

Submit 1 Copy To Appropriate District
Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO. 30-025-41670
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No. VB-2103
7. Lease Name or Unit Agreement Name Cranberry BSU State Com
8. Well Number 5H
9. OGRID Number 025575
10. Pool name or Wildcat 2nd Bone Springs Sand

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator
Yates Petroleum Corporation

3. Address of Operator
105 S. 4th St. Artesia, NM 88210

4. Well Location Unit Letter <u>P</u> : <u>15</u> feet from the <u>South</u> line and <u>680</u> feet from the <u>East</u> line Section <u>11</u> Township <u>21S</u> Range <u>33E</u> NMPM <u>Eddy</u> County	11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,790' GR
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12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Yates Petroleum Corporation respectfully requests make the following changes to our well plan:

We request to change our TVD @ EOC to approx. 10,943' and @ EOL to approx. 10,918'. Directional plan is also attached. Target formation, casing weight and grade will remain the same. Cement volumes will be adjusted accordingly. We would also like to request to set our 9 5/8" intermediate casing @ approx. 5,600' as per the attached casing design. Our production cement will tie back 500' into previous casing string if intermediate string is cemented in one stage. If intermediate casing is cemented in 2 stages, production cement will tie back 200' above DV/Packer stage tool placement. Cement volumes will be adjusted accordingly.

Thank you.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Naomi Saiz TITLE Well Planning Tech DATE 9/17/14

Type or print name Naomi Saiz E-mail address: nsaiz@yatespetroleum.com PHONE: 575-748-4211

For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 09/19/14
Conditions of Approval (If any):

SEP 19 2014



Yates Petroleum
Project: Lea County, NM (NAD-83)
Site: Cranberry BSU State Com
Well: #5H
Wellbore: OH
Plan: Plan #1 (#5H/OH)

WELL DETAILS: #5H

Ground Elevation:: 3790.0
RKB Elevation: RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Rig Name: Nomac 22 - KB=21.5'

Surface Hole Location
Northing Easting Latitude Longitude
541488.10 786915.40 32° 29' 9.934 N 103° 32' 12.827 W

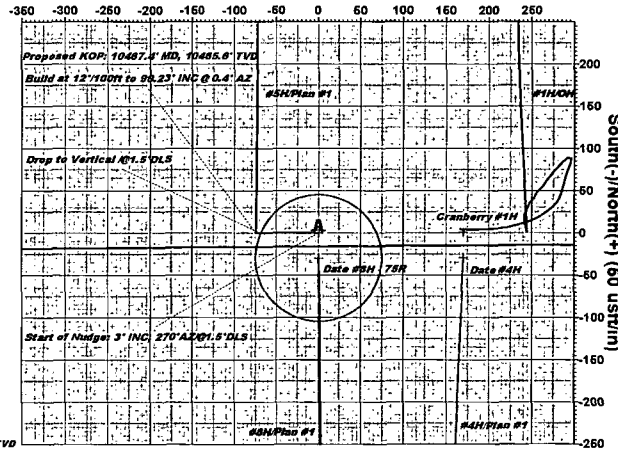


Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.78°
Magnetic Field
Strength: 48467.7snT
Dip Angle: 60.36°
Date: 7/10/2014
Model: IGRF2010

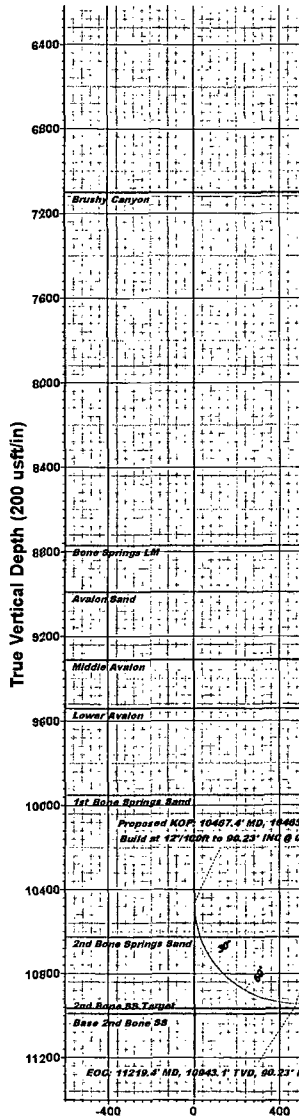
Section Details

	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0
3	2200.0	3.00	270.00	2199.9	0.0	-6.2	1.60	270.00	0.0
4	3413.0	3.00	270.00	3411.2	0.0	-68.7	0.00	0.00	0.6
5	3613.0	0.00	0.00	3611.2	0.0	-74.0	1.60	180.00	0.6
6	10467.4	0.00	0.00	10466.6	0.0	-74.0	0.00	0.00	0.6
7	11219.4	90.23	0.40	10943.1	479.4	-70.6	12.00	0.40	479.9
8	13739.8	90.23	0.40	10932.9	2999.7	-53.0	0.00	0.00	3000.0
9	13745.3	90.34	0.40	10932.9	3005.2	-53.0	2.00	0.00	3005.5
10	14739.9	90.34	0.40	10927.0	3999.8	-46.0	0.00	0.00	4000.0
11	14750.4	90.55	0.40	10926.9	4010.3	-46.0	2.00	0.00	4010.5
12	15673.2	90.55	0.40	10918.1	4933.0	-39.5	0.00	0.00	4933.2
13	15773.2	90.55	0.40	10917.1	5033.0	-38.8	0.00	0.00	5033.1

West(-)/East(+) (60 usft/in)

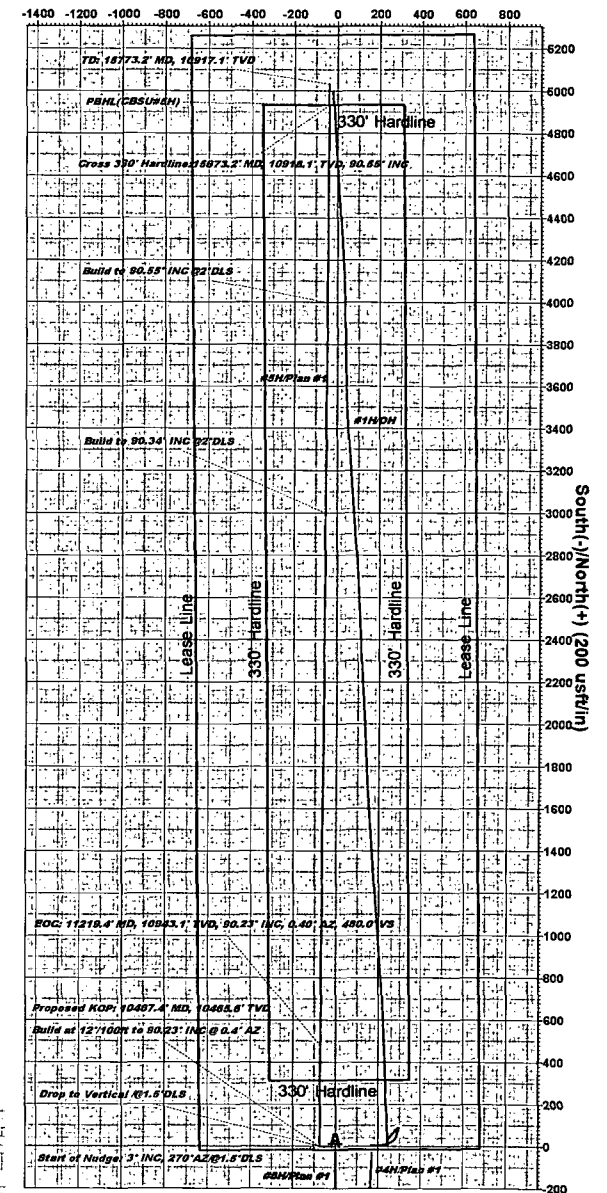


DESIGN TARGET DETAILS				
Name	+N/-S	+E/-W	Northing	Easting
Cranberry #1H	0.7	168.8	541488.80	787085.20
Cranberry #5H	0.0	0.0	541488.10	786915.40
Date #5H	-26.2	170.0	541488.90	787085.40
Date #5H	-26.9	0.3	541488.20	786915.70
PBHL/CBSU#5H	4933.0	-38.5	546421.10	786875.90
PBHL/CBSU#4H	-4963.3	-38.9	536524.80	786875.90



Vertical Section at 369.54° (200 usft/in)

West(-)/East(+) (200 usft/in)



PROJECT DETAILS: Lea County, 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



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

Plan: Plan #1 (#5H/OH)
Created By: Adrian Castro Date: 6:36, September 02 2014

Yates Petroleum

Lea County, NM (NAD-83)

Cranberry BSU State Com

#5H

OH

Plan: Plan #1

Standard Planning Report

02 September, 2014

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Lea County, 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:	Cranberry BSU State Com		
Site Position:		Northing:	541,488.80 usft
From:	Map	Easting:	787,085.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 29' 9.928 N
		Longitude:	103° 32' 10.845 W
		Grid Convergence:	0.43 °

Well	#5H					
Well Position	+N/-S	-0.7 usft	Northing:	541,488.10 usft	Latitude:	32° 29' 9.934 N
	+E/-W	-169.8 usft	Easting:	786,915.40 usft	Longitude:	103° 32' 12.827 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,790.0 usft

Wellbore:	OH		
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Magnetics:	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/10/2014	7.21	60.36	48,468

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.54

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	3.00	270.00	2,199.9	0.0	-5.2	1.50	1.50	0.00	270.00	
3,413.0	3.00	270.00	3,411.2	0.0	-68.7	0.00	0.00	0.00	0.00	
3,613.0	0.00	0.00	3,611.2	0.0	-74.0	1.50	-1.50	0.00	180.00	
10,467.4	0.00	0.00	10,465.6	0.0	-74.0	0.00	0.00	0.00	0.00	
11,219.4	90.23	0.40	10,943.1	479.4	-70.6	12.00	12.00	0.00	0.40	
13,739.8	90.23	0.40	10,932.9	2,999.7	-53.0	0.00	0.00	0.00	0.00	
13,745.3	90.34	0.40	10,932.9	3,005.2	-53.0	2.00	2.00	0.00	0.00	
14,739.9	90.34	0.40	10,927.0	3,999.8	-46.0	0.00	0.00	0.00	0.00	
14,750.4	90.55	0.40	10,926.9	4,010.3	-46.0	2.00	2.00	0.00	0.00	
15,673.2	90.55	0.40	10,918.1	4,933.0	-39.5	0.00	0.00	0.00	0.00	
15,773.2	90.55	0.40	10,917.1	5,033.0	-38.8	0.00	0.00	0.00	0.00	

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	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)	
0.0	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	
1,836.0	0.00	0.00	1,836.0	0.0	0.0	0.0	0.00	0.00	0.00	
Rustler										
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,971.0	0.00	0.00	1,971.0	0.0	0.0	0.0	0.00	0.00	0.00	
Top Salt										
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
Start of Nudge: 3° INC, 270°AZ/@1.5°DLS										
2,100.0	1.50	270.00	2,100.0	0.0	-1.3	0.0	1.50	1.50	0.00	
2,200.0	3.00	270.00	2,199.9	0.0	-5.2	0.0	1.50	1.50	0.00	
2,300.0	3.00	270.00	2,299.8	0.0	-10.5	0.1	0.00	0.00	0.00	
2,400.0	3.00	270.00	2,399.6	0.0	-15.7	0.1	0.00	0.00	0.00	
2,500.0	3.00	270.00	2,499.5	0.0	-20.9	0.2	0.00	0.00	0.00	
2,600.0	3.00	270.00	2,599.4	0.0	-26.2	0.2	0.00	0.00	0.00	
2,700.0	3.00	270.00	2,699.2	0.0	-31.4	0.3	0.00	0.00	0.00	
2,800.0	3.00	270.00	2,799.1	0.0	-36.6	0.3	0.00	0.00	0.00	
2,900.0	3.00	270.00	2,898.9	0.0	-41.9	0.3	0.00	0.00	0.00	
3,000.0	3.00	270.00	2,998.8	0.0	-47.1	0.4	0.00	0.00	0.00	
3,100.0	3.00	270.00	3,098.7	0.0	-52.3	0.4	0.00	0.00	0.00	
3,200.0	3.00	270.00	3,198.5	0.0	-57.6	0.5	0.00	0.00	0.00	
3,300.0	3.00	270.00	3,298.4	0.0	-62.8	0.5	0.00	0.00	0.00	
3,400.0	3.00	270.00	3,398.3	0.0	-68.0	0.5	0.00	0.00	0.00	
3,413.0	3.00	270.00	3,411.2	0.0	-68.7	0.6	0.00	0.00	0.00	
Drop to Vertical /@1.5°DLS										
3,422.8	2.85	270.00	3,421.0	0.0	-69.2	0.6	1.50	-1.50	0.00	
Base Salt - Top Tansill										
3,500.0	1.70	270.00	3,498.2	0.0	-72.3	0.6	1.50	-1.50	0.00	
3,600.0	0.20	270.00	3,598.2	0.0	-73.9	0.6	1.50	-1.50	0.00	
3,613.0	0.00	0.00	3,611.2	0.0	-74.0	0.6	1.50	-1.50	0.00	
3,652.8	0.00	0.00	3,651.0	0.0	-74.0	0.6	0.00	0.00	0.00	
Yates										
3,700.0	0.00	0.00	3,698.2	0.0	-74.0	0.6	0.00	0.00	0.00	
3,800.0	0.00	0.00	3,798.2	0.0	-74.0	0.6	0.00	0.00	0.00	
3,900.0	0.00	0.00	3,898.2	0.0	-74.0	0.6	0.00	0.00	0.00	
3,937.8	0.00	0.00	3,936.0	0.0	-74.0	0.6	0.00	0.00	0.00	

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid:
Well:	#5H	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)
Capitan									
4,000.0	0.00	0.00	3,998.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,100.0	0.00	0.00	4,098.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,200.0	0.00	0.00	4,198.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,300.0	0.00	0.00	4,298.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,400.0	0.00	0.00	4,398.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,500.0	0.00	0.00	4,498.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,600.0	0.00	0.00	4,598.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,700.0	0.00	0.00	4,698.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,800.0	0.00	0.00	4,798.2	0.0	-74.0	0.6	0.00	0.00	0.00
4,900.0	0.00	0.00	4,898.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,000.0	0.00	0.00	4,998.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,100.0	0.00	0.00	5,098.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,198.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,300.0	0.00	0.00	5,298.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,398.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,498.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,598.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,698.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,798.2	0.0	-74.0	0.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,898.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,998.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,062.8	0.00	0.00	6,061.0	0.0	-74.0	0.6	0.00	0.00	0.00
Cherry Canyon									
6,100.0	0.00	0.00	6,098.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,198.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,298.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,398.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,498.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,598.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,700.0	0.00	0.00	6,698.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,798.2	0.0	-74.0	0.6	0.00	0.00	0.00
6,900.0	0.00	0.00	6,898.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,998.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,100.0	0.00	0.00	7,098.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,102.8	0.00	0.00	7,101.0	0.0	-74.0	0.6	0.00	0.00	0.00
Brushy Canyon									
7,200.0	0.00	0.00	7,198.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,300.0	0.00	0.00	7,298.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,398.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,500.0	0.00	0.00	7,498.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,598.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,698.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,798.2	0.0	-74.0	0.6	0.00	0.00	0.00
7,900.0	0.00	0.00	7,898.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,998.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,100.0	0.00	0.00	8,098.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,200.0	0.00	0.00	8,198.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,300.0	0.00	0.00	8,298.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,400.0	0.00	0.00	8,398.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,500.0	0.00	0.00	8,498.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,600.0	0.00	0.00	8,598.2	0.0	-74.0	0.6	0.00	0.00	0.00
8,700.0	0.00	0.00	8,698.2	0.0	-74.0	0.6	0.00	0.00	0.00

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	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)	
8,772.8	0.00	0.00	8,771.0	0.0	-74.0	0.6	0.00	0.00	0.00	
Bone Springs LM										
8,800.0	0.00	0.00	8,798.2	0.0	-74.0	0.6	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,898.2	0.0	-74.0	0.6	0.00	0.00	0.00	
8,992.8	0.00	0.00	8,991.0	0.0	-74.0	0.6	0.00	0.00	0.00	
Avalon Sand										
9,000.0	0.00	0.00	8,998.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,098.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,198.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,298.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,312.8	0.00	0.00	9,311.0	0.0	-74.0	0.6	0.00	0.00	0.00	
Middle Avalon										
9,400.0	0.00	0.00	9,398.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,498.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,542.8	0.00	0.00	9,541.0	0.0	-74.0	0.6	0.00	0.00	0.00	
Lower Avalon										
9,600.0	0.00	0.00	9,598.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,698.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,798.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,898.2	0.0	-74.0	0.6	0.00	0.00	0.00	
9,952.8	0.00	0.00	9,951.0	0.0	-74.0	0.6	0.00	0.00	0.00	
1st Bone Springs Sand										
10,000.0	0.00	0.00	9,998.2	0.0	-74.0	0.6	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,098.2	0.0	-74.0	0.6	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,198.2	0.0	-74.0	0.6	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,298.2	0.0	-74.0	0.6	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,398.2	0.0	-74.0	0.6	0.00	0.00	0.00	
10,467.4	0.00	0.00	10,465.6	0.0	-74.0	0.6	0.00	0.00	0.00	
Proposed KOP: 10467.4' MD, 10465.6' TVD - Build at 12°/100ft to 90.23° INC @ 0.4° AZ										
10,475.0	0.91	0.40	10,473.2	0.1	-74.0	0.7	11.93	11.93	0.00	
10,500.0	3.91	0.40	10,498.1	1.1	-73.9	1.7	12.00	12.00	0.00	
10,525.0	6.91	0.40	10,523.0	3.5	-73.9	4.1	12.00	12.00	0.00	
10,550.0	9.91	0.40	10,547.7	7.1	-73.9	7.7	12.00	12.00	0.00	
10,575.0	12.91	0.40	10,572.2	12.1	-73.9	12.7	12.00	12.00	0.00	
10,600.0	15.91	0.40	10,596.5	18.3	-73.8	18.9	12.00	12.00	0.00	
10,625.0	18.91	0.40	10,620.3	25.8	-73.8	26.4	12.00	12.00	0.00	
10,631.0	19.63	0.40	10,626.0	27.7	-73.8	28.3	12.00	12.00	0.00	
2nd Bone Springs Sand										
10,650.0	21.91	0.40	10,643.7	34.5	-73.7	35.1	12.00	12.00	0.00	
10,675.0	24.91	0.40	10,666.7	44.4	-73.6	45.0	12.00	12.00	0.00	
10,700.0	27.91	0.40	10,689.1	55.5	-73.6	56.1	12.00	12.00	0.00	
10,725.0	30.91	0.40	10,710.8	67.8	-73.5	68.4	12.00	12.00	0.00	
10,750.0	33.91	0.40	10,731.9	81.2	-73.4	81.8	12.00	12.00	0.00	
10,775.0	36.91	0.40	10,752.3	95.7	-73.3	96.3	12.00	12.00	0.00	
10,800.0	39.91	0.40	10,771.9	111.2	-73.2	111.8	12.00	12.00	0.00	
10,825.0	42.91	0.40	10,790.7	127.7	-73.1	128.3	12.00	12.00	0.00	
10,850.0	45.91	0.40	10,808.5	145.2	-72.9	145.8	12.00	12.00	0.00	
10,875.0	48.91	0.40	10,825.4	163.6	-72.8	164.2	12.00	12.00	0.00	
10,900.0	51.91	0.40	10,841.4	182.9	-72.7	183.5	12.00	12.00	0.00	
10,925.0	54.91	0.40	10,856.3	203.0	-72.5	203.5	12.00	12.00	0.00	
10,950.0	57.91	0.40	10,870.1	223.8	-72.4	224.4	12.00	12.00	0.00	
10,975.0	60.91	0.40	10,882.8	245.3	-72.2	245.9	12.00	12.00	0.00	
11,000.0	63.91	0.40	10,894.4	267.5	-72.1	268.0	12.00	12.00	0.00	

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	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)	
11,025.0	66.91	0.40	10,904.8	290.2	-71.9	290.7	12.00	12.00	0.00	
11,050.0	69.91	0.40	10,914.0	313.4	-71.8	314.0	12.00	12.00	0.00	
11,075.0	72.91	0.40	10,922.0	337.1	-71.6	337.7	12.00	12.00	0.00	
11,100.0	75.91	0.40	10,928.7	361.2	-71.4	361.8	12.00	12.00	0.00	
11,125.0	78.91	0.40	10,934.1	385.6	-71.3	386.1	12.00	12.00	0.00	
11,150.0	81.91	0.40	10,938.3	410.2	-71.1	410.8	12.00	12.00	0.00	
11,175.0	84.91	0.40	10,941.2	435.1	-70.9	435.6	12.00	12.00	0.00	
11,200.0	87.91	0.40	10,942.7	460.0	-70.7	460.6	12.00	12.00	0.00	
11,219.4	90.23	0.40	10,943.1	479.4	-70.6	480.0	11.98	11.98	0.00	
EOC: 11219.4' MD, 10943.1' TVD, 90.23° INC, 0.40° AZ, 480.0' VS										
11,300.0	90.23	0.40	10,942.7	560.0	-70.0	560.5	0.00	0.00	0.00	
11,400.0	90.23	0.40	10,942.3	660.0	-69.3	660.5	0.00	0.00	0.00	
11,500.0	90.23	0.40	10,941.9	760.0	-68.6	760.5	0.00	0.00	0.00	
11,600.0	90.23	0.40	10,941.5	860.0	-67.9	860.5	0.00	0.00	0.00	
11,700.0	90.23	0.40	10,941.1	960.0	-67.3	960.5	0.00	0.00	0.00	
11,800.0	90.23	0.40	10,940.7	1,060.0	-66.6	1,060.5	0.00	0.00	0.00	
11,900.0	90.23	0.40	10,940.3	1,160.0	-65.9	1,160.5	0.00	0.00	0.00	
12,000.0	90.23	0.40	10,939.9	1,260.0	-65.2	1,260.5	0.00	0.00	0.00	
12,100.0	90.23	0.40	10,939.5	1,360.0	-64.5	1,360.5	0.00	0.00	0.00	
12,200.0	90.23	0.40	10,939.1	1,460.0	-63.8	1,460.4	0.00	0.00	0.00	
12,300.0	90.23	0.40	10,938.7	1,560.0	-63.1	1,560.4	0.00	0.00	0.00	
12,400.0	90.23	0.40	10,938.3	1,660.0	-62.4	1,660.4	0.00	0.00	0.00	
12,500.0	90.23	0.40	10,937.9	1,760.0	-61.7	1,760.4	0.00	0.00	0.00	
12,600.0	90.23	0.40	10,937.5	1,860.0	-61.0	1,860.4	0.00	0.00	0.00	
12,700.0	90.23	0.40	10,937.1	1,960.0	-60.3	1,960.4	0.00	0.00	0.00	
12,800.0	90.23	0.40	10,936.7	2,060.0	-59.6	2,060.4	0.00	0.00	0.00	
12,900.0	90.23	0.40	10,936.3	2,160.0	-58.9	2,160.4	0.00	0.00	0.00	
13,000.0	90.23	0.40	10,935.9	2,260.0	-58.2	2,260.3	0.00	0.00	0.00	
13,100.0	90.23	0.40	10,935.5	2,359.9	-57.5	2,360.3	0.00	0.00	0.00	
13,200.0	90.23	0.40	10,935.1	2,459.9	-56.8	2,460.3	0.00	0.00	0.00	
13,300.0	90.23	0.40	10,934.7	2,559.9	-56.1	2,560.3	0.00	0.00	0.00	
13,400.0	90.23	0.40	10,934.3	2,659.9	-55.4	2,660.3	0.00	0.00	0.00	
13,500.0	90.23	0.40	10,933.9	2,759.9	-54.7	2,760.3	0.00	0.00	0.00	
13,600.0	90.23	0.40	10,933.5	2,859.9	-54.0	2,860.3	0.00	0.00	0.00	
13,700.0	90.23	0.40	10,933.1	2,959.9	-53.3	2,960.3	0.00	0.00	0.00	
13,739.8	90.23	0.40	10,932.9	2,999.7	-53.0	3,000.1	0.00	0.00	0.00	
Build to 90.34° INC @2°DLS										
13,745.3	90.34	0.40	10,932.9	3,005.2	-53.0	3,005.5	2.02	2.02	0.00	
13,800.0	90.34	0.40	10,932.6	3,059.9	-52.6	3,060.2	0.00	0.00	0.00	
13,900.0	90.34	0.40	10,932.0	3,159.9	-51.9	3,160.2	0.00	0.00	0.00	
14,000.0	90.34	0.40	10,931.4	3,259.9	-51.2	3,260.2	0.00	0.00	0.00	
14,100.0	90.34	0.40	10,930.8	3,359.9	-50.5	3,360.2	0.00	0.00	0.00	
14,200.0	90.34	0.40	10,930.2	3,459.9	-49.8	3,460.2	0.00	0.00	0.00	
14,300.0	90.34	0.40	10,929.6	3,559.9	-49.1	3,560.2	0.00	0.00	0.00	
14,400.0	90.34	0.40	10,929.0	3,659.9	-48.4	3,660.2	0.00	0.00	0.00	
14,500.0	90.34	0.40	10,928.4	3,759.9	-47.7	3,760.2	0.00	0.00	0.00	
14,600.0	90.34	0.40	10,927.8	3,859.9	-47.0	3,860.1	0.00	0.00	0.00	
14,700.0	90.34	0.40	10,927.3	3,959.9	-46.3	3,960.1	0.00	0.00	0.00	
14,739.9	90.34	0.40	10,927.0	3,999.8	-46.0	4,000.0	0.00	0.00	0.00	
Build to 90.55° INC @2°DLS										
14,750.4	90.55	0.40	10,926.9	4,010.3	-46.0	4,010.5	2.00	2.00	0.00	
14,800.0	90.55	0.40	10,926.5	4,059.9	-45.6	4,060.1	0.00	0.00	0.00	
14,900.0	90.55	0.40	10,925.5	4,159.9	-44.9	4,160.1	0.00	0.00	0.00	

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County, NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	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)
15,000.0	90.55	0.40	10,924.5	4,259.9	-44.2	4,260.1	0.00	0.00	0.00
15,100.0	90.55	0.40	10,923.6	4,359.9	-43.5	4,360.1	0.00	0.00	0.00
15,200.0	90.55	0.40	10,922.6	4,459.9	-42.8	4,460.1	0.00	0.00	0.00
15,300.0	90.55	0.40	10,921.7	4,559.8	-42.1	4,560.0	0.00	0.00	0.00
15,400.0	90.55	0.40	10,920.7	4,659.8	-41.4	4,660.0	0.00	0.00	0.00
15,500.0	90.55	0.40	10,919.7	4,759.8	-40.7	4,760.0	0.00	0.00	0.00
15,600.0	90.55	0.40	10,918.8	4,859.8	-40.0	4,860.0	0.00	0.00	0.00
15,673.2	90.55	0.40	10,918.1	4,933.0	-39.5	4,933.2	0.00	0.00	0.00
Cross 330° Hardline: 15673.2' MD, 10918.1' TVD, 90.55° INC									
15,700.0	90.55	0.40	10,917.8	4,959.8	-39.3	4,960.0	0.00	0.00	0.00
15,773.2	90.55	0.40	10,917.1	5,033.0	-38.8	5,033.1	0.00	0.00	0.00
TD: 15773.2' MD, 10917.1' TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(CBSU#5H)	0.00	0.00	10,918.0	4,933.0	-39.5	546,421.10	786,875.90	32° 29' 58.747 N	103° 32' 12.858 W
- plan misses target center by 0.1usft at 15673.2usft MD (10918.1 TVD, 4933.0 N, -39.5 E)									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,836.0	1,836.0	Rustler				
1,971.0	1,971.0	Top Salt				
3,422.8	3,421.0	Base Salt - Top Tansill				
3,652.8	3,651.0	Yates				
3,937.8	3,936.0	Capitan				
6,062.8	6,061.0	Cherry Canyon				
7,102.8	7,101.0	Brushy Canyon				
8,772.8	8,771.0	Bone Springs LM				
8,992.8	8,991.0	Avalon Sand				
9,312.8	9,311.0	Middle Avalon				
9,542.8	9,541.0	Lower Avalon				
9,952.8	9,951.0	1st Bone Springs Sand				
10,631.0	10,626.0	2nd Bone Springs Sand				

Planning Report

Database:	Houston R5000 Database	Local Co-ordinate Reference:	Well #5H
Company:	Yates Petroleum	TVD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Project:	Lea County - NM (NAD-83)	MD Reference:	RKB @ 3811.5usft (Nomac 22 - KB=21.5')
Site:	Cranberry BSU State Com	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.0	2,000.0	0.0	0.0	Start of Nudge: 3° INC, 270°AZ/@1.5°DLS
3,413.0	3,411.2	0.0	-68.7	Drop to Vertical /@1.5°DLS
10,467.4	10,465.6	0.0	-74.0	Proposed KOP: 10467.4' MD, 10465.6' TVD
10,467.4	10,465.6	0.0	-74.0	Build at 12°/100ft to 90.23° INC @ 0.4° AZ
11,219.4	10,943.1	479.4	-70.6	EOC: 11219.4' MD, 10943.1' TVD, 90.23° INC, 0.40° AZ, 480.0' VS
13,739.8	10,932.9	2,999.7	-53.0	Build to 90.34° INC @2°DLS
14,739.9	10,927.0	3,999.8	-46.0	Build to 90.55° INC @2°DLS
15,673.2	10,918.1	4,933.0	-39.5	Cross 330' Hardline:15673.2' MD, 10918.1' TVD, 90.55° INC
15,773.2	10,917.1	5,033.0	-38.8	TD: 15773.2' MD, 10917.1' TVD

Casing Design Well: **Cranberry BSU State Com #5H**String size & function: **9 5/8** in SURFACE **X** INTERMEDIATE **X**Total Depth: **5,600** ft

1st segment		5,600 ft to	4,200 ft	Make up Torque ft-lbs			Total ft =	1,400
O.D.	Weight	Grade	Threads	opt.	min.	mx.		
9.625 inches	40 #/ft	HCK 55	ST&C		6,940	5,210	8,680	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift		
4,230 psi	3,950 psi	694 ,000 #		630 ,000 #		8.75 SD		

2nd segment		4,200 ft to	3,200 ft	Make up Torque ft-lbs			Total ft =	1,000
O.D.	Weight	Grade	Threads	opt.	min.	mx.		
9.625 inches	40 #/ft	J 55	ST&C		4,520	3,390	5,660	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift		
2,570 psi	3,950 psi	452 ,000 #		630 ,000 #		8.75 SD		

3rd segment		3,200 ft to	80 ft	Make up Torque ft-lbs			Total ft =	3,120
O.D.	Weight	Grade	Threads	opt.	min.	mx.		
9.625 inches	36 #/ft	J 55	ST&C		4,530	3,400	5,660	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift		
2,020 psi	3,520 psi	394 ,000 #		564 ,000 #		8.75 SD		

4th segment		80 ft to	0 ft	Make up Torque ft-lbs			Total ft =	80
O.D.	Weight	Grade	Threads	opt.	min.	mx.		
9.625 inches	40 #/ft	J 55	ST&C		4,520	3,390	5,660	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift		
2,570 psi	3,950 psi	452 ,000 #		630 ,000 #		8.75 SD		