

Form 3160-3  
(August 2007)

**RECEIVED**  
NOV 25 2009  
**NMOC D ARTESIA**

OCD-ARTESIA

1045

UNITED STATES **SECRETARY'S POTASH**  
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

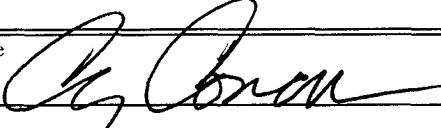
1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No <b>NM-99034</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> 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>Juniper BIP Federal #9H</b>
3b. Phone No. (include area code) <b>505-748-1471</b>		9. API Well No. <b>30-015-37407</b>
4. Location of well (Report location clearly and in accordance with any State requirements *) At surface <b>130' FSL &amp; 480' FWL, Ut. M Surface Hole Location</b> At proposed prod zone <b>660' FSL &amp; 330' FEL, Ut. P Bottom Hole Location</b>		10. Field and Pool, or Exploratory <b>Undesignated Bone Springs</b>
14. Distance in miles and direction from the nearest town or post office* <b>The well is approximately 8 miles east of Malaga, NM.</b>		12. County or Parish <b>Eddy</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg unit line, if any) <b>130'</b>		13. State <b>NM</b>
16. No. of acres in lease <b>878.94</b>	17. Spacing Unit dedicated to this well <b>S2S2 of Section 4-24S-29E</b>	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth <b>7800' VD; 12084' MD</b>	20. BLM/ BIA Bond No. on file <b>NATIONWIDE BOND #NMB000434</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>2996' GL</b>	22. Approximate date work will start* <b>ASAP</b>	23. Estimated duration

**UNORTHODOX LOCATION**

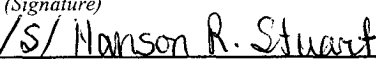
24 Attachments

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>9/22/2009</b>
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Title **Land Regulatory Agent**

Approved By (Signature) 	Name (Printed/ Typed)	Date <b>NOV 16 2009</b>
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Title <b>STATE DIRECTOR</b>	Office <b>NM STATE OFFICE</b>
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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.

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 orthodoxy at 7,329' md and 7,323' VD*

**Carlsbad Controlled Water Basin**

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**Approval Subject to General Requirements  
& Special Stipulations Attached**

DISTRICT I:  
1626 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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37407	Pool Code 11520	Pool Name Cedar Canyon <del>UNDESIGNATED</del> BONE SPRINGS
Property Code 36237	Property Name JUNIPER "BIP" FEDERAL	Well Number 9H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 2996'

Surface Location

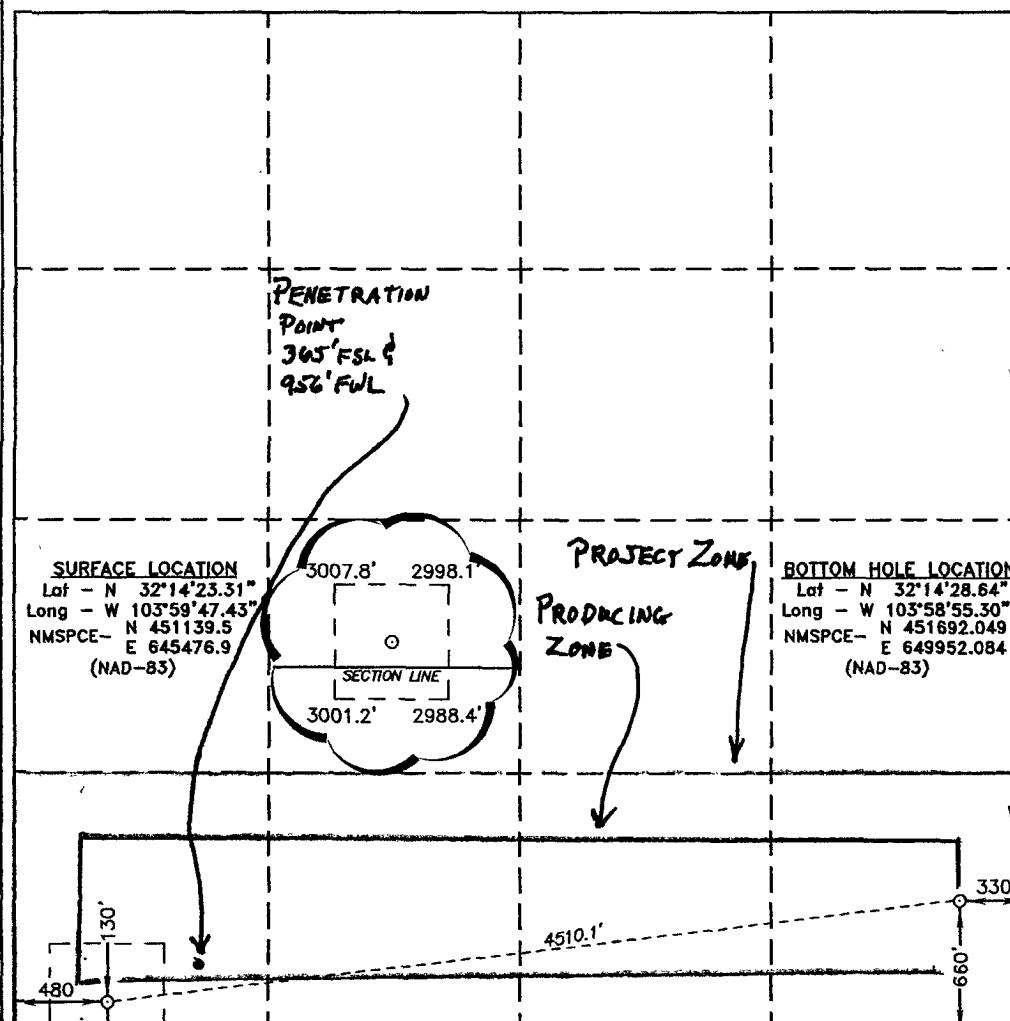
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	4	24 S	29 E		130	SOUTH	480	WEST	EDDY

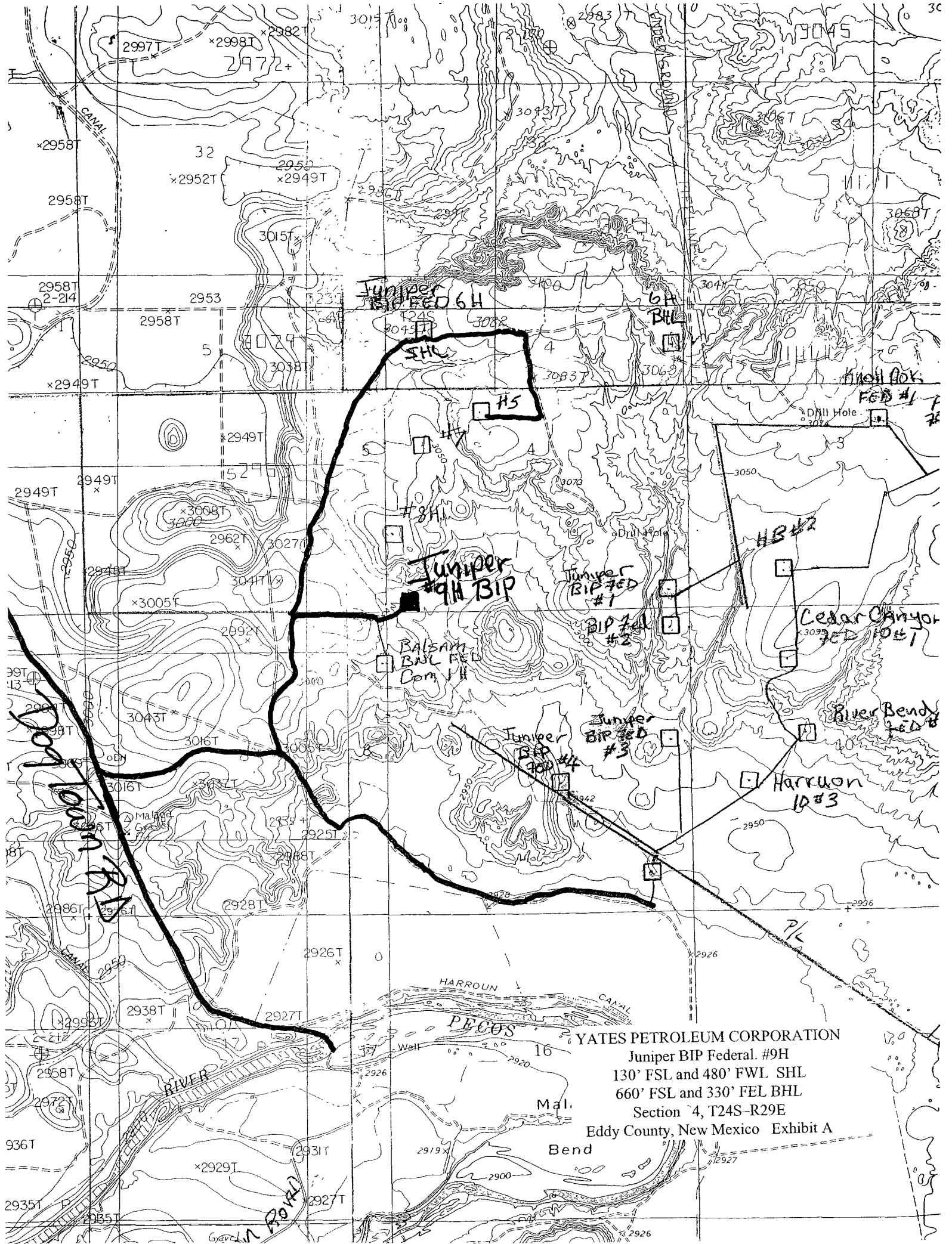
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	24 S	29 E		660	SOUTH	330	EAST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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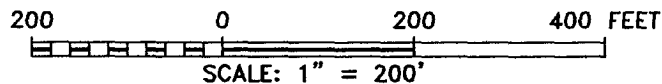
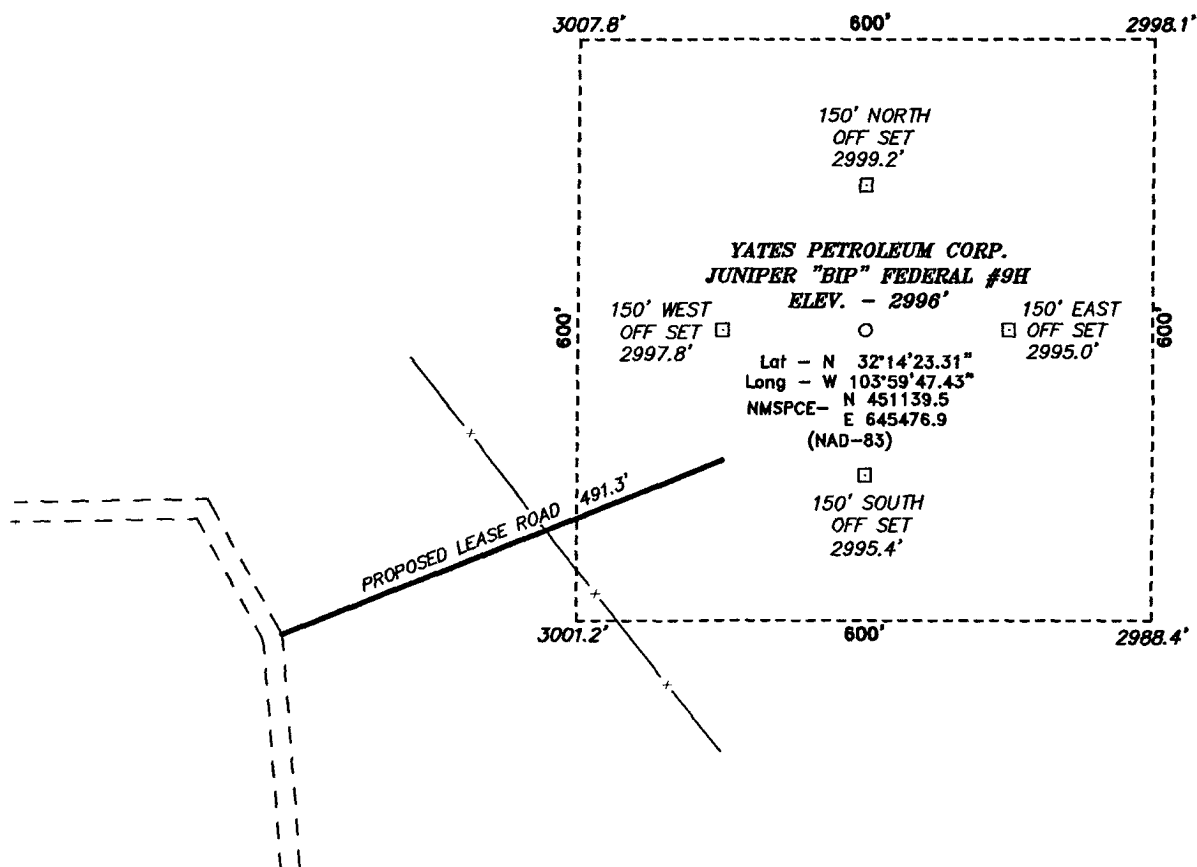
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

 <p><b>SURFACE LOCATION</b> Lot - N 32°14'23.31" Long - W 103°59'47.43" NMSPCE- N 451139.5 E 645476.9 (NAD-83)</p> <p><b>BOTTOM HOLE LOCATION</b> Lot - N 32°14'28.64" Long - W 103°58'55.30" NMSPCE- N 451692.049 E 649952.084 (NAD-83)</p> <p><b>PENETRATION POINT</b> 365' FSL &amp; 956' FWL</p> <p><b>PROJECT ZONE</b> <b>PRODUCING ZONE</b></p> <p>Diagram labels: 3007.8', 2998.1', 3001.2', 2988.4', 4510.1', 330', 660', 480', 130', SECTION LINE</p>		<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>Cy Cowan</i> 9/22/09 Signature Date <i>Cy Cowan</i> 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><i>W. L. Jones</i> 2009 Date Surveyed Signature of Professional Surveyor Professional Surveyor 7977 Certificate No. <i>W. L. Jones</i> 7977 BASIN SURVEYS</p>
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YATES PETROLEUM CORPORATION  
Juniper BIP Federal. #9H  
130' FSL and 480' FWL SHL  
660' FSL and 330' FEL BHL  
Section 4, T24S-R29E  
Eddy County, New Mexico Exhibit A

SECTION 4, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**YATES PETROLEUM CORP.**

REF: JUNIPER "BIP" FEDERAL #9H / WELL PAD TOPO

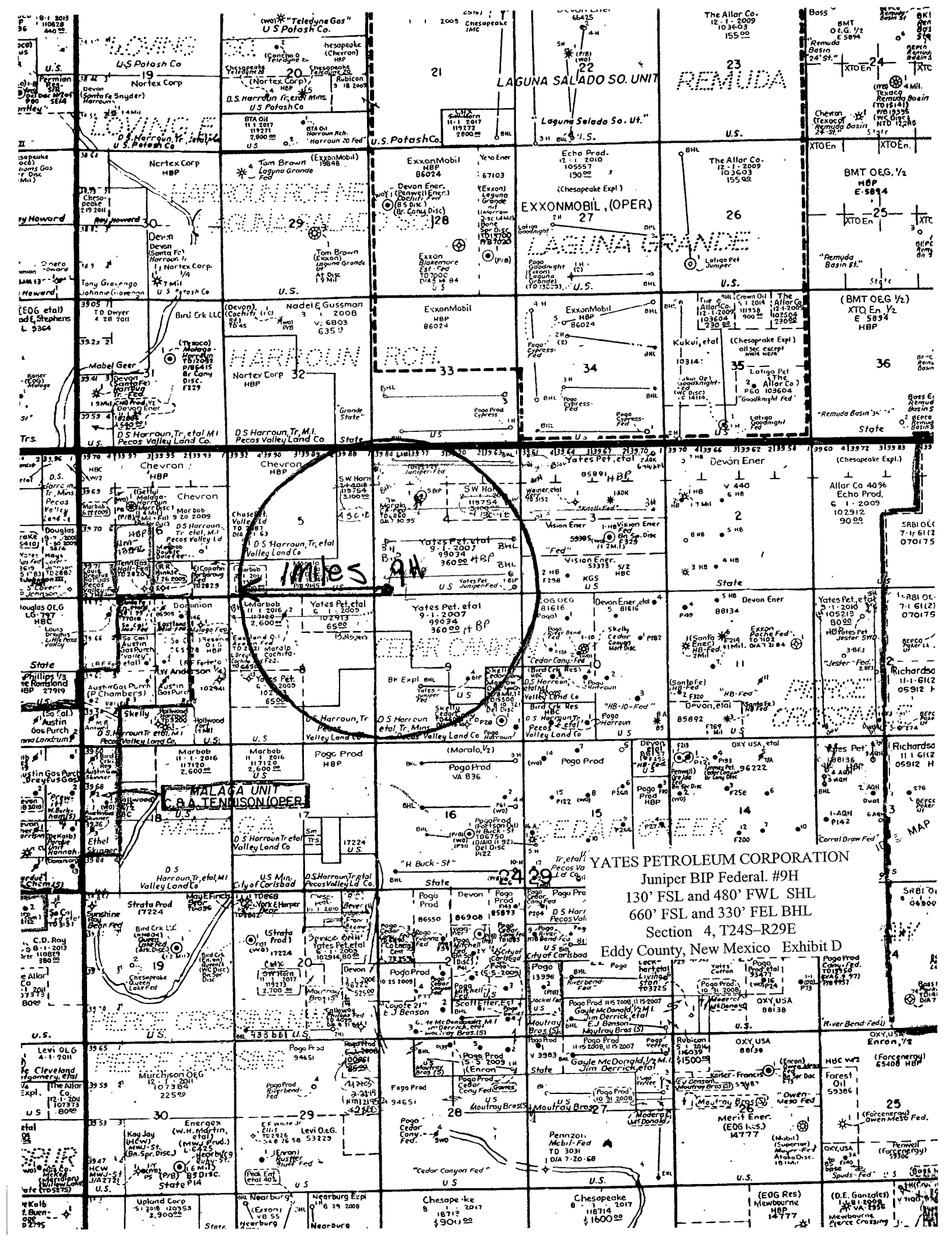
THE JUNIPER "BIP" FEDERAL #9H LOCATED 130'  
FROM THE SOUTH LINE AND 480' FROM THE WEST LINE OF  
SECTION 4, TOWNSHIP 24 SOUTH, RANGE 29 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 21373 Drawn By: J. SMALL

Date: 07-06-2009 Disk: JMS 21373

Survey Date: 07-02-2009 Sheet 1 of 1 Sheets



LAGUNA SALADO SO. UNIT

REMUDA

EXXONMOBIL (OPER)

LAGUNA GRANDE

HARRISON RCH.

MALAGA UNIT

YATES PETROLEUM CORPORATION

Juniper BIP Federal. #9H  
130' FSL and 480' FWL SHL  
660' FSL and 330' FEL BHL  
Section 4, T24S-R29E  
Eddy County, New Mexico Exhibit D

MAP

**YATES PETROLEUM CORPORATION**  
**Juniper BIP Federal #9H**  
130' FSL & 480' FWL Surface Hole Location  
660' FSL & 330' FEL Bottom Hole Location  
Section 4,-T24S-R29E  
Eddy County, New Mexico

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

Rustler	300'	Brushy Canyon Marker	6300'
Top of Salt	630'	Bone Springs	6600' OIL
Base of Salt	2730'	First Bone Springs	7680' OIL
Bell Canyon	2970' OIL	Target Zone	7800' OIL
Cherry Canyon	3820' OIL	TVD	7800'
Brushy Canyon	5050' OIL	MD	12084'

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

Water: Approx 35'

Oil or Gas: OIL: Bell Canyon, Cherry Canyon, Brushy Canyon, Bone Springs, 1<sup>st</sup> Bone Springs, and Target Zone.

3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" and 9 5/8" casing and rated for 3000 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>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-600'	600'
12 1/4"	9 5/8"	36#	J-55	ST&C	0-2850'	2850'
8 3/4"	5 1/2"	17#	HCP-110	LT&C	0-8100'	8100'
**8 3/4"	5 1/2"	17#	L-80	LT&C	8100-12084'	3984'

\*\*This well will be drilled vertically to 7329' MD. At 7329' MD the well will be kicked off and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 8079' MD (7400' TVD). If hole conditions dictate, 7" casing will be set. IA 6 1/8" hole will then be drilled to 12,084' MD (7800' 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 12084' MD (7800' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered a 365' FSL and 956' FWL of Section 4-24S-39E. The deepest TVD in the well is 7800' in the lateral.

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

- B. **CEMENTING PROGRAM:** *See COA*  
 Surface casing: TOC surface. Lead with 350 sacks Class 'C' (WT 14.8 YLD 1.64);  
 tail in with 200 sacks Class 'C' (WT 14.8 YLD 1.34).

Intermediate Casing: TOC surface. Lead with 750 sacks Lite "C" (WT 12.5 YLD 2.0).  
 Tail in with 200 sacks Class 'C' (WT. 14.8 YLD 1.32).

Production Casing:

Stage I: Lead with 1250 sacks Pecos Valley Lite (WT 13.0 YLD 1.41)  
 TOC 7000' DV tool at 7000'.

Stage II: Lead with 1000 sacks Pecos Valley Lite (WT 13.0 YLD 1.41)  
 TOC 4200' DV Tool at 4200'

Stage III: Lead with 675 sacks Pecos Valley Lite (WT 13.00 YLD 1.41).  
 TOC 2350'.

5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-600'	Fresh Water	8.6-9.2	29-36	N/C
600'-2850'	Brine Water	10.0-10.2	28-30	N/C
2850'-7329'	Cut Brine	8.9-9.1	28-29	N/C
7329'-12084'	Cut Brine	8.6-9.0	28-34	<15 cc

(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. Mud will be checked hourly by rig personnel.

6. **EVALUATION PROGRAM:** *see COA*

Samples: 30' samples to 3000'; 10' samples 3000'-TD.

Logging: Platform HALS; CMR.

Coring: None Anticipated.

DST's: As warranted.

Mudlogging: Yes-from surface casing to TD

7. Abnormal Conditions, Bottom hole pressure and potential hazards:

Anticipated BHP:

From: O	TO: 600'	Anticipated Max.	BHP: 287	PSI
From: 600'	TO: 2850'	Anticipated Max.	BHP: 1512	PSI
From: 2850'	TO: 7800'	Anticipated Max.	BHP: 3650	PSI

Abnormal pressures or temperatures anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 152 F

8. **ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 30 days to drill the well with completion taking another 15 days.

## Juniper BIP Federal #9H

### Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 8,079' MD (7,800' TVD). A 6 1/8" hole will then be drilled to 12,084' MD (7,800' 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 7000'.

#### 2nd Intermediate

0 ft to 100 ft				Make up Torque ft-lbs			Total ft =
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			

100 ft to 5,800 ft				Make up Torque ft-lbs			Total ft =
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 #	356,000 #	6.25			

5,800 ft to 8,079 ft				Make up Torque ft-lbs			Total ft =
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			

DV tools placed at 7000' and 4200'.

Stage I: Cemented w/230sx PVL (YLD 1.41 Wt 13) TOC= 7000'

Stage II: Cemented w/600sx PVL (YLD 1.41 Wt 13) TOC= 4200'

Stage III: Cemented w/150sx Lite Crete (YLD 2.78 Wt 9.9), tail w/100sx PVL (YLD 1.41 Wt 13) TOC= 2350'

#### Production

0 ft to 12,084 ft				Make up Torque ft-lbs			Total ft =
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			
8,660 psi	10,690 psi	279,000 #	367,000 #	3.875			

DV tool placed at approx. 7000' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7000'.

Cemented w/680sx PVL (YLD 1.41 Wt 13) TOC= 7000'



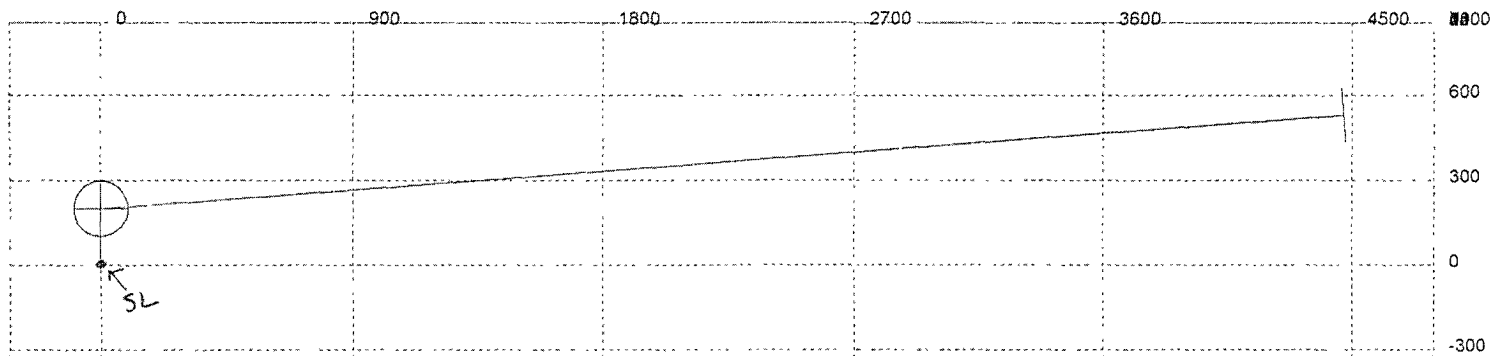
M.D.	Inclination	Azimuth	T.V.D.	N°/S°	E°/W°	D.L.S.	Tool Face	T.F. Ref. HS/GN	
0	0	0	0	0	0	0			
300	0	0	300	0	0	0			RUSTLER
630	0	0	630	0	0	0			TOP OF SALT
2,730	0	0	2,730	0	0	0			BASE OF SALT
2,970	0	0	2,970	0	0	0			BELL CANYON
3600	0	0	3600	0	0	2.5	0	GN	KOP for curve
3625	0.62	0	3625	0.14	0	2.5	0	HS	
3650	1.25	0	3650	0.55	0	2.5	0	HS	
3675	1.88	0	3674.99	1.23	0	2.5	0	HS	
3700	2.5	0	3699.97	2.18	0	2.5	0	HS	
3725	3.12	0	3724.94	3.41	0	2.5	0	HS	
3736.6	3.42	0	3736.52	4.07	0	0			
3820.23	3.42	0	3820	9.05	0	0			CHERRY CANYON
5052.42	3.42	0	5050	82.45	0	0			BRUSHY CANYON
6304.64	3.42	0	6300	157.05	0	0			BRUSHY CANYON MKR
6605.17	3.42	0	6600	174.95	0	0			BONE SPRINGS
6889.57	3.42	0	6883.89	191.89	0	0			
6900	3.15	0	6894.07	196.36	0	2.5	180	HS	
6925	2.5	0	6919.04	197.6	0	2.5	180	HS	
6950	1.85	0	6944.02	198.56	0	2.5	180	HS	
6975	1.16	0	6969.01	199.26	0	2.5	180	HS	
7000	0.19	0	6994.01	199.68	0	2.5	180	HS	
7025	0	0	7019.01	199.83	0	2.5	179	GN	
7029	0	180	7023.01	199.83	0	2.5	0	GN	
7329	0	0	7323	200	0	0			
7329	0	0	7323	200	0	12	86	GN	KOP for Lateral
7350	2.52	85.78	7343.99	200.03	0.46	12	0	HS	
7375	5.52	85.78	7368.93	200.16	2.21	12	360	HS	
7400	8.52	85.78	7393.74	200.39	5.25	12	360	HS	
7425	11.52	85.78	7418.35	200.71	9.59	12	0	HS	
7450	14.52	85.78	7442.71	201.12	15.21	12	0	HS	
7475	17.52	85.78	7466.74	201.63	22.09	12	360	HS	
7500	20.52	85.78	7490.37	202.23	30.21	12	0	HS	
7525	23.52	85.78	7513.54	202.92	39.56	12	0	HS	
7550	26.52	85.78	7536.19	203.7	50.1	12	360	HS	
7575	29.52	85.78	7558.26	204.56	61.81	12	0	HS	
7600	32.52	85.78	7579.68	205.51	74.66	12	0	HS	
7625	35.52	85.78	7600.4	206.54	88.61	12	0	HS	
7650	38.52	85.78	7620.36	207.65	103.62	12	0	HS	
7675	41.52	85.78	7639.5	208.83	119.65	12	360	HS	
7700	44.52	85.78	7657.78	210.09	136.66	12	360	HS	
7725	47.52	85.78	7675.14	211.41	154.6	12	0	HS	
7732	48.36	85.78	7679.83	211.8	159.78	12	0	HS	1ST BONE SPRINGS
7750	50.52	85.78	7691.53	212.8	173.42	12	0	HS	
7775	53.52	85.78	7706.91	214.25	193.07	12	0	HS	
7800	56.52	85.78	7721.24	215.76	213.49	12	0	HS	
7825	59.52	85.78	7734.48	217.32	234.64	12	0	HS	
7850	62.52	85.78	7746.59	218.93	256.45	12	0	HS	
7875	65.52	85.78	7757.54	220.59	278.86	12	0	HS	
7900	68.52	85.78	7767.3	222.28	301.81	12	0	HS	
7925	71.52	85.78	7775.84	224.01	325.24	12	360	HS	
7950	74.52	85.78	7783.15	225.77	349.08	12	360	HS	
7975	77.52	85.78	7789.18	227.56	373.27	12	0	HS	
8000	80.52	85.78	7793.94	229.36	397.74	12	360	HS	
8025	83.52	85.78	7797.42	231.19	422.43	12	0	HS	
8050	86.52	85.78	7799.59	233.02	447.27	12	0	HS	
8075	89.52	85.78	7800.45	234.86	472.18	12	0	HS	
8079.06	90.01	85.78	7800.47	235.16	476.23	0			TARGET ZONE
12083.7	90.01	85.78	7800	530	4470	0			LATERAL TD

Well will be drilled directionally to 7329' MD. At 7329' MD well will be kicked off at 12 degrees per 100' with an 8 3/4" hole to 8079' MD (7,800' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 12,084' MD (7,800' 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 12,084' MD (7,800' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be at 365' FSL and 956' FWL, 4-24S-29E. Deepest TVD in the well is 7800' in the lateral.

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

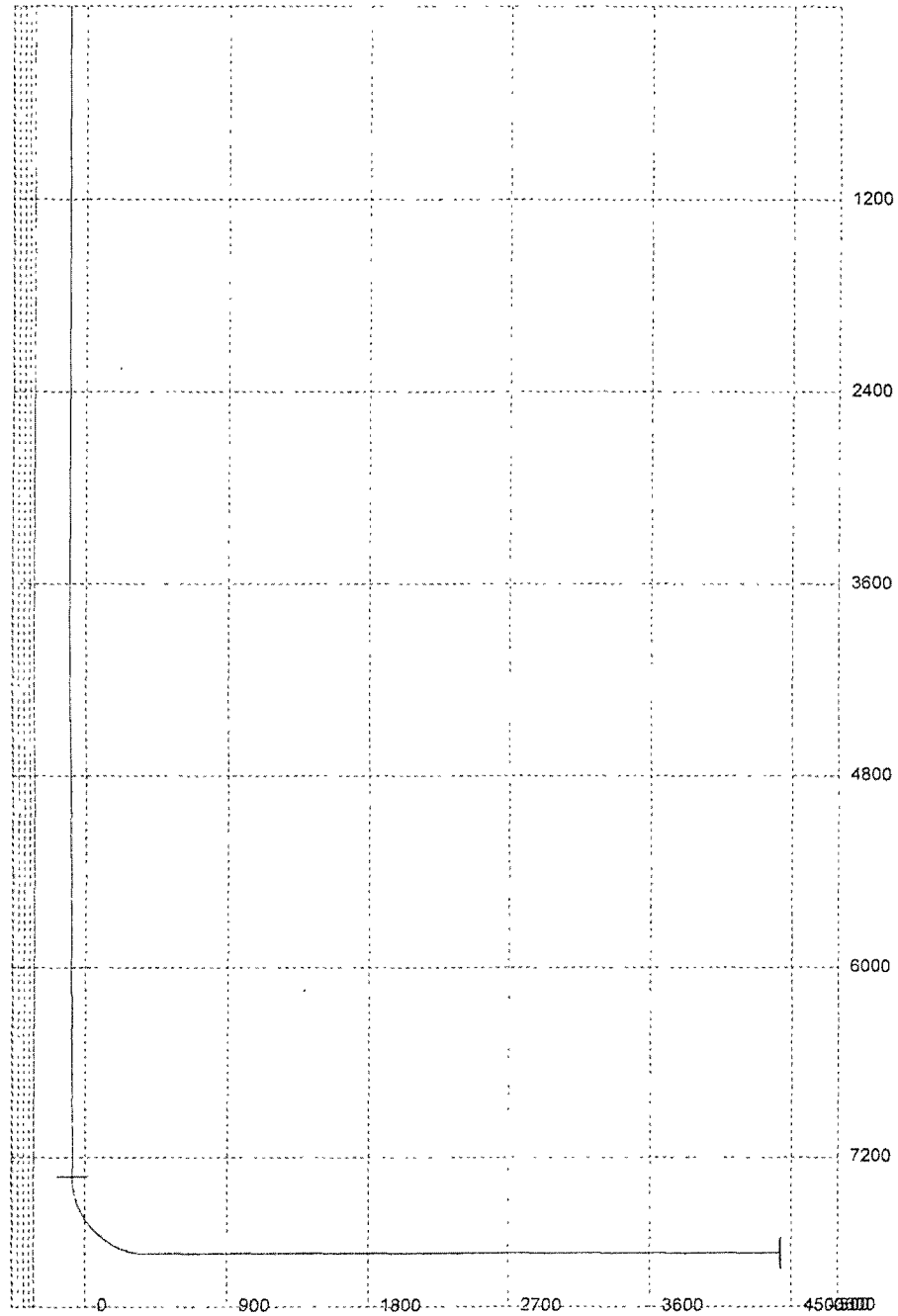
Company: Yates Petroleum Corporation

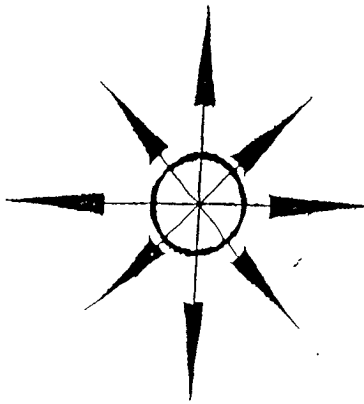
Well: Juniper BIP Federal #9H



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

Company: Yates Petroleum Corporation  
Well: Juniper BIP Federal #9H





# Yates Petroleum Corporation

Location Layout for Permian Basin

YATES PETROLEUM CORPORATION

Juniper BIP Federal. #9H

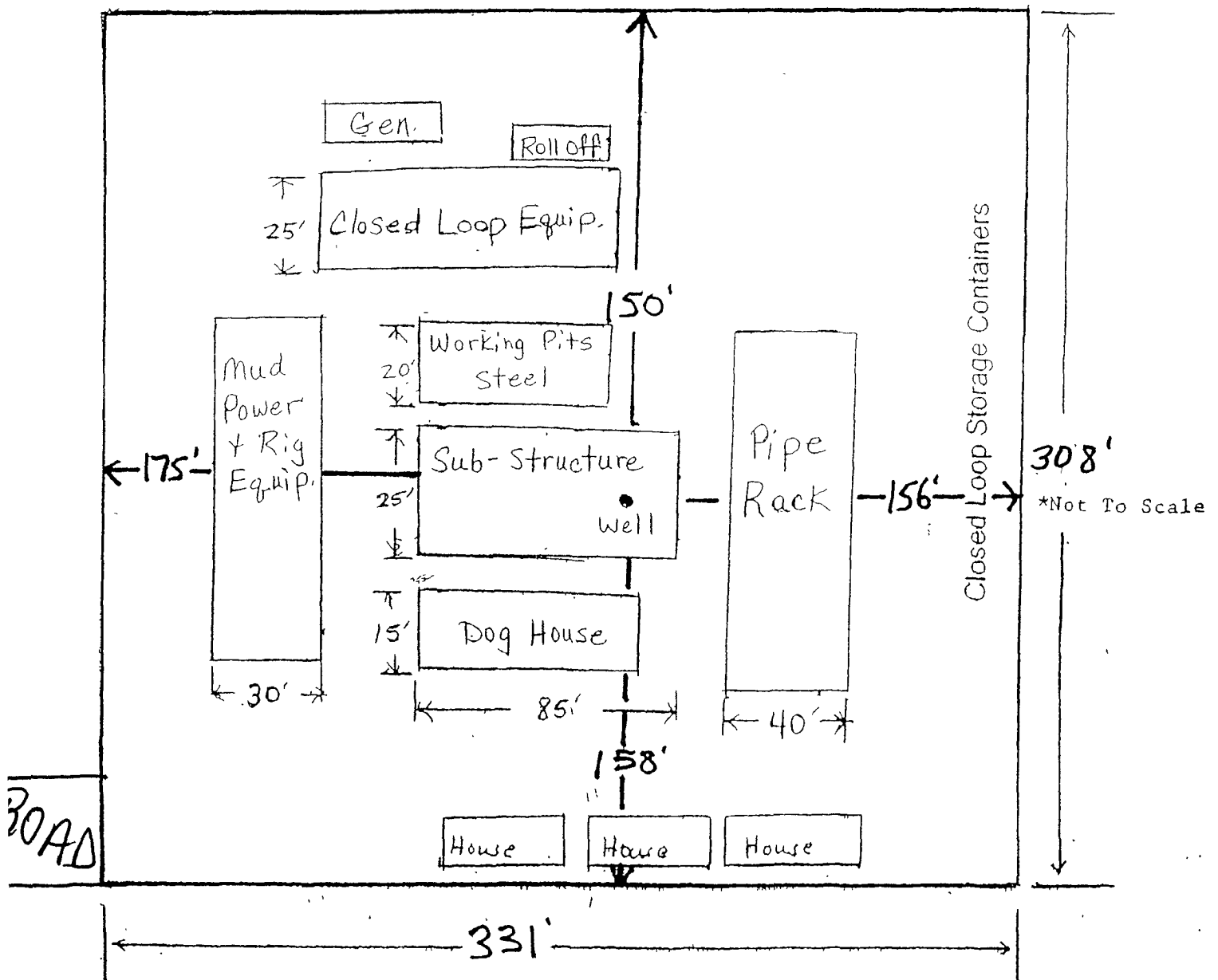
130' FSL and 480' FWL SHL

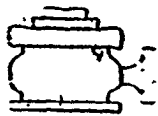
660' FSL and 330' FEL BHL

Section 4, T24S-R29E

Closed Loop Design Plan

Eddy County, New Mexico Exhibit B



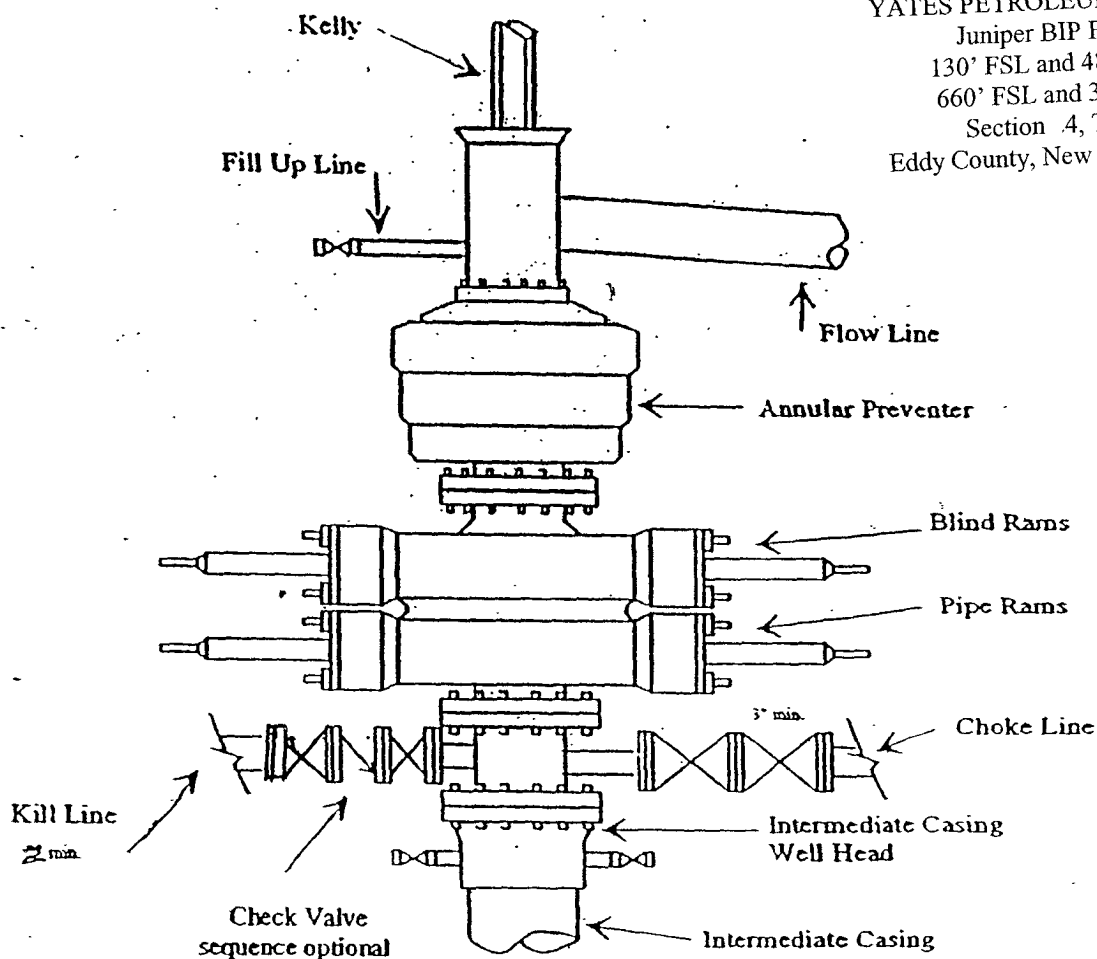


# Yates Petroleum Corporation

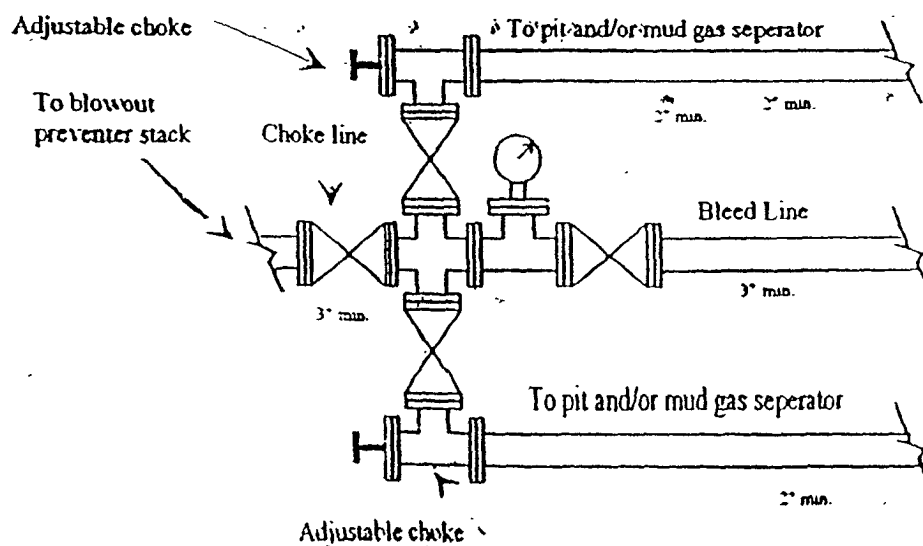
BOP-3

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

YATES PETROLEUM CORPORATION  
Juniper BIP Federal. #9H  
130' FSL and 480' FWL SHL  
660' FSL and 330' FEL BHL  
Section 4, T24S-R29E  
Eddy County, New Mexico Exhibit C

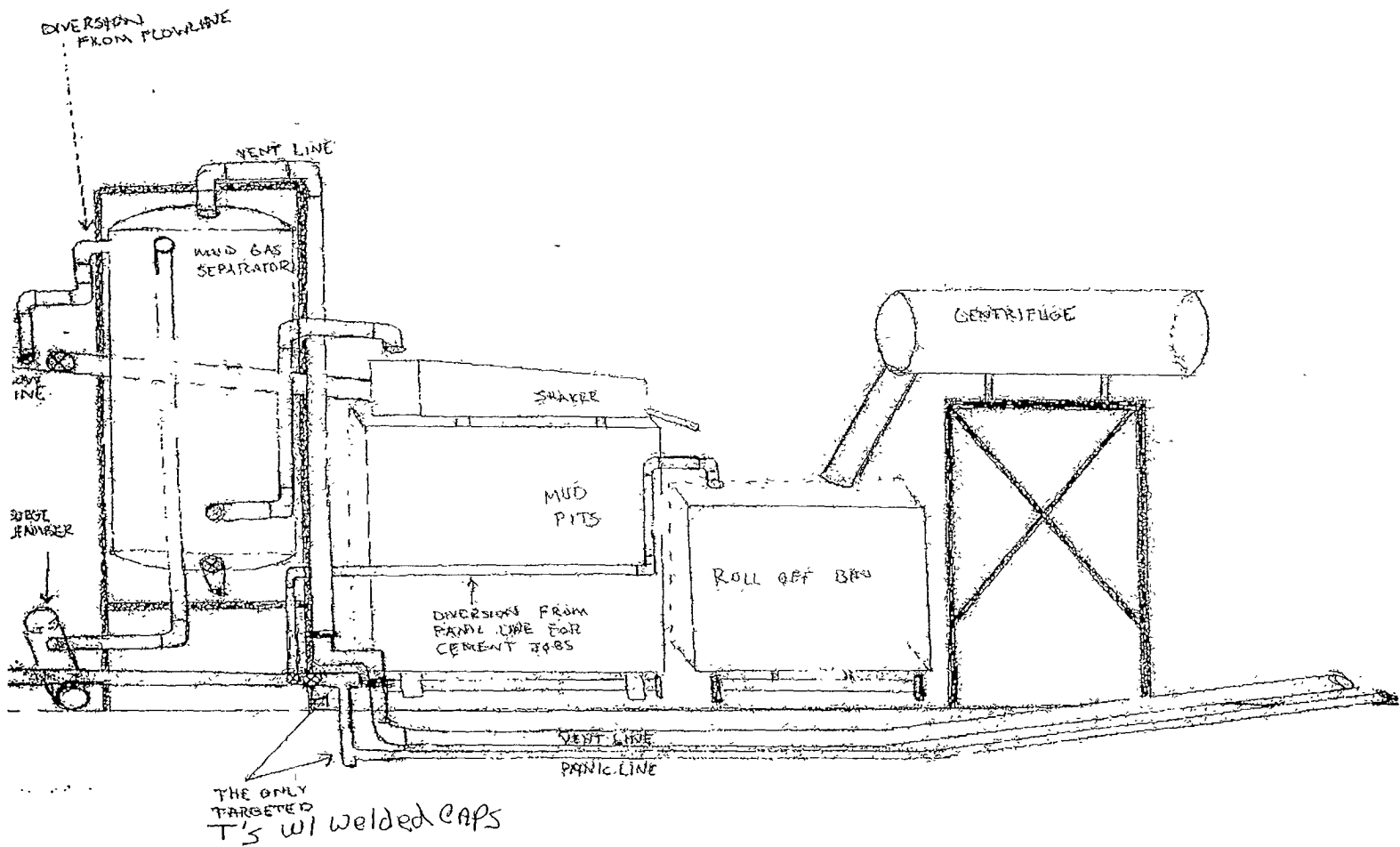


## Typical 3,000 psi choke manifold assembly with at least these minimum features



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

YATES PETROLEUM CORPORATION  
Juniper BIP Federal. #9H  
130' FSL and 480' FWL SHL  
660' FSL and 330' FEL BHL  
Section .4, T24S-R29E  
Eddy County, New Mexico Exhibit E



## **MULTI-POINT SURFACE USE AND OPERATIONS PLAN**

Yates Petroleum Corporation

Juniper BIP Federal #9H

130' FSL and 480' FWL (Surface Hole Location)

660' FSL and 330' FEL, (Bottom Hole Location)

Section 4, T24S-R29E

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 well site is located approximately 8 miles east of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

### **DIRECTIONS:**

Go east of Malaga, NM on Duarte Road (CR-720) for about 0.7 of a mile to Harroun Road (CR-745). Turn left on Harroun Road and go approximately 2.9 miles to Dog Town Road (CR-788). Turn right on Dog Town Road and go approximately 1.1 miles. Turn left here on caliche road and go approximately 0.6 of a mile. Turn left here on lease road going to the north and go approximately 0.6 of a mile or to a point where an east/west powerline crosses the road. Turn right here and follow the existing lease road for approximately 0.3 of a mile. Continue following the lease road to the south for approximately 300 feet. The new access road will start here going northeast for approximately 0.1 of a mile to the southwest corner of the proposed well location.

### **2. PLANNED ACCESS ROAD:**

- A. The proposed new access road will be approximately 0.1 of a mile in length from the point of origin to the southwest 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 may be 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 production facilities on this lease at the present time. However, if production facilities are needed for this well they will be placed on the location as determined by Yates' Production Department. Placement has not been determined at this 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 331' x 308'. 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. At the time interim remediation is proposed Yates will furnish the BLM with a Sundry Notice detailing the remediation plans.
- 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.



**11. SURFACE OWNERSHIP:**

Surface Estate: Managed by the Bureau of Land Management, 620 East  
Greene Street, Carlsbad, NM 88201

Mineral Estate: Bureau of Land Management, 620 East Greene Street,  
Carlsbad, NM 88201

**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  
Juniper BIP Federal #9H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has 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 I, or the company I represent, am 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 22nd day of September 2009

Signature 

Name Cy Cowan

Position Title Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (505) 748-4372

Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor

Address (if different from above) Same as above.

Telephone (if different from above) (505) 748-4221

E-mail (optional) cy@yates petroleumcorporation.com

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum corporation
LEASE NO.:	NM99034
WELL NAME & NO.:	Juniper BIP Federal # 9H
SURFACE HOLE FOOTAGE:	130' FSL & 480' FWL
BOTTOM HOLE FOOTAGE:	660' FSL & 330' FEL
LOCATION:	Section 4, T. 24 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**
  - Redirection of drainages
- ☐ **Construction**
  - Notification
  - Topsoil
  - Reserve Pit
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Secretary's Potash
  - Med Cave/Karst
  - Logging Requirements
- ☐ **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)**

**CONSTRUCT A DITCH AND BERM ACROSS THE NORTH END OF THE PROPOSED WELL PAD AND REDIRECT THE DRAINAGES AROUND THE LOCATION ON THE WEST SIDE.**

## **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 to be stripped is approximately 6 inches in depth. 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**

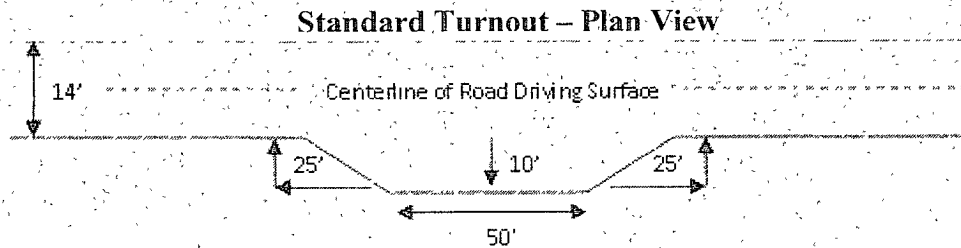
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

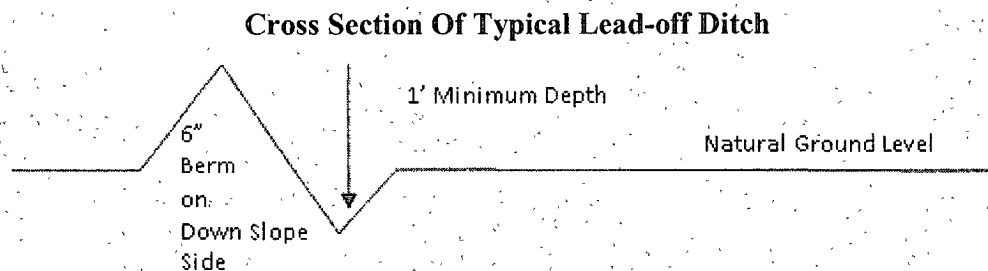
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### **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.

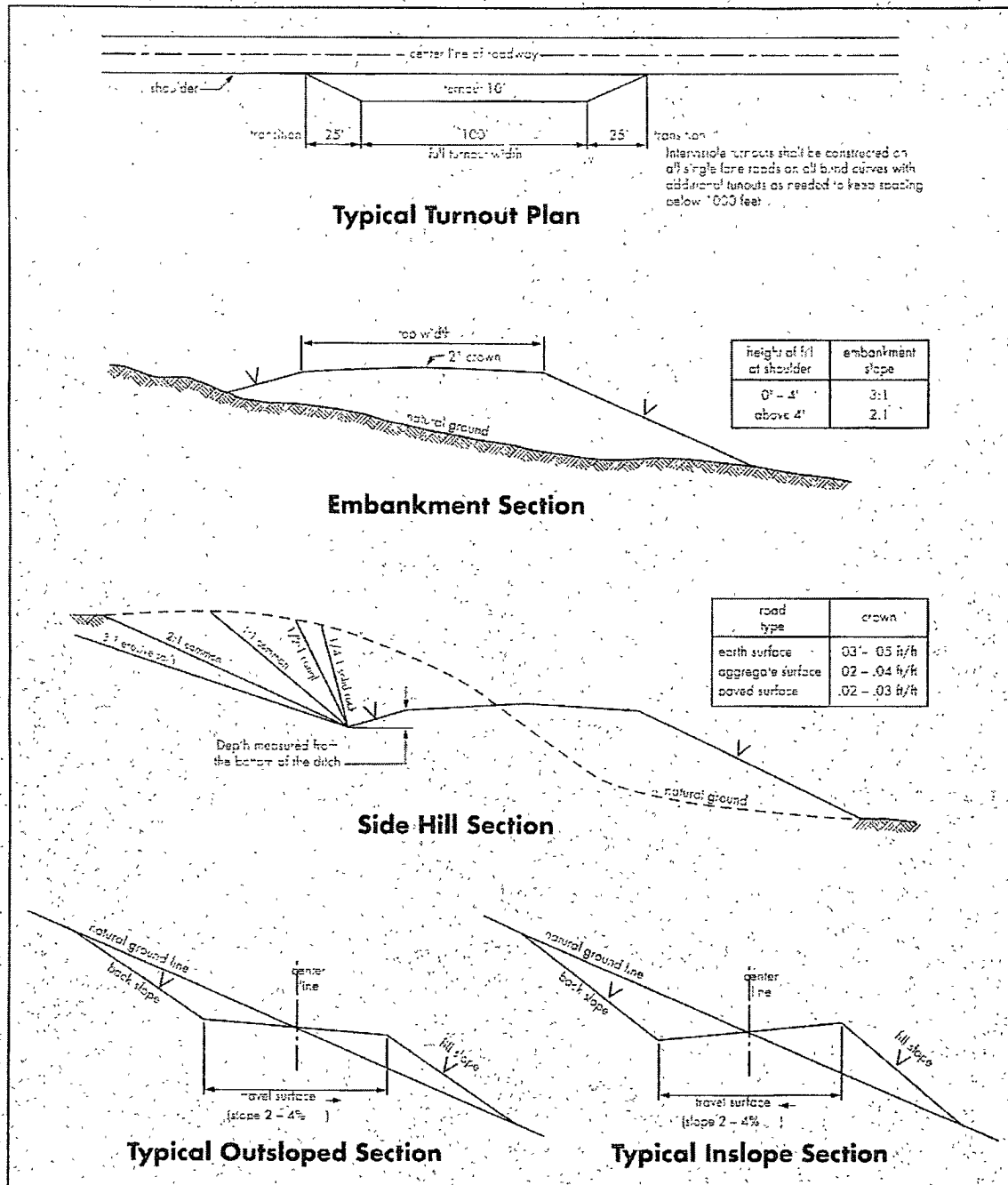
The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**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 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.**

**Secretary's Potash.**

**Medium cave/karst.**

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

1. The 13-3/8 inch surface casing shall be set at **approximately 600 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **If the salt is encountered at a shallower depth, the casing must be set 25' above the top of the salt.**
  - 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.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Secretary's Potash.**

**If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.**

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

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- a. First stage to DV tool, cement shall:
    - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.
  - 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:
- ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

**If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the 7" casing must come to surface.**

**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 come to 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. 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.

### D. DRILL STEM TEST

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

**CRW 102109**

## **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 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  
(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.

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.