	· · ·		•	
	i .	1		ATS-13-10
orm 3160-3 UNITED STATES	-		ORM APPROVE	)
March 2012) DEPARTMENT OF THE INT			AB NO. 1004-013 res October 31, 2	
BUREAU OF LAND MANAG	RECEIV		1.11	
· · · · · · · · · · · · · · · · · · ·	I I have to be and to a	5. Lease Seri		11/13/2018
	NOV 1320	1.7	Allotee or Tribe N	ame
APPLICATION FOR PERMIT TO DRIL		AIR		
a. Type of Work	TER NIVIAAres Fait	7. Unit or CA	Agreement Nam	e and No.
b. Type of Well Oil Well Gas Well Other	Single Zone Multiple Zo	nic	e and Well No. Rose 14 Fe	d 1 < 4622
Name of Operator	(7277)	9. API Well		7/2
EOG Resources, Inc.	3b. Phone No. (include area	30-015	opl or Explorato	
P.O. Box 2267 Midland, TX 79702	432,-686-3689	<i><i><i>P</i>PPPPPPPPPPP</i></i>	mated; Bone	
Location of Well (Report location clearly and in accordance with any		11. Sec., T., R	., M., or Blk. and	Survey or Area
At surface 1810' FNL & 820' FWL, SWNW (E)		Sec 14,	26S, 31E	297860
At proposed prod. zone 1806' FNL & 710' FWL, SWNW (E	)			х
4. Distance in miles and direction from nearest town or post office*	<u></u>	12. County or	Parish	13. State
Approximately +/- 33 miles Sou	uthwest from Jal, NM		ddy	NM
5. Distance from proposed*	16. No. of Acres in lease	17. Spacing Unit dec	icated to this wel	1,
location to nearest property or lease line, ft. 710' (Also to nearest drg. unit line, if any)	.2560		10 acres	
8. Distance from proposed location*	19. Proposed Depth	20.BLM/BIA Bond	l No. on file	
to nearest well, drilling, completed, applied for, on this lease, ft.	10701 MD		Ł	
10592 SE RT Wilson	3 10700' TVD		NM 2308 /	NMB000629
1. Elevations (Show whether DF, KDB, RT, GL, etc.	22. Approximate date work will s	tart* 23.Estin	ated duration	······································
3202 GL	1/1/2014		20 days	
	24. Attachments			
he following, completed in accordance with the requirements of Onshore	e Oil and Gas Order No. 1, must be attac	hed to this form:		
Well plat certified by a registered surveyor.	4. Bond to cover the oper	ations unless covered b	an existing bond	on file (see
A Drilling Plan	Item 20 above).		e.nsting oone	
A Surface Use Plan (if the location is on National Forest System Land SUPO must be filed with the appropriate Forest Service Office)		information and/or	as as may be reas	ired by the
SUPO must be filed with the appropriate Forest Service Office).	6. Such other site specific BLM	mormation and/or pla	is as may be requ	neu by the
5. Signatur	Name (Printed/Typed)		Date	·
the office of the other ot	,		•	30/13
Title	Stan Wagner	·····	//	20/12
Regulatory Analyst				
	Name (Printed/Typed)		Dathinu	8 2013
Approved by (Signautre)	rume (r macuri ypeu)		DatNOV -	
Approved by (Signautre)			I	
Approved by (Signature) /S/ STEPHEN J. CAFFEY Title	Office		~	· · · · · · · · · · · · · · · · · · ·
ISI STEPHEN J. CAFFEY	Office CARLSBAD FIELD	OFFICE	~	·
ISI STEPHEN J. CAFFEY Title FIELD MANAGER Application approval does not warrant or certify that the applicant holds onduct operations thereon.	CARLSBAD FIELD		ch would entitle t	he applicant to
ISI STEPHEN J. CAFFEY Title FIELD MANAGER Application approval does not warrant or certify that the applicant holds onduct operations thereon. Conditions of approval, if any, are attached.	CARLSBAD FIELD legal or equitable title to those rights i	n the subject lease whi		
ISI STEPHEN J. CAFFEY Title FIELD MANAGER Application approval does not warrant or certify that the applicant holds onduct operations thereon.	CARLSBAD FIELD legal or equitable title to those rights i a crime for any person knowlingly an	n the subject lease whi d willfully to make to	any department o	
ISI STEPHEN J. CAFFEY Title FIELD MANAGER Application approval does not warrant or certify that the applicant holds onduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it	CARLSBAD FIELD legal or equitable title to those rights i a crime for any person knowlingly an	n the subject lease whi d willfully to make to n. <u>APPROV</u>	any department o	ragoncy of the

# **OPERATOR CERTIFICATION**

I certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal Laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true, and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this  $29^{-1}$  day of  $_{10}$  and  $_{10}$ , 2013.

Name: <u>Roger Motley</u> Position: <u>Sr. Lease Operations ROW Representative</u> Address: <u>P.O. Box 2267, Midland, TX 79705</u> Telephone: <u>(432) 686-3642</u> Email: <u>roger motley@eogresources.com</u>

Signed

Kog Moxly

District I 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

Phone: (57) /48-1265 Fax. (57) /10-5/20 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Sante 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. Sante Fe, NM 87505

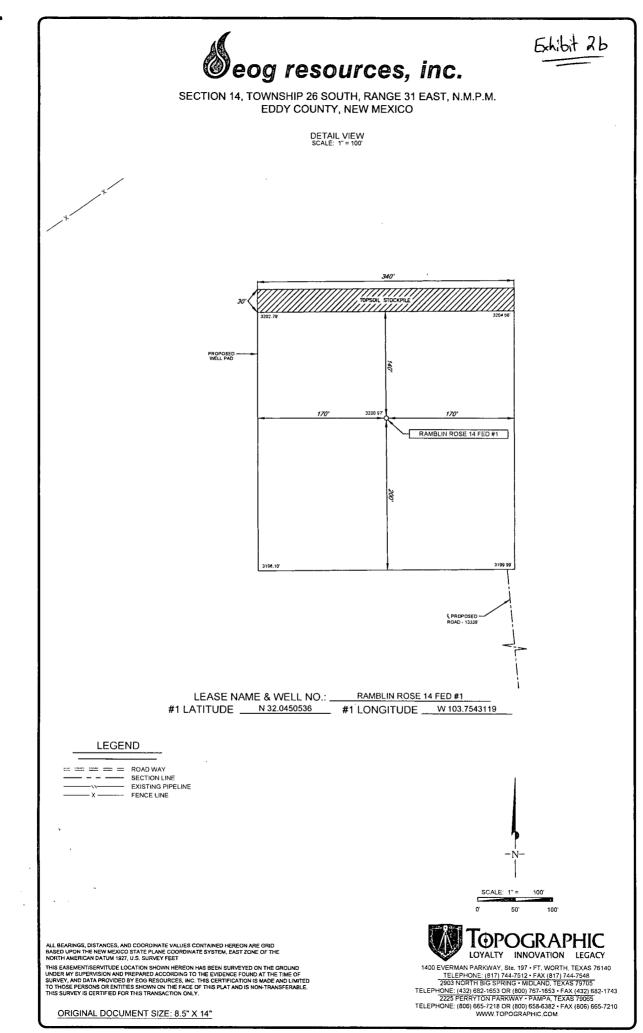
FORM C-102 Revised August 1, 2011 Submit one copy to appropriate **District Office** 

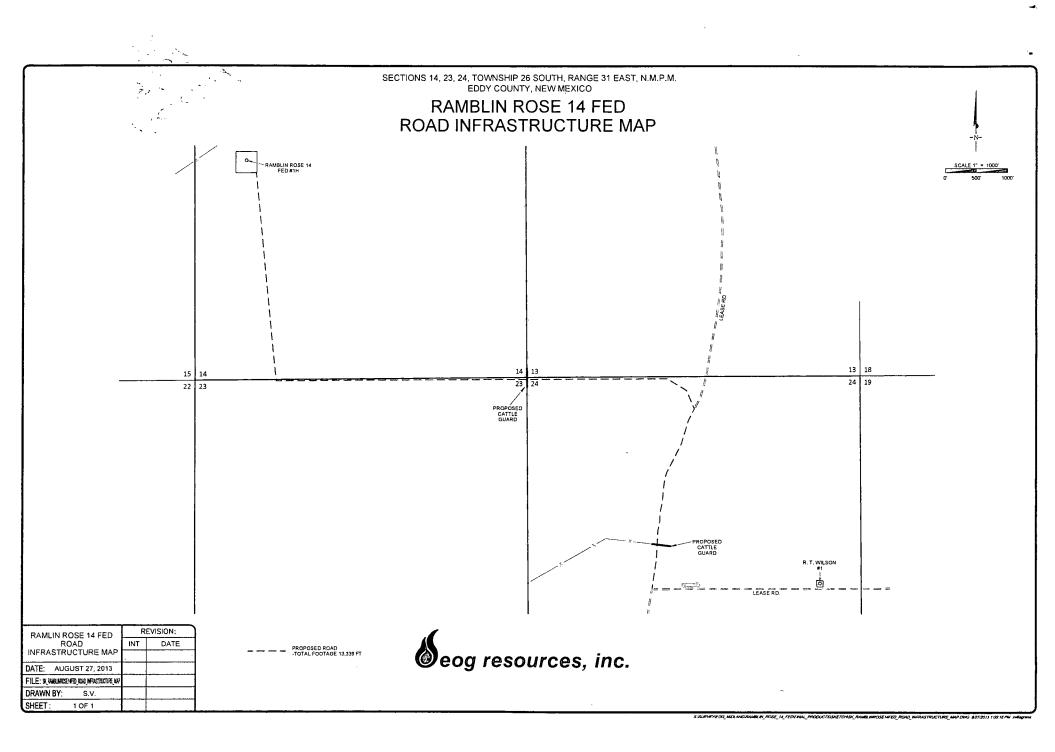
AMENDED REPORT

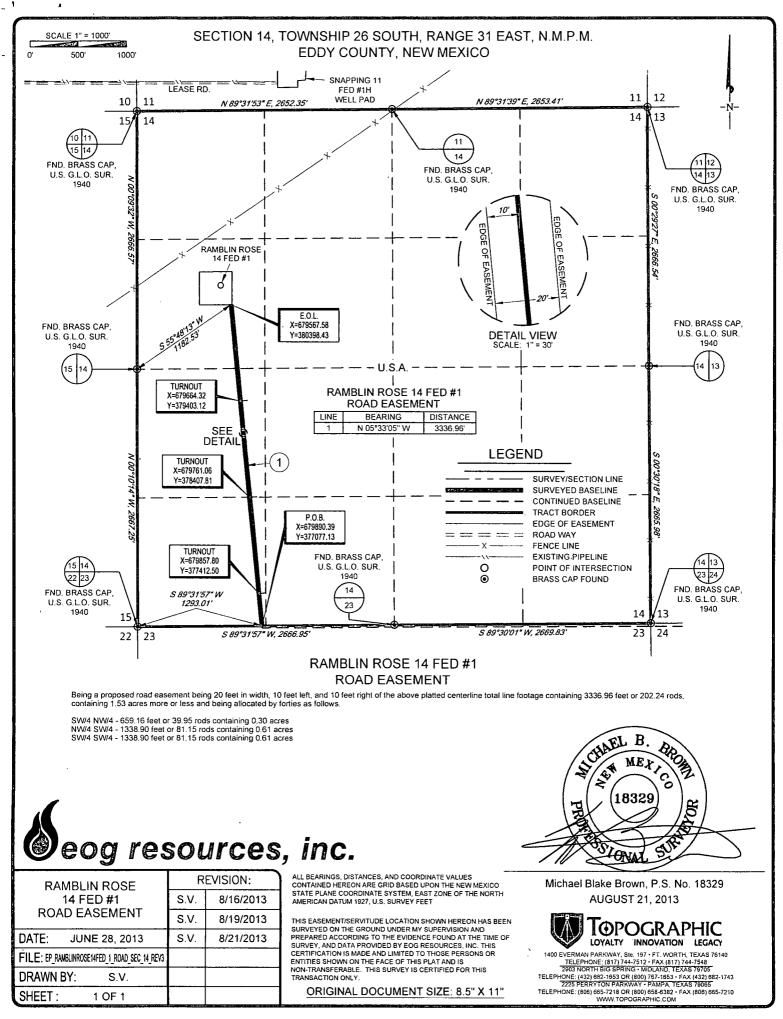
		V	VELL LC	OCATIO	N AND ACRI	EAGE DEDICA	ATION PLAT		
30-015	API Number	11796	9	7860		ennings	<sup>3</sup> Pool Name Bone Sprin	10-	P
4000		<sup>6</sup> Well Number <b>#1</b>							
<sup>7</sup> ogrid 1 7377		<sup>9</sup> Elevation 3202'							
<u> </u>					<sup>10</sup> Surface Lo	cation			
UL or lot no. E	Section 14	Township 26–S	Range 31-E	Lot Idn —	Feet from the 1810'	North/South line	Feet from the 820'	East/West line WEST	County EDDY
UL or lot no.	Section	1 1	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Count
E	14	26-S	31-E	-	1806'	NORTH	710'	WEST	EDDY
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or 1	Infill <sup>14</sup> C	onsolidation Coo	de <sup>15</sup> Orde	r No.				
40	1.1.2			}					

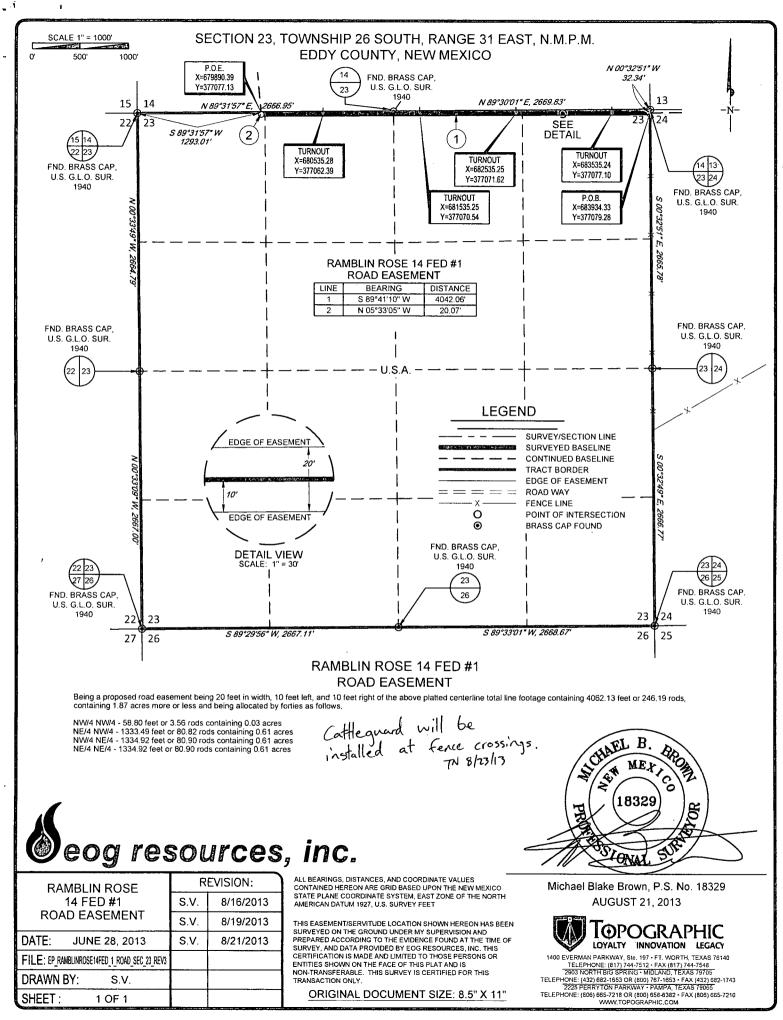
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	14 <sup>17</sup> 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 ouns a working interest or unleased mineral 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 oumer of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory
$\begin{array}{c c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\$	then War Arretofore entered by the division.
SURFACE LOCATION 820 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=679407 Y=380597 LAT.: N 32.0450536 LONG.: W 103.7543119	Stan Wagner Printed Name E-mail Address
BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=679297 Y=380600 LAT.: N 32.0450637 LONG.: W 103.7546668	<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field noles of actual surveys made by me or under my supervision, and that the same is true to the best of my betief.
	Date of Survey Charles The Source of Survey Charles of Survey Charles The Survey Charles The Survey
	14

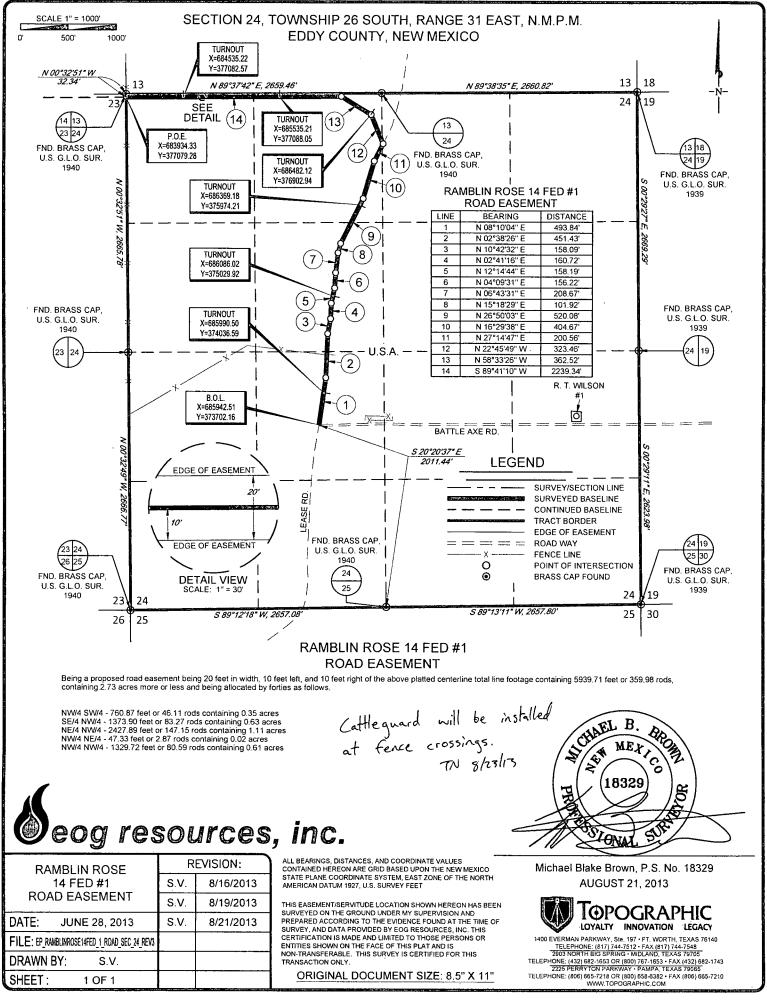








1



3

• EXHIBIT 2

			Y											
	6	5	4	3	24	- 1	6	5	4 `	3	2 ·	1	6	
12	7	8	9	10	11	12	7	8	9		11	12	. 7	
13	18	17		15	14	13	18	17			14 Cotto	13 nJ-Jicaw Ro	13	
24	19	20	21	- <u>3    </u> 22	23	24	19	20		 22	23	24	) <sup>19</sup> /	
25	30	29	28	27	26	25	30	29	28	27 R	26	25	30	
36	3h	32	33	34	35	36	31 .	32	33	34	35	36	31	
1	6	5 Pipelin	e Rd	3	2		6 	<b>5</b> ineline Rdi	4	3	2	1	6	
12	7	B	9	10		12 BLIN ROSE	7	8	9	10	11	15	7	
13	18	17	16	<sup>15</sup> > <b>◯ 1</b> [	• 14	13	18	17		15	14	13	18	
24	19 -	- 50 - 50	21	22	23	24	19	20	DS Battle	22	23	24	19	
25	30	29	28	27	26		30	29	28	27 27	26	25	- 30 Axe Rd	
36	31	32	33	34	35	36	31	32	33	34	35	36	31	

VICINITY MAP

❷eog resources, inc.

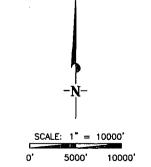
LEASE NAME & WELL NO .: \_\_\_\_ RAMBLIN ROSE 14 FED #1

SECTION 14	TWP 26-S	RGEE	SURVEY N.M.P.M.
COUNTY	EDDY	STATE	NM
DESCRIPTION_	18	10' FNL & 82	

DISTANCE & DIRECTION FROM INT. OF US-285 & CR. 720, GO SOUTH ON US-285 ±12.6 MILES, THENCE NORTHEAST (LEFT) ON WHITEHORN RD. ±4.1 MILES, THENCE EAST (RIGHT) ON PIPELINE RD. ±13.8 MILES, THENCE SOUTH (RIGHT) ±1.4 MILES ON LEASE RD. TO A POINT ±XXX FEET WEST OF THE LOCATION.

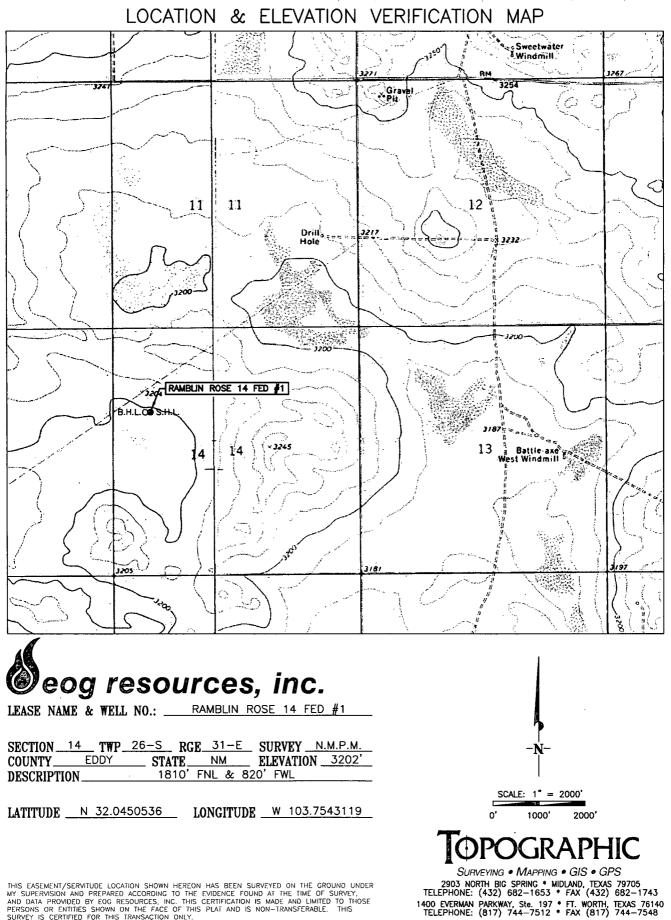
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS. DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.



#### GRAPH HIC

SURVEYING • MAPPING • GIS • GPS 2903 NORTH BIG SPRING \* MIDLAND, TEXAS 79705 TELEPHONE: (432) 682-1653 \* FAX (432) 682-1743 1400 EVERMAN PARKWAY, Ste. 197 \* FT. WORTH, TEXAS 76140 TELEPHONE: (817) 744-7548 2225 PERRYTON PARKWAY \* PAMPA, TEXAS 79065 TELEPHONE: (806) 665-7218 \* FAX (806) 665-7210 WWW.TOPOGRAPHIC.COM

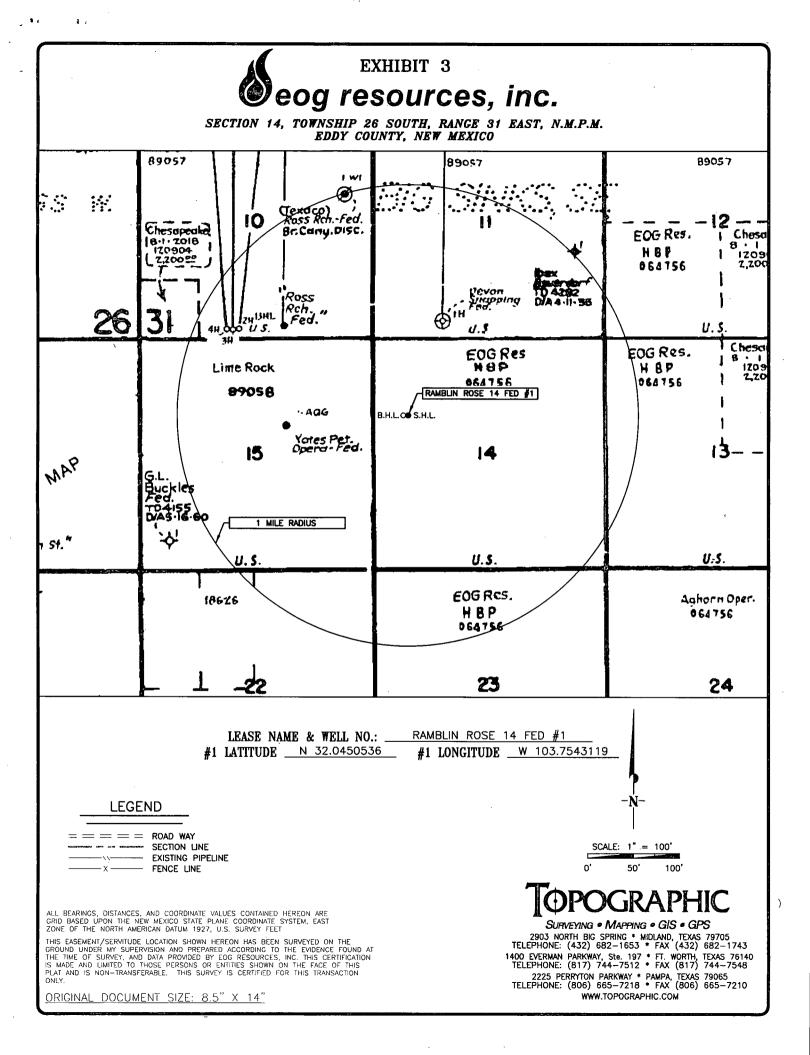


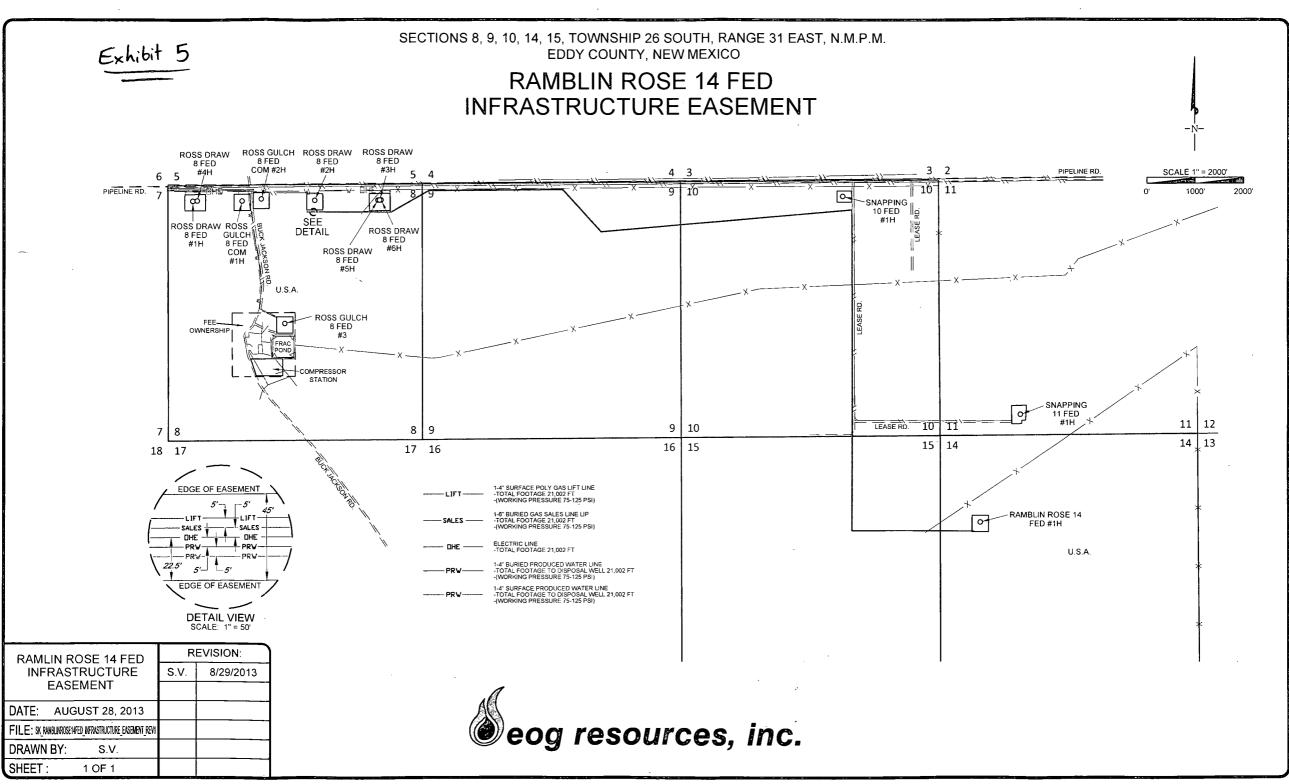
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

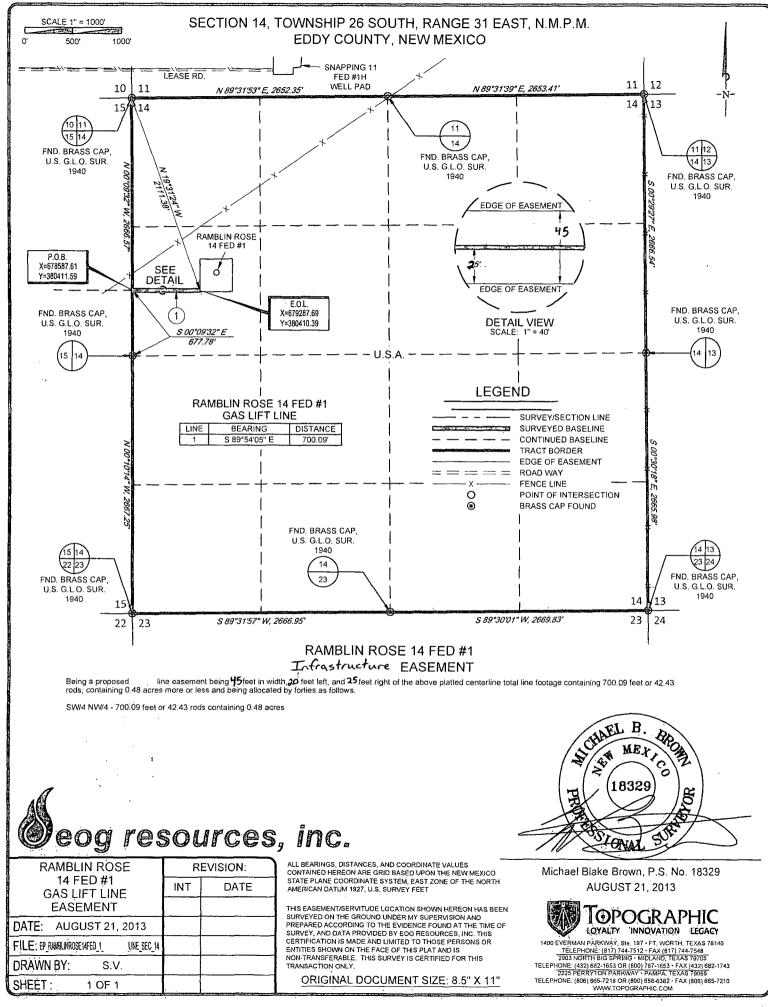
i.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.

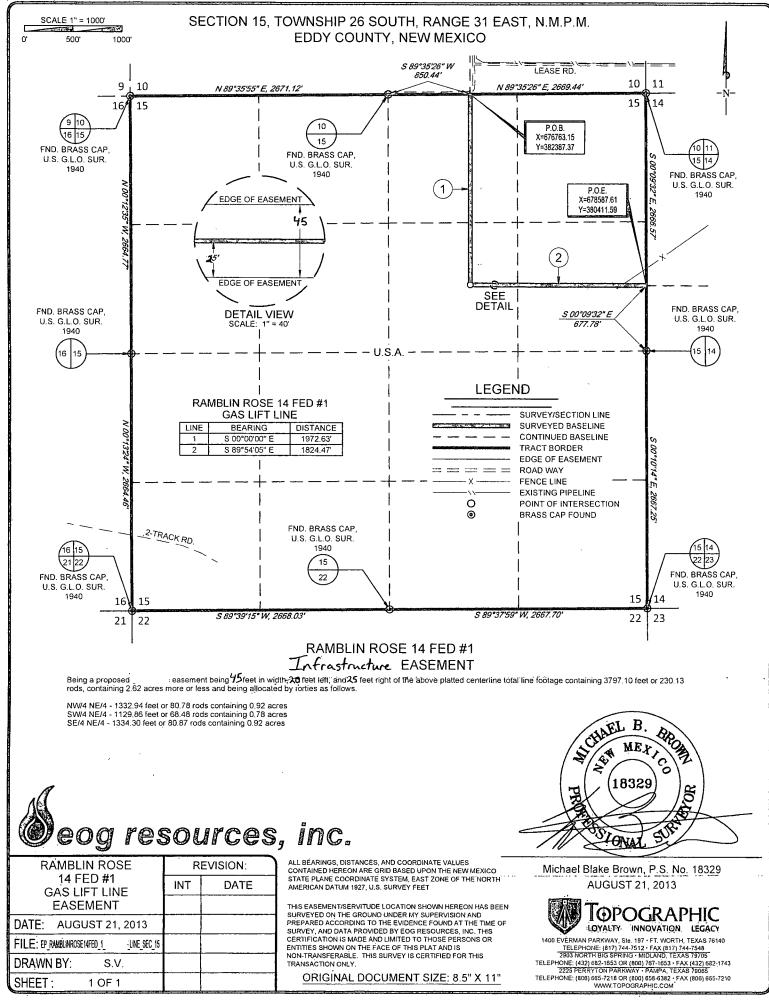
2225 PERRYTON PARKWAY \* PAMPA, TEXAS 79065 TELEPHONE: (806) 665-7218 \* FAX (806) 665-7210 WWW.TOPOGRAPHIC.COM

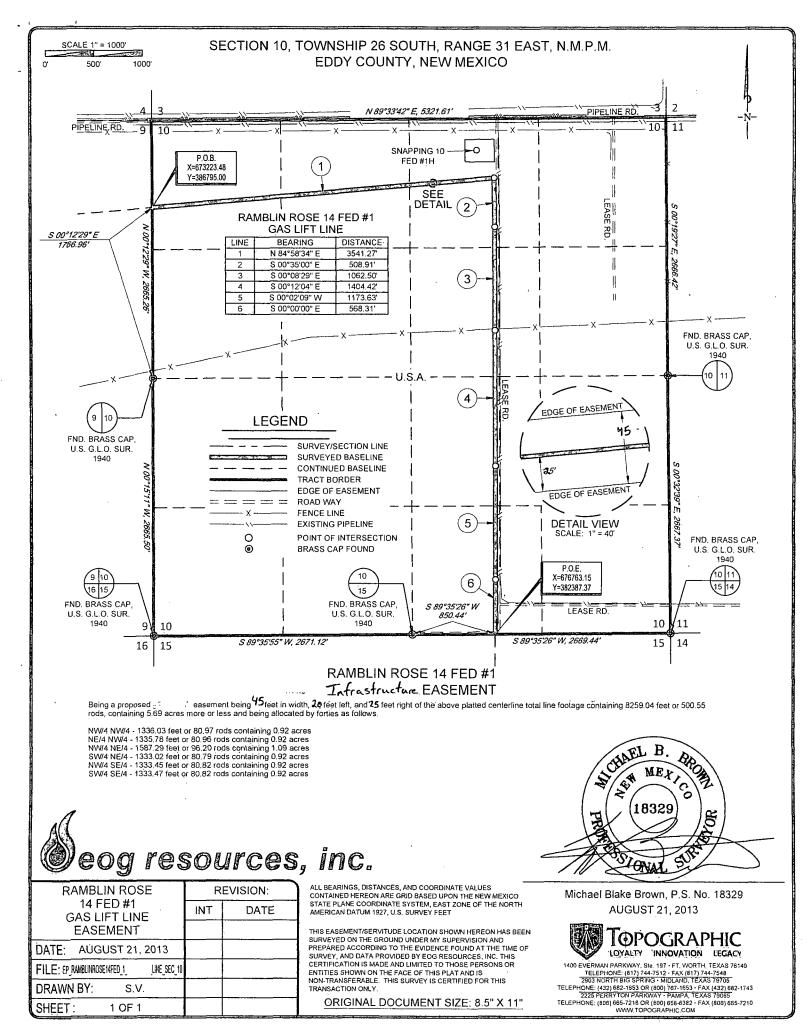


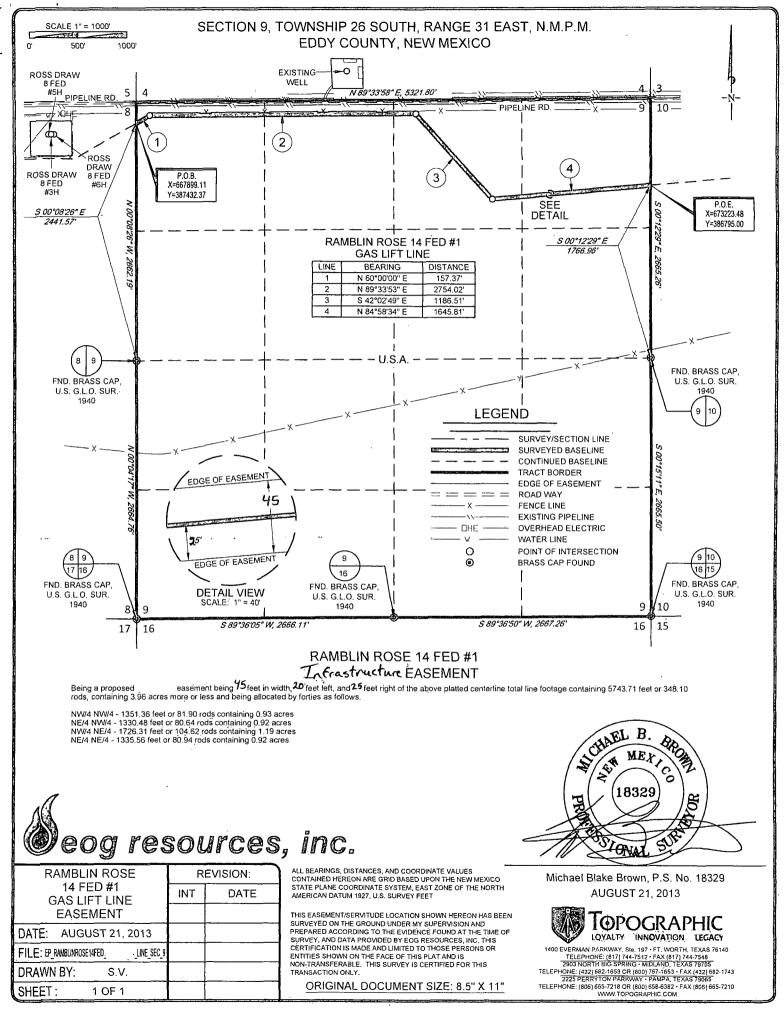




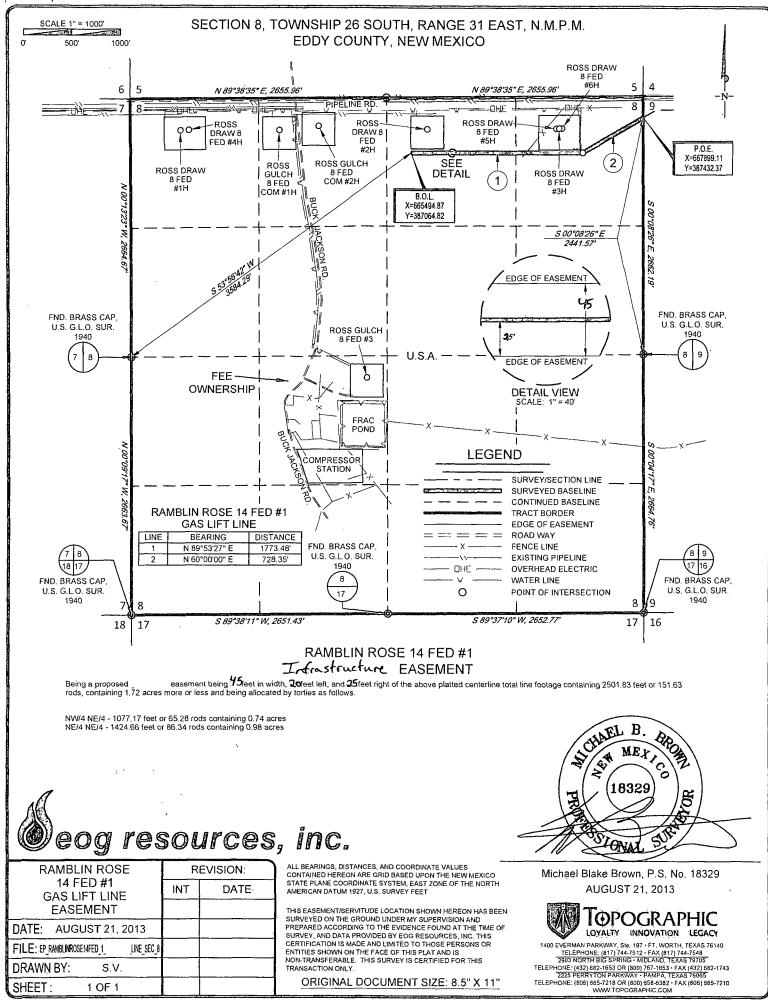
S.ISURVEYIEOG\_MIDLANDIRAMBLIN\_ROSE\_14\_FEDIFINAL\_PRODUCTSIEP\_RAMBLINROSE14FED\_1\_GAS\_LIFT\_LINE\_SEC\_14.DVKG\_821/2013 1:18:04 PM\_svillagrana







SISURVEYEOG\_MIDLANDIRAMBLIN\_ROSE\_14\_FEDIFINAL\_PRODUCTSIEP\_RAMBLINROSE14FED\_1\_GA5\_LIFT\_LINE\_SEC\_9.DWG\_8/21/2013 1:08:14 PM\_svillagrana



## 1. GEOLOGIC NAME OF SURFACE FORMATION: Permian

**,** 15

## 2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1090'
Top of Salt	1,460'
Base of Salt	3,900'
Lamar	4,110'
Bell Canyon	4,135'
Cherry Canyon	5,080'
Brushy Canyon	6,465'
Bone Spring Lime	8,120'
1 <sup>st</sup> Bone Spring Sand	9,070'
2 <sup>nd</sup> Bone Spring Carb	9,465'
2 <sup>nd</sup> Bone Spring Sand	9,800'
3 <sup>rd</sup> Bone Spring Carb	10,200'
TD	10,700'

## 3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400' Fresh Water				
Brushy Canyon	6,465'	Oil			
Bone Spring Lime	8,120'	Oil			
1 <sup>st</sup> Bone Spring Sand	9,070'	Oil			
2 <sup>nd</sup> Bone Spring Carb	9,465'	Oil			
2 <sup>nd</sup> Bone Spring Sand	9,800'	Oil			
3 <sup>rd</sup> Bone Spring Carb	10,200'	Oil			

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13.375" casing at 1.175' and circulating cement back to surface.

## 4. CASING PROGRAM - NEW

# SecOA\_

	Hole Size	Interval 12	Csg <sub>QD</sub> 'OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
Γ	17.5"	0-1,175,00	13.375"	54.5#	J55	STC	1.125	1.25	1.60
ſ	12.25"	0 - 4000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
Ĩ	8.75"	0'-10,700'	7"	26#	HCL80	LTC	1.125	1.25	1.60

١

## **Cementing Program:**

	No.	Wt.	Yld	
Depth	Sacks	lb/gal	Ft <sup>3</sup> /ft	Slurry Description
1,175'	400	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5%
1339				CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ surface)
1310	300	14.8	1.34	Tail: Class C + 0.005 pps Static Free + $1\%$ CaCl <sub>2</sub> + 0.25
				pps CelloFlake + 0.005 gps FP-6L
4,000'	650	12.7	2.22	Lead: Class C + 2% SMS + 0.8% R-3 + 0.25 pps
25/2				CelloFlake + 0.005 pps Static Free (TOC @ surface)
9 /8	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static
				Free
10,700'	200	10.8	3.68	Lead: 60:40:0 Class 'C' + 15.00 lb/sk BA-90 + 4.00% MPA-
7"	-			5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80%
$\uparrow$				ASA-301 + 2.50% R-21 + 8.00 lb/sk LCM-1
				(TOC @ 3,500')
· ·	250	11.8	2.38	Middle: 50:50:10 Class 'H' + 0.80% FL-52A + 0.50% ASA-
				301 + 1.30% SMS + 2.00% Salt (2.224 lb/sk) + 0.70% R-21
				+ 3.00 lb/sk LCM-1 + 0.25 lb/sk Cello Flake
	450	14.2	1.28	Tail: 50:50:2 Class 'H' + 0.65% FL-52 + 0.20% CD-32 +
				0.15% SMS + 2.00% Salt (0.962 lb/sk) + 0.05% R-3

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

COA

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

3000 psi BOPE is adequate for this application. Due to the 3000 psi BOPE requirement no FIT tests are planned.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 2000/250 psig and the annular preventer to 2000/250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000/250 psig and the annular preventer to 3000/250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

#### 6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The applicable depths and properties of the drilling fluid systems are as follows. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

1387 Depth Туре Weight (ppg) Viscosity Water Loss 0 - 1.175'Fresh water + Gel 8.6-8.8 28-34 N/c 1,175' - 4,000' Brine 10.0-10.2 28-34 N/c  $\overline{4.000^{\circ}}$  - 10,700' Cut Brine 8.4-9.3 28-34 N/c

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H<sub>2</sub>S monitoring and detection equipment will be utilized from surface casing point to TD.

### 8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logging is possible in the 8-3/4" hole section. The possible logging suite for this hole section is listed below:

- LDT-CNL-HNGS w/ Pe From TD to intermediate casing point.
- GR-CCL Will be run in cased hole during completions phase of operations from TD to surface.

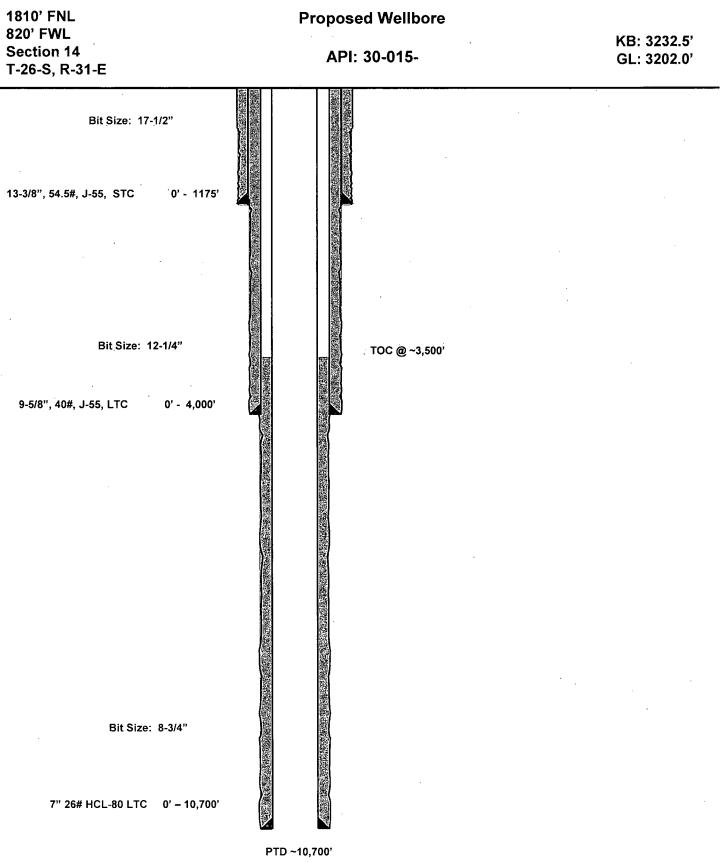
# 9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

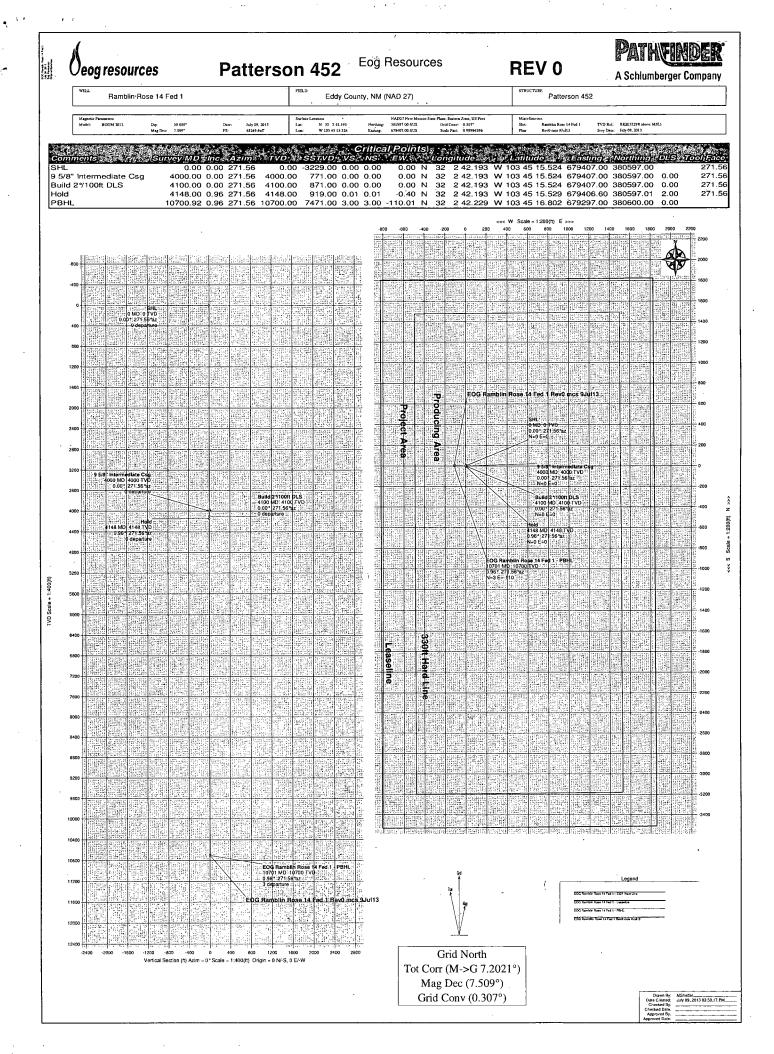
See COA The estimated bottom hole temperature (BHT) at TD is 166 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4633 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

## **10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

The drilling operation should be finished in approximately one month. If the well is productive, an additional 90-120 days will be required for completion and testing before a decision is made to install permanent facilities.

## Ramblin Rose 14 Fed #1 Eddy County, New Mexico







Report Date: Cilent: Field: Structure / Slot: Well:

Borehole: UWI / API#: Survey Name:

, ,

#### EOG Ramblin Rose 14 Fed 1 Rev0 mcs 9Jul13 Proposal Geodetic Report

(Def Plan)

Grid Convergence Used:

Survey / DLS Computation: Vertical Section Azimuth: Vertical Section Origin: Minimum Curvature / Lubinski 0,000 ° (Grid North) 0.000 ft, 0.000 ft TVD Reference Datum: TVD Reference Elevation: RKB 3229,000 ft above MSL Seabed / Ground Elevation: Magnetic Declination: Total Gravity Field Strength: 2202.000 ft above MSL 7.509 \* 998.4910mgn (9.80665 Based) 48249.604 nT Total Magnetic Field Strength: Magnetic Dip Angle: Declination Date: 48249.004 m 59.889 ° July 09, 2013 BGGM 2012 Magnetic Declination Model: North Reference: Grid North 0.3072 °

PATHEINDER oer Con A Schlu

EOG Ramblin Rose 14 Fed 1 Original Borehole Paterson 452 / Unknown EOG Ramblin Rose 14 Fed 1 Rev0 mcs 8Jul 13 July 09, 2013 0,963 \* / 110.047 ft / 2.025 / 0.010 NAD27 New Mexico State Plane, Eastern Zone, US Feet N 32\* 2\* 42.19335\*, W1 03\* 45\* 15.52385\* N 38059\* 000 ft US, E 879407.000 ft US 0.3072 \* 0.99994596

July 09, 2013 - 03:56 PM Eog Resources NM Eddy County (NAD 27) EOG Ramblin Rose 14 Fed 1 / EOG Ramblin Rose 14 Fed 1 EOG Ramblin Rose 14 Fed 1

Survey Name: Survey Date: Tort / AHD / DDI / ERD Ratto: Coordinate Reference System: Location Lat / Long: Location Grid N/E Y/X: CRS Grid Convergence Angle:

CRS Grid Convergence Angle:	0.307				Grid	Convergence Use	d: 0.30	12-				
Grid Scale Factor:	0.999	94596			Tota	ll Corr Mag North->	Grid North: 7.20	21 °				
					Loca	al Coord Reference	ed To: Struc	ture Reference P	oint			
<b>01</b> -	MD	Incl	Azim Grid	TVD	TVDSS	VSEC	NS	EW	DLS	Northing	Easting Latitu	de Longitude
Comments SHL	(ft) 0.00	0.00	271.56	(ft) 0.00	(ft) -3229.00	(ft) 0.00	(ft) 0.00	(ft) 0.00	(*/100ft) N/A	(RUS) 380597.00	(ftUS) (N/S ° 679407.00 N 32 2 42	
and	100.00	0.00	271.56	100.00	-3129.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	200.00	0.00	271.56	200.00	-3029.00	0.00	0.00	0.00	. 0.00	380597.00	679407.00 N 32 2 42	
	300.00 400.00	0.00	271.56 271.56	300.00 400.00	-2929.00 -2829.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	500.00 600.00	0.00	271.56 271.56	500.00 600.00	-2729.00 -2629.00	0.00	0.00 0.00	0.00	0.00	380597.00 380597.00	679407.00 N 32 242 679407.00 N 32 242	
	700,00	0.00	271.56	700.00	-2529.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 242	19 W 103 45 15.52
	800.00 - 900.00	0.00	271.56 271.56	800.00 900.00	-2429.00 -2329.00	0.00 0.00	0.00	0.00 0.00	0.00	380597.00 380597.00	679407.00 N 32 242 679407.00 N 32 242	
	1000.00 1100.00	0.00	271.56 271.56	1000.00 1100.00	-2229.00 -2129.00	0.00	0.00	0.00 0.00	0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	1200.00	0.00	271.56	1200.00	-2029.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	1300.00	0.00	271.56	1300.00	-1929.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	1400.00	0.00	271.56	1400.00	-1829.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 242	.19 W 103 45 15.52
	1500.00	0.00	271.56	1500.00	-1729.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 242	
	1600.00 . 1700.00	0.00	271.56 271.56	1600.00 1700.00	-1629.00 -1529.00	0.00	0.00	0.00	0.00 0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	1800.00	0.00	271.56	1800.00	-1429.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	1900.00	0.00	271.56	1900.00	-1329.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	.19 W 103 45 15.52
	2000.00	0.00	271.56	2000.00	-1229.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 242	19 W 103 45 15.52
a state of the second	2100.00	0.00	271.56	2100.00	-1129.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	2200.00 2300.00	0.00	271.56 271.56	2200.00 2300.00	-1029.00 -929.00	0.00 0.00	0.00	0.00	0.00 0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
<i>1</i> .	2400.00	0,00	271.56	2400.00	-829.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	2500.00	0.00	271.56	2500.00	-729.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	19 W 103 45 15.52
	2600.00	0.00	271.56	2600.00	-629.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
<i>.</i> .	2700.00	. 0.00	271.56	2700.00	-529.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
•	2800.00 2900.00	0.00 0.00	271.56 271.56	2800.00 2900.00	-429.00 -329.00	0.00	0.00 0.00	0.00	0.00 0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	3000.00 . 3100.00 /	0.00 0.00	271.56 271.56	3000.00 3100.00	-229.00 -129.00	0.00 0.00	0.00 0.00	0.00	0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	3200.00		271.56	3200.00	-29.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 242	19 W 103 45 15.52
	3300.00 3400.00	0.00	271.56 271.56	3300.00 3400.00	71.00 171.00	0,00 0,00	0.00 0.00	0.00 0.00	0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	3500.00 3600.00	0.00 0.00	271.56 271.56	3500.00 3600.00	271.00 371.00	0.00	0.00 0.00	0.00	0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
	3700.00	0.00	271.56	3700.00	471.00	0.00	0.00	0.00	0.00	380597.00	679407.00 N 32 2 42	
	3800.00 3900.00	0.00 0.00	271.56 271.56	3800.00 3900.00	571.00 671.00	0.00	0.00	0.00	0.00	380597.00 380597.00	679407.00 N 32 2 42 679407.00 N 32 2 42	
							0.00	0.00				
9 5/8" Intermediate Csg Build 2°/100ft DLS	4000.00 4100.00	0.00	271.56 271.56	4000.00 4100.00	771.00 871.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	380597.00 380597.00	679407.00 N 32 242 679407.00 N 32 242	
Hold	4148.00	0.96	271.56	4148.00	919.00	0.00	0.01	-0.40	2.00	380597.01	679406.60 N 32 2 42	
	4200.00	0.96	271.56	4199.99	970.99	0.03	0.03	-1.27	0.00	380597.03	679405.73 N 32 2 42	
	4300.00	0.96	271.56	4299.98	1070.98	0.08	0.08	-2.95	0.00	380597.08	679404.05 N 32 242	.19 W 103 45 15.56
	4400.00	0.96	271.56	4399.96	1170.96	0.13	0.13	-4.62	0.00	380597.13	679402.38 N 32 2 42	
	4500.00 4600.00	0.96 0.96	271.56 271.56	4499.95 4599.93	1270.95 1370.93	0.17 0.22	0.17	-6.30 -7.97	0.00	380597.17 380597.22	679400.70 N 32 2 42 679399.03 N 32 2 42	
	4700.00	0,96	271.56	4699.92	1470.92	0.26	0.26	-9.65	0.00	380597.26	679397.35 N 32 242	20 W 103 45 15.64
	4800.00	0.96	271.56	4799.91	1570.91	0.31	0.31	-11.32	0.00	380597,31	679395.68 N 32 242	20 W 103 45 15.66
	4900.00	0.96	271.56	4899.89	1670.89	0.35	0.35	-12.99	0.00	380597.35	679394.01 N 32 242	
	5000.00 5100.00	0.96 0.96	271.56 271.56	4999.88 5099.86	1770.88 1870.86	0.40 0.45	0.40 0.45	-14.67 -16.34	0.00 0.00	380597.40 380597.45	679392.33 N 32 2 42 679390.66 N 32 2 42	
	5200.00	0.96	271.56	5199.85	1970.85	0.49	0.49	-18.02	0.00	380597.49	679388.98 N 32 2 42	20 W 103 45 15.73
	5300.00	0.96	271.56	5299.84	2070.84	0.54	0.54	-19.69	0.00	380597.54	679387.31 N 32 2 42	.20 W 103 45 15.75
	5400.00	0.96	271.56	5399.82	2170.82	0.58	0,58	-21.37	0.00	380597,58	679385.64 N 32 242	20 W 103 45 15.77
	5500 00	0.96	271.56	5499.81	2270.81	0.63	0.63	-23.04	0.00	380597.63	679383.96 N 32 2 42	
	5600.00 5700.00	0.96 0.96	271.56 271.56	5599.79 5699.78	2370.79 2470.78	0.67 0.72	0.67 0.72	-24.71 -26.39	0.00 0.00	380597.67 380597.72	679382.29 N 32 2.42 679380.61 N 32 2.42	
	5800.00	0.96	271.56	5799.77	2570,77	0.76	0.76	-28.06	0.00	380597.76	679378.94 N 32 2 42	
	5900.00	0.96	271.56	5899,75	2670.75	0.81	0.81	-29.73	0.00	380597,81	679377.27 N 32 2 42	20 W 103 45 15 87
	5000.00	0.96	271.56	5999.74	2770.74	0.86	0.86	-31,41	0.00	380597.86	679375.59 N 32 242	20 W 103 45 15.89
	6100.00 6200.00	0.96	271.56	6099.72	2870.72	0.90	0.90	-33.08	0.00	380597.90	679373.92 N 32 2 42	
	6300.00	0.96 0.96	271.56 271.56	6199.71 6299.70	2970.71 3070.70	0.95 0.99	0.95 0.99	-34.75 -36.43	0.00	380597.95 380597.99	679372.25 N 32 2 42 679370.57 N 32 2 42	
	6400.00 6500.00	0.96 0.96	271.56 271.56	6399.68 6499.67	3170.68 3270.67	1.04 1.08	1.04	-38,10 -39,77	• 0.00 0.00	380598.04 380598.08	679368.90 N 32 2 42 679367.23 N 32 2 42	
	6600.00	0.96	271.56	6599.65	3370.65	1.13	1.13	-41.45	0.00	380598.13	679365.55 N 32 2 42	21 W 103 45 16.01
	6700.00 6800.00	0.96 0.96	271.56	6699.64 6799.63	3470.64 3570.63	1.18	1.18	-43.12	0.00	380598.17	679363.88 N 32 2 42 679362.21 N 32 2 42	
	0000,00	0.90	271.56	6799.63	3370.03	1.22	1.22	-44.79	0.00	380598.22	019302.21 N 32 242	.2) VV 103 43 15.04
	6900.00	0.96	271.56	6899.61	3670,61	1.27	1.27	-46.47	0.00	380598.27	679360.54 N 32 2 42	
	7000.00	0.96 0.96	271.56 271.56	6999.60 7099.58	3770.60 3870.58	1.31	1.31 1.36	-48.14 -49.81	0.00	380598.31 380598.36	679358,86 N 32 2 42 679357,19 N 32 2 42	
	00.00	0.50	271.00	, 378,56	5570,55		1.30	-43.01	0.00	200380.00	515501.15 N 52 242	

Comments	MD (ft)	inci (*)	Azim Grid (*)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (*/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S * ' ")	Longitude (E/W * ' '')
	7200,00	0.96	271.56	7199.57	3970.57	1,40	1.40	-51.49	0.00	380598.40		N 32 242.21	
	7300.00	0,96	271.56	7299.56	4070.56	1.45	1.45	-53.16	0.00	380598.45		N 32 242.21	W 103 45 16.14
	7400.00	0.96	271.56	7399.54	4170.54	1.49	, 1.49	-54.83	0.00	380598.49	679352.17	N 32 242.21	W 103 45 16.16
	7500.00	0.96	271.56	7499.53	4270.53	1.54	1.54	-56.50	0.00	380598.54	679350.50	N 32 242.21	W 103 45 16.18
	7600.00	0.96	271.56	7599.51	4370,51	1.59	1.59	-58.18	0.00	380598.59	679348.83	N 32 242.21	W 103 45 16.20
	7700.00	£.96	271.56	7699.50	4470.50	1.63	1.63	-59.85	0.00	380598.63	679347,15	N 32 242.21	W 103 45 16.22
	7800.00	0.96	271.56	7799.49	4570.49	1.68	1.68	-61.52	0.00	380598.68	679345.48	N 32 242.21	W 103 45 16.24
	7900.00	0.96	271.56	7899.47	4670.47	1.72	1.72	-63.19	0.00	380598.72	679343.81	N 32 242.21	W 103 45 16.26
	8000.00	0.96	271.56	7999.46	4770.46	1.77	1.77	-64.87	0.00	380598,77	679342.14	N 32 242.21	W 103 45 16.28
	8100.00	0.96	271.56	8099.44	4870.44	1.81	1.81	-66.54	0.00	380598,81	679340,47	N 32 242.21	W 103 45 16.30
	8200.00	0.96	271.56	8199.43	4970.43	1.86	1.86	-68.21	0.00	380598.86	679338.79	N 32 2 42.22	W 103 45 16.32
	8300.00	0.96	271.56	8299.42	5070.42	1.90	1.90	-69.88	0.00	380598.90			W 103 45 16.34
	8400.00	0.96	271.56	8399.40	5170,40	1.95	1.95	-71.55	0.00	380598.95	679335.45	N 32 242.22	W 103 45 16.36
	8500.00	0.96	271.56	8499.39	5270,39	2.00	2.00	-73.23	0.00	380599.00	679333.78	N 32 2 42.22	W 103 45 16.37
	8600.00	0,96	271.56	8599.37	5370.37	2.04	2.04	-74.90	0.00	380599.04			W 103 45 16.39
	8700.00	0.96	271.56	8699,36	5470,36	2.09	2.09	-76.57	0.00	380599.09			W 103 45 16.41
	8800.00	0.96	271.56	8799.35	5570.35	2.13	2.13	-78.24	0.00	380599.13		N 32 242.22	
	8900.00	0.96	271.56	8899.33	5670.33	2.18	2.18	-79.91	0.00	380599.18	679327 09	N 32 2,42.22	W 103 45 16.45
	9000,00	0.96	271.56	8999.32	5770.32	2.22	2.22	-81.58	0.00	380599.22		N 32 2 42.22	W 103 45 16.47
	9100.00	0.96	271,56	9099.30	5870,30	2.27	2.27	-83.26	0.00	380599.27			
	9200.00	0,96	271.56	9199.29	5970.29	2.32	2.32	-84,93	0.00	380599.32			W 103 45 16.51
	9300.00	0.96	271.56	9299.28	6070.28	2.36	2.36	-86.60	0.00	380599.36			W 103 45 16.53
	9400.00	0.96	271.56	9399.26	6170.26	2.41	2.41	-88.27	0.00	380599,41	679318 73	N 32 242.22	W 103 45 16.55
	9500.00	0.96	271.56	9499.25	6270.25	2.45	2.45	-89,94	0.00	380599.45		N 32 2 42.22	W 103 45 16.57
	9600.00	0.96	271.56	9599.23	6370.23	2.50	2.50	-91.61	0.00	380599.50		N 32 2 42.22	W 103 45 16.59
	9700.00	0.96	271.56	9699.22	6470.22	2.54	2.54	-93.28	0.00	380599,54			
	9800.00	0.96	271.56	9799.21	6570.21	2.59	2.59	-94.95	0.00	380599,59			
	9900.00	0.96	271.56	9899.19	6670,19	2.63	2.63	-96.63	0.00	380599.63	679310 38	N 32 242.22	W 103 45 16.65
	10000.00	0.96	271.56	9999.18	6770,18	2.68	2.68	-98.30	0.00	380599.68		N 32 2 42.23	W 103 45 16.67
	10100.00	0.96	271,56	10099,16	6870,16	2.73	2.73	-99.97	0.00	380599.73		N 32 2 42.23	W 103 45 16.69
	10200.00	0.96	271.56	10199.15	6970.15	2.77	2.77	-101.64	0.00	380599.77		N 32 2 42.23	W 103 45 16.70
	10300.00	0.96	271.56	10299.14	7070.14	2.82	2.82	-103.31	0.00	380599.82		N 32 2 42.23	W 103 45 16.72
	10400.00	0.96	271.56	10399.12	7170.12	2.86	2.86	-104.98	0.00	380599,86	679302 03	N 32 242.23	W 103 45 16.74
	10500.00	0.96	271,56	10499.11	7270.11	2.91	2.91	-106.65	0.00	360599.91		N 32 2 42.23	W 103 45 16.76
	10600.00	0.96	271,56	10599.09	7370.09	2.95	2.95	-108.32	0.00	380599.95		N 32 2 42.23	W 103 45 16.78
	10700.00	0.96	271.56	10699.08	7470.08	3.00	3.00	-108.32	0.00	380600.00		N 32 242.23	W 103 45 16.80
EOG Ramblin Rose 14 Fed 1 - PBHL	10700.92	0.96	271.56	10700.00	7471.00	3.00	3.00	-110.01	0.00	380600.00		N 32 2 42.23	W 103 45 16.80
EUG Nampier Nose 14 Feg 1 - PBHL	10100.92	0.90	271.50	10700.00	/4/1.00	3.00	3,00	-110.01	0.00	300000.00	0/329/.00	11 32 242.23	44 103 45 10.00

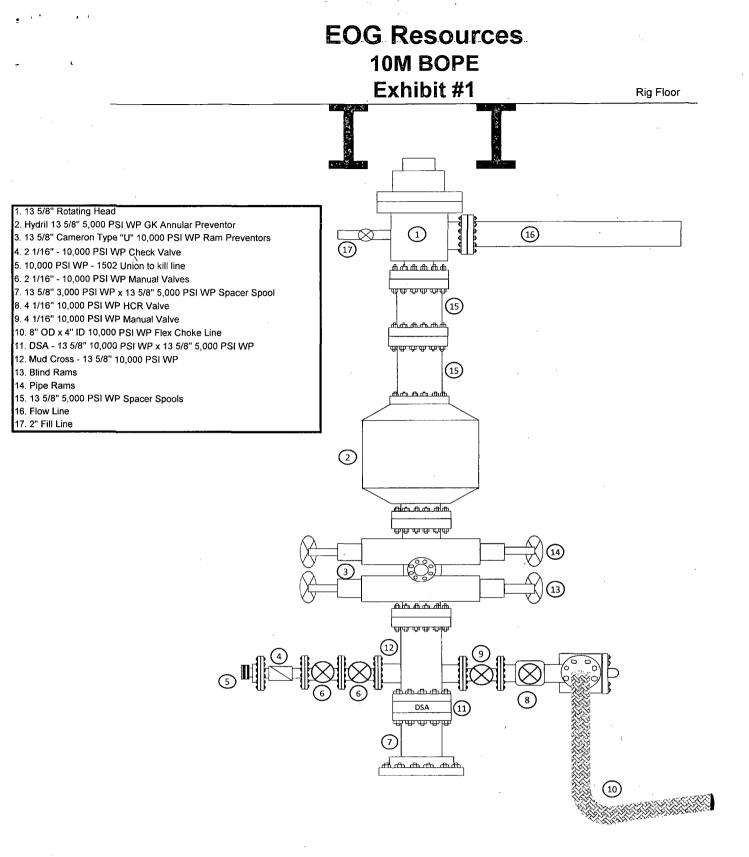
#### Survey Type:

. .

Def Plan

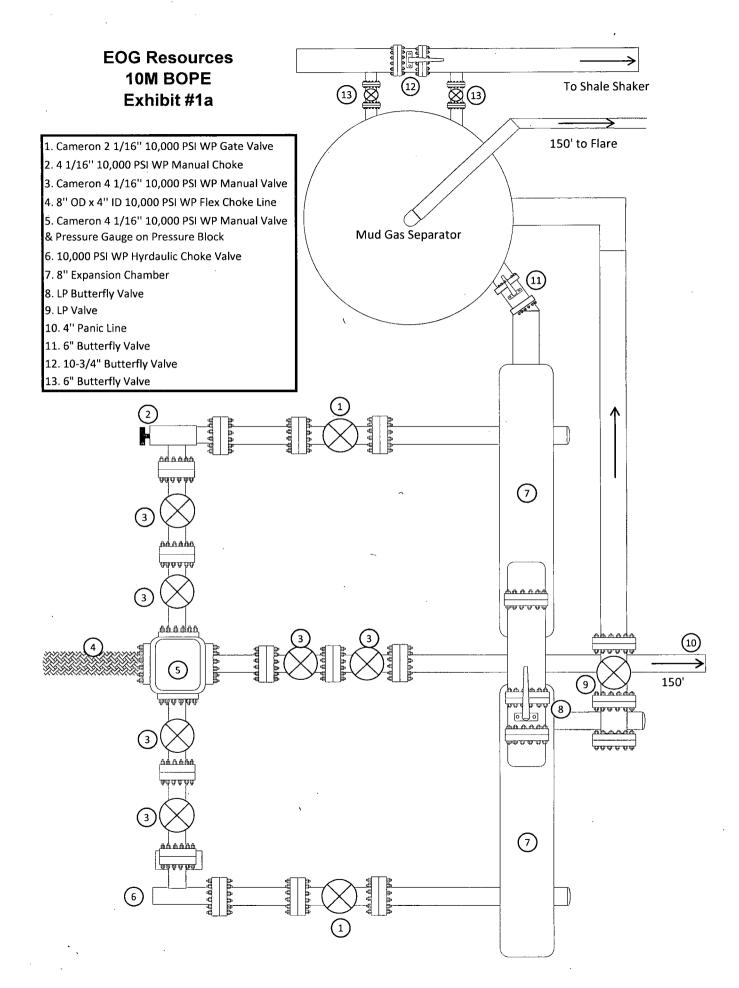
Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ቢ)	MD To (11)	EOU Freq (ft)	Hole Size Casing Di (in)	lameter (in)	Survey Tool Type	Borehole / Survey
	0.000	27.000	1/100.000	30.000	30.000	SLB_UNKNOWN-Depth Only	Original Borehole / EOG Ramblin Rose 14 Fed 1 Rev0 mcs 9Jul13
	27.000	10700.920	1/100.000	30.000	30.000	SLB_UNKNOWN	Original Borehole / EOG Ramblin Rose 14 Fed 1 Rev0 mcs 9Jul 13



#### ATTACHMENT TO EXHIBIT #1

- 1. Wear ring to be properly installed in head.
- 2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.
- 3. All fittings to be flanged
- 4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
- 5. All choke and fill lines to be securely anchored especially ends of choke lines.
- 6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 7. Kelly cock on kelly.
- 8. Extension wrenches and hand wheels to be properly installed.
- 9. Blow out preventer control to be located as close to driller's position as feasible.
- 10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.



Manufacturer: Robsco, Inc.

Serial Number: L31802030612R091712-1

Length: 35'

Size: OD = 8" ID = 3.5"

Ends: 4-1/16" 10k Flange

WP Rating: 10,000 psi

Anchors required by manufacturer: No



Robsco, Inc. **OILFIELD RUBBER PRODUCTS** 4749 Eastpark Drive Houston, TX 77028 United States of America

Gates Corporation Authorized Rotary and Vibrator Hose Subcontracted Fabricator

Hydrostatic Test Certification

Robsco, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the hydrostatic test per API Spec 7K, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

**Assembly Part Number** 36335R4-1/16FLG10K-SS

Serial Number / Date Code L31802030612R091712-1

**Hose Size** 3.5IN X 35FT Testers OC CS

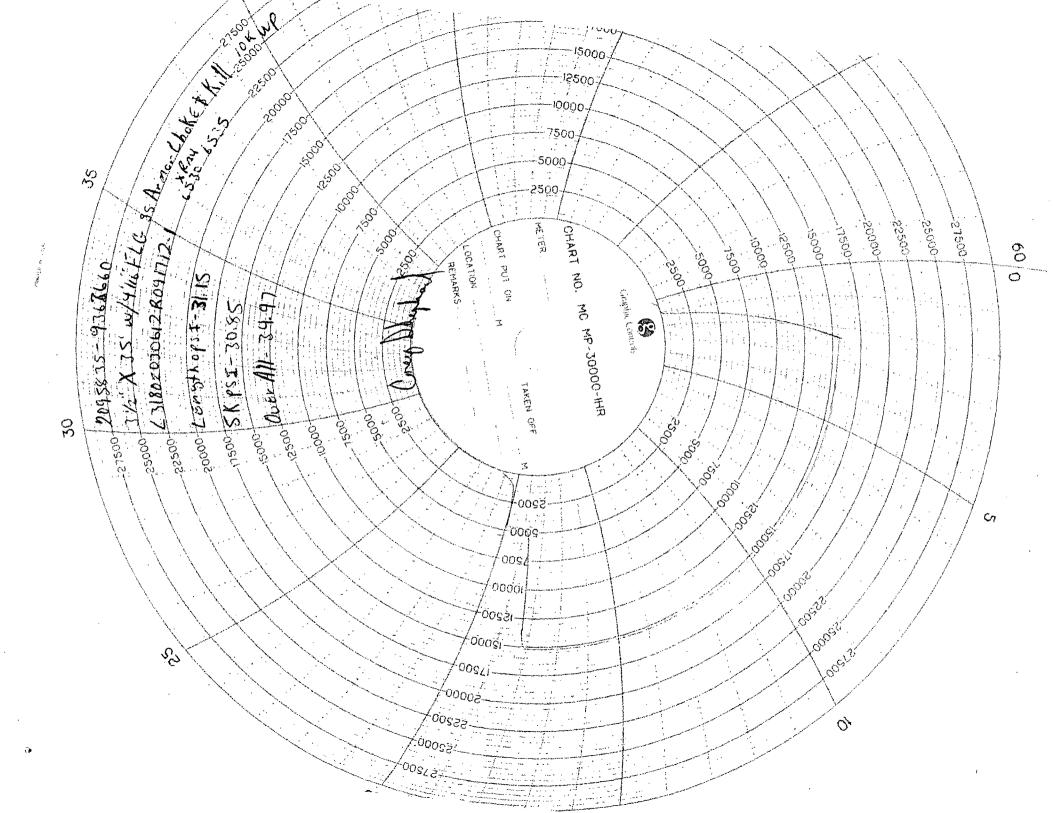
**Chart Recorder Information** Serial Number Recorder 22349

**Calibration Date** July 10th 2012

**Hydrostatic Test: Visual Inspection:**  Passed Passed

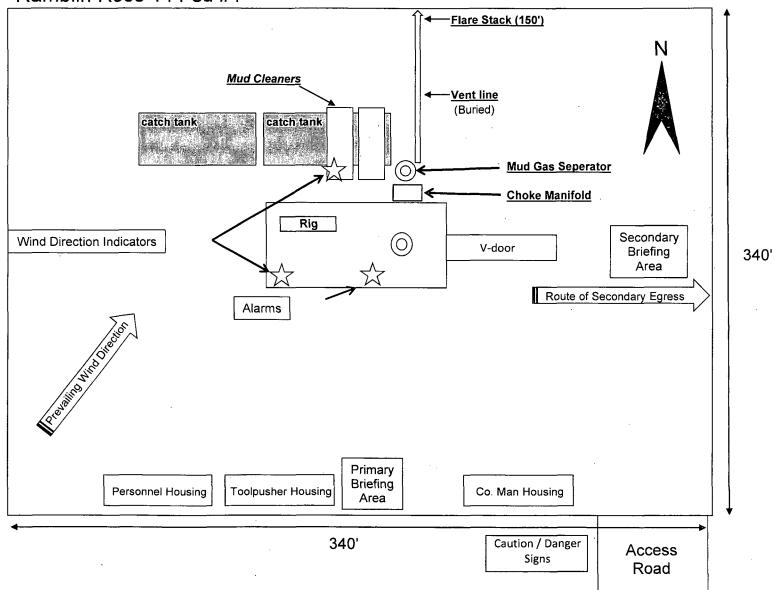
**QA** Representative Signature

Date & Initial



## Exhibit 4 EOG Resources Ramblin Rose 14 Fed #1





r

## Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H2S training in accordance with Onshore Order 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 with sufficient air hose 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:

All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

#### Communication:

Communication will be via cell phones and land lines where available.

, ·

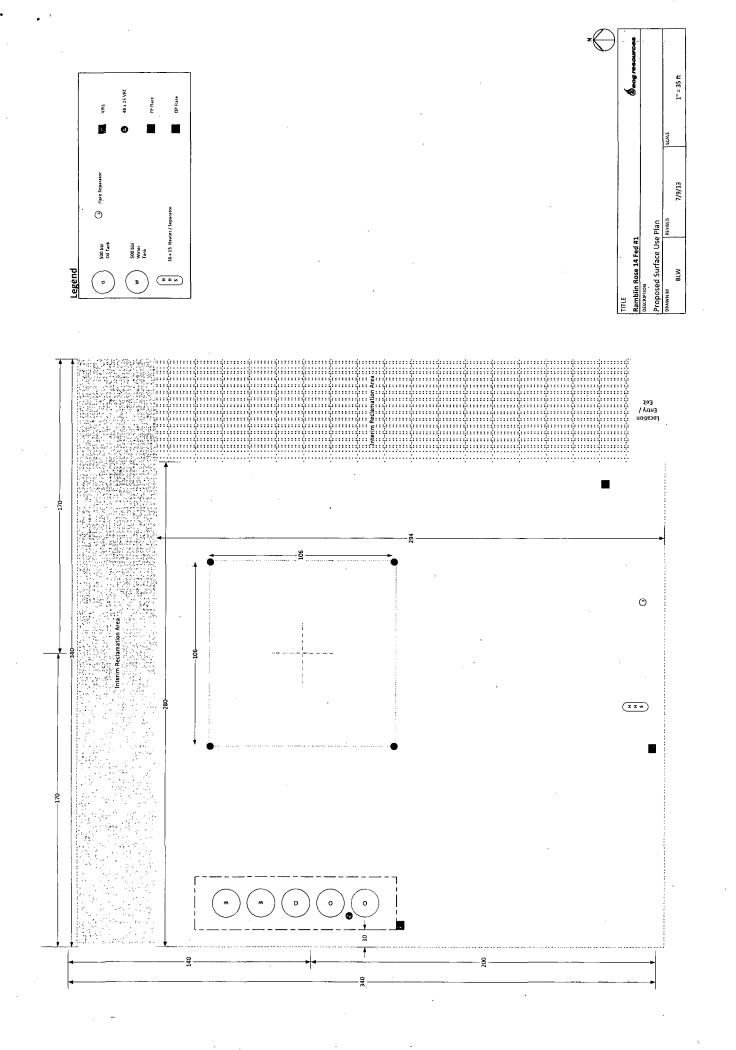
...

.

·

Emergency Assistance Telephone	List	911 or
PUBLIC SAFETY: Eddy County Sheriff's Department		(575) 887-7551
Kent Waller		(373) 887-7331
Fire Department: Carlsbad		(575) 885-3125
		• •
Artesia		(575) 746-5050
Hospitals:		(575) 007 4101
Carlsbad		(575) 887-4121
Artesia		(575) 748-3333
Hobbs		(575) 392-1979
Dept. of Public Safety/Carlsbad		(575) 748-9718
Highway Department		(575) 885-3281
New Mexico Oil Conservation		(575) 476-3440
U.S. Dept. of Labor		(575) 887-1174
EOG Resources, Inc.		
EOG / Midland	Office	(432) 686-3600
Company Drilling Consultants:		•
Danny Kiser Will Henderson	Cell	(432) 894-3417
Larry King	0.111	()
Drilling Engineer		
Steve Munsell	Office	(432) 686-3609
	Cell	(432) 894-1256
Operations Manager	COM	(152) 05 1 1250
Travis Lain	Office	(432) 686-3740
	Cell	(432) 254-3521
Drilling Superintendents	Con	(152) 251 5521
Ron Welch	Office	(432) 686-3695
	Cell	(432) 386-0592
Cactus Drilling	Con	(452) 500 0572
Cactus Drilling	Office	(580) 799-2752
Cactus 123 Drilling Rig	Rig	(432) 894-3417
	Nig	(+52) (54-5417
Tool Pusher:		
Jack Herndon	Cell	(405) 519-6552
Larry Slife	Cell	(405) 250-6368
Safety		
Reggie Phillips (HSE Manager)	Office	(432) 686-3747
	Cell	(303) 501-4587
Brian Chandler	Cell	(806) 777-8814
Terry Maxwell (Consultant)	Cell	(432) 349-6926
		(152) 517-0720

# **Emergency Assistance Telephone List**



# **SURFACE USE PLAN OF OPERATION**

# SHL: 1810' FNL & 820' FWL, Unit E, Section 14-T26S-R31E, N.M.P.M., Eddy Co, NM BHL: 1806' FNL & 710' FWL, Unit E, Section 14-T26S-R33E, N.M.P.M., Eddy Co, NM

An onsite inspection was conducted on Thursday, June 6th with BLM Natural Resources Specialists Tanner Nygren and Jesse Rice along with representatives from EOG Resources, Inc. to review the surface location, roads and infrastructure routes for the Ramblin Rose 14 Fed #1 well.

#### 1. EXISTING ROADS:

- a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Michael B. Brown of Topographic Land Surveyors, N.M.P.S. No. 18329.
- b. All roads into the location are depicted on Exhibits 2 & 2a.
- c. Operator shall maintain existing lease roads and improve said roads as deemed necessary, whether by observation of Operator or by an Authorized Officer of the BLM. In compliance with Onshore Order 1, Operator will improve or maintain existing roads in a condition the same as, or better than before operations began. Proper crowning, ditching, drainage and turnouts shall be monitored and updated as necessary. Should additional surfacing be required, surfacing material shall be obtained from a BLM approved caliche pit. Any updates to existing roads would comply with the parameters set out in the Construction section of the Conditions of Approval for the well site location and its road access.
- d. <u>Directions to Location:</u> From the intersection of US Highway 285 and County Road 1, go south on County Road 1 for 13.6 miles, then turn right (west) on Battle Axe Road and travel 1.9 miles to a point 13,302 feet southeast of the location.

#### 2. NEW OR RECONSTRUCTED ACCESS ROAD:

- a. The well site layout, Exhibit 2a shows the layout. The location will be accessed by a proposed lease road that will enter the location at the southeast corner of the well pad. This new lease road will travel a distance of 13,302 feet, and is depicted in the Ramblin Rose 14 Fed #1 Site Diagram. -14'
- b. The maximum width of the lease road is **X**. It is crowned and consists of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent soil erosion.
- c. Surface material is native caliche. This material will be obtained, as needed for maintenance, from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.

d. There will be two cattleguards installed along the access road to the Ramblin Rose 14 Fed #1 well site, and these cattle guards are depicted in the Ramblin Rose 14 Fed #1 Lease Infrastructure Map.

#### 3. LOCATION OF EXISTING WELLS:

Exhibit 3 shows all existing wells within a one-mile radius of the surface and bottom hole locations of this well.

#### 4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:

- a. In the event the well is found to be productive, the production equipment will be located on site. Please refer to the attached production facility diagram. The production of this well will be measured for sales on lease.
- b. Applicant will lay a 6" poly buried low pressure gas sales pipeline, a distance of 21,002 feet west, that shall tie into an existing buried 6" poly low pressure gas sales pipeline located in Section 8, T26S-R31E, which leads to a SUG sales point on the northern line of Section 8, T64S-R31E. Applicant shall construct a produced water pipeline, a buried 6" poly low pressure line that travels 21,002 feet west of the proposed Ramblin Rose 14 Fed #1 well pad, that shall tie into an existing buried 6" poly low pressure produced water pipeline located in section 8, T26S-R31E. A proposed 4" surface poly gas lift line and SWD pipeline shall be laid 21,002 feet to the west to service the Ramblin Rose 14 Fed #1, and these pipelines shall originate in Section 8, T26S-R31E. Initially applicant shall have its oil trucked. Plains will be the crude oil purchaser and Flint will be the oil transport company. All pipelines described above are depicted on Exhibit 5.
- c. Electricity shall be brought from the west in Section 8, T26S-R31E a distance of 21,002 feet, and will service the electricity needs on the Ramblin Rose 14 Fed #1.
- d. Refer to b above.
- e. If the well is productive, rehabilitation plans are as follows:
  - i. The location shall be reduced on the East and North sides as depicted by the Location Layout. The interim reclamation will be performed when optimal conditions exist during the growing season as per the interim reclamation guidelines of the BLM.
  - ii. The original topsoil, which will be stored to the North of the well pad, will be returned to the location. The location will be contoured as close as possible to match the original topography.

## 5. LOCATION AND TYPE OF WATER SUPPLY:

This location will be drilled using a combination of water mud systems (outlined in the drilling program). The water will be obtained from commercial water stations in the area and hauled to location by poly pipelines using existing and proposed roads shown in Exhibit 2 & 2a. In these cases where a poly pipeline is used to transport

water for drilling purposes, proper authorizations will be secured. If poly pipeline is used to transport fresh water to the location, proper authorization will be secured by the contractor.

#### 6. CONSTRUCTION MATERIALS

Obtaining Mineral Material – Caliche utilized for the drilling pad and proposed access road will be obtained either from an existing approved pit, or by benching into a hill which will allow the pad to level with existing caliche from cut, or extracted by "flipping" the location. A caliche permit shall be obtained from the BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "flipping" the location is as follows:

- a. An adequate amount of topsoil for final reclamation will be stripped from the well location surface and stockpiled along the edge of the location as shown in the well site layout.
- b. An area will be used within the proposed well site to excavate caliche.
- c. The subsoil will then be removed and stockpiled within the footages of the well location.
- d. Once caliche/mineral material is found, the material will be excavated and stockpiled within the footages of the well location.
- e. The subsoil will then be placed back in the excavated hole.
- f. Caliche/mineral material will then be placed over the entire pad and/or road to be compacted.

In the event that caliche is not found on site, a permit will be acquired if caliche is obtained from a BLM approved caliche pit

#### 7. METHODS OF HANDLING WASTE MATERIALS

a. Drill cuttings shall be disposed of in a steel cuttings bin (catch tanks) on the drilling pad (behind the steel mud tanks). The bin and cuttings shall be hauled to an approved cuttings dumpsite.

At the site, the cuttings shall be removed from the bin & the bin shall be returned to the drilling site for reuse.

- b. All trash, junk, and other waste material shall be contained in trash cages or trash bins to prevent scattering. When a job is completed, all contents shall be removed and disposed of in an approved landfill.
- c. The supplier, including broken sacks, shall pick up salts remaining after completion of well.
- d. If necessary, a porto-john shall be provided for the rig crews. This equipment shall be properly maintained during the drilling and completion operations and shall be removed when all operations are complete.
- e. Remaining drilling fluids shall be hauled off by transports to a state approved disposal site. Water produced during completion shall be put in storage tanks

and disposed of in a state approved disposal. Oil and condensate produced shall be put in a storage tank and sold.

- f. Disposal of fluids to be transported by the following companies:
  - i. RGB TRUCKING
  - ii. LOBO TRUCKING
  - iii. I & W TRUCKING
  - iv. CRANE HOT OIL & TRANSPORT
  - v. JWS
  - vi. QUALITY TRUCKING

#### 8. ANCILLARY FACILITIES:

a. No airstrip, campsite, or other facilities will be built.

#### 9. WELL SITE LAYOUT:

- a. Exhibit 4 shows the proposed location of sump pits, living facilities and well site layout with dimensions of the pad layout.
- b. Mud pits in the active circulating system shall be steel pits and the catch tanks shall be steel tanks set in shallow sumps behind the steel circulating tanks and sumps.
- c. The area where the catch tanks are placed shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations.

#### 10. PLANS FOR SURFACE RECLAMATION:

- a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche shall be removed from the pad and transported to the original caliche pit or used for other drilling locations and roads. The road shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations. The original topsoil shall again be returned to the pad and contoured, as close as possible, to the original topography.
- b. After the well is plugged and abandoned, the location and road shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations.
- c. Caliche from areas of the pad site not required for operations shall be reclaimed. The original topsoil shall be returned to the area of the drill pad not necessary to

operate the well. These unused areas of the drill pad shall be contoured, as close as possible, to match the original topography.

## 11. SURFACE OWNERSHIP

The surface is owned by the United States of America. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.

## 12. OTHER INFORMATION:

- a. The area surrounding the well is mesquite and tar brush. The topsoil is sandy in nature. The vegetation is moderately sparse with native prairie grass, cactus and shinnery oak. A nesting hawk was observed during our onsite inspection roughly 190 yards to the Northwest, and in addition to the hawk it is likely that deer, rabbits, coyotes, other birds and rodents transverse the area.
- b. There are not dwellings within 0.50 miles of location.
- c. Applicant will participate in the MOA.

# 13. BOND COVERAGE:

a. Bond Coverage is Nationwide; Bond No. NM 2308

#### COMPANY REPRESENTATIVES:

Representatives responsible for ensuring compliance of the surface use plan are listed below:

#### Land and Right of Way

Mr. Roger Motley Senior Lease Operations ROW Representative EOG Resources, Inc. P.O. Box 2267 Midland, TX 79702 (432) 686-3642 Office (361) 537-8281 Cell

#### Drilling

Mr. Steve Munsell Drilling Engineer EOG Resources, Inc. P.O. Box 2267 Midland, TX 79702 (432) 686-3609 Office (432) 894-1256 Cell

## **Operations**

Mr. Howard Kemp Production Manager EOG Resources, Inc P.O. Box 2267 Midland, TX 79702 (432) 686-3704 Office (432) 634-1001 Cell

#### Regulatory

Mr. Stan Wagner Regulatory Analyst EOG Resources, Inc. P.O. Box 2267 Midland, TX 79702 (432) 686-3689 Office

# PECOS DISTRICT CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	EOG Resources, Inc.
LEASE NO.:	NMLC-064756
WELL NAME & NO.:	Ramblin Rose 14 Fed 1
SURFACE HOLE FOOTAGE:	1810' FNL & 0820' FWL
<b>BOTTOM HOLE FOOTAGE</b>	1806' FNL & 0710' FWL
LOCATION:	Section 14, T. 26 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

# **TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

General Provisions

- **Permit Expiration**
- Archaeology, Paleontology, and Historical Sites

Noxious Weeds

Special Requirements

Timing Stipulation (Active Raptor Nest) Fence Crossing/Cattle Guard Requirement

Infrastructure Easement Requirement

Phantom Banks Heronry Area Requirement

# Construction

Notification

Topsoil

Closed Loop System

Federal Mineral Material Pits

Well Pads

Roads

**Road Section Diagram** 

# Drilling

Cement Requirements Logging Requirements Waste Material and Fluids

## **Production (Post Drilling)**

Well Structures & Facilities

Pipelines

**Electric Lines** 

**Interim Reclamation** 

Final Abandonment & Reclamation

# I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

# **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

# **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

# **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

\*There are known populations of African Rue on the existing road route to the well pad.

# V. SPECIAL REQUIREMENT(S)

# **Timing Stipulation (Active Raptor Nest)**:

Contact a Wildlife Biologist at the Carlsbad BLM office at least 5 days prior to construction or reclamation. (575)234-5972

Oil and gas activities including construction, drilling, and fracturing operations will not be allowed during the period from March 15th through August 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and work-over operations will be allowed.

## Fence Crossing/Cattle Guard Requirement

#### Fence

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway with H-braces prior to cutting. The operator shall notify the grazing allotment holder prior to crossing any fences.

#### Cattle Guards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings.

Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

## Infrastructure Easement Requirement

The infrastructure easement permitted in the APD must be maintained in a manner to prevent vehicle traffic upon the easement. Fence barricades are encouraged to prevent traffic.

## Phantom Banks Heronry Area Requirement

Exhaust noise from engines and compressors must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

# **VI. CONSTRUCTION**

# A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

# **B.** TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

## C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

## D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

## E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

# F. EXCLOSURE FENCING (CELLARS & PITS)

#### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

# G. ON LEASE ACCESS ROADS

#### **Road Width**

1

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

#### Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

## Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

## Ditching

Ditching shall be required on both sides of the road.

#### Turnouts

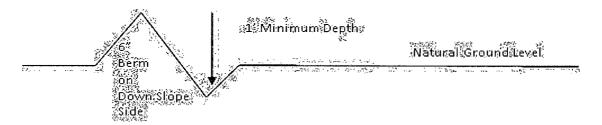
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

#### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

# **Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

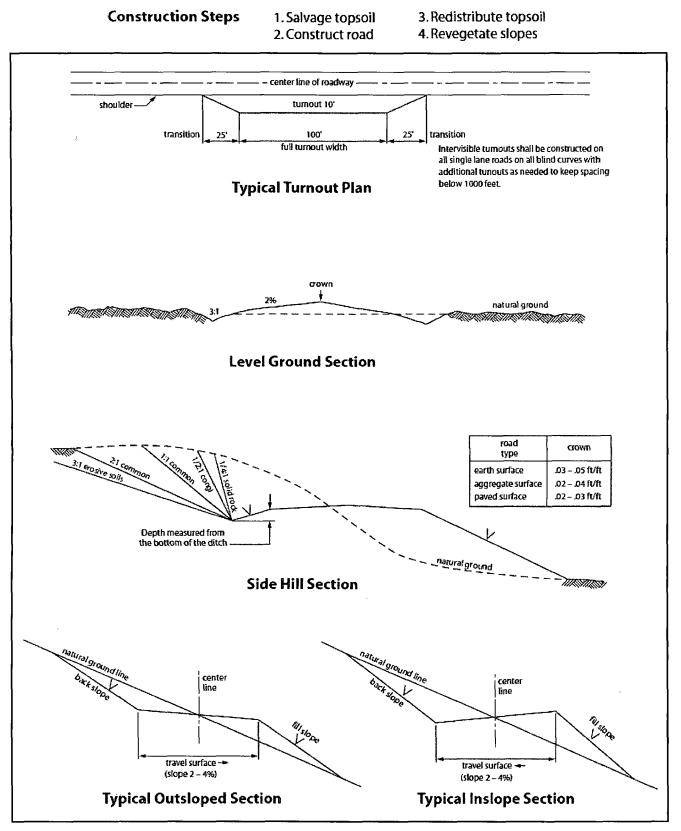
## Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 400' + 100' = 200' lead-off ditch interval 4%

#### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.





# VII. DRILLING

# A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

# Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.
- Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval an Incident of Non-Compliance will be written and will be a "Major" violation.
- 3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
- 4. The record of the drilling rate along with the GR/N well log run from TD to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

# B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Castile, Delaware, and Bone Spring. Possibility of lost circulation in the Rustler, Red Beds, and Delaware. Abnormal pressures may be encountered near the base of the 2<sup>nd</sup> Bone Spring Sands.

- The 13-3/8 inch surface casing shall be set at approximately 1387 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, set casing at least 25 feet above the salt. Excess calculates to 8% Additional cement may be required.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the 7 inch production casing is:

Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 2000 (2M) psi (Installing a 5M, testing to 2,000 psi).
  - a. For surface casing only: If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
- Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be 3000 (3M) psi (Installing a 5M, testing to 3,000 psi).

- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
  - d. The results of the test shall be reported to the appropriate BLM office.
  - e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

# D. DRILL STEM TEST

ŕ

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

#### JAM 092013

# VIII. PRODUCTION (POST DRILLING)

## A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

## **Painting Requirement**

1

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, <u>Shale Green</u> from the BLM Standard Environmental Color Chart (CC-001: June 2008).

# **B. PIPELINES**

#### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
    - (3) Blasting.
    - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-ofway width of <u>20</u> feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of <u>24</u> inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will

be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

STANDARD STIPULATIONS FOR BURIED PIPELINES

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting

Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be  $\underline{45}$  feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed <u>20</u> feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed <u>30</u> feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately  $6_{---}$  inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

() seed mixture 1	() seed mixture 3
(x) seed mixture 2	() seed mixture 4
() seed mixture 2/LPC	() Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-ofway and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. <u>Escape Ramps</u> - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.

b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

# C. ELECTRIC LINES

# STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roasting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

i •

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and

any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes with native soil.

# IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

# X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by

drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species	l <u>b/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed