

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.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. MARTHA AIK FEDERAL 8H
2. Name of Operator YATES PETROLEUM CORPORATION		9. API Well No. 30-015-39733-00-X1
3a. Address 105 SOUTH FOURTH STREET ARTESIA, NM 88210		10. Field and Pool, or Exploratory UNDESIGNATED
3b. Phone No. (include area code) Ph: 575-748-4211		
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 11 T22S R31E NENE 430FNL 200FEL		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			
☒ 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
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 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 set 9 5/8" casing at 4450' due to a Lamar LM pick at 4429'. We would also like to request a change in target formation to the Basal Brushy Canyon with EOL to 11,484' MD (8,222 TVD). Please see attached for the casing design and cement volume changes. A contingency casing design is also attached that will be used if hole conditions warrant.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED

OCT 23 2013

MOOD ARTESIA

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #222232 verified by the BLM Well Information System For YATES PETROLEUM CORPORATION, sent to the Carlsbad Committed to AFMSS for processing by WESLEY INGRAM on 10/17/2013 (14WWI0234SE)	
Name (Printed/Typed) NAOMI G SAIZ	Title WELL PLANNING TECH
Signature (Electronic Submission)	Date 10/08/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By WESLEY INGRAM	Title PETROLEUM ENGINEER	Date 10/18/2013
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.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Intermediate Casing:

4,250 ft to 4,450 ft				Make up Torque ft-lbs			Total ft
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	40 #/Ft	HCK-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	3,950 psi	694 ,000 #		630 ,000 #		8.75-SD	

3,300 ft to 4,250 ft				Make up Torque ft-lbs			Total ft
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	40 #/Ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
2,570 psi	3,950 psi	520 ,000 #		630 ,000 #		8.75-SD	

80 ft to 3,300 ft				Make up Torque ft-lbs			Total ft
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	36 #/Ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
2,020 psi	3,520 psi	394 ,000 #		564 ,000 #		8.765	

0 ft to 80 ft				Make up Torque ft-lbs			Total ft
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	40 #/Ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
2,570 psi	3,950 psi	620 ,000 #		630 ,000 #		8.75-SD	

Stage I: Lead w/1,255sx C Lite (YLD 2 WT 2 11 gal/sk) Tail w/210sx C (YLD 1.34 WT 14.8 6.2 gal/sk) 4450'-0' 100% excess

Well will be drilled vertically to approx. 7781'. Well will then be kicked off at approx. 7781' and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 8537' MD (8258' TVD). Hole size will then be reduced to 8 1/2" and drilled to 11484' MD (8222' TVD) where 5 1/2" casing will be set and cemented to surface. Penetration point of producing zone will be encountered at 443' FNL and 683' FEL, 11-225-31E. Deepest TVD in the well is 8258' in the lateral.

EOC= 8258' TVD

EOL=8222' TVD

Production Casing:

0 ft to 11,484 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	17 #/ft	L-80	BT&C	3410	2560	4260	11,484
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
6,290 psi	7,740 psi	462 ,000 #		397 ,000 #		4.767	

DV/Packer Stage tool placed approximately at 4500'-5000' (cement volumes will be adjusted accordingly)

Stage I: Lead w/545sx 35/65 PozH (YLD 2 WT 12.5, 11 gal/sk), tail w/660sx PVL (YLD 1.82 WT 13, 9.1 gal/sk) 11,484-4500' 35% Excess

Stage II: Lead w/630sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/205sx C (YLD 1.34 WT 14.2, 6.2 gal/sk) 4500'-0' 35% Excess

Martha AIK Federal #8H Contingency Casing Design

Contingency Casing Design:

2nd Intermediate: Drilled with an 8 3/4" hole:

0 ft to 8,537 ft		Make up Torque ft-lbs			Total ft	8,537
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

7700' - Brushy Canyon

DV/Packer Stage tool will be placed at approx. 4500' and ~~6500'~~ *6900'*

Stage I: Cemented w/290sx 50/50 PozC (YLD 1.42 WT 13, 7.3 gal/sk) 8537'-6500' 35% excess

Stage II: Lead w/135sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/105sx 50/50 PozC (YLD 1.34 WT 13, 6.2 gal/sk) ~~6500'~~ *6900'* -4500' 35% excess

Stage III: Lead w/385sx 35/65 PozC (YLD 2 WT 12.5, 11 gal/sk) tail w/105sx 50/50 PozC (YLD 1.34 WT 14.2, 6.2 gal/sk) 4500'-0' 35% excess

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

0		ft to		11,484 ft		Make up Torque ft-lbs			Total ft = 11,484	
O.D.		Weight		Grade	Threads	opt.	min.	mx.		
4.5 inches		11.6 #/Ft		L-80	BT&C	2230	1670	2790		
Collapse Resistance		Internal Yield		Joint Strength		Body Yield		Drift		
6,350 psi		7,780 psi		291 ,000 #		267 ,000 #		3.875		

Production stage will be cemented in one stage with a DV tool at approx. ~~7700'~~ *7600'*. After completions 4 1/2" casing will be cut and pulled at approx. ~~7700'~~ *7600'*

Stage I: Cemented w/265sx PVL (YLD 1.82 WT 13, 9.1 gal/sk) 11,484'-~~7700'~~ *7600'* 35% excess

Actual 7" setting depth will be dependent on where lost circulation is encountered. BLM will be notified of any changes prior to any work being done.



Yates Petroleum

Eddy, NM (NAD-83)

Martha AIK Federal

#8H

OH

Plan: Plan #2

Standard Planning Report

27 September, 2013





Planning Report



Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #8H
Company:	Yates Petroleum	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Project:	Eddy, NM (NAD-83)	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site:	Martha AIK Federal	North Reference:	Grid
Well:	#8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project:	Eddy, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Martha AIK Federal				
Site Position:		Northing:	509,750.87 usft	Latitude:	32° 23' 59.928 N
From:	Map	Easting:	724,235.17 usft	Longitude:	103° 44' 26.648 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well:	#8H					
Well Position	+N/-S	4,423.3 usft	Northing:	514,174.14 usft	Latitude:	32° 24' 43.698 N
	+E/-W	-23.9 usft	Easting:	724,211.30 usft	Longitude:	103° 44' 26.641 W
Position Uncertainty	2.0 usft		Wellhead Elevation:	Ground Level: 3,546.0 usft		

Wellbore:		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/18/2013	7.40	60.28	48,484

Design: Plan #2				
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	268.40

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	
7,780.7	0.00	0.00	7,780.7	0.0	0.0	0.00	0.00	0.00	0.00	
8,536.6	90.70	268.40	8,258.1	-13.5	-483.1	12.00	12.00	-12.12	268.40	
11,484.6	90.70	268.40	8,222.0	-95.7	-3,429.8	0.00	0.00	0.00	0.00	PBHL (M#8H)



Planning Report



Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #8H
Company:	Yates Petroleum	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Project:	Eddy, NM (NAD-83)	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site:	Martha AIK Federal	North Reference:	Grid
Well:	#8H	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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
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
970.0	0.00	0.00	970.0	0.0	0.0	0.0	0.00	0.00	0.00
T of Salt									
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
4,140.0	0.00	0.00	4,140.0	0.0	0.0	0.0	0.00	0.00	0.00
B of Salt									
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
Bell Cnyn									
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #8H
Company:	Yates Petroleum	TVD Reference:	WELL @ 3567 Susft (Nomac #22 - 21.5' KB)
Project:	Eddy NM (NAD-83)	MD Reference:	WELL @ 3567 Susft (Nomac #22 - 21.5' KB)
Site:	Martha A/K Federal	North Reference:	Grid
Well:	#8H	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)
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
5,320.0	0.00	0.00	5,320.0	0.0	0.0	0.0	0.00	0.00	0.00
Cherry Cyn									
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	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
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	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
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	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
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	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
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	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
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	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
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	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
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	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
6,992.0	0.00	0.00	6,992.0	0.0	0.0	0.0	0.00	0.00	0.00
Livingston Ridge									
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	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
7,148.0	0.00	0.00	7,148.0	0.0	0.0	0.0	0.00	0.00	0.00
Brushy Cyn									
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	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
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	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
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	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
7,780.7	0.00	0.00	7,780.7	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 7780.7' MD, 7780.7' TVD									
7,800.0	2.32	268.40	7,800.0	0.0	-0.4	0.4	12.00	12.00	0.00
7,825.0	5.32	268.40	7,824.9	-0.1	-2.1	2.1	12.00	12.00	0.00
7,850.0	8.32	268.40	7,849.8	-0.1	-5.0	5.0	12.00	12.00	0.00
7,875.0	11.32	268.40	7,874.4	-0.3	-9.3	9.3	12.00	12.00	0.00
7,900.0	14.32	268.40	7,898.8	-0.4	-14.8	14.8	12.00	12.00	0.00
7,925.0	17.32	268.40	7,922.8	-0.6	-21.6	21.6	12.00	12.00	0.00
7,950.0	20.32	268.40	7,946.5	-0.8	-29.7	29.7	12.00	12.00	0.00
7,975.0	23.32	268.40	7,969.7	-1.1	-39.0	39.0	12.00	12.00	0.00
8,000.0	26.32	268.40	7,992.4	-1.4	-49.5	49.5	12.00	12.00	0.00
8,025.0	29.32	268.40	8,014.5	-1.7	-61.1	61.1	12.00	12.00	0.00
8,042.0	31.36	268.40	8,029.1	-1.9	-69.7	69.7	12.00	12.00	0.00
BR Cyn Mrkr									
8,050.0	32.32	268.40	8,035.9	-2.1	-73.9	74.0	12.00	12.00	0.00
8,075.0	35.32	268.40	8,056.7	-2.5	-87.8	87.9	12.00	12.00	0.00

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #8H
Company:	Yates Petroleum	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Project:	Eddy NM (NAD-83)	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site:	Martha A/K Federal	North Reference:	Grid
Well:	#8H	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)	
8,100.0	38.32	268.40	8,076.7	-2.9	-102.8	102.8	12.00	12.00	0.00	
8,125.0	41.32	268.40	8,095.9	-3.3	-118.8	118.9	12.00	12.00	0.00	
8,150.0	44.32	268.40	8,114.3	-3.8	-135.8	135.8	12.00	12.00	0.00	
8,175.0	47.32	268.40	8,131.7	-4.3	-153.7	153.8	12.00	12.00	0.00	
8,200.0	50.32	268.40	8,148.1	-4.8	-172.5	172.6	12.00	12.00	0.00	
8,225.0	53.32	268.40	8,163.6	-5.4	-192.2	192.2	12.00	12.00	0.00	
8,250.0	56.32	268.40	8,178.0	-5.9	-212.6	212.7	12.00	12.00	0.00	
8,275.0	59.32	268.40	8,191.3	-6.5	-233.7	233.8	12.00	12.00	0.00	
8,300.0	62.32	268.40	8,203.5	-7.1	-255.5	255.6	12.00	12.00	0.00	
8,325.0	65.32	268.40	8,214.5	-7.8	-278.0	278.1	12.00	12.00	0.00	
8,350.0	68.32	268.40	8,224.4	-8.4	-300.9	301.0	12.00	12.00	0.00	
8,375.0	71.32	268.40	8,233.0	-9.1	-324.4	324.5	12.00	12.00	0.00	
8,400.0	74.32	268.40	8,240.4	-9.7	-348.3	348.4	12.00	12.00	0.00	
8,425.0	77.32	268.40	8,246.5	-10.4	-372.5	372.6	12.00	12.00	0.00	
8,450.0	80.32	268.40	8,251.4	-11.1	-397.0	397.1	12.00	12.00	0.00	
8,475.0	83.32	268.40	8,254.9	-11.8	-421.7	421.9	12.00	12.00	0.00	
8,500.0	86.32	268.40	8,257.2	-12.5	-446.6	446.8	12.00	12.00	0.00	
8,525.0	89.32	268.40	8,258.1	-13.2	-471.6	471.8	12.00	12.00	0.00	
8,530.8	90.02	268.40	8,258.2	-13.3	-477.4	477.6	12.00	12.00	0.00	
Target Basal BYCN										
8,536.6	90.70	268.40	8,258.1	-13.5	-483.2	483.4	11.90	11.90	0.00	
EOC - 8536.6' MD, 8258.1' TVD, 90.70° INC, 483.4' VS										
8,600.0	90.70	268.40	8,257.4	-15.3	-546.5	546.8	0.00	0.00	0.00	
8,700.0	90.70	268.40	8,256.1	-18.0	-646.5	646.8	0.00	0.00	0.00	
8,800.0	90.70	268.40	8,254.9	-20.8	-746.5	746.7	0.00	0.00	0.00	
8,900.0	90.70	268.40	8,253.7	-23.6	-846.4	846.7	0.00	0.00	0.00	
9,000.0	90.70	268.40	8,252.4	-26.4	-946.4	946.7	0.00	0.00	0.00	
9,100.0	90.70	268.40	8,251.2	-29.2	-1,046.3	1,046.7	0.00	0.00	0.00	
9,200.0	90.70	268.40	8,250.0	-32.0	-1,146.3	1,146.7	0.00	0.00	0.00	
9,300.0	90.70	268.40	8,248.8	-34.8	-1,246.2	1,246.7	0.00	0.00	0.00	
9,400.0	90.70	268.40	8,247.5	-37.6	-1,346.2	1,346.7	0.00	0.00	0.00	
9,500.0	90.70	268.40	8,246.3	-40.4	-1,446.1	1,446.7	0.00	0.00	0.00	
9,600.0	90.70	268.40	8,245.1	-43.2	-1,546.1	1,546.7	0.00	0.00	0.00	
9,700.0	90.70	268.40	8,243.9	-45.9	-1,646.0	1,646.7	0.00	0.00	0.00	
9,800.0	90.70	268.40	8,242.6	-48.7	-1,746.0	1,746.7	0.00	0.00	0.00	
9,900.0	90.70	268.40	8,241.4	-51.5	-1,845.9	1,846.7	0.00	0.00	0.00	
10,000.0	90.70	268.40	8,240.2	-54.3	-1,945.9	1,946.7	0.00	0.00	0.00	
10,100.0	90.70	268.40	8,239.0	-57.1	-2,045.9	2,046.6	0.00	0.00	0.00	
10,200.0	90.70	268.40	8,237.7	-59.9	-2,145.8	2,146.6	0.00	0.00	0.00	
10,300.0	90.70	268.40	8,236.5	-62.7	-2,245.8	2,246.6	0.00	0.00	0.00	
10,400.0	90.70	268.40	8,235.3	-65.5	-2,345.7	2,346.6	0.00	0.00	0.00	
10,500.0	90.70	268.40	8,234.1	-68.3	-2,445.7	2,446.6	0.00	0.00	0.00	
10,600.0	90.70	268.40	8,232.8	-71.0	-2,545.6	2,546.6	0.00	0.00	0.00	
10,700.0	90.70	268.40	8,231.6	-73.8	-2,645.6	2,646.6	0.00	0.00	0.00	
10,800.0	90.70	268.40	8,230.4	-76.6	-2,745.5	2,746.6	0.00	0.00	0.00	
10,900.0	90.70	268.40	8,229.2	-79.4	-2,845.5	2,846.6	0.00	0.00	0.00	
11,000.0	90.70	268.40	8,227.9	-82.2	-2,945.4	2,946.6	0.00	0.00	0.00	
11,100.0	90.70	268.40	8,226.7	-85.0	-3,045.4	3,046.6	0.00	0.00	0.00	
11,200.0	90.70	268.40	8,225.5	-87.8	-3,145.3	3,146.6	0.00	0.00	0.00	
11,300.0	90.70	268.40	8,224.3	-90.6	-3,245.3	3,246.6	0.00	0.00	0.00	
11,400.0	90.70	268.40	8,223.0	-93.4	-3,345.2	3,346.6	0.00	0.00	0.00	
11,484.6	90.70	268.40	8,222.0	-95.7	-3,429.8	3,431.1	0.00	0.00	0.00	
TD @ 11484.6' MD, 8222.0' TVD										



Planning Report



Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #8H
Company:	Yates Petroleum	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Project:	Eddy, NM (NAD-83)	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site:	Martha Alk Federal	North Reference:	.Grid
Well:	#8H	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 (M#8H)	0.00	0.00	8,222.0	-95.7	-3,429.8	514,078.42	720,781.54	32° 24' 42.938 N	103° 45' 6.656 W
- plan hits target center									
- Point									
Martha #6 (165' Rad)	0.00	0.00	8,410.0	-231.0	-128.8	513,943.10	724,082.50	32° 24' 41.419 N	103° 44' 28.158 W
- plan misses target center by 329.8usft at 8295.5usft MD (8201.4 TVD, -7.0 N, -251.6 E)									
- Circle (radius 165.0)									

Casing Points:

Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(")	(")
3,200.0	3,200.0	9 5/8" 36# J55 Int1	9-5/8	12-1/4
4,350.0	4,350.0	9 5/8" 40# J55 Int2	9-5/8	12-1/4

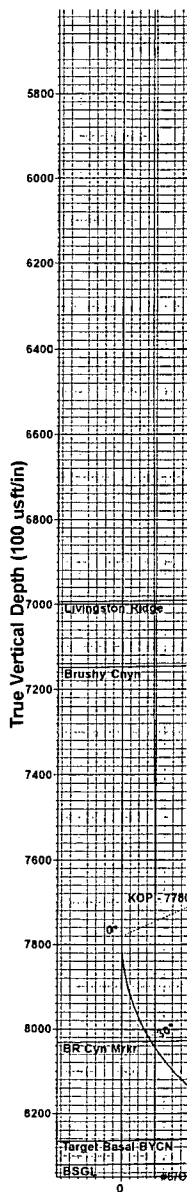
Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
650.0	650.0	Rustler		-0.70	268.40
970.0	970.0	T of Salt		-0.70	268.40
4,140.0	4,140.0	B of Salt		-0.70	268.40
4,500.0	4,500.0	Bell Cnyn		-0.70	268.40
5,320.0	5,320.0	Cherry Cnyn		-0.70	268.40
6,992.0	6,992.0	Livingston Ridge		-0.70	268.40
7,148.0	7,148.0	Brushy Cnyn		-0.70	268.40
8,042.0	8,029.1	BR Cyn Mrkr		-0.70	268.40
8,530.8	8,258.2	Target Basal BYCN		-0.70	268.40

Plan Annotations

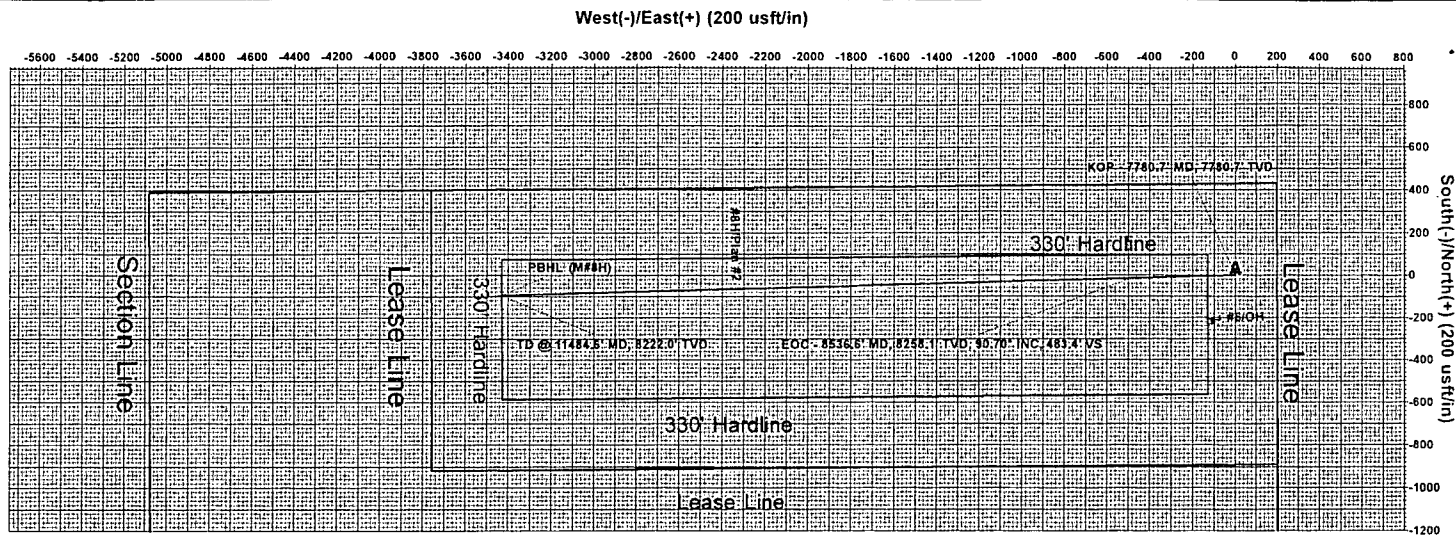
Measured Depth	Vertical Depth	Local Coordinates	Comment
(usft)	(usft)	N/S (usft) E/W (usft)	
7,780.7	7,780.7	0.0 0.0	KOP - 7780.7' MD, 7780.7' TVD
8,536.6	8,258.1	-13.5 -483.2	EOC - 8536.6' MD, 8258.1' TVD, 90.70° INC, 483.4' VS
11,484.6	8,222.0	-95.7 -3,429.8	TD @ 11484.6' MD, 8222.0' TVD

Yates Petroleum
Project: Eddy, NM (NAD-83)
Site: Martha AIK Federal
Well: #8H
Wellbore: OH
Plan: Plan #2 (#8H/OH)

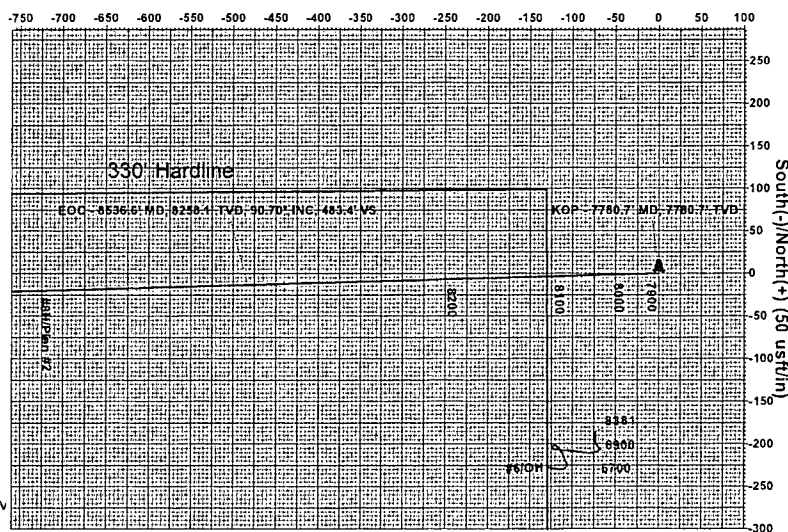


Azimuths to Grid North
True North: -0.32°
Magnetic North: 7.08°

Magnetic Field
Strength: 48484.2snT
Dip Angle: 60.28°
Date: 9/18/2013
Model: IGRF2010



West(-)/East(+) (50 usf/in)



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (M#8H)	8222.0	-95.7	-3429.8	514078.41	720781.54

Section Details

ec	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	7780.7	0.00	0.00	7780.7	0.0	0.0	0.00	0.00	0.0	
3	8536.6	90.70	268.40	8258.1	-13.5	-483.1	12.00	268.40	483.3	
4	11484.6	90.70	268.40	8222.0	-95.7	-3429.8	0.00	0.00	3431.1	PBHL (M#8H)

WELL DETAILS: #8H

Ground Elevation:: 3546.0

RKB Elevation: WELL @ 3567.5usft (Nomac #22 - 21.5' KB)

Rig Name: Nomac #22 - 21.5' KB

Surface Hole Location

Northing	Easting	Latitude	Longitude
514174.14	724211.31	32° 24' 43.698 N	103° 44' 26.641 W

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
650.0	650.0	Rustler
970.0	970.0	T of Salt
4140.0	4140.0	B of Salt
4500.0	4500.0	Bell Cnyn
5320.0	5320.0	Cherry Cnyn
6992.0	6992.0	Livingston Ridge
7148.0	7148.0	Brushy Cnyn
8029.1	8042.0	BR Cyn Mrkr
8258.2	8530.8	Target Basal BYCN

PROJECT DETAILS: Eddy, NM (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



Vertical Section at 268.40° (100 usf/in)

Crescent Directional Drilling
7715 West Industrial Ave. Midland, Tx 79706
Phone: 432-618-1135

Plan: Plan #2 (#8H/OH)
Created By: Matt Higgins Date: 18:17, October 02 2013





Yates Petroleum

Eddy, NM (NAD-83)
Martha AIK Federal
#8H

OH
Plan #2

Anticollision Report

02 October, 2013





Anticollision Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #8H
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Reference Site:	Martha AIK Federal	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site Error:	2.0 usft	North Reference:	Grid
Reference Well:	#8H	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	Houston R5000 Database
Reference Design:	Plan #2	Offset: TVD Reference:	Offset Datum

Reference:	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum separation factor of 10.00	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	9/27/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,484.6	Plan #2 (OH)	MWD	MWD - Standard	

Summary						
	Reference	Offset	Distance			
Site Name	Measured Depth	Measured Depth	Between Centres	Between Ellipses	Separation Factor	Warning
Offset Well: Wellbore: Design:	(usft)	(usft)	(usft)	(usft)		
Martha AIK Federal						
#6 - OH - OH	8,066.8	8,082.4	190.5	105.2	2.232	CC, ES, SF

Offset Design	Martha AIK Federal - #6 - OH - OH										Offset Site Error:	0.0 usft
Survey Program:	100-CP-GYRO-MS-7714-MWD										Offset Well Error:	10.0 usft
Reference	Offset	Semi Major Axis										
Measured Vertical Depth (usft)	Measured Vertical Depth (usft)	Reference Depth (usft)	Offset Depth (usft)	Highside (ft)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		Warning
2,100.0	2,100.0	2,127.6	2,127.5	5.0	21.1	-153.82	-229.6	-112.9	255.9	229.9	26.05	9.825
2,200.0	2,200.0	2,227.4	2,227.3	5.2	21.8	-154.06	-229.9	-111.8	255.7	228.6	27.04	9.456
2,300.0	2,300.0	2,328.5	2,328.4	5.4	22.6	-154.24	-229.7	-110.8	255.0	227.0	28.04	9.094
2,400.0	2,400.0	2,428.1	2,428.0	5.6	23.4	-154.35	-229.3	-110.1	254.4	225.3	29.05	8.756
2,500.0	2,500.0	2,528.8	2,528.6	5.8	24.3	-154.48	-229.0	-109.3	253.8	223.7	30.08	8.437
2,600.0	2,600.0	2,630.2	2,630.0	6.0	25.1	-154.66	-228.2	-108.1	252.5	221.4	31.12	8.115
2,700.0	2,700.0	2,730.3	2,730.2	6.3	25.9	-154.75	-227.2	-107.1	251.2	219.1	32.15	7.815
2,800.0	2,800.0	2,833.4	2,833.2	6.5	26.7	-154.68	-225.2	-106.6	249.3	216.1	33.21	7.506
2,900.0	2,900.0	2,937.3	2,937.0	6.7	27.6	-154.00	-220.6	-107.6	245.6	211.4	34.27	7.167
3,000.0	3,000.0	3,037.5	3,037.0	6.9	28.4	-152.81	-214.2	-110.1	241.1	205.8	35.31	6.828
3,100.0	3,100.0	3,134.5	3,133.8	7.1	29.2	-151.57	-208.6	-112.9	237.3	201.0	36.31	6.535
3,200.0	3,200.0	3,230.9	3,230.1	7.3	30.0	-150.53	-204.6	-115.6	235.0	197.7	37.32	6.298
3,300.0	3,300.0	3,327.5	3,326.6	7.6	30.8	-149.70	-202.2	-118.2	234.2	195.9	38.32	6.112
3,303.0	3,303.0	3,330.4	3,329.5	7.6	30.8	-149.68	-202.2	-118.2	234.2	195.9	38.35	6.107
3,400.0	3,400.0	3,424.4	3,423.4	7.8	31.6	-149.18	-201.7	-120.4	234.9	195.6	39.32	5.975
3,500.0	3,500.0	3,522.9	3,521.9	8.0	32.4	-148.79	-202.3	-122.6	236.6	196.3	40.32	5.868
3,600.0	3,600.0	3,623.9	3,622.9	8.2	33.2	-148.61	-203.6	-124.2	238.5	197.1	41.35	5.767
3,700.0	3,700.0	3,727.4	3,726.4	8.4	34.0	-148.89	-204.8	-123.6	239.3	196.8	42.43	5.639
3,800.0	3,800.0	3,830.4	3,829.4	8.6	34.9	-149.71	-206.0	-120.4	238.6	195.1	43.52	5.484
3,900.0	3,900.0	3,932.7	3,931.6	8.9	35.8	-150.84	-206.9	-115.4	236.9	192.3	44.61	5.312
4,000.0	4,000.0	4,034.2	4,032.9	9.1	36.6	-152.29	-207.5	-109.0	234.5	188.8	45.70	5.130
4,100.0	4,100.0	4,134.2	4,132.6	9.3	37.5	-153.86	-207.9	-102.0	231.7	184.9	46.78	4.953
4,200.0	4,200.0	4,232.7	4,230.8	9.5	38.3	-155.31	-208.4	-95.8	229.4	181.5	47.84	4.795
4,300.0	4,300.0	4,330.9	4,328.9	9.7	39.2	-156.51	-209.1	-90.9	228.0	179.1	48.90	4.663
4,400.0	4,400.0	4,430.9	4,428.8	10.0	40.1	-157.61	-209.8	-86.5	227.0	177.0	49.98	4.541
4,500.0	4,500.0	4,530.8	4,528.7	10.2	40.9	-158.49	-210.2	-82.9	226.0	174.9	51.07	4.426

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company	Yates Petroleum	Local Co-ordinate Reference	Well #8H
Project	Eddy, NM (NAD-83)	TVD Reference	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Reference Site	Martha AIK Federal	MD Reference	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site Error	2.0 usft	North Reference	Grid
Reference Well	#8H	Survey Calculation Method	Minimum Curvature
Well Error	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database	Houston R5000 Database
Reference Design	Plan #2	Offset TVD Reference	Offset Datum

Offset Design: Martha AIK Federal - #6 - OH - OH													Offset Site Error
Survey Program: 100-CB-GYRO-MS-7714-MWD													0.0 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,600.0	4,600.0	4,630.7	4,628.6	10.4	41.8	-159.17	-210.3	-80.0	225.0	172.8	52.15	4.314	
4,700.0	4,700.0	4,730.3	4,728.1	10.6	42.7	-159.70	-210.3	-77.8	224.3	171.0	53.23	4.213	
4,800.0	4,800.0	4,830.9	4,828.7	10.8	43.6	-160.08	-210.0	-76.1	223.3	169.0	54.33	4.111	
4,900.0	4,900.0	4,930.4	4,928.2	11.1	44.4	-160.35	-209.5	-74.8	222.5	167.1	55.41	4.015	
5,000.0	5,000.0	5,030.3	5,028.1	11.3	45.3	-160.63	-209.2	-73.6	221.8	165.3	56.50	3.925	
5,100.0	5,100.0	5,130.6	5,128.4	11.5	46.2	-161.02	-208.9	-71.9	220.9	163.4	57.59	3.836	
5,200.0	5,200.0	5,230.5	5,228.2	11.7	47.1	-161.29	-208.5	-70.6	220.2	161.5	58.68	3.752	
5,300.0	5,300.0	5,330.8	5,328.5	11.9	47.9	-161.41	-207.8	-69.9	219.3	159.5	59.78	3.668	
5,400.0	5,400.0	5,431.0	5,428.7	12.2	48.8	-161.55	-207.1	-69.1	218.3	157.4	60.87	3.586	
5,500.0	5,500.0	5,530.4	5,528.2	12.4	49.7	-161.72	-206.4	-68.2	217.4	155.4	61.96	3.508	
5,600.0	5,600.0	5,629.3	5,627.1	12.6	50.5	-161.91	-206.1	-67.3	216.8	153.8	63.05	3.439	
5,656.5	5,656.5	5,685.3	5,683.0	12.7	51.0	-162.00	-206.2	-67.0	216.8	153.1	63.66	3.405	
5,700.0	5,700.0	5,728.6	5,726.3	12.8	51.4	-162.04	-206.2	-66.8	216.8	152.7	64.13	3.380	
5,800.0	5,800.0	5,828.6	5,826.3	13.1	52.3	-162.11	-206.4	-66.6	216.9	151.7	65.21	3.326	
5,900.0	5,900.0	5,928.8	5,926.5	13.3	53.1	-162.12	-206.5	-66.6	216.9	150.7	66.28	3.273	
6,000.0	6,000.0	6,028.9	6,026.6	13.5	53.9	-162.06	-206.4	-66.6	216.9	149.6	67.33	3.222	
6,100.0	6,100.0	6,128.9	6,126.6	13.7	54.8	-161.97	-206.2	-67.1	216.8	148.4	68.39	3.171	
6,121.0	6,121.0	6,149.8	6,147.5	13.8	54.9	-161.97	-206.2	-67.1	216.8	148.2	68.62	3.160	
6,200.0	6,200.0	6,228.5	6,226.2	13.9	55.6	-162.02	-206.3	-67.0	216.9	147.4	69.46	3.123	
6,300.0	6,300.0	6,328.6	6,326.4	14.2	56.5	-162.05	-206.5	-66.9	217.1	146.5	70.53	3.078	
6,400.0	6,400.0	6,429.4	6,427.1	14.4	57.3	-161.97	-206.2	-67.1	216.9	145.3	71.61	3.029	
6,500.0	6,500.0	6,529.4	6,527.2	14.6	58.1	-161.86	-205.9	-67.4	216.6	144.0	72.67	2.981	
6,600.0	6,600.0	6,629.9	6,627.6	14.8	59.0	-161.77	-205.3	-67.6	216.2	142.4	73.75	2.931	
6,700.0	6,700.0	6,729.3	6,727.0	15.1	59.8	-161.67	-204.8	-67.8	215.8	140.9	74.82	2.884	
6,748.5	6,748.5	6,777.3	6,775.0	15.2	60.2	-161.64	-204.7	-68.0	215.7	140.4	75.33	2.863	
6,800.0	6,800.0	6,828.8	6,826.5	15.3	60.7	-161.60	-204.7	-68.1	215.7	139.9	75.88	2.843	
6,900.0	6,900.0	6,929.2	6,926.9	15.5	61.5	-161.47	-204.4	-68.5	215.6	138.6	76.94	2.802	
7,000.0	7,000.0	7,028.8	7,026.5	15.7	62.4	-161.41	-204.3	-68.7	215.5	137.5	78.00	2.763	
7,100.0	7,100.0	7,129.1	7,126.8	15.9	63.2	-161.30	-204.1	-69.1	215.4	136.4	79.07	2.725	
7,200.0	7,200.0	7,229.6	7,227.3	16.2	64.0	-161.20	-203.7	-69.3	215.2	135.0	80.15	2.684	
7,300.0	7,300.0	7,329.9	7,327.6	16.4	64.9	-160.99	-203.0	-69.9	214.7	133.5	81.23	2.643	
7,400.0	7,400.0	7,430.4	7,428.1	16.6	65.8	-160.67	-202.0	-70.9	214.1	131.8	82.32	2.601	
7,500.0	7,500.0	7,530.9	7,528.6	16.8	66.5	-160.32	-200.8	-71.8	213.2	130.0	83.28	2.560	
7,600.0	7,600.0	7,631.2	7,628.8	17.1	66.9	-160.05	-199.4	-72.4	212.2	128.3	83.94	2.528	
7,700.0	7,700.0	7,731.4	7,729.1	17.3	67.3	-159.88	-198.1	-72.6	211.0	126.5	84.52	2.497	
7,780.7	7,780.7	7,812.4	7,810.0	17.5	67.3	-159.77	-197.0	-72.6	210.0	125.3	84.70	2.479	
7,800.0	7,800.0	7,831.7	7,829.4	17.5	67.3	-68.29	-196.7	-72.6	209.6	124.8	84.72	2.474	
7,825.0	7,824.9	7,856.7	7,854.4	17.6	67.3	-68.78	-196.3	-72.6	208.6	123.9	84.72	2.462	
7,850.0	7,849.8	7,881.6	7,879.3	17.6	67.3	-69.66	-196.0	-72.6	207.2	122.5	84.71	2.446	
7,875.0	7,874.4	7,906.3	7,904.0	17.7	67.3	-70.94	-195.6	-72.6	205.4	120.7	84.70	2.424	
7,900.0	7,898.8	7,930.8	7,928.4	17.7	67.3	-72.60	-195.2	-72.7	203.2	118.5	84.70	2.399	
7,925.0	7,922.8	7,954.9	7,952.5	17.8	67.3	-74.64	-194.8	-72.7	200.8	116.1	84.72	2.370	
7,950.0	7,946.5	7,978.6	7,976.3	17.8	67.3	-77.05	-194.4	-72.7	198.3	113.5	84.79	2.339	
7,975.0	7,969.7	8,001.9	7,999.5	17.9	67.3	-79.79	-194.0	-72.7	195.8	110.9	84.90	2.307	
8,000.0	7,992.4	8,024.6	8,022.3	17.9	67.3	-82.82	-193.6	-72.7	193.6	108.6	85.04	2.277	
8,025.0	8,014.5	8,046.8	8,044.4	18.0	67.3	-86.08	-193.2	-72.7	191.8	106.6	85.20	2.252	
8,050.0	8,035.9	8,068.3	8,065.9	18.1	67.3	-89.51	-192.8	-72.7	190.8	105.4	85.32	2.236	
8,066.8	8,050.0	8,082.4	8,080.0	18.1	67.3	-91.86	-192.5	-72.7	190.5	105.2	85.37	2.232	CC, ES, SF
8,075.0	8,056.7	8,089.1	8,086.7	18.1	67.3	-93.01	-192.4	-72.7	190.6	105.2	85.37	2.232	
8,100.0	8,076.7	8,109.1	8,106.8	18.2	67.3	-96.50	-192.0	-72.7	191.6	106.3	85.30	2.246	
8,125.0	8,095.9	8,128.4	8,126.0	18.3	67.3	-99.87	-191.7	-72.8	193.9	108.8	85.09	2.279	
8,150.0	8,114.3	8,146.8	8,144.4	18.4	67.3	-103.05	-191.3	-72.8	197.9	113.2	84.71	2.336	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company	Yates Petroleum	Local Co-ordinate/Reference	Well #8H
Project	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Reference Site	Martha AIK Federal	MD Reference:	WELL @ 3567.5usft (Nomac #22 - 21.5' KB)
Site Error	2.0 usft	North Reference:	Grid
Reference Well	#8H	Survey Calculation Method	Minimum Curvature
Well Error	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database	Houston R5000 Database
Reference Design	Plan #2	Offset TVD Reference	Offset Datum

Offset Design										Martha AIK Federal - #6 - OH - OH				Offset Site Error		0.0 usft
Survey Program: 100-CB-GYRO-MS-7714-MWD										Offset Well Error		10.0 usft				
Reference		Offset		Semi Major Axis		Distance										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N/S (usft)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
8,175.0	8,131.7	8,164.2	8,161.8	18.5	67.3	-105.95	-191.0	-72.8	203.5	119.3	84.18	2.418				
8,200.0	8,148.1	8,180.7	8,178.3	18.6	67.3	-108.52	-190.7	-72.8	211.0	127.4	83.53	2.525				
8,225.0	8,163.6	8,196.2	8,193.8	18.8	67.3	-110.70	-190.4	-72.8	220.2	137.4	82.82	2.659				
8,250.0	8,178.0	8,210.6	8,208.2	18.9	67.3	-112.46	-190.1	-72.8	231.2	149.1	82.10	2.816				
8,275.0	8,191.3	8,223.9	8,221.5	19.1	67.3	-113.77	-189.8	-72.8	243.9	162.5	81.46	2.994				
8,300.0	8,203.5	8,236.2	8,233.7	19.3	67.3	-114.59	-189.6	-72.8	258.2	177.3	80.98	3.189				
8,325.0	8,214.5	8,247.2	8,244.8	19.5	67.3	-114.90	-189.4	-72.8	274.0	193.3	80.72	3.394				
8,350.0	8,224.4	8,257.1	8,254.7	19.7	67.3	-114.66	-189.2	-72.8	291.1	210.3	80.77	3.604				
8,375.0	8,233.0	8,265.7	8,263.3	19.9	67.3	-113.83	-189.0	-72.8	309.3	228.1	81.17	3.811				
8,400.0	8,240.4	8,273.1	8,270.7	20.2	67.3	-112.34	-188.8	-72.8	328.6	246.6	81.96	4.009				
8,425.0	8,246.5	8,279.2	8,276.8	20.5	67.3	-110.13	-188.7	-72.8	348.7	265.6	83.14	4.194				
8,450.0	8,251.4	8,284.1	8,281.7	20.8	67.3	-107.12	-188.6	-72.8	369.6	285.0	84.64	4.367				
8,475.0	8,254.9	8,287.7	8,285.2	21.1	67.3	-103.23	-188.5	-72.8	391.1	304.8	86.31	4.532				
8,500.0	8,257.2	8,289.9	8,287.5	21.4	67.3	-98.40	-188.5	-72.8	413.2	325.3	87.88	4.701				
8,525.0	8,258.1	8,290.9	8,288.5	21.8	67.3	-92.62	-188.5	-72.8	435.6	346.6	88.99	4.895				
8,536.6	8,258.1	8,290.9	8,288.5	22.0	67.3	-89.65	-188.5	-72.8	446.1	356.8	89.22	4.999				
8,600.0	8,257.4	8,290.1	8,287.7	22.9	67.3	-89.41	-188.5	-72.8	504.4	414.2	90.19	5.593				
8,700.0	8,256.1	8,288.9	8,286.5	24.6	67.3	-89.03	-188.5	-72.8	598.5	506.6	91.87	6.514				
8,800.0	8,254.9	8,287.6	8,285.2	26.5	67.3	-88.66	-188.5	-72.8	694.2	600.4	93.73	7.406				
8,900.0	8,253.7	8,286.4	8,284.0	28.5	67.3	-88.28	-188.6	-72.8	791.0	695.2	95.73	8.262				
9,000.0	8,252.4	8,285.2	8,282.8	30.6	67.3	-87.90	-188.6	-72.8	888.5	790.6	97.84	9.081				
9,100.0	8,251.2	8,284.0	8,281.5	32.9	67.3	-87.53	-188.6	-72.8	986.4	886.4	100.04	9.861				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

**Martha AIK Federal 8H
30-015-39733
Yates Petroleum Corporation
October 18, 2013
Conditions of Approval**

1. Request for setting the 9-5/8" casing at 4450' was verbally approved 10/8/2013.
2. Request for KOP at 7781' was verbally approved 10/15/2013.

October 18, 2013 – due to lost circulation, operator changed setting depth for 7" contingency casing to 7700'. The first DV tool has been moved to 6900'. The 4.5" casing DV tool will move to 7600'.

Operator has proposed DV tools at depths of 6900' and 4500'. Operator shall submit a sundry if DV tool depth varies by more than 100' from approved depth.

1. The minimum required fill of cement behind the 7 inch production casing is:
 - a. First stage to first 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 on the next stage.
 - b. Second stage to second 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 on the next stage. **Additional cement may be required as excess cement calculated to 14%.**
 - c. Third stage above DV tool:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required as excess cement calculated to 23%.**
2. The minimum required fill of cement behind the 4.5 inch production liner is:
 - a. First stage to DV tool:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office.

WWI 101813