District 1 1625 N. French Dr. Phone: (575) 393-6 District 11 811 S. First St., Art Phone: (575) 748-1 District 111 1000 Rio Brazos R Phone: (505) 334-6 District IV 1220 S. St. Francis Phone: (505) 476-3	<ul> <li>161 Fax: (575) 34</li> <li>161 Fax: (575) 74</li> <li>163 Fax: (575) 74</li> <li>164 oad, Aztec, NM 8</li> <li>161 Fax: (505) 33</li> <li>17. Santa Fe, NN</li> <li>1460 Fax: (505) 47</li> </ul>	93-0720 18-9720 7410 14-6170 4 87505 76-3462			nergyMinera Oil Con 1220 So Santa	servation I uth St. Fra a Fe, NM 8	ural Resour Division ncis Dr. 7505			Form C-101 Revised July 18, 2013	
	PLICAI		<sup>1</sup> Operator Nam	e and Addre	ess	E-ENIEL	K, DEEFF	IN, FLUGÐ	<sup>2</sup> OGRID Number 2775		
			time Rock Res		-A, L.P. Iston, Texas 7700	2		30-0	/ Number	43117	
314	358	<u>ک</u>			<sup>5</sup> Property M Higgins (	Name Cahoon 11A			6 V	Vell No. #1	
					<sup>7</sup> Surfac	e Locatio	n				
UL - Lot A	Section	Township 18S	Range 26E	Lo	t Idn Feet	From 90	N/S Line N	Feet From 330	E/W Line E	County Eddy	
٤	<u>↓</u> .			<sup>8</sup> Pro	oposed Bott	om Hole	Location				
UL - Lot A	Section 11	Township 18S	Range 26E	Lo	t Idn Feet	From 90	N/S Line N	Feet From 330	E/W Line E	County Eddy	
	L		<u> </u>	I	9 Pool I	nformati	 D <b>n</b>				
Atoka; Gloriet	a-Yeso	· · · · · · · ·								3250	
				A	dditional W	ell Infor					
	rk T∨ne N		<sup>10</sup> Well Type O		<sup>11</sup> Cable/I R				<sup>13</sup> Ground Level Elevation 3301.8		
	ulti <del>o</del> le N		Proposed Depth MD / 4750' T	VD				<sup>7</sup> Contractor d Drilling, Inc.		<sup>18</sup> Soud Date After 6/1/2015	
Depth to Groui		50 Fi	Distan		nearest fresh water	5,					
		osed-loop syste	19	Propo	osed Casing		•	ram Sacks of C		Estimated TOC	
Type Conductor	. Hole 26		asing Size 20"		asing Weight/ft 91.5	Sell	Setting Depth 80		ement	Estimated TOC Surface	
Surface	12-1		8-5/8"		24		425	350	· .	Surface	
Production	n 7-7/	/8"	5-1/2"		17		4750 930			Surface	
			Casir	ng/Cei	nent Progra	am: Addi	tional Co	mments			
			Р	ropos	ed Blowout	Preventio	on Progra	m			
	Туре			Working	Pressure		Test Pressu	ure		Manufacturer	
	XLT 11"			50	00		2000		N	lational Varco	
I hereby certify of my knowled I further certi	ge and belief. fy that I have	complied with	<u>1 19.15.14.9 (A</u>		_		OIL CO	ONSERVAT	ION DIV	ISION	
19.15.14.9 (B) Signature:	<u>Spen</u>	opplicable.				Approved By: ADDODQ					
Printed Name	: Spencer Co	x					NT R	Supervic	SON		
Title: Produc	tion Enginee	r				Approved D		DO/S	oiration Date:	5/20/2017	
E-mail Addres	is: scox@lii	merockresourc	es.com						1		

Phone: 713-292-9528 Conditions of Approval Attached

Date: 5/13/2015

Conditions of Appro

District 1 1625 N. French Dr., Hobbs, NM \$\$240 Phone: (575) 393-6161 Fax: (575) 393-0720 District 11 \$11 S. First St., Artesia, NM \$\$210

Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztee, NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

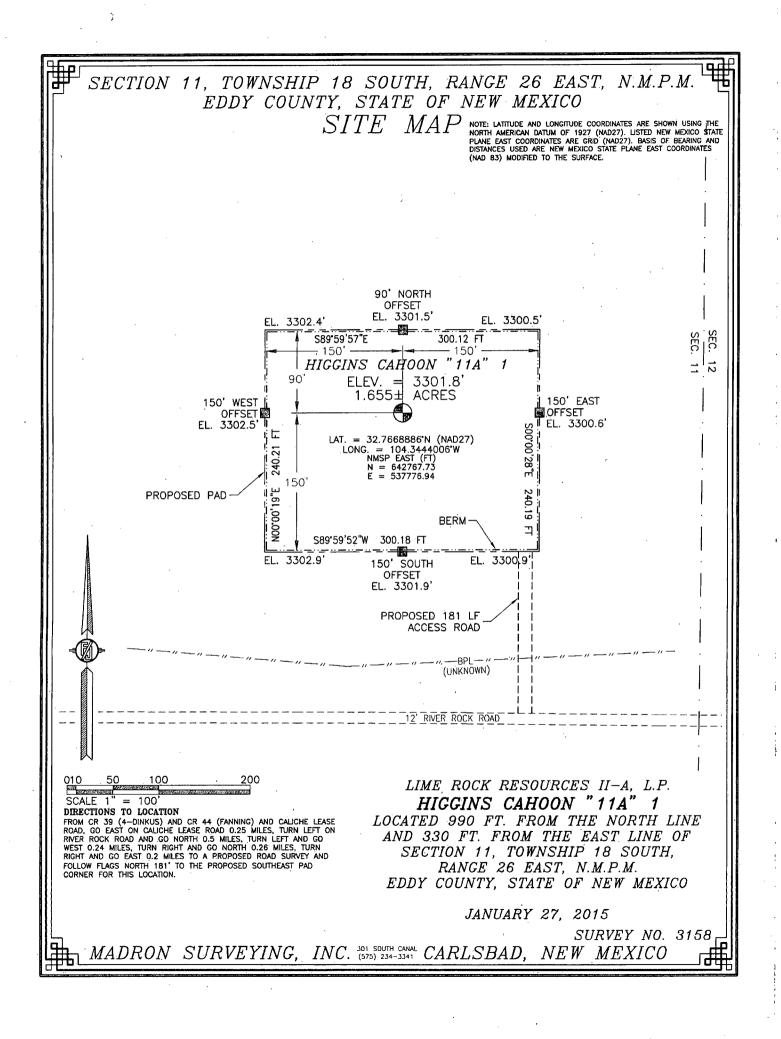
State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

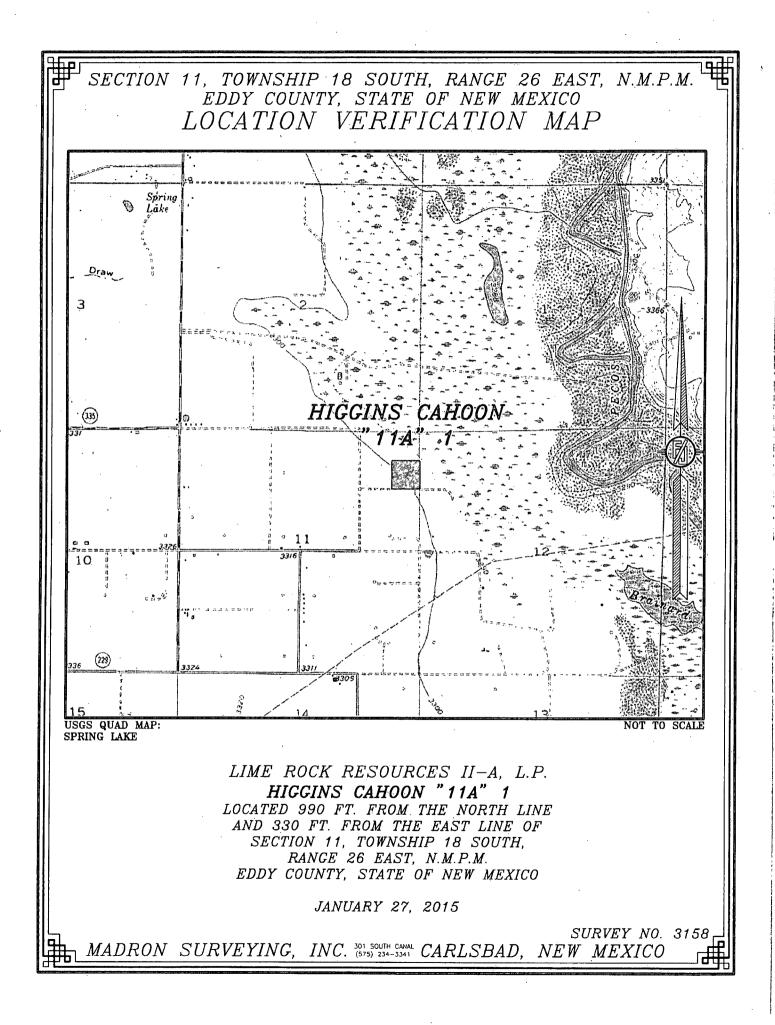
AMENDED REPORT

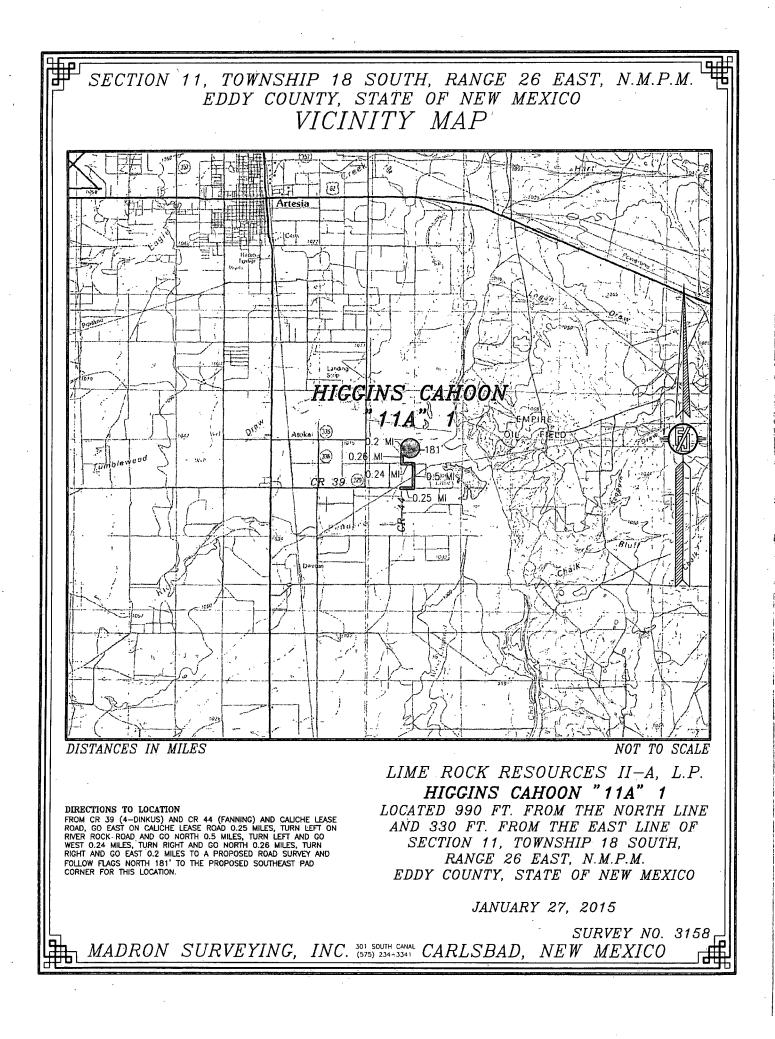
		W]	ELL LC	CATIO	N AND ACF	REAGE DEDI	CATION PL	AT		
30-015- 43/17 3250 ATOKA - Clorieta Yeso										
Property					<sup>5</sup> Property	Name	. ``		6 1	Well Number
3142	X I			I	HIGGINS CAI	HOON 11A			1	
<sup>7</sup> OGRID	No.				<sup>8</sup> Operator	Name				<sup>9</sup> Elevation
27755	8			LIME I	ROCK RESOU	JRCES II-A, L.	Р.			3301.8
					Surface	Location				
UL or lot no.	Section	Township	Range	Lot Idu	Feet from the	North/South line	Feet from the	East/We	est line	County
A	11	18 S	26 E		990	NORTH	330	EAS	ST .	EDDY
	4	••	י "B	ottom Ho	ole Location	If Different Fi	rom Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/We	est line	County
<sup>12</sup> Dedicated Acre	s <sup>13</sup> Joint	or Infill <sup>14</sup> (	Consolidation	1 Code			<sup>15</sup> Order No.			

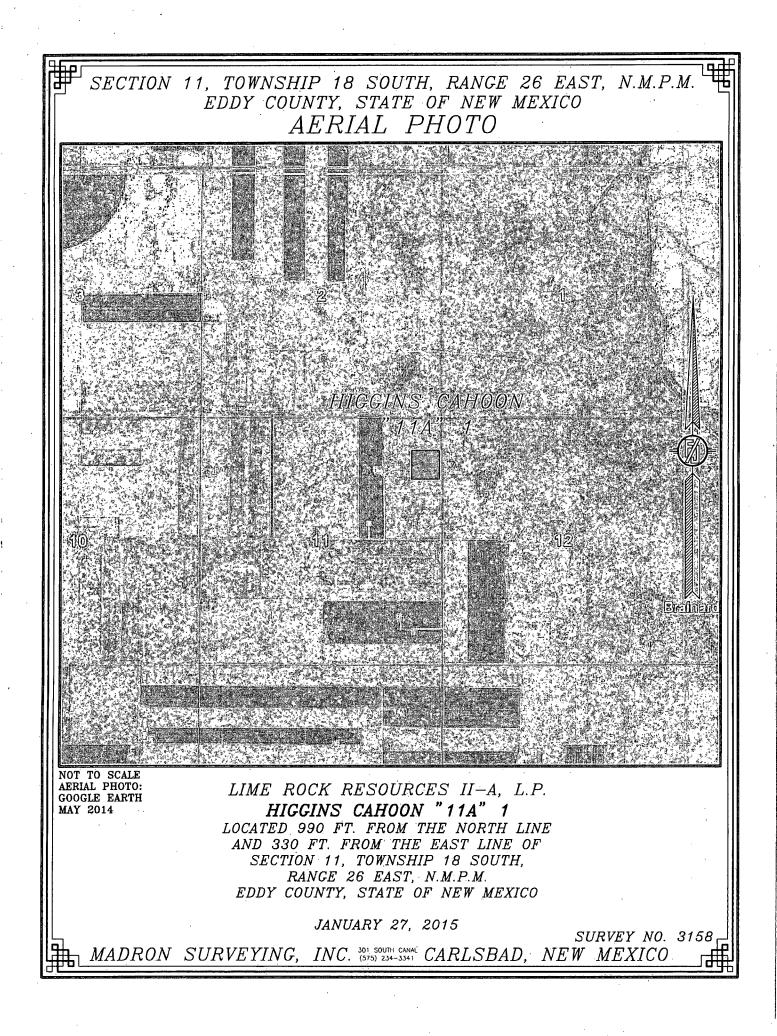
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

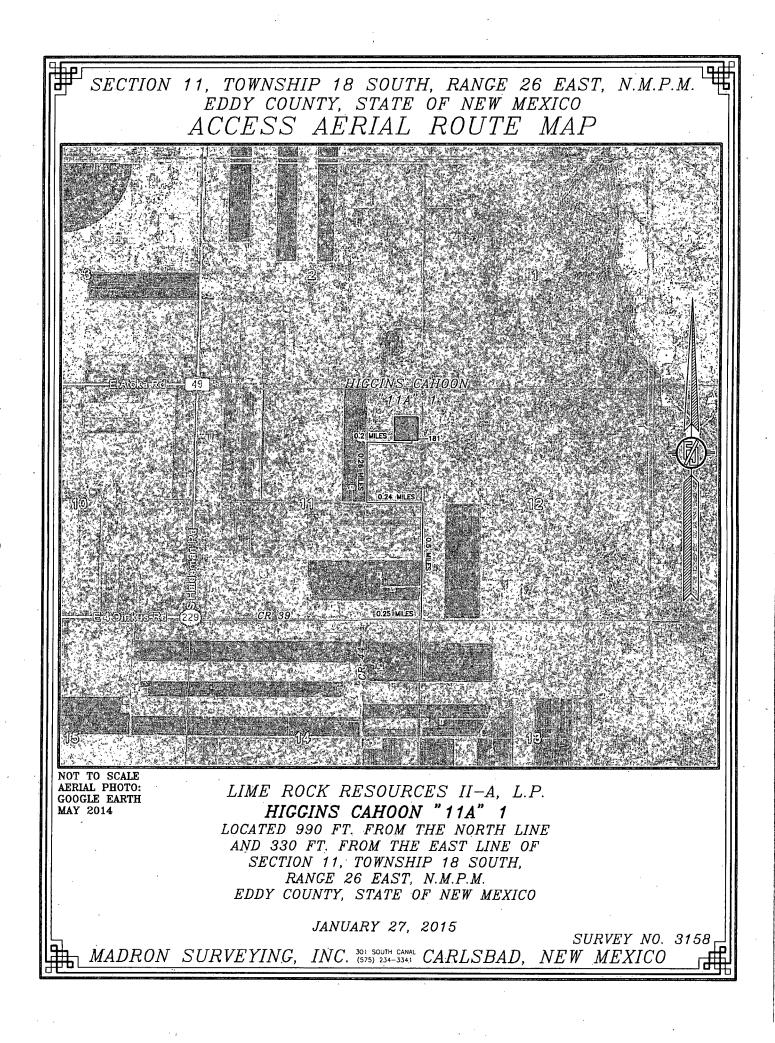
	S89'41'09"E	2653 26 FT \$80'41'00"E	2653.26 FT		" OPERATOR CERTIFICATION
	NW CORNER SEC. 11		CORNER SEC. 11		I hereby certify that the information contained herein is true and complete to the
	LAT. = 32.7696820 N	LAT. = 32.7696435'N .LAT.	⊨ 32.7696045'N		best of my knowledge and helief, and that this organization either owns a
	LONG. = 104.3605564 W		= 104.3432972'W		working interest or unleased mineral interest in the land including the proposed
	NMSP EAST (FT)	NMSP EAST (FT) N = $643770.32$	NMSP EAST (FT) 0 N = 643755.77 0		bottom hole location or has a right to drill this well at this location pursuant to
Į	N = 643784.86 E = 532811.07	E = 535463.63		8	a contract with an owner of such a mineral or working interest, or to a
			1 330'	S00'32'	voluntary pooling agreement or a compulsory pooling order heretofore entered
1			330	2'26	by the division.
ſ	i		$ =  N_{-} = 1 $	₹	Spenor Cop 5-13-15 Signadur Date
6		HIGGINS CAHOON "11A" 1	SURFACE	26	Slow (Cp J-13-1)
LC02		ELEV. = 3301.8' LAT. = 32.7668886'N (NAD27)	LOCATION	2649.89	Signatule Date
		LONG. = 104.3444006 W		19 19	Spencer Cox
-		NMSP EAST (FT) N = 642767.73		-	Primed Name
		E = 537776.94			sol latersent
	W/4 CORNER SEC. 11	ļ	E/4 CORNER SEC. 11		Score merode resources com
	LAT. = 32.7623791'N LONG. = 104.3605823'W		LAT. = 32.7623228'N		E-mail Address
	NMSP EAST (FT)		LONG. = 104.3433777'W NMSP EAST (FT)		
	N = 641128.03		N = 641106.65		<b>*SURVEYOR CERTIFICATION</b>
	E = 532802.40	NOTE: LATITUDE AND LONGITUDE COORDINATES ARE	E = 538091.20		I hereby certify that the well location shown on this plat was
		SHOWN USING THE NORTH AMERICAN DATUM OF 1927 (NAD27). LISTED NEW MEXICO STATE PLANE EAST			plotted from field notes of actual surveys made by me or under
Z		COORDINATES ARE GRID (NAD27). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE	l l	3	in unervision and that the same is using this correct to the
NUU IO 38 E		EAST (NAD83) COORDINATES MODIFIED TO THE		S00.34,12,M	
L La	1	SURFACE.		4.12	best of my belief.
<b>п</b>		·		ຮ້	JANUARY 27 2015
6	i	1	L.	30	Date of Survey
2640.31		1	4	2640 08	
1 2			1	· 1	This with the stand
-	LAT. = 32.7551234'N	S/4 CORNÉR SEC. 11 LAT. = 32:7550825'N	SE CORNER SEC. 11 - LAT. = 32.7550409'N		A MALL MAN
	LONG. = 104.3606067 W	LAR = 327350823  N LONG = 104.3520347'W	LONG. = 104.3434626W		Signature and Seal of Professional Surveyor
	NMSP EAST (FT) N = 638488.38	NMSP EAST (FT)	NMSP EAST (FT)		Certificate Number: FILINON & JARAMILLO, PLS 12797
	E = 532794.24	N = 638472.92 $E = 535429.54$	N = 638457.46 E = 538064.84		SURVEY NO. 3158
	N89'39'50"W				
L			Malyana aslagigati a tina		











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

#### Higgins Cahoon 11A #1 990' FNL 330' FEL (A) 11-18S-26E Eddy County, NM

- 1. The elevation of the unprepared ground is 3301.8 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 4750' 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 4750' MD.
- 5. Estimated tops of geologic markers:

	MD	TVD
Quaternary – Alluvium	Surface	Surface
Yates	NA	NA
7 Rivers	NA	NA
Queen	349	349
Grayburg	764	764
Premier	959	959
San Andres	1036	1036
Glorieta	2350	2350
Yeso	2423	2423
Tubb	3847	3847
TD	4750	4750

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	349 `	349
Grayburg	764	764
Premier	959	959
San Andres	1036	1036
Glorieta	2350	2350
Yeso	2423	242,3
Tubb <sup>r</sup>	3847	3847
TD	4750	4750

7. Proposed Casing and Cement program is as follows:

Туре	Hole	Casing	Wt	Grade	Thread	Depth	÷Sx.	Dénsity	Yield	Components
Conductor	26"	20"	91.5	В	Welded	80	80			Ready Mix
Surface	.12-1/4"	8-5/8"	24	J-55	ST&C	425	350	14.8	1.35	CI C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
Intermediate				•						
					د					
Production	7-7/8"	5-1/2"	17	J-55	LT&C	4750	200	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 + 6% Gel
							730	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	0-425	425-4600	4600-4750
Mud Type	Fresh Water Mud	Brine	Brine, Salt Gel, & Starch
Properties			
мw	8.4-9.2	9.8-10.1	9.9-10.1
рН	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 4750 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 area. If H2S 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 2090 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.

### 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/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

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.

### 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 #
Mike Loudermilk	Operations Manager	Houston	713-292-9526	832-331-7367	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	405-821-0534	832-491-3079
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	575-62 <u>3</u> -4707
Gary McCelland	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					
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 <del>.</del> 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				

	Emerge	ency 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 Oilfirld 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	Alburquerque	505-842-4433	Same
Artesia General Hospital	Emergency Medical Care	Artesia	575-748-3333	702 North 13th Street

.

#### Pressure Control Equipment

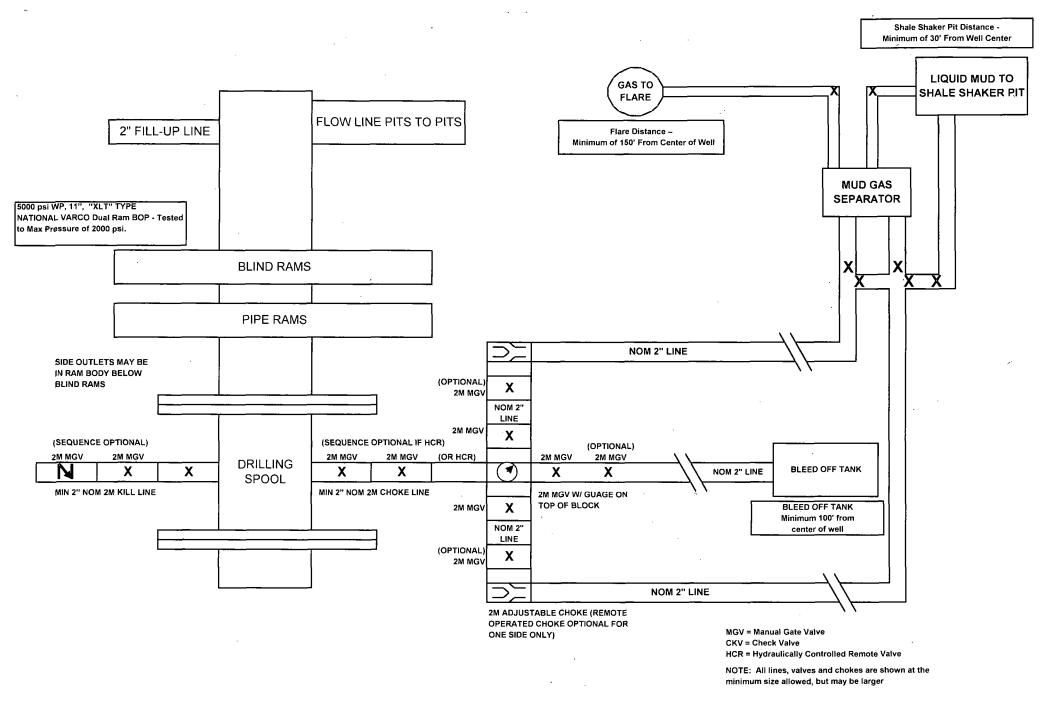
The blowout preventer equipment (BOP) will consist of a 5000 psi rated, "XLT" type, National VARCO double ram preventer that will be tested to a maximum pressure of 2000 psi. The unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and drill pipe rams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



J

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

### Higgins Cahoon 11A #1

### Unit A, S11-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.

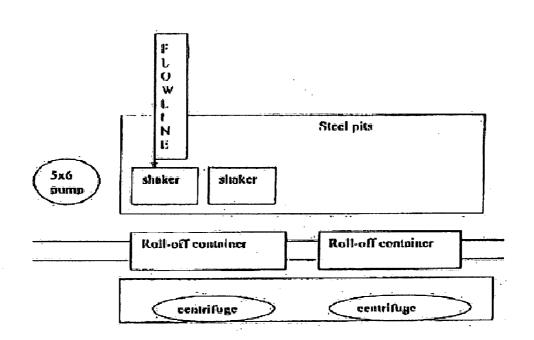
2- (250 bbl) tanks to hold fluid2-CRI bins with track system2-500 bbl frac tanks with fresh water2-500 bbl frac tanks for brine water

#### **Operations:**

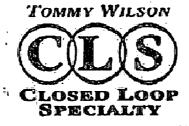
Closed Loop System equipment will be inspected daily by each tour and any necessary maintenance performed. leak in system will be repaired and/or contained immediately. OCD will be notified within 48 hours of any spill. Remediation process will start immediately.

#### 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.



Office: \$15,746,1689

Call: 575.748.6367

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## Permit Conditions of Approval

API: 30-0/5-43/17

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OCD Review <mark>er</mark>	Condition
	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.