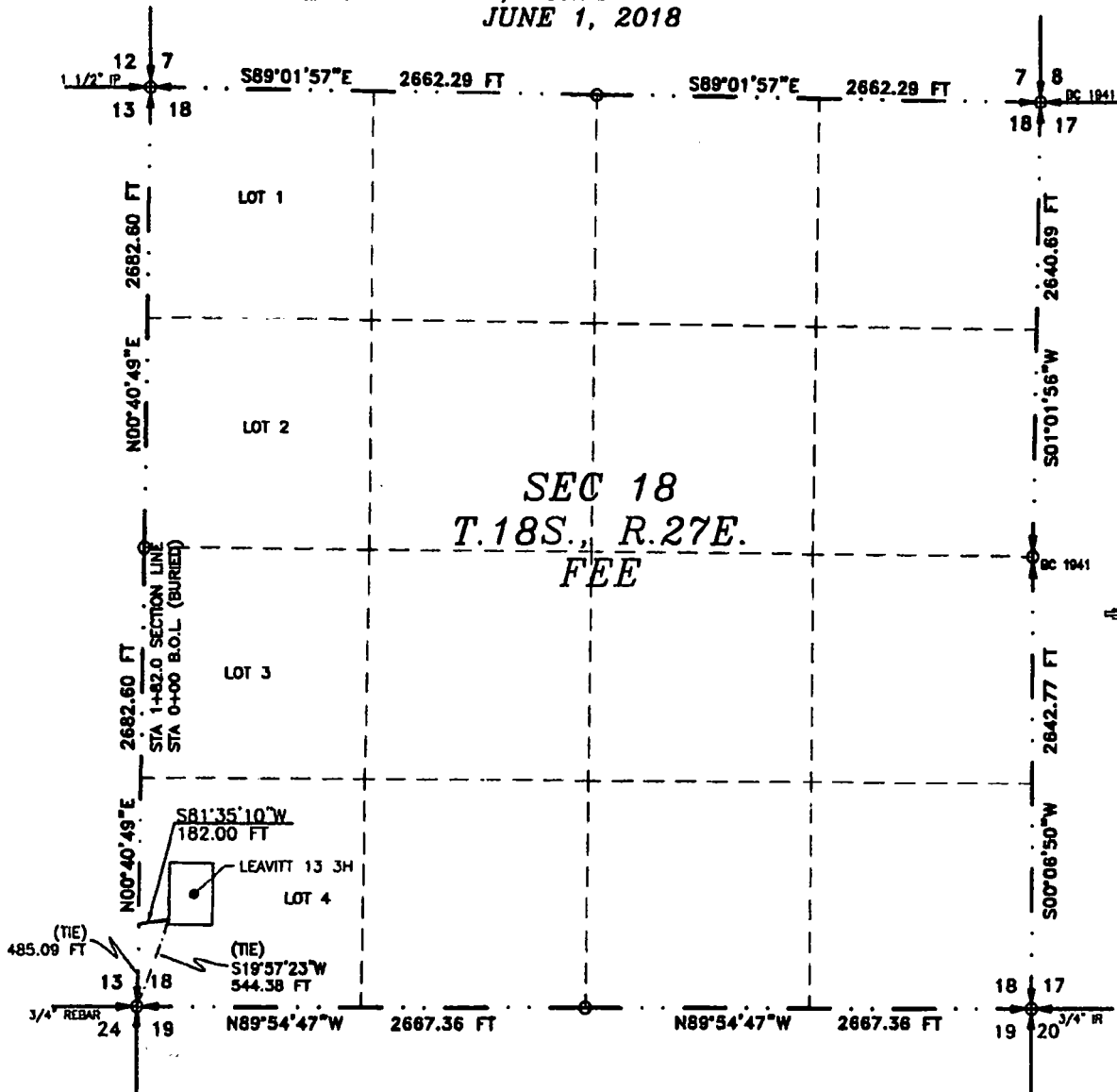
**MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO**

**SURVEY NO. 6202**

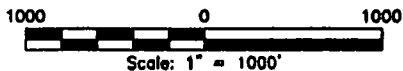
# **FLOWLINE PLAT**

4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE LEAVITT 13 3H TO THE WOR SECTION 13 MAIN FACILITY

**LIME ROCK RESOURCES II-A, L.P.**  
**CENTERLINE SURVEY OF A PIPELINE CROSSING**  
**SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**JUNE 1, 2018**



SEE NEXT SHEET (2-6) FOR DESCRIPTION



## **GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SHEET: 1-6**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

## **SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 29 DAY OF JUNE 2018.

FILMON F. JARAMILLO, P.S. 12797

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 6202**

**FLOWLINE PLAT**

**4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE  
LEAVITT 13 SH TO THE WOR SECTION 13 MAIN FACILITY**

**LIME ROCK RESOURCES II-A, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 1, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING FEE LAND IN SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 4 OF SAID SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S19°57'23"W, A DISTANCE OF 544.38 FEET; THENCE S81°35'10"W A DISTANCE OF 182.00 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S00°40'49"W, A DISTANCE OF 485.09 FEET;

SAID STRIP OF LAND BEING 182.00 FEET OR 11.03 RODS IN LENGTH, CONTAINING 0.125 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 4 182.00 L.F. 11.03 RODS 0.125 ACRES

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SHEET: 2-6**

**MADRON SURVEYING, INC.**

301 SOUTH CANAL  
(575) 234-3341

**CARLSBAD, NEW MEXICO**

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 12 DAY OF JUNE 2018

FILMON F. JARAMILLO, PLS. No. 12797

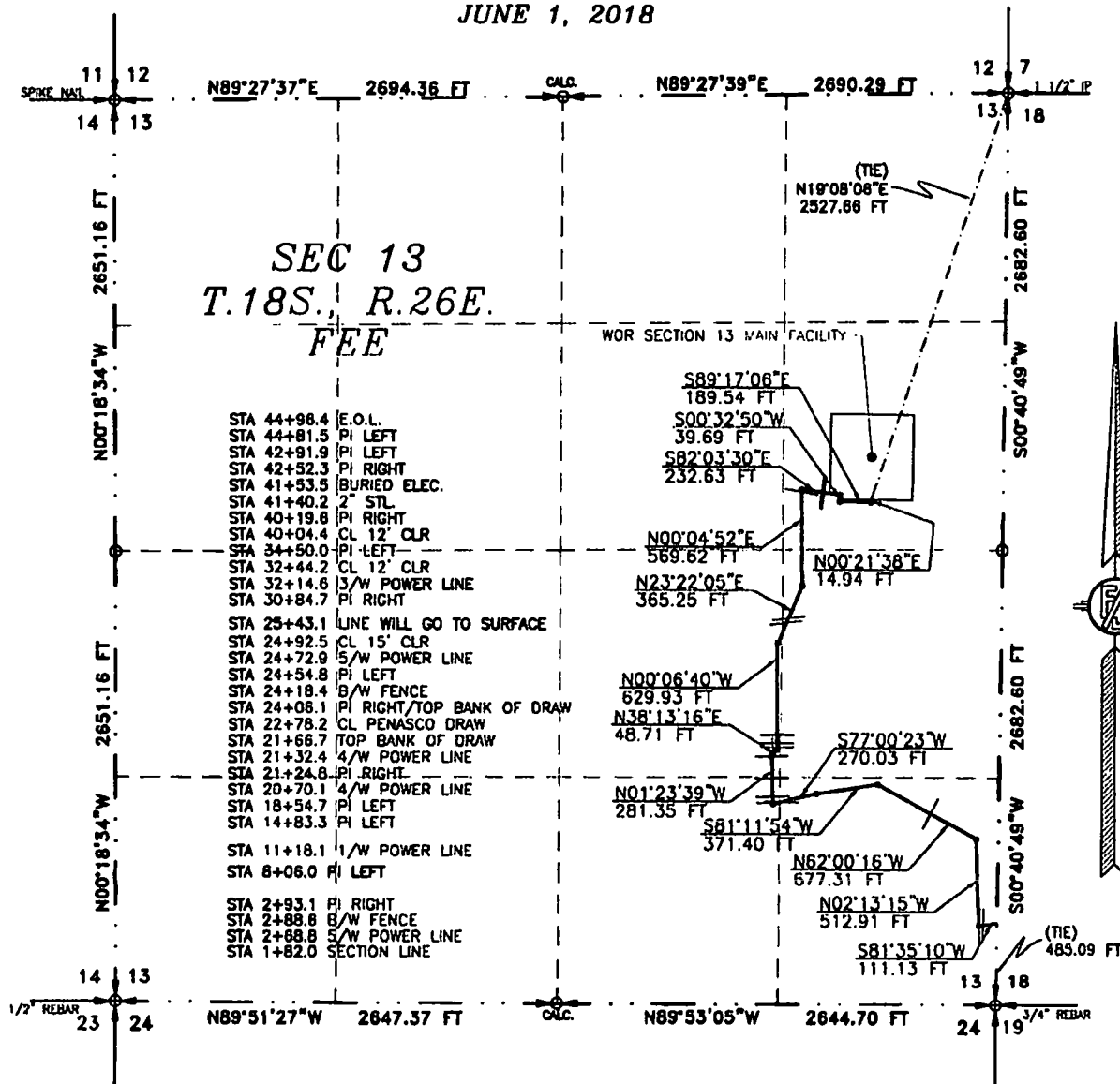
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 6202**

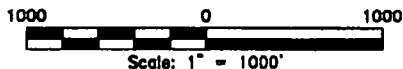
# FLOWLINE PLAT

4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE LEAVITT 13 3H TO THE WOR SECTION 13 MAIN FACILITY

LIME ROCK RESOURCES II-A, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 1, 2018



SEE NEXT SHEET (4-6) FOR DESCRIPTION



## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 3-6

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

## SURVEYOR CERTIFICATE

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 12 DAY OF JUNE 2018.

FILMON F. JARAMILLO, PLS 12797

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

SURVEY NO. 6202

# FLOWLINE PLAT

4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE  
LEAVITT 13 3H TO THE WOR SECTION 13 MAIN FACILITY

**LIME ROCK RESOURCES II-A, L.P.**  
**CENTERLINE SURVEY OF A PIPELINE CROSSING**  
**SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**JUNE 1, 2018**

## DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING FEE LAND IN SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M. BEARS 500°40'49"W, A DISTANCE OF 485.09 FEET;

THENCE S81°35'10"W A DISTANCE OF 111.13 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N02°13'15"W A DISTANCE OF 512.91 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N62°00'16"W A DISTANCE OF 677.31 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S81°11'54"W A DISTANCE OF 371.40 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S77°00'23"W A DISTANCE OF 270.03 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N01°23'39"W A DISTANCE OF 281.35 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N38°13'16"E A DISTANCE OF 48.71 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°06'40"W A DISTANCE OF 629.93 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N23°22'05"E A DISTANCE OF 365.25 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°04'52"E A DISTANCE OF 569.62 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S82°03'30"E A DISTANCE OF 232.63 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S00°32'50"W A DISTANCE OF 39.69 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°17'06"E A DISTANCE OF 189.54 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°21'38"E A DISTANCE OF 14.94 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M. BEARS N19°08'06"E, A DISTANCE OF 2527.66 FEET;

SAID STRIP OF LAND BEING 4314.44 FEET OR 261.48 RODS IN LENGTH, CONTAINING 2.972 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4	1902.76 L.F.	115.32 RODS	1.310 ACRES
SW/4 SE/4	198.44 L.F.	12.03 RODS	0.137 ACRES
NW/4 SE/4	863.48 L.F.	52.33 RODS	0.595 ACRES
NE/4 SE/4	914.68 L.F.	31.20 RODS	0.355 ACRES
SE/4 NE/4	834.88 L.F.	50.60 RODS	0.575 ACRES

## SURVEYOR CERTIFICATE

I, FILIMON P. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 1 DAY OF JUNE 2018

FILIMON P. JARAMILLO, PLS. #2797

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

SURVEY NO. 6202

## GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

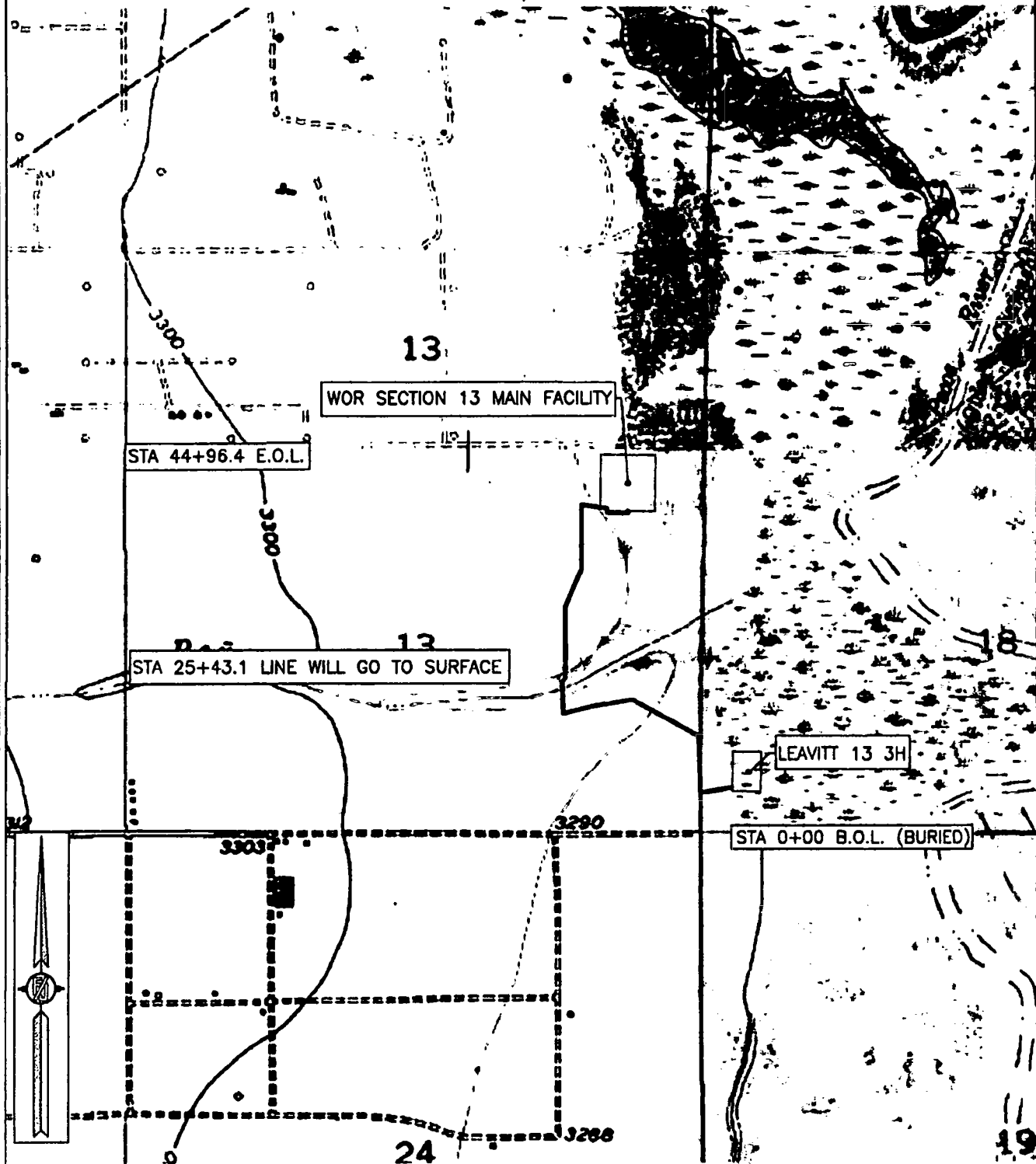
SHEET: 4-6

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

# FLOWLINE PLAT

4" SDR7 POLY PRODUCTION LINE (PARTIALLY BURIED AND PARTIALLY SURFACE) FROM THE  
LEAVITT 13 3H TO THE WOR SECTION 13 MAIN FACILITY

LIME ROCK RESOURCES II-A, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.  
SECTION 13, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 1, 2018



SHEET: 5-6

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 6202

**Lime Rock Resources II-A, L.P.  
Drilling Plan**

**Leavitt 13 #3H  
660' FSL 330' FWL  
(D) 18-18S-27E  
Eddy County, NM**

1. The elevation of the unprepared ground is 3287.5 feet above sea level.
2. The geologic name of the surface formation is Quaternary – Alluvium.
3. A rotary rig will be utilized to drill the well to 8000' MD/3500' TVD and run casing. This equipment will be down and the well will be completed with a workover rig.
4. Well will be drilled to a total proposed depth of 8000' MD/3500' TVD. The KOP for horizontal drilling will be at 1932'. See directional plan for details.

5. Estimated tops of geologic markers:

	MD	TVD
Quaternary – Alluvium	Surface	Surface
Yates	NA	NA
7 Rivers	NA	NA
Queen	400	400
Grayburg	637	637
Premier	906	906
San Andres	946	946
Glorieta	2406	2305
Yeso	2496	2395
Tubb	NA	NA
TD	8000	3500

6. Estimated depths at which anticipated oil, gas, or other mineral bearing formations are expected to be encountered:

	MD	TVD
Yates	NA	NA
7 Rivers	NA	NA
Queen	400	400
Grayburg	637	637
Premier	906	906
San Andres	946	946
Glorieta	2406	2305
Yeso	2496	2395
Tubb	NA	NA
TD	8000	3500

7. Proposed Casing and Cement program is as follows:

Type	Hole	Casing	Wt	Grade	Thread	Depth	Sx	Density	Yield	Components
Conductor	26"	20"	91.5	B	Welded	80	80			Ready Mix
Surface	12.25"	9-5/8"	36	J-55	ST&C	1230	600	14.8	1.35	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl <sub>2</sub>
Intermediate										
Production	8 3/4"	5-1/2"	20	L-80	LT&C	8000	500	12.8	1.903	(35:65) Poz/Cl C Cmt + 5% NaCl + 0.25 lbs/sk Cello Flake + 5 lbs/sk LCM-1 + 0.2% R-3 + 8% Gel
							1800	14.8	1.33	Class C w/ 0.6% R-3 and 1/4 pps cello flake

8. Proposed Mud Program is as follows

Depth	0-1230	1230-7850	7850-8000
Mud Type	Fresh Water Mud	Brine, Salt Gel, & Starch	Brine, Salt Gel, & Starch
Properties			
MW	8.4-9.2	9.8-10.1	9.9-10.1
pH	9.0-10.5	10.0-12.0	10.0-12.0
WL	NC	NC	20-30
Vis	28-34	28-29	32-34
MC	NC	NC	<2
Solids	NC	<2%	<3%
Pump Rate	300-500 gpm	375-425 gpm	400-425 gpm
Special		Use Poymers sticks and MF-55 Hi-Vis Sweeps as necessary	Hi Vis Sweeps, add acid and starch as req. Raise Vis to 35 for log.

9. Pressure Control Equipment: See Attached Description and diagram of Pressure Control Equipment.

10. Testing, Logging and Coring Program

**Testing Program:** No drill stem tests are anticipated

**Electric Logging Program:** SGR-DLL-CDL-CNL Quad Combo from 8000 to surf. Csg. SGR-CNL to Surf.

**Coring Program:** No full or sidewall cores are anticipated.

11. Potential Hazards:

No abnormal temperatures or pressures are expected. There is no known presence of H<sub>2</sub>S in this area. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 1540 psi based on 0.44 x TD. The estimated BHT is 125 degrees F.

12. Duration of Operations:

Anticipated spud date will be soon after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 15 days. An additional 14 days will be needed it complete the well and to construct surface facilities.



# LIME ROCK

Project: Eddy County, NM  
 Site: SEC 18 T18S R27E  
 Well: Leavitt 13-3H  
 Wellbore: Original Wellbore  
 Design: Plan 1

## Reference Details

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Latitude: 32° 44' 32.512 N  
 Longitude: 104° 19' 32.081 W  
 Grid Convergence: 0.00° West  
 Ground Elevation: 3291.2  
 KB Elevation: KB @ 3308.7usft

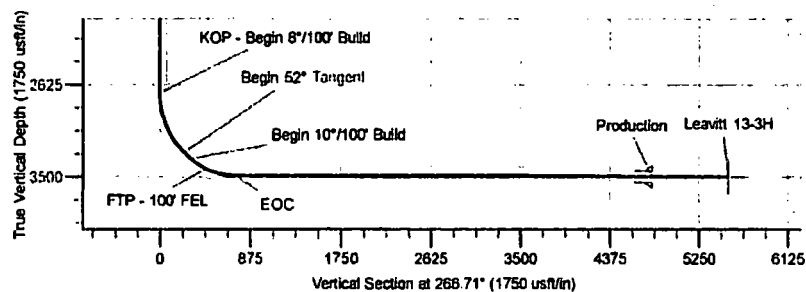
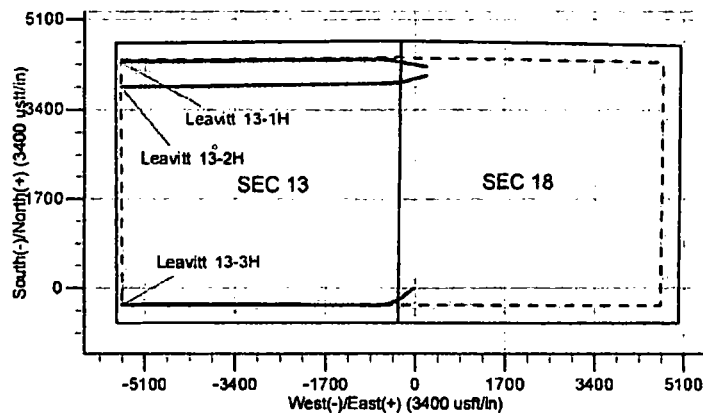
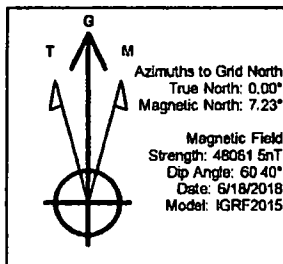
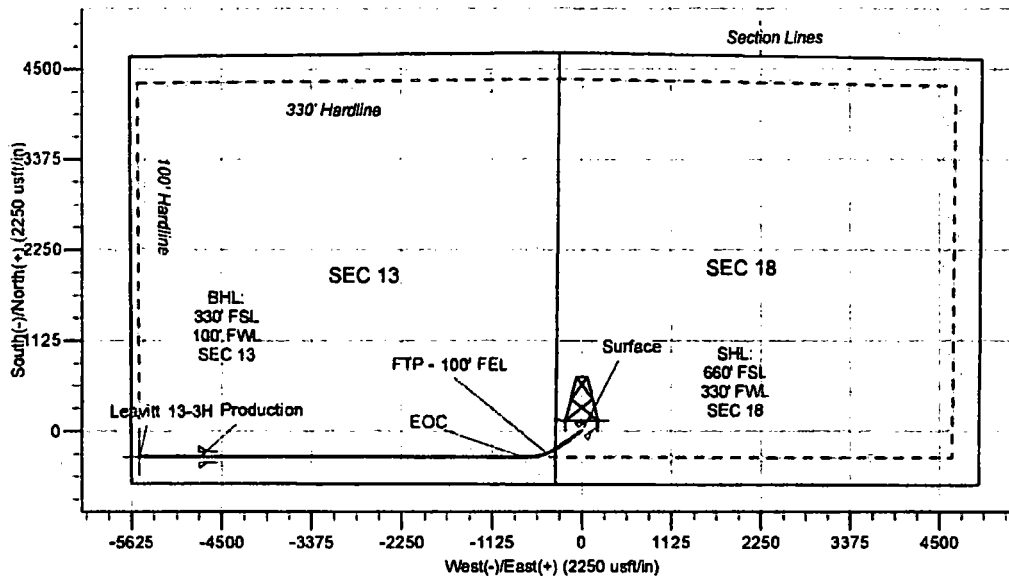


RPM Consulting, Inc.  
 1600 Broadway, Suite 1510  
 Denver, CO 80013  
 303-595-7825

## SECTION DETAILS

## CASING DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	TVD	MD	Name	Size
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	1230.0	1230.0	Surface	9-5/8
2700.0	0.00	0.00	2700.0	0.0	0.0	0.00	0.00	0.0	3498.5	8000.0	Production	5-1/2
3350.0	52.00	235.00	3264.4	-157.9	-225.5	8.00	235.00	234.2				
3450.0	52.00	235.00	3325.9	-203.1	-280.0	0.00	0.00	301.2				
3948.4	89.89	270.22	3490.3	-322.4	-728.0	10.00	49.00	745.3				
8750.7	89.88	269.87	3500.0	-318.3	-5530.3	0.01	-90.06	5539.5				



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DISTRICT II-ARTESIA O.C.D.

# **Lime Rock Resources**

**Eddy County, NM  
SEC 18 T18S R27E  
Leavitt 13-3H**

**Original Wellbore**

**Plan: Plan 1**

## **Standard Planning Report**

**18 June, 2018**

# Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well Leavitt 13-3H
<b>Company:</b>	Lime Rock Resources	<b>TVD Reference:</b>	KB @ 3308.7usft
<b>Project:</b>	Eddy County, NM	<b>MD Reference:</b>	KB @ 3308.7usft
<b>Site:</b>	SEC 18 T18S R27E	<b>North Reference:</b>	Grid
<b>Well:</b>	Leavitt 13-3H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<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		

**Site** SEC 18 T18S R27E

<b>Site Position:</b>		<b>Northing:</b>	638,004.77 usft	<b>Latitude:</b>	32° 45' 14.080 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	543,939.96 usft	<b>Longitude:</b>	104° 19' 29.525 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.00 °

**Well** Leavitt 13-3H

<b>Well Position</b>	<b>+N/-S</b>	-4,200.8 usft	<b>Northing:</b>	633,803.97 usft	<b>Latitude:</b>	32° 44' 32.512 N
	<b>+E/-W</b>	-218.0 usft	<b>Easting:</b>	543,721.99 usft	<b>Longitude:</b>	104° 19' 32.081 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,291.2 usft

**Wellbore** Original Wellbore

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2015	6/18/2018	7.23	60.40	48,061.49725680

**Design** Plan 1

**Audit Notes:**

<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
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<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	268.71

**Plan Survey Tool Program** Date 6/18/2018

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 0.0	8,750.7	Plan 1 (Original Wellbore)	MWD	
			Gealink MWD	

**Plan Sections**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,350.0	52.00	235.00	3,264.4	-157.9	-225.5	8.00	8.00	0.00	235.00	
3,450.0	52.00	235.00	3,325.9	-203.1	-290.0	0.00	0.00	0.00	0.00	
3,948.4	89.89	270.22	3,490.3	-322.4	-728.0	10.00	7.60	7.07	49.00	
8,750.7	89.88	269.87	3,500.0	-318.3	-5,530.3	0.01	0.00	-0.01	-90.06	Leavitt 13-3H

# Planning Report

**Database:** EDM Server Database  
**Company:** Lime Rock Resources  
**Project:** Eddy County, NM  
**Site:** SEC 18 T18S R27E  
**Well:** Leavitt 13-3H  
**Wellbore:** Original Wellbore  
**Design:** Plan 1

**Local Co-ordinate Reference:** Well Leavitt 13-3H  
**TVD Reference:** KB @ 3308.7usft  
**MD Reference:** KB @ 3308.7usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0 0	0.00	0.00	0 0	0.0	0.0	0 0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,230.0	0.00	0.00	1,230.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Surface</b>									
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Begin 8°/100' Build</b>									
2,800.0	8.00	235.00	2,798.7	-4.0	-5.7	5.9	8.00	8.00	0.00
2,900.0	16.00	235.00	2,897.4	-15.9	-22.7	23.6	8.00	8.00	0.00
3,000.0	24.00	235.00	2,991.3	-35.5	-50.7	52.7	8.00	8.00	0.00
3,100.0	32.00	235.00	3,079.5	-62.4	-89.1	92.6	8.00	8.00	0.00
3,200.0	40.00	235.00	3,160.4	-98.1	-137.3	142.6	8.00	8.00	0.00
3,300.0	48.00	235.00	3,232.2	-135.9	-184.1	201.6	8.00	8.00	0.00
3,350.0	52.00	235.00	3,284.4	-157.9	-225.5	234.2	8.00	8.00	0.00
<b>Begin 52° Tangent</b>									
3,400.0	52.00	235.00	3,285.2	-180.5	-257.8	267.7	0.00	0.00	0.00
3,450.0	52.00	235.00	3,325.9	-203.1	-290.0	301.2	0.00	0.00	0.00
<b>Begin 10°/100' Build</b>									
3,500.0	55.37	239.59	3,355.8	-224.8	-323.9	336.3	10.00	6.74	9.17
3,600.0	62.58	247.72	3,407.1	-262.6	-400.7	415.1	10.00	7.19	8.13
3,635.0	65.18	250.30	3,422.6	-273.8	-430.0	445.0	10.00	7.49	7.38
<b>FTP - 100' FEL</b>									
3,700.0	70.15	254.82	3,447.3	-291.8	-487.3	503.3	10.00	7.66	6.96
3,800.0	78.01	261.27	3,474.7	-311.6	-581.3	588.2	10.00	7.85	6.44
3,900.0	86.00	267.34	3,488.6	-321.3	-679.7	697.1	10.00	7.99	6.08
3,948.4	89.89	270.22	3,490.3	-322.4	-728.1	745.4	9.99	8.03	5.95
<b>EOC</b>									
4,000.0	89.88	270.22	3,490.5	-322.2	-779.7	796.9	0.01	0.00	-0.01
4,100.0	89.88	270.21	3,490.7	-321.8	-879.7	898.7	0.01	0.00	-0.01

# Planning Report

Database: EDM Server Database  
Company: Lime Rock Resources  
Project: Eddy County, NM  
Site: SEC 18 T18S R27E  
Well: Leavitt 13-3H  
Wellbore: Original Wellbore  
Design: Plan 1

Local Co-ordinate Reference: Well Leavitt 13-3H  
TVD Reference: KB @ 3308.7usft  
MD Reference: KB @ 3308.7usft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,200.0	89.88	270.20	3,490.9	-321.4	-979.7	998.5	0.01	0.00	-0.01
4,300.0	89.88	270.20	3,491.1	-321.1	-1,079.7	1,098.3	0.01	0.00	-0.01
4,400.0	89.88	270.19	3,491.3	-320.7	-1,179.7	1,198.1	0.01	0.00	-0.01
4,500.0	89.88	270.18	3,491.5	-320.4	-1,279.7	1,298.0	0.01	0.00	-0.01
4,600.0	89.88	270.18	3,491.7	-320.1	-1,379.7	1,395.8	0.01	0.00	-0.01
4,700.0	89.88	270.17	3,491.9	-319.8	-1,479.7	1,495.6	0.01	0.00	-0.01
4,800.0	89.88	270.16	3,492.1	-319.5	-1,579.7	1,595.4	0.01	0.00	-0.01
4,900.0	89.88	270.15	3,492.3	-319.2	-1,679.7	1,695.2	0.01	0.00	-0.01
5,000.0	89.88	270.15	3,492.5	-319.0	-1,779.7	1,795.0	0.01	0.00	-0.01
5,100.0	89.88	270.14	3,492.7	-318.7	-1,879.7	1,894.9	0.01	0.00	-0.01
5,200.0	89.88	270.13	3,492.9	-318.5	-1,979.7	1,994.7	0.01	0.00	-0.01
5,300.0	89.88	270.12	3,493.1	-318.3	-2,079.7	2,094.5	0.01	0.00	-0.01
5,400.0	89.88	270.12	3,493.3	-318.1	-2,179.7	2,194.3	0.01	0.00	-0.01
5,500.0	89.88	270.11	3,493.5	-317.9	-2,279.7	2,294.2	0.01	0.00	-0.01
5,600.0	89.88	270.10	3,493.7	-317.7	-2,379.7	2,394.0	0.01	0.00	-0.01
5,700.0	89.88	270.10	3,493.9	-317.5	-2,479.7	2,493.8	0.01	0.00	-0.01
5,800.0	89.88	270.09	3,494.1	-317.3	-2,579.7	2,593.6	0.01	0.00	-0.01
5,900.0	89.88	270.08	3,494.3	-317.2	-2,679.7	2,693.5	0.01	0.00	-0.01
6,000.0	89.88	270.07	3,494.5	-317.1	-2,779.7	2,793.3	0.01	0.00	-0.01
6,100.0	89.88	270.07	3,494.7	-316.9	-2,879.7	2,893.1	0.01	0.00	-0.01
6,200.0	89.88	270.06	3,494.9	-316.8	-2,979.7	2,992.9	0.01	0.00	-0.01
6,300.0	89.88	270.05	3,495.1	-316.7	-3,079.7	3,092.8	0.01	0.00	-0.01
6,400.0	89.88	270.04	3,495.3	-316.6	-3,179.7	3,192.6	0.01	0.00	-0.01
6,500.0	89.88	270.04	3,495.5	-316.6	-3,279.7	3,292.4	0.01	0.00	-0.01
6,600.0	89.88	270.03	3,495.7	-316.5	-3,379.7	3,392.3	0.01	0.00	-0.01
6,700.0	89.88	270.02	3,495.9	-316.5	-3,479.7	3,492.1	0.01	0.00	-0.01
6,800.0	89.88	270.02	3,496.1	-316.4	-3,579.6	3,591.9	0.01	0.00	-0.01
6,900.0	89.88	270.01	3,496.3	-316.4	-3,679.6	3,691.8	0.01	0.00	-0.01
7,000.0	89.88	270.00	3,496.5	-316.4	-3,779.6	3,791.6	0.01	0.00	-0.01
7,100.0	89.88	269.99	3,496.7	-316.4	-3,879.6	3,891.4	0.01	0.00	-0.01
7,200.0	89.88	269.99	3,496.9	-316.4	-3,979.6	3,991.3	0.01	0.00	-0.01
7,300.0	89.88	269.98	3,497.1	-316.5	-4,079.6	4,091.1	0.01	0.00	-0.01
7,400.0	89.88	269.97	3,497.3	-316.5	-4,179.6	4,190.9	0.01	0.00	-0.01
7,500.0	89.88	269.96	3,497.5	-316.6	-4,279.6	4,290.8	0.01	0.00	-0.01
7,600.0	89.88	269.96	3,497.7	-316.6	-4,379.6	4,390.6	0.01	0.00	-0.01
7,700.0	89.88	269.95	3,497.9	-316.7	-4,479.6	4,490.4	0.01	0.00	-0.01
7,800.0	89.88	269.94	3,498.1	-316.8	-4,579.6	4,590.3	0.01	0.00	-0.01
7,900.0	89.88	269.94	3,498.3	-316.9	-4,679.6	4,690.1	0.01	0.00	-0.01
8,000.0	89.88	269.93	3,498.5	-317.0	-4,779.6	4,790.0	0.01	0.00	-0.01
Production									
8,100.0	89.88	269.92	3,498.7	-317.2	-4,879.6	4,889.8	0.01	0.00	-0.01
8,200.0	89.88	269.91	3,498.9	-317.3	-4,979.6	4,989.7	0.01	0.00	-0.01
8,300.0	89.88	269.91	3,499.1	-317.5	-5,079.6	5,089.5	0.01	0.00	-0.01
8,400.0	89.88	269.90	3,499.3	-317.6	-5,179.6	5,189.3	0.01	0.00	-0.01
8,500.0	89.88	269.89	3,499.5	-317.8	-5,279.6	5,289.2	0.01	0.00	-0.01
8,600.0	89.88	269.88	3,499.7	-318.0	-5,379.6	5,389.0	0.01	0.00	-0.01
8,700.0	89.88	269.86	3,499.9	-318.2	-5,479.6	5,488.9	0.01	0.00	-0.01
8,750.7	89.88	269.87	3,500.0	-318.3	-5,530.3	5,539.5	0.01	0.00	-0.01
Total Depth									

## Planning Report

**Database:** EDM Server Database  
**Company:** Lime Rock Resources  
**Project:** Eddy County, NM  
**Site:** SEC 18 T18S R27E  
**Well:** Leavitt 13-3H  
**Wellbore:** Original Wellbore  
**Design:** Plan 1

**Local Co-ordinate Reference:** Well Leavitt 13-3H  
**TVD Reference:** KB @ 3308.7usft  
**MD Reference:** KB @ 3308.7usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Leavitt 13-3H	0.00	380.00	3,500.0	-318.3	-5,530.3	633,485.64	538,191.69	32° 44' 29.381 N	104° 20' 36.833 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

### Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,230.0	1,230.0	Surface	9-5/8	12-1/4
8,000.0	3,498.5	Production	5-1/2	8-3/4

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,700.0	2,700.0	0.0	0.0	KOP - Begin 8"/100' Build
3,350.0	3,264.4	-157.9	-225.5	Begin 52" Tangent
3,450.0	3,325.9	-203.1	-280.0	Begin 10"/100' Build
3,635.0	3,422.6	-273.8	-430.0	FTP - 100' FEL
3,848.4	3,490.3	-322.4	-728.1	EOC
8,750.7	3,500.0	-318.3	-5,530.3	Total Depth

# Hydrogen Sulfide Drilling Plan Summary

A. All personnel shall receive proper H<sub>2</sub>S training in accordance with Onshore Order 6 III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

■ Well control equipment

- a. Flare line 150' from wellhead to be ignited by flare gun.
- b. Choke manifold with a remotely operated choke.
- c. Mud/gas separator

■ Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor and contain sufficiently long air hoses as to not restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

■ H<sub>2</sub>S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.  
(Gas sample tubes will be stored in the safety trailer)

■ Visual warning systems:

- a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
- c. Two wind socks will be placed in strategic locations, visible from all angles.

■ Mud program:

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.

■ Metallurgy:

- a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- b. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

■ Communication:

Communication will be via two way radio in emergency and company vehicles. Cell phones and land lines where available.

## H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

**Company Offices -** Lime Rock Houston Office  
 Answering Service (After Hours)  
 Artesia, NM Office  
 Roswell, NM

713-292-9510  
 713-292-9555  
 575-748-9724  
 575-623-8424

### KEY PERSONNEL

Name	Title	Location	Office #	Cell #	Home #
Steve Hunter	Production Manager	Houston	713-292-9516	832-330-7313	Same as Cell
Spencer Cox	Operations Engineer	Houston	713-292-9528	432-254-5140	Same as Cell
Eric McClusky	Operations Engineer	Houston	713-360-5714	832-491-3079	405-821-0534
Jerry Smith	Assistant Production Supervisor	Artesia	575-748-9724	505-918-0556	575-746-2478
Michael Barrett	Production Supervisor	Roswell	575-623-8424	505-353-2644	575-623-4707
Gary McClland	Well Site Supervisor	Rotates on Site	NA	903-503-8997	NA
Dave Williamson	Well Site Supervisor	Rotates on Site	NA	575-308-9980	NA

### Agency Call List

City	Agency or Office	Telephone #
Artesia	Ambulance	911
Artesia	State Police	575-746-2703
Artesia	Sherriff's Office	575-746-9888
Artesia	City Police	575-746-2703
Artesia	Fire Department	575-746-2701
Artesia	Local Emergency Planning Committee	575-746-2122
Artesia	New Mexico OCD District II	575-748-1283
Carlsbad	Ambulance	911
Carlsbad	State Police	575-885-3137
Carlsbad	Sherriff's Office	575-887-7551
Carlsbad	City Police	575-885-2111
Carlsbad	Fire Department	575-885-2111
Carlsbad	Local Emergency Planning Committee	575-887-3798
Carlsbad	US DOI Bureau of Land Management	575-887-6544
State Wide	New Mexico Emergency Response Commisssion ("NMERC")	505-476-9600
State Wide	NMERC 24 Hour Number	505-827-9126
State Wide	New Mexico State Emergency Operations Center	505-476-9635
National	National Emergency Response Center (Washington D.C.)	800-424-8802

Emergency Services				
Name	Service	Location	Telephone Number	Alternate Number
Boots & Coots International Well Control	Well Control	Houston / Odessa	1-800-256-9688	281-931-8884
Cudd Pressure Control	Well Control/Pumping	Odessa	915-699-0139	915-563-3356
Baker Hughes Inc.	Pumping Services	Artesia, Hobbs & Odessa	575-746-2757	Same
Total Safety	Safety Equipment & Personnel	Artesia	575-746-2847	Same
Cutter Oilfield Services	Drilling Systems Equipment	Midland	432-488-6707	Same
Safety Dog	Safety Equipment & Personnel	Artesia	575-748-5847	575-441-1370
Fighting for Life	Emergency Helicopter Evacuation	Lubbock	806-743-9911	Same
Aerocare	Emergency Helicopter Evacuation	Lubbock	806-747-8923	Same
Med Flight Air Ambulance	Emergency Helicopter Evacuation	Albuquerque	505-842-4433	Same
Artesia General Hospital	Emergency Medical Care	Artesia	575-748-3333	702 North 13th Street

## **Pressure Control Equipment**

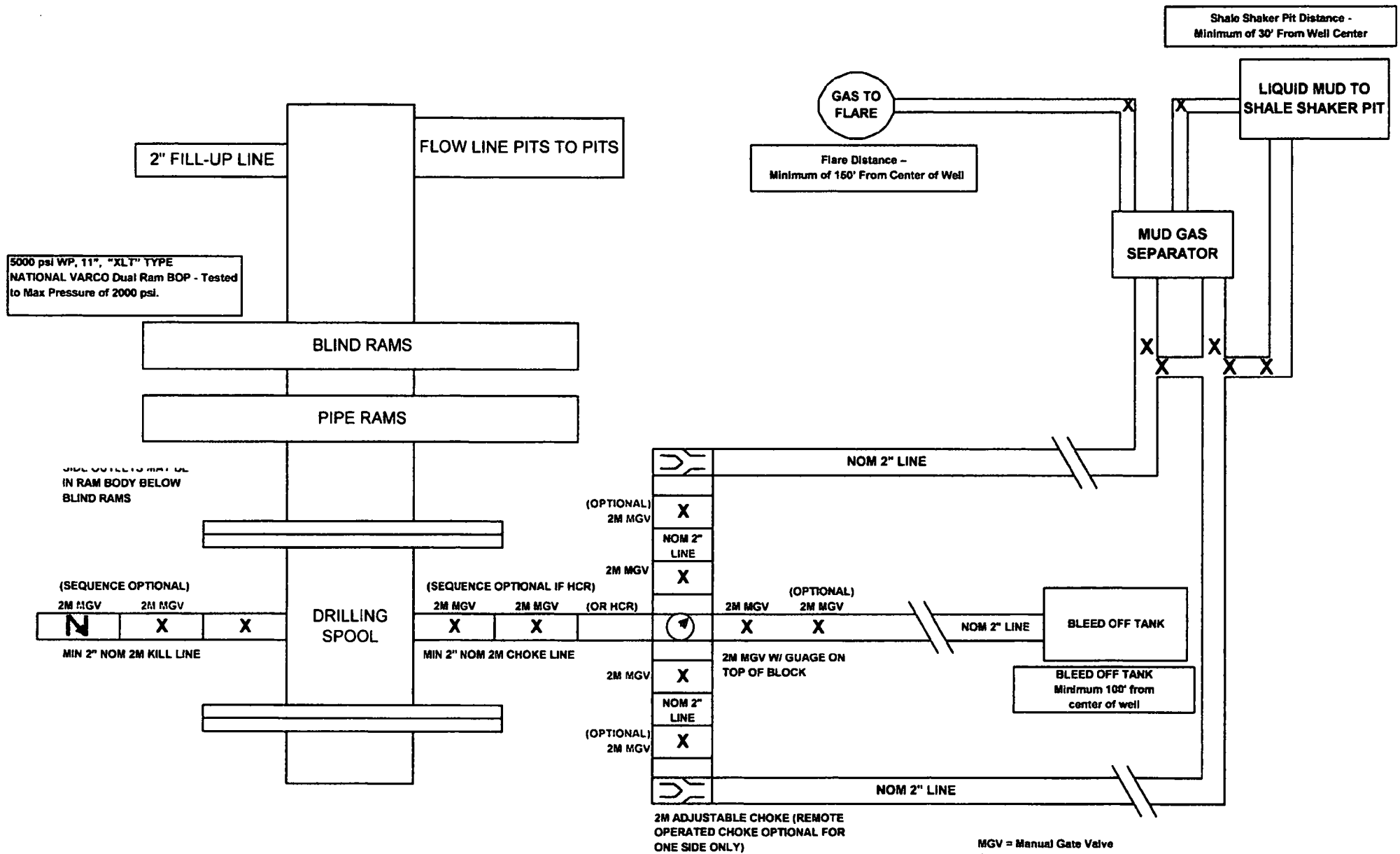
The blowout preventer equipment (BOP) will consist of a 5000 psi rated, "XLT" type, National VARCO double ram preventer that will be tested to a maximum pressure of 2000 psi. The unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and drill pipe rams on bottom. The 2M BOP will be installed on the 9 5/8" surface casing and utilized continuously until total depth is reached. All casing strings will be tested as per Onshore Order #2. This also includes a thirty day (30) test, should the rig still be operating on the same well in thirty days.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drilling logs.

The BOP equipment will consist of the following:

- Double ram with blind rams (top) and pipe rams (bottom),
- Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 2" minimum diameter, kill side will be at least 2 inch diameter),
- Kill line (2 inch minimum),
- A minimum of 2 choke line valves (2 inch minimum),
- 2 inch diameter choke line,
- 2 kill valves, one of which will be a check valve (2 inch minimum),
- 2 chokes, one of which will be capable of remote operation,
- Pressure gauge on choke manifold,
- Upper Kelly cock valve with handle available,
- Safety valve and subs to fit all drill string connections in use,
- All BOPE connections subjected to well pressure will be flanged, welded, or clamped,
- A Fill-up line above the uppermost preventer.

## 2M BOP SCHEMATIC



MGV = Manual Gate Valve  
 CKV = Check Valve  
 HCR = Hydraulically Controlled Remote Valve

NOTE: All lines, valves and chokes are shown at the minimum size allowed, but may be larger

# **Lime Rock Resources II-A, L.P.**

## **Leavitt 13 #3H**

### **Unit D, S18-T18S-R27E, Eddy County, NM**

#### **Design: Closed Loop System with roll-off steel bins (pits)**

CRI/HOBBS will supply (2) bins (100 bbl) volume, rails and transportation relating to the Close Loop System. Specification of the Closed Loop System is attached.

Contacts: Gary Wallace (432) 638-4076 Cell (575) 393-1079 Office

#### **Scomi Oil Tool: Supervisor – Armando Soto (432) 553-7979 Hobbs, NM**

Monitoring 24 Hour service

Equipment:

Centrifuges – Derrick Brand

Rig Shakers – Brandt Brand

D-watering Unit

Air pumps on location for immediate remediation process

Layout of Close Loop System with bins, centrifuges and shakers attached.

Cuttings and associated liquids will be hauled to a State regulated third party disposal site (CRI or Controlled Recovery, Inc.). The disposal site permit is DFP = #R9166.

2- (250 bbl) tanks to hold fluid

2-CRI bins with track system

2-500 bbl frac tanks with fresh water

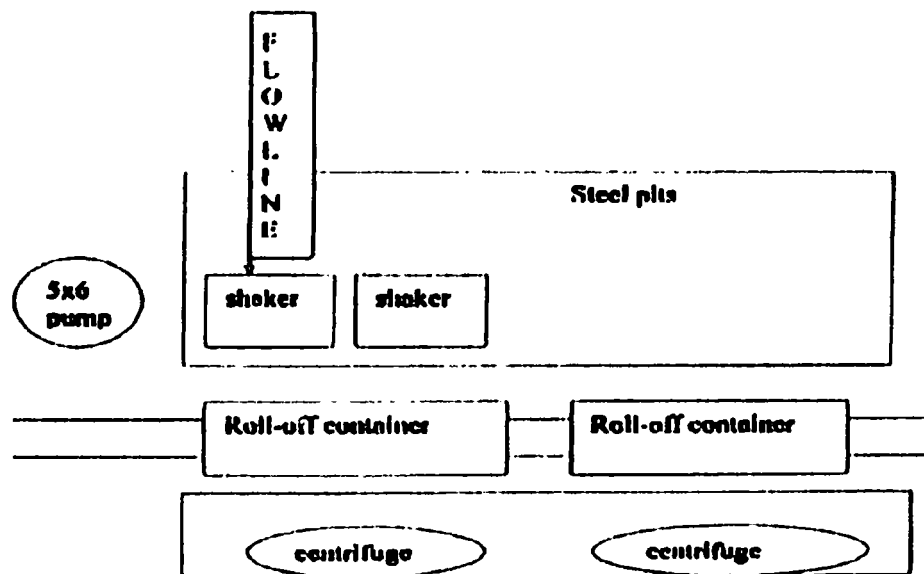
2-500 bbl frac tanks for brine water

#### **Operations:**

Closed Loop System equipment will be inspected daily by each tour and any necessary maintenance performed. leak in system will be repaired and/or contained immediately. OCD will be notified within 48 hours of any spill. Remediation process will start immediately.

#### **Closure:**

During drilling operations all liquids, drilling fluids and cuttings will be hauled off via CRI equipment to DFP #R9166.



This will be maintained by 24 hour solids control personnel that stay on location.

**TOMMY WILSON**



**CLOSED LOOP  
SPECIALTY**

Office: 575.744.1689

Cell: 575.744.6167