OCD-ARTESIA

Form 3160 -3 (August 2007)



DEC 20 2007

OCD-AKTESIA FORM APPROVED OMB No. 1004-0137

UNITED STATES	OMB No 100 Expires July 31
DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	5 Lease Serial No NM-11042
Detterie of Errib Millimetri	

APPLICATION FOR PERMIT TO I		6 If Indian, Allotee or Tribe Name					
la Type of work DRILL REENTE	R			7 If Unit or CA Agree ROSS DRAW #		nd No	
Ib Type of Well Oth Well Gas Well Other	Sın	gle Zone Multip	ole Zone	8 Lease Name and Well No ROSS DRAW #30 11808			
2 Name of Operator J C WILLIAMSON	58			9 API Well No 30 - 015 - 36010			
3a Address 214 WEST TEXAS Suite 1250 MIDLAND, TX 79701	3b Phone No (432)-682-1	(include area code) 797		10 Field and Pool, or Exploratory ROSS DRAW - DELAWARE			
4 Location of Well (Report location clearly and in accordance with arry	State requireme	ents *)		11 Sec, T R M or Bl	lk and Survey	or Area	
At surface 1980 FEL 1980 FSL				27 T26S R30E			
At proposed prod zone 1980 FEL 1980 FSL	ン						
14 Distance in miles and direction from nearest town or post office* 34 MILES SOUTHEAST OF CARLSBAD, NEW MEXICO		12 County or Parish EDDY	13 NN	State 1			
15 Distance from proposed* 1980 J-NL location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of ac	cres in lease	17 Spacin 40	g Unit dedicated to this w			
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	t well, drilling, completed,			I/BIA Bond No on file 2469			
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3002 GL	22 Approxim 01/01/200	nate date work will star 8	rt*	23 Estimated duration 20 DAYS			
	24 Attac	hments					
The following, completed in accordance with the requirements of Onshor	e Oil and Gas	Order No 1, must be a	ttached to th	is form			
 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) 	Lands, the	Item 20 above) 5 Operator certific	cation	ns unless covered by an	J	·	
25 Signature Way An Month	4	(Printed Typed) H E WILLIAMSON	v ;		Date 11/02/200	7	
Title CHIEF PROJECT OFFICER							
Approved by (Signature) /s/ Don Peterson	Name	(Printed/Typed)	n Pete	erson	Date	FC 1 8 201	
FIELD MANAGER	Office	CARLS	BAD	FIFID OFF	ICF		
Application approval does not warrant or certify that the applicant hold: conduct operations thereon Conditions of approval, if any, are attached	s legal or equit	able title to those righ	ts in the sub	ject lease which would e APPROVAL			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as t	ime for any pe o any matter w	erson knowingly and v	willfully to n	nake to any department o	er agency of th	e United	

Carlsbad Controlled Water Basin

(Continued on page 2)

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SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

*(Instructions on page 2)

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II 1301 W. GRAND AVENUE, ARTESIA, NW 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

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

3002

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR. SANTA FE, NM 87505 API Number Pool Code Pool Name 790 Well Number Property Code ROSS DRAW UNIT 30 OGRID No. Operator Name Elevation

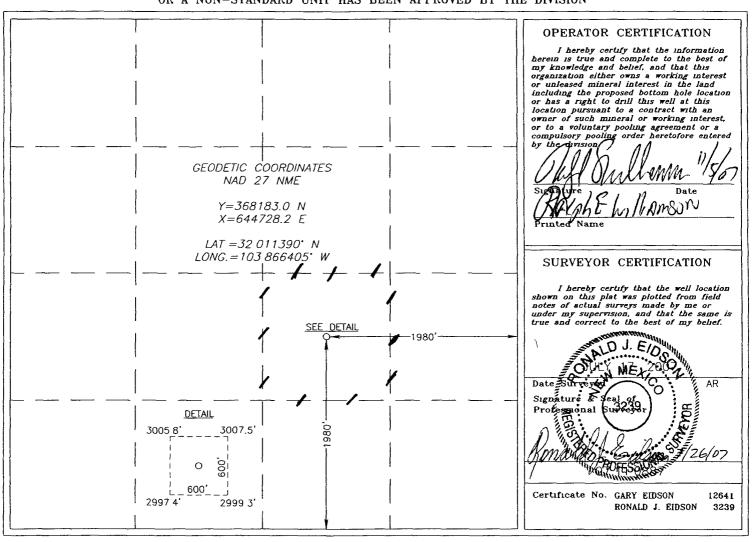
J.C. WILLIAMSON Surface Location

1	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	J	27	26-S	30-E		1980	SOUTH	1980	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
Dedicated Acres	Joint o	r Infill Co	nsolidation	Code Or	der No.	1			L
40									

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



J.C. WILLIAMSON

WELL ROSS DRAW #30

1980 FEL, 1980 FSL, Sec 27, T265, R30E

Eddy County, New Mexico

Lease No. NM-11042

DRILLING PROGRAM

1. Geologic Name of Surface Formation

a. Quaternary Alluvium

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a.	Rustler Anhydrate	500'	Water	1
Ъ.	Upper Salt	1100'	Impervious	
c.	Delaware Sand	3460'	Oil	
d.	Cherry Canyon	4400'	Oil	-
e.	Brushy Canyon	5700'	Oil	· ·
	Delaware -	-7 7000 '	n per	operator

No other formations are expected to yield oil, gas or fresh water in measurable volumes in this well. The surface fresh water sands will be protected by setting $13^{\circ}378^{\circ}$ casing at 500' and circulating cement back to surface. The Delaware Sand intervals will be isolated by setting $5\frac{1}{2}^{\circ}$ casing to total depth and circulating cement above the base of the $85/8^{\circ}$ casing.

3. Casing Program:

<u>Hole</u> <u>Size</u>	<u>Interval</u>	OD Csg	Weight	<u>Collar</u>	<u>Grade</u>	Collapse Design	Burst Design	Tension Design
						<u>Factor</u>	Factor	Factor
17 1/2"	0' -500'	13 3/8"	48#	ST&C	H-40	1.97	3.70	9.01 J
		new						
11-**	500'-3400'	8 5/8"23	30V 24#	ST&C	K-55	1.18	1.73	3 44 J
		new //	oo 32#	ST&C	K-55	1.50	1.75	4 30J
7 7/8"	3400'-7000'	(5/12)	15.5#	LT&C	K-55	4.21	1.31	1.89 J
		new				1,12		
		5/2						

4. Cement Program: (Note yields; and DV tool depth if multiple stages)

a. 13 3/8" Surface Cement circulated to surface with 750 sx 35/65 Poz C, 2% CaCl, 1/4pps Celloflake, 6%

Bentonite, 12.8 ppg yield followed by; 500 sx C, 2% CaCl, ¼ pps Celloflake/sx weight, 14.8 ppg,

1.32 yield, TOC at surface.

b. 8 5/8" Intermediate Cement to 1000' from surface with 1000 sx 35/65 Poz C, 2% NaCl, 1/4 pps Celloflake/sx, 6 % Bentonite, 12.8 ppg yield 1.72, followed by

see coA

		500 sx 35/65 Poz C, 2% NaCl, ¼ pps /4 & Celloflake/sx, 6% Bentonite, weight is 12.8 ppg, 1.32 yield, TOC 1000'.
c. 5 1/2"	Production	Cement 1 st stage w/ 1000 sx 60/35 Poz cement, 6# NaCl, ½# Celloflake per sx @ 14.8 ppg, 1.32 ppg yield, DV tool @ 4500'; 2 nd stage 1000 sx,
		65/35 Poz, 6# NaCl, ¼ # Celloflake/sx @ 14.8
		ppg, 1.32 ppg yield, estimated top of cement
		2900'.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 500' above the 8 5/8" casing shoe. All casing is new and API approved or drifted and tested used pipe.

5. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventor. Unit will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. The drilling head will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1200 psi with the rig pump before drilling out the 13 3/8" casing shoe (70% of 48#, H-40 casing). Prior to drilling out the 8 5/8" casing shoe, the BOP's will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

	6.	Proposed Mud 1	Drilling Progr	am		
		Depth	Mud Wt.	<u>Visc</u>	Fluid Loss	Type System
/0.0		$\sqrt{0'-600'}$	8.4	32-40	NC	Fresh Water
Se.e C0/9	2 <	500'- 3400'	9.5-9.9	29-33	NC	Fresh Water/Cut Brine
		2400'-7000'	9.5-9.9	29	NC	Cut Brine

The necessary mud products for weight addition and fluid loss control will be on location at all times, and will be used as necessary.

Auxiliary Well Control and Monitoring Equipment: 7.

a. A Kelly cock will be in the drill string at all times.

- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. Logging, Coring, and Testing Program:

- a. Drill stem tests will be based on geological sample shows.
- b. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog with SP and Gamma Ray; Compensated Neutron Z Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface Compensated Neutron with Gamma Ray
 - iii. No coring program is planned
 - iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests, and electronic logs to be run may be adjusted depending on well conditions.

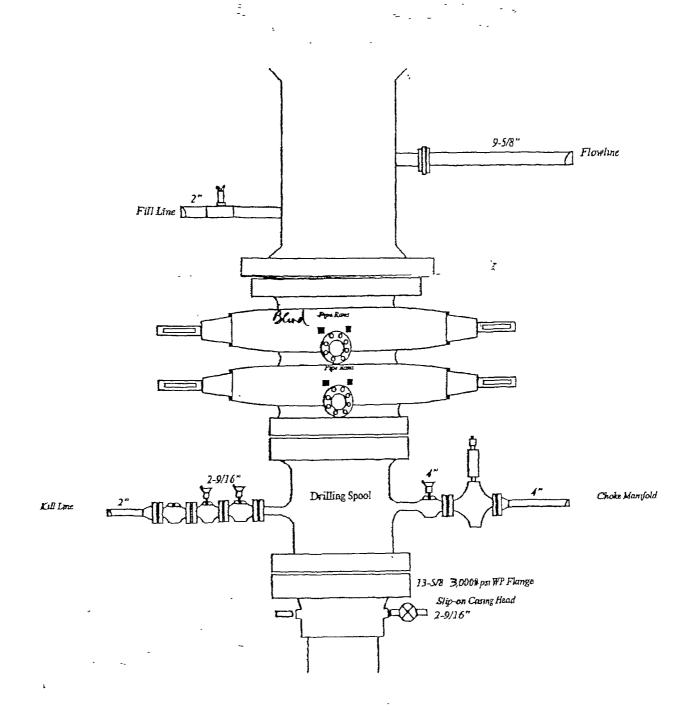
9. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur, but if loss of circulation does occur, lost circulation materials will be on location to control said loss. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3500 psi and Estimated BHT 150°. No H2S is anticipated to be encountered.

10. Anticipated Starting Date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 20 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines to existing facilities in order to place well on production.

Blowout Preventor

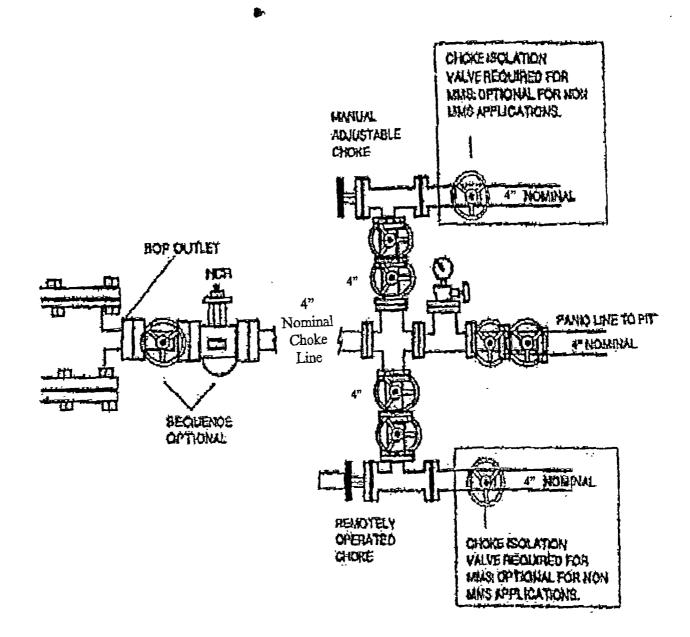


REVISED EXHIBIT

J.C. WILLIAMSON
WELL ROSS DRAW # 30
1980 FEL 1980 FSL, SEC 27, T26S, R30E
EDDY COUNY, NM
LEASE NO. NM-11042

ORILLING OPERATIONS OHOKE MANIFOLD 3M SERVICE

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REVISED EXHIBIT

J.C. WILLIAMSON
WELL ROSS DRAW # 30
1980 FEL 1980 FSL, SEC 27, T26S, R30E
EDDY COUNY, NM
LEASE NO. NM-11042

SURFACE USE AND OPERATIONS PLAN

J.C. WILLIAMSON ROSS DRAW UNIT # 30 1980' FEL, 1980' FSL, Sec 27, T26S, R30E Eddy County, New Mexico Lease No. NM-11042

1. EXISTING ROADS:

Vicinity map Exhibit "A" is a portion of a road map showing the location of the proposed well. Access to the location will be gained by using an existing road which leads west from Lea County 1, some 13.5 miles, leading to the south line of Section 27 and connecting to existing Ross Draw lease roads as shown, or leading out to the west, connecting to county road 52 which connects to the Jal - Orla Hwy (652).

2. PLANNED ACCESS ROAD:

- A. SURFACING MATERIAL: Some surfacing material may be needed for the prepared location, if necessary, 4" caliche, watered and compacted will be used. Surfacing materials where needed will be removed from an approved caliche pit, located one mile to the southwest of the location.
- B. MAXIMUM GRADE: Two Percent
- C. TURNOUTS: None Required
- D. CULVERTS: None required
- E. CUTS AND FILLS: None necessary. Only clearing and minor leveling will be required.
- F. GATES AND CATTLE GUARDS: None required. No fences will need to be cut in conjunction with drilling operations.

3. LOCATION OF EXISTING WELLS:

A. Existing wells in the area are shown on Exhibit "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. There are existing facilities owned and operated by J.C. Williamson that will be utilized by this lease, which are the battery and treating facilities put on the leases in association with the Ross Draw Unit # 11.
- B. If the proposed well is completed for production, the tank battery for this well will be the production facility constructed for the Ross Draw # 11 well. This will be connected to this existing production facility by a 2" steel surface flowline, crossing the lease, leading along existing roads to the Ross Draw # 11 production facility.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Fresh water necessary for drilling will be purchased and hauled to the well site over existing and proposed roads. Produced Delaware formation Brine water will be purchased, hauled, or brought by temporary surface pipeline laid down existing roads to the location for make up water in the 8-5/8", and 7-7/8" portions of the hole to be drilled.

6. SOURCE OF CONSTRUCTION MATERIALS:

The construction materials that may be needed can be obtained from an approved pit located in SW/4 SW/4 of Sec. 26, T-26-S, R-30-E, Eddy County, New Mexico, or such other caliche pits as approved by the Bureau of Land Management.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the lined drilling pit, using pits specifically constructed for this well.
- B. Drilling fluid will be allowed to evaporate in the drilling pit until the pit is dry, or removed to be used on a subsequent well.
- C. All pits will be fenced with normal barbed wire fencing materials, and metal corner braces and metal T ports, to prevent livestock from entering the area.
- D. Salt water received during the testing of this well, will be disposed of in the drilling pit.
- E. Oil produced during test will be stored in a test tank, after which, when the well is completed, they will be transferred to the Ross Draw #11 production facility, treated, and sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage, and junk, will be contained in metal trash bins to prevent scattering by the wind, and will be removed for deposit in an approved sanitary land fill within 30 days the completion of drilling operations.

8. ANCILLARY FACILITIES:

A. A wellhead of this well will be laid along the edge of the proposed access road, connecting to the Ross Draw 11 battery, from which all well head effluent will be processed, sold, and properly disposed of.

9. WELL SITE LAYOUT:

- A. Exhibit "D" shows the relative location and dimensions of the well pit, mud pit, trash pit, and the location of major rig components. The pits will be dug after the application is approved.
- B. Only minor leveling of the well site will be required. No significant cut and fill will be necessary.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for continuing production operations will be removed from the location as soon as possible. Pits will be remediated as by BLM requires, and the location cleaned out of all trash and junk to leave this well site in as an aesthetically pleasing condition a possible.
- B. Any unguarded pits containing fluids will be fenced until they are remediated.
- C. After final abandonment of the well, all equipment, junk, and trash, will be removed or buried as specified, and the location cleaned. Then, any special rehabilitation and/or special vegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible.

11. <u>OTHER INFORMATION:</u>

- A. Topography: The land surface is relatively level. Regional slope is to the southwest.
- B. Soil: The top soil at the well site is gravelly loamy sand.
- C. Flora and Fauna: The vegetative cover is sparse and consists of mesquite, greasewood, yucca, weeds, and sparse range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbit, rodents, reptiles, dove, and quail.
- D. Ponds and Streams: The Pecos River is approximately 6 ½ miles southwest of the proposed well site. Red Bluff Reservoir is approximately 6-½ miles to the southwest of the location. There are no natural ponds or streams near the location.
- E. Residence and Other Structures: There are no occupied dwellings within two miles of proposed well site. There is a windmill approximately ½ mile to the northeast of the location.
- F. Archaeological, Historical, or Other Cultural Sites: None observed in the area, but the requirements for archaeological research will be complied with.
- G. Land Use: Cattle grazing and hunting in season
- H. Surface Ownership: Federal

12. OPERATORS REPRESENTATIVE:

Representative responsible for assuring compliance with the approved Surface User Plan is as follows:

Ralph E. Williamson Chief Project Engineer 8202 IH-35 North, Suite 490 San Antonio, Texas 78239 Office: 210.490.5700

Fax: 210.590.4705

CERTIFICATION:

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that the statements made in the 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 J.C Williamson and its contractors and subcontractors in conformity with this plan and the term and conditions under which it is approved.

Date: 1/5/6/

BY

RALPH E WILLIAMSON CHIEF PROJECT OFFICER

AGENT FOR J.C. WILLIAMSON,

OPERATOR

SECTION 27, EDDY COUNTY,	TOWNSHIP 26 S	SOUTH, RAM	VGE 30		.M.P.M., MEXICO
3005 8'		600'			3007 5'
	0	O' NORTH DFFSET 3004 3'			30073
99	0 WES1 002 1' ELE LAT.=3	RAW UNIT #30 O V. 3002.2' 2.011390° N 03.866405° W	150' □ OFF. 300.	SET	,000,
		CI D' SOUTH DFFSET 3000 3'			
2997 4'		600'			2999 3'
DIRECTIONS TO LOCATION	V				
FROM ST HWY. 128 AN HWY), GO SOUTH ON C MILES. TURN RIGHT ON GO WEST APPROX 86 GO NORTH APPROX. 06	D CO. RD #1 (ORLA O RD #1 APPROX 14-1 CALICHE LEASE ROAD AND MILES. TURN RIGHT AND 5 MILES. TURN RIGHT AND	100	0 		200 Feet
GO EAST APPROX. 0.26 ROAD SURVEY. FOLLOW	MILES. TO A PROPOSED FLAGS SOUTH APPROX	J.C.	WIL	LIAN	150N
0 25 MILES TO THE NOF	DING SURVEYING SERVICES SINCE 1946	AND 1980 F	FEET FROM THE	ROM THE SOUTH I EAST LINE OF SE NGE 30 EAST, NI	CTION 27,
JOHN WES	ST SURVEYING COMPANY 412 N DAL PASO	Survey Date 7,	/17/07	Sheet 1 of	1 Sheets
	HOBBS, N.M 88240 (505) 393-3117	W.O Number 07	11 0887 Dr		Rev 1 N/A
	1000,000	Date 7/25/07	Disk.	07110887	Scale 1"=100'

VI. 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 no Hydrogen Sulfide has been reported, it is always a potential hazard. If Hydrogen Sulfide is encountered, please provide measured values to the BLM.
- 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 13-3/8 inch surface casing shall be set a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 800 feet and cemented to the surface.
 - 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.

Possible lost circulation in the Redbeds, evaporites to the base of the Castile group, Delaware and Bone Spring formations.

- 2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a-d above.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. First stage to circulate.
- 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. 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.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 8-5/8" intermediate casing shoe shall be 3000 (3M) psi. A 3M system requires an annular preventer.
- 4. 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. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1200** psi with the rig pumps is approved.

D. DRILL STEM TEST

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

PLEASE SUBMIT SUNDRIES FOR ANY CHANGES IN APPROVED DRILLING PLAN.

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

WWI 121407