<u>District 1</u> 1625 N French Dr., Hobbs, NM 88240 Phone (575) 393-6161 Fax (575) 393-0720

State of New Mexico

Form C-101 Revised December 16, 2011

Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr.



Prince (373) 393-6161 Fax (373) 393-0720 District.III 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 Santa Fe, NM 87505

API	LICA	TION F	OR PERMI	T TO DR	ILL, RE-	ENTER	R, DEEPE	N, PLUGBA	CK, O	R ADD A ZONE
LRE Oper	ating, LL	.C, 111	Operator Name a Bagby Street		Housto	n, Texas 7	77002		OGRID N 28199	
	<i>G</i> ,	,				•		30-0	APLNur	
Property Staley S						me te				" Well No. #16
					⁷ Surface	Locatio	on _			
UL - Lot O	Section 30	Township 17S	Range 28E	Lot Idn	Feet from	n !	N/S Line S	Feet From 2310	E/W Line E	County Eddy
					8 Pool Inf	formation	on			
RedLake, Glonet	a-Yeso, NE		<u> </u>	Add	tional We	ell Infor	mation			96836
⁹ Work			¹⁰ Well Type	7100	11 Cable/Rot Rotary			Lease Type State	1,	Ground Level Elevation 3626 3
¹⁴ Mu	tiple		15 Proposed Depth		16 Formatio		15	Contractor ed Drilling, Inc		18 Spud Date
Depth to Groun			5100 Distar	nce from neares	GLORIETA - Y		Unite		nearest sur	After 06/01/2012 face water:
	4	0	19	Proposed	L Casing a		ent Prog	 ram		3
Туре	Hok	e Size	Casing Size	Casing V			ng Depth	Sacks of C	ement	Estimated TOC
Conductor		20"	14"	68		40		Ready Mix		Surface
Surface	12	2,25	8 625	2	4	425		` 280		Surface
Production	7	875	5 5	<u> </u>	7	4900		975		surface
	l		Casii	ıg/Cemen	t Progran	n: Addi	tional Co	mments		
				D 1	D14 I	D	D			
				Proposed		Preventi 				
	Type XLT 11"			Working Pressu	re		Test Pressi	re Manufacturer National Varco		
ļ	XLI II"			5000			2000			National Varco
			1 .	1 1						
of my knowled	ge and bel	ief.	ven above is true a will be construc				OIL CO	ONSERVAT	ION DI	VISION
NMOCD guid	elines 🔲.	, a general p	ermit [], or an (attached) alte	native –	A managed Da				
OCD-approve	g pian 🔯	· /	-11		'	Approved By	y.	1 Cha		
Signature.	ing	X mu	M				1. (. \\/1910	ra	
Printed name	lerry Smit	h			7	Γıtle	Good	ogist		,
Title Assistar	t Production	on Supervisor			A	Approved Da	ate: 5 / 2.5	1/2012 Ex	piration Dat	°5/25/2014
E-mail Addres	s. jsmith@	Olimerockrese	ources.com					/		/-/-
Date 5-2	4-12		Phone. 575-74	18-9724		Conditions o	f Approval Atta	ached		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

District IV

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 October 15,2009 Submit one copy to appropriate District Office

☐ AMENDED REPORT

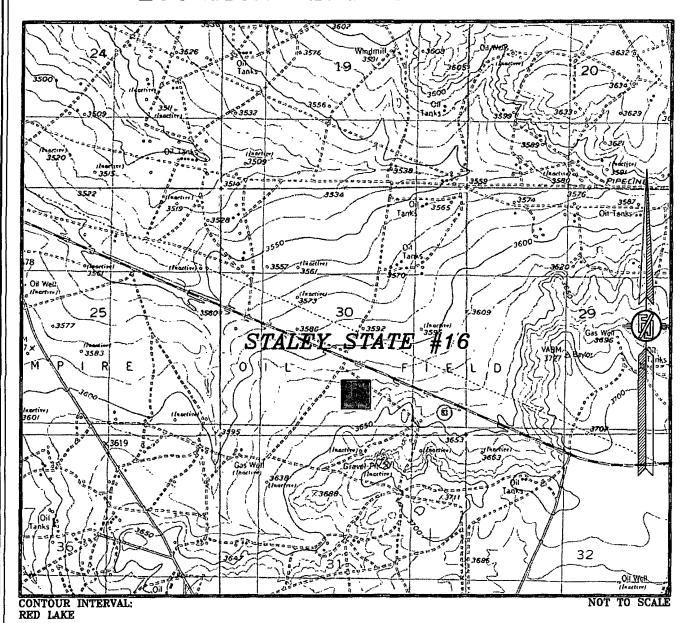
WELL LOCATION AND ACREAGE DEDICATION PLAT

30-0	15-7	0338		9683) <i>/</i>	Red Lake; Glorieta-Yeso NE						
Property Code Property Name								⁶ Well Number				
3098	40			16								
OGRID	No.				'8 Operato	r Name			"Elevation			
28199	281994 LRE OPERATING, LLC								3626.3			
					10 Surface	Location						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
O	30	17 S	28 E		890	SOUTH	2310	EAST	EDDY			
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	" Bo	ttom Hol	le Location	If Different From	n Surface		<u> </u>			
UL or lot no.	Section	Township	Rangè	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
12 Dedicated Acres	Joint o	r Infill 14 C	onsolidation	Code 13 Or	der No.		'					
40												

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

NW CORNER SEC. 30 LAT. = 32.8121534'N LONG. = 104.2230975'W	NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH I-AMERICAN DATUM OF 1927 (NAD27), AND ARE IN DECIMAL DEGREE FORMAT.		NE CORNER SEC. JO LAT. = 32.8122566'N. LONG. = 104.2057065'W'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased numeral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division
SW CORNER SEC. 30 LAT. = 32.7976322'N LONG. = 104.2230120'W		LOCATION	SE CORNER SEC. 30 LAT. = 32.7977087'N LONG. = 104.2058501'W	5-24-2012 Printed Name Jerry Smith **SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by mc or under my supervision, and that the same is true and correct to the best of my ballet, MAY 24, 2012 Date of survey Certificate Number: FILENON F. JARAMISLO. PLS 12797 DLAND S. SURVEY NO 579A

SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO LOCATION VERIFICATION MAP

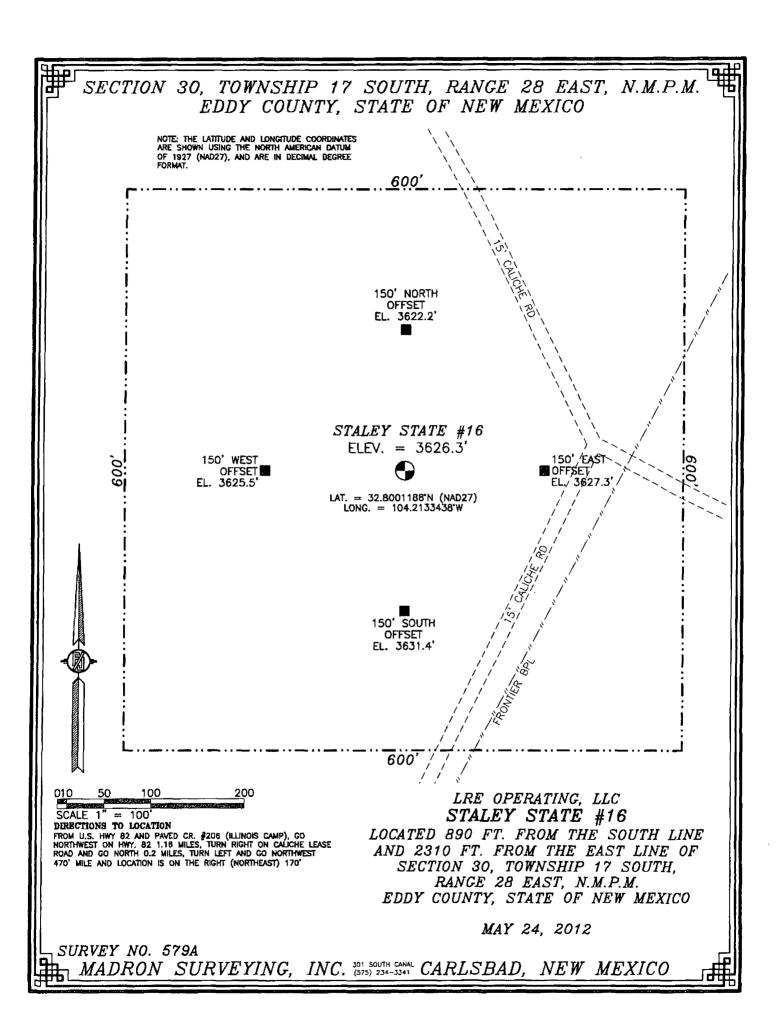


LRE OPERATING, LLC
STALEY STATE #16
LOCATED 890 FT. FROM THE SOUTH LINE
AND 2310 FT. FROM THE EAST LINE OF
SECTION 30, TOWNSHIP 17 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

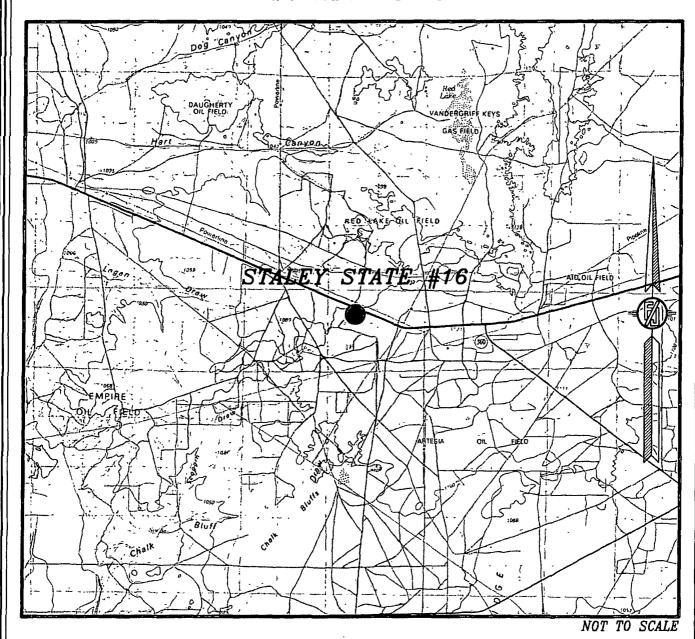
MAY 24, 2012

SURVEY NO. 579A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO



SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO VICINITY MAP



LRE OPERATING, LLC
STALEY STATE #16

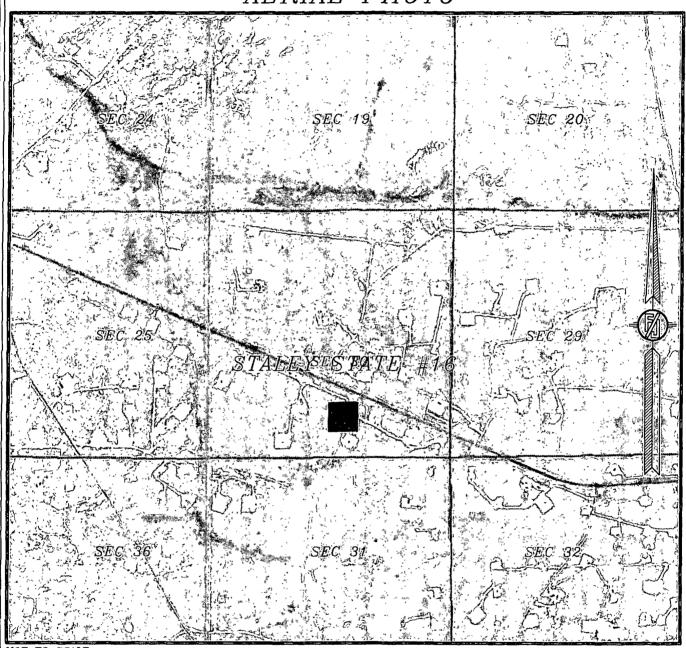
LOCATED 890 FT. FROM THE SOUTH LINE
AND 2310 FT. FROM THE EAST LINE OF
SECTION 30, TOWNSHIP 17 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 24, 2012

SURVEY NO. 579A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO AERIAL PHOTO



NOT TO SCALE AERIAL PHOTO: GOOGLE EARTH JUNE 2011

LRE OPERATING, LLC STALEY STATE #16

LOCATED 890 FT. FROM THE SOUTH LINE AND 2310 FT. FROM THE EAST LINE OF SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

MAY 24, 2012

SURVEY NO. 579A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

LRE Operating, LLC Drilling Plan

Staley State #16 990' FSL 2310' FEL O-S30-T17S-R28E Eddy County, NM

- 1. The elevation of the unprepared ground is 3626.3' feet above sea level.
- 2. The geologic name of the surface formation is Permian with Quaternary Alluvium.
- 3. A rotary rig will be utilized to Drill the well to 5100' and run casing. This equipment will be rigged down and the well will be completed with a workover rig.
- 4. Proposed total depth is 5100'.
- 5. Estimated tops of geologic markers:

Quaternary – Alluvium	Surface
7 Rivers	524
Queen	1073
Grayburg	1450
Premier	1767
San Andres	1798
Glorieta	3208
Yeso	3315
Tubb	4686
TD	5100'

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

Queen	1073
Grayburg	1450
Premier	1767
San Andres	1798
Glorieta	3208
Yeso	3315
Tubb	4686
TD	5100'

7. Proposed Casing and Cement program is as follows:

Type	Hole Size	Casing Size	Wt	Grade	Thread	Depth	Sx	Density	Yield	.Components
Conductor	20"	14"	68.7	Weld	В	40	Ī			Ready Mix
Surface	12.25	8.625	24	ST&C	J-55	425	280	14.8	1.351	CI C Cmt w/ 1/4 pps Cello Flake + 2% CaCl2
Production	7.875	5.5	17	LT&C	J-55	4900	325	12.8	1.903	Lead: (35:65) Poz/Cl C Cmt + 5% NaCl + 0.125 lbs/sk Cello Flake + 5 lbs/sk LCM-1 +0.6% R-3 + 6% Gel
							650	14.8	1.328	Tail: Class C w/ 0.6% R-3 and 1/4 pps cello flake

8. Proposed Mud Program is as follows

Depth	425	4850	4850-5100
Mud Type	Fresh Water Mud	Brine	Brine, Salt Gel & Starch
Properties			
MW	8.5-9.2	9.8-10.1	9.9-10.2
pH	10	10-11.5	11-12
WL	NC	NC	20-30
Vis	28-34	29-32	32-35
MC	NC	NC	<2
Solids	NC	<1	<3
Pump Rate	300-350	375-425	400-450
Special		Use Polymers 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 5000' 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. The presence of H2S is not expected in this wellbore due to the drilling mud program design expected to exclude reservoir fluids from entering the hole. In the event H2S is detected, equipment will be in place and available to comply with the provisions of state regulations and BLM 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 2244 psi based on $0.44 \times TD$. The estimated BHT is 135 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.

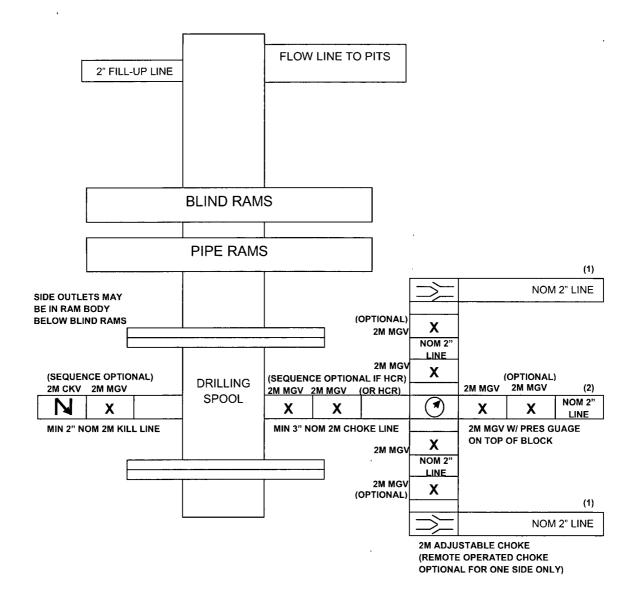
Pressure Control Equipment

The blowout preventer equipment (BOP) will consist of a 2000 psi double ram type preventer, a bag-type (Hydril) preventer and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and drill pipe rams on bottom. A 2M BOP will be installed on the 8 5/8" surface casing and utilized continuously until the depth is reached. All casing strings will be tested as per Onshore Order #2.

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:

- -Annular preventers
- -Double ram with blind rams and pipe rams.
- -Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 2 inch 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)
- -3 inch diameter choke line
- -2 kill valves, one of which will be a check valve (2 inch minimum)
- -2 chokes
- -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.
- -Fill-up line above the uppermost preventer.



- (1) Line to mud gas separator and/or pit
- (2) Bleed line to pit

MGV = Manual Gate Valve

CKV = Check Valve

HCR = Hydraulically Controlled Remote Valve

LRE Operating, LLC

STALEY STATE #16 HYDROGEN SULFIDE (H₂S) CONTINGENCY DRILLING PLAN

Assumed 100 ppm ROE = 3000'
100 ppm H₂S concentration shall trigger activation of this plan.

This is an open drilling site. H_2S monitoring equipment, along with a choke manifold, mud/gas separator, and flare will be rigged up and in use when the company drills out from under surface casing. H_2S monitors, warning signs, wind indicators and flags will be in use.

SUMMARY PLAN

- 1. All personnel shall receive proper H₂S training in accordance with Onshore Oil and Gas Order No. 6.III.C.3.a. A minimum of an initial training session and weekly H₂S and well control drills for all personnel in each working crew shall be conducted. The initial training session for each well shall include a review of the this Drilling Operations Plan and site specific measures and areas set up when the rig is moved onto location.
- 2. The company has caused the drilling contractor and other vendors to install 2000 psi well control systems including:

A. A choke manifold with:

- i. One remotely operated choke,
- ii. a flare line and flare that is 150' from the wellhead to be ignited, in the event the plan is put into effect, with an electronic ignition system or a back up flare gun,
- iii. a mud/gas separator downstream of the of the choke and upstream of the flare.
- iv. All BOP equipment required for a 2000 psi well control system will be in place and tested by a third party to 250 psi low pressure and 2000 psi high pressure. This test will include testing all lines and equipment associated with the choke manifold and kill line. Weekly BOP function and control drills will be performed with all applicable crews and personnel on location.
- 3. At rig move in, two perpendicular briefing areas readily accessible will be designated and marked with signage. A clear foot path for escape will be designated and marked.
- 4. The following protective equipment for essential personnel will be located on location at rig move in:

A. Breathing apparatus:

- i. Rescue Packs (1 at each briefing area and 2 stored in the designated safety equipment storage area), shall be on location,
- ii. 4 work/escape packs shall be stored on the rig floor with sufficient hose to allow work activity,
- iii. 4 Emergency escape packs shall be stored in the rig doghouse for emergency evacuation,

H2S CONTINGENCY DRILLING PLAN

- B. Auxiliary Rescue Equipment will be available in the designated safety equipment storage area and will include:
 - i. Stretcher.
 - ii. Two OSHA approved full body harnesses,
 - iii. 100 feet of 5/8 inch OSHA approved rope,
 - iv. 2-20# Class ABC fire extinguishers.
- 5. H₂S detection and monitoring equipment shall be in place before drilling out surface casing. There will be a stationary detector in the rig dog house and another with the mud log equipment on the end of the flow line. Three sensors will be placed on the rig floor, the wellhead/cellar, and on the closed loop equipment. The detection level for H₂S will be set at 10 ppm and the alarm will sound if any level of the gas is detected over 10 ppm.
- 6. Visual warning systems will be in place at rig move in and before the surface casing is drilled out. Color coded signage will be placed at the entrance to location indicating H₂S is possible, and furthermore, the color will be changed should the site condition dictate. If H₂S is detected, then a color coded condition flag will be displayed to indicate levels of detection. Wind socks will be placed at the location entrance and one other fully visible site to allow personnel to determine wind direction and safe escape/briefing routes.
- 7. The mud program utilized on this well is intended to provide sufficient density to exclude H₂S from the wellbore. Furthermore, Loss Circulation Material will be added before any known loss circulation (low pressure) zones are encountered. Corrosion inhibitors are included in the mud system to prevent failures in the event H₂S does enter the wellbore, and seal rings are used to prevent the use of elastomers on the wellhead equipment. In the event a rotating head is necessary, elastomers will be designed to operate in H₂S conditions. Drill collars and other bottom hole assembly components are to be inspected after each well, and in the event H₂S is encountered in the wellbore, drill pipe shall be inspected as well.
- 8. The location shall be equipped with one cell telephone in the rig doghouse, one cell telephone with the well site supervisor, two way communication devices to communicate between mud system personnel, rig floor personnel, mud log personnel, and safety personnel on location. In the event H₂S is detected, a company vehicle with two way radios shall be moved into a safe briefing area and manned for communication with all vendors, company personnel or agency personnel as required.

H2S CONTINGENCY DRILLING PLAN

EMERGENCY PROCEDURES

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas, or if monitors indicate H₂S is present. Escape will take place via the entry road away from the flare stack, or a foot path marked and designated before the well is spud by on site personnel. Once crews and other personnel are a safe distance, the crews will move to evacuate any persons in the Radius of Exposure, followed by blocking access to the Radius of Exposure.

There are no homes or buildings within the Radius of Exposure ("ROE"), so efforts will be concentrated on evacuating any third parties within the ROE. Immediate response will include evacuation of any persons potentially affected by toxic or flammable gasses. Once evacuation is under way, perimeter monitoring and control of access will be executed to ensure safe areas and stage areas.

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- · Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- · Have received training in the
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide ($S0_2$). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any

major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H₂S and S0₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H₂S	1.189 Air= 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	S0 ₂	2.21 Air= 1	2ppm	N/A	1000 ppm

H2S CONTINGENCY DRILLING PLAN

Contacting Authorities

Lime Rock Resources personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Lime Rock Resources response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER) and BLM Onshore Order #6.

H₂S OPERATIONS

Though no H_2S is anticipated during the drilling operation, this contingency plan will provide for methods to ensure the well is kept under control in the event an H_2S reading of 100 ppm or more are encountered.

Once personnel are safe and the proper protective gear is in place and on personnel, the operator and rig crew essential personnel will ensure the well is under control, suspend drilling operations and shut-in the well (unless pressure build up or other operational situations dictate suspending operations will prevent well control), increase the mud weight and circulate all gas from the hole utilizing the mud/gas separator downstream of the choke, the choke manifold and the emergency flare system located 150' from the well. Bring the mud system into compliance and the H₂S level below 10 ppm, and then notify all emergency officers that drilling ahead is practical and safe.

Proceed with drilling ahead only after all provisions of Onshore Order 6, Section III.C. have been satisfied.

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 #			
SID ASHWORTH	PRODUCTION ENGINEER	HOUSTON	713-292-9526	713-906-7750	713-783-1959			
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 FATHEREE	WELL SITE SUPERVISOR	ROTATES ON SITE	NA	940-389-6044	NA			
GARY MCCELLAND	WELL SITE SUPERVISOR	ROTATES ON SITE	NA	903-503-8997	NA			

Agency Call List						
City	Agency or Office	Telephone Number				
Artesia	Ambulance	911				
Artesia	State Police	575-746-2703				
Artesia	Sheriff'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	Sheriff'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 Commission ("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				

H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

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 Service	Artesia, Hobbs and Odessa	575-746-2757	SAME				
Total Safety	Safety Equipment and Personnel	Artesia	575-746-2847	SAME				
Cutter Oilfield Services	Drilling Systems Equipment	Midland	432-488-6707	SAME				
Assurance Fire & Safety	Safety Equipment and Personnel	Artesia	575-396-9702	575-441-2224				
Flight 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 13 Street				