

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		5. Lease Serial No. NMNM61358
2. Name of Operator YATES PETROLEUM CORPORATION Contact: NAOMI G SAIZ E-Mail: nsaliz@yatespetroleum.com		6. If Indian, Allottee or Tribe Name
3a. Address 105 SOUTH FOURTH STREET ARTESIA, NM 88210	3b. Phone No. (include area code) Ph: 575-748-4211	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 36 T21S R31E NWSW 1480FSL 650FWL 32.255474 N Lat, 103.441667 W Lon		8. Well Name and No. WOLF AJA FEDERAL 21H
		9. API Well No. 30-015-42239-00-X1
		10. Field and Pool, or Exploratory LOST TANK-DELAWARE
		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 recompleat 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 well plan as per below and the attached.

We request to change our BHL to 230' FNL and 400' FWL, in 25-21S-31E. The bottom 100' will not be produced and will consist of our float shoe and collar. Our bottom perf will not cross the 330' hardline. Attached is the new signed C-102 and the directional plan.

We would also like to request a change in TVD @ EOL to approx. 8075'. Target formation will remain the same. Casing weight and grade will remain the same.

Production cement changes will be requested as per the attached.

Accepted for record
NMOCD *TS*
*7/24/14*NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 25 2014

RECEIVED

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #253896 verified by the BLM Well Information System For YATES PETROLEUM CORPORATION, sent to the Carlsbad Committed to AFMSS for processing by CHRISTOPHER WALLS on 07/22/2014 (14CRW0306SE)	
Name (Printed/Typed): NAOMI G SAIZ	Title WELL PLANNING TECH
Signature (Electronic Submission)	Date 07/21/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED

Approved By _____	Title _____	Date JUL 22 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 _____	/s/ Chris Walls

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.

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name
Property Code	Property Name WOLF AJA FEDERAL COM		Well Number 21H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.		Elevation 3556'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	36	21 S	31 E		1480	SOUTH	650	WEST	EDDY

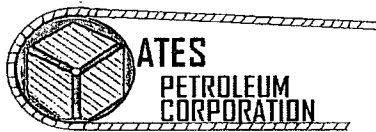
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	21 S	31 E		230	NORTH	400	WEST	EDDY

Dedicated Acres 2.80	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

PROPOSED BOTTOM HOLE LOCATION Lat - N 32°27'22.33" Long - W 103°44'19.47" NMSPCE- N 530207.9 E 724735.3 (NAD-83) SURFACE LOCATION Lat - N 32°25'54.74" Long - W 103°44'16.67" NMSPCE- N 521358.39 E 725026.02 (NAD-83)	N: 530435.8 E: 724335.4 NAD 83 N: 530443.5 E: 725654.1 NAD 83 N: 530467.2 E: 726610.1 NAD 83 N: 525162.6 E: 725679.0 NAD 83 N: 525169.2 E: 726999.5 NAD 83 N: 525182.4 E: 726639.1 NAD 83 N: 522515.7 E: 724371.1 NAD 83 N: 522541.6 E: 726652.9 NAD 83 N: 521202.1 E: 725697.6 NAD 83 N: 519301.3 E: 726666.7 NAD 83 N: 527796.0 E: 724346.1 NAD 83 N: 525158.0 E: 724358.6 NAD 83 N: 519875.6 E: 724382.8 NAD 83	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>G. Cowan</i> 6/30/14 Signature Date Gy Cowan Printed Name Email Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. GARY L. JONES Date Surveyed MARCH 04 2013 Signature & Seal of Professional Surveyor W.O. No. 27961 Certificate No. Gary L. Jones 7977 BASIN SURVEYS 27961
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Yates Petroleum Corp.

Eddy County, NM(NAD83)

Wolf AJA Federal Com

#21H

OH

Plan: Plan #4_REV1

Standard Planning Report

15 July, 2014



Wellplanning Planning Report

Database:	EDM:5000.1 Single User Db	Local Co-ordinate Reference:	Well #21H
Company:	Yates Petroleum Corp.	TVD Reference:	WELL1 @ 3574.5usft
Project:	Eddy County, NM(NAD83)	MD Reference:	WELL1 @ 3574.5usft
Site:	Wolf AJA Federal Com	North Reference:	Grid
Well:	#21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 REV1		

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	Wolf AJA Federal Com.				
Site Position:		Northing:	521,358.39 usft	Latitude:	32° 25' 54.743 N
From:	Map	Easting:	725,026.02 usft	Longitude:	103° 44' 16.670 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32

Well	#21H					
Well Position	+N/-S	0.0 usft	Northing:	521,358.39 usft	Latitude:	32° 25' 54.743 N
	+E/-W	0.0 usft	Easting:	725,026.02 usft	Longitude:	103° 44' 16.670 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,556.0 usft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	5/12/2014	7.32	60.28	48,432

Design: Plan #4 REV1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	7,550.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	358.10

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
7,550.0	0.60	230.90	7,549.1	16.2	17.3	0.00	0.00	0.00	0.00	
7,578.5	0.60	230.90	7,577.6	16.0	17.1	0.00	0.00	0.00	0.00	
8,487.4	90.55	358.02	8,154.0	593.8	-7.7	10.00	9.90	13.99	127.11	
16,748.5	90.55	358.02	8,074.7	8,849.6	-293.2	0.00	0.00	0.00	0.00	PBHL(WFC#21)



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #21H
Company:	Yates Petroleum Corp.	TVD Reference:	WELL1 @ 3574.5usft
Project:	Eddy County, NM(NAD83)	MD Reference:	WELL1 @ 3574.5usft
Site:	Wolf AJA Federal Com	North Reference:	Grid
Well:	#21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4_REV1		

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	0.48	78.33	100.0	0.1	0.4	0.1	0.48	0.48	9.72	
200.0	0.71	32.72	200.0	0.7	1.2	0.7	0.51	0.23	-45.61	
300.0	0.53	68.64	300.0	1.4	1.9	1.3	0.42	-0.18	35.92	
400.0	0.79	43.44	400.0	2.0	2.8	2.0	0.38	0.26	-25.20	
500.0	0.59	45.31	500.0	2.9	3.7	2.8	0.20	-0.20	1.87	
600.0	0.85	55.03	600.0	3.7	4.6	3.5	0.29	0.26	9.72	
700.0	1.11	37.92	700.0	4.9	5.8	4.7	0.39	0.26	-17.11	
804.0	1.10	28.80	803.9	6.6	6.9	6.3	0.17	-0.01	-8.77	
899.0	1.20	29.70	898.9	8.2	7.9	8.0	0.11	0.11	0.95	
994.0	1.10	29.00	993.9	9.9	8.8	9.6	0.11	-0.11	-0.74	
1,089.0	0.40	99.50	1,088.9	10.6	9.6	10.3	1.09	-0.74	74.21	
1,184.0	0.40	76.10	1,183.9	10.7	10.2	10.3	0.17	0.00	-24.63	
1,278.0	0.50	75.90	1,277.9	10.8	10.9	10.5	0.11	0.11	-0.21	
1,373.0	0.60	86.50	1,372.9	11.0	11.8	10.6	0.15	0.11	11.16	
1,468.0	0.90	78.40	1,467.9	11.1	13.1	10.7	0.33	0.32	-8.53	
1,563.0	1.30	73.80	1,562.9	11.6	14.8	11.1	0.43	0.42	-4.84	
1,658.0	1.80	67.50	1,657.8	12.5	17.2	11.9	0.56	0.53	-6.63	
1,753.0	1.70	73.80	1,752.8	13.4	20.0	12.8	0.23	-0.11	6.63	
1,848.0	1.10	62.40	1,847.7	14.2	22.1	13.5	0.69	-0.63	-12.00	
1,943.0	1.00	42.20	1,942.7	15.3	23.5	14.5	0.40	-0.11	-21.26	
2,038.0	0.90	84.20	2,037.7	16.0	24.8	15.1	0.72	-0.11	44.21	
2,133.0	1.10	51.50	2,132.7	16.6	26.3	15.7	0.63	0.21	-34.42	
2,228.0	0.80	0.70	2,227.7	17.8	27.0	16.9	0.90	-0.32	-53.47	
2,323.0	0.60	95.60	2,322.7	18.5	27.5	17.5	1.09	-0.21	99.89	
2,418.0	0.80	54.60	2,417.7	18.8	28.5	17.8	0.55	0.21	-43.16	
2,513.0	1.10	106.30	2,512.7	18.9	29.9	17.9	0.92	0.32	54.42	
2,608.0	1.20	109.10	2,607.6	18.3	31.8	17.3	0.12	0.11	2.95	
2,703.0	2.70	109.30	2,702.6	17.3	34.8	16.1	1.58	1.58	0.21	
2,798.0	1.60	113.70	2,797.5	16.0	38.1	14.7	1.17	-1.16	4.63	
2,893.0	0.70	21.90	2,892.5	16.0	39.6	14.7	1.86	-0.95	-96.63	
2,988.0	1.70	48.10	2,987.5	17.5	40.8	16.1	1.17	1.05	27.58	
3,083.0	1.00	48.70	3,082.5	19.0	42.5	17.6	0.74	-0.74	0.63	
3,177.0	0.20	56.90	3,176.5	19.6	43.3	18.2	0.85	-0.85	8.72	
3,272.0	0.70	62.70	3,271.5	20.0	43.9	18.5	0.53	0.53	6.11	
3,367.0	0.40	96.30	3,366.4	20.2	44.8	18.7	0.45	-0.32	35.37	
3,462.0	0.50	204.80	3,461.4	19.8	44.9	18.3	0.77	0.11	114.21	
3,557.0	1.50	208.80	3,556.4	18.3	44.1	16.8	1.05	1.05	4.21	
3,652.0	0.70	228.70	3,651.4	16.8	43.1	15.4	0.92	-0.84	20.95	
3,747.0	0.40	258.70	3,746.4	16.4	42.3	15.0	0.43	-0.32	31.58	
3,842.0	0.60	250.30	3,841.4	16.2	41.5	14.8	0.22	0.21	-8.84	
3,937.0	0.10	20.70	3,936.4	16.1	41.1	14.7	0.70	-0.53	137.26	
4,032.0	0.60	39.70	4,031.4	16.5	41.5	15.1	0.53	0.53	20.00	
4,127.0	0.90	61.80	4,126.4	17.3	42.4	15.9	0.43	0.32	23.26	
4,221.0	0.30	126.90	4,220.4	17.5	43.3	16.0	0.87	-0.64	69.26	
4,316.0	0.40	139.20	4,315.4	17.1	43.7	15.6	0.13	0.11	12.95	
4,359.0	0.30	149.40	4,358.4	16.9	43.8	15.4	0.27	-0.23	23.72	
4,528.0	0.20	115.30	4,527.4	16.3	44.3	14.9	0.10	-0.06	-20.18	
4,623.0	0.10	167.70	4,622.4	16.2	44.5	14.7	0.17	-0.11	55.16	
4,718.0	0.10	158.50	4,717.4	16.0	44.6	14.6	0.02	0.00	-9.68	
4,812.0	0.30	42.90	4,811.4	16.1	44.8	14.7	0.38	0.21	-122.98	
4,907.0	0.40	37.60	4,906.4	16.6	45.1	15.1	0.11	0.11	-5.58	
5,002.0	0.40	26.20	5,001.4	17.1	45.5	15.6	0.08	0.00	-12.00	
5,097.0	0.40	18.60	5,096.4	17.8	45.7	16.2	0.06	0.00	-8.00	



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #21H
Company:	Yates Petroleum Corp	TVD Reference:	WELL1 @ 3574.5usft
Project:	Eddy County NM(NAD83)	MD Reference:	WELL1 @ 3574.5usft
Site:	Wolf AJA Federal Com	North Reference:	Grid
Well:	#21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4-REV1		

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)	
5,192.0	0.30	338.50	5,191.4	18.3	45.7	16.8	0.27	-0.11	-42.21	
5,287.0	0.50	302.30	5,286.4	18.8	45.3	17.2	0.33	0.21	-38.11	
5,382.0	0.70	287.20	5,381.4	19.2	44.4	17.7	0.27	0.21	-15.89	
5,477.0	0.80	304.10	5,476.4	19.7	43.3	18.3	0.25	0.11	17.79	
5,572.0	0.70	289.50	5,571.4	20.3	42.2	18.9	0.23	-0.11	-15.37	
5,666.0	0.70	298.40	5,665.3	20.7	41.1	19.4	0.12	0.00	9.47	
5,762.0	0.60	300.90	5,761.3	21.3	40.2	19.9	0.11	-0.10	2.60	
5,857.0	0.70	287.40	5,856.3	21.7	39.2	20.4	0.19	0.11	-14.21	
5,952.0	0.80	295.30	5,951.3	22.1	38.1	20.9	0.15	0.11	8.32	
6,046.0	0.80	289.10	6,045.3	22.6	36.9	21.4	0.09	0.00	-6.60	
6,141.0	0.80	283.00	6,140.3	23.0	35.6	21.8	0.09	0.00	-6.42	
6,236.0	0.90	281.00	6,235.3	23.3	34.2	22.2	0.11	0.11	-2.11	
6,331.0	1.00	273.80	6,330.3	23.5	32.6	22.4	0.16	0.11	-7.58	
6,426.0	1.10	280.70	6,425.3	23.7	30.9	22.7	0.17	0.11	7.26	
6,521.0	1.20	280.50	6,520.2	24.1	29.0	23.1	0.11	0.11	-0.21	
6,616.0	1.20	250.80	6,615.2	23.9	27.1	23.0	0.65	0.00	-31.26	
6,710.0	1.10	241.30	6,709.2	23.2	25.4	22.3	0.23	-0.11	-10.11	
6,805.0	1.00	237.40	6,804.2	22.3	23.9	21.5	0.13	-0.11	-4.11	
6,900.0	1.10	224.60	6,899.2	21.2	22.6	20.4	0.27	0.11	-13.47	
6,995.0	0.70	219.00	6,994.2	20.1	21.6	19.4	0.43	-0.42	-5.89	
7,090.0	0.70	228.30	7,089.2	19.3	20.8	18.6	0.12	0.00	9.79	
7,185.0	0.50	229.00	7,184.2	18.6	20.0	17.9	0.21	-0.21	0.74	
7,280.0	0.60	227.80	7,279.1	18.0	19.3	17.3	0.11	0.11	-1.26	
7,390.0	0.60	222.90	7,389.1	17.2	18.5	16.6	0.05	0.00	-4.45	
7,483.0	0.50	235.50	7,482.1	16.6	17.9	16.0	0.17	-0.11	13.55	
7,507.0	0.60	230.90	7,506.1	16.5	17.7	15.9	0.46	0.42	-19.17	
7,550.0	0.60	230.90	7,549.1	16.2	17.3	15.6	0.00	0.00	0.00	
Tie in 7,550.0 MD 0.60° INC 230.90° AZI										
7,578.5	0.60	230.90	7,577.6	16.0	17.1	15.4	0.00	0.00	0.00	
KOP 7,578.5 MD 0.60° INC 230.90° AZI										
7,600.0	1.85	343.04	7,599.1	16.2	16.9	15.7	10.00	5.82	521.60	
7,650.0	6.81	354.00	7,649.0	20.0	16.4	19.4	10.00	9.91	21.92	
7,700.0	11.80	355.72	7,698.3	28.0	15.7	27.5	10.00	9.99	3.44	
7,750.0	16.80	356.43	7,746.7	40.3	14.8	39.8	10.00	10.00	1.41	
7,800.0	21.80	356.82	7,793.9	56.8	13.9	56.3	10.00	10.00	0.78	
7,850.0	26.80	357.07	7,839.5	77.4	12.8	76.9	10.00	10.00	0.50	
7,900.0	31.80	357.24	7,883.1	101.8	11.6	101.4	10.00	10.00	0.35	
7,950.0	36.80	357.38	7,924.3	129.9	10.2	129.5	10.00	10.00	0.26	
8,000.0	41.80	357.48	7,963.0	161.6	8.8	161.2	10.00	10.00	0.21	
8,050.0	46.80	357.57	7,998.8	196.4	7.3	196.1	10.00	10.00	0.17	
8,100.0	51.80	357.64	8,031.4	234.3	5.7	234.0	10.00	10.00	0.15	
8,150.0	56.81	357.70	8,060.6	274.9	4.1	274.6	10.00	10.00	0.13	
8,200.0	61.81	357.76	8,086.1	317.8	2.4	317.6	10.00	10.00	0.11	
8,250.0	66.81	357.81	8,107.7	362.8	0.6	362.6	10.00	10.00	0.10	
8,300.0	71.81	357.86	8,125.4	409.5	-1.1	409.4	10.00	10.00	0.10	
8,350.0	76.81	357.90	8,138.9	457.6	-2.9	457.5	10.00	10.00	0.09	
8,400.0	81.81	357.95	8,148.2	506.7	-4.7	506.6	10.00	10.00	0.09	
8,450.0	86.81	357.99	8,153.1	556.4	-6.4	556.3	10.00	10.00	0.08	
8,487.4	90.55	358.02	8,154.0	593.8	-7.7	593.7	10.00	10.00	0.08	
EOC 8,487.4 MD 90.55° INC 358.02° AZI										
8,500.0	90.55	358.02	8,153.9	606.4	-8.2	606.3	0.00	0.00	0.00	
8,600.0	90.55	358.02	8,152.9	706.3	-11.6	706.3	0.00	0.00	0.00	
8,700.0	90.55	358.02	8,152.0	806.3	-15.1	806.3	0.00	0.00	0.00	



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #21H
Company:	Yates Petroleum Corp.	TVD Reference:	WELL1 @ 3574.5usft
Project:	Eddy County, NM(NAD83)	MD Reference:	WELL1 @ 3574.5usft
Site:	Wolf AJA Federal Com	North Reference:	Grid
Well:	#21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 REV1		

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)
8,800.0	90.55	358.02	8,151.0	906.2	-18.5	906.3	0.00	0.00	0.00
8,900.0	90.55	358.02	8,150.0	1,006.1	-22.0	1,006.3	0.00	0.00	0.00
9,000.0	90.55	358.02	8,149.1	1,106.1	-25.5	1,106.3	0.00	0.00	0.00
9,100.0	90.55	358.02	8,148.1	1,206.0	-28.9	1,206.3	0.00	0.00	0.00
9,200.0	90.55	358.02	8,147.2	1,305.9	-32.4	1,306.3	0.00	0.00	0.00
9,300.0	90.55	358.02	8,146.2	1,405.9	-35.8	1,406.3	0.00	0.00	0.00
9,400.0	90.55	358.02	8,145.2	1,505.8	-39.3	1,506.3	0.00	0.00	0.00
9,500.0	90.55	358.02	8,144.3	1,605.7	-42.7	1,606.3	0.00	0.00	0.00
9,600.0	90.55	358.02	8,143.3	1,705.7	-46.2	1,706.3	0.00	0.00	0.00
9,700.0	90.55	358.02	8,142.4	1,805.6	-49.6	1,806.3	0.00	0.00	0.00
9,800.0	90.55	358.02	8,141.4	1,905.5	-53.1	1,906.3	0.00	0.00	0.00
9,900.0	90.55	358.02	8,140.4	2,005.5	-56.6	2,006.3	0.00	0.00	0.00
10,000.0	90.55	358.02	8,139.5	2,105.4	-60.0	2,106.2	0.00	0.00	0.00
10,100.0	90.55	358.02	8,138.5	2,205.4	-63.5	2,206.2	0.00	0.00	0.00
10,200.0	90.55	358.02	8,137.6	2,305.3	-66.9	2,306.2	0.00	0.00	0.00
10,300.0	90.55	358.02	8,136.6	2,405.2	-70.4	2,406.2	0.00	0.00	0.00
10,400.0	90.55	358.02	8,135.6	2,505.2	-73.8	2,506.2	0.00	0.00	0.00
10,500.0	90.55	358.02	8,134.7	2,605.1	-77.3	2,606.2	0.00	0.00	0.00
10,600.0	90.55	358.02	8,133.7	2,705.0	-80.7	2,706.2	0.00	0.00	0.00
10,700.0	90.55	358.02	8,132.8	2,805.0	-84.2	2,806.2	0.00	0.00	0.00
10,800.0	90.55	358.02	8,131.8	2,904.9	-87.6	2,906.2	0.00	0.00	0.00
10,900.0	90.55	358.02	8,130.8	3,004.8	-91.1	3,006.2	0.00	0.00	0.00
11,000.0	90.55	358.02	8,129.9	3,104.8	-94.6	3,106.2	0.00	0.00	0.00
11,100.0	90.55	358.02	8,128.9	3,204.7	-98.0	3,206.2	0.00	0.00	0.00
11,200.0	90.55	358.02	8,128.0	3,304.6	-101.5	3,306.2	0.00	0.00	0.00
11,300.0	90.55	358.02	8,127.0	3,404.6	-104.9	3,406.2	0.00	0.00	0.00
11,400.0	90.55	358.02	8,126.0	3,504.5	-108.4	3,506.2	0.00	0.00	0.00
11,500.0	90.55	358.02	8,125.1	3,604.5	-111.8	3,606.2	0.00	0.00	0.00
11,600.0	90.55	358.02	8,124.1	3,704.4	-115.3	3,706.2	0.00	0.00	0.00
11,700.0	90.55	358.02	8,123.2	3,804.3	-118.7	3,806.2	0.00	0.00	0.00
11,800.0	90.55	358.02	8,122.2	3,904.3	-122.2	3,906.2	0.00	0.00	0.00
11,900.0	90.55	358.02	8,121.2	4,004.2	-125.7	4,006.2	0.00	0.00	0.00
12,000.0	90.55	358.02	8,120.3	4,104.1	-129.1	4,106.2	0.00	0.00	0.00
12,100.0	90.55	358.02	8,119.3	4,204.1	-132.6	4,206.2	0.00	0.00	0.00
12,200.0	90.55	358.02	8,118.4	4,304.0	-136.0	4,306.1	0.00	0.00	0.00
12,300.0	90.55	358.02	8,117.4	4,403.9	-139.5	4,406.1	0.00	0.00	0.00
12,400.0	90.55	358.02	8,116.4	4,503.9	-142.9	4,506.1	0.00	0.00	0.00
12,500.0	90.55	358.02	8,115.5	4,603.8	-146.4	4,606.1	0.00	0.00	0.00
12,600.0	90.55	358.02	8,114.5	4,703.7	-149.8	4,706.1	0.00	0.00	0.00
12,700.0	90.55	358.02	8,113.6	4,803.7	-153.3	4,806.1	0.00	0.00	0.00
12,800.0	90.55	358.02	8,112.6	4,903.6	-156.7	4,906.1	0.00	0.00	0.00
12,900.0	90.55	358.02	8,111.6	5,003.6	-160.2	5,006.1	0.00	0.00	0.00
13,000.0	90.55	358.02	8,110.7	5,103.5	-163.7	5,106.1	0.00	0.00	0.00
13,100.0	90.55	358.02	8,109.7	5,203.4	-167.1	5,206.1	0.00	0.00	0.00
13,200.0	90.55	358.02	8,108.8	5,303.4	-170.6	5,306.1	0.00	0.00	0.00
13,300.0	90.55	358.02	8,107.8	5,403.3	-174.0	5,406.1	0.00	0.00	0.00
13,400.0	90.55	358.02	8,106.8	5,503.2	-177.5	5,506.1	0.00	0.00	0.00
13,500.0	90.55	358.02	8,105.9	5,603.2	-180.9	5,606.1	0.00	0.00	0.00
13,600.0	90.55	358.02	8,104.9	5,703.1	-184.4	5,706.1	0.00	0.00	0.00
13,700.0	90.55	358.02	8,104.0	5,803.0	-187.8	5,806.1	0.00	0.00	0.00
13,800.0	90.55	358.02	8,103.0	5,903.0	-191.3	5,906.1	0.00	0.00	0.00
13,900.0	90.55	358.02	8,102.0	6,002.9	-194.7	6,006.1	0.00	0.00	0.00
14,000.0	90.55	358.02	8,101.1	6,102.8	-198.2	6,106.1	0.00	0.00	0.00
14,100.0	90.55	358.02	8,100.1	6,202.8	-201.7	6,206.1	0.00	0.00	0.00



Wellplanning Planning Report

Database:	EDM5000.1 Single User Db	Local Co-ordinate Reference:	Well #21 H
Company:	Yates Petroleum Corp	TVD Reference:	WELL1 @ 3574.5usft
Project:	Eddy County, NM (NAD83)	MD Reference:	WELL1 @ 3574.5usft
Site:	Wolf AJA Federal Com	North Reference:	Grid
Well:	#21 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 REV1		

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)
14,200.0	90.55	358.02	8,099.2	6,302.7	-205.1	6,306.1	0.00	0.00	0.00
14,300.0	90.55	358.02	8,098.2	6,402.7	-208.6	6,406.0	0.00	0.00	0.00
14,400.0	90.55	358.02	8,097.2	6,502.6	-212.0	6,506.0	0.00	0.00	0.00
14,500.0	90.55	358.02	8,096.3	6,602.5	-215.5	6,606.0	0.00	0.00	0.00
14,600.0	90.55	358.02	8,095.3	6,702.5	-218.9	6,706.0	0.00	0.00	0.00
14,700.0	90.55	358.02	8,094.4	6,802.4	-222.4	6,806.0	0.00	0.00	0.00
14,800.0	90.55	358.02	8,093.4	6,902.3	-225.8	6,906.0	0.00	0.00	0.00
14,900.0	90.55	358.02	8,092.4	7,002.3	-229.3	7,006.0	0.00	0.00	0.00
15,000.0	90.55	358.02	8,091.5	7,102.2	-232.8	7,106.0	0.00	0.00	0.00
15,100.0	90.55	358.02	8,090.5	7,202.1	-236.2	7,206.0	0.00	0.00	0.00
15,200.0	90.55	358.02	8,089.6	7,302.1	-239.7	7,306.0	0.00	0.00	0.00
15,300.0	90.55	358.02	8,088.6	7,402.0	-243.1	7,406.0	0.00	0.00	0.00
15,400.0	90.55	358.02	8,087.6	7,501.9	-246.6	7,506.0	0.00	0.00	0.00
15,500.0	90.55	358.02	8,086.7	7,601.9	-250.0	7,606.0	0.00	0.00	0.00
15,600.0	90.55	358.02	8,085.7	7,701.8	-253.5	7,706.0	0.00	0.00	0.00
15,700.0	90.55	358.02	8,084.8	7,801.8	-256.9	7,806.0	0.00	0.00	0.00
15,800.0	90.55	358.02	8,083.8	7,901.7	-260.4	7,906.0	0.00	0.00	0.00
15,900.0	90.55	358.02	8,082.8	8,001.6	-263.8	8,006.0	0.00	0.00	0.00
16,000.0	90.55	358.02	8,081.9	8,101.6	-267.3	8,106.0	0.00	0.00	0.00
16,100.0	90.55	358.02	8,080.9	8,201.5	-270.8	8,206.0	0.00	0.00	0.00
16,200.0	90.55	358.02	8,080.0	8,301.4	-274.2	8,306.0	0.00	0.00	0.00
16,300.0	90.55	358.02	8,079.0	8,401.4	-277.7	8,406.0	0.00	0.00	0.00
16,400.0	90.55	358.02	8,078.0	8,501.3	-281.1	8,505.9	0.00	0.00	0.00
16,500.0	90.55	358.02	8,077.1	8,601.2	-284.6	8,605.9	0.00	0.00	0.00
16,600.0	90.55	358.02	8,076.1	8,701.2	-288.0	8,705.9	0.00	0.00	0.00
16,700.0	90.55	358.02	8,075.2	8,801.1	-291.5	8,805.9	0.00	0.00	0.00
16,748.5	90.55	358.02	8,074.7	8,849.6	-293.2	8,854.5	0.00	0.00	0.00
TD at 16748.5 - PBHL(WFC#21)									

Design Targets									
Target Name	hit/miss/target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude
PBHL(WFC#21)		0.00	0.00	8,075.0	8,849.6	-293.3	530,207.99	724,732.72	32° 27' 22.328 N 103° 44' 19.517 W
- plan misses target center by 0.3usft at 16748.5usft MD (8074.7 TVD, 8849.6 N, -293.2 E)									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Comment
7,550.0	7,549.1	16.2	17.3	Tie-In 7550.0 'MD, 0.60° INC, 230.90° AZI
7,578.5	7,577.6	16.0	17.1	KOP - 7578.5 'MD, 0.60° INC, 230.90° AZI
8,487.4	8,154.0	593.8	-7.7	EOC- 8487.4 'MD, 90.55° INC, 358.02° AZI
16,748.5	8,074.7	8,849.6	-293.2	TD at 16748.5



Section Details										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	
1	7550.0	0.60	230.90	7549.1	16.2	17.3	0.00	0.00	15.6	
2	7578.5	0.60	230.90	7577.6	16.0	17.1	0.00	0.00	15.4	
3	8487.4	90.55	358.02	8154.0	593.8	-7.7	10.00	127.11	593.7	
4	16748.5	90.55	358.02	8074.7	8849.6	-293.2	0.00	0.00	8854.5	PBHL(WFC#21)

Yates Petroleum Corp.
Project: Eddy County, NM(NAD83)
Site: Wolf AJA Federal Com
Well: #21H
Wellbore: OH
Plan: Plan #4_REV1 (#21H/OH)

WELL DETAILS: #21H

Ground Elevation:: 3556.0
RKB Elevation: WELL1 @ 3574.5usft
Rig Name:

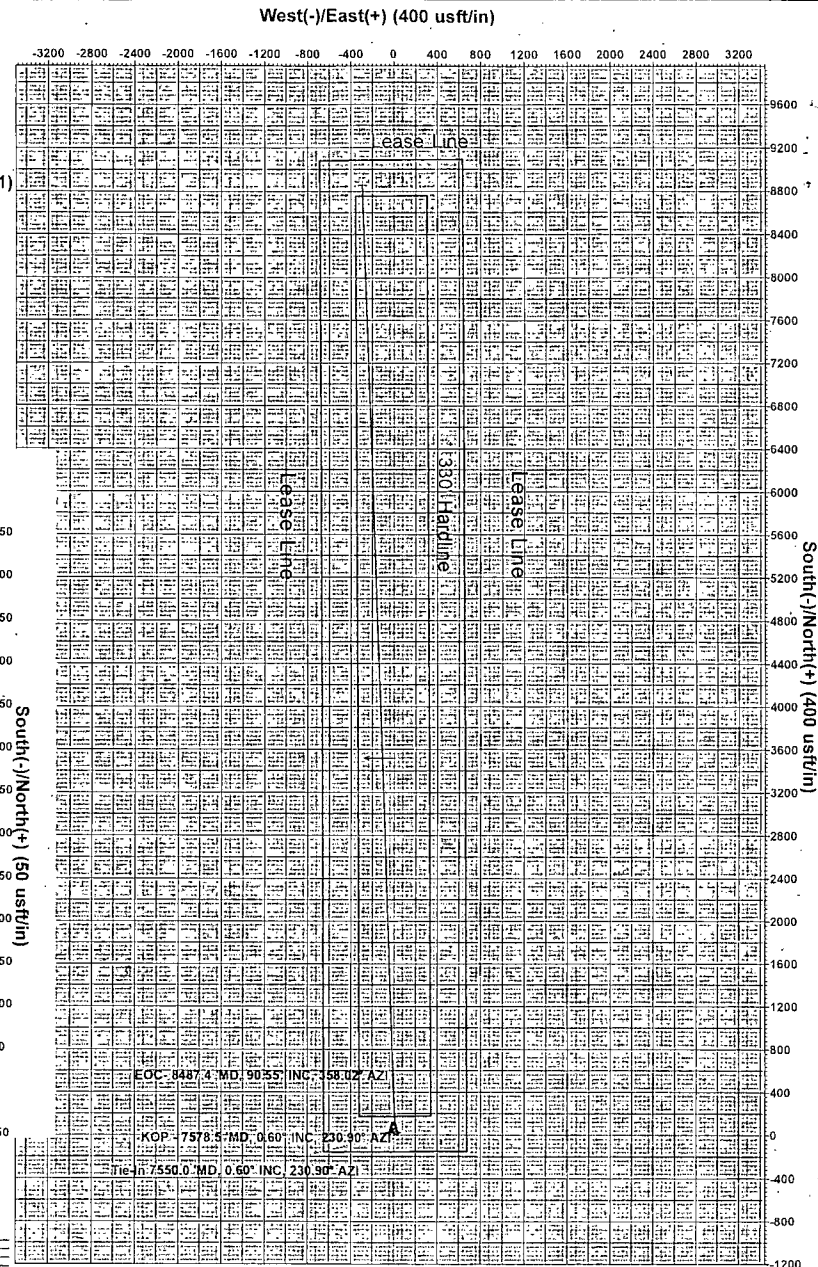
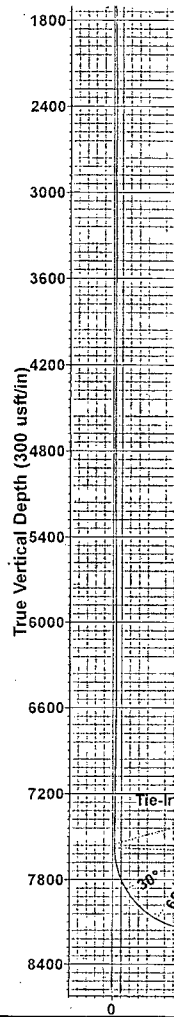
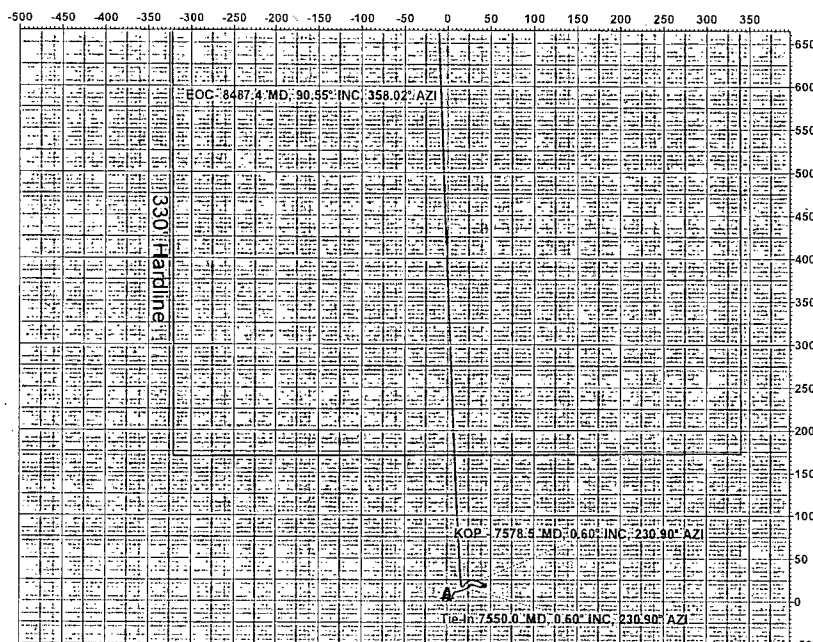


Azimuths to Grid North
True North: -0.32°
Magnetic North: 7.00°

Magnetic Field
Strength: 48431.6snT
Dip Angle: 60.28°
Date: 5/12/2014
Model: IGRF2010

Northing 521358.39
Easting 725026.02
Latitude 32° 25' 54.743 N
Longitude 103° 44' 16.670 W

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



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 358.10° (300 usft/in)

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

Plan: Plan #4_REV1 (#21H/OH)
Date: 16:25, July 15 2014