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OCD-ARTESIA

Form 3160-3
(February 2005)

NMOCD ARTESIA

UNITED STATES

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB NO 1004-0137
Expires: March 31, 2007

1a. Type of Work: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone
2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address 105 South Fourth Street, Artesia, NM 88210
3b. Phone No. (include area code) 575-748-1471

4. Location of well (Report location clearly and in accordance with any State requirements *)
At surface 690' FSL & 330' FEL, Surface Hole
At proposed prod zone 330' FNL & 1980' FEL, Bottom Hole

14. Distance in miles and direction from the nearest town or post office*
38 miles northeast of Carlsbad, NM

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg unit line, if any) 330
16. No. of acres in lease 880.00
17. Spacing Unit dedicated to this well W2NE; NWSE

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 8497'
19. Proposed Depth 8497' VD & 13074' MD
20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434

21. Elevations (Show whether DF, KDB, RT, GL, etc) 3634' GL
22. Approximate date work will start* ASAP
23. Estimated duration 50 days

24. Attachments

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

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

25. Signature *Clifton May* Printed Name Clifton May Date 5/18/2010
Title Land Regulatory Agent

Approved By (Signature) /s/ Tony J. Herrell Name (Printed/ Typed) /s/ Tony J. Herrell Date JAN 6 2012
Title FOR ACTING STATE DIRECTOR Office NM STATE 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 cc 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 wilfully 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)

CARLSBAD CONTROLLED WATER BASIN
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL 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 87506

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 15, 2009

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-39828	Pool Code 40299	Pool Name Lost Tank Delaware
Property Code 12900	Property Name WOLF "AJA" FEDERAL	Well Number 13H
GRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3634'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	24	21 S	31 E		690	SOUTH	330	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
B	24	21 S	31 E		330	NORTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
120			

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

<p>PROPOSED BOTTOM HOLE LOCATION Lat - N 32°28'13.61" Long - W 103°43'45.68" NMSPE- N 535406.998 E 727602.444 (NAD-83)</p> <p>Project Area →</p> <p>Producing Zone →</p> <p>Penetration Point 1650' FSL and 1650' FEL</p> <p>SURFACE LOCATION Lat - N 32°27'31.45" Long - W 103°43'26.42" NMSPE- N 531155.126 E 729276.452 (NAD-83)</p>	<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Clifton May</i> 5/17/10 Signature Date</p> <p>Clifton May Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date Surveyed: 5/17/10 Signature & Seal of Professional Surveyor: [Seal] Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
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YATES PETROLEUM CORPORATION
 Wolf "AJA" Federal #13H
 690' FSL and 330' FEL Surface Hole Location
 330' FNL and 1980' FEL Bottom Hole Location
 Section 24-T21S-R31E
 Eddy County, New Mexico

1. The estimated tops of geologic markers are as follows:

Rustler	830'	Brushy Canyon Mkr	8106'	
Top of Salt	1152'	Target-Basal Sand	8270'-Oil	MD 9370'
Bottom of Salt	4200'	Bone Spring	8397'-Oil	
Bell Canyon	4506'	TD (Pilot Hole)	8497'	
Cherry Canyon	5390'-Oil			MTD (Lateral) 12736'
Brushy Canyon	6680'-Oil			
2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 150'
 Oil or Gas: Oil Zones: 5390', 6680', 8270' & 8397'.

3. Pressure Control Equipment: ^{13 3/8"}BOPE will be installed on the 13 3/8" and the 9 5/8" casing and rated for 3000# BOP System. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.
4. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when Kelly is not in use.
5. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: All new casing to be used

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	J-55	ST&C	0-900'	900'
12 1/4"	9 5/8"	40#	J-55	LT&C	0-100'	100'
12 1/4"	9 5/8"	36#	J-55	LT&C	100'-3300'	3200'
12 1/4"	9 5/8"	40#	J-55	LT&C	3300'-4200'	900'
12 1/4"	9 5/8"	40#	HCK-55	LT&C	4050'-4600'	400'
8 3/4" Pilot Hole					^{4200'}	
7 7/8"	5.1/2"	17#	P- 110	LT&C	0'-12736'	12736'

Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.125

B. CEMENTING PROGRAM:

Surface Casing: Lead with 600 sacks C Lite (Yld 1.64 Wt. 14.80). Tail in with 250 sacks Class C (Yld. 1.34 Wt. 14.80). TOC surface.

Intermediate Casing: Lead with 1425 sacks of Poz C (Yld 1.96 Wt 12.60). Tail in with 100 sack Class C (Yld. 1.34 Wt. 14.80). TOC surface

Production Casing: Casing cement to be done in two stages with stage tools at approx. 6000'.

Stage One: Cement with 1400 sacks Pecos Valley Lite (Yld 1.83 Wt 13.00). TOC 6000'.

See COA Stage Two: Lead with 300 sacks Lite Crete (Yld. 2.66 Wt 9.90). Tail in with 100 sacks Pecos Valley Lite (Yld. 1.41 Wt 13.00). TOC 4100'. *See COA* *Surface*

See COA Pilot hole drilled vertically to 8497'. Well will be plugged back with a 400'-500' kick off plug, then kicked off at 7400' and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 9370' MD (8270' TVD). 7 7/8" hole will then be drilled to 12736' MD (8270' TVD) where 5 1/2" casing will be run and cemented in place. Penetration point of producing zone will be encountered at 1650' FSL & 1650' FEL, 24-21S-31E. Deepest TVD in the pilot hole is 8497'. Deepest TVD in the lateral will be 8270'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-900'	Fresh Water	8.60-9.20	29-36	N/C
900'-4600'	Brine Water	10.00-10.20	28-30	N/C
4600'-8497'	Cut Brine (Pilot Hole)	8.90-9.10	28-29	N/C
7400'-12736'	Cut Brine (Lateral Section)	9.00-9.30	28-34	<=15

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM:

Samples: 30' samples to 4400'. 10' samples from 4400' to TD. Mudloggers on at surface casing
 Logging: Platform Hals, CMR (DLWR), NGT *See COA*
 Coring: None anticipated
 DST's: None Anticipated

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-900'	431 PSI
900'-4600'	2440 PSI
4600'-8497'	4021 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None

H2S Zones Anticipated: None Anticipated *See COA*

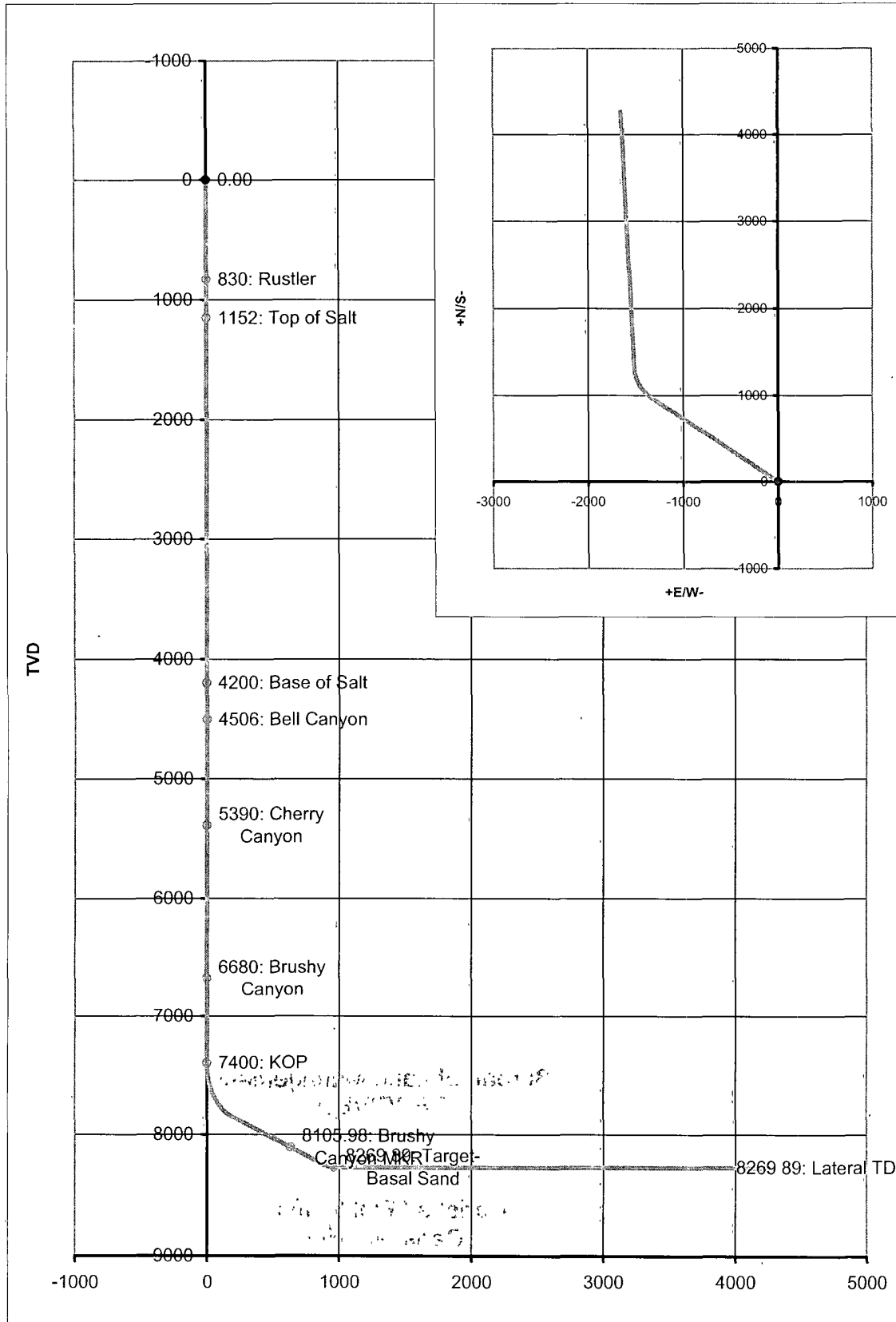
Maximum Bottom Hole Temperature: 150 F

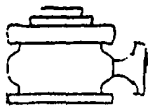
9. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.

Co: Yates Petroleum Corporation					Units: Feet, °, 7100ft			VS Az: 0.00		Tgt TVD:		
Drillers: 0					Elevation: 0.00			Tgt Radius:		Tgt MD:		
Well Name: Wolf AJA Federal #13H					Northing: 0.00			Tgt N/S:		Tgt Displ.:		
Location: Sect. 24, 21S-31E					Easting: 0.00			Tgt E/W:		Method: Minimum Curvature		
wolf13h												
No	MD	CL	Inc.	Azi	TVD	VS	+N/S-	+E/W-	BR	WR	DLS	Comments
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
2	830.00	830.00	0.00	0.00	830.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
3	1152.00	322.00	0.00	0.00	1152.00	0.00	0.00	0.00	0.00	0.00	0.00	Top of Salt
4	4200.00	3048.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	Base of Salt
5	4506.00	306.00	0.00	0.00	4506.00	0.00	0.00	0.00	0.00	0.00	0.00	Bell Canyon
6	5390.00	884.00	0.00	0.00	5390.00	0.00	0.00	0.00	0.00	0.00	0.00	Cherry Canyon
7	6680.00	1290.00	0.00	0.00	6680.00	0.01	0.01	0.00	0.00	0.00	0.00	Brushy Canyon
8	7400.00	7400.00	0.00	0.00	7400.00	0.01	0.01	0.00	0.00	0.00	0.00	KOP
9	7425.00	25.00	3.00	306.03	7424.99	0.39	0.39	-0.53	12.00	-215.88	12.00	
10	7450.00	25.00	6.00	306.03	7449.91	1.55	1.55	-2.12	12.00	0.00	12.00	
11	7475.00	25.00	9.00	306.03	7474.69	3.46	3.46	-4.75	12.00	0.00	12.00	
12	7500.00	25.00	12.00	306.03	7499.27	6.14	6.14	-8.44	12.00	0.00	12.00	
13	7525.00	25.00	15.00	306.03	7523.58	9.58	9.58	-13.16	12.00	0.00	12.00	
14	7550.00	25.00	18.00	306.03	7547.54	13.75	13.75	-18.90	12.00	0.00	12.00	
15	7575.00	25.00	21.00	306.03	7571.11	18.66	18.66	-25.65	12.00	0.00	12.00	
16	7600.00	25.00	24.00	306.03	7594.20	24.29	24.29	-33.38	12.00	0.00	12.00	
17	7625.00	25.00	27.00	306.03	7616.76	30.62	30.62	-42.09	12.00	0.00	12.00	
18	7650.00	25.00	30.00	306.03	7638.73	37.63	37.63	-51.73	12.00	0.00	12.00	
19	7675.00	25.00	33.00	306.03	7660.05	45.32	45.32	-62.29	12.00	0.00	12.00	
20	7700.00	25.00	36.00	306.03	7680.65	53.64	53.64	-73.74	12.00	0.00	12.00	
21	7725.00	25.00	39.00	306.03	7700.48	62.60	62.60	-86.05	12.00	0.00	12.00	
22	7750.00	25.00	42.00	306.03	7719.49	72.14	72.14	-99.18	12.00	0.00	12.00	
23	7775.00	25.00	45.00	306.03	7737.62	82.27	82.27	-113.09	12.00	0.00	12.00	
24	7800.00	25.00	48.00	306.03	7754.83	92.93	92.93	-127.76	12.00	0.00	12.00	
25	7825.00	25.00	51.00	306.03	7771.06	104.11	104.11	-143.13	12.00	0.00	12.00	
26	7850.00	25.00	54.00	306.03	7786.28	115.78	115.78	-159.17	12.00	0.00	12.00	
27	7875.00	25.00	57.00	306.03	7800.44	127.89	127.89	-175.83	12.00	0.00	12.00	
28	7900.00	25.00	60.00	306.03	7813.50	140.43	140.43	-193.07	12.00	0.00	12.00	
29	7925.00	25.00	63.00	306.03	7825.42	153.35	153.35	-210.83	12.00	0.00	12.00	
30	7950.00	25.00	66.00	306.03	7836.19	166.62	166.62	-229.08	12.00	0.00	12.00	
31	7975.00	25.00	69.00	306.03	7845.75	180.21	180.21	-247.75	12.00	0.00	12.00	
32	7993.54	18.54	71.23	306.03	7852.06	190.46	190.46	-261.85	12.03	0.00	12.03	
33	8782.68	789.14	71.23	306.03	8105.98	629.95	629.95	-866.09	0.00	0.00	0.00	Brushy Canyon MKR
34	9213.16	1219.62	71.23	306.03	8244.49	869.70	869.70	-1195.72	0.00	0.00	0.00	
35	9225.00	1184.84	72.65	306.03	8248.16	876.32	876.32	-1204.82	11.99	0.00	11.99	
36	9250.00	25.00	75.65	306.03	8254.99	890.47	890.47	-1224.26	12.00	0.00	12.00	
37	9275.00	25.00	78.65	306.03	8260.55	904.80	904.80	-1243.97	12.00	0.00	12.00	
38	9300.00	25.00	81.65	306.03	8264.83	919.29	919.29	-1263.89	12.00	0.00	12.00	
39	9325.00	25.00	84.65	306.03	8267.81	933.89	933.89	-1283.96	12.00	0.00	12.00	
40	9350.00	25.00	87.65	306.03	8269.49	948.56	948.56	-1304.13	12.00	0.00	12.00	
41	9369.61	19.61	90.00	306.03	8269.89	960.09	960.09	-1319.99	11.98	0.00	11.98	Target-Basal Sand
42	9369.61	0.00	90.00	306.03	8269.89	960.09	960.09	-1319.99	0.00	0.00	0.00	
43	9369.61	0.00	90.00	306.03	8269.89	960.09	960.09	-1319.99	0.00	0.00	0.00	

No.	MD	CL	Inc.	Azi.	TVD	VS	+N/S-	+E/W-	BR	WR	DLS	Comments
44	9375.00	5.39	90.00	306.67	8269.89	963.29	963.29	-1324.33	0.00	11.87	11.87	
45	9400.00	25.00	90.00	309.67	8269.89	978.73	978.73	-1343.98	0.00	12.00	12.00	
46	9425.00	25.00	90.00	312.67	8269.89	995.19	995.19	-1362.80	0.00	12.00	12.00	
47	9450.00	25.00	90.00	315.67	8269.89	1012.61	1012.61	-1380.73	0.00	12.00	12.00	
48	9475.00	25.00	90.00	318.67	8269.89	1030.94	1030.94	-1397.72	0.00	12.00	12.00	
49	9500.00	25.00	90.00	321.67	8269.89	1050.14	1050.14	-1413.73	0.00	12.00	12.00	
50	9525.00	25.00	90.00	324.67	8269.89	1070.14	1070.14	-1428.72	0.00	12.00	12.00	
51	9550.00	25.00	90.00	327.67	8269.89	1090.91	1090.91	-1442.63	0.00	12.00	12.00	
52	9575.00	25.00	90.00	330.67	8269.89	1112.37	1112.37	-1455.44	0.00	12.00	12.00	
53	9600.00	25.00	90.00	333.67	8269.89	1134.48	1134.48	-1467.11	0.00	12.00	12.00	
54	9625.00	25.00	90.00	336.67	8269.89	1157.17	1157.17	-1477.61	0.00	12.00	12.00	
55	9650.00	25.00	90.00	339.67	8269.89	1180.37	1180.37	-1486.91	0.00	12.00	12.00	
56	9675.00	25.00	90.00	342.67	8269.89	1204.03	1204.03	-1494.97	0.00	12.00	12.00	
57	9700.00	25.00	90.00	345.67	8269.89	1228.08	1228.08	-1501.79	0.00	12.00	12.00	
58	9725.00	25.00	90.00	348.67	8269.89	1252.45	1252.45	-1507.34	0.00	12.00	12.00	
59	9750.00	25.00	90.00	351.67	8269.89	1277.08	1277.08	-1511.61	0.00	12.00	12.00	
60	9775.00	25.00	90.00	354.67	8269.89	1301.90	1301.90	-1514.58	0.00	12.00	12.00	
61	9797.62	22.62	90.00	357.39	8269.89	1324.47	1324.47	-1516.15	0.00	12.02	12.02	
62	12736.28	2938.66	90.00	357.39	8269.89	4260.08	4260.08	-1649.97	0.00	0.00	0.00	Lateral TD

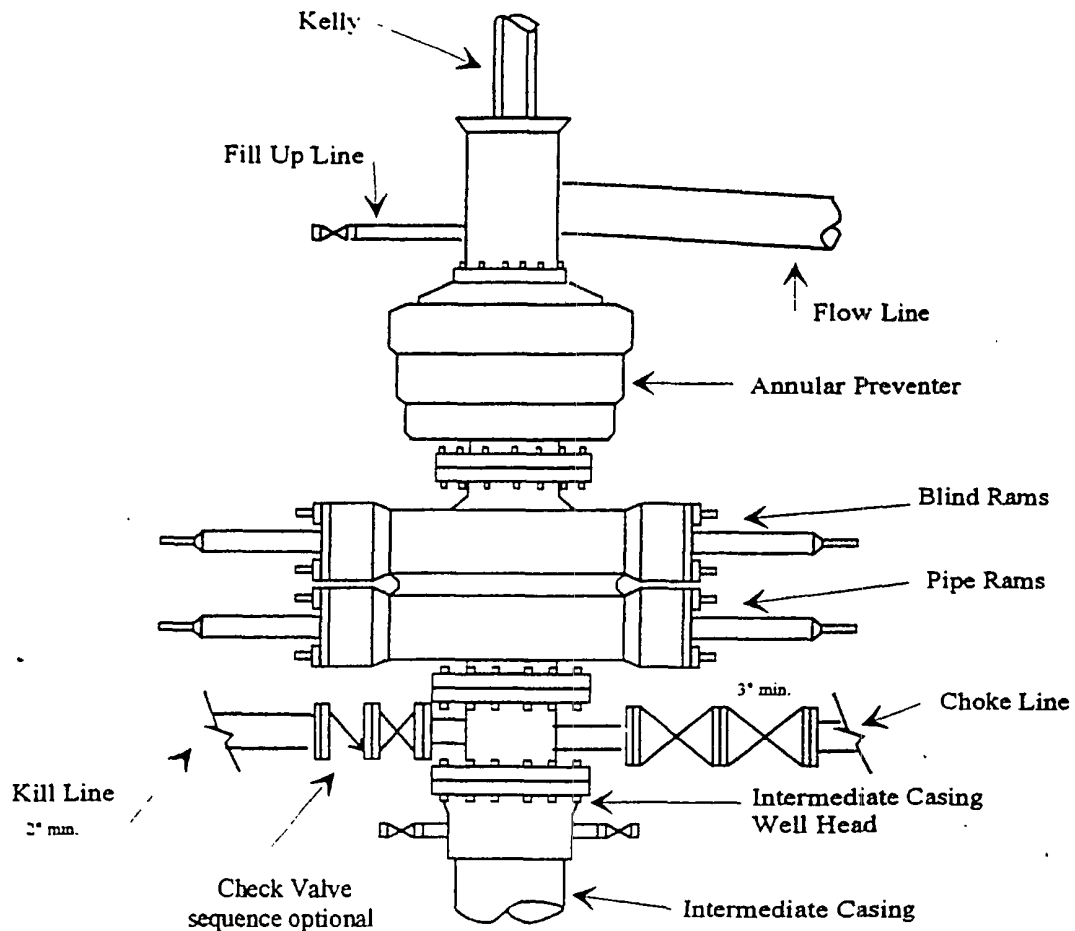




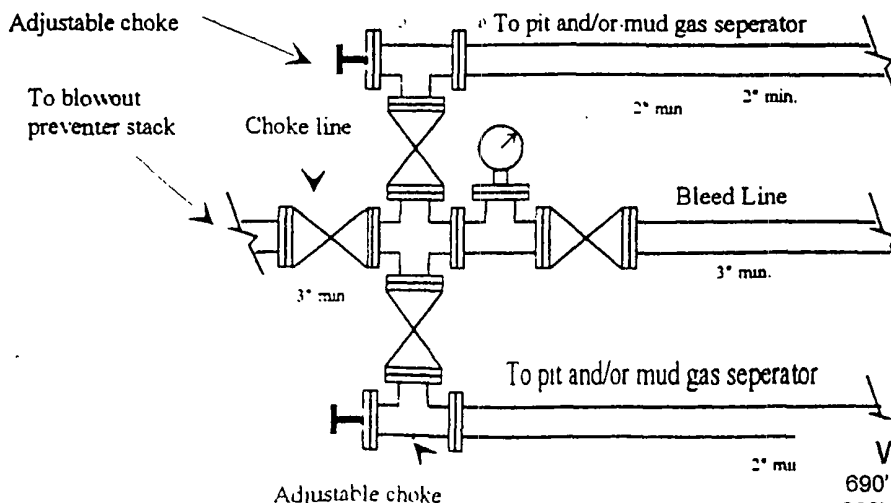
Yates Petroleum Corporation

BOP-3

Typical 3,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



Typical 3,000 psi choke manifold assembly with at least these minimum features



Wolf AJA Federal #13H
690' FSL and 330' FEL, Surface Hole
330' FNL and 1980' FEL, Bottom Hole
Section 24, T21S-R31E
Eddy County, New Mexico
Exhibit "B"

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	YATES PETROLEUM CORP
LEASE NO.:	NM-61358
WELL NAME & NO.:	WOLF AJA FED #13H
SURFACE HOLE FOOTAGE:	0690' FSL & 0330' FEL
BOTTOM HOLE FOOTAGE:	0330' FNL & 1980' FEL
LOCATION:	Section 24, T. 21 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**
 - Constructing over a Reserve Pit
 - Interim Reclamation
 - Painting Requirement
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
- ☒ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - R-111-P Potash
 - H2S Requirements
 - Logging Requirements
 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
- ☐ **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.

V. SPECIAL REQUIREMENT(S)

Constructing over a Reserve Pit

Yates shall not excavate any portion of the existing reserve pit area. No topsoil shall be stripped from the reserve pit area. Reclamation over the reserve pit area during interim reclamation or final reclamation must be satisfactory to the authorized officer. Yates must comply with OCD rules when drilling over a reserve pit.

Interim Reclamation

Yates shall perform the maximum amount of interim reclamation on this location. If it is discovered that the well pad can be downsized further than 280'x250', Yates is responsible for performing the task.

Painting Requirement:

All new and old above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period.

Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted.

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

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) 234-5972 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 stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used 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. ON LEASE ACCESS ROADS

Road Width

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 (20) 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

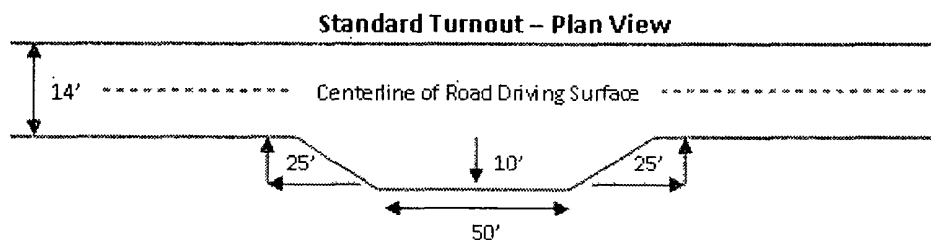
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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 be constructed on all blind curves. Turnouts shall conform to the following diagram:

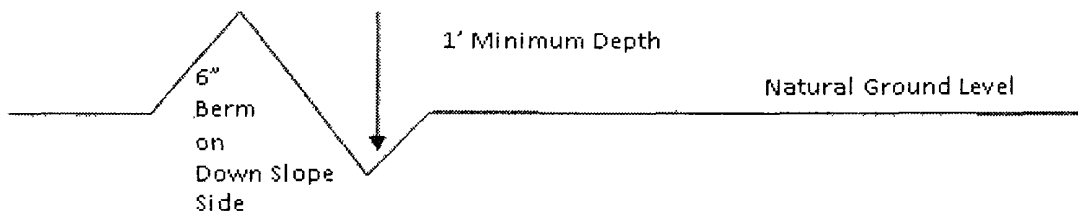


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing 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:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

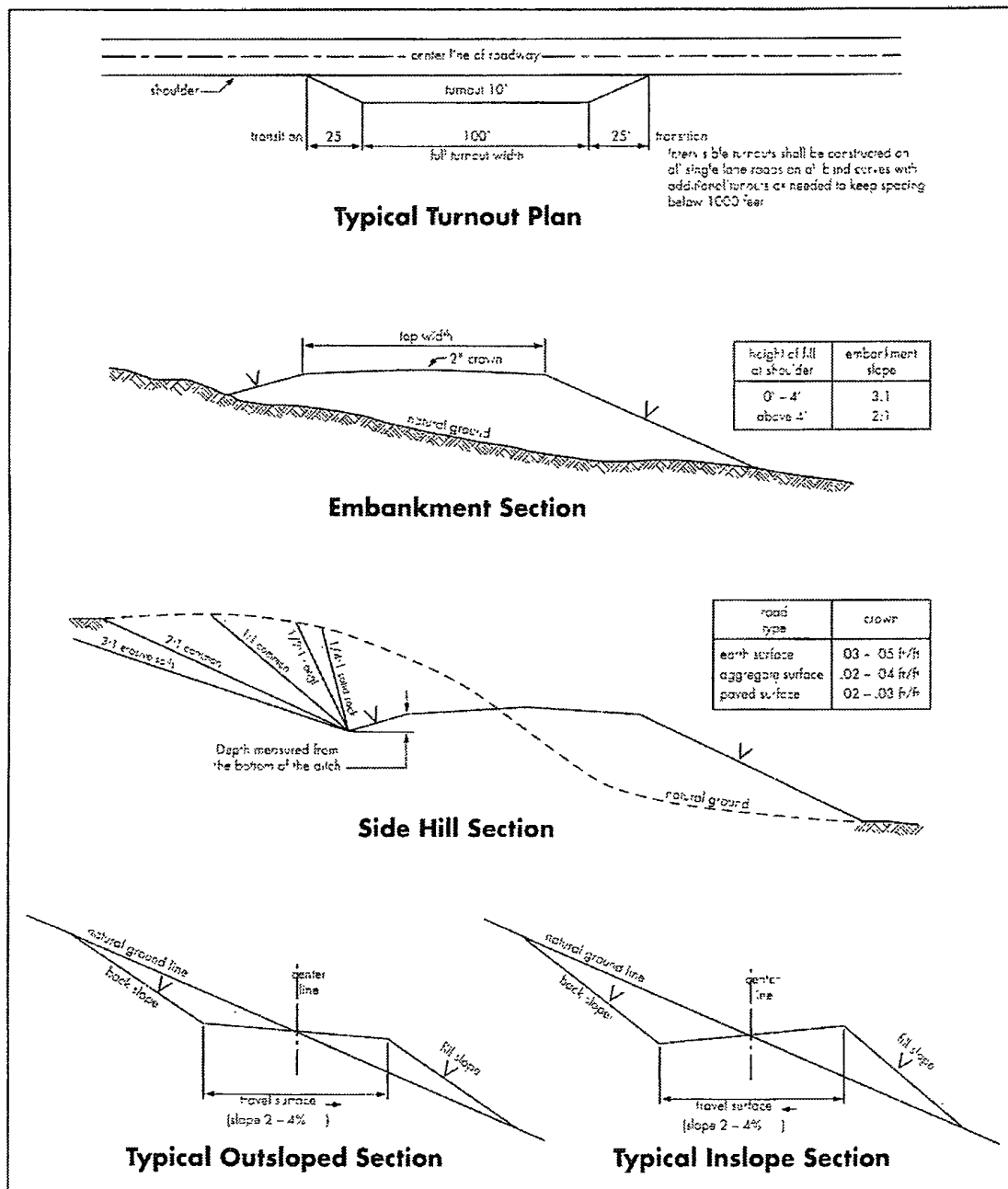
Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 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. **Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations 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. **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 (horizontal well – vertical portion of hole) 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 and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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. 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.

R-111-P Potash

Possible lost circulation within the Glorietta formation.

Possible water flows in the Blinebry formation.

1. The 13-3/8 inch surface casing shall be set at **approximately 900 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** 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 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. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

Pilot hole shall have a plug set at the bottom of the hole. Plug shall be 185' in length and shall be tagged – contact 575-361-2822 a minimum of 4 hours prior to tag. Operator can place one plug to the KOP and no tag is required.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - a. First stage to DV tool, cement shall:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
 - b. Second stage above DV tool, cement shall:
 - ☒ Cement to surface. **Required due to R-111-P Potash.** If cement does not circulate, contact the appropriate BLM office. **May require additional cement as the excess calculates negative 45%.**
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.
5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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. **Piping from choke manifold to flare to be as straight as possible.**
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** 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.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. 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.**
 - e. 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.

D. DRILL STEM TEST

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.

RGH/WWI 080410/090311