

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.  
NM-65415 & NM-61358

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE** - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Yates Petroleum Corporation

3a. Address  
105 South 4th St., Artesia, NM 88210

3b. Phone No. (include area code)  
575-748-4347

7. If Unit of CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
Juanel AJE Federal #1H

9. APL Well No.  
30-015-39828

10. Field and Pool or Exploratory Area  
Lost Tank Delaware

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Unit Ltr P, 690' FSL & 330' FEL, Section 24-21S-31E, Surface; Unit Ltr J, 2310' FSL & 1980' FEL, Section 13-21S-31E, Bottom

11. County or Parish, State  
Eddy County, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 type="checkbox"/> Other Change name and change bottom hole footages
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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 name of this well from the Wolf AJA Federal #13H to the Juanel AJE Federal Com #1H. (39593)

The surface hole location will remain the same at 690' FSL & 330' FEL in Section 24-T21S-R31E. The bottom hole will now become 2310' FSL and 1980' FEL in Section 13-T21S-R31E.

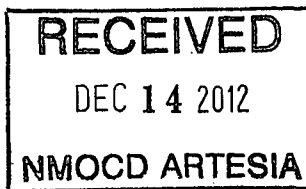
A new drilling plan is attached.

Dedicated acreage will be Sec. 13: W/2SE; Sec. 24: W2NE, NWSE.

BLM Bond No. NMB000434

Surety Bond No. B002953

Individual Bond No. NMB000920



Accepted for record  
NMOC D  
12/14/2012

SUBJECT TO LIKE  
APPROVAL BY STATE

New COA drafted. See Attached

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Clifton May

Title Land Regulatory Agent

Signature

Clifton May

Date

11/1/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Office

APPROVED

DEC 12 2012

BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, 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 page 2)

## 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 15, 2009

Submit one copy to appropriate  
District Office

## OIL CONSERVATION DIVISION

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

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Lost Tank Delaware
Property Code	Property Name	Well Number
	JUANEL AJE FEDERAL COM	1H
OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORP.	3634'

## Surface Location

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

## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	13	21 S	31 E		2310	SOUTH	1980	EAST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
200 Ac.									

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><u>PROPOSED BOTTOM HOLE LOCATION</u>          Lat - N 32°28'39.74"          Long - W 103°43'45.66"          NMSPCE- N 538046.957          E 727587.662          (NAD-83)</p> <p>PROJECT AREA →</p> <p>PRODUCING ZONE →</p> <p>PENETRATION POINT →</p> <p>2136' FSL          1689' FEL          24-21S-31E</p> <p><u>SURFACE LOCATION</u>          Lat - N 32°27'31.45"          Long - W 103°43'26.42"          NMSPCE- N 531155.126          E 729276.452          (NAD-83)</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 or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Clifton May</i> 4/1/12          Signature Date</p> <p>Clifton 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>Date Surveyed          Signature &amp; Seal of Professional Surveyor          7977</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
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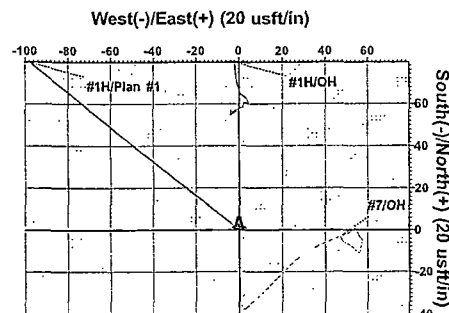
PROJECT DETAILS: Eddy County (NAD 83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level  
 Local North: Grid



Azimuths to Grid North  
 True North: -0.33°  
 Magnetic North: 7.18°  
 Magnetic Field  
 Strength: 48654.2snT  
 Dip Angle: 60.37°  
 Date: 9/19/2012  
 Model: IGRF200510

**PATHFINDER**  
 A Schlumberger Company

Project: Eddy County (NAD 83)  
 Site: Juanel AJE Federal Com  
 Well: #1H  
 Wellbore: OH  
 Plan: Plan #1 (#1H/OH)

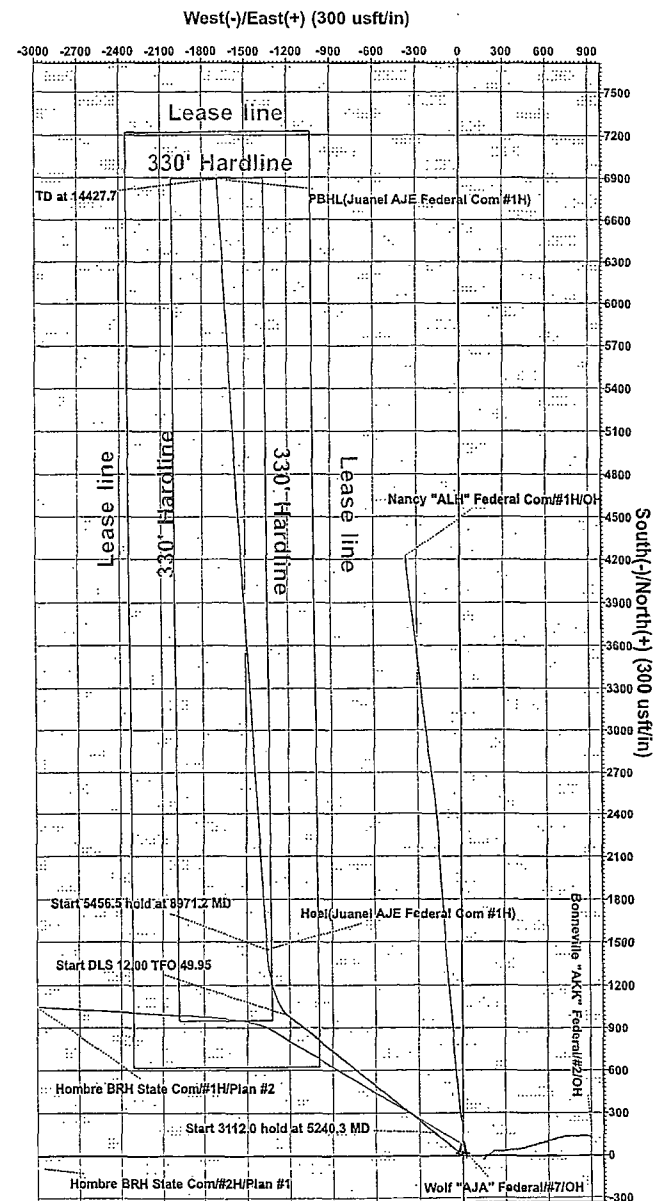
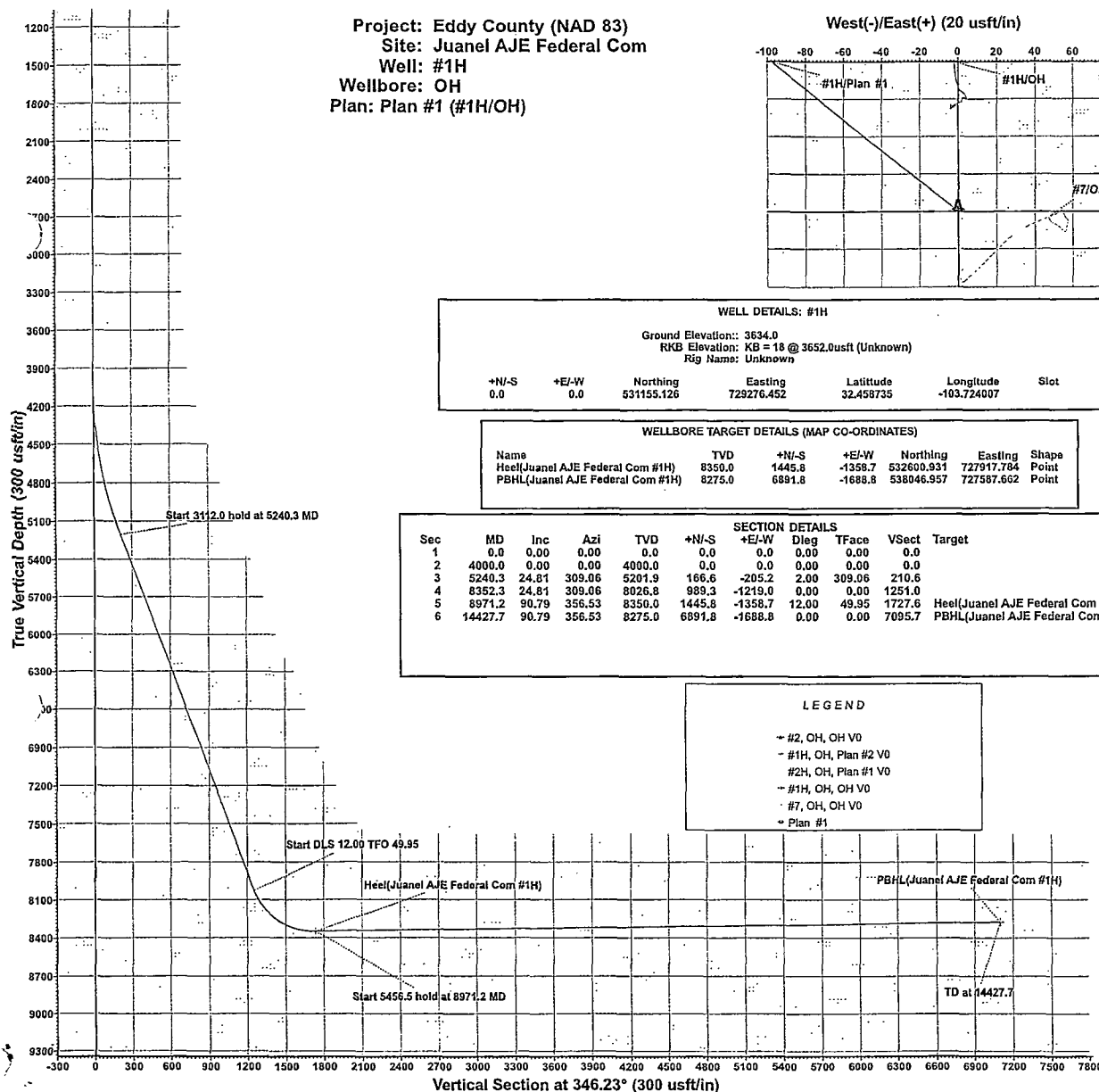


WELL DETAILS: #1H						
Ground Elevation: 3634.0						
RKB Elevation: KB = 18 @ 3652.0usft (Unknown)						
Rig Name: Unknown						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	531155.126	729276.452	32.458735	-103.724007	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Heel(Juanel AJE Federal Com #1H)	8350.0	1445.8	-1358.7	532600.931	727917.784	Point
PBHL(Juanel AJE Federal Com #1H)	8275.0	6891.8	-1688.8	538046.957	727587.662	Point

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
3	5240.3	24.81	309.06	5201.9	166.6	-205.2	2.00	309.06	210.6	
4	8352.3	24.81	309.06	8026.8	989.3	-1219.0	0.00	0.00	1251.0	
5	8971.2	90.79	356.53	8350.0	1445.8	-1358.7	12.00	49.95	1727.6	Heel(Juanel AJE Federal Com #1H)
6	14427.7	90.79	356.53	8275.0	6891.8	-1688.8	0.00	0.00	7095.7	PBHL(Juanel AJE Federal Com #1H)

LEGEND	
~ #2, OH, OH V0	
~ #1H, OH, Plan #2 V0	
~ #2H, OH, Plan #1 V0	
~ #1H, OH, OH V0	
~ #7, OH, OH V0	
~ Plan #1	



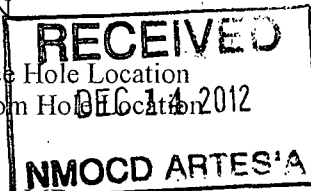
Plan: Plan #1 (#1H/OH)

Created By: Sam Bille Date: 14:19, September 19 2012

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Don't Print This  
 Print Only  
 Date: 9/19/2012  
 Time: 14:19

YATES PETROLEUM CORPORATION  
 Juanel AJE Federal Com #1H  
 690' FSL and 330' FEL, Section 24-T21S-R31E, Surface Hole Location  
 2310' FSL and 1980' FEL, Section 13-T21S-R31E, Bottom Hole Location  
 Eddy County, New Mexico



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

Rustler	830'	Cherry Canyon	5444'-Oil
Top of Salt	1152'	Brushy Canyon	6872'-Oil
Bottom of Salt	4200'	Brushy Canyon Marker	8444'
Bell Canyon	4509'-Oil	Target Basil Sand	8971'
		TD	14428'

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

Water: 150'

Oil or Gas: Oil Zones: 4509', 5444', 6872' & 8971'.

3. Pressure Control Equipment: A BOP with a minimum opening of 13 5/8" will be installed on the 13 3/8" and the 9 5/8" casing rated for 5000 psi. BOP will be tested to 5000 psi and held for thirty (30) minutes. 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

*see COA*

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
17 1/2"	13 3/8"	48#	J-55/Hybrid	ST&C	0-855' <i>900'</i>	<i>855'</i>
12 1/4"	9 5/8"	40#	HCK-55	LT&C	0-80'	80'
12 1/4"	9 5/8"	36#	J-55	LT&C	80'-3200'	3120'
12 1/4"	9 5/8"	40#	HCK-55	LT&C	3200'-4400'	1200'
8 3/4"	5 1/2"	17#	P-110	Buttress	0'-8971'	8971'
8 1/2"	5.1/2"	17#	P-110	Buttress	8971'-14428'	5457'

Hole will be drilled vertically to 4400'. The well will then be drilled on a tangent from 4400' to 8352' MD. The well will then be kicked off at approximately 8353' MD and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 8971' MD (8350' TVD). At this point, the hole size will be reduced to 8 1/2" and drill to 14428' MD (8275' TVD). 5 1/2" casing will be set and cemented in three stages with a DV/Packer Stage tool set approximately 6300'-6800' and 4400'-4930' (Cement will be distributed proportionally). Penetration point encountered at 2136' FSL and 1689' FEL, 24-21S-31E. Deepest TVD in the well is 8350' in the lateral.

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

B. CEMENTING PROGRAM:

Surface Casing: Lead with 613 sacks C with CaCl<sub>2</sub> (Wt. 13.50 Yld 1.71). Tail in with 100 sacks C with CaCl<sub>2</sub> (Wt. 14.80 Yld. 1.34). Cement designed with 100% excess. TOC surface.

Intermediate Casing: Lead with 1240 sacks of 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in with 200 sacks C with CaCl<sub>2</sub> (Wt. 14.80 Yld. 1.34). Cement designed with 100% excess. TOC surface

Production Casing: Cement to be done in three stages with DV/Packer Stage tools at approx. 6300'-6800' and 4400'-4900'.

4450'  
Stage One: Cement with 445 sacks 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in 1340 sacks of Pecos VILt with D112, Fluid Loss, 0.4%; D151, Calcium Carbonate, 22.5 lb/sack; D174, Extenter, 1.5 lb/sack; D177, Retarder, 0.01 lb/sack; D800, Retarder, 0.6 lb/sack; and D46, Antifoam Agent, 0.15 lb/sack (Wt. 13.00 Yld. 1.41). Cement designed with 35% excess. TOC 6300'.

Stage Two: Lead with 245 sacks 35:65:6PzC (Wt. 12.50 Yld 2.00). Tail in with 100 sacks Pecos Valley Lite with D112, Fluid Loss, 0.4%; D151, Calcium Carbonate, 22.5 lb/sack; D174, Extenter, 1.5 lb/sack; D177, Retarder, 0.01 lb/sack; D800, Retarder, 0.6 lb/sack; and D46, Antifoam Agent, 0.15 lb/sack (Wt. 13.00 Yld. 1.41). Cement designed with 35% excess. TOC 4450'.

Stage Three: Lead with 690 sacks 35:65:6PzC (Wt. 12.50 Yld 2.00). Tail in with 100 sacks of C with CaCl<sub>2</sub> (Wt. 14.80 Yld. 1.34). Cement designed with 35% excess. TOC is surface.

#### 6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

Interval	Type	Weight	Viscosity	Fluid Loss
0-855' 900'	Fresh Water	8.60-9.20	28-35	N/C
855'-4400'	Brine Water	10.00-10.20	28-32	N/C
4400'-14428'	Cut Brine	8.70-9.00	32-36	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: 30' samples to 4400'. 10' samples from 4400' to TD. Mudloggers out from under surface casing to TD.

Logging: Gamma Ray Neutron-30 degrees into the curve to Surface. Laterolog- 30 degrees into the curve to bottom of intermediate casing (4400'). CMR-30 degrees into the curve to bottom of intermediate casing (4400'). MWD-GR-Kick off point (8352' MD) to TD.

Coring: None anticipated

DST's: None Anticipated

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

Maximum Anticipated BHP:

0'-855' 900' 409 PSI  
855'-4400' 2281 PSI  
4400'-8350' 3995 PSI

Abnormal Pressures Anticipated: None

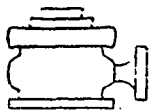
Lost Circulation Zones Anticipated: None.

H<sub>2</sub>S Zones Anticipated: None Anticipated

Maximum Bottom Hole Temperature: 150 F

#### 9. ANTICIPATED STARTING DATE:

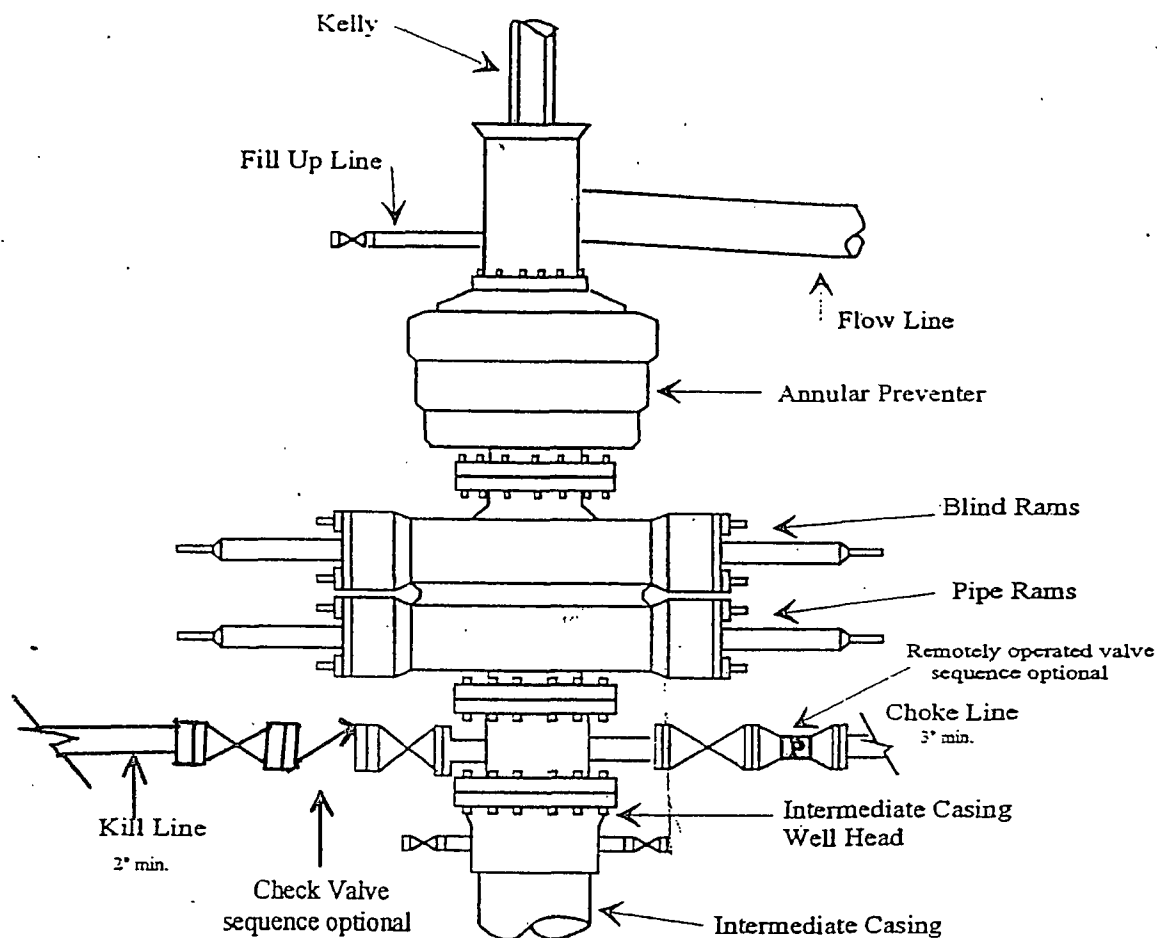
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.



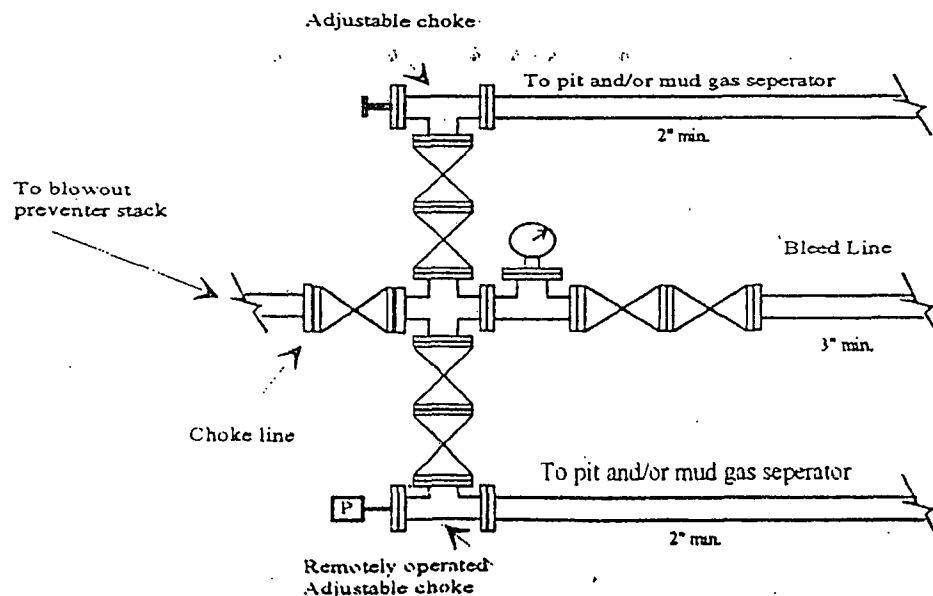
# Yates Petroleum Corporation

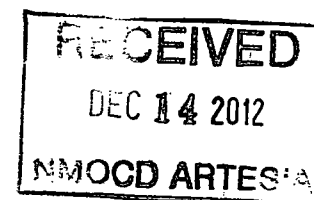
BOP-4

## Typical 5,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



Typical 5,000 psi choke manifold assembly with at least these minimum features





## Yates Petroleum Corp.

Eddy County (NAD 83)

Juanel AJE Federal Com

#1H

OH

Plan: Plan #1

## PathfinderX & Y Report

19 September, 2012

**PATHFINDER®**  
A Schlumberger Company



# Pathfinder

PathfinderX & Y Report

**PATHFINDER**  
A Schlumberger Company

**Company:** Yates Petroleum Corp.  
**Project:** Eddy County (NAD 83)  
**Site:** Juanel AJE Federal Com  
**Well:** #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well #1H  
**TVD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**MD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Project** Eddy County (NAD 83)

**Map System:** US State Plane 1983  
**Geo Datum:** North American Datum 1983  
**Map Zone:** New Mexico Eastern Zone

**System Datum:** Mean Sea Level

**Site** Juanel AJE Federal Com

<b>Site Position:</b>		<b>Northing:</b>	531,155.126 usft	<b>Latitude:</b>	32.458735
<b>From:</b>	Map	<b>Easting:</b>	729,276.452 usft	<b>Longitude:</b>	-103.724007
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.33 °

**Well** #1H

<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	531,155.126 usft	<b>Latitude:</b>	32.458735
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	729,276.452 usft	<b>Longitude:</b>	-103.724007
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,634.0 usft

**Wellbore** OH

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/19/2012	7.51	60.37	48,654

**Design** Plan #1

**Audit Notes:**

**Version:** **Phase:** PLAN **Tie On Depth:** 0.0

<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	346.23

**Survey Tool Program** **Date** 9/19/2012

<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	14,427.7	Plan #1 (OH)	MWD	MWD - Standard





# Pathfinder PathfinderX & Y Report



A Schlumberger Company

Company: Yates Petroleum Corp.  
Project: Eddy County (NAD 83)  
Site: Juanel AJE Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: KB = 18 @ 3652.0usft (Unknown)  
MD Reference: KB = 18 @ 3652.0usft (Unknown)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: EDM 5000.1 Single User Db

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,652.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
100.0	0.00	0.00	100.0	-3,552.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
200.0	0.00	0.00	200.0	-3,452.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
300.0	0.00	0.00	300.0	-3,352.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
400.0	0.00	0.00	400.0	-3,252.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
500.0	0.00	0.00	500.0	-3,152.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
600.0	0.00	0.00	600.0	-3,052.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
700.0	0.00	0.00	700.0	-2,952.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
800.0	0.00	0.00	800.0	-2,852.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
900.0	0.00	0.00	900.0	-2,752.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,000.0	0.00	0.00	1,000.0	-2,652.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,100.0	0.00	0.00	1,100.0	-2,552.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,200.0	0.00	0.00	1,200.0	-2,452.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,300.0	0.00	0.00	1,300.0	-2,352.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,400.0	0.00	0.00	1,400.0	-2,252.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,500.0	0.00	0.00	1,500.0	-2,152.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,600.0	0.00	0.00	1,600.0	-2,052.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,700.0	0.00	0.00	1,700.0	-1,952.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,800.0	0.00	0.00	1,800.0	-1,852.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
1,900.0	0.00	0.00	1,900.0	-1,752.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,000.0	0.00	0.00	2,000.0	-1,652.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,100.0	0.00	0.00	2,100.0	-1,552.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,200.0	0.00	0.00	2,200.0	-1,452.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,300.0	0.00	0.00	2,300.0	-1,352.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,400.0	0.00	0.00	2,400.0	-1,252.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,500.0	0.00	0.00	2,500.0	-1,152.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,600.0	0.00	0.00	2,600.0	-1,052.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45



# Pathfinder

PathfinderX & Y Report

**PATHFINDER**  
A Schlumberger Company

**Company:** Yates Petroleum Corp.  
**Project:** Eddy County (NAD 83)  
**Site:** Juanel AJE Federal Com  
**Well:** #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well #1H  
**TVD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**MD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.0	0.00	0.00	2,700.0	-952.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,800.0	0.00	0.00	2,800.0	-852.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
2,900.0	0.00	0.00	2,900.0	-752.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,000.0	0.00	0.00	3,000.0	-652.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,100.0	0.00	0.00	3,100.0	-552.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,200.0	0.00	0.00	3,200.0	-452.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,300.0	0.00	0.00	3,300.0	-352.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,400.0	0.00	0.00	3,400.0	-252.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,500.0	0.00	0.00	3,500.0	-152.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,600.0	0.00	0.00	3,600.0	-52.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,700.0	0.00	0.00	3,700.0	48.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,800.0	0.00	0.00	3,800.0	148.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
3,900.0	0.00	0.00	3,900.0	248.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
4,000.0	0.00	0.00	4,000.0	348.0	0.0	0.0	0.0	0.00	531,155.13	729,276.45
4,100.0	2.00	309.06	4,100.0	448.0	1.1	-1.4	1.4	2.00	531,156.23	729,275.10
4,200.0	4.00	309.06	4,199.8	547.8	4.4	-5.4	5.6	2.00	531,159.52	729,271.03
4,300.0	6.00	309.06	4,299.5	647.5	9.9	-12.2	12.5	2.00	531,165.02	729,264.27
4,400.0	8.00	309.06	4,398.7	746.7	17.6	-21.6	22.2	2.00	531,172.70	729,254.80
4,500.0	10.00	309.06	4,497.5	845.5	27.4	-33.8	34.7	2.00	531,182.55	729,242.66
4,600.0	12.00	309.06	4,595.6	943.6	39.5	-48.6	49.9	2.00	531,194.58	729,227.84
4,700.0	14.00	309.06	4,693.1	1,041.1	53.6	-66.1	67.8	2.00	531,208.75	729,210.38
4,800.0	16.00	309.06	4,789.6	1,137.6	69.9	-86.2	88.4	2.00	531,225.06	729,190.28
4,900.0	18.00	309.06	4,885.3	1,233.3	88.4	-108.9	111.7	2.00	531,243.48	729,167.58
5,000.0	20.00	309.06	4,979.8	1,327.8	108.9	-134.1	137.7	2.00	531,264.00	729,142.31
5,100.0	22.00	309.06	5,073.2	1,421.2	131.5	-162.0	166.2	2.00	531,286.58	729,114.48
5,200.0	24.00	309.06	5,165.2	1,513.2	156.1	-192.3	197.4	2.00	531,311.20	729,084.14
5,240.3	24.81	309.06	5,201.9	1,549.9	166.6	-205.2	210.6	2.00	531,321.70	729,071.21



# Pathfinder

PathfinderX & Y Report



Company: Yates Petroleum Corp.  
 Project: Eddy County (NAD 83)  
 Site: Juanel AJE Federal Com  
 Well: #1H  
 Wellbore: OH  
 Design: Plan #1

Local Co-ordinate Reference: Well #1H  
 TVD Reference: KB = 18 @ 3652.0usft (Unknown)  
 MD Reference: KB = 18 @ 3652.0usft (Unknown)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.1 Single User Db

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,300.0	24.81	309.06	5,256.1	1,604.1	182.4	-224.7	230.6	0.00	531,337.48	729,051.77
5,400.0	24.81	309.06	5,346.9	1,694.9	208.8	-257.3	264.0	0.00	531,363.92	729,019.19
5,500.0	24.81	309.06	5,437.7	1,785.7	235.2	-289.8	297.5	0.00	531,390.36	728,986.62
5,600.0	24.81	309.06	5,528.4	1,876.4	261.7	-322.4	330.9	0.00	531,416.80	728,954.04
5,700.0	24.81	309.06	5,619.2	1,967.2	288.1	-355.0	364.3	0.00	531,443.24	728,921.46
5,800.0	24.81	309.06	5,710.0	2,058.0	314.5	-387.6	397.8	0.00	531,469.67	728,888.89
5,900.0	24.81	309.06	5,800.7	2,148.7	341.0	-420.1	431.2	0.00	531,496.11	728,856.31
6,000.0	24.81	309.06	5,891.5	2,239.5	367.4	-452.7	464.6	0.00	531,522.55	728,823.73
6,100.0	24.81	309.06	5,982.3	2,330.3	393.9	-485.3	498.0	0.00	531,548.99	728,791.16
6,200.0	24.81	309.06	6,073.1	2,421.1	420.3	-517.9	531.5	0.00	531,575.43	728,758.58
6,300.0	24.81	309.06	6,163.8	2,511.8	446.7	-550.4	564.9	0.00	531,601.87	728,726.00
6,400.0	24.81	309.06	6,254.6	2,602.6	473.2	-583.0	598.3	0.00	531,628.31	728,693.43
6,500.0	24.81	309.06	6,345.4	2,693.4	499.6	-615.6	631.8	0.00	531,654.75	728,660.85
6,600.0	24.81	309.06	6,436.2	2,784.2	526.1	-648.2	665.2	0.00	531,681.19	728,628.28
6,700.0	24.81	309.06	6,526.9	2,874.9	552.5	-680.8	698.6	0.00	531,707.63	728,595.70
6,800.0	24.81	309.06	6,617.7	2,965.7	578.9	-713.3	732.1	0.00	531,734.06	728,563.12
6,900.0	24.81	309.06	6,708.5	3,056.5	605.4	-745.9	765.5	0.00	531,760.50	728,530.55
7,000.0	24.81	309.06	6,799.2	3,147.2	631.8	-778.5	798.9	0.00	531,786.94	728,497.97
7,100.0	24.81	309.06	6,890.0	3,238.0	658.3	-811.1	832.4	0.00	531,813.38	728,465.39
7,200.0	24.81	309.06	6,980.8	3,328.8	684.7	-843.6	865.8	0.00	531,839.82	728,432.82
7,300.0	24.81	309.06	7,071.6	3,419.6	711.1	-876.2	899.2	0.00	531,866.26	728,400.24
7,400.0	24.81	309.06	7,162.3	3,510.3	737.6	-908.8	932.7	0.00	531,892.70	728,367.66
7,500.0	24.81	309.06	7,253.1	3,601.1	764.0	-941.4	966.1	0.00	531,919.14	728,335.09
7,600.0	24.81	309.06	7,343.9	3,691.9	790.5	-973.9	999.5	0.00	531,945.58	728,302.51
7,700.0	24.81	309.06	7,434.7	3,782.7	816.9	-1,006.5	1,033.0	0.00	531,972.02	728,269.94
7,800.0	24.81	309.06	7,525.4	3,873.4	843.3	-1,039.1	1,066.4	0.00	531,998.45	728,237.36
7,900.0	24.81	309.06	7,616.2	3,964.2	869.8	-1,071.7	1,099.8	0.00	532,024.89	728,204.78



# Pathfinder

PathfinderX & Y Report

**PATHFINDER**  
A Schlumberger Company

**Company:** Yates Petroleum Corp.  
**Project:** Eddy County (NAD 83)  
**Site:** Juanel AJE Federal Com  
**Well:** #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well #1H  
**TVD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**MD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,000.0	24.81	309.06	7,707.0	4,055.0	896.2	-1,104.2	1,133.3	0.00	532,051.33	728,172.21
8,100.0	24.81	309.06	7,797.8	4,145.8	922.6	-1,136.8	1,166.7	0.00	532,077.77	728,139.63
8,200.0	24.81	309.06	7,888.5	4,236.5	949.1	-1,169.4	1,200.1	0.00	532,104.21	728,107.05
8,300.0	24.81	309.06	7,979.3	4,327.3	975.5	-1,202.0	1,233.6	0.00	532,130.65	728,074.48
8,352.3	24.81	309.06	8,026.8	4,374.8	989.3	-1,219.0	1,251.0	0.00	532,144.48	728,057.44
8,375.0	26.64	313.72	8,047.2	4,395.2	995.9	-1,226.4	1,259.1	12.00	532,151.00	728,050.06
8,400.0	28.80	318.18	8,069.4	4,417.4	1,004.2	-1,234.5	1,269.2	12.00	532,159.36	728,042.00
8,425.0	31.10	322.05	8,091.0	4,439.0	1,013.8	-1,242.4	1,280.4	12.00	532,168.94	728,034.01
8,450.0	33.49	325.43	8,112.2	4,460.2	1,024.6	-1,250.3	1,292.7	12.00	532,179.72	728,026.12
8,475.0	35.97	328.41	8,132.7	4,480.7	1,036.5	-1,258.1	1,306.2	12.00	532,191.65	728,018.36
8,500.0	38.51	331.04	8,152.6	4,500.6	1,049.6	-1,265.7	1,320.7	12.00	532,204.72	728,010.74
8,525.0	41.11	333.39	8,171.8	4,519.8	1,063.8	-1,273.2	1,336.2	12.00	532,218.88	728,003.29
8,550.0	43.75	335.51	8,190.3	4,538.3	1,079.0	-1,280.4	1,352.7	12.00	532,234.10	727,996.03
8,575.0	46.42	337.44	8,207.9	4,555.9	1,095.2	-1,287.5	1,370.2	12.00	532,250.33	727,988.97
8,600.0	49.12	339.19	8,224.7	4,572.7	1,112.4	-1,294.3	1,388.5	12.00	532,267.53	727,982.14
8,625.0	51.85	340.81	8,240.6	4,588.6	1,130.5	-1,300.9	1,407.7	12.00	532,285.66	727,975.55
8,650.0	54.60	342.32	8,255.6	4,603.6	1,149.5	-1,307.2	1,427.6	12.00	532,304.65	727,969.22
8,675.0	57.36	343.72	8,269.6	4,617.6	1,169.3	-1,313.3	1,448.3	12.00	532,324.47	727,963.17
8,700.0	60.14	345.04	8,282.5	4,630.5	1,189.9	-1,319.0	1,469.7	12.00	532,345.05	727,957.42
8,725.0	62.94	346.29	8,294.4	4,642.4	1,211.2	-1,324.5	1,491.6	12.00	532,366.34	727,951.98
8,750.0	65.74	347.47	8,305.3	4,653.3	1,233.2	-1,329.6	1,514.2	12.00	532,388.29	727,946.87
8,775.0	68.55	348.61	8,315.0	4,663.0	1,255.7	-1,334.4	1,537.2	12.00	532,410.82	727,942.10
8,800.0	71.37	349.70	8,323.5	4,671.5	1,278.8	-1,338.8	1,560.6	12.00	532,433.89	727,937.68
8,825.0	74.20	350.76	8,330.9	4,678.9	1,302.3	-1,342.8	1,584.5	12.00	532,457.42	727,933.63
8,850.0	77.03	351.78	8,337.2	4,685.2	1,326.2	-1,346.5	1,608.6	12.00	532,481.35	727,929.96
8,875.0	79.86	352.79	8,342.2	4,690.2	1,350.5	-1,349.8	1,632.9	12.00	532,505.62	727,926.67
8,900.0	82.70	353.77	8,346.0	4,694.0	1,375.0	-1,352.7	1,657.5	12.00	532,530.16	727,923.78



# Pathfinder

## PathfinderX & Y Report

**PATHFINDER**  
A Schlumberger Company

Company: Yates Petroleum Corp.  
Project: Eddy County (NAD 83)  
Site: Juanel AJE Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: KB = 18 @ 3652.0usft (Unknown)  
MD Reference: KB = 18 @ 3652.0usft (Unknown)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: EDM 5000.1 Single User Db

### Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,925.0	85.54	354.75	8,348.5	4,696.5	1,399.8	-1,355.2	1,682.1	12.00	532,554.90	727,921.29
8,950.0	88.38	355.71	8,349.8	4,697.8	1,424.6	-1,357.2	1,706.7	12.00	532,579.77	727,919.22
8,971.2	90.79	356.53	8,350.0	4,698.0	1,445.8	-1,358.7	1,727.6	12.00	532,600.93	727,917.78
9,000.0	90.79	356.53	8,349.6	4,697.6	1,474.5	-1,360.4	1,755.9	0.00	532,629.67	727,916.04
9,100.0	90.79	356.53	8,348.2	4,696.2	1,574.3	-1,366.5	1,854.3	0.00	532,729.47	727,909.99
9,200.0	90.79	356.53	8,346.9	4,694.9	1,674.2	-1,372.5	1,952.7	0.00	532,829.28	727,903.94
9,300.0	90.79	356.53	8,345.5	4,693.5	1,774.0	-1,378.6	2,051.1	0.00	532,929.09	727,897.89
9,400.0	90.79	356.53	8,344.1	4,692.1	1,873.8	-1,384.6	2,149.5	0.00	533,028.90	727,891.84
9,500.0	90.79	356.53	8,342.7	4,690.7	1,973.6	-1,390.7	2,247.8	0.00	533,128.70	727,885.79
9,600.0	90.79	356.53	8,341.4	4,689.4	2,073.4	-1,396.7	2,346.2	0.00	533,228.51	727,879.74
9,700.0	90.79	356.53	8,340.0	4,688.0	2,173.2	-1,402.8	2,444.6	0.00	533,328.32	727,873.69
9,800.0	90.79	356.53	8,338.6	4,686.6	2,273.0	-1,408.8	2,543.0	0.00	533,428.13	727,867.64
9,900.0	90.79	356.53	8,337.2	4,685.2	2,372.8	-1,414.9	2,641.4	0.00	533,527.93	727,861.59
10,000.0	90.79	356.53	8,335.9	4,683.9	2,472.6	-1,420.9	2,739.7	0.00	533,627.74	727,855.54
10,100.0	90.79	356.53	8,334.5	4,682.5	2,572.4	-1,427.0	2,838.1	0.00	533,727.55	727,849.49
10,200.0	90.79	356.53	8,333.1	4,681.1	2,672.2	-1,433.0	2,936.5	0.00	533,827.35	727,843.44
10,300.0	90.79	356.53	8,331.7	4,679.7	2,772.0	-1,439.1	3,034.9	0.00	533,927.16	727,837.39
10,400.0	90.79	356.53	8,330.4	4,678.4	2,871.8	-1,445.1	3,133.3	0.00	534,026.97	727,831.34
10,500.0	90.79	356.53	8,329.0	4,677.0	2,971.7	-1,451.2	3,231.6	0.00	534,126.78	727,825.29
10,600.0	90.79	356.53	8,327.6	4,675.6	3,071.5	-1,457.2	3,330.0	0.00	534,226.58	727,819.24
10,700.0	90.79	356.53	8,326.2	4,674.2	3,171.3	-1,463.3	3,428.4	0.00	534,326.39	727,813.19
10,800.0	90.79	356.53	8,324.9	4,672.9	3,271.1	-1,469.3	3,526.8	0.00	534,426.20	727,807.14
10,900.0	90.79	356.53	8,323.5	4,671.5	3,370.9	-1,475.4	3,625.2	0.00	534,526.01	727,801.09
11,000.0	90.79	356.53	8,322.1	4,670.1	3,470.7	-1,481.4	3,723.5	0.00	534,625.81	727,795.04
11,100.0	90.79	356.53	8,320.7	4,668.7	3,570.5	-1,487.5	3,821.9	0.00	534,725.62	727,788.99
11,200.0	90.79	356.53	8,319.4	4,667.4	3,670.3	-1,493.5	3,920.3	0.00	534,825.43	727,782.94
11,300.0	90.79	356.53	8,318.0	4,666.0	3,770.1	-1,499.6	4,018.7	0.00	534,925.24	727,776.89



# Pathfinder PathfinderX & Y Report



A Schlumberger Company

Company: Yates Petroleum Corp.  
Project: Eddy County (NAD 83)  
Site: Juanel AJE Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: KB = 18 @ 3652.0usft (Unknown)  
MD Reference: KB = 18 @ 3652.0usft (Unknown)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: EDM 5000.1 Single User Db

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,400.0	90.79	356.53	8,316.6	4,664.6	3,869.9	-1,505.6	4,117.1	0.00	535,025.04	727,770.84
11,500.0	90.79	356.53	8,315.2	4,663.2	3,969.7	-1,511.7	4,215.4	0.00	535,124.85	727,764.79
11,600.0	90.79	356.53	8,313.9	4,661.9	4,069.5	-1,517.7	4,313.8	0.00	535,224.66	727,758.74
11,700.0	90.79	356.53	8,312.5	4,660.5	4,169.3	-1,523.8	4,412.2	0.00	535,324.47	727,752.69
11,800.0	90.79	356.53	8,311.1	4,659.1	4,269.1	-1,529.8	4,510.6	0.00	535,424.27	727,746.64
11,900.0	90.79	356.53	8,309.7	4,657.7	4,369.0	-1,535.9	4,608.9	0.00	535,524.08	727,740.59
12,000.0	90.79	356.53	8,308.4	4,656.4	4,468.8	-1,541.9	4,707.3	0.00	535,623.89	727,734.54
12,100.0	90.79	356.53	8,307.0	4,655.0	4,568.6	-1,548.0	4,805.7	0.00	535,723.69	727,728.49
12,200.0	90.79	356.53	8,305.6	4,653.6	4,668.4	-1,554.0	4,904.1	0.00	535,823.50	727,722.44
12,300.0	90.79	356.53	8,304.2	4,652.2	4,768.2	-1,560.1	5,002.5	0.00	535,923.31	727,716.39
12,400.0	90.79	356.53	8,302.9	4,650.9	4,868.0	-1,566.1	5,100.8	0.00	536,023.12	727,710.34
12,500.0	90.79	356.53	8,301.5	4,649.5	4,967.8	-1,572.2	5,199.2	0.00	536,122.92	727,704.29
12,600.0	90.79	356.53	8,300.1	4,648.1	5,067.6	-1,578.2	5,297.6	0.00	536,222.73	727,698.24
12,700.0	90.79	356.53	8,298.7	4,646.7	5,167.4	-1,584.3	5,396.0	0.00	536,322.54	727,692.19
12,800.0	90.79	356.53	8,297.4	4,645.4	5,267.2	-1,590.3	5,494.4	0.00	536,422.35	727,686.14
12,900.0	90.79	356.53	8,296.0	4,644.0	5,367.0	-1,596.4	5,592.7	0.00	536,522.15	727,680.09
13,000.0	90.79	356.53	8,294.6	4,642.6	5,466.8	-1,602.4	5,691.1	0.00	536,621.96	727,674.04
13,100.0	90.79	356.53	8,293.2	4,641.2	5,566.6	-1,608.5	5,789.5	0.00	536,721.77	727,667.99
13,200.0	90.79	356.53	8,291.9	4,639.9	5,666.4	-1,614.5	5,887.9	0.00	536,821.58	727,661.94
13,300.0	90.79	356.53	8,290.5	4,638.5	5,766.3	-1,620.6	5,986.3	0.00	536,921.38	727,655.89
13,400.0	90.79	356.53	8,289.1	4,637.1	5,866.1	-1,626.6	6,084.6	0.00	537,021.19	727,649.84
13,500.0	90.79	356.53	8,287.8	4,635.8	5,965.9	-1,632.7	6,183.0	0.00	537,121.00	727,643.79
13,600.0	90.79	356.53	8,286.4	4,634.4	6,065.7	-1,638.7	6,281.4	0.00	537,220.80	727,637.74
13,700.0	90.79	356.53	8,285.0	4,633.0	6,165.5	-1,644.8	6,379.8	0.00	537,320.61	727,631.69
13,800.0	90.79	356.53	8,283.6	4,631.6	6,265.3	-1,650.8	6,478.2	0.00	537,420.42	727,625.64
13,900.0	90.79	356.53	8,282.3	4,630.3	6,365.1	-1,656.9	6,576.5	0.00	537,520.23	727,619.59
14,000.0	90.79	356.53	8,280.9	4,628.9	6,464.9	-1,662.9	6,674.9	0.00	537,620.03	727,613.54



**Pathfinder**  
PathfinderX & Y Report



A Schlumberger Company

**Company:** Yates Petroleum Corp.  
**Project:** Eddy County (NAD 83)  
**Site:** Juanel AJE Federal Com  
**Well:** #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well #1H  
**TVD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**MD Reference:** KB = 18 @ 3652.0usft (Unknown)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Planned Survey**

MD (usft)	Inc. (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
14,100.0	90.79	356.53	8,279.5	4,627.5	6,564.7	-1,669.0	6,773.3	0.00	537,719.84	727,607.49
14,200.0	90.79	356.53	8,278.1	4,626.1	6,664.5	-1,675.0	6,871.7	0.00	537,819.65	727,601.44
14,300.0	90.79	356.53	8,276.8	4,624.8	6,764.3	-1,681.1	6,970.1	0.00	537,919.46	727,595.39
14,400.0	90.79	356.53	8,275.4	4,623.4	6,864.1	-1,687.1	7,068.4	0.00	538,019.26	727,589.34
14,427.7	90.79	356.53	8,275.0	4,623.0	6,891.8	-1,688.8	7,095.7	0.00	538,046.96	727,587.66

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



PROJECT DETAILS: Eddy County (NAD 83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level  
 Local North: Grid

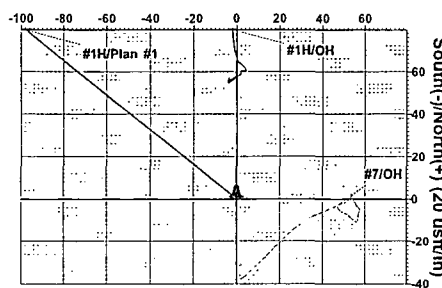


Azimuths to Grid North  
 True North: -0.33°  
 Magnetic North: 7.18°  
 Magnetic Field  
 Strength: 48654.2snT  
 Dip Angle: 60.37°  
 Date: 9/19/2012  
 Model: IGRF200510

**PATHFINDER**  
 A Schlumberger Company

Project: Eddy County (NAD 83)  
 Site: Juanel AJE Federal Com  
 Well: #1H  
 Wellbore: OH  
 Plan: Plan #1 (#1H/OH)

West(-)/East(+) (20 usft/in)



#### WELL DETAILS: #1H

Ground Elevation: 3634.0  
 RKB Elevation: KB = 18 @ 3652.0usft (Unknown)  
 Rig Name: Unknown

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	531155.126	729276.452	32.458735	-103.724007	

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

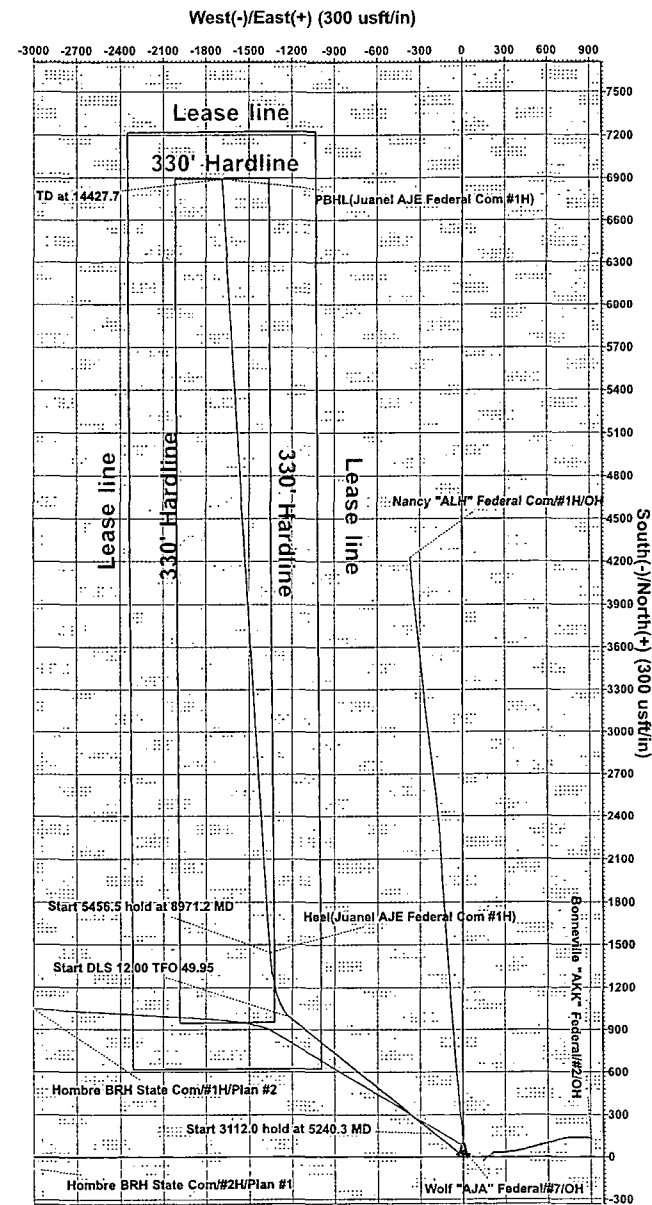
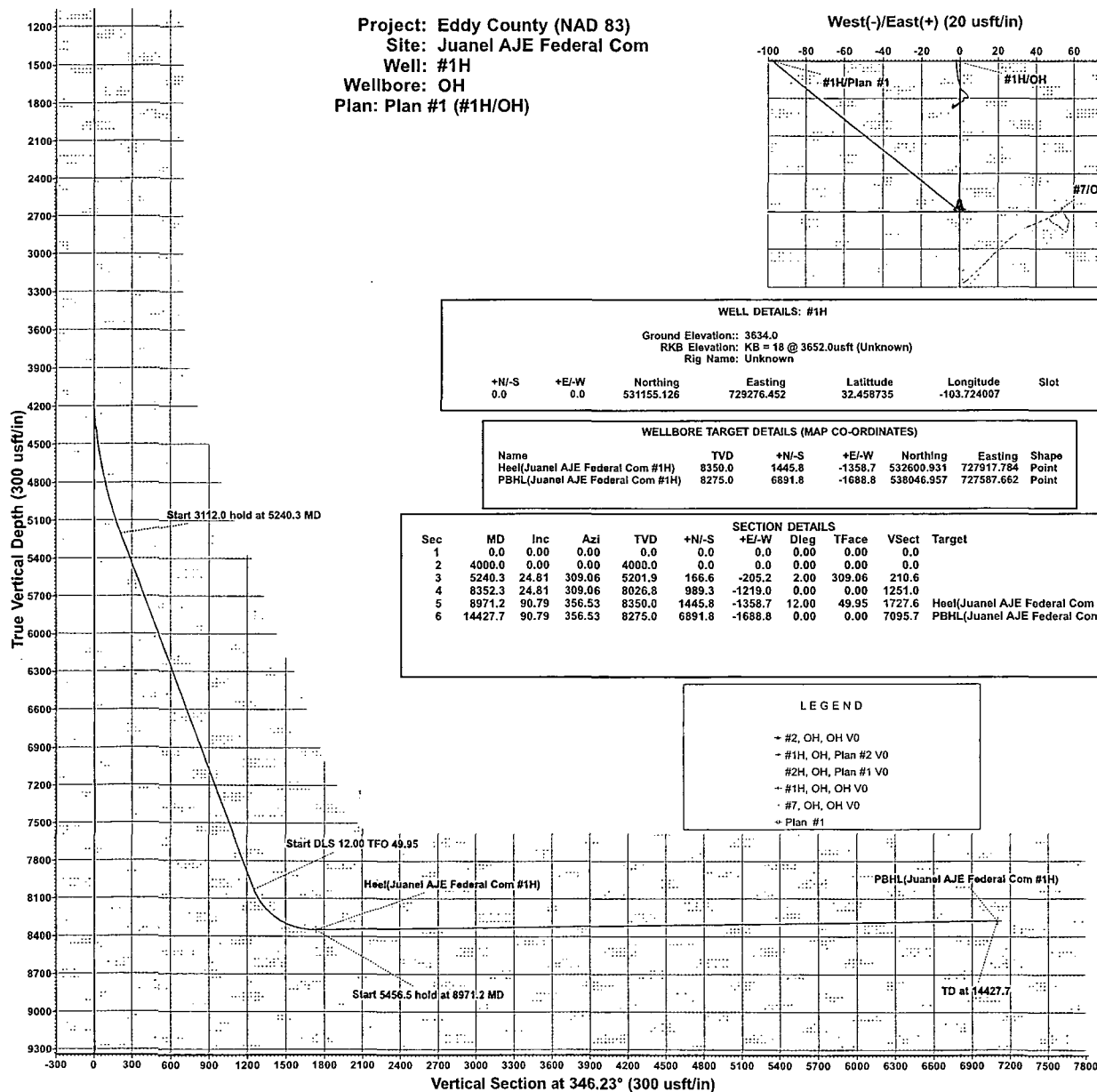
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Heel(Juanel AJE Federal Com #1H)	8350.0	1445.8	-1358.7	532600.931	727917.784	Point
PBHL(Juanel AJE Federal Com #1H)	8275.0	6891.8	-1688.8	538046.957	727587.662	Point

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
3	5240.3	24.81	309.06	5201.9	166.6	-205.2	2.00	309.06	210.6	
4	8352.3	24.81	309.06	8026.8	989.3	-1219.0	0.00	0.00	1251.0	
5	8971.2	90.79	356.53	8350.0	1445.8	-1358.7	12.00	49.95	1727.6	Heel(Juanel AJE Federal Com #1H)
6	14427.7	90.79	356.53	8275.0	6891.8	-1688.8	0.00	0.00	7095.7	PBHL(Juanel AJE Federal Com #1H)

#### LEGEND

- #2, OH, OH V0
- #1H, OH, Plan #2 V0
- #2H, OH, Plan #1 V0
- #1H, OH, OH V0
- #7, OH, OH V0
- Plan #1



Plan: Plan #1 (#1H/OH)

Created By: Sam Biffle Date: 14:19, September 19 2012

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Notes: Pathfinder Data  
 Eddy County (NAD 83)  
 Date: 9/19/2012  
 User: [blank]  
 Plot: 21



**Juanel AJE Federal #1H  
30-015-39828  
Yates Petroleum Corporation  
December 12, 2012  
Conditions of Approval**

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

## **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. **Due to recent H<sub>2</sub>S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**
2. **Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and bottom of Salt are to be recorded on the Completion Report.**

## **B. CASING**

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. **DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.** Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

### **R-111-P Potash**

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

**Possible water flows in the Salado and Castile 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.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**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:

**Second DV tool to be set a minimum of 50' below previous shoe.**

a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with third stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

c. Third stage above DV tool:

- ☒ Cement to surface. **Required due to R-111-P Potash.** If cement does not circulate, contact the appropriate BLM office.

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

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## **C. PRESSURE CONTROL**

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

**Piping from choke manifold to flare to be as straight as possible.**

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOPE. on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
  - d. The results of the test shall be reported to the appropriate BLM office.
  - e. 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.**
  - f. 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. This test shall be performed prior to the test at full stack pressure.

#### **D. DRILL STEM TEST**

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

## **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**JAM 121212**