

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

NM OIL CONSERVATION

ARTESIA DISTRICT

JUN 09 2016

RECEIVED

Form C-101  
 Revised July 18, 2013

AMENDED Report

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 309030	Property Name Simpson 15B	API Number 30 015 438 33
		Well No #5

7 Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	15	18S	26E		430	N	1760	E	Eddy

8 Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	15	18S	26E		840	N	2168	E	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 3335.2
Multile N	Proposed Depth 4101' MD / 4000' TVD	Formation Yeso	Contractor United Drilling, Inc.	Snud Date After 6/20/2016
Depth to Ground Water: 8 Ft.		Distance from nearest fresh water well: 0.085227273 Miles		Distance from nearest surface water: 2.5 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	100	Surface
Surface	17-1/2"	13 -3/8"	54.5	400	400	Surface
Intermediate	12.25	8-5/8"	24	895	500	Surface
Production	7 7/8"	5 - 1/2"	17	4101	825	Surface

Casing/Cement Program: Additional Comments

Surface Csg set 50' above first oil show & top of San Andres. Cement will be circulated as required.

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 McClusky*  
 Printed Name: Eric McClusky  
 Title: Operations Engineer  
 E-mail Address: emcclusky@limerockresources.com  
 Date: 6/8/2016  
 Phone: 713-360-5714

OIL CONSERVATION DIVISION

Approved By: *[Signature]*  
 Title: *Geologist*  
 Approved Date: 6/24/16  
 Expiration Date: 6/24/18

Conditions of Approval Attached: *Amend hole sizes*

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

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30015 43033	<sup>2</sup> Pool Code 3250	<sup>3</sup> Pool Name Atoka, Gloriaeta - yeso
<sup>4</sup> Property Code 309030	<sup>5</sup> Property Name SIMPSON 15B	
<sup>6</sup> Well Number 5	<sup>7</sup> OGRID No. 277558	
<sup>8</sup> Operator Name LIME ROCK RESOURCES II-A, L.P.		<sup>9</sup> Elevation 3335.2

<sup>10</sup> Surface Location

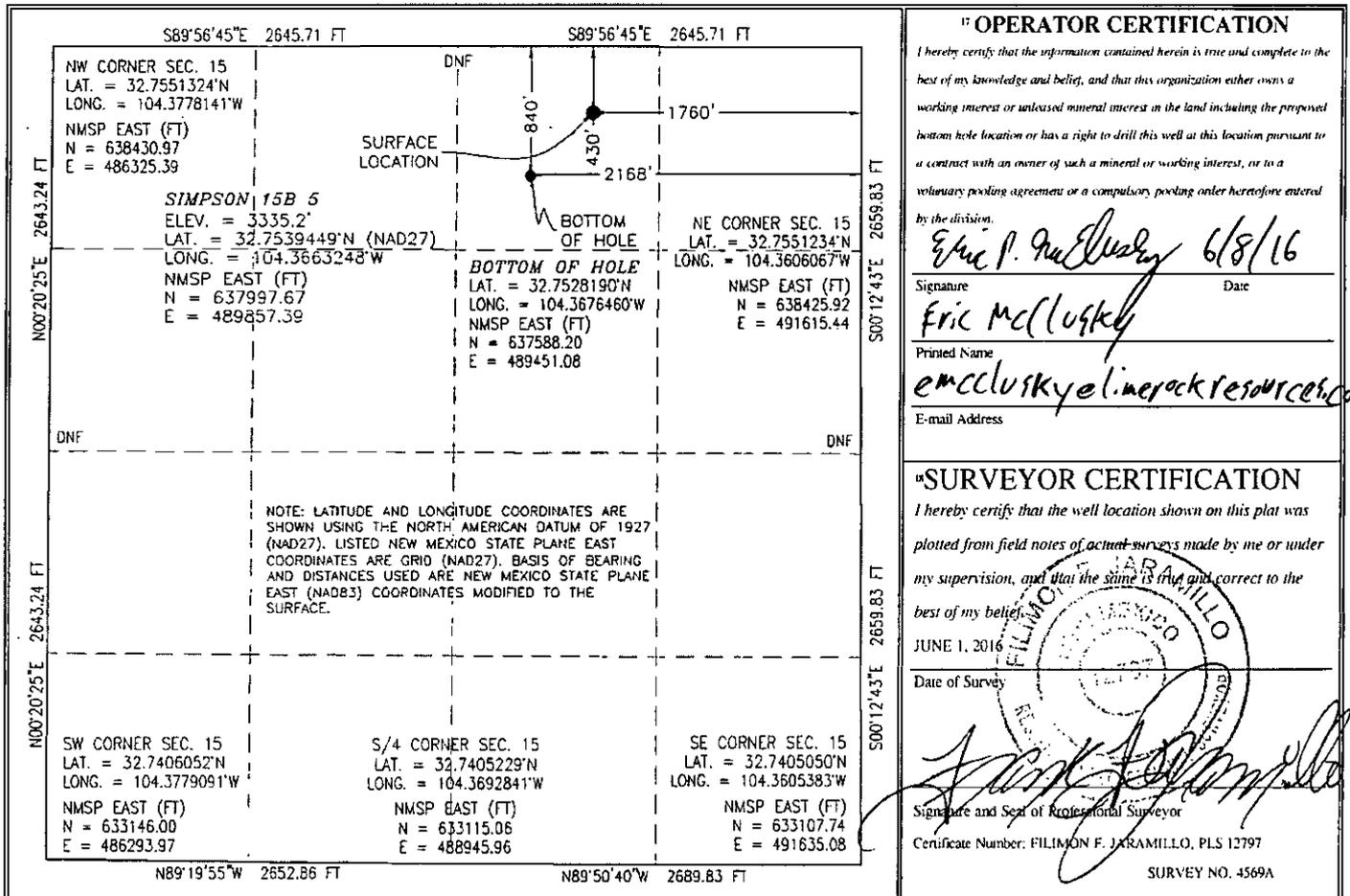
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	18 S	26 E		430	NORTH	1760	EAST	EDDY

<sup>11</sup> 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	15	18 S	26 E		840	NORTH	2168	EAST	EDDY

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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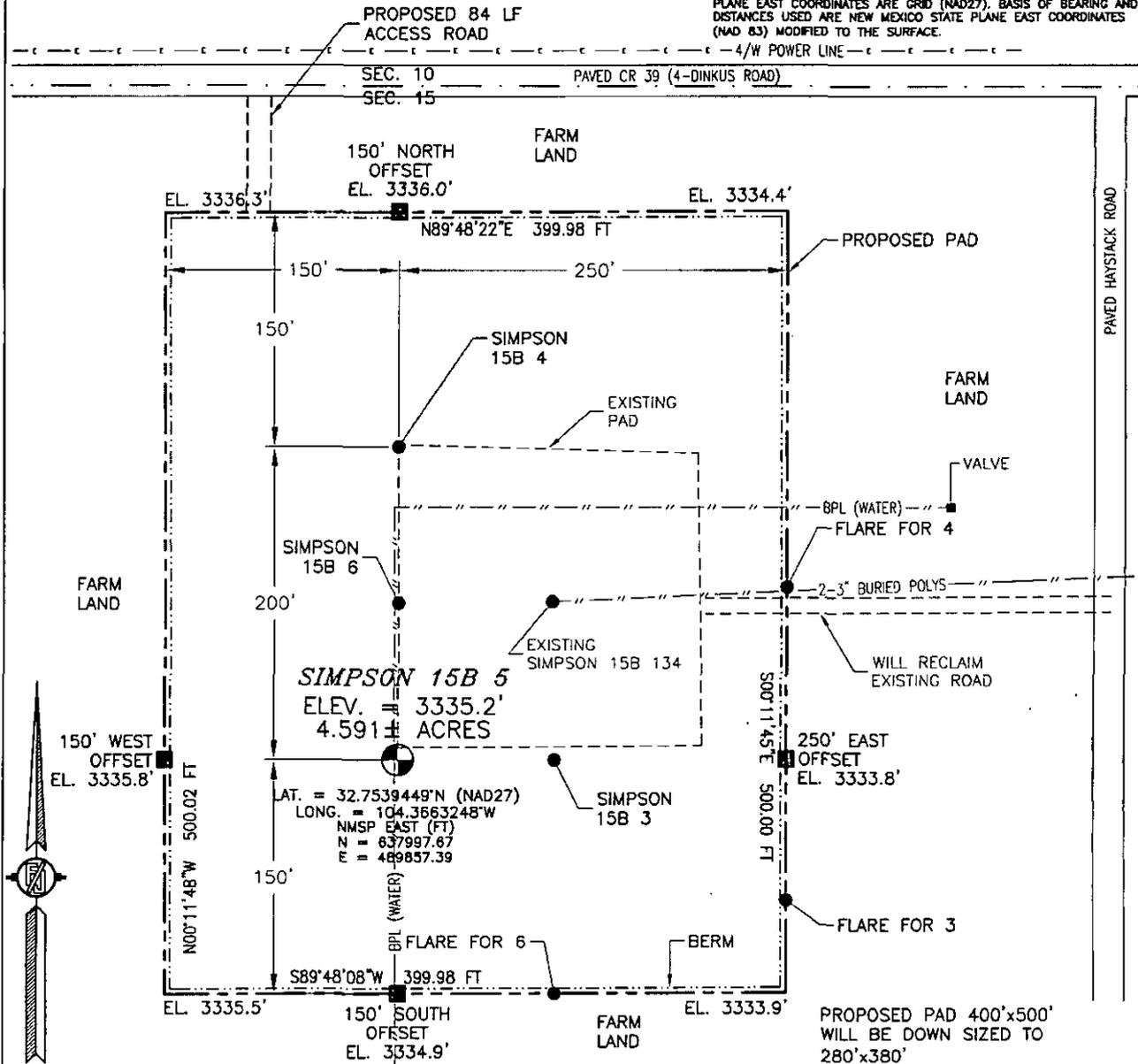
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



SECTION 15, TOWNSHIP 18 SOUTH, RANGE 26 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 1927 (NAD27). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD27). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES (NAD 83) MODIFIED TO THE SURFACE.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION  
 FROM STATE ROAD 229 (HALDEMAN) AND CR 39 (FOUR DINKUS) GO WEST ON CR 39 0.3 OF A MILE TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 84° TO THE PROPOSED NORTHWEST PAD CORNER FOR THIS LOCATION.

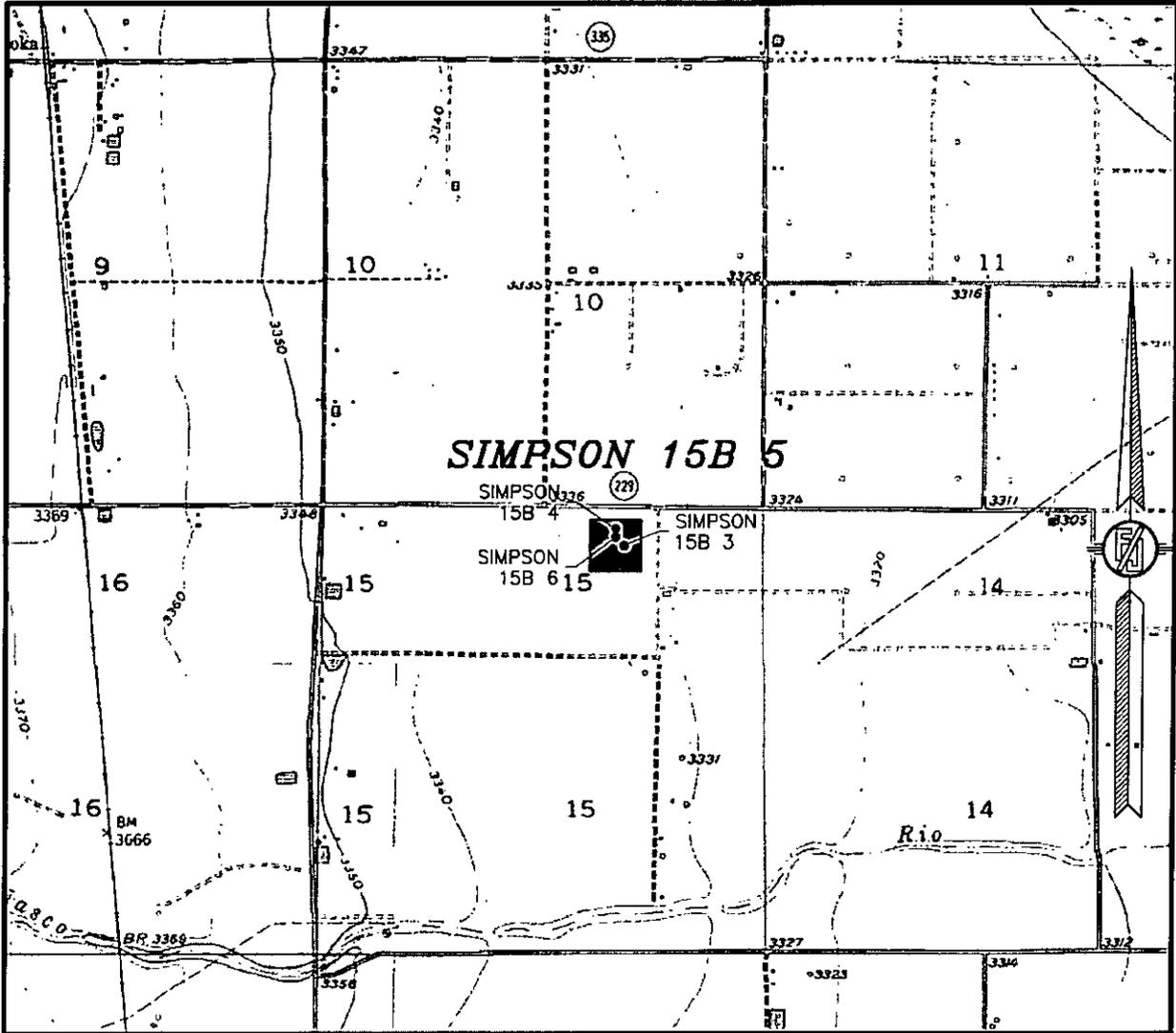
LIME ROCK RESOURCES II-A, L.P.  
**SIMPSON 15B 5**  
 LOCATED 430 FT. FROM THE NORTH LINE  
 AND 1760 FT. FROM THE EAST LINE OF  
 SECTION 15, TOWNSHIP 18 SOUTH,  
 RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

JUNE 1, 2016

SURVEY NO. 4569A

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

SECTION 15, 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

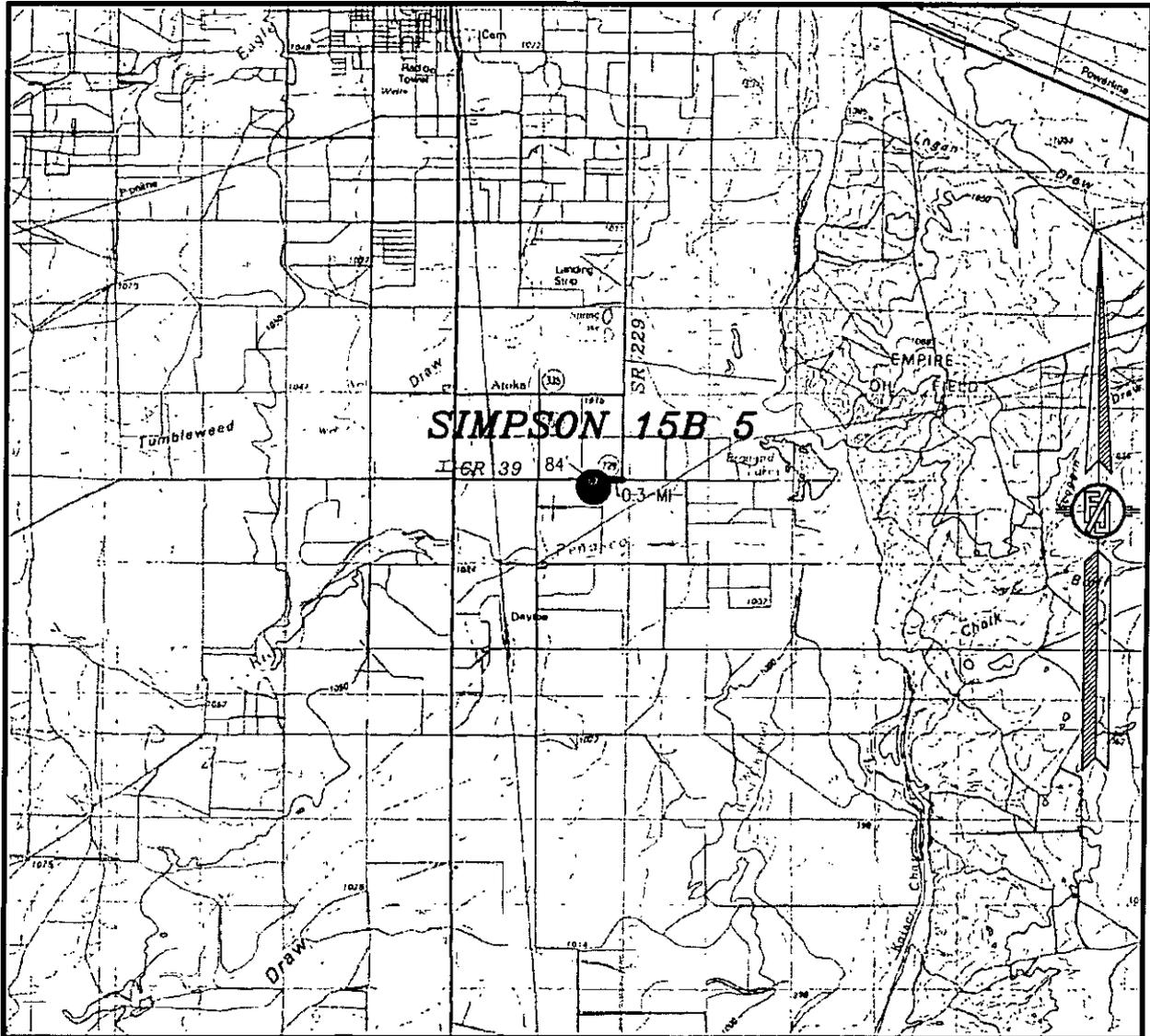
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 EDDY COUNTY, STATE OF NEW MEXICO

JUNE 1, 2016

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 (575) 234-3341

SECTION 15, TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**  
 FROM STATE ROAD 229 (HALDEMAN) AND CR 39 (FOUR DINKUS) GO  
 WEST ON CR 39 0.3 OF A MILE TO A PROPOSED ROAD SURVEY AND  
 FOLLOW FLAGS SOUTH 84° TO THE PROPOSED NORTHWEST PAD  
 CORNER FOR THIS LOCATION.

**LIME ROCK RESOURCES II-A, L.P.**  
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 RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

JUNE 1, 2016

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341 SURVEY NO. 4569A

SECTION 15, 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

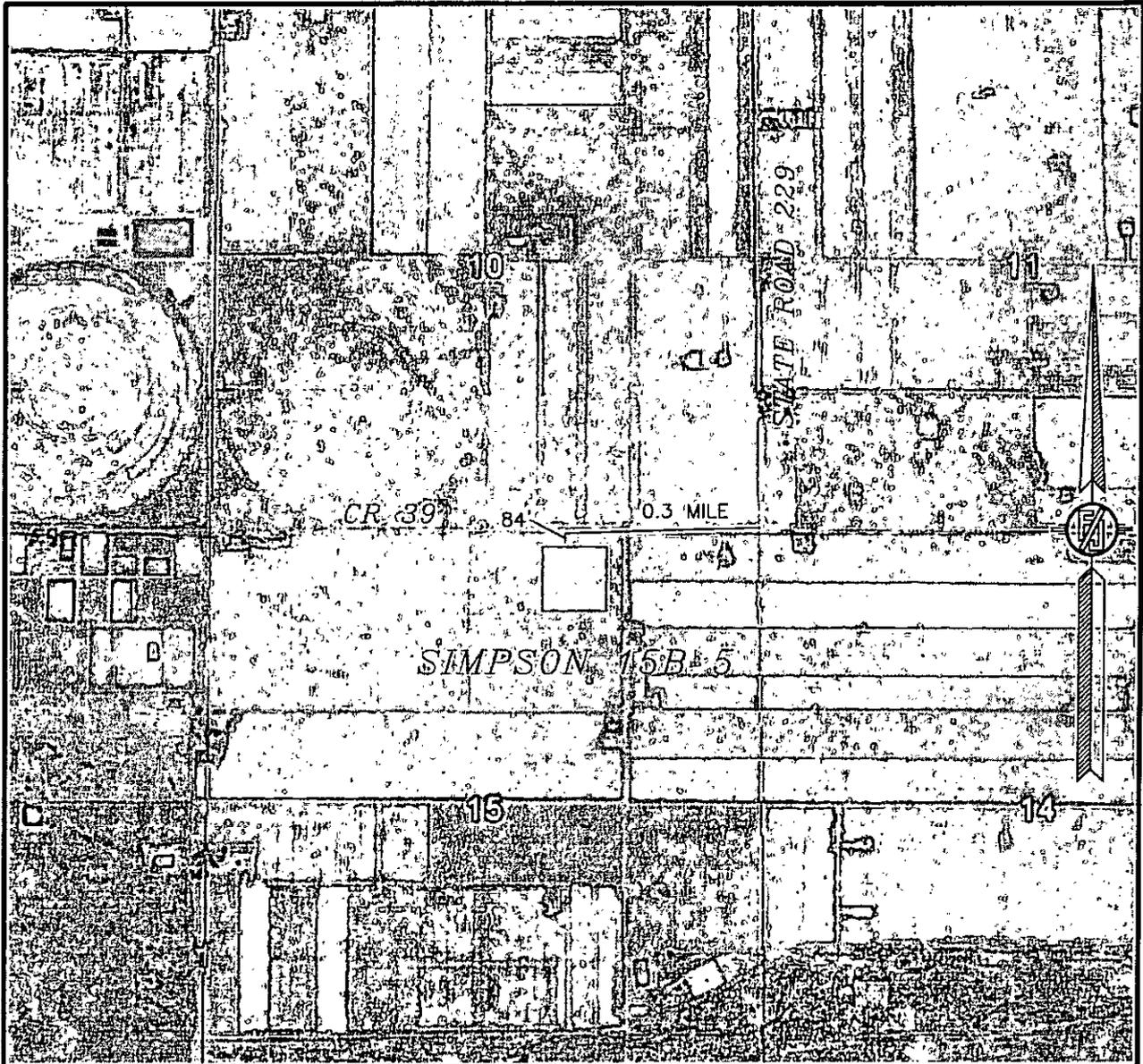
LIME ROCK RESOURCES II-A, L.P.  
SIMPSON 15B 5  
LOCATED 430 FT. FROM THE NORTH LINE  
AND 1760 FT. FROM THE EAST LINE OF  
SECTION 15, TOWNSHIP 18 SOUTH,  
RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 1, 2016

SURVEY NO. 4569A

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

SECTION 15, 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.  
SIMPSON 15B 5

LOCATED 430 FT. FROM THE NORTH LINE  
AND 1760 FT. FROM THE EAST LINE OF  
SECTION 15, TOWNSHIP 18 SOUTH,  
RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 1, 2016

SURVEY NO. 4569A

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

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

**Simpson 15B #5  
430' FNL 1760' FEL  
(B) 15-18S-26E  
Eddy County, NM**

1. The elevation of the unprepared ground is 3335.2 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 4000' 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 4101' MD./ 4000' TVD. inside a 30' X 30' square target inside of 40 acre spacing regulatory quarter-quarter setback distances. The KOP for directional drilling will be at 450'. See directional plan for detail.
5. Estimated tops of geologic markers:

	MD	TVD
Quaternary – Alluvium	Surface	Surface
Yates	NA	NA
7 Rivers	NA	NA
Queen	260	260
Grayburg	638	637
Premier	922	906
San Andres	965	946
Glorieta	2406	2305
Yeso	2496	2395
Tubb	3909	3808
TD	4101	4000

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	260	260
Grayburg	638	637
Premier	922	906
San Andres	965	946
Glorieta	2406	2305
Yeso	2496	2395
Tubb	3909	3808
TD	4101	4000

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	100			Ready Mix
Surface	17-1/2"	13-3/8"	54.5	J-55	ST&C	400	400	14.8	1.35	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
Intermediate	12.25	8-5/8"	24	J-55	ST&C	895	500		1.4	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
Production	7-7/8"	5-1/2"	17	J-55	LT&C	4101	200	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 + 6% Gel
							625	14.8	1.33	Cl H w/ 0.6% R-3, 0.125% Cello Flake, 2% Gel

8. Proposed Mud Program is as follows

Depth	0-895	895-3850	3850-4101
Mud Type	Fresh Water Mud	Brine	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 4101 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 1804.44 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 complete the well and to construct surface facilities.



# **Lime Rock**

**Eddy, NM (Nad27)**

**Simpson 15B**

**#5**

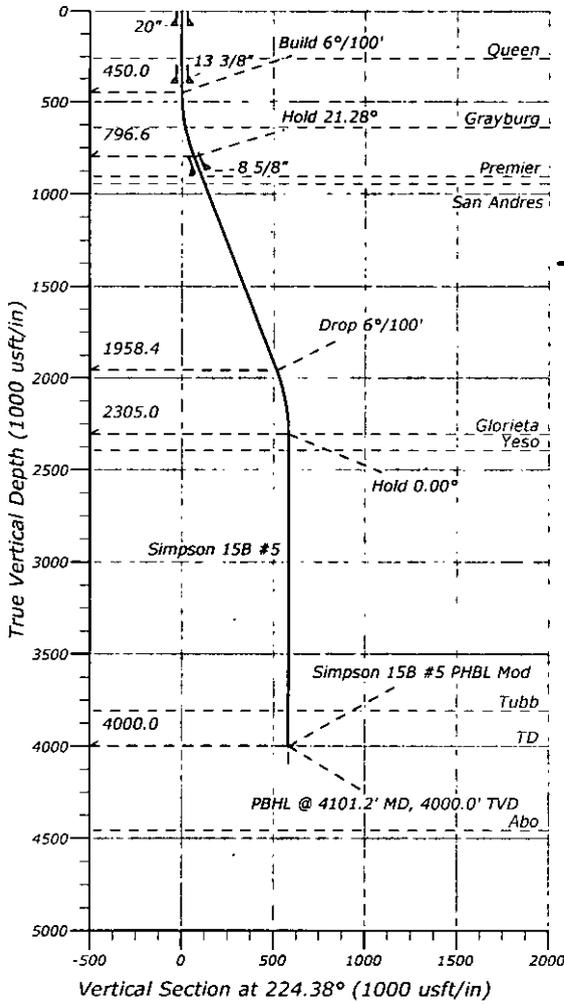
**Original Hole**

**Plan: Plan 1**

## **Standard Planning Report**

**18 May, 2016**





**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
260.0	260.0	Queen
637.0	638.2	Grayburg
906.0	922.1	Premier
946.0	965.0	San Andres
2305.0	2406.2	Glorieta
2395.0	2496.2	Yeso
3808.0	3909.2	Tubb

**PROJECT DETAILS: Eddy, NM (Nad27)**

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

**CASING DETAILS**

TVD	MD	Size
80.0	80.0	20
400.0	400.0	13-3/8
880.7	895.0	8-5/8

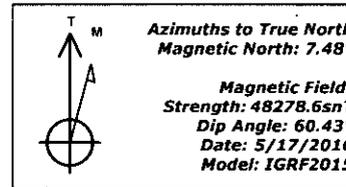
**WELL DETAILS: Simpson 15B #5**

Ground Level: 3335.2 RKB @ 3348.0usft

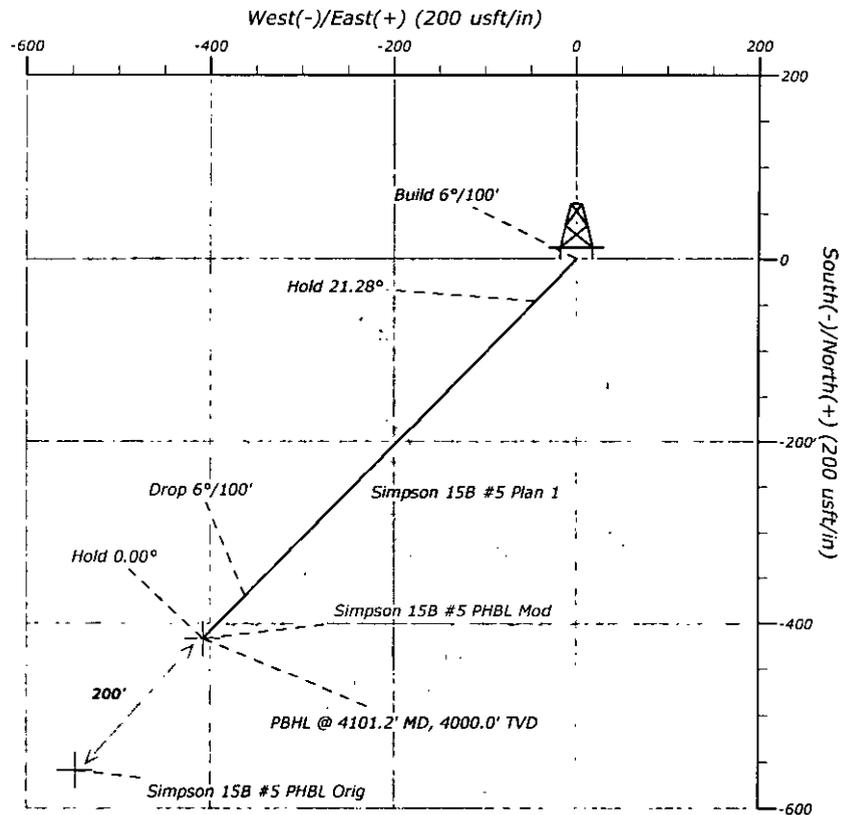
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	637997.67	489857.39	32° 45' 14.202 N	104° 21' 58.769 W

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting
Simpson 15B #5 PHBL Mod	4000.0	-416.5	-407.6	637581.28	489449.62
Simpson 15B #5 PHBL Orig	4000.0	-559.1	-547.1	637438.79	489310.13



To convert a Magnetic Direction to a True Direction, Add 7.48° East  
Magnetic North is 7.48° East of True North (Magnetic Declination)



**Section Plans**

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	IFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.0	Build 6°/100'
804.7	21.28	224.38	796.6	-46.5	-45.6	6.00	224.38	65.1	Hold 21.28°
2051.5	21.28	224.38	1958.4	-370.0	-362.1	0.00	0.00	517.7	Drop 6°/100'
2406.2	0.00	0.00	2305.0	-416.5	-407.6	6.00	180.00	582.8	Hold 0.00°
4101.2	0.00	0.00	4000.0	-416.5	-407.6	0.00	0.00	582.8	PBHL @ 4101.2' MD, 4000.0' TVD

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #5
<b>Company:</b>	Lime Rock	<b>TVD Reference:</b>	RKB @ 3348.0usft
<b>Project:</b>	Eddy, NM (Nad27)	<b>MD Reference:</b>	RKB @ 3348.0usft
<b>Site:</b>	Simpson 15B	<b>North Reference:</b>	True
<b>Well:</b>	#5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Plan 1		

<b>Project</b>	Eddy, NM (Nad27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	Simpson 15B				
<b>Site Position:</b>		<b>Northing:</b>	637,997.67 usft	<b>Latitude:</b>	32° 45' 14.202 N
<b>From:</b>	Map	<b>Easting:</b>	489,857.39 usft	<b>Longitude:</b>	104° 21' 58.769 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.02 °

<b>Well</b>	#5					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	637,997.67 usft	<b>Latitude:</b>	32° 45' 14.202 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	489,857.39 usft	<b>Longitude:</b>	104° 21' 58.769 W
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	3,335.2 usft

<b>Wellbore</b>	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/17/2016	7.48	60.43	48,279

<b>Design</b>	Plan 1
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<b>Audit Notes:</b>	
<b>Version:</b>	<b>Phase:</b> PROTOTYPE <b>Tie On Depth:</b> 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	224.38

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	
450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.00	0.00	
804.7	21.28	224.38	796.6	-46.5	-45.6	6.00	6.00	0.00	224.38	
2,051.5	21.28	224.38	1,958.4	-370.0	-362.1	0.00	0.00	0.00	0.00	
2,406.2	0.00	0.00	2,305.0	-416.5	-407.6	6.00	-6.00	0.00	180.00	
4,101.2	0.00	0.00	4,000.0	-416.5	-407.6	0.00	0.00	0.00	0.00	Simpson 15B #5 Pt

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #5
<b>Company:</b>	Lime Rock	<b>TVD Reference:</b>	RKB @ 3348.0usft
<b>Project:</b>	Eddy, NM (Nad27)	<b>MD Reference:</b>	RKB @ 3348.0usft
<b>Site:</b>	Simpson 15B	<b>North Reference:</b>	True
<b>Well:</b>	#5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<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 (°/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
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>20"</b>									
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
260.0	0.00	0.00	260.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Queen</b>									
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
<b>13 3/8"</b>									
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Build 6°/100'</b>									
500.0	3.00	224.38	500.0	-0.9	-0.9	1.3	6.00	6.00	0.00
600.0	9.00	224.38	599.4	-8.4	-8.2	11.8	6.00	6.00	0.00
638.2	11.29	224.38	637.0	-13.2	-12.9	18.5	6.00	6.00	0.00
<b>Grayburg</b>									
700.0	15.00	224.38	697.2	-23.3	-22.8	32.5	6.00	6.00	0.00
800.0	21.00	224.38	792.2	-45.3	-44.4	63.4	6.00	6.00	0.00
804.7	21.28	224.38	796.6	-46.5	-45.6	65.1	6.00	6.00	0.00
<b>Hold 21.28°</b>									
895.0	21.28	224.38	880.7	-70.0	-68.5	97.9	0.00	0.00	0.00
<b>8 5/8"</b>									
900.0	21.28	224.38	885.4	-71.3	-69.7	99.7	0.00	0.00	0.00
922.1	21.28	224.38	906.0	-77.0	-75.4	107.7	0.00	0.00	0.00
<b>Premier</b>									
965.0	21.28	224.38	946.0	-88.1	-86.3	123.3	0.00	0.00	0.00
<b>San Andres</b>									
1,000.0	21.28	224.38	978.6	-97.2	-95.1	136.0	0.00	0.00	0.00
1,100.0	21.28	224.38	1,071.8	-123.1	-120.5	172.3	0.00	0.00	0.00
1,200.0	21.28	224.38	1,164.9	-149.1	-145.9	208.6	0.00	0.00	0.00
1,300.0	21.28	224.38	1,258.1	-175.0	-171.3	244.9	0.00	0.00	0.00
1,400.0	21.28	224.38	1,351.3	-201.0	-196.7	281.2	0.00	0.00	0.00
1,500.0	21.28	224.38	1,444.5	-226.9	-222.1	317.5	0.00	0.00	0.00
1,600.0	21.28	224.38	1,537.7	-252.8	-247.5	353.8	0.00	0.00	0.00
1,700.0	21.28	224.38	1,630.8	-278.8	-272.8	390.1	0.00	0.00	0.00
1,800.0	21.28	224.38	1,724.0	-304.7	-298.2	426.4	0.00	0.00	0.00
1,900.0	21.28	224.38	1,817.2	-330.7	-323.6	462.7	0.00	0.00	0.00
2,000.0	21.28	224.38	1,910.4	-356.6	-349.0	499.0	0.00	0.00	0.00
2,051.5	21.28	224.38	1,958.4	-370.0	-362.1	517.7	0.00	0.00	0.00
<b>Drop 6°/100'</b>									
2,100.0	18.37	224.38	2,004.0	-381.7	-373.6	534.1	6.00	-6.00	0.00
2,200.0	12.37	224.38	2,100.4	-400.7	-392.1	560.6	6.00	-6.00	0.00
2,300.0	6.37	224.38	2,199.0	-412.3	-403.5	576.9	6.00	-6.00	0.00
2,400.0	0.37	224.38	2,298.8	-416.5	-407.6	582.8	6.00	-6.00	0.00
2,406.2	0.00	0.00	2,305.0	-416.5	-407.6	582.8	6.00	-6.00	0.00
<b>Hold 0.00° - Glorieta</b>									
2,496.2	0.00	0.00	2,395.0	-416.5	-407.6	582.8	0.00	0.00	0.00
<b>Yeso</b>									
2,500.0	0.00	0.00	2,398.8	-416.5	-407.6	582.8	0.00	0.00	0.00
2,600.0	0.00	0.00	2,498.8	-416.5	-407.6	582.8	0.00	0.00	0.00
2,700.0	0.00	0.00	2,598.8	-416.5	-407.6	582.8	0.00	0.00	0.00
2,800.0	0.00	0.00	2,698.8	-416.5	-407.6	582.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5
Company:	Lime Rock	TVD Reference:	RKB @ 3348.0usft
Project:	Eddy, NM (Nad27)	MD Reference:	RKB @ 3348.0usft
Site:	Simpson 15B	North Reference:	True
Well:	#5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan 1		

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)
2,900.0	0.00	0.00	2,798.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,000.0	0.00	0.00	2,898.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,100.0	0.00	0.00	2,998.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,200.0	0.00	0.00	3,098.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,300.0	0.00	0.00	3,198.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,400.0	0.00	0.00	3,298.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,500.0	0.00	0.00	3,398.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,600.0	0.00	0.00	3,498.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,700.0	0.00	0.00	3,598.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,800.0	0.00	0.00	3,698.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,900.0	0.00	0.00	3,798.8	-416.5	-407.6	582.8	0.00	0.00	0.00
3,909.2	0.00	0.00	3,808.0	-416.5	-407.6	582.8	0.00	0.00	0.00
<b>Tubb</b>									
4,000.0	0.00	0.00	3,898.8	-416.5	-407.6	582.8	0.00	0.00	0.00
4,100.0	0.00	0.00	3,998.8	-416.5	-407.6	582.8	0.00	0.00	0.00
4,101.2	0.00	0.00	4,000.0	-416.5	-407.6	582.8	0.00	0.00	0.00

PBHL @ 4101.2' MD, 4000.0' TVD - Simpson 15B #5 PHBL Orig - Simpson 15B #5 PHBL Mod

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Simpson 15B #5 PHB - hit/miss target - Shape - Point	0.00	0.00	4,000.0	-416.5	-407.6	637,581.29	489,449.62	32° 45' 10.080 N	104° 22' 3.543 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
80.0	80.0	20"	20	26
400.0	400.0	13 3/8"	13-3/8	17-1/2
895.0	880.7	8 5/8"	8-5/8	<i>12.25</i>

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
260.0	260.0	Queen		0.00	
638.2	637.0	Grayburg		0.00	
922.1	906.0	Premier		0.00	
965.0	946.0	San Andres		0.00	
2,406.2	2,305.0	Glorieta		0.00	
2,496.2	2,395.0	Yeso		0.00	
3,909.2	3,808.0	Tubb		0.00	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #5
<b>Company:</b>	Lime Rock	<b>TVD Reference:</b>	RKB @ 3348.0usft
<b>Project:</b>	Eddy, NM (Nad27)	<b>MD Reference:</b>	RKB @ 3348.0usft
<b>Site:</b>	Simpson 15B	<b>North Reference:</b>	True
<b>Well:</b>	#5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Plan 1		

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
450.0	450.0	0.0	0.0	Build 6°/100'
804.7	796.6	-46.5	-45.6	Hold 21.28°
2,051.5	1,958.4	-370.0	-362.1	Drop 6°/100'
2,406.2	2,305.0	-416.5	-407.6	Hold 0.00°
4,101.2	4,000.0	-416.5	-407.6	PBHL @ 4101.2' MD, 4000.0' TVD

# 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/Escape packs —4 packs shall be stored on the rig floor and contain sufficiently long air hoses as to not to 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**

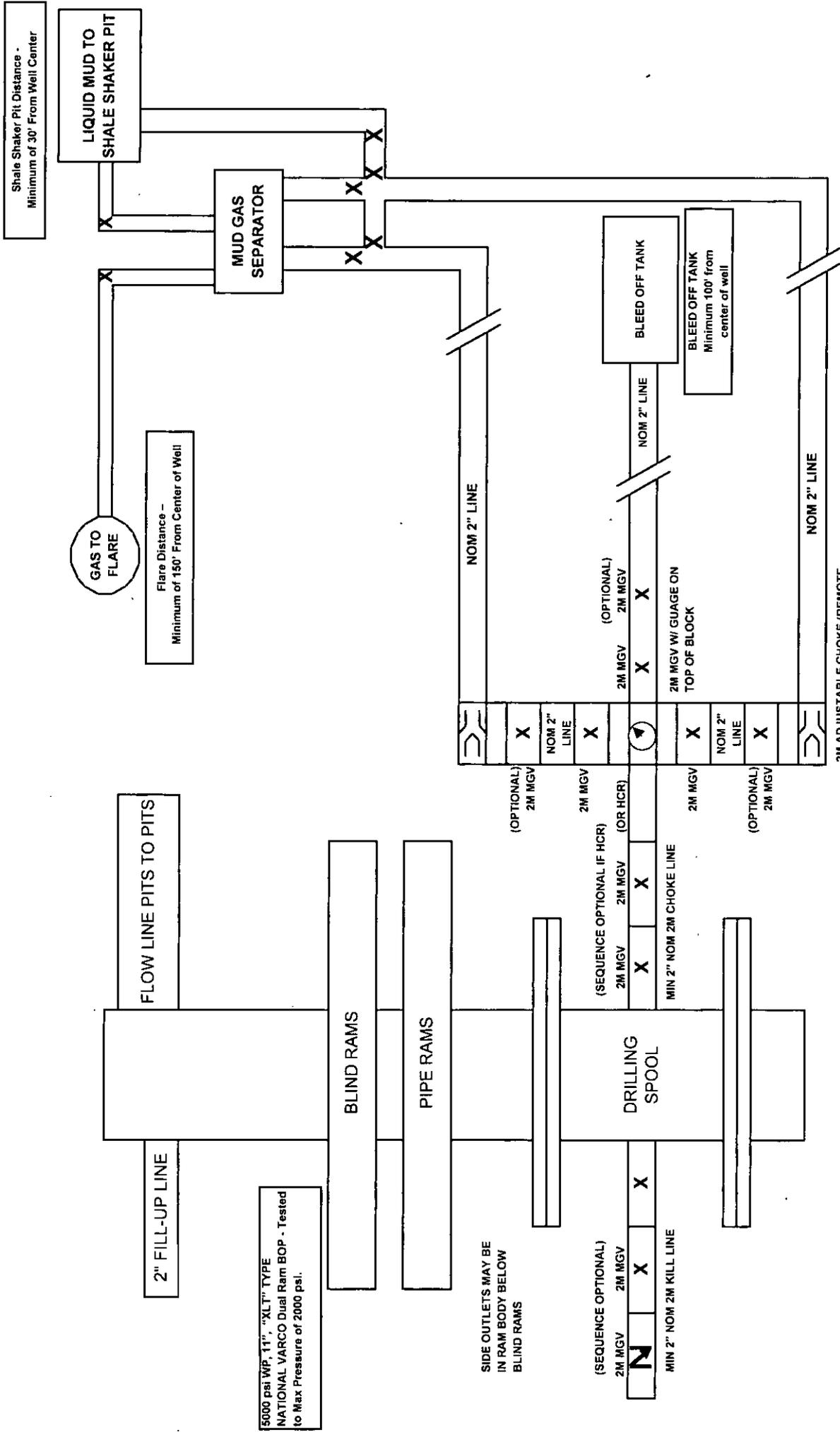
The blowout preventer equipment (BOP) will consist of a 5000 psi rated, "XLT" type, National VARCO double ram preventer that will be tested to a maximum pressure of 2000 psi. The unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and drill pipe rams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



Shale Shaker Pit Distance -  
Minimum of 30' From Well Center

GAS TO FLARE  
Flare Distance -  
Minimum of 150' From Center of Well

FLOW LINE PITS TO PITS

2" FILL-UP LINE

5000 psi WP, 11", "XLT" TYPE  
NATIONAL VARCO Dual Ram BOP - Tested  
to Max Pressure of 2000 psi.

BLIND RAMS

PIPE RAMS

SIDE OUTLETS MAY BE  
IN RAM BODY BELOW  
BLIND RAMS

(SEQUENCE OPTIONAL)  
2M MGW 2M MGV X  
MIN 2" NOM 2M KILL LINE

(SEQUENCE OPTIONAL IF HCR)  
2M MGW 2M MGV (OR HCR) X  
MIN 2" NOM 2M CHOKER LINE

NOM 2" LINE

(OPTIONAL)  
2M MGW 2M MGV X

2M MGW W/ GAUGE ON  
TOP OF BLOCK

(OPTIONAL)  
2M MGW X  
NOM 2" LINE

BLEED OFF TANK

BLEED OFF TANK  
Minimum 100' from  
center of well

NOM 2" LINE

2M ADJUSTABLE CHOKER (REMOTE)  
OPERATED CHOKER OPTIONAL FOR  
ONE SIDE ONLY

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.**  
**Simpson 15B #5**  
**Unit B, S15-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 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.

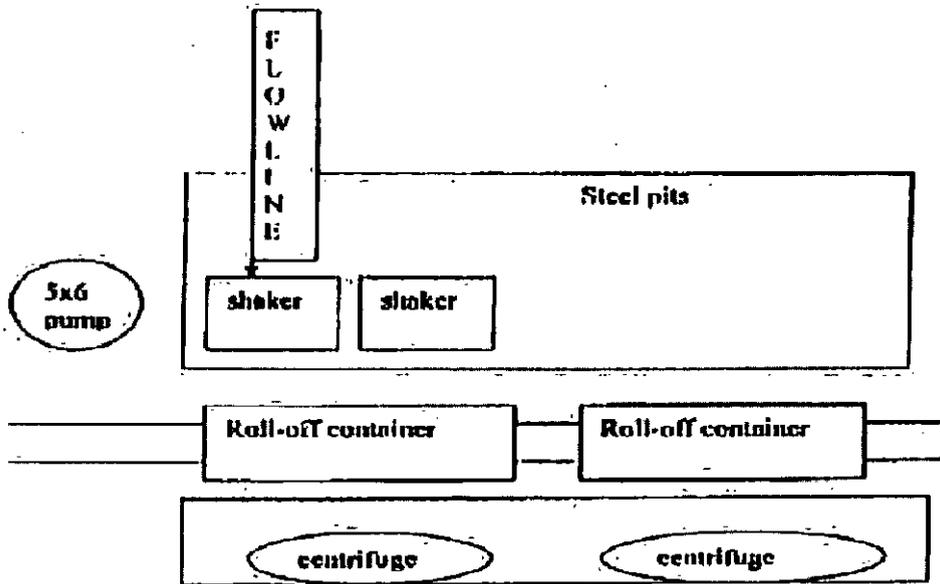
2- (250 bbl) tanks to hold fluid  
2-CRI bins with track system  
2-500 bbl frac tanks with fresh water  
2-500 bbl frac tanks for brine water

**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: 575.746.1689

Cell: 575.748.6367

**District I**  
 1825 N. French Dr., Hobbs, NM 88240  
 Phone: (575) 393-6161 Fax: (575) 393-6720

**District II**  
 811 S. First St., Artesia, NM 88213  
 Phone: (575) 748-1233 Fax: (575) 748-6720

**District III**  
 1000 Pio Brazos Rd., Aztec, NM 87410  
 Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
 1220 S. St. Francis Dr., Santa Fe, NM 87505  
 Phone: (505) 476-3470 Fax: (505) 476-3462

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

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address:  <i>Lime Rock</i>	API Number: 30-015- <i>43833</i>
	Well: <i>Simpson 15 B</i>

OCD Reviewer	Condition
kjones	Will require a directional survey with the C-104
kjones	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kjones	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement.

## NMOCD CONDITION OF APPROVAL

The *New* Gas Capture Plan (GCP) notice is posted on the NMOCD website under Announcements. The Plan became effective May 1, 2016. A copy of the GCP form is included with the NOTICE and is also in our FORMS section under Unnumbered Forms. Please review filing dates for all applicable activities currently approved or pending and submit accordingly. Failure to file a GCP may jeopardize the operator's ability to obtain C-129 approval to flare gas after the initial 60-day completion period.