

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, Artec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S St Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED Report

RECEIVED

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
		API Number 30-015-43298
Proporty Code 315090	Property Name Terry 14E	Well No #8

7 Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
E	14	18S	26E		2510	N	705	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
E	14	18S	26E		2310	N	980	W	Eddy

9 Pool Information

Atoka; Glorieta-Yeso	3250
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Additional Well Information

Work Type N	Well Type O	Cable/Rotary R	Lease Type P	Ground Level Elevation 3323.1
Multile N	Proposed Depth 4334' MD / 4300' TVD	Formation Yeso	Contractor United Drilling, Inc.	Soud Date After 1/20/2018
Depth to Ground Water: 120 Ft.		Distance from nearest fresh water well: 0.114393939 Miles		Distance from nearest surface water: 1 Miles

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

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	12-1/4"	8-5/8"	24	1230	800	Surface
Production	7-7/8"	5-1/2"	17	4334	900	Surface

Casing/Cement Program: Additional Comments

Artesian Aquifer Porosity 1160'-1170'

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) ☐ and/or 19.15.14.9 (B) NMAC 0, if ☒

Signature: *Eric McClusky*
Printed Name: Eric McClusky

Title: Operations Engineer

E-mail Address: emcclusky@limerockresources.com

Date: 1/10/2018

Phone: 713-360-5714

OIL CONSERVATION DIVISION

Approved By:

Raymond W. Rodary
Title: *Geologist*

Approved Date: 1-16-18

Expiration Date: 1-16-20

Conditions of Approval Attached

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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 & Natural Resources Department
ARTESIA DISTRICT
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-43298		Pool Code 3250	Pool Name Atoka; Glorieta - YESO
Property Code 315090	Property Name TERRY 14E		Well Number 8
OGRID No. 277558	Operator Name LIME ROCK RESOURCES II-A, L.P.		Elevation 3323.1

Surface Location

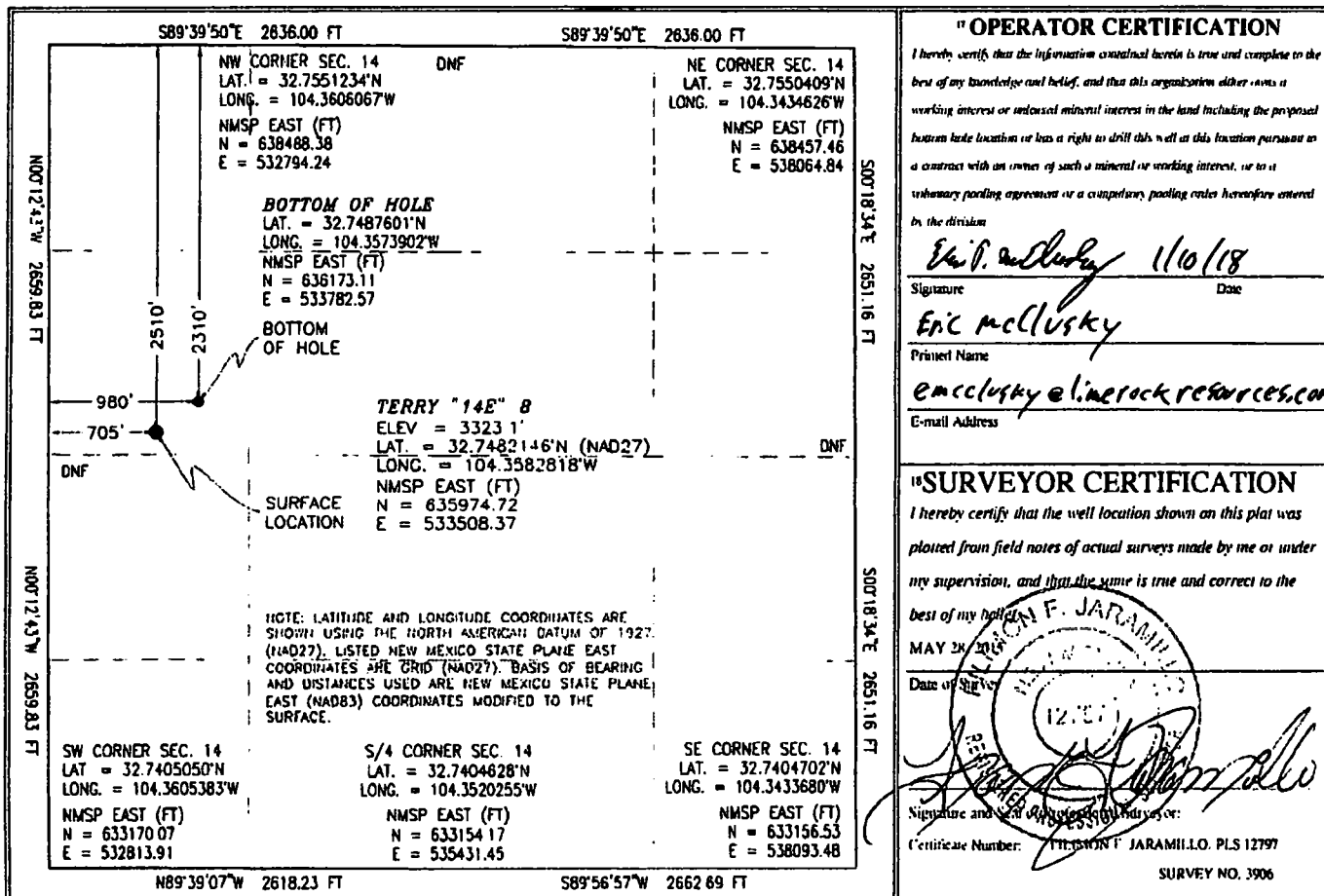
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	14	18 S	26 E		2510	NORTH	705	WEST	EDDY

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
E	14	18 S	26 E		2310	NORTH	980	WEST	EDDY

Dedicated Acres 40	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.



SITE MAP

Site plan for Terry "14E" 8, showing a proposed pad, water BPL, and various offsets and dimensions.

Proposed Pad: 400' x 290' (to be down sized to 280' x 240').

Water BPL: 589'40"01'E 400.03 FT.

Offsets:

- 150' NORTH OFFSET EL. 3323.0'
- 150' EAST OFFSET EL. 3322.3'
- 250' WEST OFFSET EL. 3324.0'
- 150' SOUTH OFFSET EL. 3323.8'

Dimensions:

- 250' (width)
- 150' (width)
- 140' (width)
- 290.06 FT (length)
- 290.08 FT (length)
- 399.97 FT (length)

Other Features:

- FLARE FOR TERRY "14E" 8
- SPRINKLER HEAD
- BERM
- POLE
- RIVER ROCK ROAD
- LEASE ROAD
- 3/W POWER LINE
- PROPOSED 19 LF ACCESS ROAD

Coordinates:

- LAT. = 32.7482146°N (NAD27)
- LONG. = 104.3582818°W
- NMSP EAST (FT)
- N = 835974.72
- E = 333508.37

Elevations:

- EL. 3324.6'
- EL. 3322.3'
- EL. 3324.0'
- EL. 3322.8'
- EL. 3323.8'

Other Labels:

- FARM LAND
- TERRY "14E" 8
- TERRY "14E" 4
- PROPOSED PAD
- PROPOSED PAD 400'x290' WILL BE DOWN SIZED TO 280'x240'

SCALE 1" = 100'
DIRECTIONS TO LOCATION

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF

(FANNING) GO SOUTH ON CR 44 FOR APPROX. 0.5 OF A MILE, TURN RIGHT ON LEASE ROAD AND GO WEST 0.59 OF A MILE TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS NORTH 18' TO THE PROPOSED SOUTHEAST PAD CORNER FOR THIS LOCATION.

LIME ROCK RESOURCES II-A, L.P.

TERRY "14E" 8

LOCATED 2510 FT. FROM THE NORTH LINE
AND 705 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

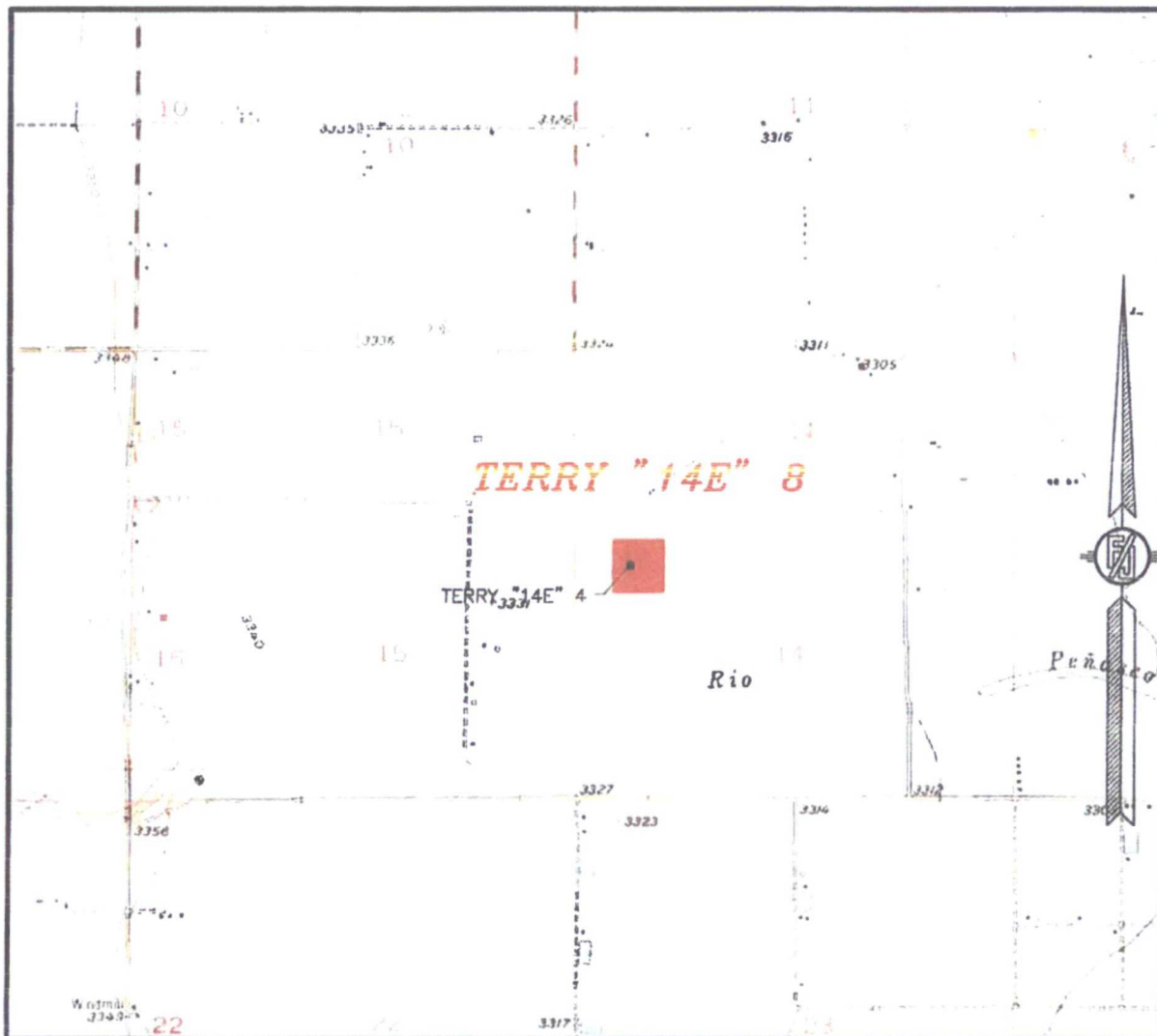
MAY 28, 2015

SURVEY NO. 3906

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

301 SOUTH CANAL
(575) 234-3341

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 LOCATION VERIFICATION MAP



USGS QUAD MAP:
 SPRING LAKE

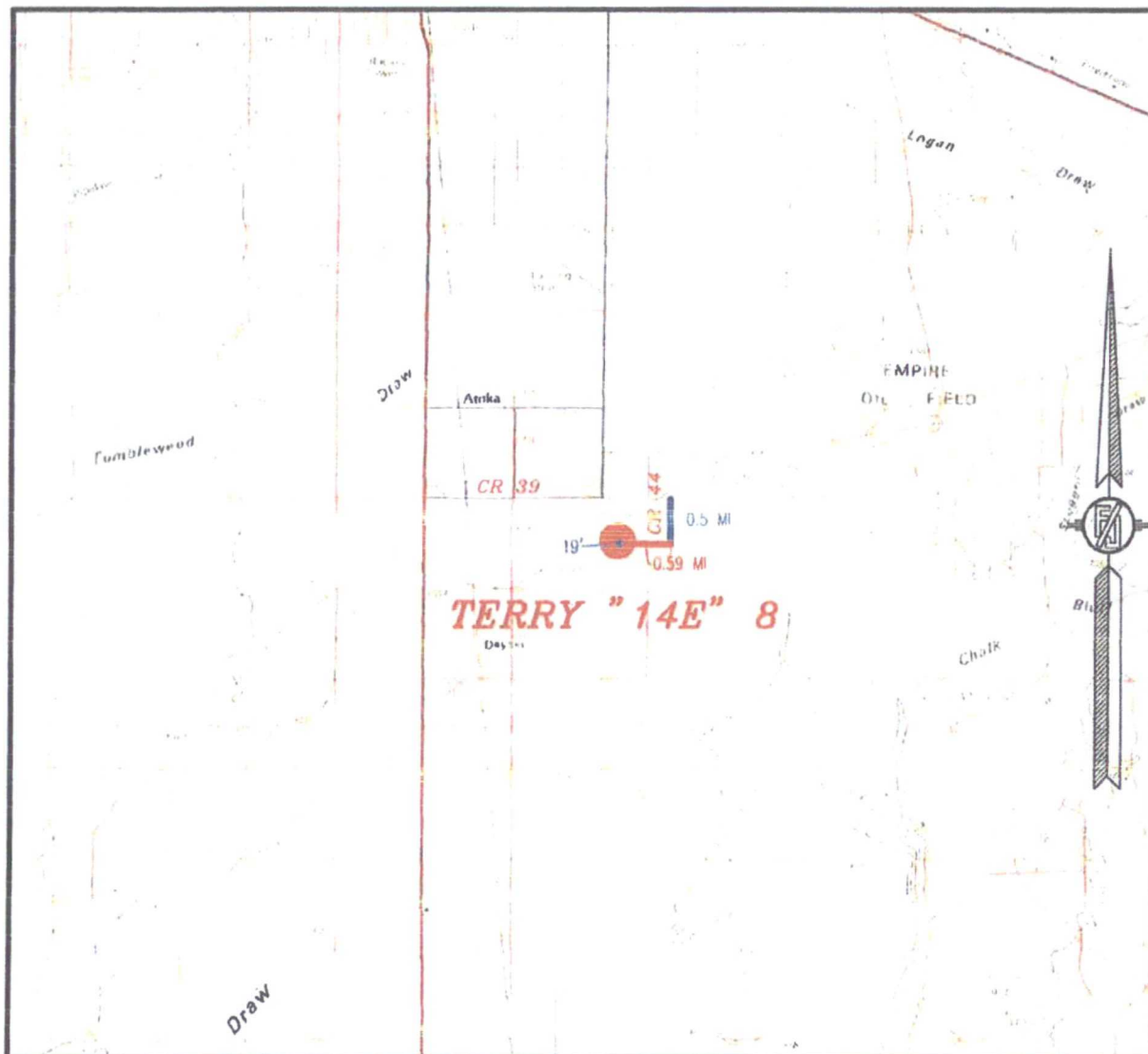
NOT TO SCALE

LIME ROCK RESOURCES II-A, L.P.
TERRY "14E" 8
 LOCATED 2510 FT. FROM THE NORTH LINE
 AND 705 FT. FROM THE WEST LINE OF
 SECTION 14, TOWNSHIP 18 SOUTH,
 RANGE 26 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 28, 2015

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 SURVEY NO. 3906
 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 26 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.
TERRY "14E" 8
LOCATED 2510 FT. FROM THE NORTH LINE
AND 705 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CR 39 (4-DINKUS) AND CR 44
(FANNING) GO SOUTH ON CR 44 FOR APPROX. 0.5 OF A MILE, TURN
RIGHT ON LEASE ROAD AND GO WEST 0.59 OF A MILE TO A
PROPOSED ROAD SURVEY AND FOLLOW FLAGS NORTH 19° TO THE
PROPOSED SOUTHEAST PAD CORNER FOR THIS LOCATION.

MAY 28, 2015

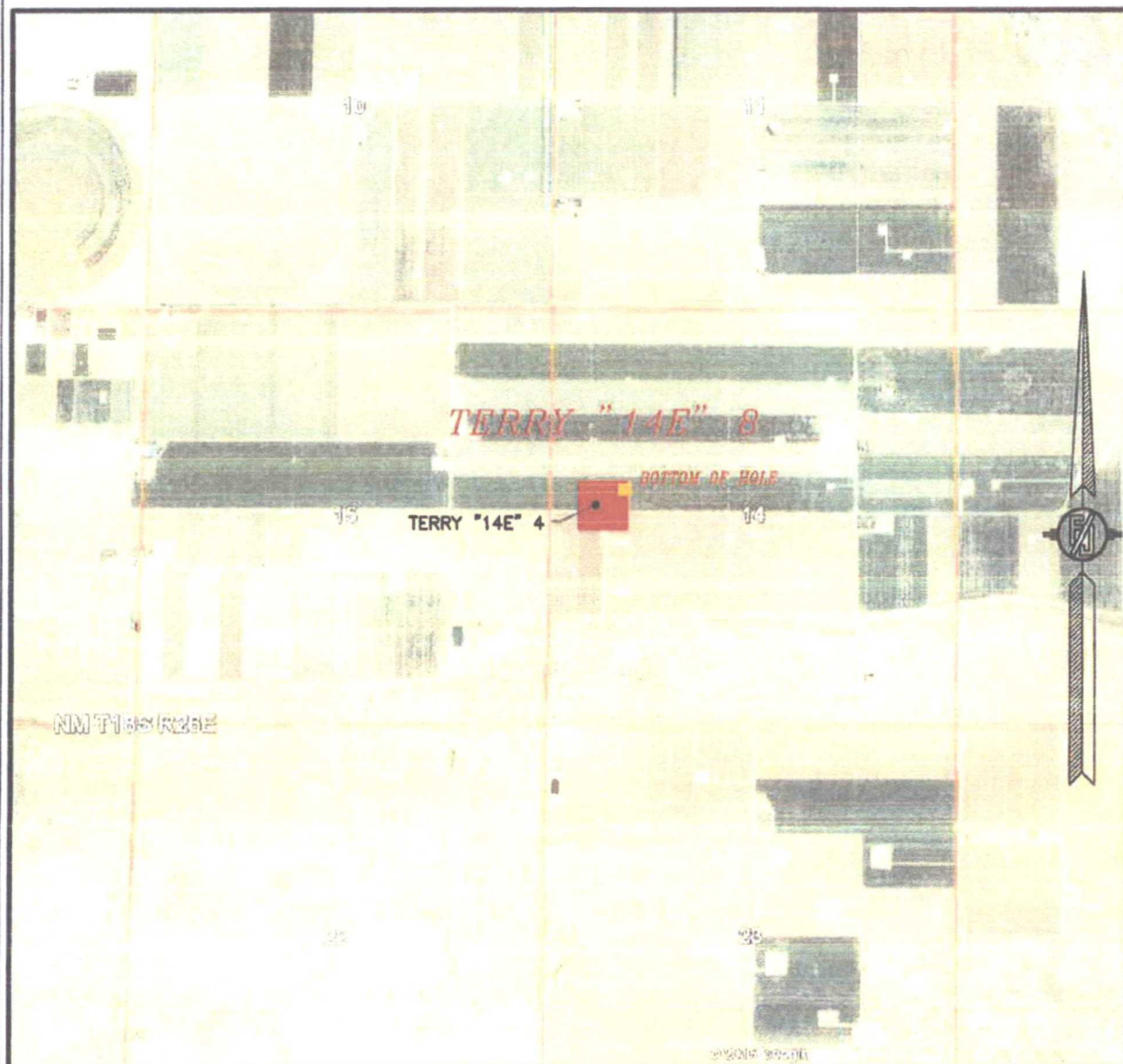
MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SURVEY NO. 3906

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAY 2014

LIME ROCK RESOURCES II-A, L.P.
TERRY "14E" 8
LOCATED 2510 FT. FROM THE NORTH LINE
AND 705 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 28, 2015

SURVEY NO. 3906

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

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAY 2014

LIME ROCK RESOURCES II-A, L.P.
TERRY "14E" 8
LOCATED 2510 FT. FROM THE NORTH LINE
AND 705 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 28, 2015

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

SURVEY NO. 3906

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

**Terry 14E #8
2510' FNL 705' FWL
(E) 14-18S-26E
Eddy County, NM**

1. The elevation of the unprepared ground is 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 4300' and run casing. This equipment will be rigged down and the well will be completed with a workover rig
4. Well will be drilled to a total proposed depth of 4334' MD./ 4300' TVD. inside a 30' X 30' square tail inside of 40 acre spacing regulatory quarter-quarter setback distance. The KOP for directional drilling will be at 400'. See directional plan for details
5. Estimated tops of geologic markers:
6. Estimated depths at which anticipated oil, gas, or other mineral bearing formations are expected to be encountered:

	MD	TVD
Quaternary – Alluvium	Surface	Surface
Yates	NA	NA
7 Rivers	NA	NA
Queen	290	290
Grayburg	671	670
Premier	984	977
San Andres	992	985
Glorieta	2398	2364
Yeso	2516	2482
Tubb	3901	3867
TD	4334	4300

	MD	TVD
Yates	NA	NA
7 Rivers	NA	NA
Queen	290	290
Grayburg	671	670
Premier	984	977
San Andres	992	985
Glorieta	2398	2364
Yeso	2516	2482
Tubb	3901	3867
TD	4334	4300

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	12-1/4"	8-5/8"	24	J-55	ST&C	1230	800	14.8	1.35	CI C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl ₂
Intermediate										
Production	7-7/8"	5-1/2"	17	J-55	LT&C	4334	300	12.8	1.903	(35:65) Poz/CI C Cmt + 5% NaCl + 0.25 lbs/sk Cello Flake + 5 lbs/sk LCM-1 + 0.2% R-3 + 8% Gel
							600	14.8	1.33	CI H w/ 0.6% R-3, 0.125% Cello Flake, 2% Gel

8. Proposed Mud Program is as follows

Depth	0-1230	1230-4150	4150-4334
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 4334 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 H₂S in this H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. personnel will be familiar with all aspects of safe operation of equipment being used to drill this well Estimated BHP 1906.96 psi based on 0.44 x TD. The estimated BHT is 125 degrees F.

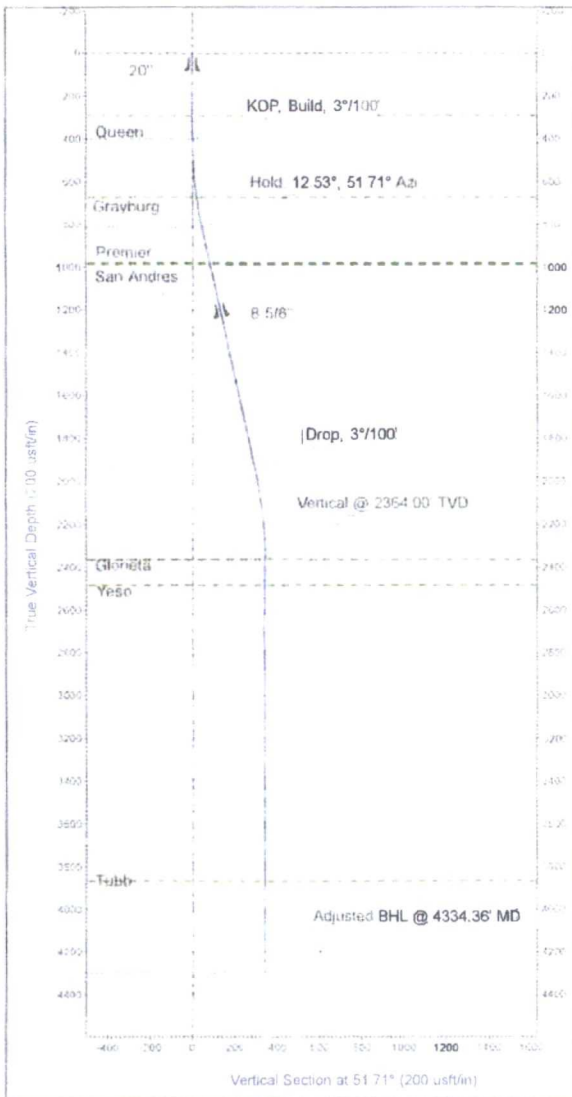
12. Duration of Operations:

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 10 days. An additional 14 days will be needed it complet well and to construct surface facilities.



Limerock Resources
Terry 14E No 8
Eddy County, New Mexico NAD 83
Wellbore: Orig Hole
Plan: Plan 1
Rig: United 33

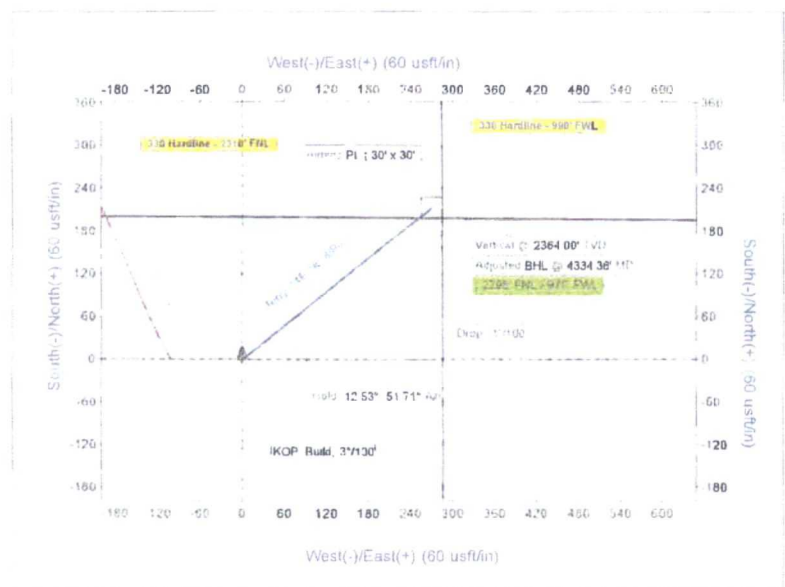
Rig: United 33



SURFACE LOCATION		Ground Elevation	3323.10 11.8 KB @ 3324.90 usf/in (United 33)		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	635974.81	533508.23	32.7483290	-104.3587990

TARGET LOCATIONS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
Aiming Pt. (Terry 14E #8)	2364.00	212.75	269.53	635187.56	533777.76
Adjusted BHL (Terry 14E #8)	4300.00	212.75	269.53	636187.56	533777.76

DRILL BIT TUBES			
TVD	MD	Name	Size
80.00	80.00	20"	20.000
1230.00	1243.47	8 5/8"	8.625



Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Latitude: 32.7483290
Longitude: -104.3587990

Grid East: 533508.23
Grid North: 635974.81
Scale Factor: 1.000

Geomagnetic Model: IGRF2015
Sample Date: 04-Jan-15
Magnetic Declination: 7.30°
Dip Angle from Horizontal: 60.41°
Magnetic Field Strength: 48107.74055516nT

To convert a Magnetic Direction to a Grid Direction Add 7.31

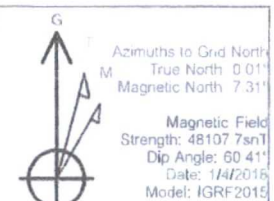
Well Offset Distances

Slot Name	+N/-S	+E/-W
Terry 14 G No 3	-15.44	2635.71
Terry 14C No 2	2316.14	1396.23
Terry 14C No 6	2316.61	1286.24
Terry 14E No 4	0.49	-90.83
Terry 14E No 8	0.00	0.00
Terry 14G No 7	-15.06	2535.49

Well Planning: Phil Lyons
11-01, January 05 2018

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	KOP: Build, 3°/100'
3	817.80	12.53	51.71	814.48	28.20	35.73	3.00	51.71	45.52	Hold, 12.53°/51.71° Az
4	1980.56	12.53	51.71	1949.52	184.55	233.80	0.00	0.00	297.86	Drop, 3°/100'
5	2308.36	0.00	360.00	2364.00	212.75	269.53	0.00	180.00	343.38	Vertical @ 2364.00 TVD
6	4334.36	0.00	360.00	4300.00	212.75	269.53	0.00	360.00	343.38	(2295° FNL / 975° FWL)



Limerock Resources

Eddy County, New Mexico NAD 83

Terry - (NAD 83)

Terry 14E No 8

Orig Hole

Plan: Plan 1

Standard Planning Report

05 January, 2018

Windows User Planning Report

Database: Accel Server EDM
Company: Limerock Resources
Project: Eddy County, New Mexico NAD 83
Site: Terry - (NAD 83)
Well: Terry 14E No 8
Wellbore: Orig Hole
Design: Plan 1

Local Co-ordinate Reference: Well Terry 14E No 8
TVD Reference: 11.8' KB @ 3334.90usft (United 33)
MID Reference: 11.8' KB @ 3334.90usft (United 33)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, New Mexico NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Terry - (NAD 83)				
Site Position:		Northing:	638,291.64 usft	Latitude:	32.7546980
From:	Lat/Long	Easting:	534,804.58 usft	Longitude:	-104.3545840
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-0.01 °

Well	Terry 14E No 8					
Well Position	+N-S	-2,316.83 usft	Northing:	635,974.81 usft	Latitude:	32.7483290
	+E-W	-1,296.34 usft	Easting:	533,508.24 usft	Longitude:	-104.3587990
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,323.10 usft

Wellbore	Orig Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/4/2018	7.30	60.41	48,107.74055516

Design	Plan 1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	51.71	

Plan Survey Tool Program	Date 1/5/2018				
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1 0.00	4,334.36	Plan 1 (Orig Hole)	MWD+IGRF		
			OWSG MWD + IGRF or WMM		

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
0.00	0.00	0.00	0.00	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	
817.80	12.53	51.71	814.48	28.20	35.73	3.00	3.00	0.00	51.71	
1,980.58	12.53	51.71	1,949.52	184.55	233.60	0.00	0.00	0.00	0.00	
2,398.36	0.00	360.00	2,364.00	212.75	269.53	3.00	-3.00	0.00	180.00	Aiming Pt. (Terry 14E
4,334.36	0.00	360.00	4,300.00	212.75	269.53	0.00	0.00	0.00	360.00	

Windows User Planning Report

Database: Accel Server EDM
Company: Limerock Resources
Project: Eddy County, New Mexico NAD 83
Site: Terry - (NAD 83)
Well: Terry 14E No 8
Wellbore: Orig Hole
Design: Plan 1

Local Co-ordinate Reference: Well Terry 14E No 8
TVD Reference: 11.8' KB @ 3334.90usft (United 33)
MID Reference: 11.8' KB @ 3334.90usft (United 33)
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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.00	0.00	0.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00
20"									
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
280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	0.00
Queen									
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
KOP, Build, 3°/100'									
500.00	3.00	51.71	499.95	1.82	2.05	2.82	3.00	3.00	0.00
600.00	6.00	51.71	599.63	6.48	8.21	10.46	3.00	3.00	0.00
670.91	8.13	51.71	670.00	11.88	15.06	19.18	3.00	3.00	0.00
Grayburg									
700.00	9.00	51.71	698.77	14.57	18.46	23.51	3.00	3.00	0.00
800.00	12.00	51.71	797.08	25.86	32.76	41.74	3.00	3.00	0.00
817.80	12.53	51.71	814.48	28.20	35.73	45.52	3.00	3.00	0.00
Hold, 12.53°, 61.71° Azi									
900.00	12.53	51.71	894.72	39.25	49.73	63.38	0.00	0.00	0.00
984.29	12.53	51.71	977.00	50.59	64.09	81.65	0.00	0.00	0.00
Premier									
992.49	12.53	51.71	985.00	51.69	65.46	83.43	0.00	0.00	0.00
San Andres									
1,000.00	12.53	51.71	992.33	52.70	66.76	85.06	0.00	0.00	0.00
1,100.00	12.53	51.71	1,089.85	66.15	83.80	108.78	0.00	0.00	0.00
1,200.00	12.53	51.71	1,187.57	79.59	100.83	128.48	0.00	0.00	0.00
1,243.47	12.53	51.71	1,230.00	85.44	108.24	137.90	0.00	0.00	0.00
8 5/8"									
1,300.00	12.53	51.71	1,285.18	93.04	117.87	150.16	0.00	0.00	0.00
1,400.00	12.53	51.71	1,382.80	106.49	134.90	171.87	0.00	0.00	0.00
1,500.00	12.53	51.71	1,480.42	119.93	151.94	193.57	0.00	0.00	0.00
1,600.00	12.53	51.71	1,578.03	133.38	168.97	215.27	0.00	0.00	0.00
1,700.00	12.53	51.71	1,675.65	146.82	186.01	236.97	0.00	0.00	0.00
1,800.00	12.53	51.71	1,773.27	160.27	203.04	258.67	0.00	0.00	0.00
1,900.00	12.53	51.71	1,870.88	173.72	220.08	280.38	0.00	0.00	0.00
1,980.56	12.53	51.71	1,949.52	184.55	233.80	297.86	0.00	0.00	0.00
Drop, 3°/100'									
2,000.00	11.95	51.71	1,968.52	187.10	237.03	301.98	3.00	-3.00	0.00
2,100.00	8.95	51.71	2,068.85	198.34	251.27	320.12	3.00	-3.00	0.00
2,200.00	5.95	51.71	2,168.00	206.37	261.45	333.08	3.00	-3.00	0.00
2,300.00	2.95	51.71	2,265.68	211.18	267.54	340.84	3.00	-3.00	0.00
2,399.36	0.00	360.00	2,364.00	212.75	269.53	343.38	3.00	-3.00	0.00
Vertical @ 2384.00' TVD - Glorieta									
2,400.00	0.00	0.00	2,365.64	212.75	269.53	343.38	0.00	0.00	0.00
2,500.00	0.00	0.00	2,465.64	212.75	269.53	343.38	0.00	0.00	0.00
2,518.36	0.00	0.00	2,482.00	212.75	269.53	343.38	0.00	0.00	0.00
Yeso									
2,600.00	0.00	0.00	2,585.64	212.75	269.53	343.38	0.00	0.00	0.00
2,700.00	0.00	0.00	2,685.64	212.75	269.53	343.38	0.00	0.00	0.00
2,800.00	0.00	0.00	2,785.64	212.75	269.53	343.38	0.00	0.00	0.00
2,900.00	0.00	0.00	2,885.64	212.75	269.53	343.38	0.00	0.00	0.00
3,000.00	0.00	0.00	2,985.64	212.75	269.53	343.38	0.00	0.00	0.00

Windows User Planning Report

Database: Accel Server EDM
Company: Limerock Resources
Project: Eddy County, New Mexico NAD 83
Site: Terry - (NAD 83)
Well: Terry 14E No 8
Wellbore: Orig Hole
Design: Plan 1

Local Co-ordinate Reference: Well Terry 14E No 8
TVD Reference: 11.8' KB @ 3334.90usft (United 33)
MD Reference: 11.8' KB @ 3334.90usft (United 33)
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)
3,100.00	0.00	0.00	3,085.64	212.75	269.53	343.38	0.00	0.00	0.00
3,200.00	0.00	0.00	3,185.64	212.75	269.53	343.38	0.00	0.00	0.00
3,300.00	0.00	0.00	3,285.64	212.75	269.53	343.38	0.00	0.00	0.00
3,400.00	0.00	0.00	3,385.64	212.75	269.53	343.38	0.00	0.00	0.00
3,500.00	0.00	0.00	3,485.64	212.75	269.53	343.38	0.00	0.00	0.00
3,600.00	0.00	0.00	3,585.64	212.75	269.53	343.38	0.00	0.00	0.00
3,700.00	0.00	0.00	3,685.64	212.75	269.53	343.38	0.00	0.00	0.00
3,800.00	0.00	0.00	3,785.64	212.75	269.53	343.38	0.00	0.00	0.00
3,900.00	0.00	0.00	3,885.64	212.75	269.53	343.38	0.00	0.00	0.00
3,901.36	0.00	0.00	3,887.00	212.75	269.53	343.38	0.00	0.00	0.00
Tubb									
4,000.00	0.00	0.00	3,985.64	212.75	269.53	343.38	0.00	0.00	0.00
4,100.00	0.00	0.00	4,085.64	212.75	269.53	343.38	0.00	0.00	0.00
4,200.00	0.00	0.00	4,185.64	212.75	269.53	343.38	0.00	0.00	0.00
4,300.00	0.00	0.00	4,285.64	212.75	269.53	343.38	0.00	0.00	0.00
4,334.36	0.00	0.00	4,300.00	212.75	269.53	343.38	0.00	0.00	0.00
(2295' FNL / 978' FWL)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Aiming Pt. (Terry 14E #	0.00	360.00	2,384.00	212.75	269.53	638,187.58	533,777.78	32 7489140	-104.3578225
- plan hits target center									
- Rectangle (sides W30.00 H30.00 D0.00)									
Adjusted BHL (Terry 14E	0.00	360.00	4,300.00	212.75	269.53	638,187.58	533,777.78	32 7489140	-104.3578225
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
80.00	80.00	20"	20.000	20.000
1,243.47	1,230.00	8 5/8"	8.625	8.625

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
290.00	290.00	Queen		0.00	
670.91	670.00	Grayburg		0.00	
984.28	977.00	Premier		0.00	
992.49	985.00	San Andres		0.00	
2,398.36	2,384.00	Glorieta		0.00	
2,516.36	2,482.00	Yeso		0.00	
3,901.36	3,887.00	Tubb		0.00	

Windows User

Planning Report

Database: Accel Server EDM
Company: Limerock Resources
Project: Eddy County, New Mexico NAD 83
Site: Terry - (NAD 83)
Well: Terry 14E No 8
Wellbore: Orig Hole
Design: Plan 1

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MD Reference: 11.8' KB @ 3334.80usft (United 33)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
400.00	400.00	0.00	0.00	KOP, Build, 3"/100'
817.80	814.48	28.20	35.73	Hold, 12.53°, 51.71° Azi
1,880.56	1,949.52	184.55	233.60	Drop, 3"/100'
2,388.38	2,384.00	212.75	269.53	Vertical @ 2384.00' TVD
4,334.38	4,300.00	212.75	269.53	(2285' FNL / 875' FWL)
4,334.38	4,300.00	212.75	269.53	Adjusted BHL @ 4334.38' MD

H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

Company Offices Lime Rock Houston Office	713-292-9510
Answering Service (After Hours)	713-292-9555
Artesia, NM Office	575-748-9724
Roswell, NM	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

Hydrogen Sulfide Drilling Plan Summary

A. All personnel shall receive proper H2S 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

■ **H2S 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 H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S 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 H₂S service.
- b. All elastomers used for packing and seals shall be H₂S trim.

■ **Communication:**

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

Pressure Control

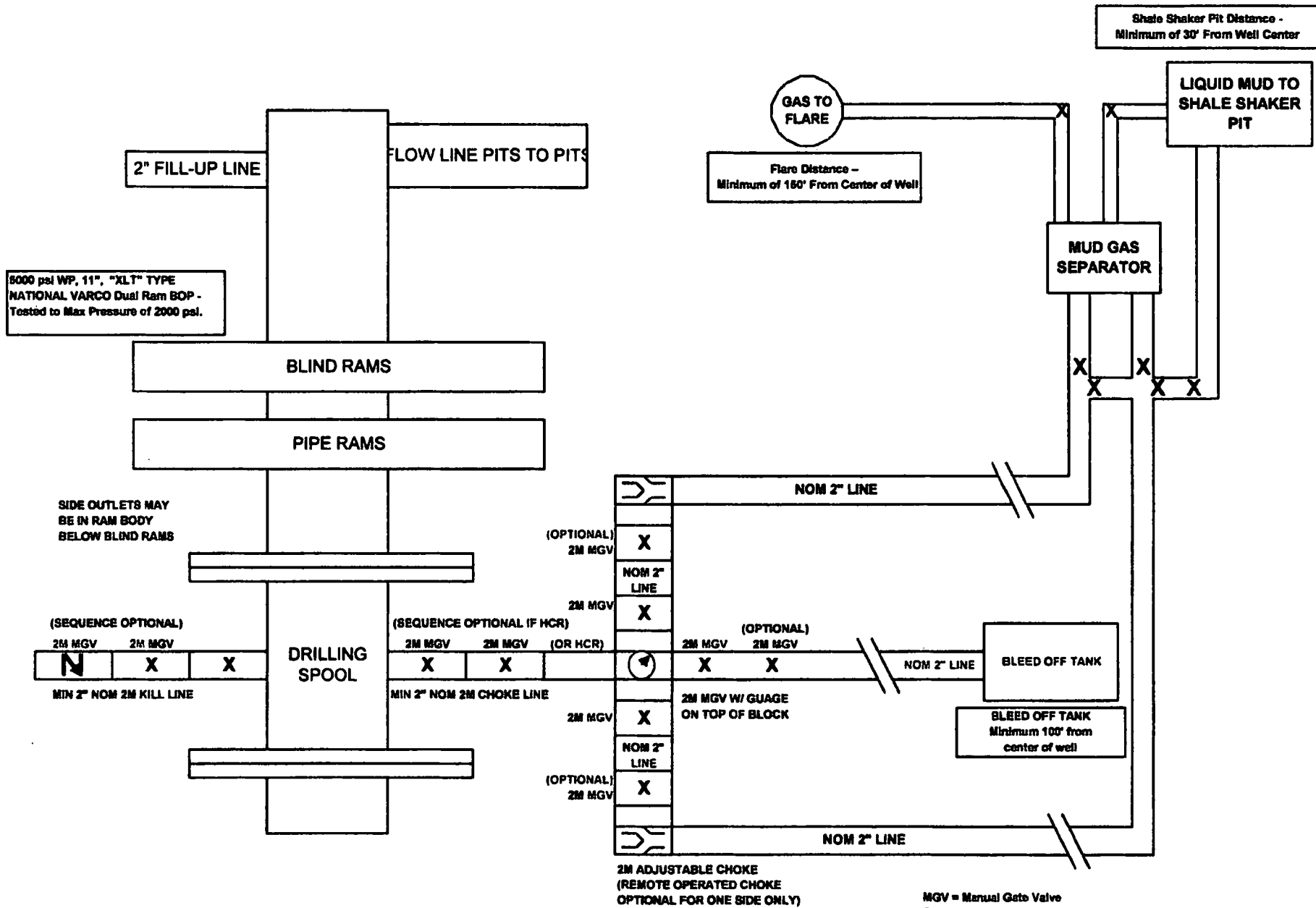
The blowout preventer equipment (BOP) will consist of a 5000 psi rated, "XLT" type, National VARCO double ram preventer that will be tested to a maximum pressure of 2000 psi. The unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and drill pipe rams on bottom. The 2M BOP will be installed on the 8 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

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.

Terry 14E #8

Unit E, S14-T18S-R26E, 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 attache

Cuttings and associated liquids will be hauled to a State regulated third party disposal site (CRI or Controlled Recc Inc.). The disposal site permit is DFP = #R916

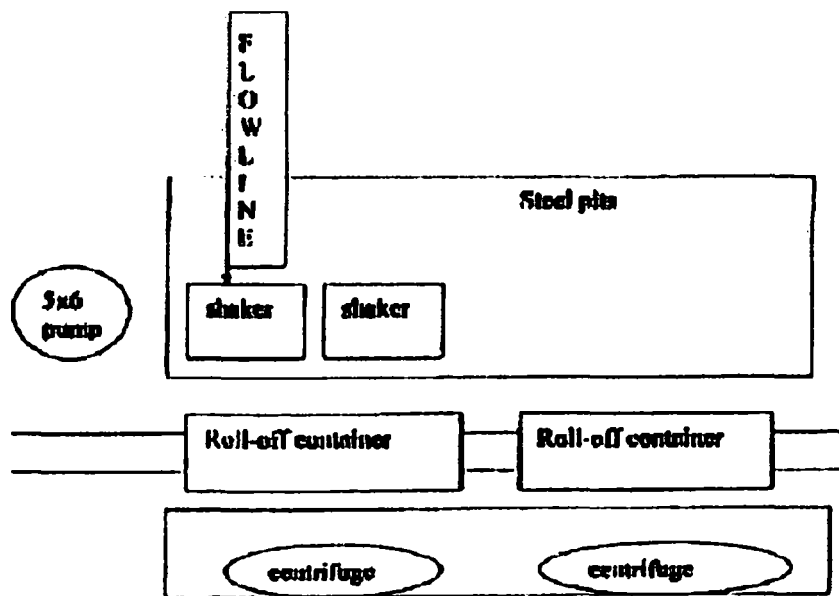
2- (250 bbl) tanks to hold fluid
2-CRI bins with track system
2-500 bbl frac tanks with fresh water
2-500 bbl frac tanks for brine water

Operations:

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

Closure:

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



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

TOMMY WILSON



**CLOSED LOOP
SPECIALTY**

Office: 973.744.1689

Cell: 978.748.6367