

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

LM

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

OCD-ARTESIA

MAR 30 2009

5 Lease Serial No

NM-102034

6 If Indian, Allottee or Tribe Name

N/A

7 If Unit or CA/Agreement, Name and/or No

N/A

1 Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2 Name of Operator

Yates Petroleum Corporation 025575

3a Address

105 South Fourth Street, Artesia, NM 88210

3b Phone No (include area code)

(505) 748-1471

4 Location of Well (Footage, Sec, T, R, M, or Survey Description)

510' FSL &amp; 330' FEL, Surface Hole Location

330' FNL and 900' FEL Bottom Hole Location

Section 5, T26S-R30E

8 Well Name and No

Banjo BNO Federal #1

9. API Well No

30-015-36923

10 Field and Pool, or Exploratory Area

Wildcat Bone Spring

11 County or Parish, State

Eddy County, NM

## 12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	option to drill
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	a horizontal well

13 Describe Proposed or Completed Operation Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports must be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection )

Yates Petroleum Corporation wishes to change the depth of the vertical hole to 8600' at this point we will consider plugging the well back to drill a horizontal lateral Plans will be to kick off the vertical hole at approximately 7753' and directionally drill at a 12 degrees per 100' with a 7 7/8" hole to 12,502' MD (8230' TVD) where 5 1/2" casing will be set and cemented into place. Penetration point of producing zone will be 963' FSL and 391' FEL of Section 5, T26S-R30E The deepest TVD of the well will be 8600' The deepest TVD in the lateral will be 8230' If we decide not to drill the horizontal lateral then 5 1/2" will be run to 8600' cemented in place as described in the attached casing and cementing design Please note attached prognosis for both the vertical and horizontal drilling plans.

14 I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Cy Cowan

Title

Regulatory Agent / Land Department

Signature

Date

March 16, 2009

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Ryan D. Hall

Title

Petroleum Engineer

Date

MAR 28 2009

Conditions of approval, if any, are attached Approval of this notice 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 conduct operations thereon

Office

CFO

Title 18 U.S.C Section 1001, make it a crime for any person knowingly and willfully 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 reverse)

CARLSBAD CONTROLLED WATER BASIN

Approval Subject to General Requirements  
& Special Stipulations AttachedSEE ATTACHED FOR  
CONDITIONS OF APPROVALWitness Surface &  
Intermediate Casing

JWR

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

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 30-015-36923	Pool Code	Pool Name Wildcat Bone Springs
Property Code 37586	Property Name BANJO "BNO" FEDERAL	Well Number 1
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3097'

Surface Location

UL or lot No. P	Section 5	Township 26 S	Range 30 E	Lot Idn	Feet from the 510	North/South line SOUTH	Feet from the 330	East/West line EAST	County EDDY
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Bottom Hole Location If Different From Surface

UL or lot No. A	Section 5	Township 26S	Range 30E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 900	East/West line EAST	County EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

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

	Project Area	<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><u>Clifton R. May</u> 3/9/09 Signature Date</p> <p>Clifton R. May 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>DECEMBER 18, 2008 Date Surveyed</p> <p><u>GARY L. JONES</u> Signature &amp; Seal Professional Surveyor</p> <p>W.O. Jones Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
	Producing Zone	
	Penetration Point 330' FNL & 900' FEL	
	<p><b>SURFACE LOCATION</b> Lat - N32°03'57.19" Long - W103°53'45.37" N.: 387980.373 E.: 676831.385 (NAD-83)</p>	

YATES PETROLEUM CORPORATION  
Banjo BNO Federal #1  
510' FSL and 330' FEL Surface Hole Location  
Section 5-T26S-R30E  
Eddy County, New Mexico

**VERTICAL INFORMATION**

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

Rustler	950'	Brushy Canyon	5650'	Oil
Base of Salt	2945'	Bone Spring	8150'	Oil
Bell Canyon	3480'	TD	8600'	
Cherry Canyon	4350'	Oil		

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

Water: 170'  
Oil or Gas: Oil Zones: 4350', 5650', 8222' & 8482'.

3. Pressure Control Equipment: BOPE will be installed on 8 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	0-780'	780'
11"	8 5/8"	32#	J-55	ST&C	0-100'	100'
11"	8 5/8"	24#	J-55	ST&C	100'-2200'	2100'
11"	8 5/8"	32#	J-55	ST&C	2200'-3550'	1350'
7 7/8"	5 1/2	17#	J-55	LT&C	0-100'	100'
7 7/8"	5 1/2	15.5#	J-55	LT&C	100'-7400'	7300'
7 7/8"	5 1/2	17#	J-55	LT&C	7400'-8600'	1200'

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

B. CEMENTING PROGRAM:

Surface Casing: Lead with 425 sacks C Lite + 2% CaCL<sub>2</sub> (Wt. 12.50 Yld 2.00). Tail in 200 sacks Premium Pecos Lite w/CaCl<sub>2</sub> (WT 14.80 YLD 1.35) +2% CaCL<sub>2</sub>. TOC surface.

Intermediate Casing: 750 sacks of Hal Lite Premium+C w/ 2% CaCL<sub>2</sub> (WT 12.50 YLD 1.97). Tail in with 200 sacks Premium Pecos Lite w/ 2% CaCl<sub>2</sub> (WT 14.80 YLD 1.35). TOC surface

Banjo BNO Federal #1  
Vertical Drilling Plan Page Two

Production Casing

Stage One: 550 sx Super H (WT 13.00 YLD 1.66). TOC. 6000'. DV Tool set approximately 6000'.

Stage Two: Lead with 375 sacks Hal Lite Premium+C (WT 12.4 YLD 1.98).  
. Tail in with 200 sacks Super H (WT 13.00 YLD 1.66). TOC 2900'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-780'	Fresh Water Gel	8.60-9.20	32-34	N/C
780'-3400'	Brine Water	10.00-10.20	28-28	N/C
3400'-3550'	Brine Water	8.70-9.30	28-28	N/C
3400'-3550'	Brine Water	8.70-9.30	28-28	N/C
3550'-8400'	Cut Brine	8.70-9.30	28-28	N/C
8400'-8600'	Gel Starch	8.70-9.30	32-36	<10 cc

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

7. EVALUATION PROGRAM:

Samples: Thirty foot samples to 3000'. Every 10' from 3000' to TD

Logging: Platform Hals; CMR;

Coring: None anticipated

DST's: None Anticipated

Mudlogging: Yes: Start by 300' to pick top of the Rustler in order to set casing 25' into the Rustler.  
Mudlogger will also pick top of Lamar in order to set intermediate casing a minimum of 25' into the top of the Lamar formation.

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

Maximum Anticipated BHP:

0'-350' 240 PSI

350'-3550' 1880 PSI

3550'-8600' 4160 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

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.

YATES PETROLEUM CORPORATION  
Banjo BNO Federal #1  
510' FSL and 330' FEL Surface Hole Location  
330' FNL & 900' FEL Bottom Hole Location  
Section 5-T26S-R30E  
Eddy County, New Mexico

HORIZONTAL INFORMATION

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

Rustler	950'	Bone Spring	8222'-Oil
Base of Salt	2945'	Pay Zone	8482'-Oil
Bell Canyon	3480'	TVD	8600'
Cherry Canyon	4350 Oil	TMD	12502'
Brushy Canyon	5650'-Oil		
2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:
 

Water: 170'

Oil or Gas: Oil Zones: 4350', 5650', 8222' & 8482'.
3. Pressure Control Equipment: BOPE will be installed on 8 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	0-780'	780'
11"	8 5/8"	32#	J-55	ST&C	0-100'	100'
11"	8 5/8"	24#	J-55	ST&C	100-2200'	2100'
11"	8 5/8"	32#	J-55	ST&C	2200-3550'	1350'
7 7/8"	5.5"	17#	HCP- 110	LT&C	0'-12502'	12502'

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

B. CEMENTING PROGRAM:

Surface Casing: Lead with 425 sacks C Lite + 2% CaCL<sub>2</sub> (Wt. 12.50 Yld 2.00). Tail in 200 sacks Premium Pecos Lite w/CaCl<sub>2</sub> (WT 14.80 YLD 1.35) +2% CaCL<sub>2</sub>. TOC surface.

Intermediate Casing: 750 sacks of Hal Lite Premium+C w/ 2% CaCL<sub>2</sub> (WT 12.50 YLD 1.97). Tail in with 200 sacks Premium Pecos Lite w/ 2% CaCl<sub>2</sub> (WT 14.80 YLD 1.35). TOC surface

Production Casing: Stage One: 1450 sacks 50/50/10 Poz H (WT 13.20 YLD 1.57).  
TOC. 6000'. DV Tool set approximately 6000'  
Stage Two: Lead with 375 sacks Hal Lite Premium+C (WT 12.45 YLD 1.98). Tail  
in with 200 sacks Super H (WT 13.00 YLD 1.66). TOC 2900'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-760'	Fresh Water Gel	8.60-9.20	32-34	N/C
760'-3550'	Brine Water	10.00-10.20	28-28	N/C
3550'-8600'	Cut Brine	8.70-9.30	28-28	N/C
7753'-12502'	Cut Brine(Lateral Section)	8.70-9.30	28-28	N/C

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

7. EVALUATION PROGRAM:

Samples: Thirty foot samples to 3000'. Every 10' from 3000' to TD

Logging: Platform Hals; CMR;

Coring: None anticipated

DST's: None Anticipated

Mudlogging: Yes: Start by 300' to pick top of the Rustler in order to set casing 25' into the Rustler.  
Mudlogger will also pick top of Lamar in order to set intermediate casing a minimum  
of 25' into the top of the Lamar formation.

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

Maximum Anticipated BHP:

0'-350'	240 PSI
350'-3550'	1880 PSI
3550'-8600'	4160 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

Maximum Bottom Hole Temperature: 150 F

9. ANTICIPATED STARTING DATE:

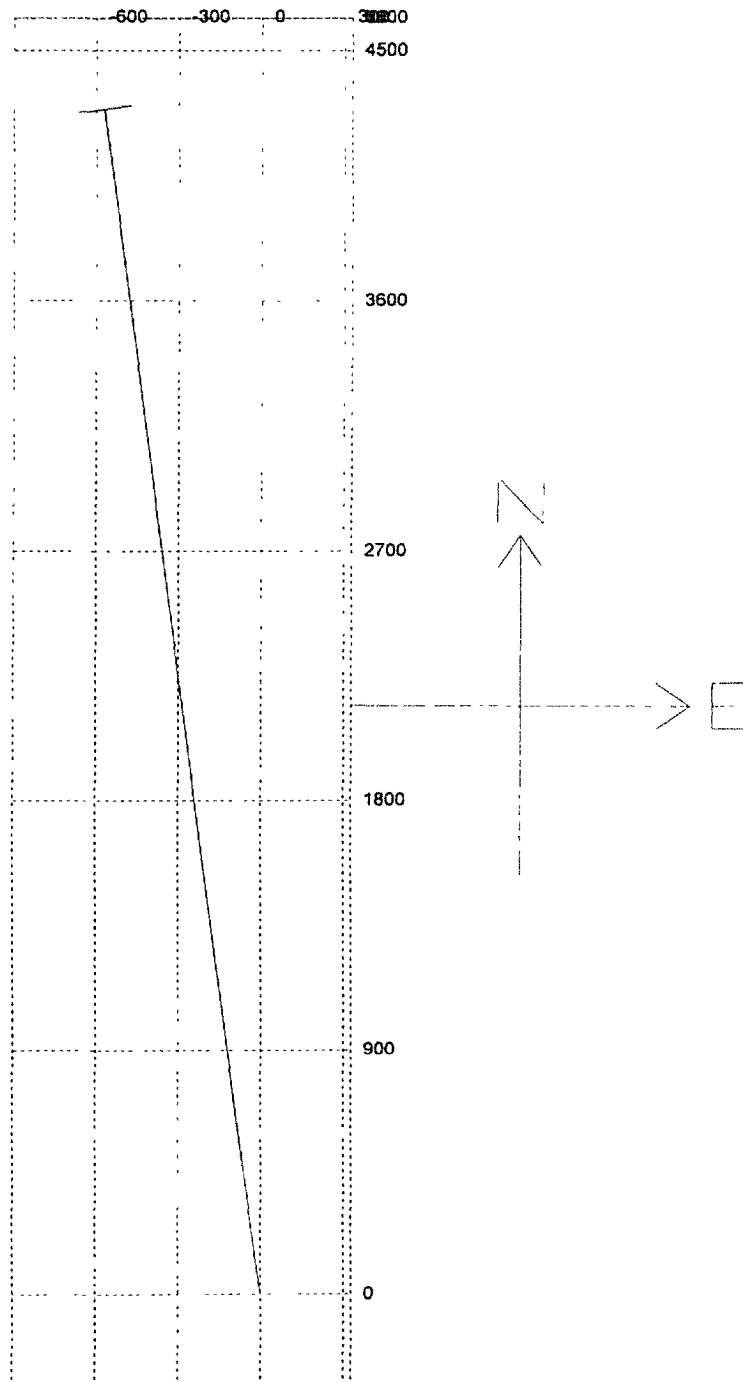
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 20 days.

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			
780	0	0	780	0	0	0			RUSTLER
850	0	0	850	0	0	0			TOP OF SALT
2,945	0	0	2,945	0	0	0			BASE OF SALT
3,480	0	0	3,480	0	0	0			BELL CANYON
4,350	0	0	4,350	0	0	0			CHERRY CANYON
5,650	0	0	5,650	0	0	0			BRUSHY CANYON
7753	0	0	7753	0	0	12	353	GN	KOP
7775	2.64	352.68	7774.99	0.5	-0.06	12	360	HS	
7800	5.64	352.68	7799.92	2.29	-0.29	12	360	HS	
7825	8.64	352.68	7824.73	5.37	-0.69	12	0	HS	
7850	11.64	352.68	7849.33	9.74	-1.25	12	0	HS	
7875	14.64	352.68	7873.68	15.38	-1.97	12	360	HS	
7900	17.64	352.68	7897.69	22.27	-2.86	12	0	HS	
7925	20.64	352.68	7921.3	30.4	-3.9	12	360	HS	
7950	23.64	352.68	7944.46	39.74	-5.1	12	0	HS	
7975	26.64	352.68	7967.09	50.27	-6.45	12	0	HS	
8000	29.64	352.68	7989.13	61.97	-7.96	12	0	HS	
8025	32.64	352.68	8010.52	74.79	-9.6	12	0	HS	
8050	35.64	352.68	8031.21	88.7	-11.39	12	0	HS	
8075	38.64	352.68	8051.14	103.67	-13.31	12	0	HS	
8100	41.64	352.68	8070.25	119.66	-15.36	12	0	HS	
8125	44.64	352.68	8088.49	136.61	-17.54	12	0	HS	
8150	47.64	352.68	8105.81	154.49	-19.83	12	360	HS	
8175	50.64	352.68	8122.17	173.24	-22.24	12	360	HS	
8200	53.64	352.68	8137.51	192.81	-24.75	12	0	HS	
8222	56.28	352.68	8150.14	210.68	-27.05	12	0	HS	1ST BONE SPRINGS
8225	56.64	352.68	8151.79	213.16	-27.36	12	0	HS	
8250	59.64	352.68	8164.99	234.22	-30.07	12	360	HS	
8275	62.64	352.68	8177.05	255.93	-32.86	12	360	HS	
8300	65.64	352.68	8187.96	278.24	-35.72	12	0	HS	
8325	68.64	352.68	8197.67	301.09	-38.65	12	0	HS	
8350	71.64	352.68	8206.16	324.41	-41.65	12	360	HS	
8375	74.64	352.68	8213.41	348.14	-44.69	12	0	HS	
8400	77.64	352.68	8219.4	372.21	-47.78	12	0	HS	
8425	80.64	352.68	8224.11	396.56	-50.91	12	360	HS	
8450	83.64	352.68	8227.53	421.12	-54.06	12	0	HS	
8475	86.64	352.68	8229.64	445.82	-57.23	12	0	HS	
8500	89.64	352.68	8230.46	470.6	-60.42	12	360	HS	
8503.06	90.01	352.68	8230.47	473.63	-60.8	0			BONE SPRINGS PAY
12501.97	90.01	352.68	8230	4440	-570	0			LATERAL TD

Pilot hole drilled vertically to 8600'. If it is decided to drill lateral, then well will be plugged back then kicked off at approx. 7753' and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 12,502' MD (8,230' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 983' FSL and 391' FEL, 5-26S-30E. Deepest TVD in the well is 8600' in the pilot hole. Deepest TVD in the lateral is 8230'. If it is decided not to drill lateral, then 5 1/2" casing will be run to 8,600' and cement tied back to previous casing as per included casing/cement design.

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

Company: Yates Petroleum Corporation  
Well: Banjo BNO Federal #1H

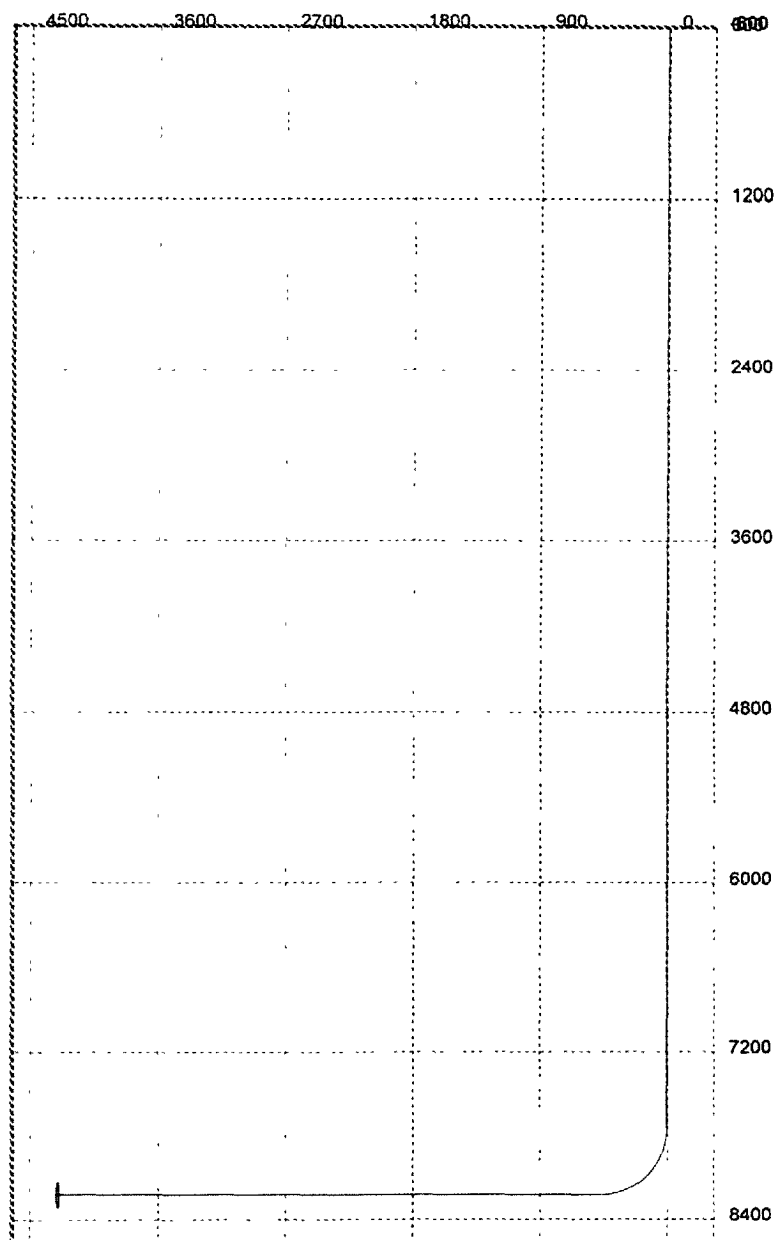




# 3D<sup>s</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation

Well: Banjo BNO Federal #1H



## PECOS DISTRICT CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Yates Petroleum Corporation</b>
<b>LEASE NO.:</b>	<b>NM 102034</b>
<b>WELL NAME &amp; NO.:</b>	<b>Banjo BNO Federal #1</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>510' FSL &amp; 330' FEL</b>
<b>BOTTOM HOLE FOOTAGE</b>	<b>330' FNL &amp; 900' FEL (If drilled as horizontal)</b>
<b>LOCATION:</b>	<b>Section 5, T. 26 S., R 30 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

### I. 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 this section, 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.

## **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.**

**Medium cave/karst.**

**Possible Rustler debris flow.**

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

- 1. The 13-5/8 inch surface casing shall be set at approximately 1000 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If the Salado is penetrated, the operator should set surface casing approximately 25 feet above the Salado Formation. Fresh water mud to be used to setting depth. Additional cement will be required due to additional depth.**
  - 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 8-5/8 inch intermediate casing shall be set at approximately 3550 feet (a minimum of 25 feet into the Lamar) and cemented to surface.**

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

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

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 above DV tool, cement shall:

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

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **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.

**RGH 032809**