

OCD Artesia

RECEIVED

OCT 15 2009

NMOCD ARTESIA

ATS-09-613

FORM APPROVED  
OMB NO. 1004-0137  
Expires: July 31, 2010

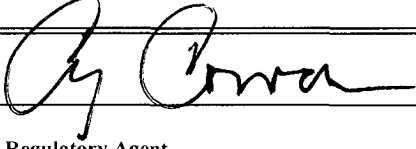
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No <b>K-5109 &amp; NM-102028</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input 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 N/A
2. Name of Operator <b>Yates Petroleum Corporation 025575</b>		7. If Unit or CA Agreement, Name and No N/A
3a. Address <b>105 South Fourth Street, Artesia, NM 88210</b>	3b. Phone No (include area code) <b>505-748-1471</b>	8. Lease Name and Well No <b>Berle "BOR" State Com. #1H</b>
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface <b>2950' FNL &amp; 2150' FWL, Lot 11, 4-16S-29E, Eddy Co., NM</b> At proposed prod. zone <b>990' FSL &amp; 2150' FEL, SWSE, 36-15S-28E, Chaves Co., NM, BHL</b>		9. API Well No. <b>30-015-37343</b>
14. Name of Operator <b>UNORTHODOX LOCATION</b>		10. Field and Pool, or Exploratory <b>WC, Undesignated Wolfcamp</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg unit line, if any) <b>500'</b>	16. No. of acres in lease <b>480.00</b>	11. Sec., T., R., M., or Blk. And Survey or Area <b>Sec. 36-T15S-R28E, BHL</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>7346'</b>	12. County or Parish <b>Eddy &amp; Chaves</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3719' GL</b>	22. Approximate date work will start* <b>ASAP</b>	13. State <b>NM</b>
20. BLM/ BIA Bond No. on file <b>NATIONWIDE BOND #NMB000434</b>		17. Spacing Unit dedicated to this well <b>SWSE of Sec. 36-T15S-R28E, BHL</b>
23. Estimated duration <b>45 days</b>		
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.  | 4. Bond to cover the operations unless covered by existing bond on file (see item 20 above) |
| 2. A Drilling Plan  | 5. Operator certification.  |
| 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) | 6. Such other site specific information and/ or plans as may be required by the BLM         |

25. Signature 	Name (Printed/ Typed) <b>Cy Cowan</b>	Date <b>9/8/09</b>
Title <b>Land Regulatory Agent</b>		
Approved By (Signature) <b>/s/ Don Peterson</b>	Name (Printed/ Typed) <b>CARLSBAD FIELD OFFICE</b>	Date <b>OCT 13 2009</b>
Title <b>FIELD MANAGER</b>		

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 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)

well becomes orthodox @ 7605' md

Roswell Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations Attached

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

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 and Natural Resources Department

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-37343</b>	Pool Code	Pool Name <b>WC UNDESIGNATED WOLF CAMP</b>
Property Code <b>37881</b>	Property Name <b>BERLE "BOR" STATE COM</b>	Well Number <b>1H</b>
OGRID No. <b>025575</b>	Operator Name <b>YATES PETROLEUM CORP.</b>	Elevation <b>3719'</b>

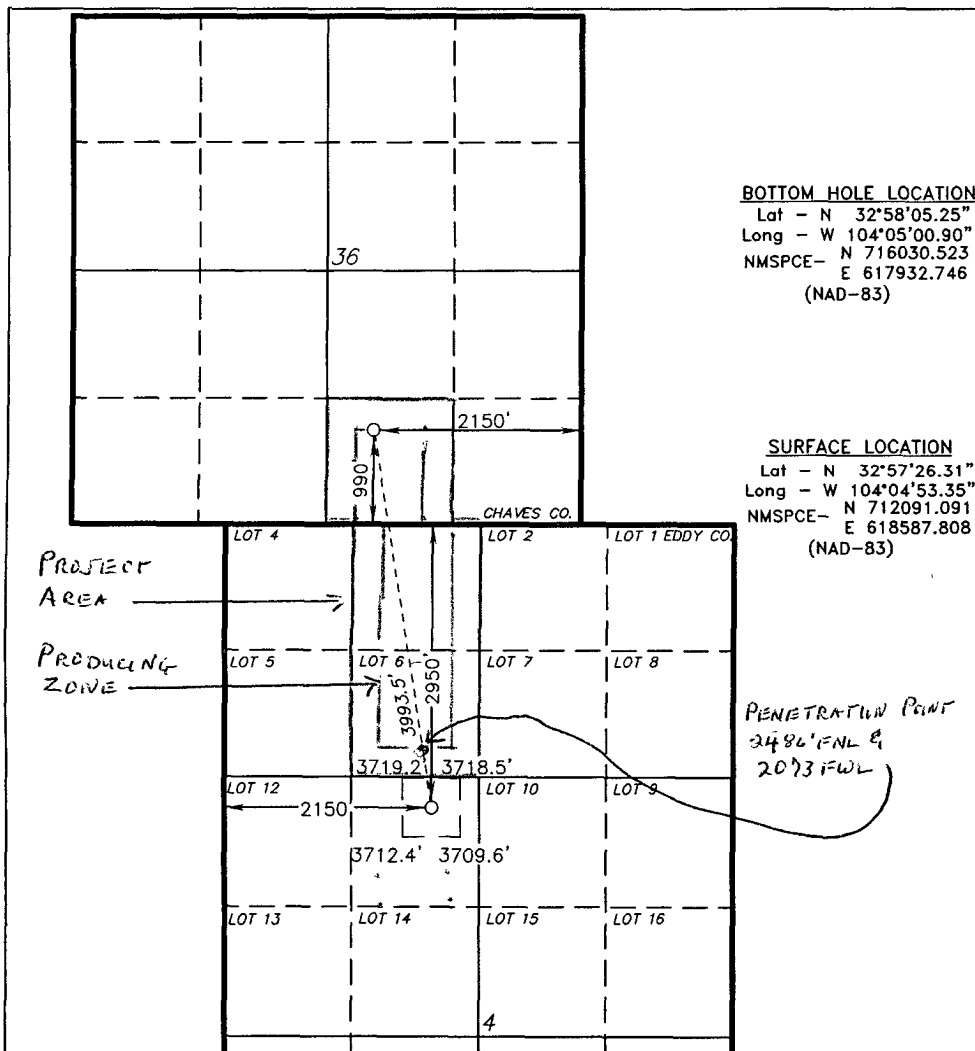
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 11	4	16 S	29 E		2950	NORTH	2150	WEST	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
0	36	15 S	28 E		990	SOUTH	2150	EAST	CHAVES
Dedicated Acres <b>120</b>	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



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 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.

*Cy Cowan* 9/9/09  
Signature Date

*Cy Cowan*  
Printed Name

SURVEYOR CERTIFICATION

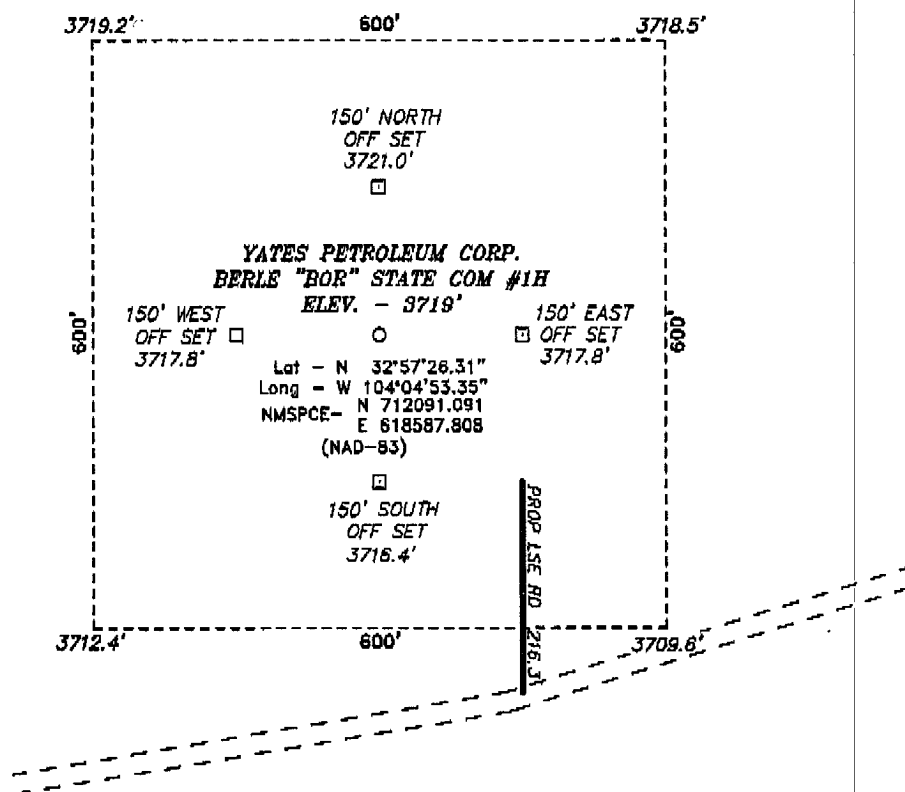
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

Date Surveyed  
Signature & Seal of Professional Surveyor  
7977  
GARY L. JONES  
NEW MEXICO  
PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

**SECTION 4, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.**



200 0 200 400 FEET  
SCALE: 1" = 200'

**YATES PETROLEUM CORP.**

REF: BERLE "BOR" STATE COM #1H / WELL PAD TOPO

THE BERLE "BOR" STATE COM #1H LOCATED 2950'  
FROM THE NORTH LINE AND 2150' FROM THE WEST LINE OF  
SECTION 4, TOWNSHIP 16 SOUTH, RANGE 29 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 21548

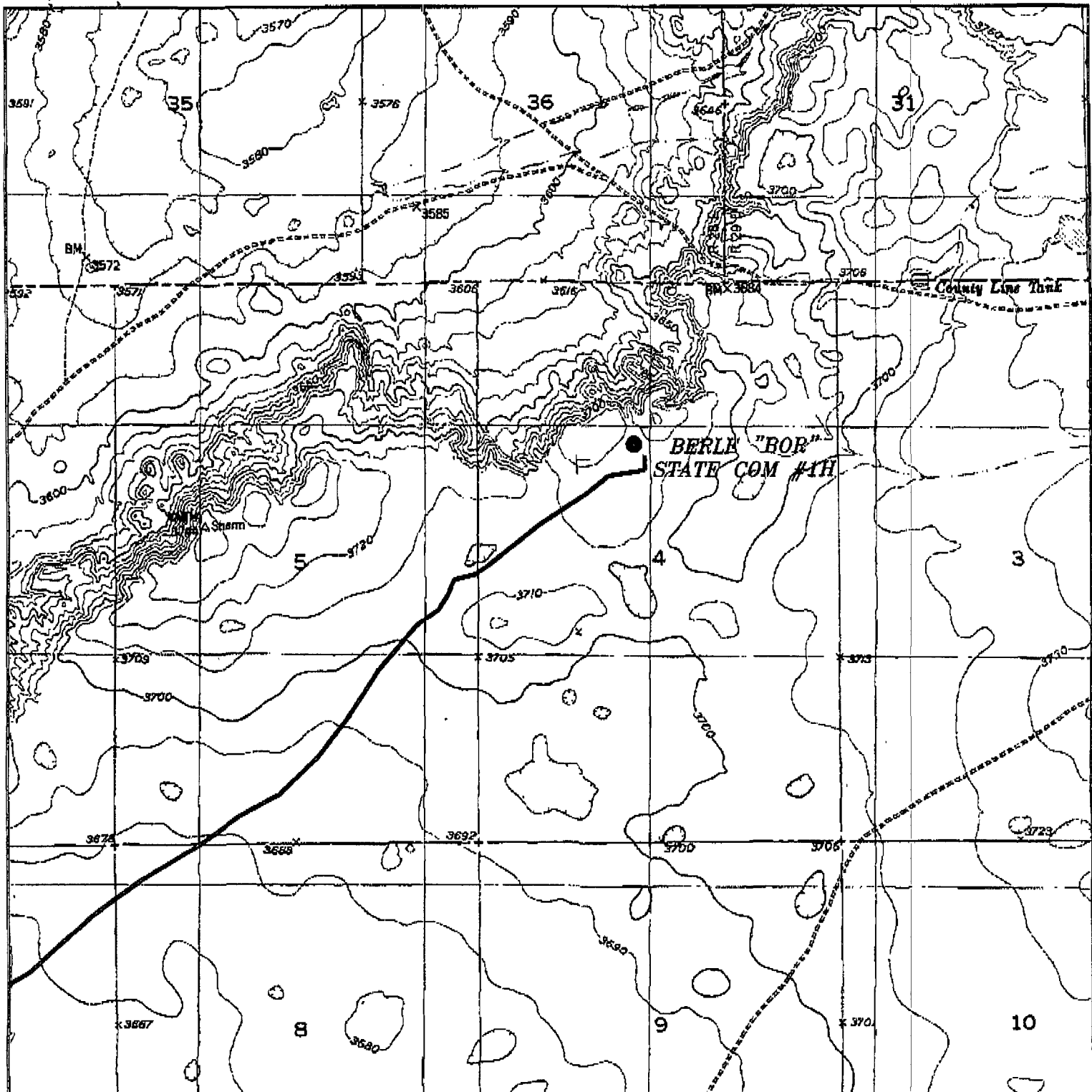
Drawn By: J. SMALL

Date: 07-17-2009

Disk: JMS 21548

Survey Date: 07-16-2009

Sheet 1 of 1 Sheets



BERLE "BOR" STATE COM #1H  
 Located at 2950' FNL AND 2150' FWL  
 Section 4, Township 16 South, Range 29 East,  
 N.M.P.M., Eddy County, New Mexico.

**basin**  
**surveys**

focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

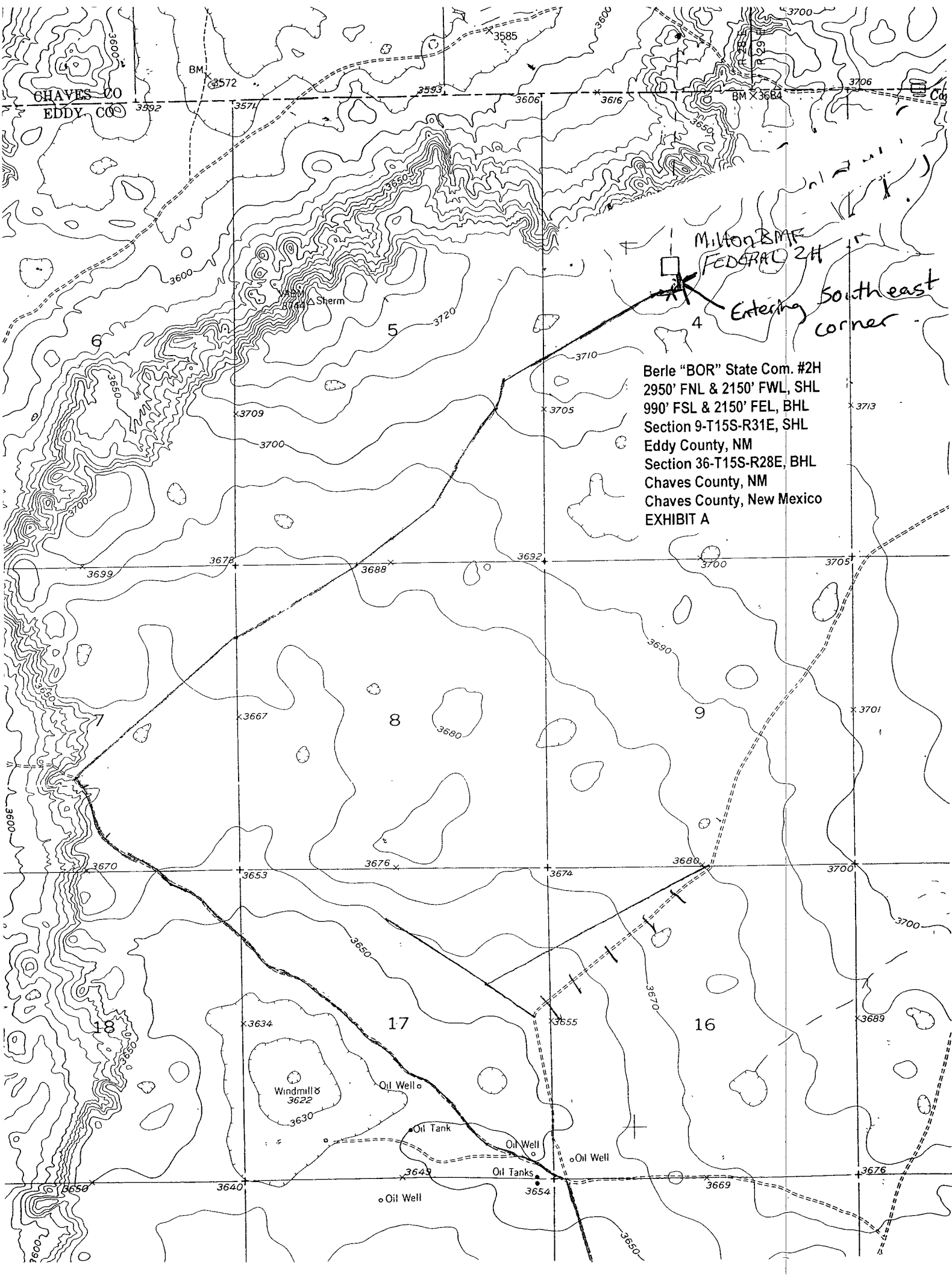
W.O. Number: JMS 21548

Survey Date: 07-16-2009

Scale: 1" = 2000'

Date: 07-17-2009

**YATES**  
**PETROLEUM**  
**COMPANY**



CHAVES CO  
EDDY CO

Milton BME  
FEDERAL 2H

Entering Southeast corner

Berle "BOR" State Com. #2H  
2950' FNL & 2150' FWL, SHL  
990' FSL & 2150' FEL, BHL  
Section 9-T15S-R31E, SHL  
Eddy County, NM  
Section 36-T15S-R28E, BHL  
Chaves County, NM  
Chaves County, New Mexico  
EXHIBIT A

Windmill 3622

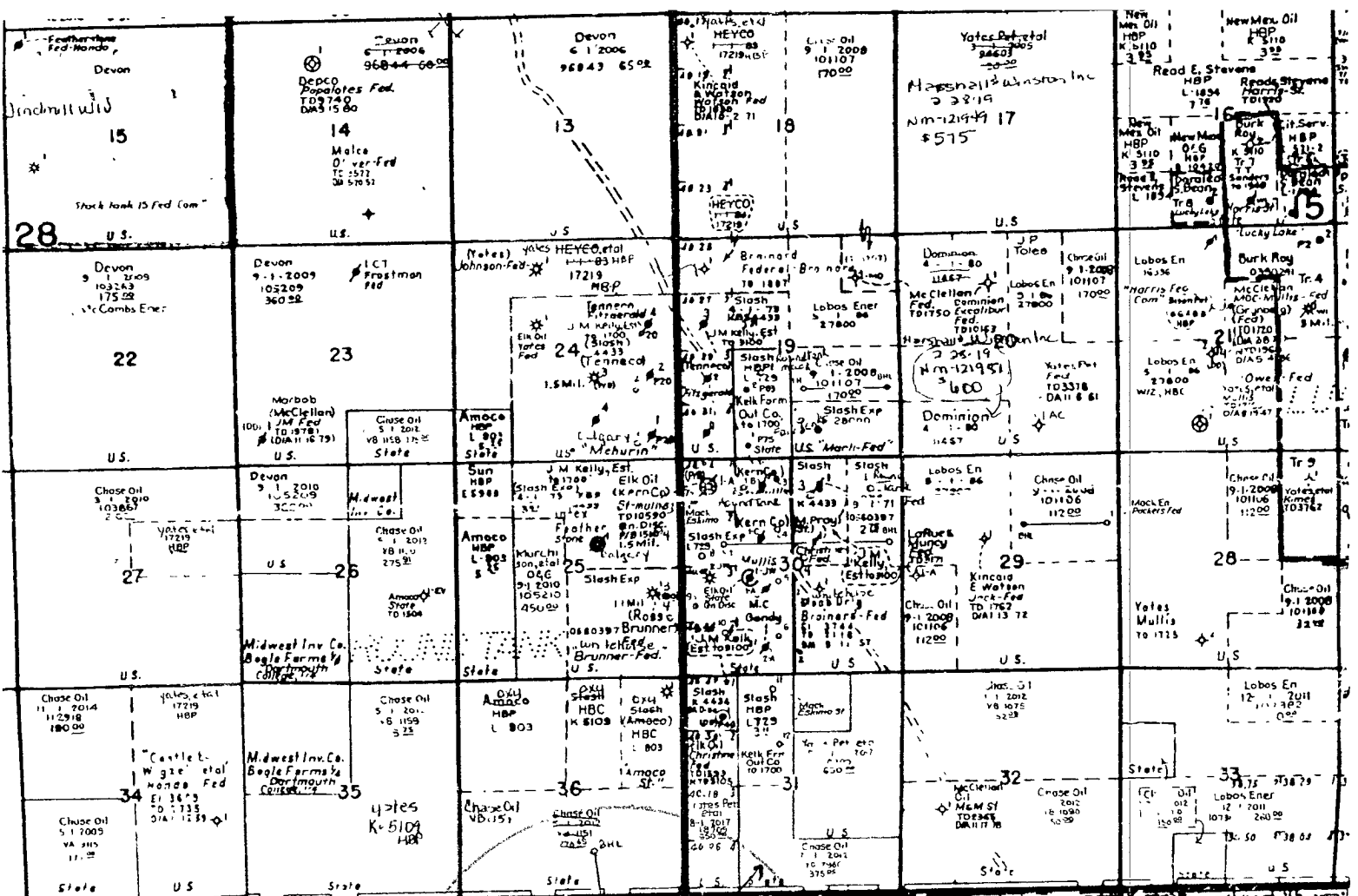
Oil Tank

Oil Well

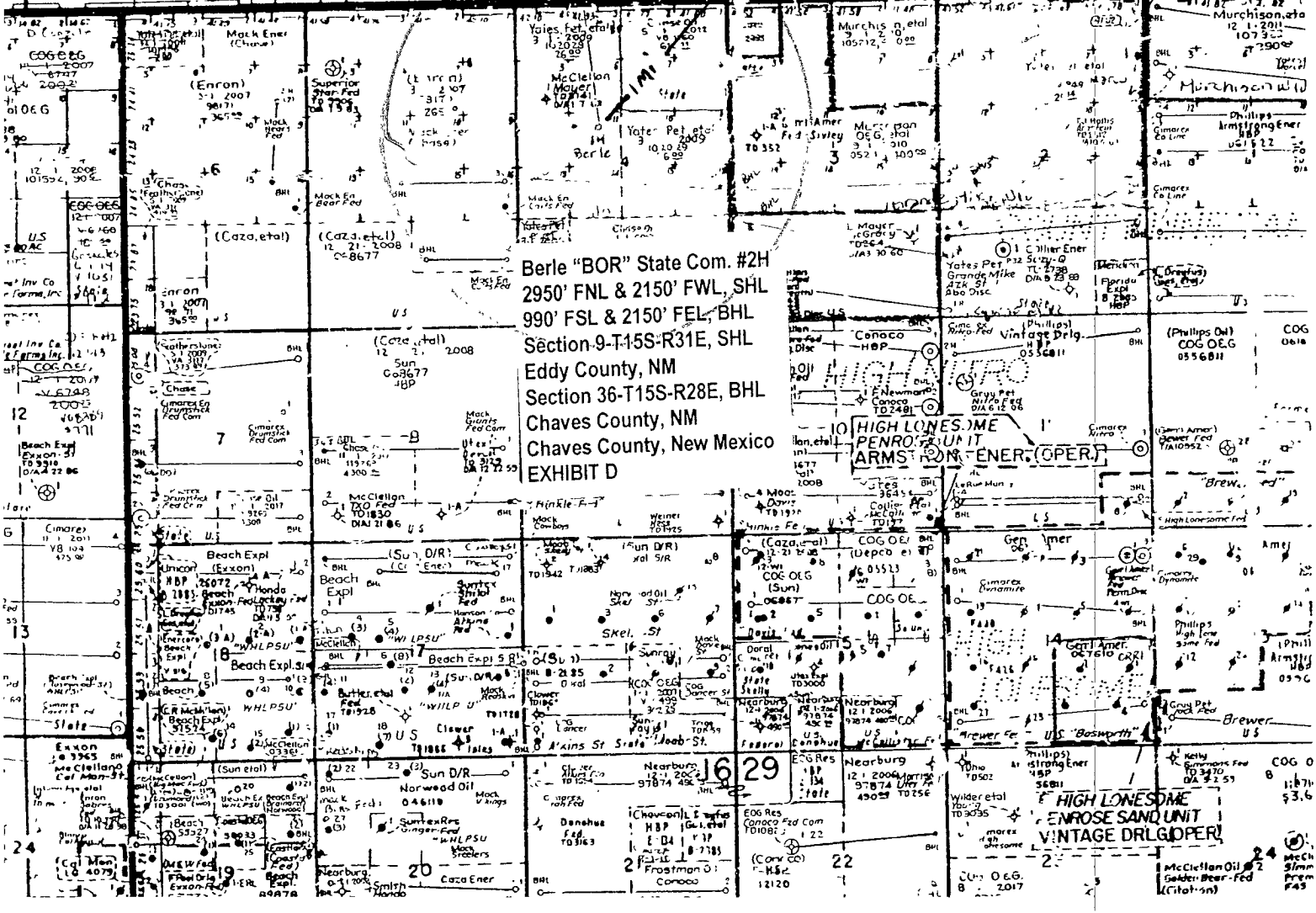
Oil Well

Oil Tanks

Oil Well



Berle "BOR" State Com. #2H  
2950' FNL & 2150' FWL, SHL  
990' FSL & 2150' FEL, BHL  
Section 9-T15S-R31E, SHL  
Eddy County, NM  
Section 36-T15S-R28E, BHL  
Chaves County, NM  
Chaves County, New Mexico  
EXHIBIT D



**YATES PETROLEUM CORPORATION****Berle "BOR" State Com. #1H**

2950' FNL and 2150' FWL, Section 4-16S-29E (Surface Hole Location)

990' FSL and 2150' FEL, Section 36-15S-28E (Bottom Hole Location)

Eddy County, New Mexico, Surface Hole

Chaves County, New Mexico, Bottom Hole

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

Yates	862'	Glorieta	3885'
Seven Rivers	1080'	Tubb	5085'
Queen	1615' Oil/Gas	ABO	5870' Gas
Grayburg	2035' Oil	Wolfcamp	7196' Oil
San Andres	2380' Oil	TVD	7346'
		TMD	10952'

**2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:**

Water: 110'  
Oil or Gas: See above

**3. Pressure Control Equipment:** BOPE will be installed and tested on the 13 3/8" and the 9 5/8" casing and rated for 3000 psi BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors 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.

Auxiliary Equipment:

- A. 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.

**4. THE PROPOSED CASING AND CEMENTING PROGRAM:****A. Casing Program: (All New)**

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Thread</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-400'	400'
12 1/4"	9 5/8"	36#	J-55	ST&C	0-2450'	2450'
8 3/4"	7"	26#	HCP-110	LT&C	0-7346'	7346'
6 1/8"	4 1/2"	11.6#	HCP-110	Buttress	6500-7500'	1000'
6 1/8"	4 1/4"	11.6#	HCP-110	LT&C	7500-10952'	3452'

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

**B. CEMENTING PROGRAM:**Surface Casing: 425 sx "C" w/CaCl<sub>2</sub> (WT 14.80 YLD 1.34). TOC at surface.Intermediate Casing: 625 sx C Lite (Wt. 12.50 YLD 2.04). Tail in with 200 sx C w/CaCl<sub>2</sub> (Wt 14.80 YLD 1.33). TOC at surface.

Intermediate 2 Casing: (Original Vertical Hole: TOC Surface, Lead w/ 800 sx 50:50:10C (WT 11.60 YLD 2.43). Tail in with 200 Sx PecosVILt (WT 13.00 YLD 1.40)

5. **Mud Program and Auxiliary Equipment:**

Interval	Type	Weight	Viscosity	Fluid Loss
Spud to 400' <sup>See COA</sup>	Fresh Water Gel	8.60-9.00	32-34	N/C
400'-2450'	Brine Water	10.00-10.20	28-28	N/C
2450'-5800'	Cut Brine	8.70-9.20	28-28	N/C
5800'-7346'	Cut Brine	8.70-9.20	28-28	10-15
6686'-10952'	Cut Brine (Lateral Section)	8.70-9.20	28-28	10-12

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. Mud will be checked hourly by rig personnel.

6. **EVALUATION PROGRAM:** *See COA*

Samples: 10' out from under intermediate casing to TD.  
Logging: Platform Express; CNL/LDT/NGT TD to intermediate casing, DLL-MSFL TD to surface casing, BHC-Sonic TD to surface casing, CNL/GR TD to surface & Horizontal MWD / GR.  
Coring: None anticipated.  
DST's: None anticipated.  
MUDLOGGING: Yes  
H2S: None anticipated.

7. **ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE AND POTENTIAL HAZARDS:**

**Anticipated BHP:**

From: 0	TO 400' TVD	Anticipated Max. BHP: 190	PSI
From: 400'	TO 2450' TVD	Anticipated Max. BHP: 1300	PSI
From: 2450'	to 7346' TVD	Anticipated Max. BHP: 3515	PSI

Pilot hole will be drilled to 7346' where 7" casing will be set and cemented. A whipstock will then be set at approximately 6686' and a window milled in the 7" casing where well will be kicked off at 12 degrees per 100' to 10952' MD with a TVD of 7216' at TD where a 4 1/2" peak Completion Liner Assembly will be set and NOT cemented. The penetration point of producing formation will be encountered at 2486' FNL & 2073' FWL, 4-16S-29E. Deepest TVD of the well will be in the pilot hole @ 7346'. The deepest TVD in the lateral will be 7216.

Abnormal Pressures Anticipated: None  
Lost Circulation Zones Anticipated: None  
H2S Zones Anticipated: None  
Maximum Bottom Hole Temperature: 120° F

8. **ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 30 days.



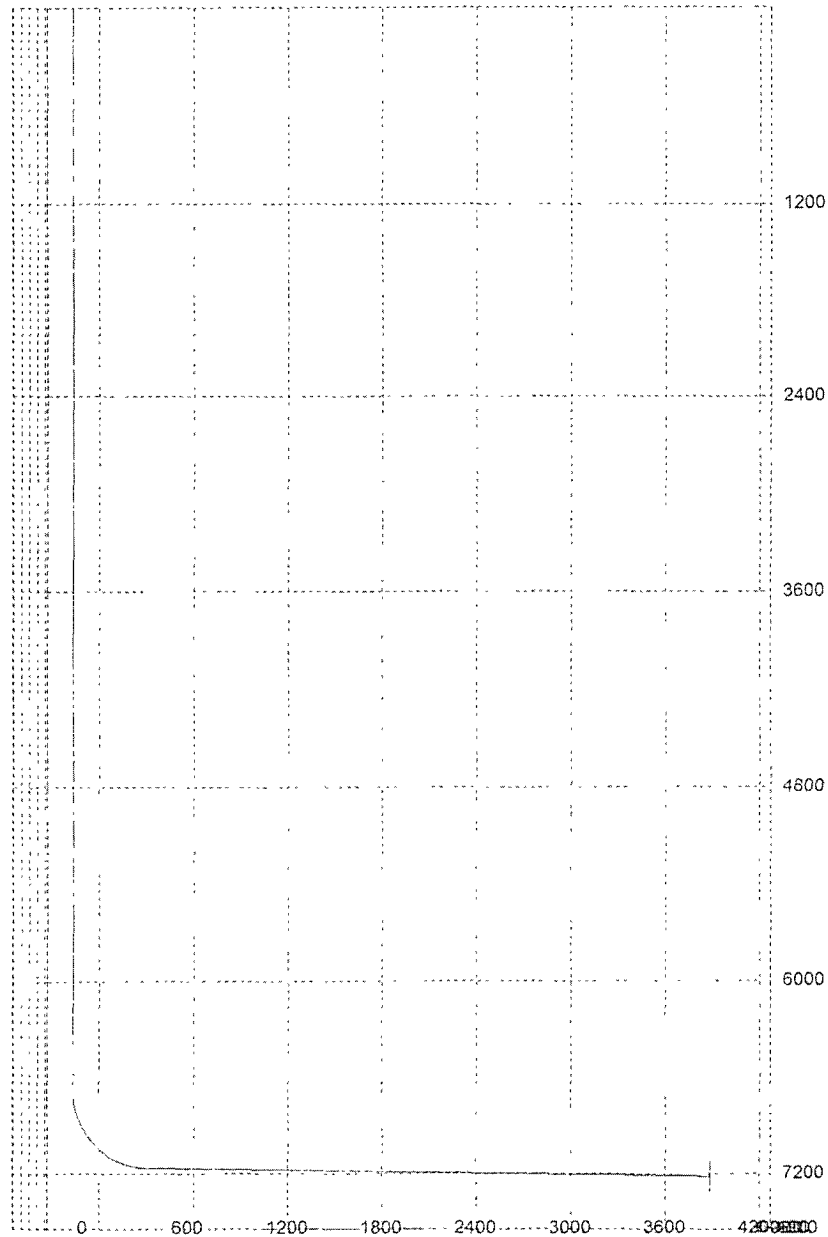
M.D.	Inclination	Azimuth	T.V.D.	N+S	E+W	D.L.S.	ToolFace	T.F. Ref (HS/GN)	
0	0	0	0	0	0	0			
862	0	0	862	0	0	0			YATES
1,080	0	0	1,080	0	0	0			SEVEN RIVERS
1,615	0	0	1,615	0	0	0			QUEEN
2,035	0	0	2,035	0	0	0			GRAYBURG
2,380	0	0	2,380	0	0	0			SAN ANDRES
3,885	0	0	3,885	0	0	0			GLORIETA
5,085	0	0	5,085	0	0	0			TUBB
5,870	0	0	5,870	0	0	0			ABO
6686	0	0	6686	0	0	12	361	GN	KOP
6700	1.68	350.56	6700	0.2	-0.03	12	360	HS	
6725	4.68	350.56	6724.96	1.57	-0.26	12	0	HS	
6750	7.68	350.56	6749.81	4.22	-0.7	12	360	HS	
6775	10.68	350.56	6774.49	8.16	-1.36	12	360	HS	
6800	13.68	350.56	6798.92	13.36	-2.22	12	360	HS	
6825	16.68	350.56	6823.05	19.82	-3.3	12	360	HS	
6850	19.68	350.56	6846.79	27.51	-4.57	12	0	HS	
6875	22.68	350.56	6870.1	36.42	-6.06	12	360	HS	
6900	25.68	350.56	6892.91	46.52	-7.74	12	360	HS	
6925	28.68	350.56	6915.14	57.78	-9.61	12	0	HS	
6950	31.68	350.56	6936.75	70.18	-11.67	12	360	HS	
6975	34.68	350.56	6957.67	83.68	-13.91	12	360	HS	
7000	37.68	350.56	6977.85	98.23	-16.33	12	0	HS	
7025	40.68	350.56	6997.23	113.81	-18.93	12	360	HS	
7050	43.68	350.56	7015.75	130.37	-21.68	12	360	HS	
7075	46.68	350.56	7033.37	147.86	-24.59	12	0	HS	
7100	49.68	350.56	7050.04	166.24	-27.64	12	360	HS	
7125	52.68	350.56	7065.71	185.45	-30.84	12	0	HS	
7150	55.68	350.56	7080.34	205.44	-34.16	12	360	HS	
7175	58.68	350.56	7093.89	226.16	-37.61	12	0	HS	
7200	61.68	350.56	7106.32	247.56	-41.17	12	360	HS	
7225	64.68	350.56	7117.6	269.56	-44.82	12	0	HS	
7250	67.68	350.56	7127.69	292.12	-48.58	12	0	HS	
7275	70.68	350.56	7136.58	315.17	-52.41	12	0	HS	
7300	73.68	350.56	7144.23	338.65	-56.31	12	0	HS	
7325	76.68	350.56	7150.62	362.48	-60.28	12	360	HS	
7350	79.68	350.56	7155.74	386.62	-64.29	12	360	HS	
7375	82.68	350.56	7159.57	410.99	-68.34	12	360	HS	
7400	85.68	350.56	7162.11	435.52	-72.42	12	360	HS	
7425	88.68	350.56	7163.34	460.15	-76.52	12	360	HS	
7428.87	89.14	350.56	7163.41	463.97	-77.15	12	360	HS	Producing Zone
10952.01	89.14	350.56	7216	3939	-655	0			Lateral TD

Pilot hole will be drilled to 7346'. Well will then be plugged back and kicked off at approx. 6686' at 12 degrees per 100' to 10,952' MD with a TVD of 7,216'. Penetration point of producing formation encountered at 2486' FNL and 2073' FWL, 4-16S-29E. Deepest TVD of the well will be in the pilot hole @ 7,346'. Deepest TVD in the lateral will be 7216'.

# 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation

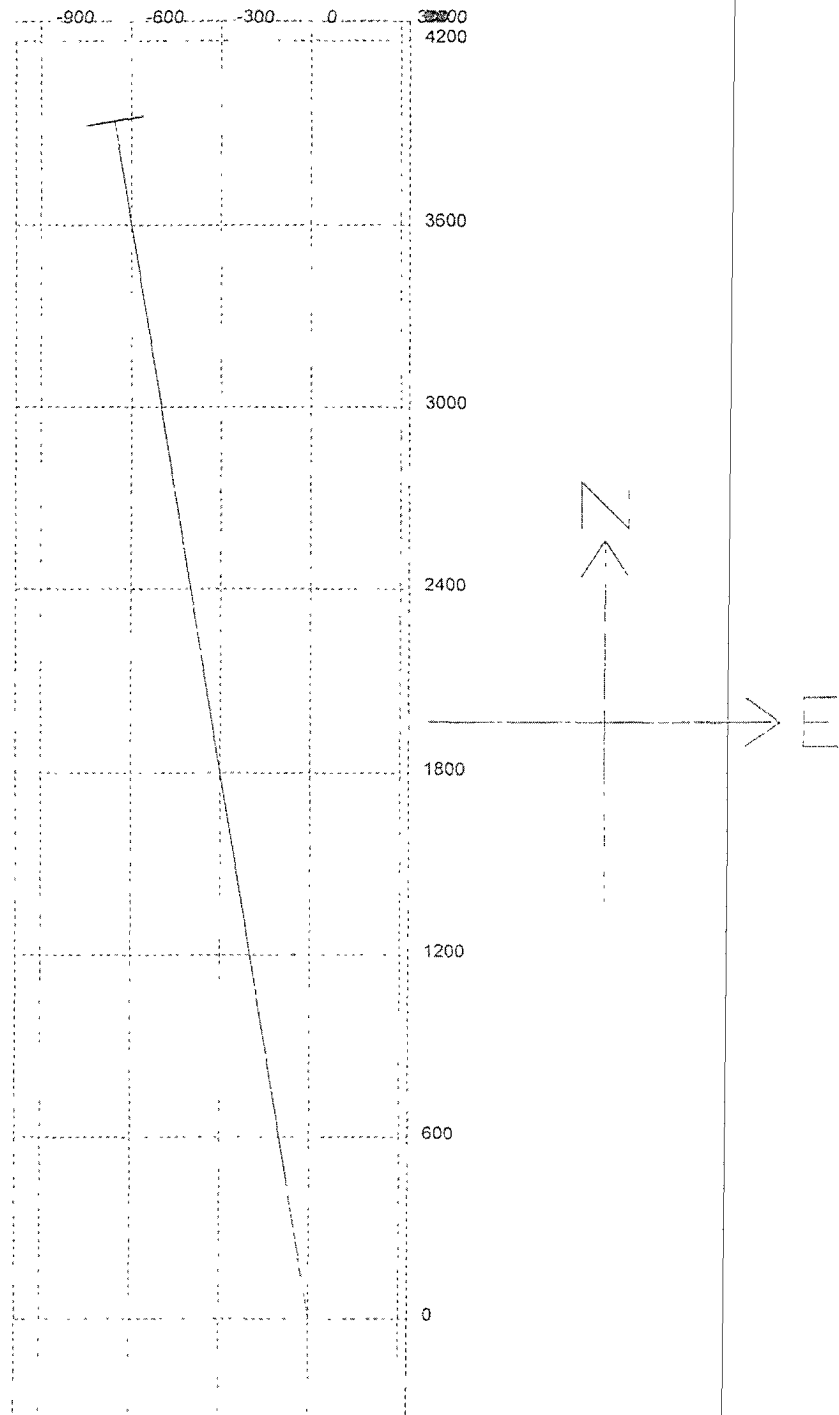
Well: Berle BOR State Com. #1H

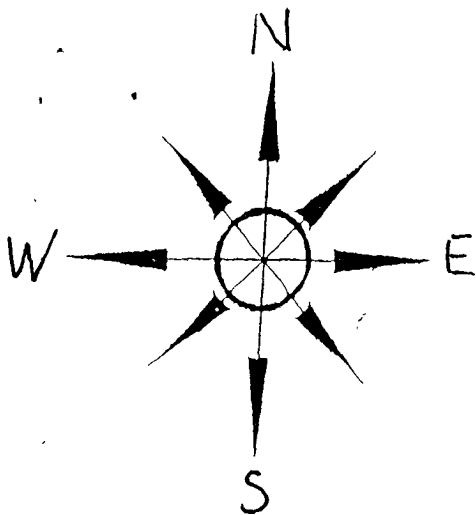


# 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation

Well: Berle BOR State Com. #1H



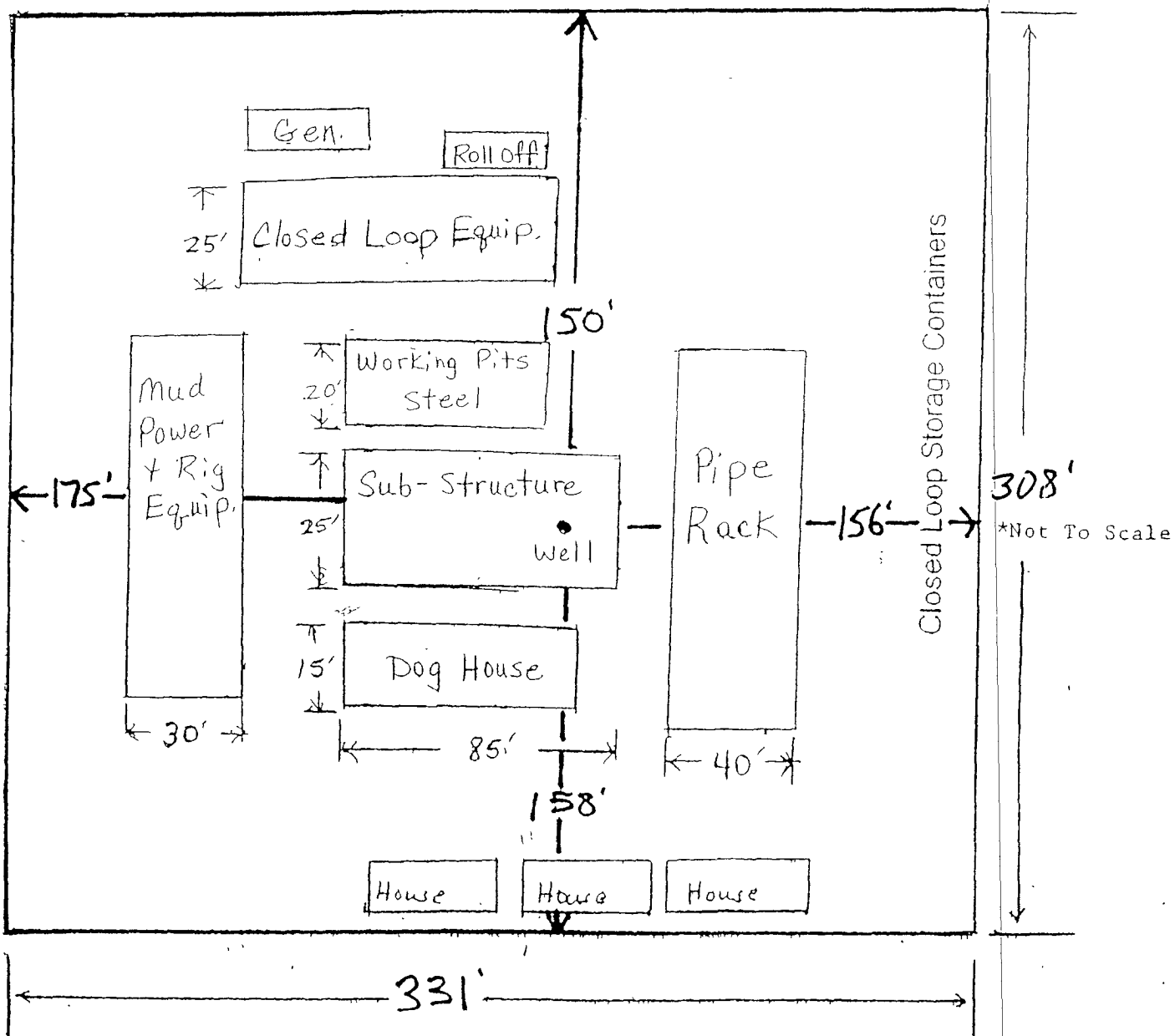


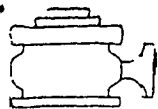
# Yates Petroleum Corporation

Location Layout for Permian Basin

## Closed Loop Design Plan

Berle "BOR" State Com. #2H  
2950' FNL & 2150' FWL, SHL  
990' FSL & 2150' FEL, BHL  
Section 9-T15S-R31E, SHL  
Eddy County, NM  
Section 36-T15S-R28E, BHL  
Chaves County, NM  
Chaves County, New Mexico  
EXHIBIT C





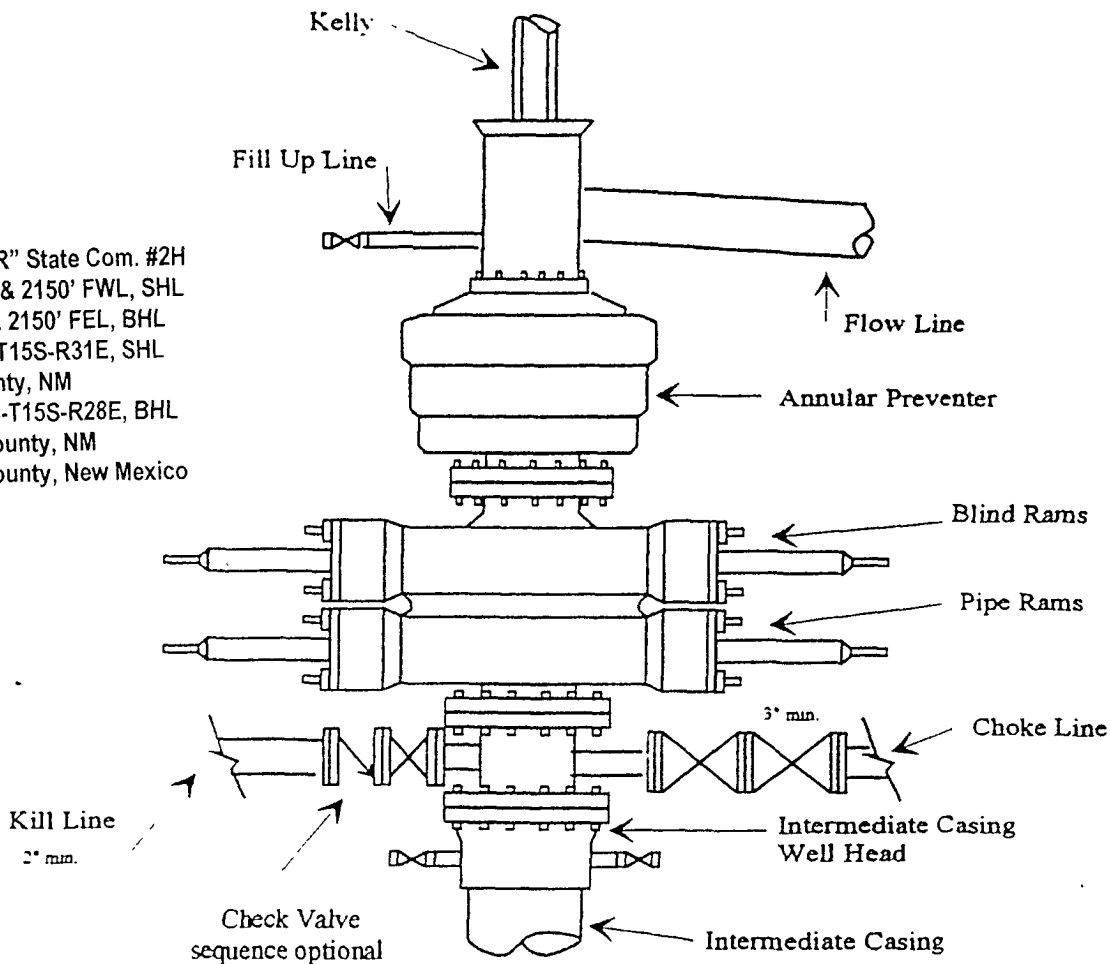
# Yates Petroleum Corporation

BOP-3

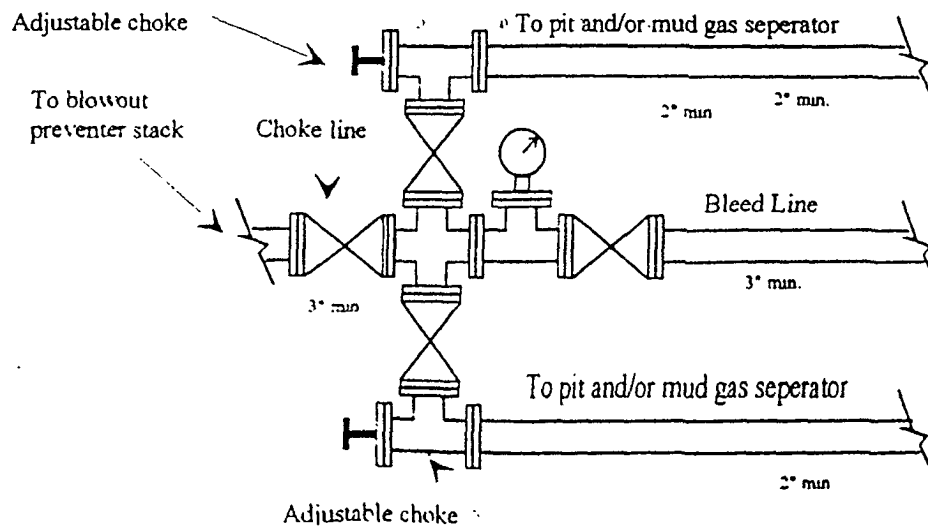
Typical 3,000 psi Pressure System  
Schematic

Annular with Double Ram Preventer Stack

Berle "BOR" State Com. #2H  
2950' FNL & 2150' FWL, SHL  
990' FSL & 2150' FEL, BHL  
Section 9-T15S-R31E, SHL  
Eddy County, NM  
Section 36-T15S-R28E, BHL  
Chaves County, NM  
Chaves County, New Mexico  
EXHIBIT B

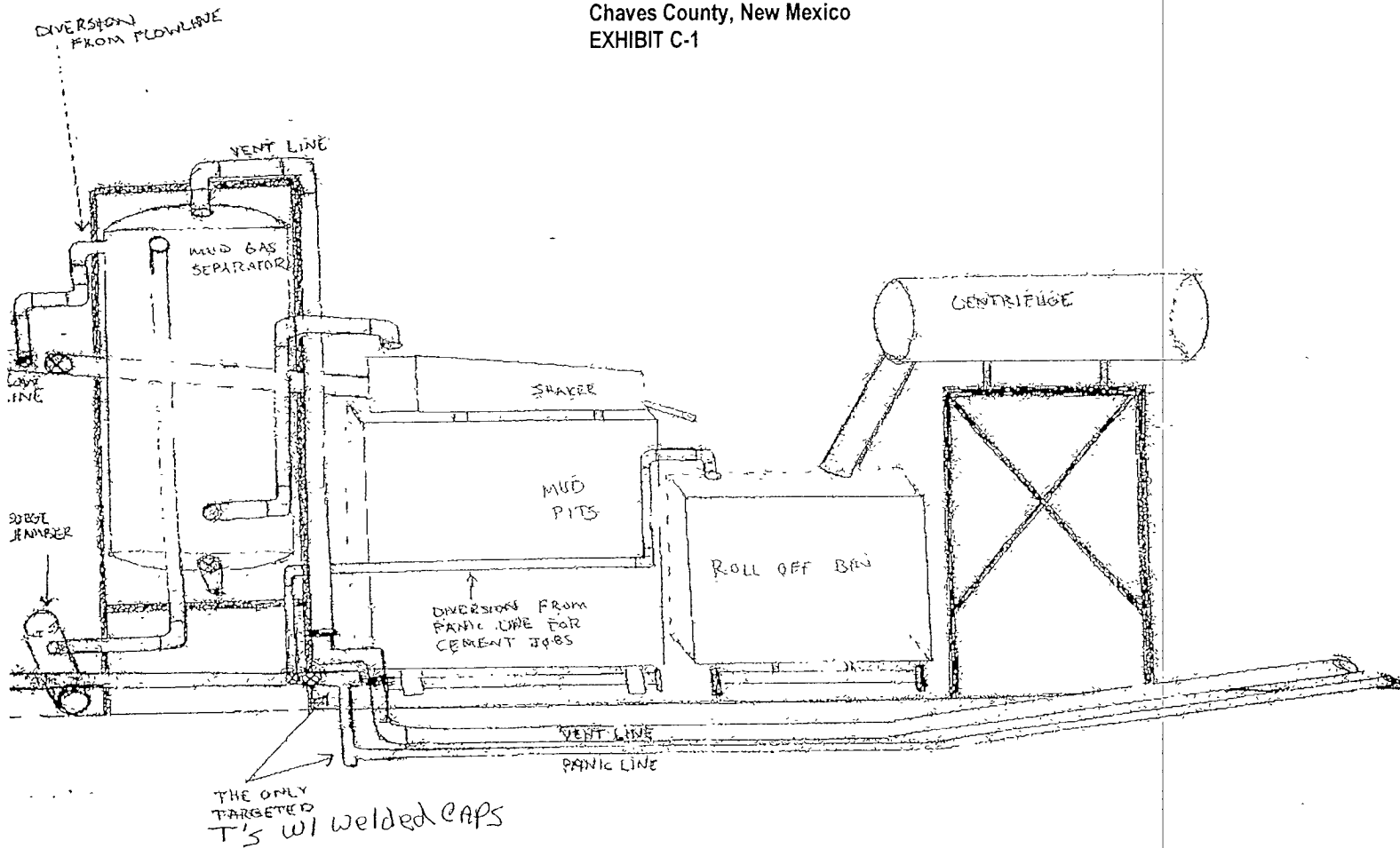


Typical 3,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION  
Piping from Choke Manifold  
to the Closed-Loop Drilling Mud System

Berle "BOR" State Com. #2H  
2950' FNL & 2150' FWL, SHL  
990' FSL & 2150' FEL, BHL  
Section 9-T15S-R31E, SHL  
Eddy County, NM  
Section 36-T15S-R28E, BHL  
Chaves County, NM  
Chaves County, New Mexico  
EXHIBIT C-1



**MULTI-POINT SURFACE USE AND OPERATIONS PLAN**  
**Yates Petroleum Corporation**  
**Berle "BOR" State Com. #1H**  
2950' FNL and 2150' FWL, 4-16S-29E (Surface Hole Location)  
990' FSL and 2150' FEL, 36-15S-28E (Bottom Hole Location)  
Eddy County, New Mexico, Surface Hole  
Chaves County, New Mexico, Bottom Hole

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

**1. EXISTING ROADS:**

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 34 miles east of Artesia, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

**DIRECTIONS:**

Go east of Artesia, NM on Highway 82 for approximately 19 miles to Barnaval Draw road, CR-214 (Across from the Arrow Gas Storage Site). Turn left on Barnaval Draw and go north for approximately 7 miles. At this point the road will fork. Take left (west) fork and go approximately 2 miles. Turn right and go in a northeasterly direction on a lease road about 0.4 of a mile. There will be a tank battery on the right side of the road. Continue going to the northeast for about 1.6 miles. There will be a reclaimed well location on the right side of the road. At this point the road becomes a two-track road which will need to be upgraded. Follow the two-track for about 0.5 of a mile. The new access road will start here going north for about 200 feet to the southwest corner of the proposed well location.

**2. PLANNED ACCESS ROAD:**

- A. The proposed two-track to be upgraded will go in a northeasterly direction for about 0.5 mile with new construction being about 200' to the southwest ~~west~~ <sup>east</sup> corner of the drilling pad.
- B. The new road will be 14' in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Traffic turnouts will be built as needed.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

**3. LOCATION OF EXISTING WELL**

- A. There is drilling activity within a one-mile radius of the well site.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed well site.

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric power line can be built if needed.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

**6. SOURCE OF CONSTRUCTION MATERIALS:**

The dirt contractor will acquire any materials from the closest source at the time of construction of the well pad.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

- A. A closed loop system will be used to drill this well.
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the "Pit Rule" 19.15.17 NMAC.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

**8. ANCILLARY FACILITIES: None**

**9. WELLSITE LAYOUT:**

- A. Exhibit B shows the relative location and dimensions of the well pad, the closed loop mud system, location of the drilling equipment, rig orientation and access road approach. The proposed well location will be approximately 350' x 300'. All of the location will be constructed within the 600' x. 600' staked area.
- B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC.

**10. PLANS FOR RESTORATION**

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

**11. SURFACE OWNERSHIP:** Federal Surface leased for grazing.



**12. OTHER INFORMATION:**

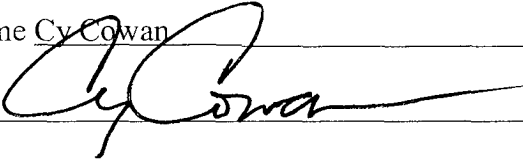
- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, and dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

CERTIFICATION  
YATES PETROLEUM CORPORATION  
Berle "BOR" State Com. #1H

I hereby certify that I or the company I represent, have inspected the drill site and access route proposed herein; that the company I represent is familiar with the conditions which currently exist; that full knowledge of state and federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that the company I represent is responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 9th day of September, 2009.

Printed Name Cy Cowan

Signature 

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, NM 88210

Telephone 575-748-4372

E-mail (optional) cyc@ypcnm.com

Field Representative (if not above signatory) Tim Bussell

Address (if different from above) Same

Telephone (if different from above) 575-748-4221

E-mail (optional) \_\_\_\_\_

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM102028
WELL NAME & NO.:	1H Berle BOR State Com
SURFACE HOLE FOOTAGE:	2950' FNL & 2150' FWL
BOTTOM HOLE FOOTAGE:	990' FSL & 2150' FEL
LOCATION:	Section 4, T. 16 S., R 29 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**
  - Lesser Prairie-Chicken
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  - Well Structures & Facilities
- ☐ **Interim Reclamation**
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## **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)**

### **Communitization Agreement**

**A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. Operator to supply NMOCD order, which details the vertical and horizontal extent of pool to verify that requested communitization is within an approved and established pool.**

**Prior to completion, NMOCD to specify completion formation (Abo or Wolfcamp).**

## **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 of the well pad. The topsoil shall not be used to backfill the reserve pit and 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**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. 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 thirty (30) 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**

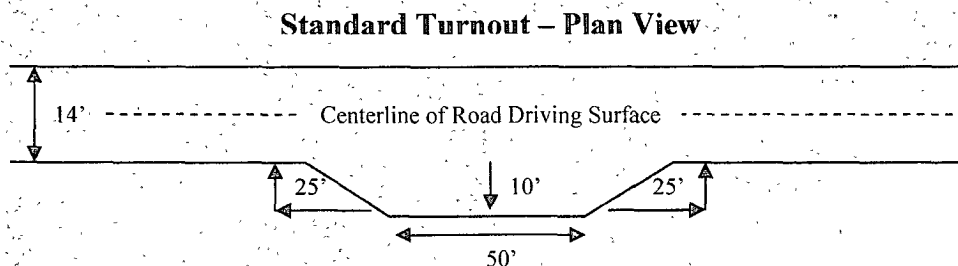
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

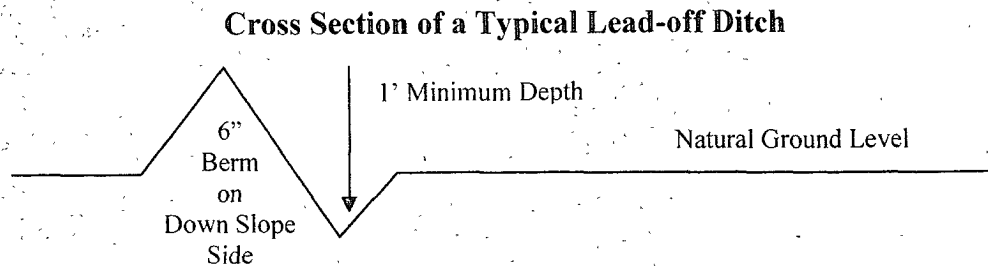
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### **Drainage**

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

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



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.

#### **Fence Requirement**



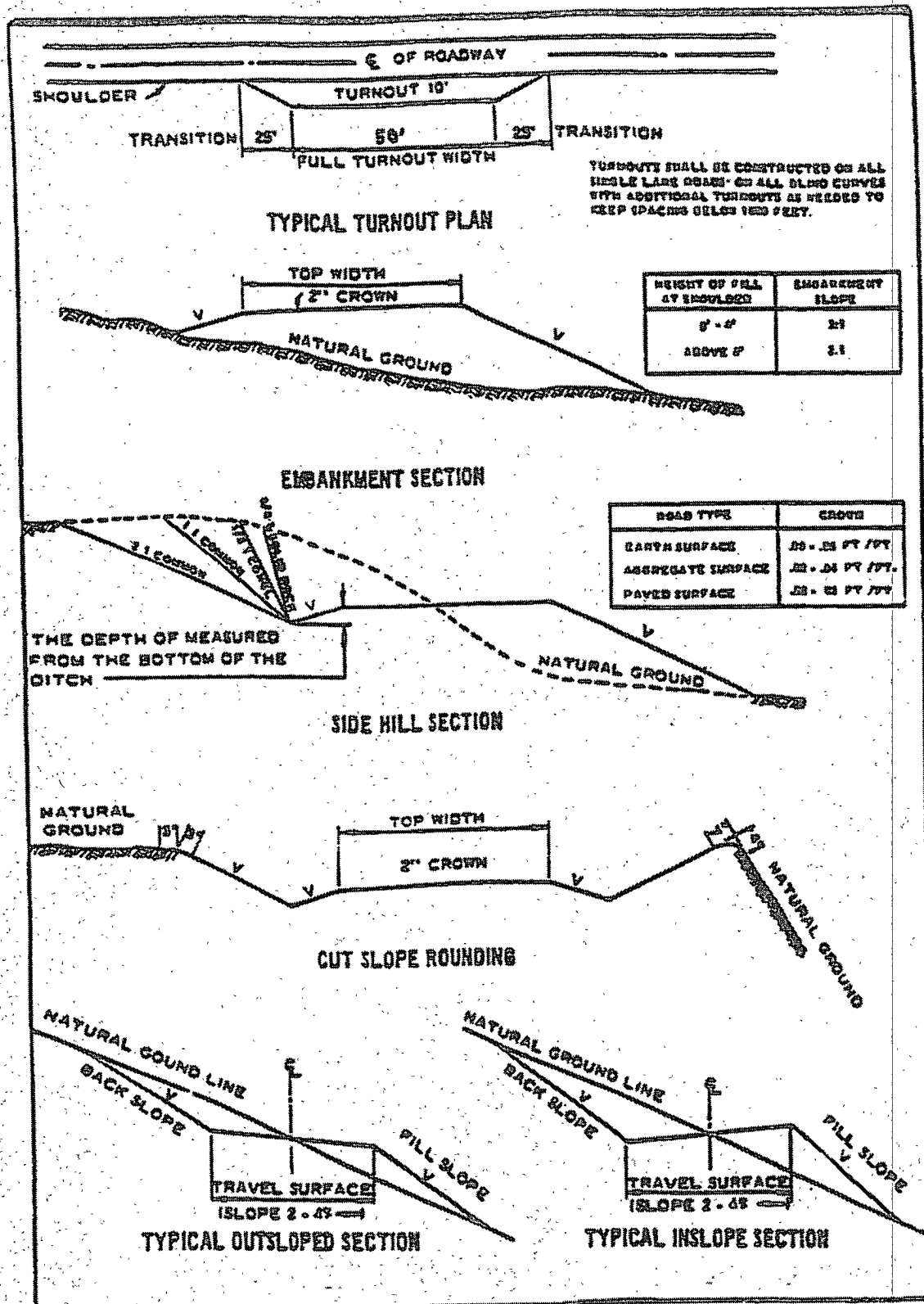
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**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. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.
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.
4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will 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 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. 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.**

**Possible brine and water flows in the Salado and Artesia Groups and the San Andres Formation.**

**Possible lost circulation in the Grayburg and San Andres Formations.**

**Possible high pressure gas bursts in the Wolfcamp Formation.**

1. The **13-3/8 inch** surface casing shall be set at **approximately 250 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 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 is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8 inch** intermediate casing is:  
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
3. The minimum required fill of cement behind the **7 inch** second intermediate casing is:  
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
4. The minimum required fill of cement behind the **4-1/2 inch** production liner is:  
☒ Not required as operator is using Peak completion assembly.

5. 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 **3000 (3M)** psi.
3. The appropriate BLM office shall be notified a minimum of 4 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.

**E. DRILL STEM TEST**

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

**CRW 100109**

## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

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

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

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All 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

## **IX. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

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

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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



### Seed Mixture 3, for Shallow Sites

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

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

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

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass ( <i>Setaria magrostachya</i> )	1.0
Green Spangletop ( <i>Leptochloa dubia</i> )	2.0
Side oats Grama ( <i>Bouteloua curtipendula</i> )	5.0

\*Pounds of pure live seed:

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

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.