

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

S


APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 100529 (N/2)
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator EOG Resources, Inc.		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 2267 Midland, TX 79702	3b. Phone No. (include area code) 432-686-3642	8. Lease Name and Well No. Llano 1 Fed 1H
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 760' FNL & 660' FEL (U/L A) At proposed prod. zone 760' FNL & 660' FWL (U/L D) JAN 23 2008 OCD-ARTESIA		9. API Well No. 30-015-36059
14. Distance in miles and direction from nearest town or post office* Approx 6 miles ESE of Hope, NM		10. Field and Pool, or Exploratory Rio Penasco (Wolfcamp)
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		11. Sec., T. R. M. or Blk. and Survey or Area Section 1, T18S-R23E, N.M.P.M.
16. No. of acres in lease 320		12. County or Parish Eddy
17. Spacing Unit dedicated to this well N/2 Sec 1, T18S-R23E, N.M.P.M.		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,120'		20. BLM/BIA Bond No. on file NM2308
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 3872'	22. Approximate date work will start* 12/04/2007	23. Estimated duration 24

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) Donny G. Glanton	Date 10/03/2007
Title Sr. Lease Operations ROW Representative		

Approved by (Signature) /s/ DAVID D. EVANS	Name (Printed/Typed) /s/ DAVID D. EVANS	Date JAN 18 2008
Title FOR FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease- 4 Copies
Fee Lease- 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 975-12	Pool Name Rio Penasce - (Wolfcamp)
Property Code 36958	Property Name LLANO 1 FED.	Well Number 1H
OGRID No. 7377	Operator Name EOG RESOURCES, INC.	Elevation 3872'

Surface Location

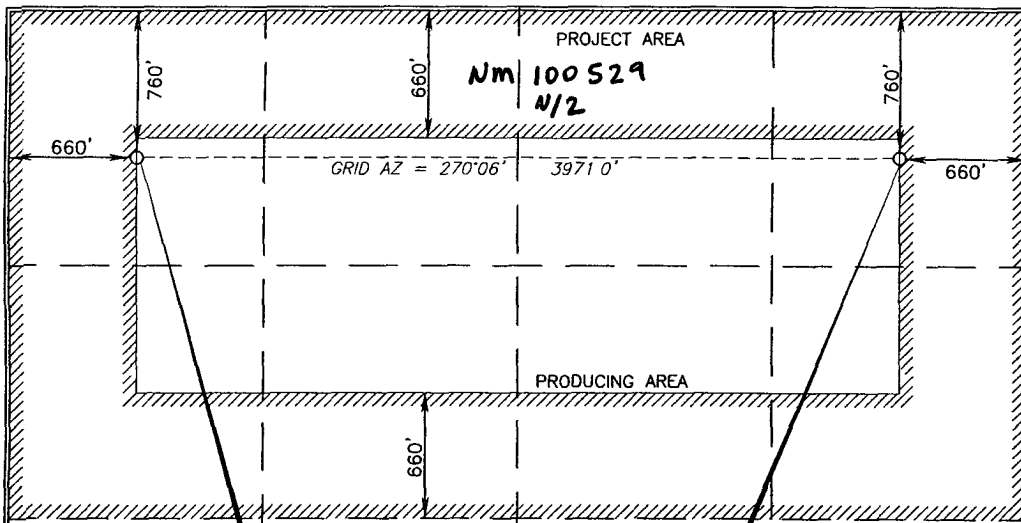
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	1	18 SOUTH	23 EAST, N.M.P.M.		760'	NORTH	660'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	1	18 SOUTH	23 EAST, N.M.P.M.		760'	NORTH	660'	WEST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
-------------------------------	-----------------	--------------------	-----------

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



BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
Y=648430.4
X=402280.0
LAT.: N 32.7822226°
LONG.: W 104.6512927°

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
Y=648423.1
X=406251.1
LAT.: N 32.7822347°
LONG.: W 104.6383718°

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased 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 owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Don D. Melt 8/16/2007
Signature Date

Donny G. Glanton
Printed Name

SURVEYOR CERTIFICATION

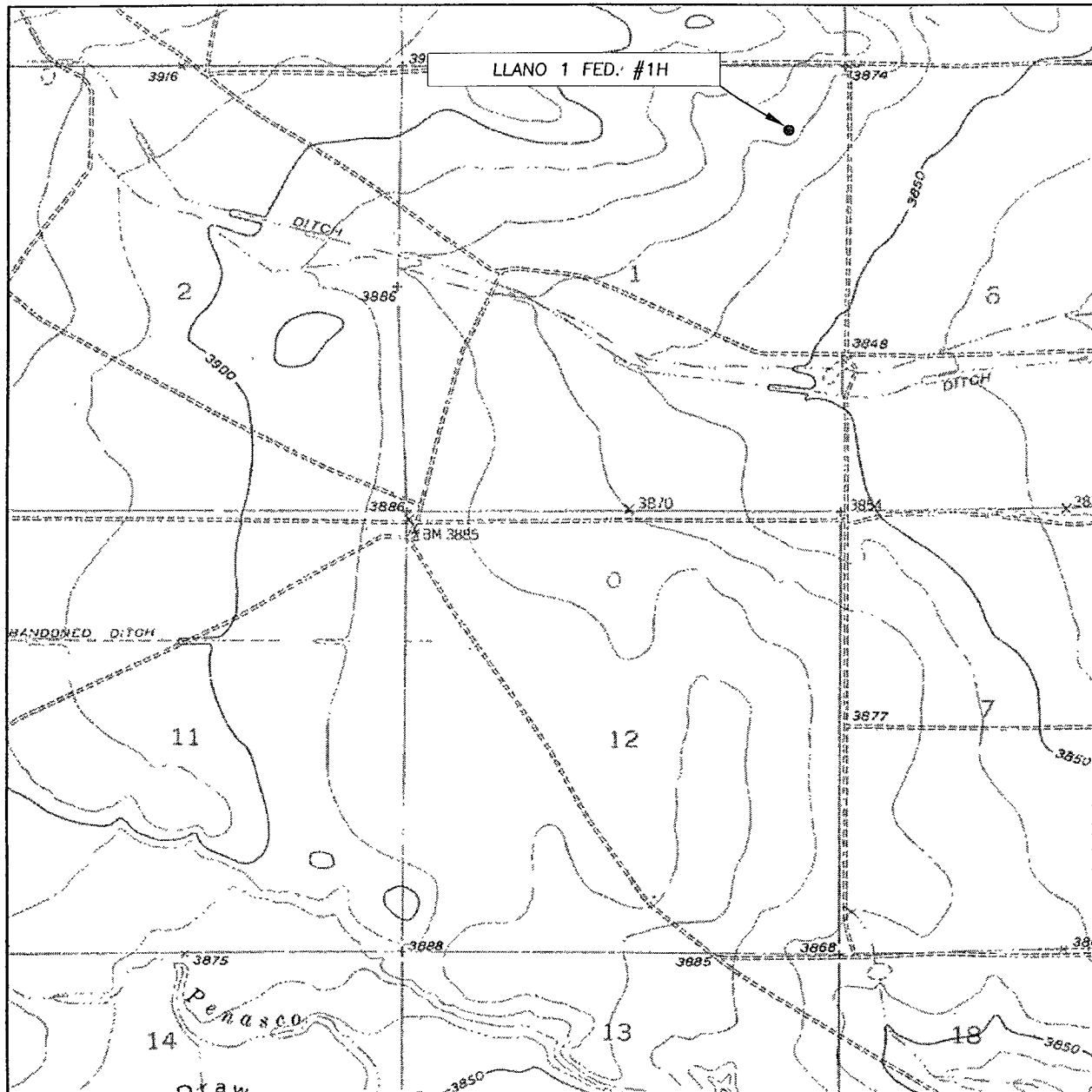
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

15079
Date of Survey

Terry G. Paul
Signature and Professional Surveyor

8/6/2007
Certificate Number 15079

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 1 TWP. 18-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 760' FNL & 660' FEL

ELEVATION 3872'

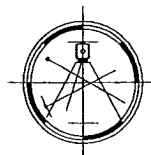
OPERATOR EOG RESOURCES INC.

LEASE LLANO 1 FED. #1H

U.S.G.S. TOPOGRAPHIC MAP
HOPE, N.M.

Asel Surveying
& Consulting

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 505-393-9146



EOG RESOURCES, INC.**LLANO 1 FED #1H****DRILLING PROGRAM****1. GEOLOGIC NAME OF SURFACE FORMATION:**

Quaternary Alluvium

0-200

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

San Andres	235'
Glorieta	1,550'
Tubb	2,230'
Abo Shale	3,575'
Wolfcamp Pay	4,465'

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

Quaternary Alluvium	0- 200'	Fresh Water
San Andres	235'	Oil
Glorieta	1,550'	Oil/Gas
Tubb	2,230'	Oil/Gas
Abo/Wolfcamp Pay	4,465'	Gas

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 8.625" casing at 900' and circulating cement back to surface.

4. CASING PROGRAM – NEW CASING

						<u>Collapse</u> <u>Design</u>	<u>Burst</u> <u>Design</u>	<u>Tension</u> <u>Design</u>
	<u>Hole</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Grade</u>	<u>Conn.</u> <u>Factor</u>	<u>Factor</u>	<u>Factor</u>
Sel COA →	12.250"	0-900'	8.625"	32#	J-55	LT&C	6.01	5.41
	7.875"	0-8,566'	5.5"	17#	N-80	LT&C	2.89	1.17
								16.49
								2.94

Cementing Program:**8.625" Surface Casing:**

Cement to surface, Lead: 560 sx Light Prem Plus + 5 pps Gilsonite + 2% CaCl₂, 12.4 ppg, 2.05 yield
Tail: 370 sx Prem Plus + 2% CaCl₂, 14.8 ppg, 1.35 yield

5.50" Production:

Cement to surface, Lead: 400sx Interfill C + 0.125 pps Poly-E-Flake, 11.9 ppg, 2.47 yield
Tail: 800 sx 50:50 Poz Premium + 5% LAP-1 + 0.2% Econolite, 14.4 ppg, 1.25 yield

EOG RESOURCES, INC.
LLANO 1 FED #1H

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. for a 3M system.

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.

EOG Resources requests a variance to eliminate the stipulation requiring a BOPE test within 500' of the Wolfcamp. The Wolfcamp is not expected to be abnormally pressured (approx 1,800 lbs.) and the BOPE will be tested to the appropriate pressure requirements as per Onshore Order No. 2 prior to drilling out of the surface casing.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

	<u>Depth</u>	<u>Type</u>	<u>Wt</u>	<u>Viscosity</u>	<u>Waterloss</u>
			<u>(PPG)</u>	<u>(sec)</u>	<u>(cc)</u>
See CERA	0-900'	Fresh - Gel	8.6-8.8	28-34	N/c
	900'-4,400'	Cut Brine	8.8-9.2	28-34	N/c
	4,400'-5,000'	Cut Brine	8.8-9.2	28-34	10-15
	4,318'-8,566'	Polymer (Lateral)	9.0-9.4	40-45	10-25

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

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.

EOG RESOURCES, INC.
LLANO 1 FED #1H

8. LOGGING, TESTING AND CORING PROGRAM:

Electric logging will consist of GR-Dual Laterlog and GR-Compensated Density-Neutron from +/-900' to TVD.

Possible sidewall cores based on shows.

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

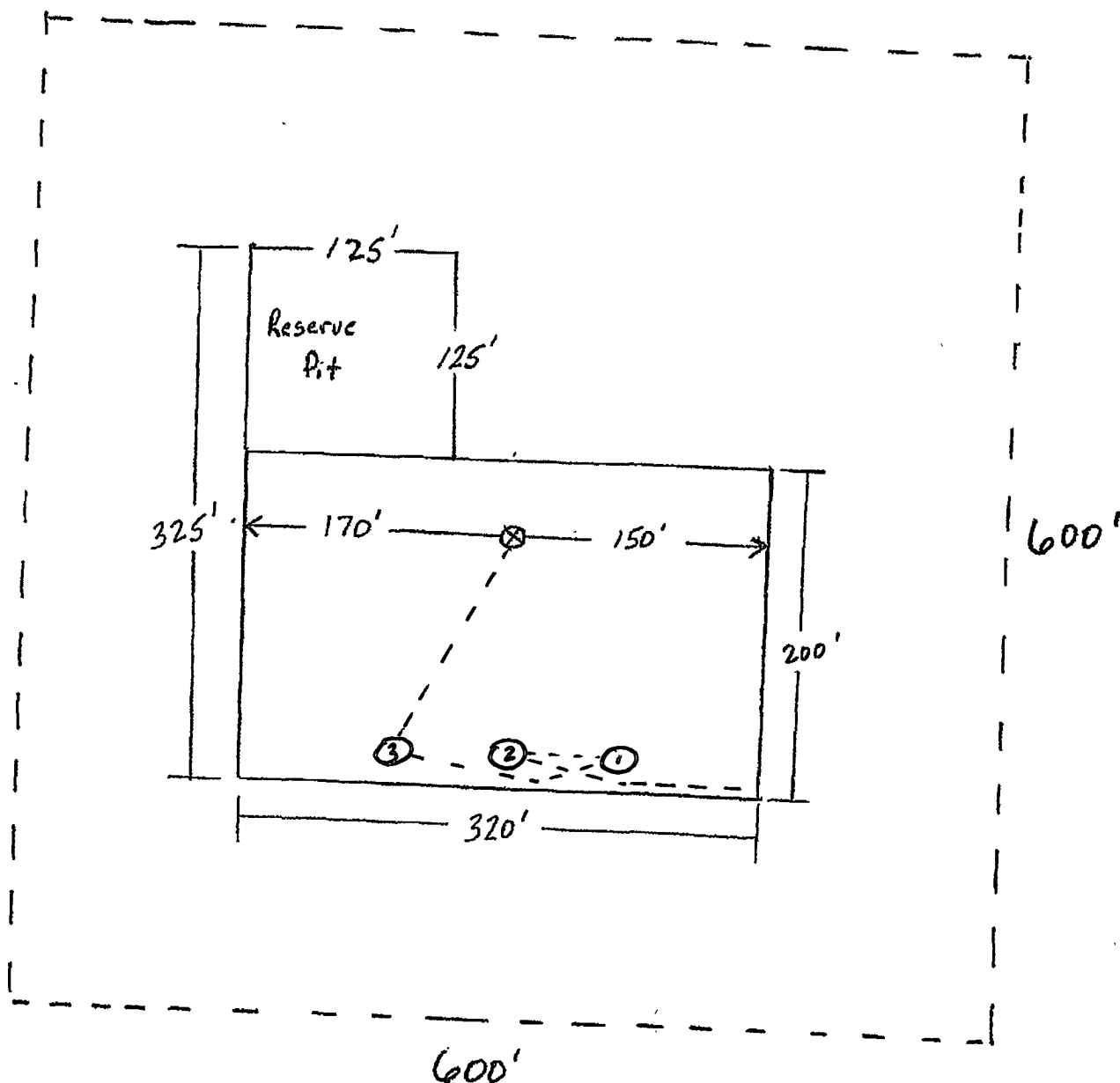
The estimated bottom hole temperature (BHT) at TD is 125 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2000 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation 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 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

PRODUCTION FACILITY LAYOUT

Well Name: Llano 1 Fed 1 H



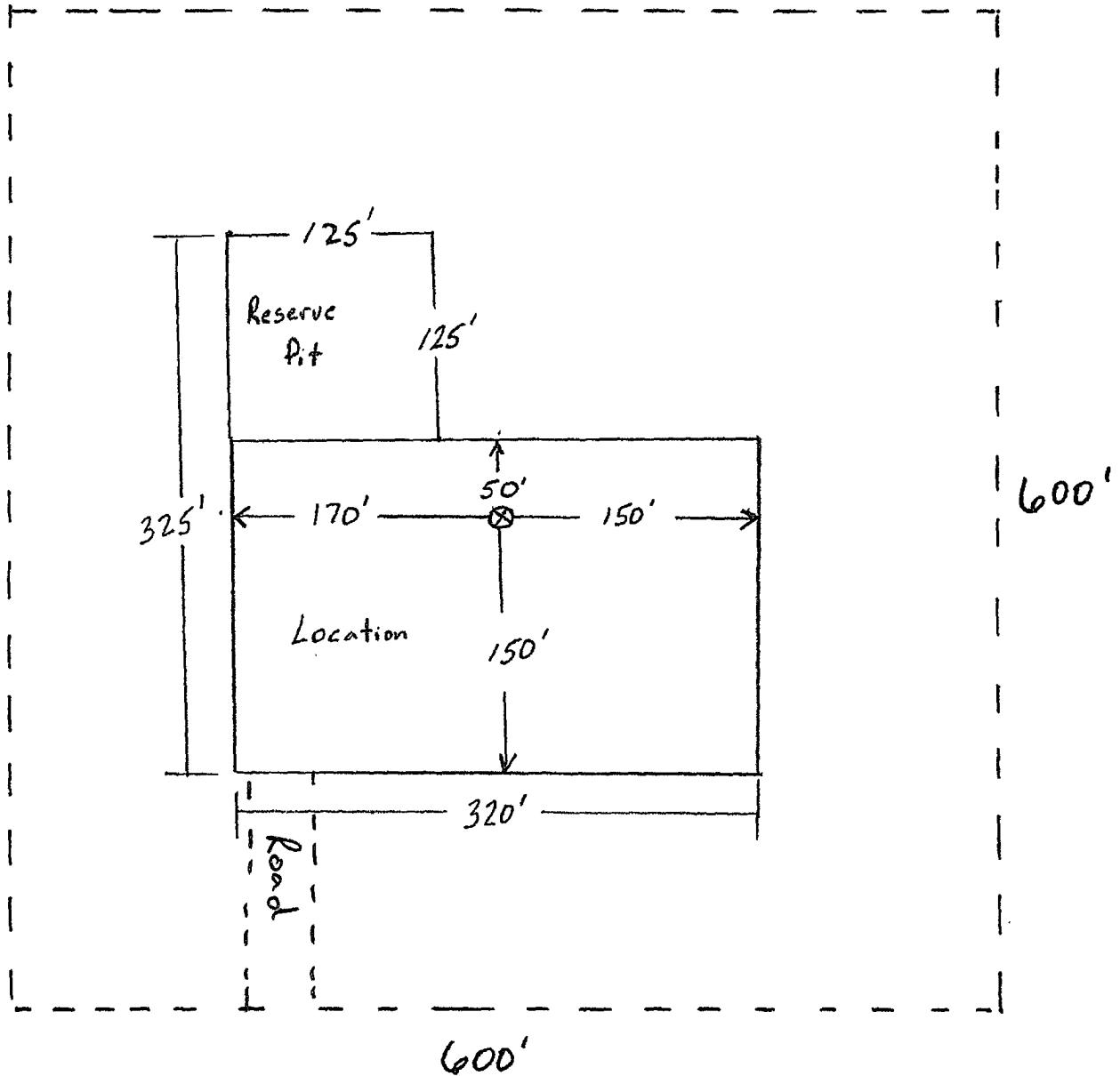
Legend:

- Item 1: TANK
- Item 2: METER
- ITEM 3: SEPARATOR

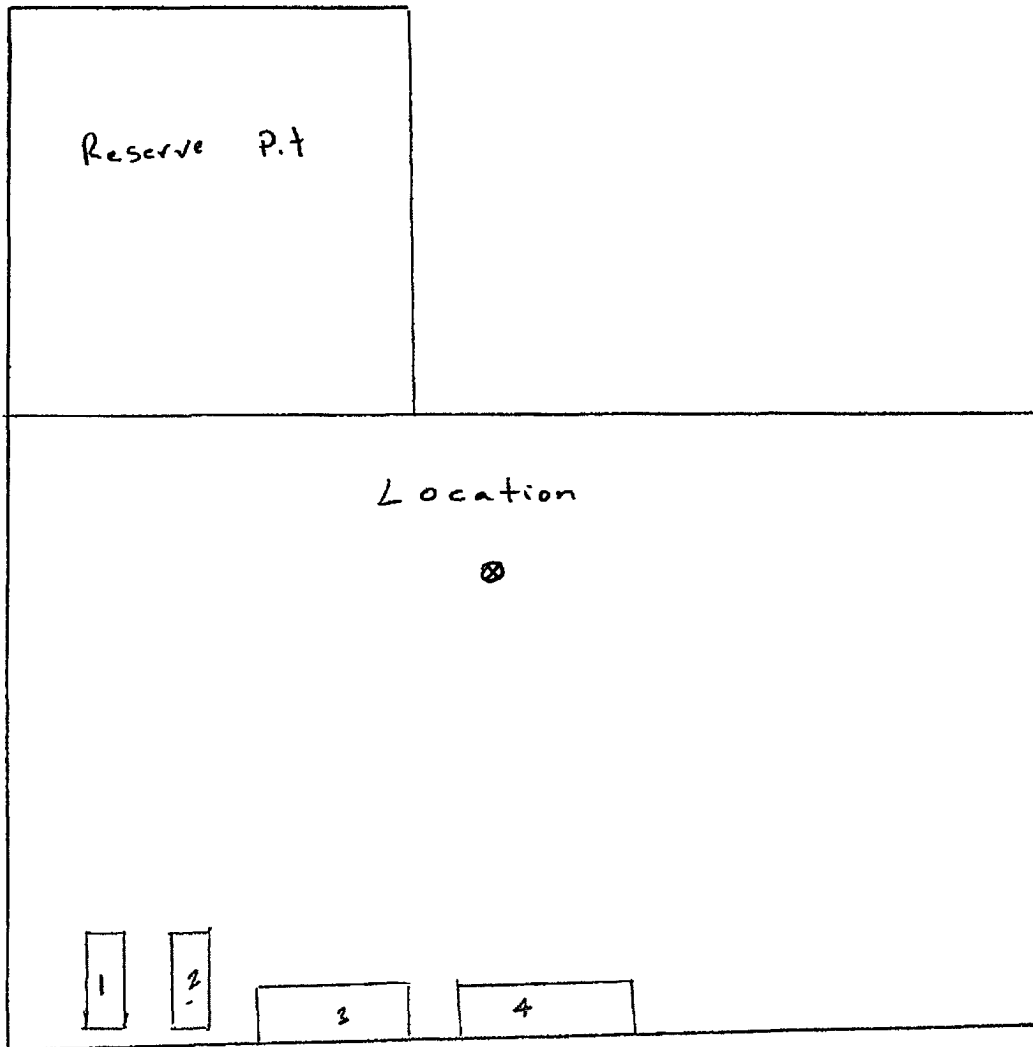
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

EXHIBIT "4"

Lland 1 Fed #1H



WELL NAME: Llano 1 Fed 1 H



Items 1-4: Drilling Trailers

EOG RESOURCES, INC.
LLANO 1 FED #1H

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, 3000 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 3000 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.

EOG Resources, Inc.

Llano 1 Fed 1H

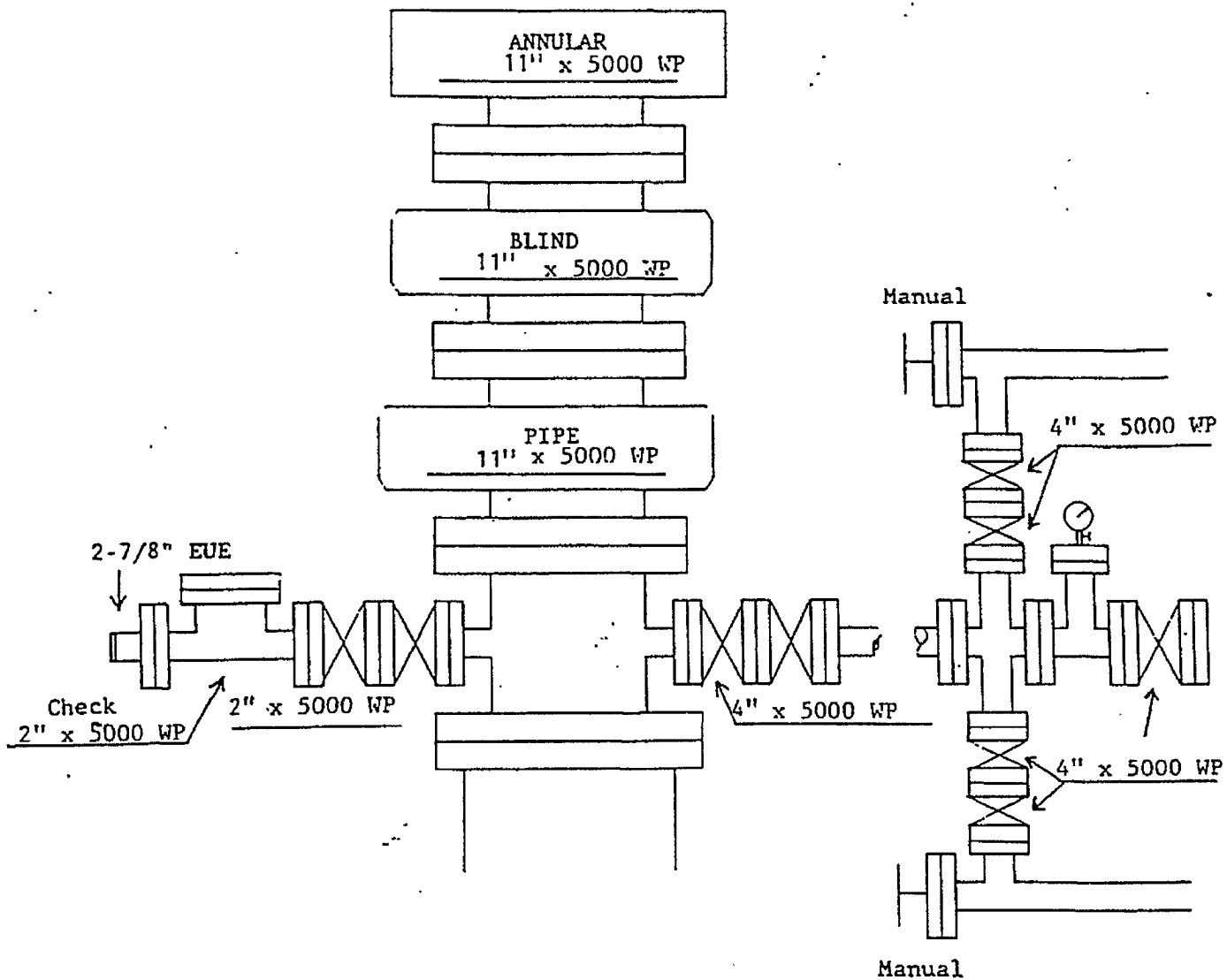


Exhibit 1

EOG RESOURCES INC.

Planning Report

Database: EDM
Company: EOG - Midland (3)
Project: Thames
Site: Llano 1 Fed #1H
Well: Llano 1 Fed #1H
Wellbore: Llano 1 Fed #1H
Design: Pre Gyro Plan

Local Co-ordinate Reference: Well Llano 1 Fed #1H
TVD Reference: WELL @ 3891.00ft (Original Well Elev)
MD Reference: WELL @ 3891.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project: Thames

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Ground Level

Site: Llano 1 Fed #1H

Site Position: Northing: 648,423.10ft Latitude: 32° 46' 56.045 N
From: Map Easting: 406,251.10ft Longitude: 104° 38' 18.138 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: -0.17 °

Well: Llano 1 Fed #1H

Well Position: +N/-S 0.00 ft Northing: 648,423.10 ft Latitude: 32° 46' 56.045 N
+E/-W 0.00 ft Easting: 406,251.10 ft Longitude: 104° 38' 18.138 W
Position Uncertainty: 0.00 ft Wellhead Elevation: ft Ground Level: 3,872.00 ft

Wellbore: Llano 1 Fed #1H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005	9/7/2007	8.55	60.58	49,158

Design: Pre Gyro Plan

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	4,714.00	0.00	0.00	270.11

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,318.00	0.00	360.00	4,318.00	0.00	0.00	0.00	0.00	0.00	360.00	
5,075.12	90.00	270.11	4,800.00	0.93	-482.00	11.89	11.89	0.00	270.11	
6,075.12	90.00	270.11	4,800.00	2.85	-1,482.00	0.00	0.00	0.00	0.00	
6,141.98	92.01	270.10	4,798.83	2.97	-1,548.84	3.00	3.00	-0.01	-0.22	
8,565.52	92.01	270.10	4,714.01	7.30	-3,970.89	0.00	0.00	0.00	0.00	
8,565.73	92.00	270.10	4,714.00	7.30	-3,971.10	3.00	-2.76	-1.18	0.00	BHL (Llano #1H)

EOG RESOURCES INC.

Planning Report

Database: EDM
Company: EOG - Midland (3)
Project: Thames
Site: Llano 1 Fed #1H
Well: Llano 1 Fed #1H
Wellbore: Llano 1 Fed #1H
Design: Pre Gyro Plan

Local Co-ordinate Reference: Well Llano 1 Fed.#1H
TVD Reference: WELL @ 3891 00ft (Original Well Elev)
MD Reference: WELL @ 3891 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	360.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	360.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	360.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	360.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	360.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	360.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	360.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	360.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	360.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	360.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	360.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	360.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	360.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	360.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	360.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	360.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	360.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	360.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	360.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	360.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	360.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	360.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	360.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	360.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	360.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	360.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	360.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	360.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	360.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	360.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	360.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	360.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	360.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	360.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	360.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	360.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	360.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	360.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	360.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	360.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	360.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	360.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	360.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,318.00	0.00	360.00	4,318.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	9.75	270.11	4,399.61	0.01	-6.96	6.96	11.89	11.89	0.00
4,500.00	21.63	270.11	4,495.71	0.07	-33.95	33.95	11.89	11.89	0.00
4,600.00	33.52	270.11	4,584.19	0.15	-80.17	80.17	11.89	11.89	0.00
4,700.00	45.41	270.11	4,661.25	0.28	-143.61	143.61	11.89	11.89	0.00
4,800.00	57.30	270.11	4,723.59	0.43	-221.57	221.57	11.89	11.89	0.00
4,900.00	69.18	270.11	4,768.53	0.60	-310.70	310.70	11.89	11.89	0.00
5,000.00	81.07	270.11	4,794.16	0.78	-407.18	407.18	11.89	11.89	0.00
5,075.12	90.00	270.11	4,800.00	0.93	-482.00	482.00	11.89	11.89	0.00
5,100.00	90.00	270.11	4,800.00	0.97	-506.88	506.88	0.00	0.00	0.00

EOG RESOURCES INC.

Planning Report

Database: EDM
Company: EOG - Midland (3)
Project: Thames
Site: Llano 1 Fed #1H
Well: Llano 1 Fed #1H
Wellbore: Llano 1 Fed #1H
Design: Pre Gyro Plan

Local Co-ordinate Reference: Well Llano 1 Fed #1H
TVD Reference: WELL @ 3891 00ft (Original Well Elev)
MD Reference: WELL @ 3891 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	90.00	270.11	4,800.00	1.17	-606.88	606.88	0.00	0.00	0.00
5,300.00	90.00	270.11	4,800.00	1.36	-706.87	706.88	0.00	0.00	0.00
5,400.00	90.00	270.11	4,800.00	1.55	-806.87	806.88	0.00	0.00	0.00
5,500.00	90.00	270.11	4,800.00	1.74	-906.87	906.88	0.00	0.00	0.00
5,600.00	90.00	270.11	4,800.00	1.93	-1,006.87	1,006.88	0.00	0.00	0.00
5,700.00	90.00	270.11	4,800.00	2.13	-1,106.87	1,106.88	0.00	0.00	0.00
5,800.00	90.00	270.11	4,800.00	2.32	-1,206.87	1,206.88	0.00	0.00	0.00
5,900.00	90.00	270.11	4,800.00	2.51	-1,306.87	1,306.88	0.00	0.00	0.00
6,000.00	90.00	270.11	4,800.00	2.70	-1,406.87	1,406.88	0.00	0.00	0.00
6,075.12	90.00	270.11	4,800.00	2.85	-1,482.00	1,482.00	0.00	0.00	0.00
6,100.00	90.75	270.11	4,799.84	2.89	-1,506.87	1,506.88	3.00	3.00	-0.01
6,141.98	92.01	270.10	4,798.83	2.97	-1,548.84	1,548.84	3.00	3.00	-0.01
6,200.00	92.01	270.10	4,796.80	3.07	-1,606.82	1,606.83	0.00	0.00	0.00
6,300.00	92.01	270.10	4,793.30	3.25	-1,706.76	1,706.77	0.00	0.00	0.00
6,400.00	92.01	270.10	4,789.80	3.43	-1,806.70	1,806.70	0.00	0.00	0.00
6,500.00	92.01	270.10	4,786.30	3.61	-1,906.64	1,906.64	0.00	0.00	0.00
6,600.00	92.01	270.10	4,782.80	3.79	-2,006.58	2,006.58	0.00	0.00	0.00
6,700.00	92.01	270.10	4,779.30	3.97	-2,106.52	2,106.52	0.00	0.00	0.00
6,800.00	92.01	270.10	4,775.80	4.14	-2,206.46	2,206.46	0.00	0.00	0.00
6,900.00	92.01	270.10	4,772.30	4.32	-2,306.39	2,306.40	0.00	0.00	0.00
7,000.00	92.01	270.10	4,768.80	4.50	-2,406.33	2,406.34	0.00	0.00	0.00
7,100.00	92.01	270.10	4,765.30	4.68	-2,506.27	2,506.28	0.00	0.00	0.00
7,200.00	92.01	270.10	4,761.80	4.86	-2,606.21	2,606.21	0.00	0.00	0.00
7,300.00	92.01	270.10	4,758.30	5.04	-2,706.15	2,706.15	0.00	0.00	0.00
7,400.00	92.01	270.10	4,754.80	5.22	-2,806.09	2,806.09	0.00	0.00	0.00
7,500.00	92.01	270.10	4,751.30	5.40	-2,906.03	2,906.03	0.00	0.00	0.00
7,600.00	92.01	270.10	4,747.80	5.57	-3,005.96	3,005.97	0.00	0.00	0.00
7,700.00	92.01	270.10	4,744.30	5.75	-3,105.90	3,105.91	0.00	0.00	0.00
7,800.00	92.01	270.10	4,740.80	5.93	-3,205.84	3,205.85	0.00	0.00	0.00
7,900.00	92.01	270.10	4,737.30	6.11	-3,305.78	3,305.79	0.00	0.00	0.00
8,000.00	92.01	270.10	4,733.80	6.29	-3,405.72	3,405.72	0.00	0.00	0.00
8,100.00	92.01	270.10	4,730.30	6.47	-3,505.66	3,505.66	0.00	0.00	0.00
8,200.00	92.01	270.10	4,726.80	6.65	-3,605.60	3,605.60	0.00	0.00	0.00
8,300.00	92.01	270.10	4,723.30	6.83	-3,705.53	3,705.54	0.00	0.00	0.00
8,400.00	92.01	270.10	4,719.80	7.00	-3,805.47	3,805.48	0.00	0.00	0.00
8,500.00	92.01	270.10	4,716.30	7.18	-3,905.41	3,905.42	0.00	0.00	0.00
8,565.52	92.01	270.10	4,714.01	7.30	-3,970.89	3,970.90	0.00	0.00	0.00
8,565.73	92.00	270.10	4,714.00	7.30	-3,971.10	3,971.11	3.00	-2.76	-1.18

BHL (Llano #1H)

Targets

Target Name

hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
BHL (Llano #1H)	0.00	360.00	4,714.00	7.30	-3,971.10	648,430.40	402,280.00	32° 46' 56.002 N	104° 39' 4.654 W
- plan hits target									
- Point									

WELL DETAILS: Llano 1 Fed #1H

+N/-S	+E/-W	Northing	Ground Level:	3872.00		
0.00	0.00	648423.10	Easting	Latitude	Longitude	Slot
			406251.10	32° 46' 56.045 N	104° 38' 18.138 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	Target	Sec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4318.00	0.00	360.00	4318.00	0.00	0.00	0.00	360.00	0.00	
3	5075.12	90.00	270.11	4800.00	0.93	-482.00	11.89	270.11	482.00	
4	6075.12	90.00	270.11	4800.00	2.85	-1482.00	0.00	0.00	1482.00	
5	6141.98	92.01	270.10	4798.83	2.97	-1548.84	3.00	-0.22	1548.84	
6	8565.52	92.01	270.10	4714.01	7.30	-3970.89	0.00	0.00	3970.90	
7	8565.73	92.00	270.10	4714.00	7.30	-3971.10	3.00	0.00	3971.11	

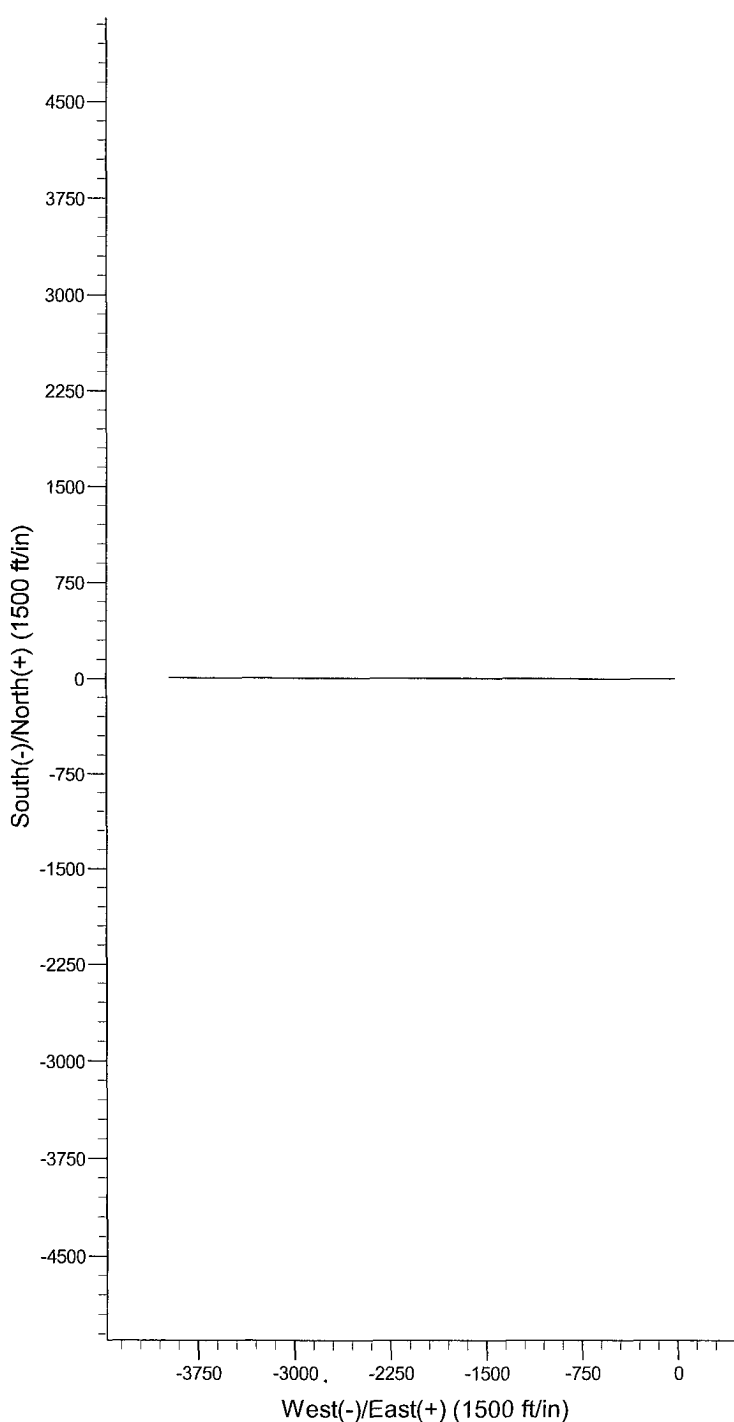
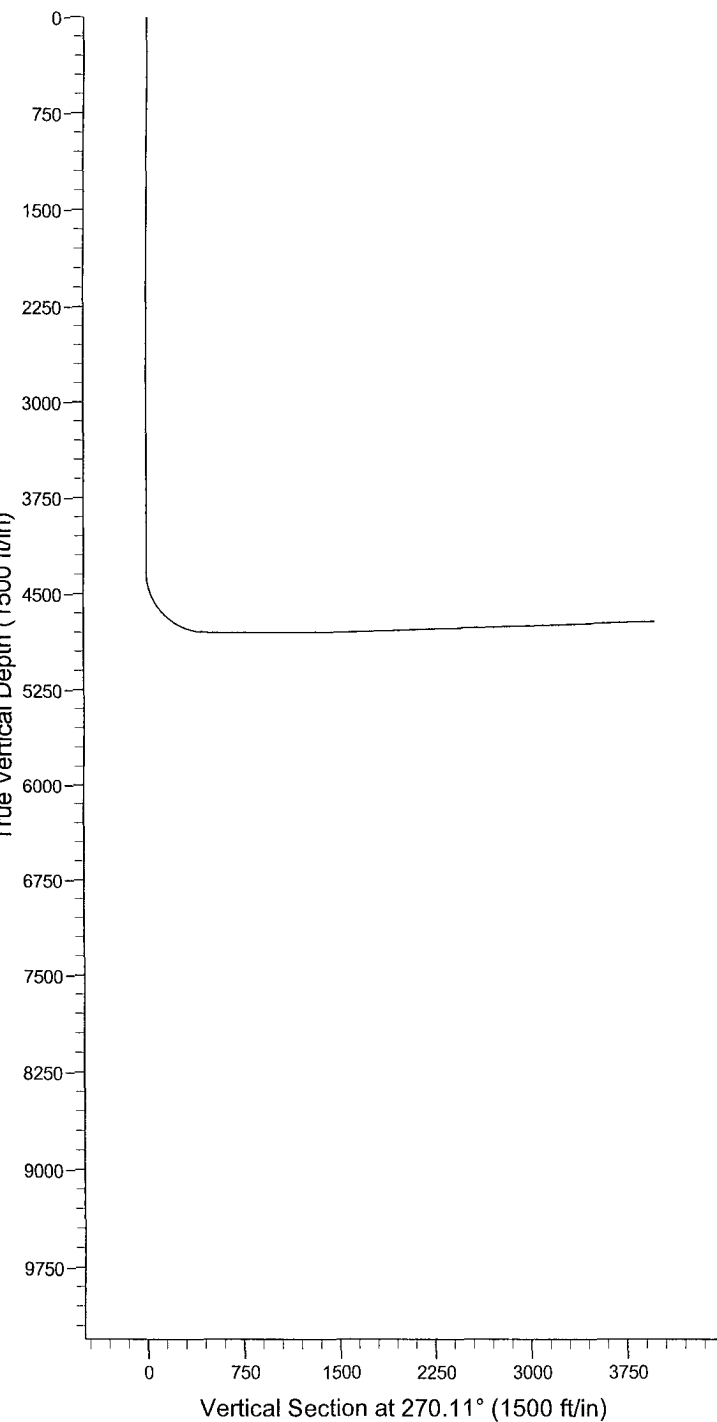
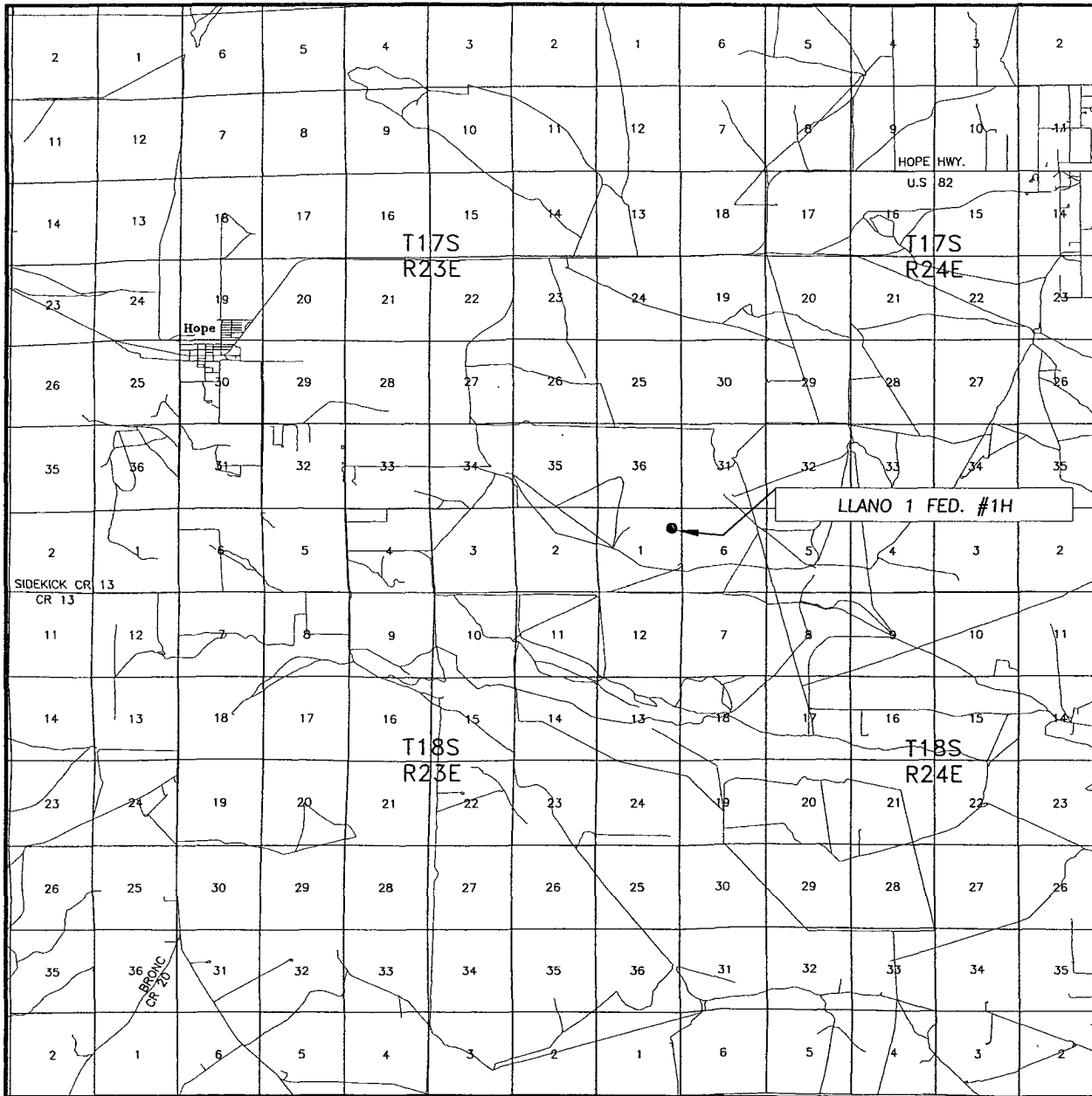


EXHIBIT 2a

VICINITY MAP

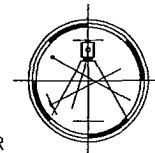


SEC. 1 TWP. 18-S RGE. 23-E
 SURVEY N.M.P.M.
 COUNTY EDDY
 DESCRIPTION 760' FNL & 660' FEL
 ELEVATION 3872'
 OPERATOR EOG RESOURCES INC.
 LEASE LLANO 1 FED. #1H

SCALE: 1" = 2 MILES

Asel Surveying
& Consulting

P.O. BOX 393 - 310 W. TAYLOR
 HOBBS, NEW MEXICO - 505-393-9146



DIRECTIONS BEGINNING IN ARTESIA, GO WEST ON HWY. 82 FOR 14.9 MILES, TURN SOUTH ON EDDY COUNTY ROAD #8 (SANTA ROAD) FOR 2.1 MILES, TURN LEFT ON LEASE ROAD FOR 2.5 MILES TO STAKED NEW ROAD, GO SOUTH FOR 1.1 MILES, TURN WEST FOR 0.1 MILES TO LOCATION.



EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
(432) 686-3600

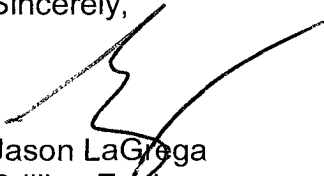
September 7, 2007

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

To Whom It May Concern:

I am writing to request a waiver for the inclusion of an H₂S Contingency Plan for the Llano 1 Fed #1H. The current plan is to complete this well in the Wolfcamp, which is sweet, and I do not anticipate encountering any H₂S bearing formations during drilling operations.

Sincerely,



Jason LaGrega
Drilling Engineer

EOG RESOURCES, INC.
LLANO 1 FED #1H

SURFACE USE PLAN OF OPERATION

SHL: 760' FNL & 660' FEL, Unit A, Section 1, T18S-R23E, N.M.P.M., Eddy, NM
BHL: 760' FNL & 660' FWL, Unit D, Section 1, T18S-R23E, N.M.P.M., Eddy, NM

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 Terry Asel, RPL 15079.
- b. All roads into the location are depicted on Exhibit 2 & 2a.
- c. Directions to Locations: Beginning in Artesia, NM, Go west on Hwy 82 for approx 14.9 miles, Turn south on CR 8 (Santa Road) for 2.1 miles, Turn left on lease road for 2.5 miles to staked new road, go south for 1.1 miles, turn west for 0.1 miles to location.

2. NEW OR RECONSTRUCTED ACCESS ROAD:

- a. The well site layout, Exhibit 2b shows the layout. The proposed access road, begins on paved CR 8 (Santa Road) and trends ESE to the E Side of the well pad. (See 1c above for driving directions).
- b. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent soil erosion.
- c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- d. No cattleguards, gates or fence cuts will be required. No turnouts are planned.

3. LOCATION OF EXISTING WELLS:

Exhibit #3 shows all existing wells within a one-mile radius of this well.

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

- a. In the event the well is found to be productive, the Llano 1 Fed No. 1H tank battery would be utilized and the necessary production equipment will be installed at the well site. See Production Facilities Layout diagram.
- b. As a proposed gas well, we do not anticipate the need for electrical service.
- c. All flow lines will adhere to API standards.
- d. As a proposed gas well, we do not anticipate the need for electrical service.
- e. If the well is productive, rehabilitation plans are as follows:
 - i. The reserve pit will be back filled after the contents of the pit are dry (within 120 days after completion, weather permitting).

EOG RESOURCES, INC.
LLANO 1 FED #1H

- ii. The original topsoil from the well site will be returned to the location. The drill site will be contoured as close as possible to the original state.

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 transport truck using existing and proposed roads shown in Exhibit 2. On occasion, water will be obtained from existing water wells. 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

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by roads, if available.

7. METHODS OF HANDLING WASTE MATERIALS

- a. Drill cuttings will be disposed of in the reserve pit.
- b. All trash, junk, and other waste material will be contained in trash cages or trash bins to prevent scattering. When a job is completed, all contents will be removed and disposed of in an approved landfill.
- c. The supplier, including broken sacks, will pick up salts remaining after completion of well.
- d. If necessary, a porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. Later pits will be broken out to speed dry. Water produced during completion will be put in reserve pits. Oil and condensate produced will 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. _____

EOG RESOURCES, INC.
LLANO 1 FED #1H

8. ANCILLARY FACILITIES:

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

9. WELL SITE LAYOUT:

- a. Exhibit 4 shows the proposed well site layout with dimensions of the pad layout.
- b. Exhibit 5 shows proposed location of reserve and sump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits and the reserve pits will be lined.
- d. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 12 mils thick. Pit liner will extend a minimum of two feet (2') over the reserve pit's dykes where the liner will be anchored down.
- e. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down after the pit contents have dried. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR SURFACE RECLAMATION:

- a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The reserve pit area will be broken out and leveled after drying to a condition where these are feasible. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography. The pit will be closed per OCD compliance regulations.
- b. The pit lining will be buried or hauled away in order to return the location and road to their pristine nature. All pits will be filled and the location leveled, weather permitting, within 120 days after abandonment.
- c. The location and road will be rehabilitated as recommended by the BLM.
- d. The reserve pit will be fenced on three sides throughout drilling operations. After the rotary rig is removed, the reserve pit will be fenced on the fourth side to preclude endangering wildlife. The fencing will be in place until the pit is reclaimed.
- e. If the well is deemed commercially productive, the reserve pit will be restored as described in 10(A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to

Cody



Donny_Glanton@eogresources.com

01/09/2008 06:55 AM

To tessa_cisneros@nm.blm.gov

cc

bcc

Subject Surface Owner Agreement Reached

Tessa,

EOG certifies that a written agreement has been entered into with the hereinbelow surface owner with respect to the following well locations:

1. Llano 1 Fed.No. 1H
2. Llano 1 Fed No. 2H
3. Niagara 3 Fee Com 1H
4. Niagara 3 Fee Com 2H

Surface Owner: J.J. Steel Testamentary Trust
c/o Mr. Ribble Holloman
P.O. Box 58
Clovis, NM 88101
505-799-1677

Please advise if you have any questions.

Thanks,
Donny G. Glanton

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **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 this section, it is always a potential hazard.**
2. 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.
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 are located, this does not include the dog house or stairway area.

B. CASING

1. The 8-5/8 inch surface casing shall be set **in the lower San Andres at approximately 1300 feet and cemented to the surface. Fresh water mud to be used to setting depth of surface casing.**
 - 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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - b. Wait on cement (WOC) time 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. (This is to include the lead cement).
 - 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 action will be done prior to drilling out that string.

Medium cave/karst with underground river nearby.

Possible lost circulation in the Grayburg and San Andres formations.

Possible high pressure gas bursts in the Wolfcamp with a potential of 3000 psi.

- 2. The minimum required fill of cement behind the 5-1/2 inch production casing is:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

- 3. 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. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. 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.
 - d. 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.

- e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 111507