

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.
NMLC062376

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

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

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
ANTWEIL ANU FEDERAL 3H

2. Name of Operator Contact: NAOMI G SAIZ
YATES PETROLEUM CORPORATION-Mail: NSAIZ@YATESPETROLEUM.COM

9. API Well No.
30-015-40523-00-X1

3a. Address
105 SOUTH FOURTH STREET
ARTESIA, NM 88210

3b. Phone No. (include area code)
Ph: 575-748-4211

10. Field and Pool, or Exploratory
WILDCAT

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 19 T19S R30E SWSE 330FSL 1980FEL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK 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 checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A PD
	<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 recomplete 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall 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 respectfully requests to make the following changes to the our well plan as per the attached paperwork and directional plan.

Thank you.

Accepted for record
NMOCD *tes*
10-6-14

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 03 2014

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVED
SEP 30 2014
Ed. Fernandez
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #267020 verified by the BLM Well Information System
For YATES PETROLEUM CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by ED FERNANDEZ on 09/30/2014 (14EF0108SE)

Name (Printed/Typed) NAOMI G SAIZ Title WELL PLANNING TECH

Signature (Electronic Submission) Date 09/29/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By *Ed. Fernandez* (BLM Approver Not Specified) RETROLEUM ENGINEER Date 09/30/2014

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 Carlsbad

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.

Antweil ANU Federal #3H

Yates Petroleum Corporation respectfully requests to make the following changes:

2nd Intermediate Cement contingency:

We would like to request the approval of a cement contingency if hole conditions warrant. Hole will be drilled with a 12 ¼" hole to 3800' with a DV/Packer stage tool at approx. 1800'-2100'. Casing weight and grade will remain the same. Cement volumes will be adjusted per tool placement.

See COA

Stage I: Lead w/485sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/210sx 50/50 PozC(YLD 1.34 WT 14.2, 6.2 gal/sk) TOC approx.=1800' 100% excess

Stage II: Lead w/425sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/210sx 50/50 PozC (YLD 1.34 WT 14.2, 6.2 gal/sk) 100% excess TOC=0'

Production:

Packers and ports will not be run on this well. We also request that the packers and ports be removed from the alternative casing design.

Well will be drilled to approx. 7838'. Well will then be kicked off at approx. 7838' and directionally drilled at 12 degrees per 100' with an 8-3/4" hole to 8595' MD (8315' TVD). Hole size will then be reduced to 8 1/2" and drilled to 12,727' MD (8429' TVD) where 5 1/2" casing will be set and cemented in a single stage to approx. 1600'. Penetration point of producing zone will be encountered at 812' FSL and 1981' FEL, 19-19S-30E. Deepest TVD is 8315' in the lateral. Production casing will be as shown below. Target formation will remain the same.

See COA

0 ft to 12,727 ft		Make up Torque ft-lbs			Total ft = 12,727
O.D. 5.5 inches	Weight 17 #/ft	Grade P-110	Threads BT&C	opt.	min. mx.
Collapse Resistance 7,480 psi	Internal Yield 10,640 psi	Joint Strength 580,000 #	Body Yield 546,000 #	Drift 4.767	

Production cement will be done in one stage as follows:
Excess is calculated at 35%.

Lead: 775sx LiteCrete (YLD 2.73, WT 9.0, 9.7 gal/sk)
Tail: 1140sx PVL (YLD 1.36, WT 13.5, 6.3 gal/sk) TOC=1600'

2 Stage Production Cement Contingency:

We would like to request the approval of a 2 stage cement job for the production interval of this well. DV/Packer Stage tool placed approximately at 7000'-7500' (cement volumes will be adjusted per tool placement)

See COA

Stage I: Cemented w/1215sx PVL (YLD 1.36 WT 13.5, 6.3 gal/sk) 35% excess TOC approx. 7500'

Stage II: Lead w/635sx Lite Crete (YLD 2.73, WT 9.0, 9.7 gal/sk) tail w/200sx PVL (YLD 1.36, WT 13.5, 6.3 gal/sk) 1600'-7500' 35% excess TOC approx. 1600'



Yates Petroleum Corp.
 Project: Eddy County, NM(NAD83)
 Site: Antweil ANU Federal
 Well: #3H
 Wellbore: OH
 Plan: Plan #2 (#3H/OH)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	7837.6	0.00	0.00	7837.6	0.0	0.0	0.00	0.00	0.0
3	8595.2	90.91	359.85	8315.0	485.1	-1.3	12.00	359.85	485.1
4	12727.1	90.91	359.85	8249.0	4616.4	-11.9	0.00	0.00	4616.5

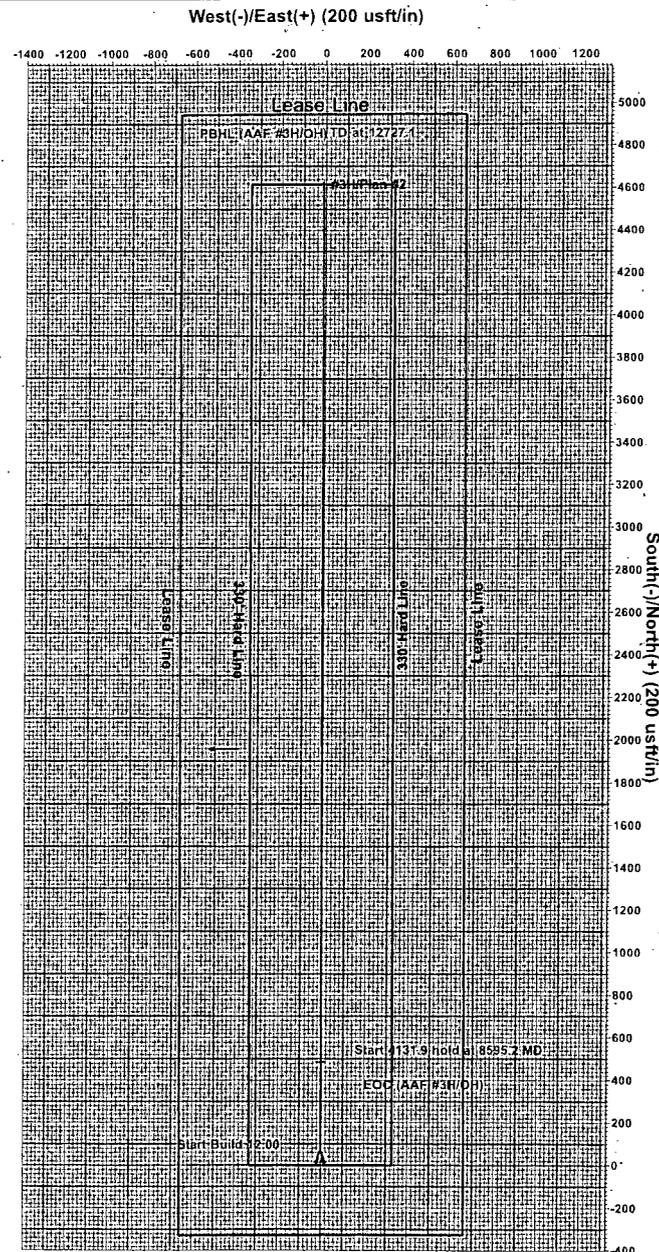
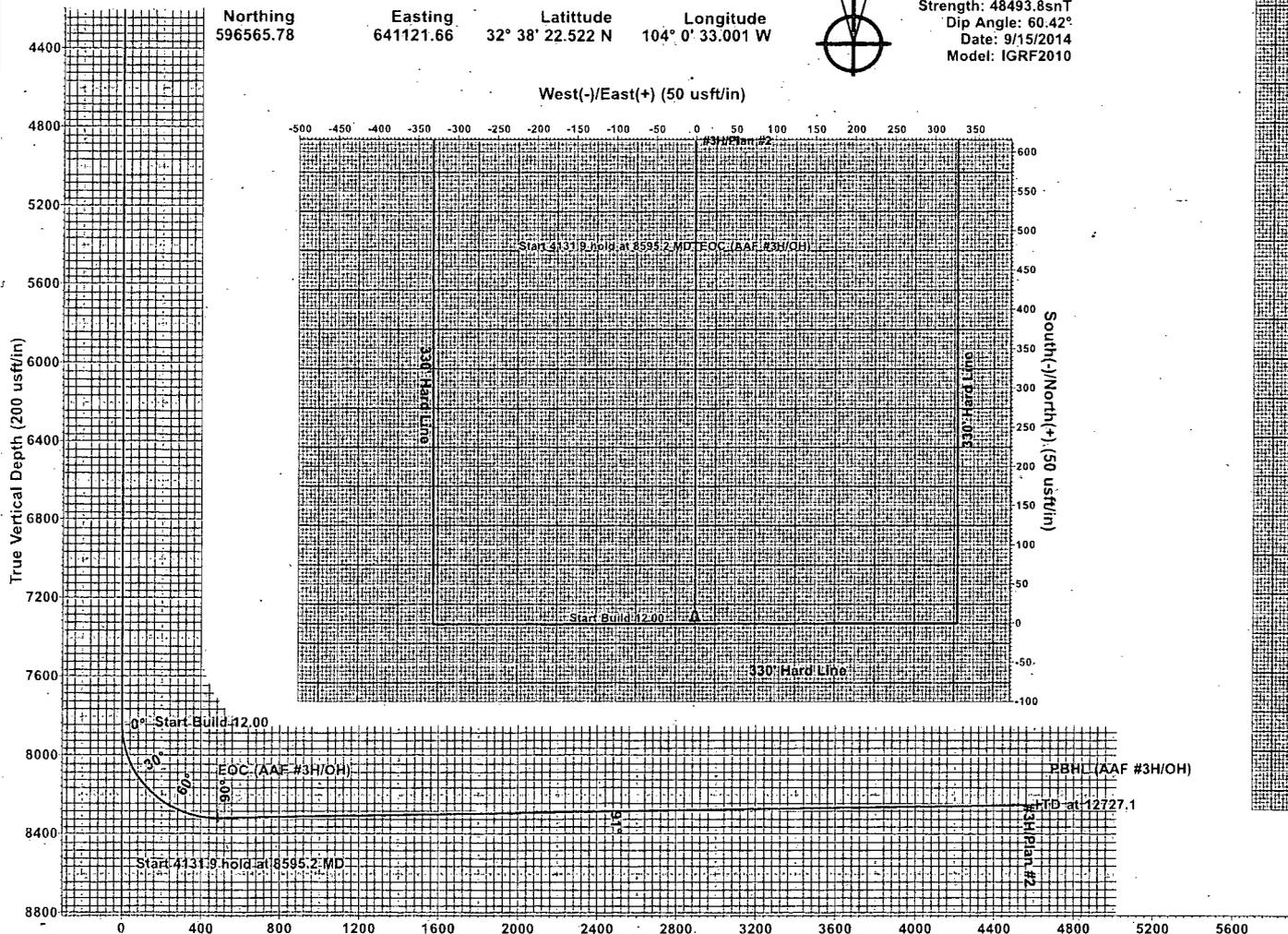
WELL DETAILS: #3H

Ground Elevation:: 3344.0
 RKB Elevation: KB @ 3363.0usft
 Rig Name:



Azimuths to Grid North
 True North: -0.17°
 Magnetic North: 7.24°

Magnetic Field
 Strength: 48493.8snT
 Dip Angle: 60.42°
 Date: 9/15/2014
 Model: IGRF2010



PROJECT DETAILS: Eddy County, NM(NAD83)
 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

Vertical Section at 359.85° (200 usft/in)

Terra Directional Services LLC
 322 Spring Hill Drive, Suite A300, Spring, Tx 77386
 Phone: 432-425-7532

Plan: Plan #2 (#3H/OH)
 Date: 14:53, September 23 2014



Yates Petroleum Corp.

Eddy County, NM(NAD83)

Antweil ANU Federal

#3H

OH

Plan: Plan #2

Standard Planning Report

23 September, 2014





TDS Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	Yates Petroleum Corp.	TVD Reference:	KB @ 3363.0usft
Project:	Eddy County, NM(NAD83)	MD Reference:	KB @ 3363.0usft
Site:	Antwell ANU Federal	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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

Site:	Antwell ANU Federal				
Site Position:	Northing:	596,565.79 usft	Latitude:	32° 38' 22.522 N	
From: Map	Easting:	641,121.67 usft	Longitude:	104° 0' 33.001 W	
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well:	#3H			
Well Position	+N-S	0.0 usft	Northing:	596,565.79 usft
	+E-W	0.0 usft	Easting:	641,121.67 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:	0.0 usft
			Ground Level:	3,344.0 usft

Wellbore:	OH			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/15/2014	7.42	60.42	48,494

Design:	Plan #2			
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	359.85

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,837.6	0.00	0.00	7,837.6	0.0	0.0	0.00	0.00	0.00	0.00	
8,595.2	90.92	359.85	8,315.0	485.1	-1.3	12.00	12.00	0.00	359.85	
12,727.1	90.92	359.85	8,249.0	4,616.4	-11.9	0.00	0.00	0.00	0.00	PBHL (AAF #3H/OH)



TDS
Planning Report



Database	EDM 5000:1 Single User Db	Local Co-ordinate Reference	Well #3H
Company	Yates Petroleum Corp.	IVD Reference	KB @ 3363.0usft
Project	Eddy County, NM(NAD83)	MD Reference	KB @ 3363.0usft
Site	Antwell ANU Federal	North Reference	Grid
Well	#3H	Survey Calculation Method	Minimum Curvature
Wellbore	OH		
Design	Plan #2		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



TDS Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	Yates Petroleum Corp.	TVD Reference:	KB @ 3363.0usft
Project:	Eddy County, NM(NAD83)	MD Reference:	KB @ 3363.0usft
Site:	Antwell ANU Federal	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,837.6	0.00	0.00	7,837.6	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,850.0	1.49	359.85	7,850.0	0.2	0.0	0.2	12.00	12.00	0.00	0.00
7,875.0	4.49	359.85	7,875.0	1.5	0.0	1.5	12.00	12.00	0.00	0.00
7,900.0	7.49	359.85	7,899.8	4.1	0.0	4.1	12.00	12.00	0.00	0.00
7,925.0	10.49	359.85	7,924.5	8.0	0.0	8.0	12.00	12.00	0.00	0.00
7,950.0	13.49	359.85	7,949.0	13.2	0.0	13.2	12.00	12.00	0.00	0.00
7,975.0	16.49	359.85	7,973.1	19.6	-0.1	19.6	12.00	12.00	0.00	0.00
8,000.0	19.49	359.85	7,996.9	27.4	-0.1	27.4	12.00	12.00	0.00	0.00
8,025.0	22.49	359.85	8,020.2	36.3	-0.1	36.3	12.00	12.00	0.00	0.00
8,050.0	25.49	359.85	8,043.1	46.5	-0.1	46.5	12.00	12.00	0.00	0.00
8,075.0	28.49	359.85	8,065.3	57.8	-0.1	57.8	12.00	12.00	0.00	0.00
8,100.0	31.49	359.85	8,087.0	70.3	-0.2	70.3	12.00	12.00	0.00	0.00
8,125.0	34.49	359.85	8,108.0	83.9	-0.2	83.9	12.00	12.00	0.00	0.00
8,150.0	37.49	359.85	8,128.2	98.6	-0.3	98.6	12.00	12.00	0.00	0.00
8,175.0	40.49	359.85	8,147.6	114.3	-0.3	114.3	12.00	12.00	0.00	0.00
8,200.0	43.49	359.85	8,166.2	131.1	-0.3	131.1	12.00	12.00	0.00	0.00
8,225.0	46.49	359.85	8,183.9	148.7	-0.4	148.7	12.00	12.00	0.00	0.00
8,250.0	49.49	359.85	8,200.6	167.3	-0.4	167.3	12.00	12.00	0.00	0.00
8,275.0	52.49	359.85	8,216.3	186.7	-0.5	186.7	12.00	12.00	0.00	0.00
8,300.0	55.49	359.85	8,231.0	206.9	-0.5	206.9	12.00	12.00	0.00	0.00
8,325.0	58.49	359.85	8,244.7	227.9	-0.6	227.9	12.00	12.00	0.00	0.00
8,350.0	61.49	359.85	8,257.2	249.5	-0.6	249.6	12.00	12.00	0.00	0.00
8,375.0	64.49	359.85	8,268.5	271.8	-0.7	271.8	12.00	12.00	0.00	0.00
8,400.0	67.49	359.85	8,278.7	294.7	-0.8	294.7	12.00	12.00	0.00	0.00
8,425.0	70.49	359.85	8,287.6	318.0	-0.8	318.0	12.00	12.00	0.00	0.00
8,450.0	73.49	359.85	8,295.4	341.8	-0.9	341.8	12.00	12.00	0.00	0.00
8,475.0	76.49	359.85	8,301.8	365.9	-0.9	365.9	12.00	12.00	0.00	0.00
8,500.0	79.49	359.85	8,307.1	390.4	-1.0	390.4	12.00	12.00	0.00	0.00
8,525.0	82.49	359.85	8,311.0	415.0	-1.1	415.0	12.00	12.00	0.00	0.00



TDS Planning Report



Database	EDM 5000.1 Single User Db	Local Co-ordinate Reference	Well #3H
Company	Yates Petroleum Corp.	TVD Reference	KB @ 3363.0usft
Project	Eddy County, NM(NAD83)	MD Reference	KB @ 3363.0usft
Site	Antwell ANU Federal	North Reference	Grid
Well	#3H	Survey Calculation Method	Minimum Curvature
Wellbore	OH		
Design	Plan #2		

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)	
8,550.0	85.49	359.85	8,313.6	439.9	-1.1	439.9	12.00	12.00	0.00	
8,575.0	88.49	359.85	8,314.9	464.9	-1.2	464.9	12.00	12.00	0.00	
8,595.2	90.91	359.85	8,315.0	485.0	-1.3	485.0	12.00	12.00	0.00	
EOC (AAF #3H/OH)										
8,600.0	90.92	359.85	8,314.9	489.9	-1.3	489.9	0.10	0.10	0.00	
8,700.0	90.92	359.85	8,313.3	589.8	-1.5	589.9	0.00	0.00	0.00	
8,800.0	90.92	359.85	8,311.7	689.8	-1.8	689.8	0.00	0.00	0.00	
8,900.0	90.92	359.85	8,310.1	789.8	-2.0	789.8	0.00	0.00	0.00	
9,000.0	90.92	359.85	8,308.5	889.8	-2.3	889.8	0.00	0.00	0.00	
9,100.0	90.92	359.85	8,306.9	989.8	-2.6	989.8	0.00	0.00	0.00	
9,200.0	90.92	359.85	8,305.3	1,089.8	-2.8	1,089.8	0.00	0.00	0.00	
9,300.0	90.92	359.85	8,303.7	1,189.8	-3.1	1,189.8	0.00	0.00	0.00	
9,400.0	90.92	359.85	8,302.2	1,289.8	-3.3	1,289.8	0.00	0.00	0.00	
9,500.0	90.92	359.85	8,300.6	1,389.7	-3.6	1,389.7	0.00	0.00	0.00	
9,600.0	90.92	359.85	8,299.0	1,489.7	-3.8	1,489.7	0.00	0.00	0.00	
9,700.0	90.92	359.85	8,297.4	1,589.7	-4.1	1,589.7	0.00	0.00	0.00	
9,800.0	90.92	359.85	8,295.8	1,689.7	-4.4	1,689.7	0.00	0.00	0.00	
9,900.0	90.92	359.85	8,294.2	1,789.7	-4.6	1,789.7	0.00	0.00	0.00	
10,000.0	90.92	359.85	8,292.6	1,889.7	-4.9	1,889.7	0.00	0.00	0.00	
10,100.0	90.92	359.85	8,291.0	1,989.7	-5.1	1,989.7	0.00	0.00	0.00	
10,200.0	90.92	359.85	8,289.4	2,089.7	-5.4	2,089.7	0.00	0.00	0.00	
10,300.0	90.92	359.85	8,287.8	2,189.6	-5.7	2,189.6	0.00	0.00	0.00	
10,400.0	90.92	359.85	8,286.2	2,289.6	-5.9	2,289.6	0.00	0.00	0.00	
10,500.0	90.92	359.85	8,284.6	2,389.6	-6.2	2,389.6	0.00	0.00	0.00	
10,600.0	90.92	359.85	8,283.0	2,489.6	-6.4	2,489.6	0.00	0.00	0.00	
10,700.0	90.92	359.85	8,281.4	2,589.6	-6.7	2,589.6	0.00	0.00	0.00	
10,800.0	90.92	359.85	8,279.8	2,689.6	-6.9	2,689.6	0.00	0.00	0.00	
10,900.0	90.92	359.85	8,278.2	2,789.6	-7.2	2,789.6	0.00	0.00	0.00	
11,000.0	90.92	359.85	8,276.6	2,889.5	-7.5	2,889.6	0.00	0.00	0.00	
11,100.0	90.92	359.85	8,275.0	2,989.5	-7.7	2,989.5	0.00	0.00	0.00	
11,200.0	90.92	359.85	8,273.4	3,089.5	-8.0	3,089.5	0.00	0.00	0.00	
11,300.0	90.92	359.85	8,271.8	3,189.5	-8.2	3,189.5	0.00	0.00	0.00	
11,400.0	90.92	359.85	8,270.2	3,289.5	-8.5	3,289.5	0.00	0.00	0.00	
11,500.0	90.92	359.85	8,268.6	3,389.5	-8.8	3,389.5	0.00	0.00	0.00	
11,600.0	90.92	359.85	8,267.0	3,489.5	-9.0	3,489.5	0.00	0.00	0.00	
11,700.0	90.92	359.85	8,265.4	3,589.5	-9.3	3,589.5	0.00	0.00	0.00	
11,800.0	90.92	359.85	8,263.8	3,689.4	-9.5	3,689.5	0.00	0.00	0.00	
11,900.0	90.92	359.85	8,262.2	3,789.4	-9.8	3,789.4	0.00	0.00	0.00	
12,000.0	90.92	359.85	8,260.6	3,889.4	-10.0	3,889.4	0.00	0.00	0.00	
12,100.0	90.92	359.85	8,259.0	3,989.4	-10.3	3,989.4	0.00	0.00	0.00	
12,200.0	90.92	359.85	8,257.4	4,089.4	-10.6	4,089.4	0.00	0.00	0.00	
12,300.0	90.92	359.85	8,255.8	4,189.4	-10.8	4,189.4	0.00	0.00	0.00	
12,400.0	90.92	359.85	8,254.2	4,289.4	-11.1	4,289.4	0.00	0.00	0.00	
12,500.0	90.92	359.85	8,252.6	4,389.4	-11.3	4,389.4	0.00	0.00	0.00	
12,600.0	90.92	359.85	8,251.1	4,489.3	-11.6	4,489.4	0.00	0.00	0.00	
12,700.0	90.92	359.85	8,249.5	4,589.3	-11.9	4,589.3	0.00	0.00	0.00	
12,727.1	90.92	359.85	8,249.0	4,616.4	-11.9	4,616.5	0.00	0.00	0.00	
PBHL (AAF #3H/OH)										



TDS
Planning Report



Database:	EDM 5000-1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	Yates Petroleum Corp.	TVD Reference:	KB @ 3363.0usft
Project:	Eddy County, NM(NAD83)	MD Reference:	KB @ 3363.0usft
Site:	Antwell ANU Federal	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 (AAF #3H/OH) - plan hits target center - Point	0.00	0.00	8,249.0	4,616.4	-11.9	601,182.24	641,109.79	32° 39' 8.203 N	104° 0' 32.975 W
EOC (AAF #3H/OH) - plan hits target center - Point	0.00	0.00	8,315.0	485.0	-1.3	597,050.83	641,120.40	32° 38' 27.322 N	104° 0' 32.998 W

CONDITIONS OF APPROVAL

Sundry dated 9/29/2014

OPERATOR'S NAME:	YATES PETROLEUM
LEASE NO.:	LC062376
WELL NAME & NO.:	ANTWEIL ANU FEDERAL #3H 30-015-40523
SURFACE HOLE FOOTAGE:	330' FSL & 1980' FEL
BOTTOM HOLE FOOTAGE:	330' FNL & 1980' FEL
LOCATION:	Section 19, T.19 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

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 H2S 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 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 or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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. **IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS.** 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.

High Cave/Karst Potential

Secretary's Potash

Possible water and brine flows in the Artesia and Salado Groups.

Possible lost circulation in the Artesia Group and Capitan Reef.

1. The 20 inch surface casing shall be set at approximately 350 feet (a minimum of 25 feet 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 **13-3/8** inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.
3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing, **which is to be set in the base of the Capitan reef or the top of the Delaware at approximately 3800'**, 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 the Capitan Reef.

Operator has proposed DV tool at depth of 1800' to 2100', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Contingency DVTOOL

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

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

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

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

Operator has proposed DV tool at depth of 7,000' to 7,500', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Contingency DVTOOL

a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with next 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 should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

Alternative SECOND Intermediate Casing Design.

5. The minimum required fill of cement behind the 7 inch production casing is:

c. 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.

d. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4-1/2 inch production Liner is with Packer/Port system has been removed

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **Piping from choke manifold 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 **20 inch surface casing shoe** shall be **2000 (2M) psi.**
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8 inch intermediate casing shoe** shall be **3000 (3M) psi.**
4. 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.
 - a. 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).

- b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, 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. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- c. The results of the test shall be reported to the appropriate BLM office.
- d. 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.**
- e. 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.

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.

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