

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.

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 Fourth Street, Artesia, NM 88210

3b. Phone No. (include area code)

575-748-4372

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

1950' FNL & 300' FEL, SHL, and 1980' FSL & 330' FWL, BHL, Section 25-21S-R31E

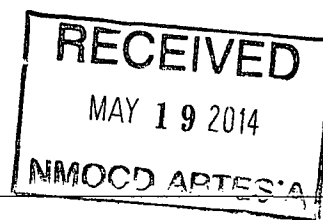
5. Lease Serial No.
NM-613586. If Indian, Allottee or Tribe Name
N/A7. If Unit of CA/Agreement, Name and/or No.
N/A8. Well Name and No.
Wolf "AJA" Federal #18-H9. API Well No.
30-015-39965 **39830**10. Field and Pool or Exploratory Area
Lost Tank Delaware11. County or Parish, State
Eddy County, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other <u>move surface hole</u>
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 surface location from the approved footages to new surface location of 1950' FNL & 300' FEL still in Section 25-21S-31E. The bottom hole will remain the same at 1980' FSL & 330' FWL. Attached is a new C-102 with the new footages. Also attached is a new drilling plan.

Accepted for record
NMOCDTES
6-22-14SEE ATTACHED FOR
CONDITIONS OF APPROVAL14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Cy Cowan

Title Land Regulatory Agent

Signature

Date

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Stephen J. Coffey

Title

Date

5/9/14

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

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
Phone (575) 393-8161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-8178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

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
	WOLF AJA FEDERAL COM	18H
OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORPORATION	3664'

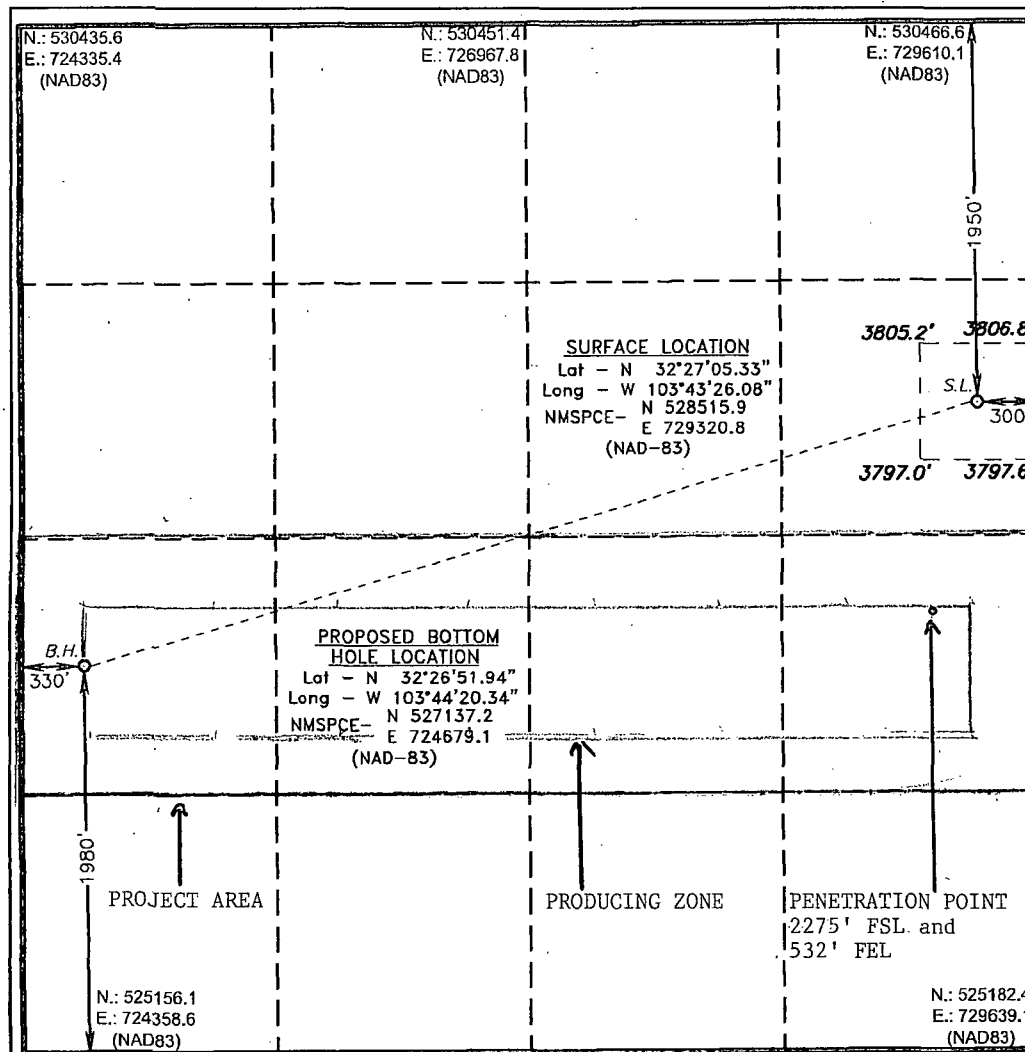
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	25	21 S	31 E		1950	NORTH	300	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
L	25	21 S	31 E		1980	SOUTH	330	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
.160									

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided 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.

Signature

Date

CY COWAN

Printed Name

cy@yatespetroleum.com

Email Address

SURVEYOR CERTIFICATION

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

SEPTEMBER 25, 2013

Date Surveyed

Signature of Professional Surveyor

Certificate No. 7977

Scale: 1" = 1000'
WO Num.: 29457

YATES PETROLEUM CORPORATION
Wolf "AJA" Federal #18-H
1950' FNL and 300' FEL SHL, 25-21S-31E
1980' FSL and 330' FWL BHL, 25-21S-31E
Eddy County, New Mexico

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

FORMATION	TOPS MD	FORMATION	TOPS MD	TOPS TVD
Rustler	826'	Kick Off Point	6865'	
Top of Salt	1146'	Livingston Ridge	7139'	
Base of Salt	3917'	Livingston Ridge Target	7588'-Oil	7216'
Bell Canyon	4540'-Oil	EOL TD	12008'	7165'
Cherry Canyon	5456'-Oil			

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

Water: 150'
Oil or Gas: Oil Zones: See above

- A. Pressure Control Equipment: A 3000 PSI BOP system with a minimum opening of 13 5/8" will be nipped up and tested on the 13 3/8" casing. A 5000 PSI BOP system with a minimum opening of 11" will be nipped up and tested on the 9 5/8" casing. A variance is requested for the use of a flexhose between the well head and the manifold if Cactus Rig #24 is used to drill this well. Certification and specs are attached. Blind rams and pipe rams will be tested to the rated pressure of BOP and the low side to 250 psi. Test will be conducted by an Independent Tester, utilizing a test plug in the well head. Test will be held for 10 minutes on each segment of the system tested. Any Leaks will be repaired at the time of the test. Annular preventer will be tested to 50% of rated working pressure. 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: (Casing All New)

HOLE SIZE	CASING SIZE	WT/FT	GRADE	COUPLING	INTERVAL	LENGTH
17 1/2"	13 3/8"	48#	H-40/J-55/Hybrid	LT&C	0'-900'	900'
12 1/4"	9 5/8"	40#	J-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#	J-55	LT&C	3200'-4200'	1000'
12 1/4"	9 5/8"	40#	HCK-55	LT&C	4200'-4600'	400'
8 3/4"	5 1/2"	17#	P-110	Buttress	0'-12008'	12008'

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

B. CEMENTING PROGRAM:

Surface Casing 0'-900': Lead with 485 sacks Class 35:65:6PzC (Wt. 12.50 Yld. 2.00 Wtr. 11 gal/sack). Tail in with 210 sacks Class 50/50 Poz with 2% CaCl₂ (Wt. 14.20 Yld. 1.34 Wtr. 6.20 gal/sack) Cement designed with 100% excess. TOC surface.

Intermediate Casing 0'-4600': Lead with 1300 sacks of 35:65:6PzC (Wt. 12.50 Yld. 2.00 Wtr. 11 gal/sack). Tail in with 210 sacks Class 50/50 PozC with 2% CaCl₂ (Wt. 14.20 Yld. 1.34 Wtr. 6.20). Cement designed with 100% excess. TOC surface.

Production Casing: Cement to be done in three stages with DV/Stage Packer tool between 6800' and 4700'. (Cement volume will be distributed proportionally if DV tool is moved)

Stage One from 6800'-12008': Lead with 900 sacks of Pecos Valley Lite (WT. 13.00 Yld. 1.82 Wtr 9.30 gal/sack) with D112, Fluid Loss, 0.4%; D151, Calcium Carbonate, 22.5 lb/sack; D174, Extender, 1.5 lb/sack; D177, Retarder, 0.01 lb/sack; D800, Retarder, 0.6 lb/sack; and D46, Antifoam Agent, 0.15 lb/sack. Cement designed with 35% excess. TOC is 6800'.

Stage Two from 4700'-6800': Lead with 220 sacks 35:65:6PzC (Wt 12.50 Yld. 2.00 Wtr. 11.00 gal/sack). Tail in with 205 sacks 50/50 PozC with 2% CaCl₂ (Wt. 14.20 Yld. 1.34 Wtr. 6.20 gal/sack). Cement designed with 35% excess. TOC is 4700'.

Stage Three from 0'-4700': Lead with 665 sacks of 35:65:6PzC (Wt. 12.50 Yld. 2.00 Wtr 11 gal/sack). Tail in with 205 sacks of 50/50 PozC with CaCl₂ (Wt. 14.20 Yld. 1.34 Wtr 6.20 gal/sack)). Cement designed with 35% excess. TOC is surface.

Well will be drilled on a tangent from 1200' to 6817' MD 6731' TVD") and kicked off at approximately 6817' MD (6731' TVD). Well will then be directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 7588' MD (7216' TVD). The hole will then be reduced to 8 1/2" and drilled to 12008' MD (7165' TVD) where 5 1/2" casing will be run and cemented to surface in three stages with a DV/Stage Packer tools at approximately 6800' and 4700' (cement volume will be distributed proportionally if DV tool is moved). Penetration point of producing zone will be encountered at 2275' FSL & 532' FEL, 25-21S-31E. Deepest TVD in the lateral will be 7216'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

INTERVAL	TYPE	WEIGHT	VISCOSITY	FLUID LOSS
0'-900'	Fresh Water	8.60-9.20	28-34	N/C
900'-4600'	Brine Water	10.00-10.20	28-29	N/C
4600'-12008'	Cut Brine	8.80-9.00	32-34	N/C

After surface casing is set an electronic PVT system will be installed as our primary mud level monitoring system. A secondary system will also be implemented as to insure the PVT system is functioning properly. The secondary system will be comprised of the derrick hand checking the fluid level in the pits periodically using a nut on the end of a rope hanging just above the fluid level in the pit. 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.

7. EVALUATION PROGRAM:

Samples: 30' samples to 4600'. 10' samples from 4600' to TD. Mudloggers on at 3000'.

Logging: CNL/LD/NGT from Curve to Intermediate Casing, CNL/GR from curve to Surface, DLL-MSFL from curve to intermediate Casing, CMR from curve to Intermediate Casing, and Horizontal-MWD-GR Horizontal

Coring: None anticipated

DST's: None Anticipated

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

Maximum Anticipated BHP:

0'-900'	431 PSI
900'-4600'	2440 PSI
4600'-7216'	3452 PSI

Abnormal Pressures Anticipated: None

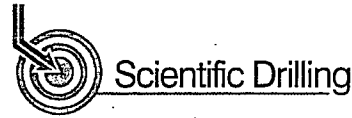
Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

Maximum Bottom Hole Temperature: 150 F

9. ANTICIPATED STARTING DATE:

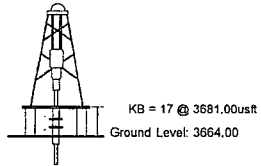
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.



Azimuths to Grid North
 True North: -0.33°
 Magnetic North: 7.05°
 Magnetic Field
 Strength: 48543.25nT
 Dip Angle: 60.34°
 Date: 10/28/2013
 Model: IGRF200510

To convert Magnetic North to Grid, Add 7.05°
 To convert True North to Grid, Subtract 0.33°

Wolf AJA Federal #18H
 Eddy County, NM (NAD83 NME)
 Northing: (Y) 528515.900
 Easting: (X) 729320.800
 Plan #1



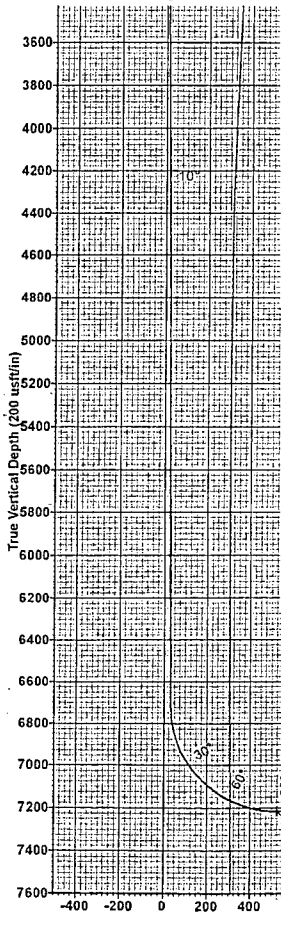
WELL DETAILS:					
Ground Level: 3664.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	528515.900	729320.800	32° 27' 5.328 N	103° 43' 26.083 W

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	
1717.71	10.35	165.41	1714.90	-45.15	11.75	2.00	165.41	1.66	
6817.02	10.35	165.41	6731.17	-932.12	242.58	0.00	0.00	34.37	
7587.82	90.66	265.72	7216.00	-1056.09	-232.14	12.00	100.03	524.72	EOC (#18H)
12007.82	90.66	265.72	7164.87	-1385.98	-4639.52	0.00	0.00	4842.12	PBHL (#18H)

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
EOC (#18H)	7216.00	-1056.09	-232.14	527459.806	729088.657
PBHL (#18H)	7166.00	-1378.70	-4641.70	527137.200	724679.100

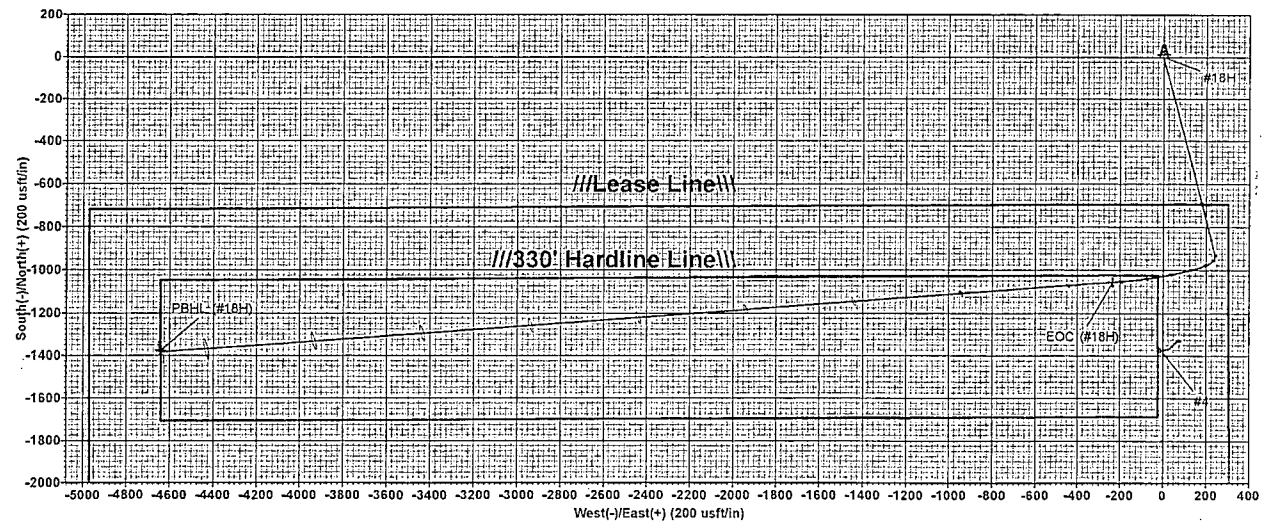
Map System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone Name: New Mexico Eastern Zone
 Local Origin: Well #18H, Grid North
 Latitude: 32° 27' 5.328 N
 Longitude: 103° 43' 26.083 W
 Grid East: 729320.800
 Grid North: 528515.900
 Scale Factor: 1.000
 Geomagnetic Model: IGRF200510
 Sample Date: 28-Oct-13
 Magnetic Declination: 7.38°
 Dip Angle from Horizontal: 60.34°
 Magnetic Field Strength: 48543
 To convert Magnetic North to Grid, Add 7.05°
 To convert Magnetic North to True, Add 7.38° East
 To convert True North to Grid, Subtract 0.33°

PROJECT DETAILS: Eddy County, NM (NAD83 NME)
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



LEGEND
 → #4, OH, OH V0
 → Plan #1

Sam Billie
 10:51, December 02 2013
 Scientific Drilling
 2034 Trade Drive
 Midland, TX 79703





Yates Petroleum Corp.

Eddy County, NM (NAD83 NME)

Wolf AJA Federal

#18H

OH

Plan: Plan #1

Standard Planning Report

28 October, 2013



www.scientificdrilling.com



Scientific Drilling Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Site Wolf AJA Federal
Company:	Yates Petroleum Corp.	TVD Reference:	KB = 17 @ 3681.00usft
Project:	Eddy County, NM (NAD83 NME)	MD Reference:	KB = 17 @ 3681.00usft
Site:	Wolf AJA Federal	North Reference:	Grid
Well:	#18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Eddy County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Wolf AJA Federal				
Site Position:		Northing:	528,545.857 usft	Latitude:	32° 27' 5.625 N
From:	Map	Easting:	729,320.807 usft	Longitude:	103° 43' 26.081 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.33 °

Well:	#18H					
Well Position	+N/-S	-29.96 usft	Northing:	528,515.900 usft	Latitude:	32° 27' 5.328 N
	+E/-W	-0.01 usft	Easting:	729,320.800 usft	Longitude:	103° 43' 26.083 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,664.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/28/2013	7.38	60.34	48,543

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN		Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	-29.96	-0.01	253.37

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	-29.96	-0.01	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	-29.96	-0.01	0.00	0.00	0.00	0.00	
1,717.71	10.35	165.41	1,714.90	-75.11	11.74	2.00	2.00	0.00	165.41	
6,817.02	10.35	165.41	6,731.17	-962.08	242.57	0.00	0.00	0.00	0.00	
7,587.82	90.66	265.72	7,216.00	-1,086.05	-232.15	12.00	10.42	13.01	100.03	EOC (#18H)
12,007.84	90.66	265.72	7,164.87	-1,415.94	-4,639.54	0.00	0.00	0.00	0.00	PBHL (#18H)



Scientific Drilling Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Site Wolf AJA Federal
Company:	Yates Petroleum Corp.	TVD Reference:	KB = 17 @ 3681.00usft
Project:	Eddy County, NM (NAD83 NME)	MD Reference:	KB = 17 @ 3681.00usft
Site:	Wolf AJA Federal	North Reference:	Grid
Well:	#18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	-29.96	-0.01	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	-29.96	-0.01	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	-29.96	-0.01	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	-29.96	-0.01	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	-29.96	-0.01	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	-29.96	-0.01	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	-29.96	-0.01	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	-29.96	-0.01	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	-29.96	-0.01	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	-29.96	-0.01	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	-29.96	-0.01	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	-29.96	-0.01	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	-29.96	-0.01	0.00	0.00	0.00	0.00
1,300.00	2.00	165.41	1,299.98	-31.65	0.43	0.06	2.00	2.00	0.00
1,400.00	4.00	165.41	1,399.84	-36.71	1.75	0.25	2.00	2.00	0.00
1,500.00	6.00	165.41	1,499.45	-45.14	3.95	0.56	2.00	2.00	0.00
1,600.00	8.00	165.41	1,598.70	-56.94	7.01	0.99	2.00	2.00	0.00
1,700.00	10.00	165.41	1,697.47	-72.08	10.95	1.55	2.00	2.00	0.00
1,717.71	10.35	165.41	1,714.90	-75.11	11.74	1.66	2.00	2.00	0.00
1,800.00	10.35	165.41	1,795.85	-89.42	15.47	2.19	0.00	0.00	0.00
1,900.00	10.35	165.41	1,894.22	-106.81	19.99	2.83	0.00	0.00	0.00
2,000.00	10.35	165.41	1,992.59	-124.21	24.52	3.48	0.00	0.00	0.00
2,100.00	10.35	165.41	2,090.96	-141.60	29.05	4.12	0.00	0.00	0.00
2,200.00	10.35	165.41	2,189.33	-158.99	33.57	4.76	0.00	0.00	0.00
2,300.00	10.35	165.41	2,287.70	-176.39	38.10	5.40	0.00	0.00	0.00
2,400.00	10.35	165.41	2,386.08	-193.78	42.63	6.04	0.00	0.00	0.00
2,500.00	10.35	165.41	2,484.45	-211.18	47.15	6.68	0.00	0.00	0.00
2,600.00	10.35	165.41	2,582.82	-228.57	51.68	7.32	0.00	0.00	0.00
2,700.00	10.35	165.41	2,681.19	-245.96	56.21	7.97	0.00	0.00	0.00
2,800.00	10.35	165.41	2,779.56	-263.36	60.73	8.61	0.00	0.00	0.00
2,900.00	10.35	165.41	2,877.93	-280.75	65.26	9.25	0.00	0.00	0.00
3,000.00	10.35	165.41	2,976.31	-298.15	69.79	9.89	0.00	0.00	0.00
3,100.00	10.35	165.41	3,074.68	-315.54	74.31	10.53	0.00	0.00	0.00
3,200.00	10.35	165.41	3,173.05	-332.93	78.84	11.17	0.00	0.00	0.00
3,300.00	10.35	165.41	3,271.42	-350.33	83.37	11.81	0.00	0.00	0.00
3,400.00	10.35	165.41	3,369.79	-367.72	87.90	12.46	0.00	0.00	0.00
3,500.00	10.35	165.41	3,468.16	-385.12	92.42	13.10	0.00	0.00	0.00
3,600.00	10.35	165.41	3,566.53	-402.51	96.95	13.74	0.00	0.00	0.00
3,700.00	10.35	165.41	3,664.91	-419.90	101.48	14.38	0.00	0.00	0.00
3,800.00	10.35	165.41	3,763.28	-437.30	106.00	15.02	0.00	0.00	0.00
3,900.00	10.35	165.41	3,861.65	-454.69	110.53	15.66	0.00	0.00	0.00
4,000.00	10.35	165.41	3,960.02	-472.09	115.06	16.30	0.00	0.00	0.00
4,100.00	10.35	165.41	4,058.39	-489.48	119.58	16.95	0.00	0.00	0.00
4,200.00	10.35	165.41	4,156.76	-506.87	124.11	17.59	0.00	0.00	0.00
4,300.00	10.35	165.41	4,255.13	-524.27	128.64	18.23	0.00	0.00	0.00
4,400.00	10.35	165.41	4,353.51	-541.66	133.16	18.87	0.00	0.00	0.00
4,500.00	10.35	165.41	4,451.88	-559.06	137.69	19.51	0.00	0.00	0.00
4,600.00	10.35	165.41	4,550.25	-576.45	142.22	20.15	0.00	0.00	0.00
4,700.00	10.35	165.41	4,648.62	-593.84	146.74	20.79	0.00	0.00	0.00
4,800.00	10.35	165.41	4,746.99	-611.24	151.27	21.44	0.00	0.00	0.00
4,900.00	10.35	165.41	4,845.36	-628.63	155.80	22.08	0.00	0.00	0.00
5,000.00	10.35	165.41	4,943.74	-646.03	160.32	22.72	0.00	0.00	0.00
5,100.00	10.35	165.41	5,042.11	-663.42	164.85	23.36	0.00	0.00	0.00
5,200.00	10.35	165.41	5,140.48	-680.81	169.38	24.00	0.00	0.00	0.00



Scientific Drilling Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Site Wolf AJA Federal
Company:	Yates Petroleum Corp.	TVD Reference:	KB = 17 @ 3681.00usft
Project:	Eddy County, NM (NAD83 NME)	MD Reference:	KB = 17 @ 3681.00usft
Site:	Wolf AJA Federal	North Reference:	Grid
Well:	#18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	10.35	165.41	5,238.85	-698.21	173.90	24.64	0.00	0.00	0.00
5,400.00	10.35	165.41	5,337.22	-715.60	178.43	25.28	0.00	0.00	0.00
5,500.00	10.35	165.41	5,435.59	-733.00	182.96	25.93	0.00	0.00	0.00
5,600.00	10.35	165.41	5,533.96	-750.39	187.48	26.57	0.00	0.00	0.00
5,700.00	10.35	165.41	5,632.34	-767.78	192.01	27.21	0.00	0.00	0.00
5,800.00	10.35	165.41	5,730.71	-785.18	196.54	27.85	0.00	0.00	0.00
5,900.00	10.35	165.41	5,829.08	-802.57	201.06	28.49	0.00	0.00	0.00
6,000.00	10.35	165.41	5,927.45	-819.97	205.59	29.13	0.00	0.00	0.00
6,100.00	10.35	165.41	6,025.82	-837.36	210.12	29.77	0.00	0.00	0.00
6,200.00	10.35	165.41	6,124.19	-854.75	214.64	30.42	0.00	0.00	0.00
6,300.00	10.35	165.41	6,222.57	-872.15	219.17	31.06	0.00	0.00	0.00
6,400.00	10.35	165.41	6,320.94	-889.54	223.70	31.70	0.00	0.00	0.00
6,500.00	10.35	165.41	6,419.31	-906.94	228.22	32.34	0.00	0.00	0.00
6,600.00	10.35	165.41	6,517.68	-924.33	232.75	32.98	0.00	0.00	0.00
6,700.00	10.35	165.41	6,616.05	-941.72	237.28	33.62	0.00	0.00	0.00
6,800.00	10.35	165.41	6,714.42	-959.12	241.80	34.26	0.00	0.00	0.00
6,817.02	10.35	165.41	6,731.17	-962.08	242.57	34.37	0.00	0.00	0.00
6,825.00	10.23	170.73	6,739.02	-963.47	242.87	34.49	12.00	-1.55	66.62
6,850.00	10.41	187.50	6,763.62	-967.90	242.93	35.70	12.00	0.73	67.08
6,875.00	11.40	202.52	6,788.17	-972.43	241.69	38.18	12.00	3.96	60.09
6,900.00	13.02	214.53	6,812.61	-977.03	239.15	41.94	12.00	6.45	48.03
6,925.00	15.05	223.64	6,836.86	-981.70	235.31	46.95	12.00	8.15	36.45
6,950.00	17.37	230.50	6,860.87	-986.43	230.19	53.21	12.00	9.25	27.45
6,975.00	19.86	235.74	6,884.56	-991.19	223.80	60.70	12.00	9.97	20.96
7,000.00	22.47	239.83	6,907.88	-995.98	216.16	69.39	12.00	10.45	16.36
7,025.00	25.17	243.10	6,930.75	-1,000.79	207.28	79.27	12.00	10.78	13.07
7,050.00	27.92	245.77	6,953.11	-1,005.60	197.20	90.30	12.00	11.02	10.66
7,075.00	30.72	247.98	6,974.90	-1,010.40	185.94	102.47	12.00	11.19	8.88
7,100.00	33.55	249.86	6,996.07	-1,015.17	173.53	115.72	12.00	11.31	7.52
7,125.00	36.40	251.48	7,016.56	-1,019.90	160.01	130.03	12.00	11.41	6.47
7,150.00	39.27	252.90	7,036.30	-1,024.59	145.41	145.36	12.00	11.49	5.65
7,175.00	42.16	254.15	7,055.25	-1,029.21	129.77	161.67	12.00	11.55	5.00
7,200.00	45.06	255.26	7,073.35	-1,033.75	113.14	178.91	12.00	11.60	4.47
7,225.00	47.97	256.27	7,090.55	-1,038.21	95.56	197.03	12.00	11.64	4.04
7,250.00	50.89	257.19	7,106.81	-1,042.56	77.08	215.98	12.00	11.67	3.68
7,275.00	53.81	258.04	7,122.08	-1,046.80	57.75	235.72	12.00	11.70	3.39
7,300.00	56.74	258.83	7,136.32	-1,050.92	37.62	256.18	12.00	11.72	3.15
7,325.00	59.67	259.56	7,149.49	-1,054.90	16.75	277.32	12.00	11.74	2.94
7,350.00	62.61	260.25	7,161.55	-1,058.74	-4.80	299.07	12.00	11.75	2.77
7,375.00	65.55	260.91	7,172.48	-1,062.41	-26.98	321.37	12.00	11.77	2.63
7,400.00	68.50	261.54	7,182.23	-1,065.92	-49.73	344.17	12.00	11.78	2.51
7,425.00	71.44	262.14	7,190.79	-1,069.26	-72.98	367.40	12.00	11.79	2.41
7,450.00	74.39	262.72	7,198.14	-1,072.40	-96.66	391.00	12.00	11.79	2.33
7,475.00	77.34	263.29	7,204.24	-1,075.36	-120.72	414.89	12.00	11.80	2.26
7,500.00	80.29	263.84	7,209.09	-1,078.10	-145.09	439.03	12.00	11.80	2.21
7,525.00	83.24	264.38	7,212.67	-1,080.64	-169.70	463.34	12.00	11.81	2.17
7,550.00	86.20	264.92	7,214.97	-1,082.97	-194.48	487.75	12.00	11.81	2.14
7,575.00	89.15	265.45	7,215.98	-1,085.06	-219.37	512.19	12.00	11.81	2.13
7,587.82	90.66	265.72	7,216.00	-1,086.05	-232.15	524.72	12.00	11.81	2.12
EOC (#18H)									
7,600.00	90.66	265.72	7,215.86	-1,086.96	-244.30	536.62	0.00	0.00	0.00
7,700.00	90.66	265.72	7,214.71	-1,094.42	-344.01	634.30	0.00	0.00	0.00
7,800.00	90.66	265.72	7,213.55	-1,101.89	-443.73	731.98	0.00	0.00	0.00



Scientific Drilling Planning Report

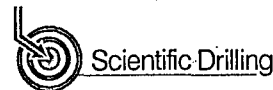


Database:	Midland District	Local Co-ordinate Reference:	Site Wolf AJA Federal
Company:	Yates Petroleum Corp.	TVD Reference:	KB = 17 @ 3681.00usft
Project:	Eddy County, NM (NAD83 NME)	MD Reference:	KB = 17 @ 3681.00usft
Site:	Wolf AJA Federal	North Reference:	Grid
Well:	#18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,900.00	90.66	265.72	7,212.39	-1,109.35	-543.44	829.66	0.00	0.00	0.00	
8,000.00	90.66	265.72	7,211.23	-1,116.81	-643.16	927.34	0.00	0.00	0.00	
8,100.00	90.66	265.72	7,210.08	-1,124.28	-742.87	1,025.01	0.00	0.00	0.00	
8,200.00	90.66	265.72	7,208.92	-1,131.74	-842.58	1,122.69	0.00	0.00	0.00	
8,300.00	90.66	265.72	7,207.76	-1,139.20	-942.30	1,220.37	0.00	0.00	0.00	
8,400.00	90.66	265.72	7,206.61	-1,146.67	-1,042.01	1,318.05	0.00	0.00	0.00	
8,500.00	90.66	265.72	7,205.45	-1,154.13	-1,141.73	1,415.73	0.00	0.00	0.00	
8,600.00	90.66	265.72	7,204.29	-1,161.60	-1,241.44	1,513.41	0.00	0.00	0.00	
8,700.00	90.66	265.72	7,203.14	-1,169.06	-1,341.16	1,611.09	0.00	0.00	0.00	
8,800.00	90.66	265.72	7,201.98	-1,176.52	-1,440.87	1,708.76	0.00	0.00	0.00	
8,900.00	90.66	265.72	7,200.82	-1,183.99	-1,540.59	1,806.44	0.00	0.00	0.00	
9,000.00	90.66	265.72	7,199.67	-1,191.45	-1,640.30	1,904.12	0.00	0.00	0.00	
9,100.00	90.66	265.72	7,198.51	-1,198.91	-1,740.01	2,001.80	0.00	0.00	0.00	
9,200.00	90.66	265.72	7,197.35	-1,206.38	-1,839.73	2,099.48	0.00	0.00	0.00	
9,300.00	90.66	265.72	7,196.20	-1,213.84	-1,939.44	2,197.16	0.00	0.00	0.00	
9,400.00	90.66	265.72	7,195.04	-1,221.30	-2,039.16	2,294.84	0.00	0.00	0.00	
9,500.00	90.66	265.72	7,193.88	-1,228.77	-2,138.87	2,392.51	0.00	0.00	0.00	
9,600.00	90.66	265.72	7,192.73	-1,236.23	-2,238.59	2,490.19	0.00	0.00	0.00	
9,700.00	90.66	265.72	7,191.57	-1,243.69	-2,338.30	2,587.87	0.00	0.00	0.00	
9,800.00	90.66	265.72	7,190.41	-1,251.16	-2,438.01	2,685.55	0.00	0.00	0.00	
9,900.00	90.66	265.72	7,189.26	-1,258.62	-2,537.73	2,783.23	0.00	0.00	0.00	
10,000.00	90.66	265.72	7,188.10	-1,266.09	-2,637.44	2,880.91	0.00	0.00	0.00	
10,100.00	90.66	265.72	7,186.94	-1,273.55	-2,737.16	2,978.59	0.00	0.00	0.00	
10,200.00	90.66	265.72	7,185.78	-1,281.01	-2,836.87	3,076.26	0.00	0.00	0.00	
10,300.00	90.66	265.72	7,184.63	-1,288.48	-2,936.59	3,173.94	0.00	0.00	0.00	
10,400.00	90.66	265.72	7,183.47	-1,295.94	-3,036.30	3,271.62	0.00	0.00	0.00	
10,500.00	90.66	265.72	7,182.31	-1,303.40	-3,136.02	3,369.30	0.00	0.00	0.00	
10,600.00	90.66	265.72	7,181.16	-1,310.87	-3,235.73	3,466.98	0.00	0.00	0.00	
10,700.00	90.66	265.72	7,180.00	-1,318.33	-3,335.44	3,564.66	0.00	0.00	0.00	
10,800.00	90.66	265.72	7,178.84	-1,325.79	-3,435.16	3,662.34	0.00	0.00	0.00	
10,900.00	90.66	265.72	7,177.69	-1,333.26	-3,534.87	3,760.02	0.00	0.00	0.00	
11,000.00	90.66	265.72	7,176.53	-1,340.72	-3,634.59	3,857.69	0.00	0.00	0.00	
11,100.00	90.66	265.72	7,175.37	-1,348.19	-3,734.30	3,955.37	0.00	0.00	0.00	
11,200.00	90.66	265.72	7,174.22	-1,355.65	-3,834.02	4,053.05	0.00	0.00	0.00	
11,300.00	90.66	265.72	7,173.06	-1,363.11	-3,933.73	4,150.73	0.00	0.00	0.00	
11,400.00	90.66	265.72	7,171.90	-1,370.58	-4,033.44	4,248.41	0.00	0.00	0.00	
11,500.00	90.66	265.72	7,170.75	-1,378.04	-4,133.16	4,346.09	0.00	0.00	0.00	
11,600.00	90.66	265.72	7,169.59	-1,385.50	-4,232.87	4,443.77	0.00	0.00	0.00	
11,700.00	90.66	265.72	7,168.43	-1,392.97	-4,332.59	4,541.44	0.00	0.00	0.00	
11,800.00	90.66	265.72	7,167.28	-1,400.43	-4,432.30	4,639.12	0.00	0.00	0.00	
11,900.00	90.66	265.72	7,166.12	-1,407.89	-4,532.02	4,736.80	0.00	0.00	0.00	
12,007.84	90.66	265.72	7,164.87	-1,415.94	-4,639.54	4,842.13	0.00	0.00	0.00	
PBHL (#18H)										



Scientific Drilling Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Site Wolf AJA Federal
Company:	Yates Petroleum Corp.	TVD Reference:	KB = 17 @ 3681.00usft
Project:	Eddy County, NM (NAD83 NME)	MD Reference:	KB = 17 @ 3681.00usft
Site:	Wolf AJA Federal	North Reference:	Grid
Well:	#18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
PBHL (#18H)	0.00	0.00	7,166.00	-1,408.66	-4,641.71	527,137.200	724,679.100	32° 26' 51.945 N	103° 44' 20.343 W
- plan misses target center by 7.68usft at 12007.83usft MD (7164.87 TVD, -1415.94 N, -4639.54 E)									
- Point									
EOC (#18H)	0.00	0.00	7,216.00	-1,086.05	-232.15	527,459.806	729,088.657	32° 26' 54.891 N	103° 43' 28.863 W
- plan hits target center									
- Point									

Wolf AJA Federal Com #18H Contingency

Contingency Casing Design:

2nd Intermediate: Drilled with an 8 ¾" hole:

0 ft to 7,588 ft				Make up Torque ft-lbs			Total ft	7,588
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/Packer Stage tool will be placed at approx. 4700' and 6800'

Stage I: Cemented w/180sx 50/50 PozC (YLD 1.34 WT 13, 6.2 gal/sk) 7588'-6800' 100% excess

Stage II: Lead w/180sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/200sx 50/50 PozC (YLD 1.34 WT 13, 6.2 gal/sk) 6800'-4700' 100% excess

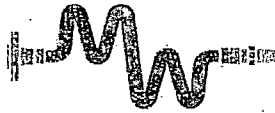
Stage III: Lead w/570sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/200sx 50/50 PozC (YLD 1.34 WT 14.2, 6.2 gal/sk) 4700'-0' 100% excess

Production: Production hole will be drilled with a 6 1/8" hole:

0 ft to 12,008 ft				Make up Torque ft-lbs			Total ft =	12,008
O.D.	Weight	Grade	Threads	opt.	min.	mx.		
4.5 inches	11.6 #/Ft	P-110	BT&C	3020	2270	3780		
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift		
7,580 psi	10,690 psi	385,000 #		367,000 #		3.875		

Stage I: Cemented w/325sx PVL (YLD 1.82 WT 13, 9.3 gal/sk) 12,008'-7400' 35% excess

DV tool at approx. 7400'. Cemented in one stage up to the packer stage tool. 4 ½" casing will be cut and pulled at approx. 7400' after stimulation.



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: CACTUS

Customer P.O.# RIG#137 M12653

Sales Order # 191672

Date Assembled: 12/11/2013

Specifications

Hose Assembly Type: Choke & Kill

Assembly Serial # 229391

Hose Lot # and Date Code 11060 10/13

Hose Working Pressure (psi) 10000

Test Pressure (psi) 15000

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

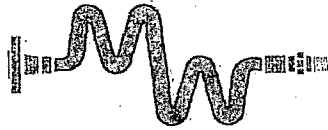
Comments:

Approved By

Phillip Magistella

Date

12/11/2013



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	CACTUS	Hose Assembly Type	Choke & Kill
MWH Sales Representative	EVAN SPARKMAN	Certification	API 7K
Date Assembled	12/11/2013	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	191672	Hose Lot # and Date Code	11060 10/13
Customer Purchase Order #	RIG#137 M12653	Hose I.D. (Inches)	4"
Assembly Serial # (Pick Ticket #)	229391	Hose O.D. (Inches)	6.60"
Hose Assembly Length	35 FEET	Aarmor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R4.0X64WB	Stem (Part and Revision #)	R4.0X64WB
Stem (Heat #)	1311405220	Stem (Heat #)	1311405220
Ferrule (Part and Revision #)	RF4.0	Ferrule (Part and Revision #)	RF4.0
Ferrule (Heat #)	120368	Ferrule (Heat #)	120368
Connection (Part #)	4 1/16" 10K	Connection (Part #)	4 1/16" 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	6.62"	Dies Used	6.62"
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 1/2		
Date Tested	Tested By		Approved By
12/11/2013	<i>T. Keef</i>		<i>Philip M. [Signature]</i>

M12653



Midwest Hose
& Specialty, Inc.

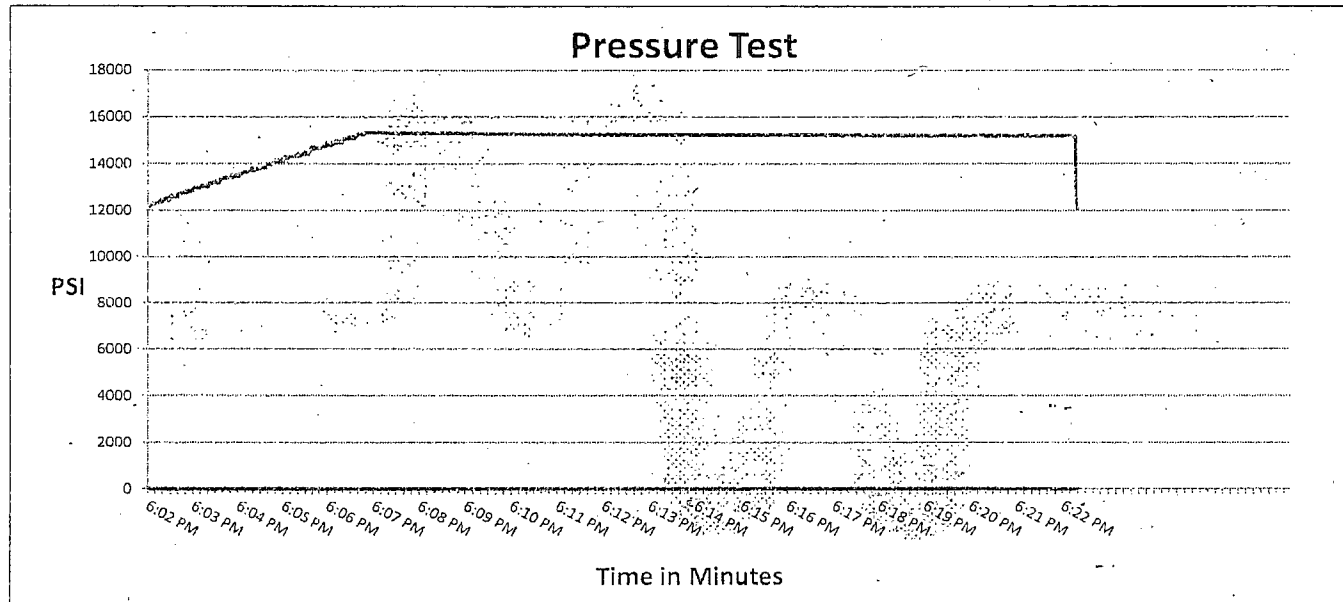
Internal Hydrostatic Test Graph

December 11, 2013

Customer: Cactus

Pick Ticket #: 229391

Hose Specifications		Verification	
<u>Hose Type</u>	<u>Length</u>	<u>Type of Fitting</u>	<u>Coupling Method</u>
Mud	35'	4 1/16 10K	Swage
<u>I.D.</u>	<u>O.D.</u>	<u>Die Size</u>	<u>Final O.D.</u>
4"	6.13"	6.62"	6.66"
<u>Working Pressure</u>	<u>Burst Pressure</u>	<u>Hose Serial #</u>	<u>Hose Assembly Serial #</u>
10000 PSI	Standard Safety Multiplier Applies	11060	229391



Test Pressure
15000 PSI

Time Held at Test Pressure
16 2/4 Minutes

Actual Burst Pressure

Peak Pressure
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tony Kellington

Approved By: Phil Maytubby

x *Tony Kellington*

x *Phil Maytubby*

Conditions of Approval

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

Operator has proposed DV tools at depths of 6800 and 4700'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

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. **Additional cement may be required – excess calculates to 24%.**

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. If cement does not circulate, contact the appropriate BLM office.