

OCD-ARTESIA

SECRETARY'S POTASH

ATS-09-576

RM

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

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

0952

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NM-116044</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 <b>N/A</b>
2. Name of Operator <b>Yates Petroleum Corporation 025575</b>		7. If Unit or CA Agreement, Name and No. <b>N/A</b>
3a. Address <b>105 South Fourth Street, Artesia, NM 88210</b>		8. Lease Name and Well No. <b>Petrogulf "BJT" Federal #1H</b>
3b. Phone No. (include area code) <b>505-748-1471</b>		9. API Well No. <b>30-015-37365</b>
4. Location of well (Report location clearly and in accordance with any State requirements *) At surface <b>660' FSL &amp; 330' FEL. UL P, SESE, Surface</b> At proposed prod. zone <b>660' FSL &amp; 330' FWL, UL M, SWSW, Bottom</b>		10. Field and Pool, or Exploratory <b>Undesignated Bone Springs</b>
14. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>This well is approximately 29 miles east of Carlsbad, NM</b>		11. Sec., T, R., M., or Blk And Survey or Area <b>Section 14-T24S-R31E</b>
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any) <b>330'</b>	16. No. of acres in lease <b>320.00</b>	17. Spacing Unit dedicated to this well <b>S2S2</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft <b>None</b>	19. Proposed Depth <b>8390' VD &amp; 12805' MD</b>	20. BLM/ BIA Bond No. on file <b>NATIONWIDE BOND #NMB000434</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3591' GL</b>	22. Approximate date work will start* <b>ASAP</b>	23. Estimated duration

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 <i>Clifton May</i>	Name (Printed/ Typed) <b>for Cy Cowan</b>	Date <b>8/20/2009</b>
Title <b>Land Regulatory Agent</b>		
Approved By (Signature) <i>/s/ Linda S.C. Rundell</i>	Name (Printed/ Typed)	Date <b>OCT 15 2009</b>
Title <b>STATE DIRECTOR</b>		Office <b>NM STATE OFFICE</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 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  
& 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 Brasos 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

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-37305</b>	Pool Code	Pool Name Undesignated Bone Springs ✓
Property Code <b>37894</b>	Property Name PETROGULF "BJT" FEDERAL	Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3591

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	14	24 S	31 E		660	SOUTH	330	EAST	EDDY

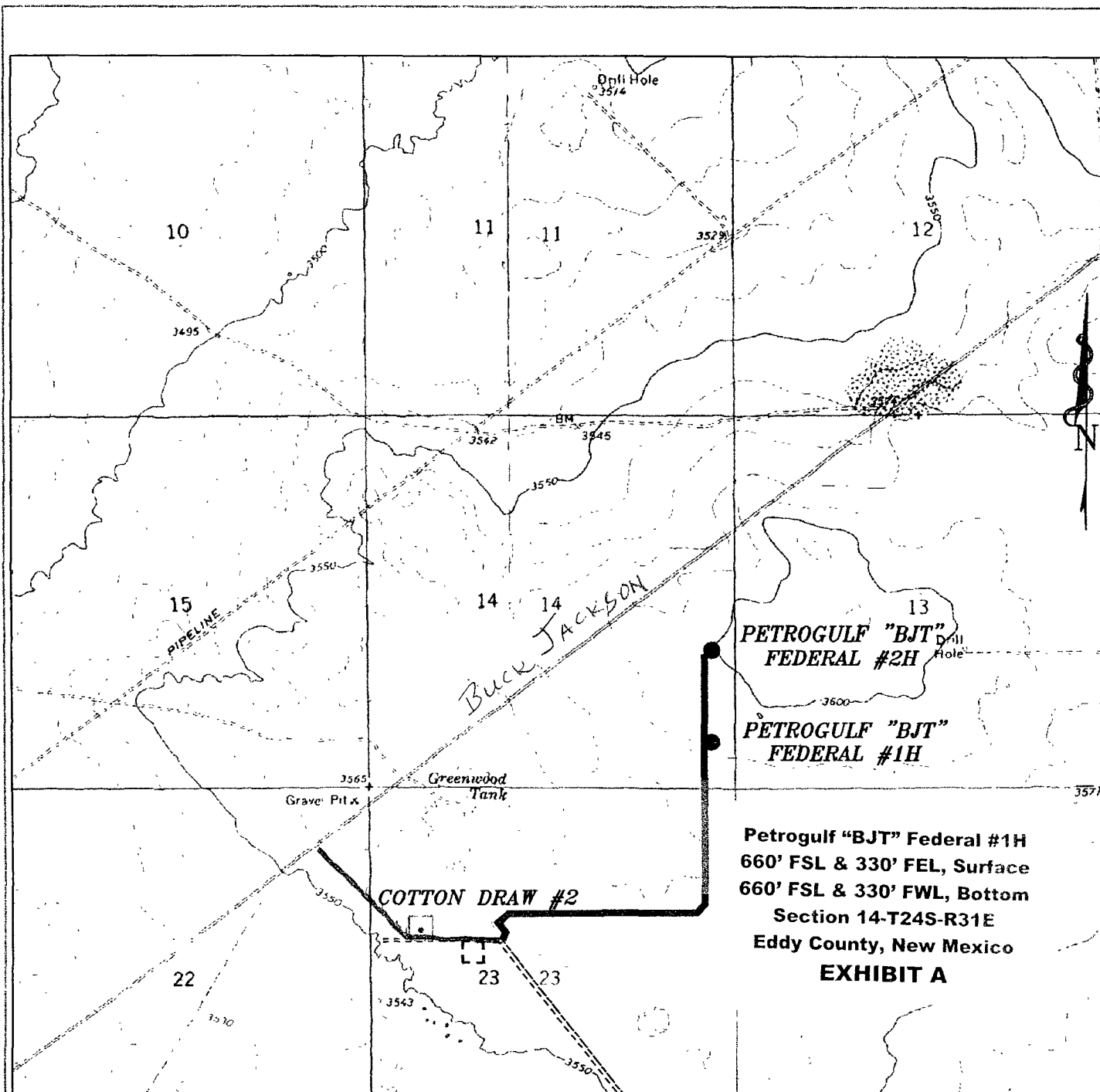
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	24 S	31 E		660	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

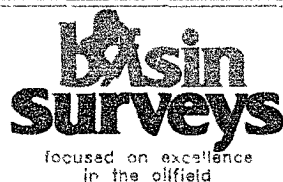
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

				<p><b>OPERATOR CERTIFICATION</b></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 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> 8/20/09 Signature Date</p> <p>Clifton May for Cy Cowan Printed Name</p>	
				<p><b>SURVEYOR CERTIFICATION</b></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>AUGUST 18, 2009 Date Signed</p> <p><i>Gary L. Jones</i> Signature of Professional Surveyor</p> <p>634 Professional Surveyor No.</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>	



### PETROGULF "BJT" FEDERAL #1H

Located at 660' FSL AND 330' FEL  
 Section 14, Township 24 South, Range 31 East,  
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2296 - Fax  
 basinsurveys.com

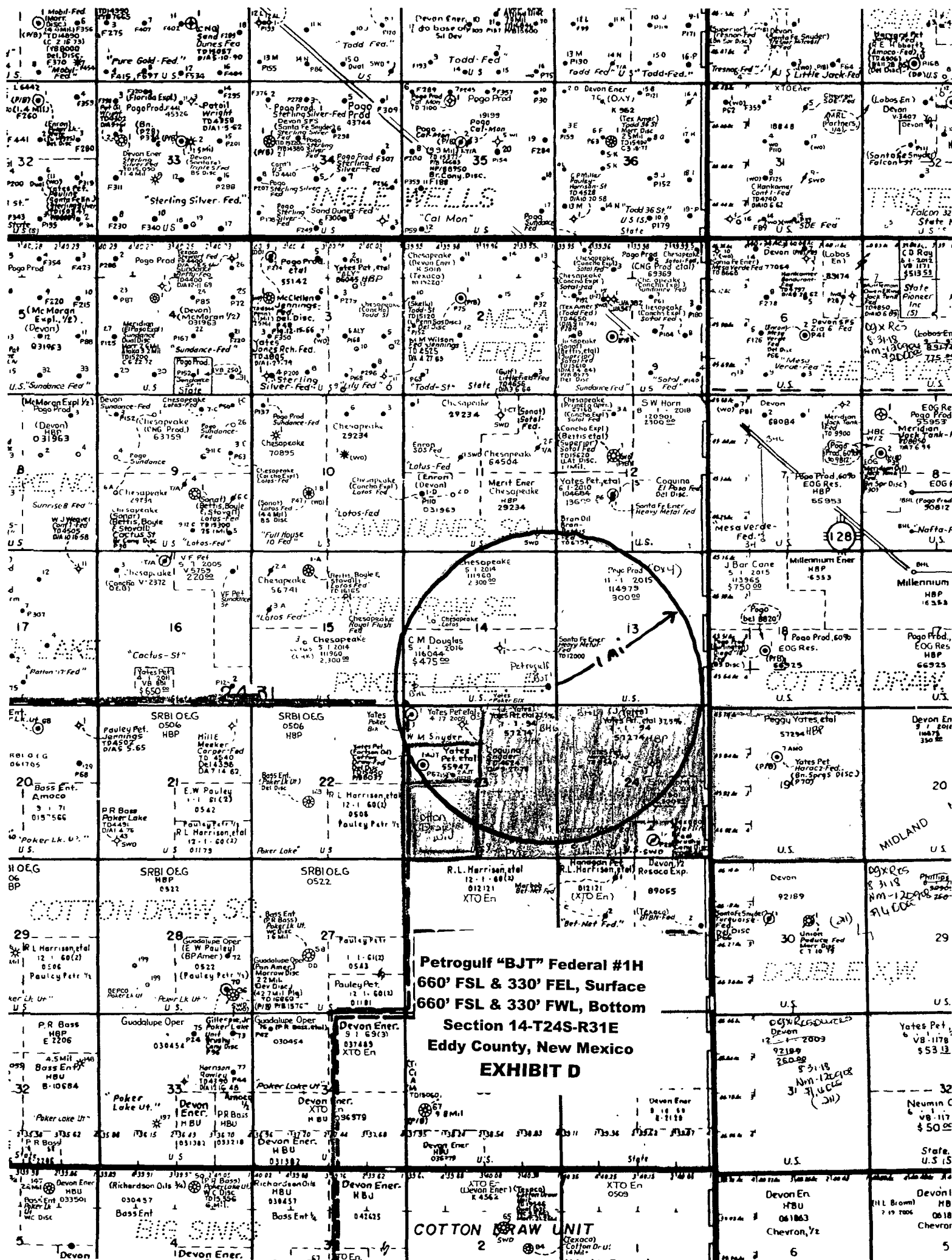
W.O. Number: 21634

Survey Date: 8-18-2009

Scale: 1" = 2000'

Date: 8-19-2009

**YATES  
 PETROLEUM  
 CORP.**



YATES PETROLEUM CORPORATION  
Petrogulf "BJT" Federal #1H  
660' FSL and 330' FEL, Surface Hole  
660' FSL & 330' FWL, Bottom Hole  
Section 14-T24S-R31E  
Eddy County, New Mexico

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

Rustler	670'	Brushy Canyon	6640'-Oil
Top of Salt	1020'	Brushy Canyon Marker	8140'-Oil
Base of Salt	4270'	Target-Basil Sand	8390'-Oil
Bell Canyon	4550'	Bone Springs	8450'-Oil
Cherry Canyon	5470'-Oil	First Bone Springs	9530'- Oil
		Pilot TD	9900'
		Lateral TMD	12805'
- 2 The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 160  
Oil or Gas: See above
3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" casing 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#	H-40	ST&C	0-900'	900'
12 1/4"	9 5/8"	40#	J-55	ST&C	0-100'	100'
12 1/4"	9 5/8"	36#	J-55	ST&C	100-3300'	3200'
12 1/4"	9 5/8"	40#	J-55	ST&C	3300-4300'	1000'
12 1/4"	9 5/8"	40#	HCK-55	ST&C	4300-4400'	100'
**8 3/4"	5.1/2"	17#	HCP-110	LT&C	0'-12805'	12805'

See  
COA

\*\*\*Pilot hole will be drilled vertically to 9900'. Well will then be plugged back with 180' plug on bottom and 400'-500' kicked off at approx. 7912' and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 8662' TMD (8390' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 12805' MD (8390 TVD) where 4 1/2" casing will be set and cemented. If 7" casing is not set, then hole size will be reduced to 7 7/8" and drilled to 12805' MD(8390' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 660' FSL & 807' FEL, Section 14, T24S-R31E. Deepest TVD in the well is 9900' in the pilot hole. Deepest TVD in the Lateral will be 8390'. ~~It is requested that a variance be granted to test the BOP on the surface casing to 1000 psi using rig pumps. A 3000 psi BOPE will be nipped up on the 9 5/8" casing and tested to 3000 psi,~~

See  
COA

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

B. CEMENTING PROGRAM: — See COA

Surface Casing: Lead in with 265 sacks 'C' Lite (WT 12.5 YLD 1.96). Tail in with 200 sacks Class 'C'. TOC surface. (WT 14.8 YLD 1.34). TOC Surface (See COA)

Intermediate Casing: Lead in with 975 sacks of 'C' Lite (WT 12.5 YLD 2.0) Tail in with 225 Sacks Class 'C' (WT 14.8 YLD 1.34). TOC Surface.

Production Casing: Stage One: DV Tool set at 7800'. Cement with 1325 sacks Pecos Valley Lite (WT 13.0 YLD 1.41) Top of cement 7800'.

Stage Two: DV tool will be placed at 5700'. Lead with 750 sacks Pecos Valley Lite (WT 13.0 YLD 1.41). Top of cement 5700'.

Stage Three: Lead in with 300 sacks Lite Crete (WT 9.0 YLD 2.66). Tail in with 100 sacks Pecos Valley Lite (WT 13.0 YLD 1.41). Top of cement 3900'.

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	8.6-9.2	35-40	N/C
900'-4400'	Brine Water	10.0-10.2	28-28	N/C
4400'-9900'	Cut Brine	8.7-9.2	28-29	N/C
7912'-12805'	Cut Brine	8.8-9.0	28-32	<10-12

(Lateral Section)

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:

See COA — Samples: 30' samples to 4500'. 10' samples 4500-TD  
 Logging: Platform Hals, CMR  
 Coring: None anticipated  
 DST's: None Anticipated  
 Mudlogging: Yes. From surface casing to TD

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

Maximum Anticipated BHP:  
 0'-900' 431 PSI  
 900'-4400' 2334 PSI  
 4400'-9900' 4736 PSI

Abnormal Pressures Anticipated: None  
 Lost Circulation Zones Anticipated: None.  
 H2S Zones Anticipated: None  
 Maximum Bottom Hole Temperature: 150 F

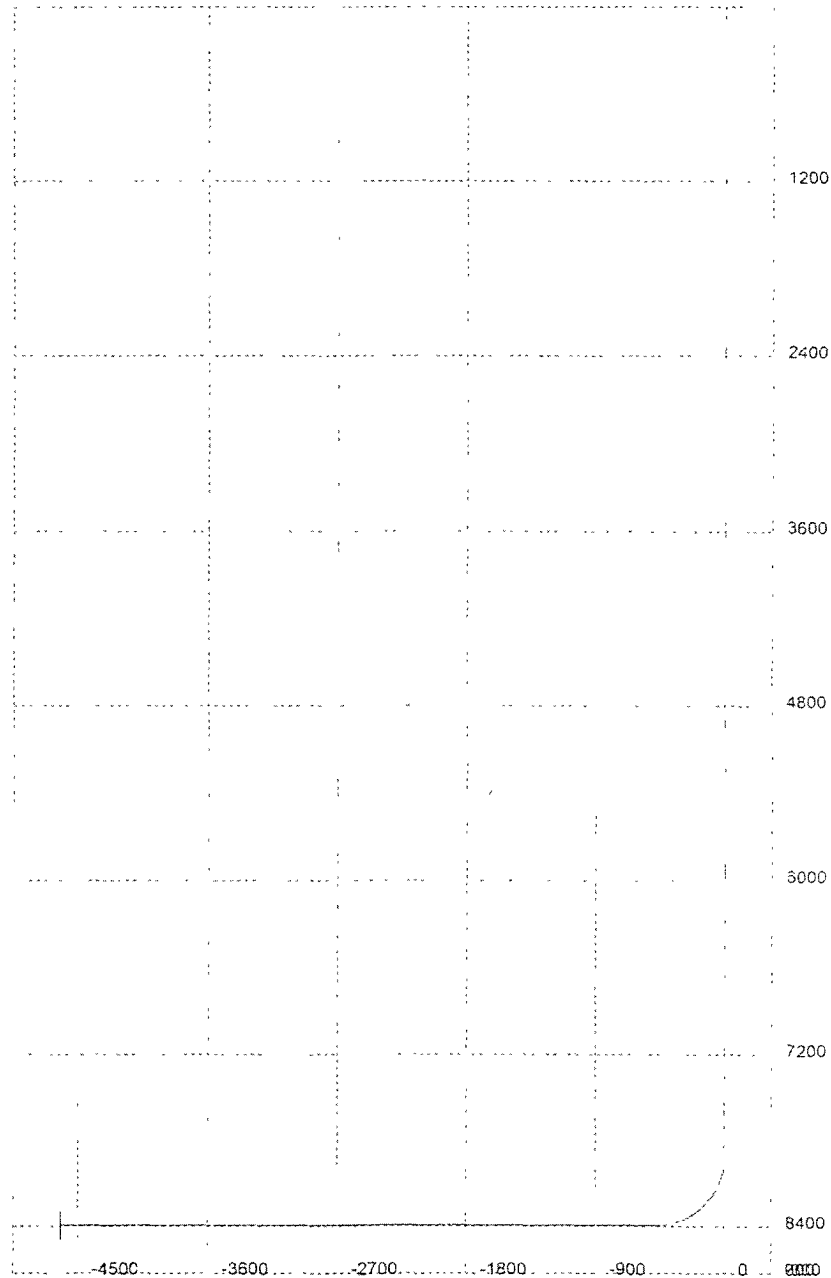
9. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 20 days.

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

Company: Yates Petroleum Corporation

Well: Petrogulf BJT Federal #1H



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			
670	0	0	670	0	0	0			RUSTLER
1,020	0	0	1,020	0	0	0			TOP OF SALT
4,270	0	0	4,270	0	0	0			BASE OF SALT
4,550	0	0	4,550	0	0	0			BELL CANYON
5,470	0	0	5,470	0	0	0			CHERRY CANYON
6,640	0	0	6,640	0	0	0			BRUSHY CANYON
7912	0	0	7912	0	0	12	270	GN	KOP
7925	1.56	270	7925	0	-0.18	12	0	HS	
7950	4.56	270	7949.96	0	-1.51	12	0	HS	
7975	7.56	270	7974.82	0	-4.15	12	0	HS	
8000	10.56	270	7999.5	0	-8.09	12	0	HS	
8025	13.56	270	8023.95	0	-13.31	12	0	HS	
8050	16.56	270	8048.09	0	-19.8	12	0	HS	
8075	19.56	270	8071.85	0	-27.55	12	0	HS	
8100	22.56	270	8095.18	0	-36.54	12	0	HS	
8125	25.56	270	8118.01	0	-46.73	12	0	HS	
8150	28.56	270	8140.27	0	-58.1	12	0	HS	BRUSHY CANYON MKR
8175	31.56	270	8161.9	0	-70.62	12	0	HS	
8200	34.56	270	8182.85	0	-84.26	12	0	HS	
8225	37.56	270	8203.06	0	-98.97	12	0	HS	
8250	40.56	270	8222.47	0	-114.72	12	0	HS	
8275	43.56	270	8241.03	0	-131.47	12	0	HS	
8300	46.56	270	8258.69	0	-149.16	12	0	HS	
8325	49.56	270	8275.39	0	-167.76	12	0	HS	
8350	52.56	270	8291.1	0	-187.2	12	0	HS	
8375	55.56	270	8305.77	0	-207.44	12	0	HS	
8400	58.56	270	8319.37	0	-228.42	12	0	HS	
8425	61.56	270	8331.84	0	-250.08	12	0	HS	
8450	64.56	270	8343.17	0	-272.36	12	0	HS	
8475	67.56	270	8353.31	0	-295.21	12	0	HS	
8500	70.56	270	8362.25	0	-318.56	12	0	HS	
8525	73.56	270	8369.94	0	-342.34	12	0	HS	
8550	76.56	270	8376.39	0	-366.49	12	0	HS	
8575	79.56	270	8381.56	0	-390.95	12	0	HS	
8600	82.56	270	8385.45	0	-415.64	12	0	HS	
8625	85.56	270	8388.03	0	-440.5	12	0	HS	
8650	88.56	270	8389.31	0	-465.47	12	0	HS	
8661.94	89.99	270	8389.47	0	-477.41	12	0	HS	BASAL SAND TARGET
12804.54	89.99	270	8390	0	-4620	0			LATERAL TD

Pilot hole drilled vertically to 9900'. Well will be plugged back with 180' plug on bottom and 400'-500' kick off plug at approx. 7912' and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 8662' MD (8,390' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 12,805' MD (8,390' TVD) where 4 1/2" casing will be set and cemented. If 7" is not set, then hole size will be reduced to 7 7/8" and drilled to 12,805' MD (8,390' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 660' FSL and 807' FEL, 14-24S-31E. Deepest TVD in the well is 9900' in the pilot hole. Deepest TVD in the lateral will be 8390'.



### Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 8,662' MD (8,390' TVD). A 6 1/8" hole will then be drilled to 12,805' MD (8,390' TVD) where 4 1/2" casing will be set and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7800'

#### 2nd Intermediate

0 ft to 300 ft				Make up Torque ft-lbs			Total ft = 300
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

300 ft to 5,800 ft				Make up Torque ft-lbs			Total ft = 5,500
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	23 #/ft	J-55	LT&C	3130	2350	3910	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,270 psi	4,360 psi	313,000 #		366,000 #		6.25	

5,800 ft to 8,100 ft				Make up Torque ft-lbs			Total ft = 2,300
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

8,100 ft to 8,662 ft				Make up Torque ft-lbs			Total ft = 562
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
5,410 psi	7,240 psi	511,000 #		604,000 #		6.151	

DV tools placed at 7800' & 5700'

Stage I. Cemented w/185sx PVL (YLD 1.41 Wt 13) TOC= 7800'

Stage II. Cemented w/450sx PVL (YLD 1.41 Wt 13) TOC= 5700'

Stage III. Cemented w/150sx Lite Crete (YLD 2.66 Wt 9.9), tail w/100sx PVL (YLD 1.41 Wt 13) TOC= 3900'

#### Production

0 ft to 12,805 ft				Make up Torque ft-lbs			Total ft = 12,805
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
4.5 inches	11.6 #/ft	HCP-110	LT&C	3020	2270	3780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,650 psi	10,690 psi	279,000 #		367,000 #		3.875	

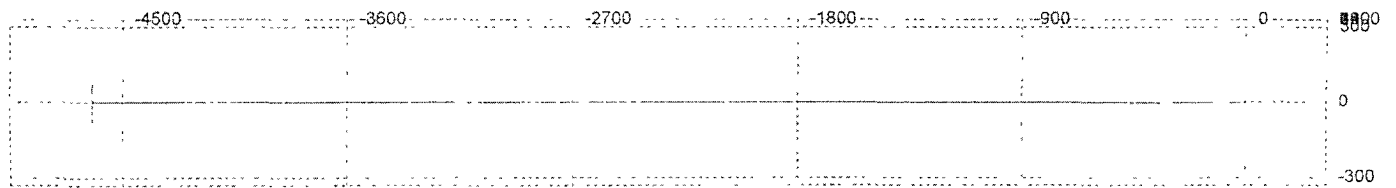
DV tool placed at approx. 7800' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7800'.

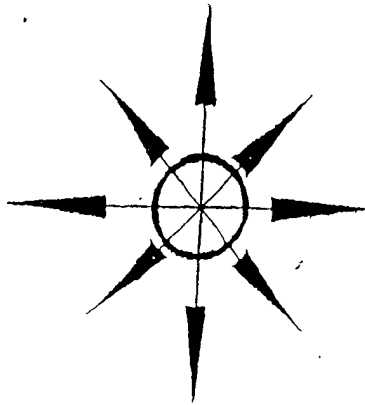
Cemented w/675sx PVL (YLD 1.41 Wt 13) TOC= 7800'

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

Company: Yates Petroleum Corporation

Well: Petrogulf BJT Federal #1H



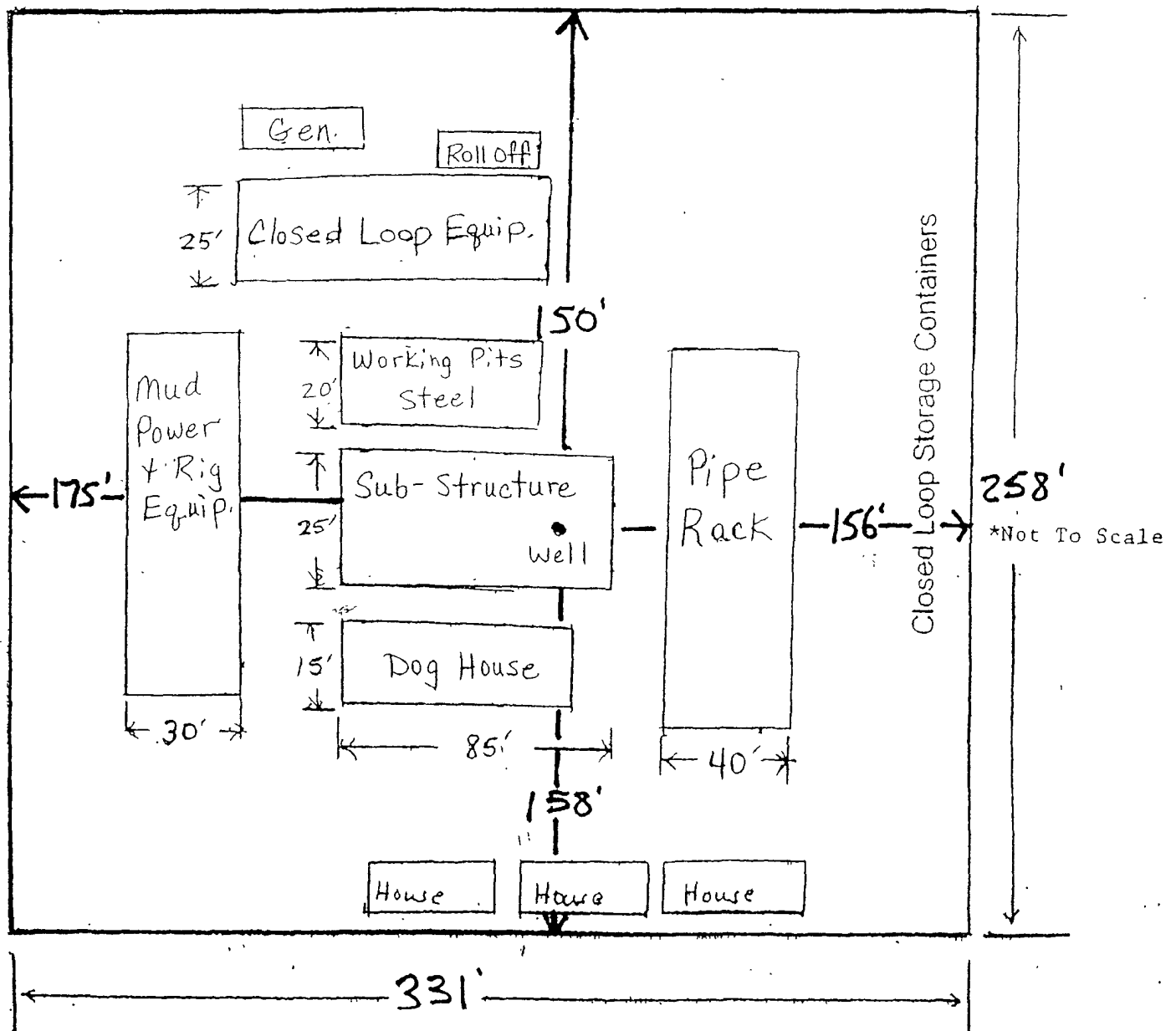


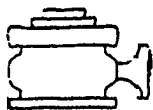
# Yates Petroleum Corporation

Location Layout for Permian Basin

## Closed Loop Design Plan

Petrogulf "BJT" Federal #1H  
660' FSL & 330' FEL, Surface  
660' FSL & 330' FWL, Bottom  
Section 14-T24S-R31E  
Eddy County, New Mexico  
**EXHIBIT C**





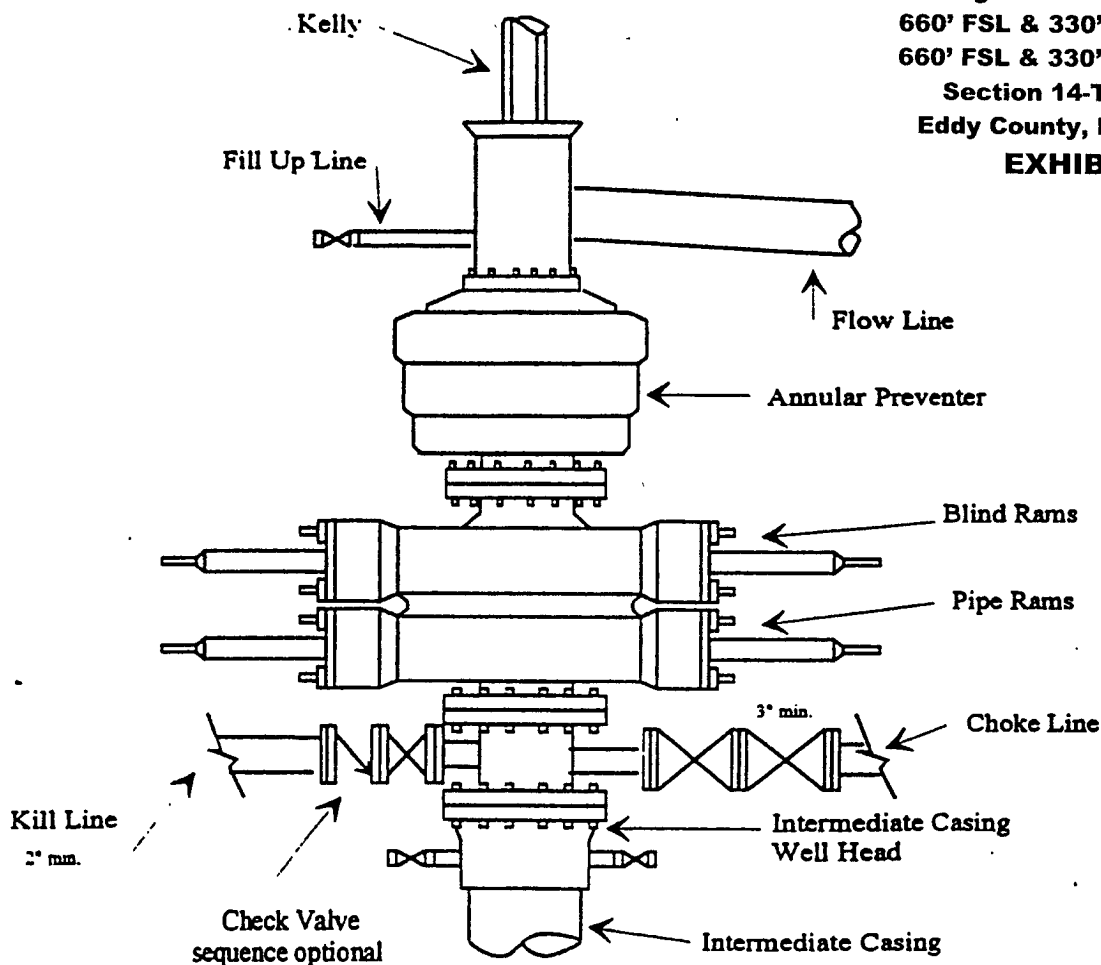
# Yates Petroleum Corporation

BOP-3

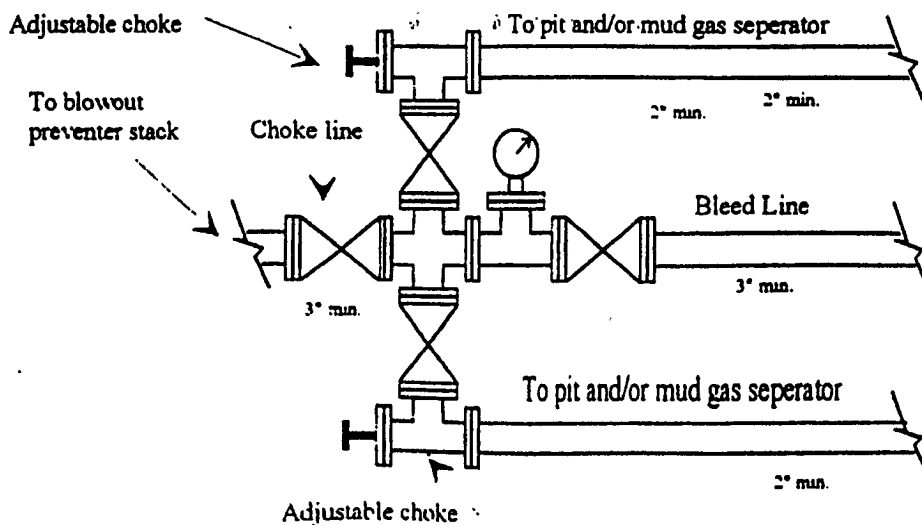
## Typical 3,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack

Petrogulf "BJT" Federal #1H  
660' FSL & 330' FEL, Surface  
660' FSL & 330' FWL, Bottom  
Section 14-T24S-R31E  
Eddy County, New Mexico

### EXHIBIT B

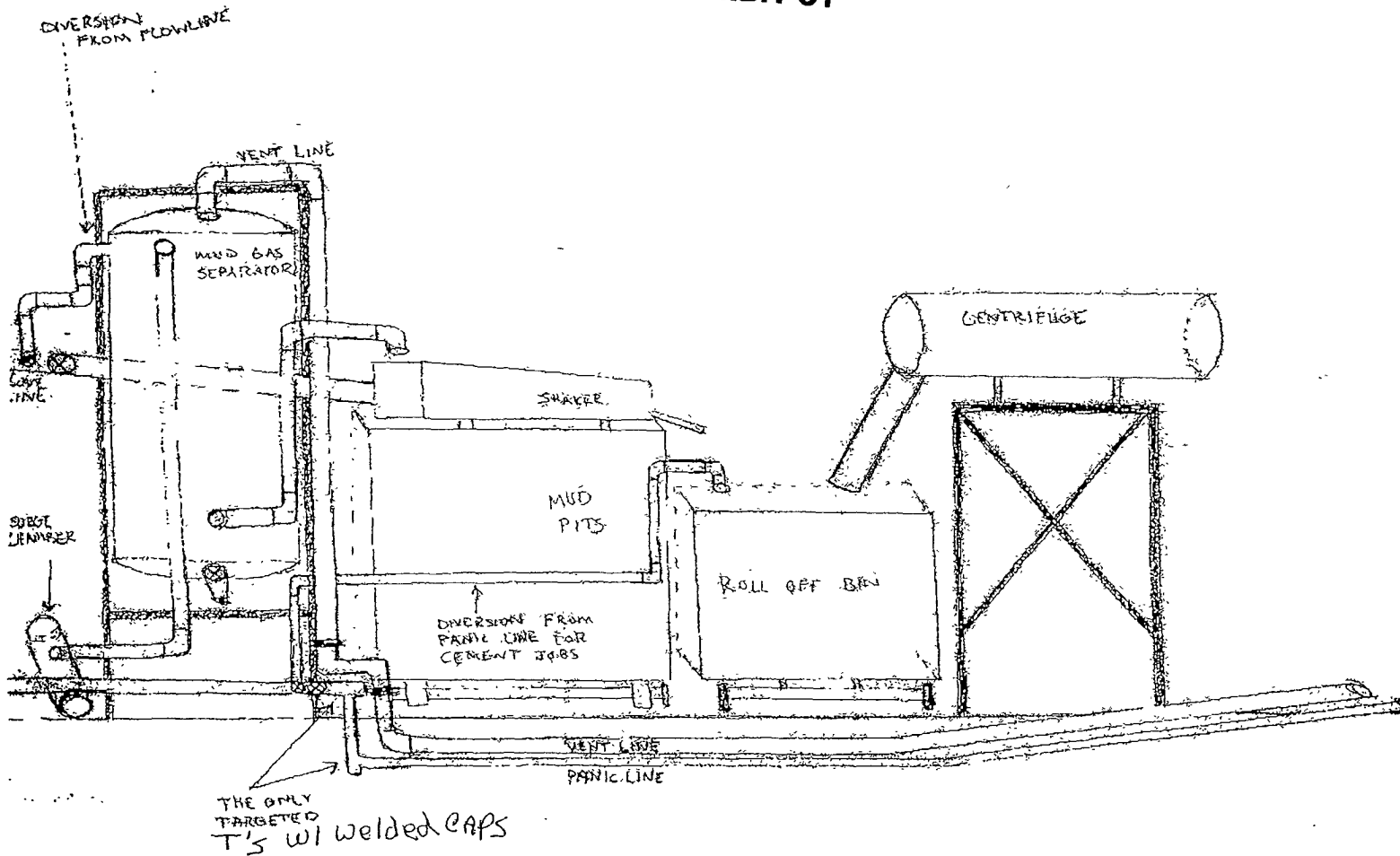


Typical 3,000 psi choke manifold assembly with at least these minimum features



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

Petrogulf "BJT" Federal #1H  
660' FSL & 330' FEL, Surface  
660' FSL & 330' FWL, Bottom  
Section 14-T24S-R31E  
Eddy County, New Mexico  
**EXHIBIT C1**



MULTI-POINT SURFACE USE AND OPERATIONS PLAN  
YATES PETROLEUM CORPORATION  
Petrogulf "BJT" Federal #1H  
660' FSL & 330' FEL, Surface Hole  
660' FSL & 330' FWL, Bottom Hole  
Section 14-T24S-R31E  
Eddy County, New Mexico

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 wellsite is located approximately 29 miles southeast of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Carlsbad on Highway 62-180 to State Road 31. Turn south on 31 and go to Highway 128 (Jal Highway). Turn left on HWY 128 and go east for approximately 18.7 miles to the intersection of Highway 128 and Buck Jackson Road. Turn right on Buck Jackson Road and go approx. 2.9 miles. Turn left here at a cattle guard and lease road and go approximately .5 of a mile to the Cotton Draw AJT Federal #2 well location. The new road will start at the northeast corner of the Cotton Draw AJT Federal #2 going east for approximately 0.2 of a mile.. The new road will turn left and go north for about for approximately 0.1 of a mile. The road will turn east for about 0.5 of a mile. The road will then go north for about 0.5 of a mile to the southwest corner of the proposed location.

2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately 1 mile in length going north, east, and then north to the southwest corner of the proposed well location.
- B. The new road will be 14 feet 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 may be built.
- 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 line can be built, if needed.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a brine 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 be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. The temporary drilling pit 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.
- B. Drilling fluids will be removed after drilling and completion operations are completed.
- 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 C shows the relative location and dimensions of the well pad, the closed loop system, and the location of the drilling equipment, rig orientation and access road approach.
- 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. A 600' x 600' area has been staked and flagged.

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 plugged and abandoned, 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 after they have evaporated and dried. Pit reclamation will meet 19.15.17 requirements.

11. SURFACE OWNERSHIP: Federal Lands managed by the supervision of the Carlsbad BLM.

12 OTHER INFORMATION:

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



CERTIFICATION  
YATES PETROLEUM CORPORATION  
**Petrogulf "BJT" Federal #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 20th day of August, 2009.

Printed Name Clifton May

Signature Clifton May

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, NM 88210

Telephone 575-748-4372—call Cy Cowan with any questions

E-mail (optional) cyc@yatespetroleum.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 CORPORATION
LEASE NO.:	NM116044
WELL NAME & NO.:	PETROGULF BJT FEDERAL 1H
SURFACE HOLE FOOTAGE:	660' FSL & 330' FEL
BOTTOM HOLE FOOTAGE:	660' FSL & 330' FWL
LOCATION:	Section 14, T. 24 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

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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**
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  - Lesser Prairie Chicken
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- ☐ **Construction**
  - Notification
  - Topsoil
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  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
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- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **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)

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, geophysical exploration other than 3-D operations, and 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 ft. 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 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. RESERVE PITS**

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

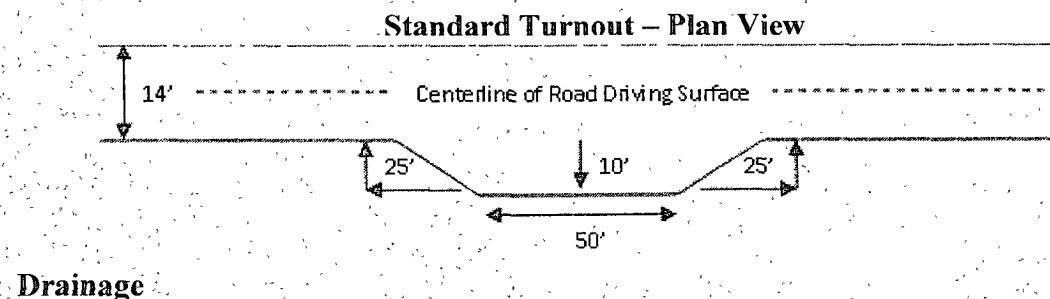
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### Ditching

Ditching shall be required on both sides of the road.

### Turnouts

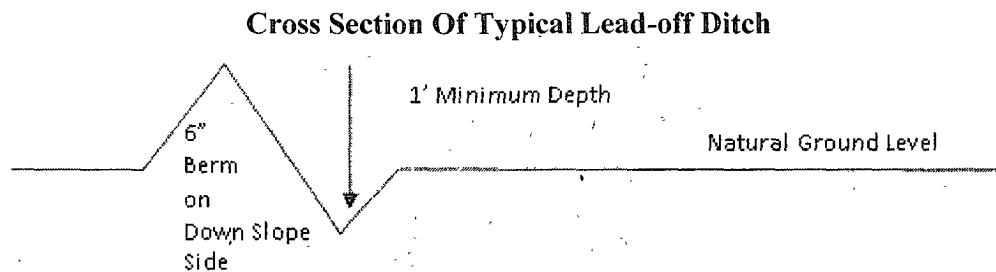
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### Drainage

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



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:

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

#### **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.

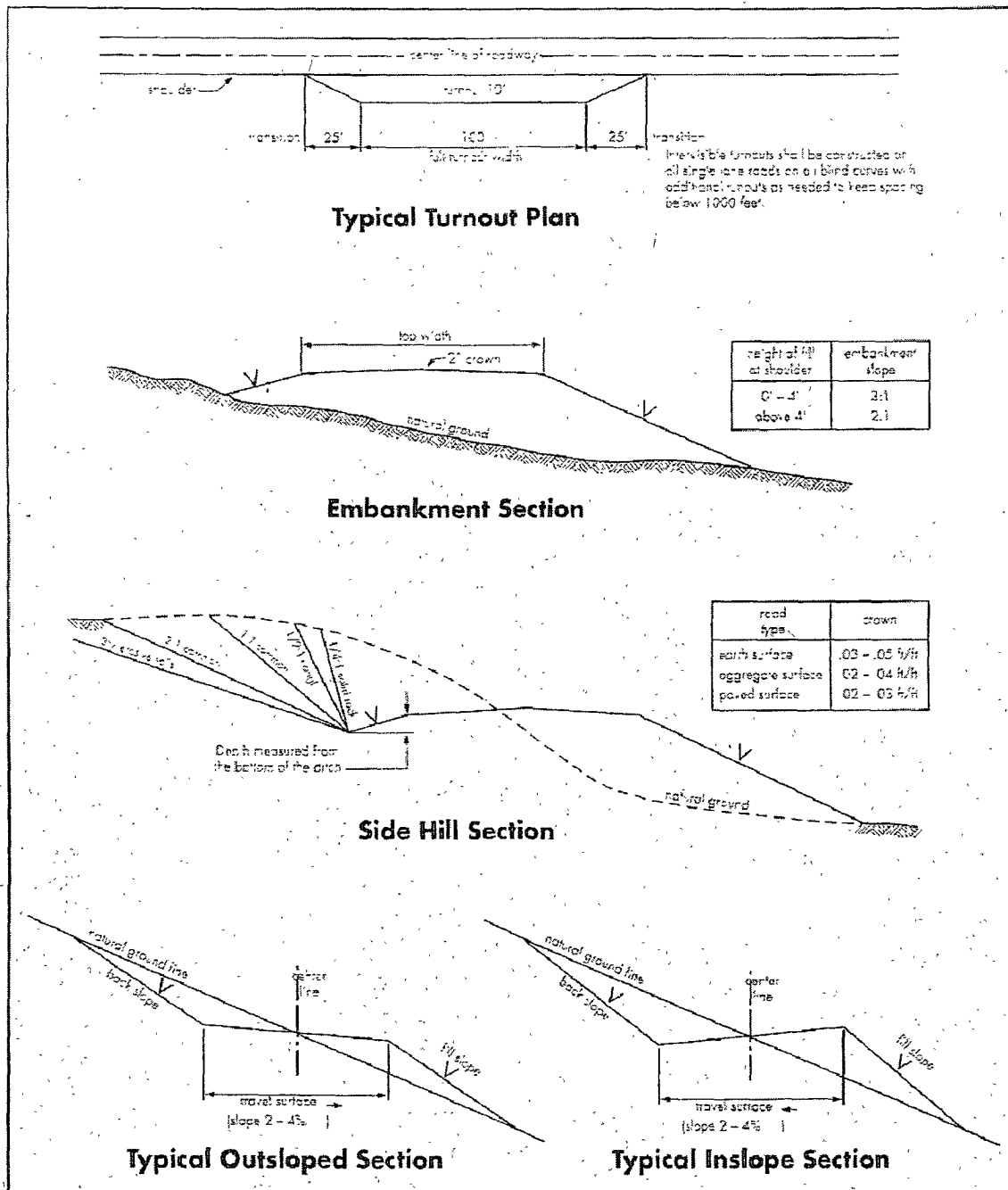
The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**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 as a hazard 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 is 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. The Rustler top and top and bottom of Salt is 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.**

**Secretary's Potash.**

**Possible lost circulation in the Delaware and Bone Springs formations.**

**Possible water and brine flows in the Castile, Salado, Delaware and Bone Springs formations.**

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. Additional cement may be required as the excess calculates to less than 20%.
  - 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.
  - 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 Secretary's Potash.**

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

**Pilot hole plugging procedure approved as written with the additional requirement that the bottom plug be tagged. The BLM is to be contacted (575-361-2822) prior to tag of bottom plug. Tag depth to be reported on subsequent sundry with casing details.**

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.

b. Second stage to second DV tool, cement shall:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with third stage cement job.

c. Third stage above DV tool, cement shall:

☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.

**Contingency casing program:**

4. The minimum required fill of cement behind the **7** inch intermediate 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.

b. Second stage to second DV tool, cement shall:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with third stage cement job.

c. Third stage above DV tool, cement shall:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Secretary's Potash.**

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

5. The minimum required fill of cement behind the 4-1/2 inch production casing is:

☒ Cement to reach DV tool depth. Operator shall provide method of verification.

6. 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. **Piping from choke manifold and to flare to be as straight as possible.**
2. 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. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

#### D. DRILL STEM TEST

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

RGH 092309

## **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 & RESERVE PIT CLOSURE**

### **A. 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 for LPC Sand/Shinnery 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	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed  
(Insert Seed Mixture Here)



## **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.

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.

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.