Form 3160 -3 (February 2005)

7008

FORM APPROVED ATS -07-27/ OMB No. 1004-0137 Expires March 31, 2007

PARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Lease Serial No. NM 0437521

6. If Indian, Allotee or Tribe Name

ACLICA N FOR PERMIT TO	DRILL OR REENTERD - A	RTESIA, NA	6. If Indian, Alloted	e or Tribe Name
la. Type of work: DRILL REENTI	ER		7 If Unit or CA Agr	eement, Name and No.
lb. Type of Well: ✓Oil Well ☐Gas Well ☐Other	Single Zone Multi	ple Zone	8. Lease Name and SAND TANK	Well No. 2109 18 FED No. 2H
2. Name of Operator EOG Resources, Inc. 7377	1		9. API Well No.	5.35617
3a. Address P.O. Box 2267 Midland, TX 79702	3b. Phone No. (include area code) 432-686-3642		10. Field and Pool, or Sand Tank Bo	Exploratory
4. Location of Well (Report location clearly and in accordance with an At surface 330' FNL & 860' FEL (U/L A) At proposed prod. zone 2310' FNL & 660' FEL (U/L H)	ny State requirements.*)		ŕ	Blk. and Survey or Area 18S-R30E, N.M.P.M.
 Distance in miles and direction from nearest town or post office* 4.5 miles SW of Loco Hills, NM 			12. County or Parish Eddy	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 80		g Unit dedicated to this E/4 Sec 18, T18S-R3	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth TVD 8100' TMD 10,080'	20. BLM/E NM23	BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 3526'	22. Approximate date work will sta 07/01/2007	rt*	23. Estimated duration 45	on
	24. Attachments			
 The following, completed in accordance with the requirements of Onshorm. Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 	4. Bond to cover the Item 20 above). Lands, the 5. Operator certification is a second control of the Item 20 above.	he operation	ns unless covered by an	s may be required by the
25. Signature J. J. J.	Name (Printed/Typed) Donny G. Glanton			Date 03/19/2007
Title Sr. Lease Operations ROW Representative				
Approved by (Signature) /s/ Tames Stovall	Name (Printed/Typed) /s/ James	Stova	11	Date MAY 1 1 2007
FIELD MANAGER	Office CARLSBA			
Application approval does not warrant or certify that the applicant hold conduct operations thereon. Conditions of approval, if any, are attached.	ls legal or equitable title to those righ			entitle the applicant to

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and united to States any false, fictitious or fraudulent statements or representations as to any matter within its juri

*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

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

District 1 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 OfficeState Lease-4 Copies

Fee Lease-3 Copies

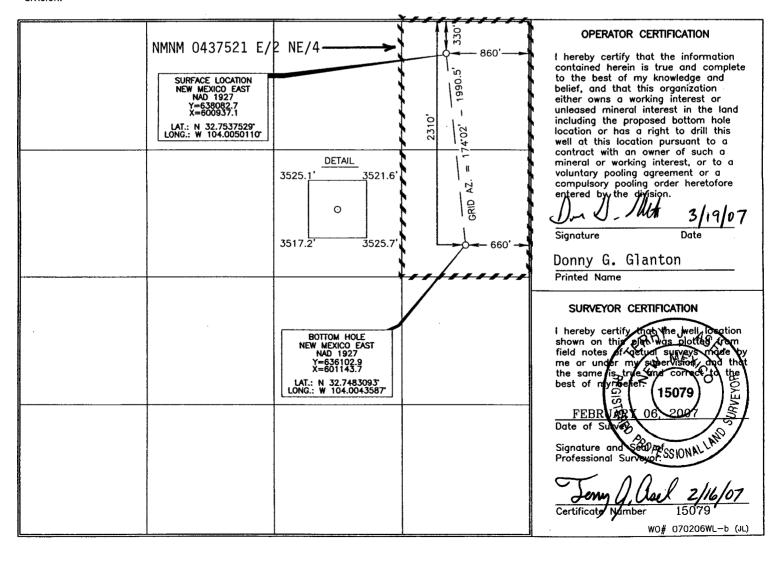
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

		<u> </u>	
API Numb	er Pool Code	Pool Name	
	96832	SAND TANK BONE SPRING	
Property Code	Prop	erty Name	Well Number
	SAND TAI	NK 18 FED.	2H
OGRID No.	Open	otor Name	Elevation
7377	EOG RESO	URCES INC.	3526'

Surface Location Range Lot Idn Feet from the North/South line | Feet from the East/West line UL or lot no. Section Township County 18 SOUTH 30 EAST, N.M.P.M. NORTH **EDDY** Α 18 330' 860' EAST Bottom Hole Location If Different From Surface UL or lot no. Section Township Lot Idn Feet from the North/South line Feet from the East/West line County Η 18 SOUTH 30 EAST, N.M.P.M. NORTH **EDDY** EAST 18 2310' 660 Dedicated Acres Joint or Infill Consolidation Code Order No. 80

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.



EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	500'
San Andres	3400'
1 st Bone Spring	7600'
2nd Bone Spring	7900'
TD	8100'

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

Upper Permian Sands	Above 250'	Fresh Water
Grayburg/San Andres	3000'	Oil
1 st Bone Spring	7600'	Oil
2nd Bone Spring	8100'	Gas

4. CASING PROGRAM

Hole Size	<u>Interval</u>	OD Casing	Weight	Grade Jt.	Conn. Type	Desired TOC
14.750"	0-650'	11.750"	42#	H-40	ST&C	Surface
11"	0-3400'	8.625"	32#	J-55	LT&C	Surface
7.875"	0-9685'	5.5"	1 <i>7</i> #	P-110	LT&C	3000' - CDA

Cementing Program:

11.750" Surface Casing:	Lead: 150 sx: Premium Plus + 2% CaCl ₂ + 3% Econolite + ½ pps Flocele
	Tail: 150 sx: Premium Plus + 2% CaCl ₂ + ¼ pps Flocele
8.625" Intermediate:	Lead: 500 sx: Interfill C + 1/4 pps Flocele
	Tail: 200 sx: Premium Plus + 1% CaCl ₂
5.50" Production:	Lead: 350 sx: Interfill C + 1/4 pps Flocele
	Tail: 200 sx: Premium Cement + 100% Acid
	Soluable Additive + 0.6% Halad®-344 + 0.8%
	Econolite + 0.2% HR-55

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

(SEE EXHIBIT #1)

The blowout preventer and related equipment (BOPE) shown in Exhibit #1 shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. EOG request authorization to use a 2M system, providing for an annular preventer to be used prior to the surface casing shoe while drilling the intermediate section. Before drilling out the 1st intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000 psi and the annular to 3500 psi.

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.

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:

		Wt	Visc	ositWaterloss
<u>Depth</u>	<u>Type</u>	(PPG)	(sec)	<u>(cc)</u>
0-650'	Fresh – Gel	8.6-8.8	28-34	N/c
650'-3,400'	Brine	10.0-10.2	28-34	N/c
3,400'-7,000'	Cut Brine	8.8-9.6	28-34	N/c
7,000'-8,125'	Cut Brine	8.8-9.6	28-34	10-15
7,418'-9,685'	Cut Brine/Polymer	8.8-9.6	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.
- (C) A mud logging unit complete with H₂S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 500' to TD.

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

8. LOGGING, TESTING AND CORING PROGRAM:

Electric logging will consist of GR-Dual Induction Focused and GR-Compensated Density-Neutron from TD to intermediate casing with a GR-Compensated Neutron run from intermediate casing to surface and optional Sonic from TD to intermediate casing.

Possible sidewall cores based on shows.

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

The estimated bottom hole temperature (BHT) at TD is 175 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 3500 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.

EOG Resources, Inc.

Sand Tank 18 Fed No. 2H meets 3M specifications For manifold

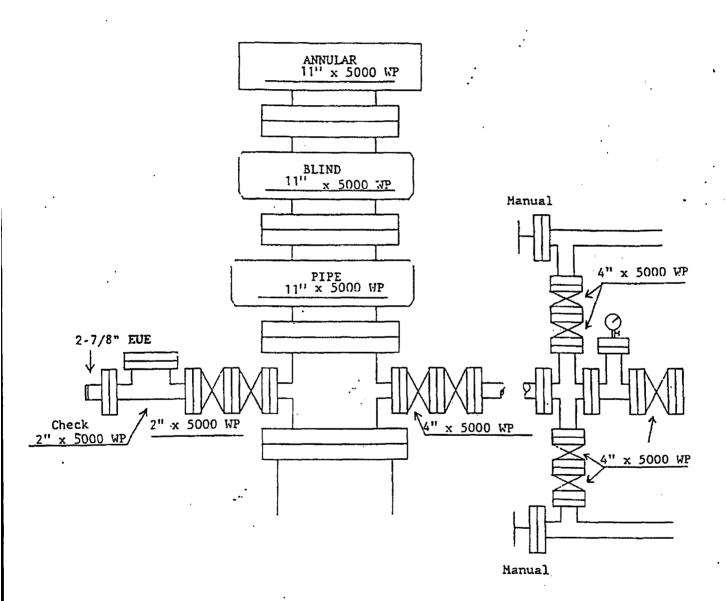


Exhibit 1

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

DATE: 3/19/2007

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.

EOG RESÓURCES INC.

Planning Report

Database:

EDM

EOG - Midland (3)

Company: Project: Site:

Sand Tank (Bone Spring) Sand Tank 18 Fed #2H

Well Wellbore: Design:

Sand Tank 18 Fed #2H Sand Tank 18 Fed #2H

Original Plan

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Well Sand Tank 18 Fed #2H

WELL @ 3544.00ft (Original Well Elev) WELL @ 3544.00ft (Original Well Elev)

Grid

Minimum Curvature

Project Sand Tank (Bone Spring), Eddy County, NM

Map System: Geo Datum:

Map Zone:

US State Plane 1927 (Exact solution)

NAD 1927 (NADCON CONUS)

New Mexico East 3001

System Datum:

Mean Sea Level

Sand Tank 18 Fed #2H Site

Site Position:

Northing:

638,082.70ft

Latitude:

32° 45' 13.510 N

600,937.10ft

104° 0' 18.039 W

From: Мар Easting: Longitude: **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.18°

Well Well Position Sand Tank 18 Fed #2H

+N/-S

0.00 ft

Northing:

638,082.70 ft

Latitude:

32° 45' 13.510 N

+E/-W **Position Uncertainty**

0.00 ft 0.00 ft Easting: Wellhead Elevation: 600,937.10 ft

Longitude: **Ground Level:** 104° 0' 18.039 W 3,526.00ft

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9,684.76	88.00	174.04	7,953.00	-1,979.80	206.60	3.00	-2.84	-0.97	0.00 BHI	L (ST 18 #2H

EOG RESOURCES INC.

Planning Report

Database: EDM

Company: EOG - Midland (3)
Project: Sand Tank (Bone Spring)
Site: Sand Tank 18 Fed #2H

Well: Sand Tank 18 Fed #2H Wellbore: Sand Tank 18 Fed #2H

Design: Original Plan

Local Co-ordinate Reference:

TVD Reference:

North Reference: Survey Calculation Method: Well Sand Tank 18 Fed #2H

WELL @ 3544.00ft (Original Well Elev) WELL @ 3544.00ft (Original Well Elev)

Grid

Minimum Curvature

ned Survey		ATT IS THE REST LABOUR.	THE PARTY OF THE P	The fact of the second	Market Mill and Article To Park	and the first of t	ALTERNATION THE MARKET PROPERTY.	STATE OF SECULORS	
Measured Depth (ft)	Inclination (*)	Azimuth (*)	Vertical Depth (ft)	-N-S	+EJ-W (f0	Vertical Section (ft)	Dogleg Rate (*/100ft)	Build Rate (7100ft)	Turn Rate (*/100ft)
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EOG RESOURCES INC.

Planning Report

Database:

EDM

Company: Project: EOG - Midland (3)

Site: Well: Sand Tank (Bone Spring) Sand Tank 18 Fed #2H Sand Tank 18 Fed #2H

Wellbore:

Sand Tank 18 Fed #2H

Design:

Original Plan

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Well Sand Tank 18 Fed #2H

WELL @ 3544.00ft (Original Well Elev) WELL @ 3544.00ft (Original Well Elev)

Grid

Minimum Curvature

		Sand San And S							
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+EJ-W	Vertical Section	Dogleg Rate	Build Rate	Tum Rate
(ñ)	(1)	n	(n)	(m)	(n)	(ft)	(°/100ft)	(*/100ft)	(*/100ft)
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5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
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6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
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6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,418.00	0.00	0.00	7,418.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	9.74	174.04	7,499.61	-6.92	0.72	6.95	11.88	11.88	0.00
7,600.00	21.62	174.04	7,595.71	-33.75	3.52	33.93	11.88	11.88	0.00
7,700.00	33.50	174.04	7,684.20	-79.69	8.32	80.12	11.88	11.88	0.00
7,800.00	45.38	174.04	7,761.29	-142.76	14.90	143.54	11.88	11.88	0.00
7,900.00	57.26	174.04	7,823.68	-220.27	23.00	221.46	11.88	11.88	0.00
8,000.00	69.14	174.04	7,868.68	-308.88	32.25	310.56	11.88	11.88	0.00
8,100.00	81.02	174.04	7,894.38	-404.82	42.26	407.02	11.88	11.88	0.00
8,158.75	88.00	174.04	7,900.00	-462.95	48.33	465.46	11.88	11.88	0.00
8,159.09	88.01	174.04	7,900.01	-463.28	48.37	465.80	3.00	2.84	0.97
8,200.00	88.01	174.04	7,901.43	-503.95	52.61	506.69	0.00	0.00	0.00
8,300.00	88.01	174.04	7,904.91	-603.35	62.98	606.63	0.00	0.00	0.00
8,400.00	88.01	174.04	7,908.38	-702.75	73.35	706.57	0.00	0.00	0.00
8,500.00 8,600.00	88.01 88.01	174.04 174.04	7,911.85 7,915.33	-802.15 -901.55	83.72	806.51 906.45	0.00	0.00	0.00
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8,700.00	88.01	174.04	7,918.80	-1,000.95	104.47	1,006.39	0.00	0.00	0.00
8,800.00 8,900.00	88.01	174.04	7,922.27	-1,100.35 -1,199.75	114.84	1,106.33	0.00	0.00	0.00
9,000.00	88.01 88.01	174.04 174.04	7,925.74 7,929.22		125.21 135.58	1,206.26	0.00	0.00	0.00
9,100.00	88.01	174.04	7,929.22	-1,299.15 -1,398.55	145.95	1,306.20 1,406.14	0.00 0.00	0.00 0.00	0.00 0.00
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9,200.00	88.01	174.04	7,936.16	-1,497.95	156.32	1,506.08	0.00	0.00	0.00
9,300.00	88.01	174.04	7,939.64	-1,597.35	166.69	1,606.02	0.00	0.00	0.00
9,400.00 9,500.00	88.01 88.01	174.04 174.04	7,943.11 7,946.58	-1,696.75 -1,706.15	177.07	1,705.96	0.00	0.00	0.00
9,600.00	88.01	174.04	7,940.58 7,950.06	-1,796.15 -1,895.55	187.44 197.81	1,805.90 1,905.84	0.00 0.00	0.00 0.00	0.00 0.00
9,684.42	88.01	174.04	7,952.99	-1,979.46					
9,684.76	88.00	174.04	7,952.99 7,953.00	-1,979.46 -1,979.80	206.56 206.60	1,990.21 1,990.55	0.00 3.00	0.00 2.84	0.00
9,004.70 BHL (ST 1		: (4, 04	7,000.00	-1,318.00	2.00.00	1,330.00	3.00	-2.84	-0.97

EOG RESOURCES INC.

Planning Report

Database:

EDM

Company: EOG Project: Sand

EOG - Midland (3)
Sand Tank (Bone Spring)
Sand Tank 18 Fed #2H

Well: Wellbore:

Site:

Sand Tank 18 Fed #2H Sand Tank 18 Fed #2H

Design: Original Plan

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Well Sand Tank 18 Fed #2H

WELL @ 3544.00ft (Original Well Elev) WELL @ 3544.00ft (Original Well Elev)

Grid

Minimum Curvature

BHL (ST 18 #2H) - plan hits target - Point	0.00	0.00	7,953.00	-1,979.80	206.60	636,102.90	601,143.70	32° 44′ 53.913 N	104° 0' 15.692 W
Targets Target Name - hit/miss target Dip - Shape		p Dir. (')	TYP (0)	+N/-\$	+E/.W (fl)	Northing (ft)	197 - E. J. J. J. S.	Latitude	Longitude

	+N/-S 0.00	+E/ 0	-W .00	North 638082	ing	round Level Easting 600937.10	سا	atittude	Lo 104° 0' 18	ongitude 8.039 W		Slot	
						SECTION	DETAILS						
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Vertical Section at 174.04° (1500 ft/in)

-300

West(-)/East(+) (300 ft/in)

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

SURFACE USE AND OPERATIONS PLAN Surface is owned by BLM

<u>Directions to Well Site</u>: From Loco Hills at the intersection of U.S. Hwy #82 and Eddy County Road No. 217, go south-southwest on Eddy Co. Road #217 for 3.0 miles; then turn left on Eddy County Road No. 216 and go south for 1.9 miles; then turn left on lease road for 0.1 miles; then turn right on lease road for 0.2 miles; then turn left on lease road and go east for 0.7 miles; then turn right and go south on old lease road for 0.1 miles to location.

1. EXISTING ROADS:

Access to location will be made as shown on Exhibit #2

Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. PROPOSED ACCESS ROAD:

EOG will utilize the existing old lease road to the Herman J. Ledbetter Southern Union No. 1 Dry Hole Marker as shown on Exhibit 2a.

No turnouts necessary.

No culverts are necessary. No low-water crossings are necessary.

Surfacing material consists of native caliche to be obtained from the nearest BLM-approved caliche pit. Any additional materials required will be purchased from the dirt contractor.

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 FACILITIES:

There are no existing production facilities. If production is encountered, a temporary facility will be established on the drill pad, and if warranted, a production facility would be built at a later date in the immediate area of the drill pad location. If the well is productive, a flowline will be built to the nearest pipeline.

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

5. LOCATION AND TYPE OF WATER SUPPLY:

Fresh water and brine water for drilling will come from commercial sources and transported to the well site over the roads as shown on Exhibit 2 & 2a and by temporary water supply lines.

6. PLANS FOR RESTORATION OF THE SURFACE:

After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Location will be cleaned of all trash and junk to leave the well in an aesthetically pleasing condition as possible.

Any unguarded pits containing fluid will be fenced until they are dry and back filled.

After abandonment of the well, surface restoration will be in accordance with current federal laws and regulations. Location will be cleaned, and the well pad removed to promote vegetation and disposal of human waste will be complied with. Trash, waste paper, garbage and junk will be hauled to an approved disposal site in an enclosed trash trailer.

All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

ANCILLARY FACILITIES:

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

WELL SITE LAYOUT:

Exhibit #4 shows the relative location and dimensions of the well pad.

EOG RESOURCES, INC. SAND TANK 18 Fed 2H Eddy Co. NM

OTHER INFORMATION:

The area around the well site is grassland and the topsoil is sandy with rock. The vegetation is native scrub grass.

COMPANY REPRESENTATIVES:

Permitting & Land

Mr. Donny G. Glanton Senior Lease Operations ROW Representative EOG Resources, Inc. P.O. Box 2267 Midland, TX 79702 (432) 686-3642 Office (432) 770-0602 Cell

Email: donny_glanton@eogresources.com

<u>Drilling</u> <u>Operations</u>

Mr. Jason LaGrega
Mr. Howard Kemp
Division Drilling Engineer
EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
Midland

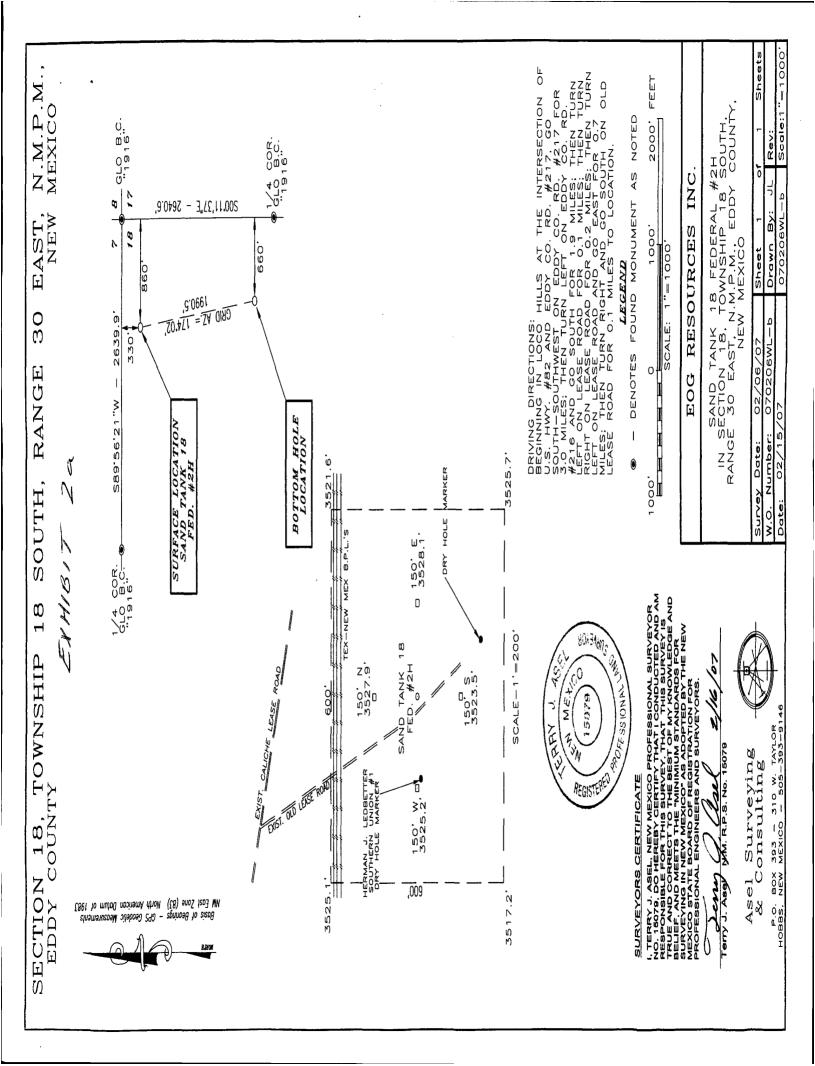
Email: jason_lagrega@eogresources.com Email: howard_kemp@eogresources.com

CERTIFICATION:

I HEREBY CERTIFY that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by EOG Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Jason LaGrega

Division Drilling Engineer



CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

EOG Resources, Inc

Well Name & No.

2H-Sand Tank 18 Fed

Location SHL:

0330FNL, 0860 FEL, Section 18, T-18-S, R-30-E 2310 FNL, 0660 FEL, Section 18, T-18-S, R-30-E

Lease:

NM 0437521

I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
 - 1. Spudding well
 - 2. Setting and/or Cementing of all casing strings
 - 3. BOPE tests
 - Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. Although there is no measured Hydrogen Sulfide in this section, it has been measured in Section 7, T-18-S, R-31-E ranging from 150-380 ppm in the gas streams.
- C. 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.
- **D.** If floor controls are required, (3M or Greater) 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.

II. CASING:

- A. The 13-3/8 inch surface casing shall be set at a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 650 feet and cemented to the surface.
 - 1. 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.
 - 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
 - 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
 - 4. If cement falls back, remedial action will be done prior to drilling out that string.

B. The minimum required fill of cement behind the <u>8-5/8</u> inch intermediate casing is cement to circulate to surface. If cement does not circulate see A.1 thru 4.

Possible water flow in the Salado Group and the Premier member of the Grayburg formation.

- C. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is cement is to extend a minimum of 200 feet inside of the intermediate casing.
- **D.** 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.

III. PRESSURE CONTROL:

- A. 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.
- **B.** 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.
- C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the <u>8-5/8 inch</u> intermediate casing shoe shall be 3000 (3M) PSI.
- **D.** The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - 1. The tests shall be done by an independent service company.
 - 2. The results of the test shall be reported to the appropriate BLM office.
 - 3. 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.
 - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. 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.

Engineer on call phone: 505-706-2779

WWI 032707