

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMML CONSERVATION
ARTESIA DISTRICT

AUG 3 2015

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. NMNM61358	
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		6. If Indian, Allottee or Tribe Name	
2. Name of Operator YATES PETROLEUM CORPORATION		8. Lease Name and Well No. WOLF AJA FEDERAL 18H	
Contact: LAURA WATTS Mail: laura@yatespetroleum.com		7. Unit or CA Agreement Name and No.	
3. Address 105 SOUTH FOURTH STREET ARTESIA, NM 88210		9. API Well No. 30-015-39830	
3a. Phone No. (include area code) Ph: 575-748-4272		10. Field and Pool, or Exploratory LOST TANK; DELAWARE	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface SENE 1950FNL 300FEL At top prod interval reported below SENE 1950FNL 300FEL At total depth NWSW 1987FSL 337FWL		11. Sec., T., R., M., or Block and Survey or Area Sec 25 T21S R31E Mer	
14. Date Spudded 07/26/2014		12. County or Parish EDDY	
15. Date T.D. Reached 09/01/2014		13. State NM	
16. Date Completed ☐ D & A ☒ Ready to Prod. 03/05/2015		17. Elevations (DF, KB, RT, GL)* 3664 GL	
18. Total Depth: MD TVD 11826		19. Plug Back T.D.: MD TVD 11752	
20. Depth Bridge Plug Set: MD TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) SECTOR BOND/VL GAMMA RAY/CCL	
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)			

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
30.000	20.000		0	80		243		0	
17.500	13.375 J-55	48.0	0	925		770		0	
12.250	9.625 J-55	36.0	0	4620		1180		0	
8.500	5.500 P-110	17.0	0	11801		1675		0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	6785							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) DELAWARE	7548	11801	7548 - 11650			FRAC SLEEVES
B)						
C)						
D)						

26. Perforation Record

Depth Interval	Amount and Type of Material
7548 TO 11801	ACIDIZED WITH 24,250 GALLONS 7-1/2 PERCENT KCL ACID, FRAC WITH A TOTAL OF 4,099,963 LBS 20/40 RCS
7548 TO 11801	AND 20/40 WHITE SAND.

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/06/2015	03/10/2015	24	→	147.0	112.0	1625.0			ELECTRIC PUMP SUB-SURFACE
Choke Size	Tbg. Press. Flwg. 200 SI	Csg. Press. 100.0	24 Hr. Rate →	Oil BBL 147	Gas MCF 112	Water BBL 1625	Gas:Oil Ratio	Well Status	
30/64								POW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #295186 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Reclamation: 9/10/15

AB

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
RUSTLER	826	1145		RUSTLER	826
TOS	1146	3916		TOS	1146
BOS	3917	4539		BOS	3917
BELL CANYON	4540	5455		BELL CANYON	4540
CHERRY CANYON	5456	11826		CHERRY CANYON	5456

32. Additional remarks (include plugging procedure):

2 logs mailed to BLM-Carlsbad, 1 log mailed to NMOCD-Artesia on 3/17/2015

Surveys attached

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #295186 Verified by the BLM Well Information System.
For YATES PETROLEUM CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH HAM on 06/13/2015 ()

Name(please print) LAURA WATTS

Title REG REPORTING TECHNICIAN

Signature _____ (Electronic Submission)

Date 03/17/2015

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.

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NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 3 2015

RECEIVED

Yates Petroleum Corp.

Eddy County, NM(NAD83)
Wolf AJA Federal
#18H

OH

Design: OH

Standard Survey Report

02 September, 2014





Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #18H
Project:	Eddy County, NM(NAD83)	TVD Reference:	WELL @ 3682.5usft (Original Well Elev)
Site:	Wolf AJA Federal	MD Reference:	WELL @ 3682.5usft (Original Well Elev)
Well:	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassEDM

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)
1,014.0	1.10	219.10	1,013.9	-6.0	-3.5	5.0	0.31	-0.27	6.89
1,108.0	1.10	222.30	1,107.9	-7.3	-4.7	6.5	0.07	0.00	3.40
1,203.0	1.00	236.70	1,202.9	-8.4	-6.0	8.1	0.30	-0.11	15.16
1,298.0	1.00	240.30	1,297.9	-9.3	-7.4	9.7	0.07	0.00	3.79
1,393.0	0.80	237.80	1,392.9	-10.1	-8.7	11.1	0.21	-0.21	-2.63
1,488.0	1.00	230.50	1,487.9	-11.0	-9.9	12.5	0.24	0.21	-7.68
1,583.0	0.90	224.90	1,582.8	-12.0	-11.0	13.9	0.14	-0.11	-5.89
1,678.0	0.70	227.70	1,677.8	-12.9	-12.0	15.1	0.21	-0.21	2.95
1,773.0	0.70	204.90	1,772.8	-13.8	-12.7	16.0	0.29	0.00	-24.00
1,868.0	0.60	206.80	1,867.8	-14.8	-13.1	16.7	0.11	-0.11	2.00
1,963.0	0.40	164.30	1,962.8	-15.6	-13.3	17.1	0.43	-0.21	-44.74
2,058.0	0.40	119.60	2,057.8	-16.1	-12.9	16.9	0.32	0.00	-47.05
2,152.0	0.70	74.60	2,151.8	-16.1	-12.0	16.1	0.54	0.32	-47.87
2,247.0	1.10	79.50	2,246.8	-15.8	-10.6	14.6	0.43	0.42	5.16
2,342.0	1.50	75.20	2,341.8	-15.3	-8.5	12.4	0.43	0.42	-4.53
2,437.0	1.50	67.00	2,436.7	-14.5	-6.1	9.9	0.23	0.00	-8.63
2,532.0	1.70	71.10	2,531.7	-13.5	-3.7	7.3	0.24	0.21	4.32
2,627.0	1.50	94.50	2,626.7	-13.2	-1.1	4.7	0.71	-0.21	24.63
2,722.0	1.80	98.80	2,721.6	-13.5	1.6	2.2	0.34	0.32	4.53
2,754.0	2.30	106.70	2,753.6	-13.8	2.7	1.2	1.79	1.56	24.69
2,785.0	2.60	119.60	2,784.6	-14.3	3.9	0.2	2.02	0.97	41.61
2,817.0	3.10	124.90	2,816.5	-15.1	5.3	-0.8	1.76	1.56	16.56
2,849.0	3.70	133.90	2,848.5	-16.3	6.7	-1.9	2.50	1.88	28.13
2,881.0	3.80	137.80	2,880.4	-17.8	8.2	-2.9	0.86	0.31	12.19
2,912.0	4.00	145.30	2,911.3	-19.5	9.5	-3.7	1.77	0.65	24.19
2,944.0	4.10	145.80	2,943.3	-21.4	10.8	-4.4	0.33	0.31	1.56
2,976.0	4.30	151.70	2,975.2	-23.4	12.0	-5.0	1.49	0.63	18.44
3,007.0	4.30	159.20	3,006.1	-25.5	12.9	-5.3	1.81	0.00	24.19
3,039.0	4.20	160.30	3,038.0	-27.7	13.8	-5.5	0.40	-0.31	3.44
3,070.0	4.10	161.00	3,068.9	-29.8	14.5	-5.6	0.36	-0.32	2.26
3,100.0	4.60	162.00	3,098.8	-32.0	15.2	-5.7	1.69	1.67	3.33
3,134.0	4.70	163.90	3,132.7	-34.6	16.0	-5.7	0.54	0.29	5.59
3,165.0	4.80	169.40	3,163.6	-37.1	16.6	-5.6	1.50	0.32	17.74
3,195.0	5.20	171.90	3,193.5	-39.7	17.1	-5.3	1.52	1.33	8.33
3,229.0	6.00	174.90	3,227.3	-43.0	17.4	-4.7	2.50	2.35	8.82
3,260.0	6.80	177.60	3,258.1	-46.4	17.6	-4.0	2.76	2.58	8.71
3,292.0	8.00	178.30	3,289.9	-50.5	17.8	-3.0	3.78	3.75	2.19
3,324.0	9.10	178.70	3,321.5	-55.3	17.9	-1.8	3.44	3.44	1.25
3,355.0	10.20	180.50	3,352.1	-60.5	17.9	-0.3	3.68	3.55	5.81
3,387.0	11.40	183.00	3,383.5	-66.5	17.8	1.5	4.02	3.75	7.81
3,419.0	11.90	185.70	3,414.9	-72.9	17.3	3.8	2.31	1.56	8.44
3,450.0	11.80	187.90	3,445.2	-79.2	16.5	6.3	1.49	-0.32	7.10
3,482.0	11.50	187.70	3,476.5	-85.6	15.6	8.9	0.95	-0.94	-0.63



Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #18H
Project:	Eddy County, NM(NAD83)	TVD Reference:	WELL @ 3682.5usft (Original Well Elev)
Site:	Wolf AJA Federal	MD Reference:	WELL @ 3682.5usft (Original Well Elev)
Well:	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassEDM

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)
3,577.0	11.60	187.30	3,569.6	-104.5	13.2	16.5	0.13	0.11	-0.42
3,672.0	11.30	187.50	3,662.7	-123.2	10.7	24.1	0.32	-0.32	0.21
3,767.0	10.70	185.90	3,756.0	-141.2	8.6	31.2	0.71	-0.63	-1.68
3,862.0	10.50	186.60	3,849.4	-158.6	6.7	37.8	0.25	-0.21	0.74
3,957.0	10.40	188.20	3,942.8	-175.7	4.5	44.7	0.32	-0.11	1.68
4,052.0	10.90	187.70	4,036.1	-193.1	2.1	51.9	0.54	0.53	-0.53
4,147.0	10.10	184.00	4,129.6	-210.3	0.3	58.4	1.10	-0.84	-3.89
4,242.0	10.20	186.50	4,223.1	-226.9	-1.3	64.6	0.48	0.11	2.63
4,337.0	9.80	188.60	4,316.6	-243.3	-3.4	71.2	0.57	-0.42	2.21
4,432.0	9.50	187.40	4,410.3	-259.1	-5.6	77.7	0.38	-0.32	-1.26
4,527.0	9.10	188.70	4,504.0	-274.3	-7.8	84.0	0.48	-0.42	1.37
4,712.0	10.00	185.20	4,686.5	-304.7	-11.5	96.1	0.58	0.49	-1.89
4,806.0	11.40	186.10	4,778.8	-322.1	-13.2	102.6	1.50	1.49	0.96
4,901.0	11.90	184.90	4,871.9	-341.2	-15.0	109.7	0.58	0.53	-1.26
4,996.0	11.50	185.00	4,964.9	-360.4	-16.7	116.6	0.42	-0.42	0.11
5,090.0	11.90	185.00	5,056.9	-379.4	-18.3	123.5	0.43	0.43	0.00
5,185.0	12.30	184.50	5,149.8	-399.2	-20.0	130.6	0.44	0.42	-0.53
5,274.0	12.00	183.80	5,236.8	-417.9	-21.3	137.2	0.38	-0.34	-0.79
5,369.0	11.20	186.60	5,329.9	-436.9	-23.1	144.1	1.03	-0.84	2.95
5,464.0	10.40	186.40	5,423.2	-454.6	-25.1	151.0	0.84	-0.84	-0.21
5,559.0	10.40	186.40	5,516.7	-471.6	-27.0	157.6	0.00	0.00	0.00
5,654.0	10.60	187.70	5,610.1	-488.8	-29.1	164.4	0.33	0.21	1.37
5,749.0	10.20	186.30	5,703.5	-505.8	-31.2	171.2	0.50	-0.42	-1.47
5,844.0	10.30	186.10	5,797.0	-522.6	-33.0	177.6	0.11	0.11	-0.21
5,939.0	11.10	185.60	5,890.3	-540.2	-34.8	184.2	0.85	0.84	-0.53
6,034.0	10.30	186.60	5,983.7	-557.7	-36.7	190.9	0.86	-0.84	1.05
6,128.0	9.80	186.60	6,076.2	-574.0	-38.6	197.3	0.53	-0.53	0.00
6,223.0	9.30	187.00	6,169.9	-589.7	-40.4	203.5	0.53	-0.53	0.42
6,318.0	9.00	186.80	6,263.7	-604.7	-42.3	209.4	0.32	-0.32	-0.21
6,412.0	9.30	188.20	6,356.5	-619.5	-44.2	215.4	0.40	0.32	1.49
6,507.0	9.40	190.80	6,450.3	-634.7	-46.8	222.1	0.46	0.11	2.74
6,614.0	9.50	191.00	6,555.8	-652.0	-50.1	230.1	0.10	0.09	0.19
6,705.0	9.40	190.50	6,645.6	-666.6	-52.9	236.9	0.14	-0.11	-0.55
6,767.0	11.40	197.30	6,706.6	-677.5	-55.6	242.5	3.78	3.23	10.97
6,798.0	14.20	203.10	6,736.8	-683.9	-58.0	246.6	9.93	9.03	18.71
6,830.0	17.60	205.80	6,767.6	-691.9	-61.7	252.4	10.87	10.63	8.44
6,861.0	21.20	207.90	6,796.8	-701.0	-66.3	259.4	11.83	11.61	6.77
6,892.0	24.50	210.30	6,825.4	-711.5	-72.2	268.0	11.06	10.65	7.74
6,923.0	27.30	214.70	6,853.2	-722.9	-79.5	278.1	10.95	9.03	14.19
6,954.0	30.40	219.30	6,880.4	-734.9	-88.5	290.1	12.29	10.00	14.84
6,985.0	33.00	225.30	6,906.8	-746.9	-99.5	304.0	13.17	8.39	19.35
7,016.0	34.20	229.50	6,932.6	-758.5	-112.1	319.4	8.44	3.87	13.55
7,048.0	36.00	232.10	6,958.8	-770.1	-126.4	336.3	7.31	5.63	8.13



Survey Report



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Site:	Wolf AJA Federal	MD Reference:	WELL @ 3682.5usft (Original Well Elev)
Well:	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassEDM

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,079.0	37.80	233.00	6,983.6	-781.4	-141.2	353.7	6.06	5.81	2.90
7,109.0	40.40	232.30	7,006.8	-792.9	-156.2	371.3	8.79	8.67	-2.33
7,140.0	43.40	230.20	7,029.9	-805.8	-172.3	390.4	10.68	9.68	-6.77
7,171.0	45.10	228.50	7,052.1	-819.9	-188.7	410.1	6.69	5.48	-5.48
7,201.0	47.60	226.70	7,072.8	-834.6	-204.8	429.6	9.40	8.33	-6.00
7,232.0	51.30	226.00	7,093.0	-850.8	-221.8	450.5	12.06	11.94	-2.26
7,264.0	55.30	226.90	7,112.1	-868.5	-240.4	473.3	12.70	12.50	2.81
7,295.0	57.90	227.80	7,129.2	-886.0	-259.4	496.5	8.73	8.39	2.90
7,323.0	60.10	227.80	7,143.6	-902.2	-277.2	518.0	7.86	7.86	0.00
7,357.0	63.70	227.60	7,159.6	-922.3	-299.4	545.0	10.60	10.59	-0.59
7,389.0	67.20	228.30	7,172.9	-941.8	-321.0	571.1	11.12	10.94	2.19
7,420.0	71.00	229.70	7,183.9	-960.8	-342.8	597.4	12.96	12.26	4.52
7,452.0	74.50	231.10	7,193.4	-980.3	-366.4	625.5	11.71	10.94	4.38
7,492.0	77.30	232.10	7,203.2	-1,004.4	-396.8	661.4	7.41	7.00	2.50
7,524.0	80.20	232.30	7,209.4	-1,023.6	-421.6	690.6	9.08	9.06	0.63
7,555.0	83.10	232.10	7,213.9	-1,042.4	-445.8	719.1	9.38	9.35	-0.65
7,577.1	85.10	232.03	7,216.2	-1,056.0	-463.2	739.6	9.04	9.03	-0.32
EOC									
7,586.0	85.90	232.00	7,216.9	-1,061.4	-470.2	747.8	9.04	9.03	-0.32
7,617.0	87.80	232.00	7,218.6	-1,080.4	-494.5	776.5	6.13	6.13	0.00
7,648.0	90.10	231.40	7,219.2	-1,099.7	-518.9	805.2	7.67	7.42	-1.94
7,657.3	90.67	231.40	7,219.1	-1,105.5	-526.1	813.8	6.13	6.13	0.00
EOC (Actual)									
7,679.0	92.00	231.40	7,218.6	-1,119.0	-543.1	833.9	6.13	6.13	0.00
7,710.0	93.90	232.50	7,217.0	-1,138.1	-567.5	862.6	7.08	6.13	3.55
7,742.0	94.90	233.70	7,214.5	-1,157.2	-593.0	892.5	4.87	3.13	3.75
7,773.0	95.20	235.10	7,211.8	-1,175.2	-618.1	921.6	4.60	0.97	4.52
7,803.0	94.50	237.20	7,209.3	-1,191.9	-642.9	950.1	7.35	-2.33	7.00
7,835.0	92.80	239.90	7,207.2	-1,208.5	-670.1	980.9	9.96	-5.31	8.44
7,867.0	91.40	242.50	7,206.1	-1,223.9	-698.2	1,012.1	9.22	-4.38	8.13
7,899.0	90.80	244.60	7,205.5	-1,238.2	-726.8	1,043.6	6.82	-1.88	6.56
7,930.0	91.80	247.10	7,204.8	-1,250.8	-755.1	1,074.3	8.68	3.23	8.06
7,962.0	92.70	249.00	7,203.5	-1,262.8	-784.7	1,106.1	6.57	2.81	5.94
7,993.0	92.80	251.10	7,202.0	-1,273.4	-813.9	1,137.0	6.77	0.32	6.77
8,025.0	91.60	252.70	7,200.8	-1,283.3	-844.2	1,168.9	6.25	-3.75	5.00
8,055.0	90.70	253.90	7,200.2	-1,291.9	-873.0	1,198.9	5.00	-3.00	4.00
8,086.0	89.40	255.00	7,200.1	-1,300.2	-902.8	1,229.9	5.49	-4.19	3.55
8,114.0	88.80	256.60	7,200.6	-1,307.1	-930.0	1,257.9	6.10	-2.14	5.71
8,145.0	88.40	257.50	7,201.3	-1,314.0	-960.2	1,288.8	3.18	-1.29	2.90
8,176.0	88.20	257.80	7,202.3	-1,320.7	-990.4	1,319.7	1.16	-0.65	0.97
8,207.0	89.00	258.70	7,203.0	-1,327.0	-1,020.8	1,350.6	3.88	2.58	2.90
8,238.0	88.80	258.70	7,203.6	-1,333.0	-1,051.2	1,381.5	0.65	-0.65	0.00
8,269.0	89.40	259.00	7,204.1	-1,339.0	-1,081.6	1,412.4	2.16	1.94	0.97
8,301.0	89.90	260.30	7,204.3	-1,344.8	-1,113.1	1,444.2	4.35	1.56	4.06



Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #18H
Project:	Eddy County, NM(NAD83)	TVD Reference:	WELL @ 3682.5usft (Original Well Elev)
Site:	Wolf AJA Federal	MD Reference:	WELL @ 3682.5usft (Original Well Elev)
Well:	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassEDM

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)
8,332.0	90.00	261.50	7,204.3	-1,349.7	-1,143.7	1,475.0	3.88	0.32	3.87
8,363.0	90.90	263.40	7,204.1	-1,353.8	-1,174.4	1,505.6	6.78	2.90	6.13
8,457.0	91.10	266.10	7,202.4	-1,362.4	-1,268.0	1,597.9	2.88	0.21	2.87
8,549.0	90.00	266.10	7,201.6	-1,368.6	-1,359.8	1,687.8	1.20	-1.20	0.00
8,644.0	90.00	268.00	7,201.6	-1,373.5	-1,454.6	1,780.2	2.00	0.00	2.00
8,739.0	90.90	269.20	7,200.8	-1,375.8	-1,549.6	1,872.1	1.58	0.95	1.26
8,834.0	91.40	270.80	7,198.9	-1,375.8	-1,644.6	1,963.3	1.76	0.53	1.68
8,928.0	90.70	271.70	7,197.2	-1,373.8	-1,738.5	2,052.9	1.21	-0.74	0.96
9,023.0	89.90	272.00	7,196.7	-1,370.7	-1,833.5	2,143.3	0.90	-0.84	0.32
9,117.0	89.60	270.50	7,197.1	-1,368.7	-1,927.5	2,232.9	1.63	-0.32	-1.60
9,212.0	89.30	269.90	7,198.0	-1,368.3	-2,022.5	2,324.0	0.71	-0.32	-0.63
9,307.0	90.00	269.10	7,198.6	-1,369.2	-2,117.5	2,415.5	1.12	0.74	-0.84
9,402.0	90.50	268.00	7,198.2	-1,371.6	-2,212.4	2,507.4	1.27	0.53	-1.16
9,497.0	89.80	267.70	7,197.9	-1,375.1	-2,307.4	2,599.5	0.80	-0.74	-0.32
9,591.0	90.60	269.10	7,197.6	-1,377.8	-2,401.3	2,690.5	1.72	0.85	1.49
9,685.0	90.00	269.60	7,197.1	-1,378.8	-2,495.3	2,781.0	0.83	-0.64	0.53
9,780.0	90.90	269.10	7,196.4	-1,379.9	-2,590.3	2,872.5	1.08	0.95	-0.53
9,874.0	91.90	267.30	7,194.1	-1,382.9	-2,684.2	2,963.5	2.19	1.06	-1.91
9,969.0	92.00	267.50	7,190.8	-1,387.2	-2,779.1	3,055.8	0.24	0.11	0.21
10,063.0	91.30	267.00	7,188.1	-1,391.7	-2,872.9	3,147.2	0.92	-0.74	-0.53
10,158.0	91.30	268.70	7,186.0	-1,395.2	-2,967.8	3,239.3	1.79	0.00	1.79
10,252.0	90.60	269.20	7,184.4	-1,397.0	-3,061.8	3,330.0	0.92	-0.74	0.53
10,347.0	90.50	269.60	7,183.5	-1,397.9	-3,156.8	3,421.5	0.43	-0.11	0.42
10,438.0	91.50	269.40	7,181.9	-1,398.7	-3,247.8	3,509.1	1.12	1.10	-0.22
10,531.0	92.10	271.00	7,179.0	-1,398.4	-3,340.7	3,598.3	1.84	0.65	1.72
10,625.0	93.20	271.50	7,174.6	-1,396.4	-3,434.6	3,687.9	1.29	1.17	0.53
10,720.0	92.20	272.00	7,170.2	-1,393.5	-3,529.4	3,778.1	1.18	-1.05	0.53
10,815.0	92.10	272.00	7,166.6	-1,390.2	-3,624.3	3,868.3	0.11	-0.11	0.00
10,909.0	91.10	271.70	7,164.0	-1,387.1	-3,718.2	3,957.6	1.11	-1.06	-0.32
11,001.0	89.30	271.70	7,163.7	-1,384.4	-3,810.2	4,045.2	1.96	-1.96	0.00
11,093.0	88.70	271.50	7,165.3	-1,381.8	-3,902.1	4,132.7	0.69	-0.65	-0.22
11,189.0	89.90	272.00	7,166.4	-1,378.9	-3,998.1	4,224.1	1.35	1.25	0.52
11,284.0	88.90	271.50	7,167.4	-1,376.0	-4,093.0	4,314.4	1.18	-1.05	-0.53
11,379.0	89.60	271.00	7,168.7	-1,373.9	-4,188.0	4,405.0	0.91	0.74	-0.53
11,473.0	90.60	271.50	7,168.5	-1,371.9	-4,282.0	4,494.7	1.19	1.06	0.53
11,568.0	90.00	269.40	7,168.0	-1,371.1	-4,377.0	4,585.7	2.30	-0.63	-2.21
11,661.0	90.90	269.80	7,167.3	-1,371.8	-4,470.0	4,675.2	1.06	0.97	0.43
11,761.0	91.70	269.90	7,165.0	-1,372.0	-4,569.9	4,771.3	0.81	0.80	0.10
11,826.0	91.70	269.90	7,163.1	-1,372.1	-4,634.9	4,833.7	0.00	0.00	0.00
EOL (Actual) - PBHL(W#18H) - TD									



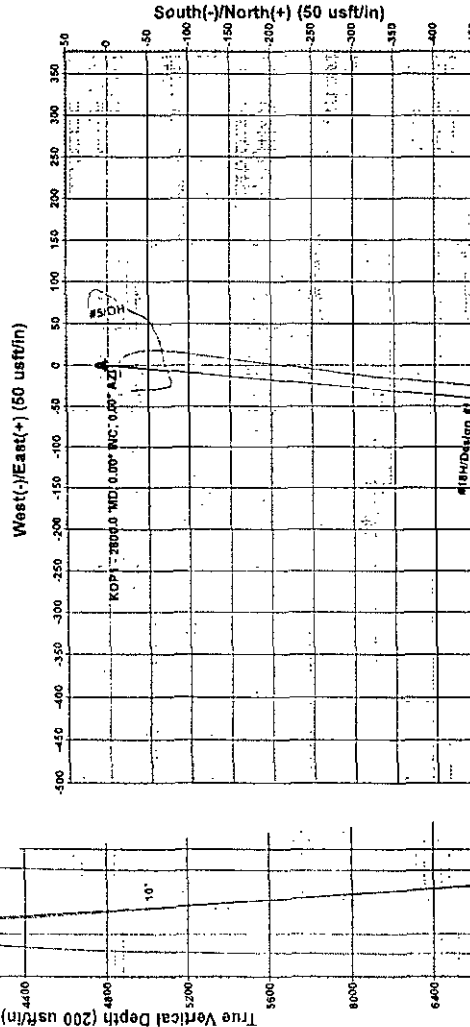
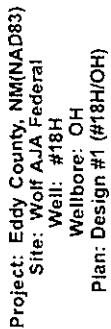
Survey Report



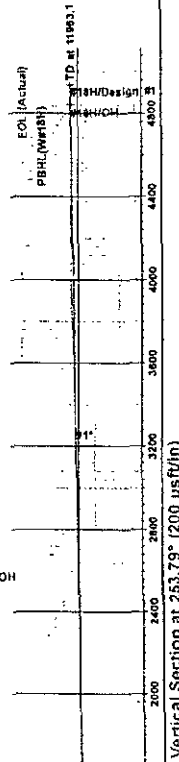
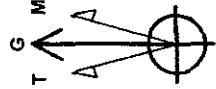
Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #18H
Project:	Eddy County, NM(NAD83)	TVD Reference:	WELL @ 3682.5usft (Original Well Elev)
Site:	Wolf AJA Federal	MD Reference:	WELL @ 3682.5usft (Original Well Elev)
Well:	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassEDM

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,657.3	7,219.1	-1,105.5	-526.1	EOC (Actual)
11,826.0	7,163.1	-1,372.1	-4,634.9	EOL (Actual)

Checked By: _____	Approved By: _____	Date: _____
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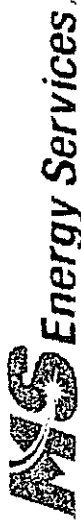
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dlog	TFace	VSec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2800.0	0.0	0.0	2800.0	0.0	0.0	0.0	0.0	0.0
3	3300.0	10.0	185.00	3297.5	-43.4	-3.8	2.0	185.00	15.7
4	6771.5	10.0	185.00	6716.2	-64.9	-66.3	0.0	0.0	233.9
5	7509.1	90.67	230.85	7216.0	-1057.0	-462.4	10.0	46.20	739.1
6	8587.7	90.67	270.00	7204.1	-1378.5	-1366.5	4.00	89.77	1897.0
7	11863.1	90.67	270.00	7166.0	-1378.7	-484.7	0.0	0.0	4842.0
8	11863.1	90.67	270.00	7168.4	-1378.7	-474.7	0.0	0.0	4938.1



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

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





Job Number: SVMO-141113
Company: Yates Petroleum Corporation
Lease/Well: Wolf AJA Fed 18H
Location: Eddy County, NM
Rig Name: McVay #10
RKB: 18'
G.L. or M.S.L.: GL

State/Country: New Mexico/USA
Declination: 6.99°
Grid: East To Grd North
File name: S:\2014SU-11YATES\MOIWOLF-AJ-1118H.SVY
Date/Time: 18-Aug-14 / 15:47
Curve Name: Surface - 794' M.D. (Rate Gyro)

MS SURVEY

WINERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 253.79

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
Surface MD to 794' MD is, to the best of
our knowledge a true and accurate account of
the well bore.
Joseph Brack 8/18/14 Date
MS Energy Services

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.22	321.24	100.00	.15	-.12	.07	.19	321.24	.22
200.00	.47	341.93	200.00	.69	-.37	.16	.78	331.93	.28
300.00	.26	354.19	300.00	1.30	-.52	.13	1.40	338.36	.22
400.00	.12	284.26	400.00	1.56	-.64	.18	1.68	337.58	.25
500.00	.28	195.83	499.99	1.35	-.81	.40	1.57	328.97	.30
600.00	.51	188.32	599.99	.67	-.94	.72	1.16	305.51	.24
700.00	.74	191.74	699.99	-.40	-1.14	1.20	1.21	250.58	.23

Last Survey Depth Recorded

794.00	1.13	189.37	793.97	-1.91	-1.41	1.89	2.37	216.47	.42
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Customer Name: Yates Petroleum Corp
Well Name: Wolf AJA Fed Com# 1
API Number: 30-015-39830
County / Parish: Eddy Co NM

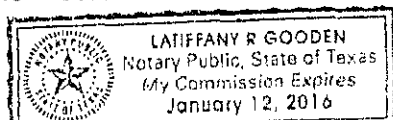
M.W.D. Operator: R. Martin
Directional Driller: J. Muller
Total Magnetic Correction: 6.97
Job #: NM-462

Vertical Section: 253.79

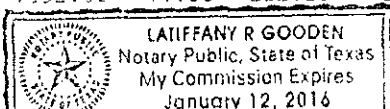
Tie In Survey(s) Provided By:

Multi Shot Survey

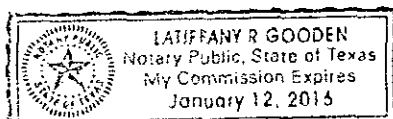
	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist.	Angle	DLS
Tie - In										
0	794.00	1.13	189.37	793.97	1.89	-1.91	-1.41	2.37	216.47	0.42
1	940.00	1.30	214.00	939.94	3.78	-4.70	-2.57	5.36	208.66	0.37
2	1014.00	1.10	219.10	1013.92	5.01	-5.95	-3.49	6.90	210.38	0.31
3	1108.00	1.10	222.30	1107.90	6.52	-7.32	-4.66	8.68	212.51	0.07
4	1203.00	1.00	236.70	1202.89	8.09	-8.45	-5.97	10.34	215.25	0.30
5	1298.00	1.00	240.30	1297.87	9.69	-9.31	-7.38	11.89	218.41	0.07
6	1393.00	0.80	237.80	1392.86	11.13	-10.08	-8.67	13.29	220.69	0.21
7	1488.00	1.00	230.50	1487.85	12.53	-10.96	-9.87	14.75	222.00	0.24
8	1583.00	0.90	224.90	1582.84	13.95	-12.01	-11.03	16.31	222.56	0.14
9	1678.00	0.70	227.70	1677.83	15.12	-12.93	-11.99	17.63	222.83	0.21
10	1773.00	0.70	204.90	1772.82	16.02	-13.85	-12.66	18.77	222.43	0.29
11	1868.00	0.60	206.80	1867.82	16.75	-14.82	-13.13	19.80	221.54	0.11
12	1963.00	0.40	164.30	1962.81	17.09	-15.58	-13.26	20.46	220.40	0.43
13	2058.00	0.40	119.60	2057.81	16.86	-16.07	-12.89	20.60	218.73	0.32
14	2152.00	0.70	74.60	2151.81	16.06	-16.08	-12.05	20.09	216.85	0.54
15	2247.00	1.10	79.50	2246.79	14.57	-15.76	-10.59	18.99	213.91	0.43
16	2342.00	1.50	75.20	2341.77	12.42	-15.27	-8.49	17.47	209.08	0.43
17	2437.00	1.50	67.00	2436.74	9.94	-14.47	-6.15	15.72	203.02	0.23
18	2532.00	1.70	71.10	2531.70	7.30	-13.53	-3.67	14.02	195.17	0.24
19	2627.00	1.50	94.50	2626.66	4.73	-13.17	-1.10	13.21	184.76	0.71
20	2722.00	1.80	98.80	2721.62	2.21	-13.49	1.62	13.59	173.16	0.34
21	2754.00	2.30	106.70	2753.60	1.22	-13.75	2.73	14.02	168.77	1.79
22	2785.00	2.60	119.60	2784.58	0.21	-14.28	3.94	14.81	164.59	2.02
23	2817.00	3.10	124.90	2816.54	-0.84	-15.13	5.28	16.03	160.77	1.76
24	2849.00	3.70	133.90	2848.48	-1.90	-16.35	6.73	17.68	157.62	2.50
25	2881.00	3.80	137.80	2880.41	-2.88	-17.85	8.19	19.64	155.36	0.86
26	2912.00	4.00	145.30	2911.34	-3.67	-19.50	9.49	21.69	154.04	1.77
27	2944.00	4.10	145.80	2943.26	-4.38	-21.36	10.77	23.92	153.24	0.33
28	2976.00	4.30	151.70	2975.17	-4.99	-23.36	11.98	26.26	152.85	1.49
29	3007.00	4.30	159.20	3006.09	-5.32	-25.47	12.95	28.57	153.06	1.81
30	3039.00	4.20	160.30	3038.00	-5.49	-27.70	13.77	30.93	153.57	0.40
31	3070.00	4.10	161.00	3068.92	-5.61	-29.81	14.51	33.16	154.05	0.36
32	3100.00	4.60	162.00	3098.83	-5.70	-31.97	15.23	35.42	154.53	1.69
33	3134.00	4.70	163.90	3132.72	-5.74	-34.61	16.04	38.14	155.13	0.54
34	3165.00	4.80	169.40	3163.61	-5.61	-37.10	16.63	40.66	155.86	1.50
35	3195.00	5.20	171.90	3193.50	-5.30	-39.68	17.05	43.19	156.74	1.52
36	3229.00	6.00	174.90	3227.34	-4.74	-42.98	17.43	46.38	157.93	2.50
37	3260.00	6.80	177.60	3258.14	-3.99	-46.42	17.65	49.67	159.18	2.76
38	3292.00	8.00	178.30	3289.88	-2.98	-50.54	17.79	53.58	160.60	3.76
39	3324.00	9.10	178.70	3321.52	-1.77	-55.30	17.92	58.13	162.05	3.44
40	3355.00	10.70	180.50	3352.08	-0.35	-60.50	17.95	63.10	163.47	3.68
41	3387.00	11.40	183.00	3383.51	1.51	-66.49	17.76	68.82	165.04	4.02
42	3419.00	11.90	185.70	3414.85	3.78	-72.93	17.27	74.94	166.68	2.31
43	3450.00	11.80	187.90	3445.16	6.27	-79.25	16.51	80.95	168.23	1.49



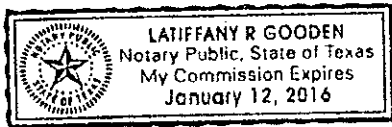
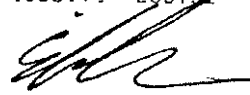
44	3482.00	11.50	187.70	3476.53	8.90	-85.65	15.64	87.07	169.65	0.95
45	3577.00	11.60	187.30	3569.61	16.54	-104.51	13.15	105.33	172.83	0.13
46	3672.00	11.30	187.50	3662.72	24.10	-123.22	10.73	123.68	175.03	0.32
47	3767.00	10.70	185.90	3755.97	31.16	-141.21	8.60	141.47	176.51	0.71
48	3862.00	10.50	186.60	3849.35	37.83	-158.58	6.70	158.72	177.58	0.25
49	3957.00	10.40	188.20	3942.78	44.73	-175.67	4.48	175.73	178.54	0.32
50	4052.00	10.90	187.70	4036.14	51.92	-193.06	2.06	193.07	179.39	0.54
51	4147.00	10.10	184.00	4129.55	58.44	-210.27	0.27	210.27	179.93	1.10
52	4242.00	10.20	186.50	4223.06	64.56	-226.93	-1.26	226.94	180.32	0.48
53	4337.00	9.80	188.60	4316.62	71.20	-243.29	-3.42	243.31	180.81	0.57
54	4432.00	9.50	187.40	4410.28	77.73	-259.05	-5.64	259.12	181.25	0.38
55	4527.00	9.10	188.70	4504.03	84.04	-274.26	-7.79	274.37	181.63	0.48
56	4712.00	10.00	185.20	4686.46	96.06	-304.71	-11.45	304.93	182.15	0.58
57	4806.00	11.40	186.10	4778.83	102.57	-322.08	-13.18	322.35	182.34	1.50
58	4901.00	11.90	184.90	4871.87	109.66	-341.17	-15.02	341.50	182.52	0.58
59	4996.00	11.50	185.00	4964.90	116.61	-360.37	-16.68	360.75	182.65	0.42
60	5091.00	11.90	185.00	5057.92	123.58	-379.56	-18.36	380.00	182.77	0.42
61	5185.00	12.30	184.50	5149.83	130.63	-399.20	-19.99	399.70	182.87	0.44
62	5274.00	12.00	183.80	5236.84	137.15	-417.88	-21.34	418.42	182.92	0.38
63	5369.00	11.20	186.60	5329.90	144.11	-436.90	-23.06	437.51	183.02	1.03
64	5464.00	10.40	186.40	5423.22	150.98	-454.58	-25.08	455.27	183.16	0.84
65	5559.00	10.40	186.40	5516.66	157.57	-471.63	-26.99	472.40	183.27	0.00
66	5654.00	10.60	187.70	5610.06	164.41	-488.81	-29.11	489.67	183.41	0.33
67	5749.00	10.20	186.30	5703.50	171.17	-505.83	-31.21	506.79	183.53	0.50
68	5844.00	10.30	186.10	5796.99	177.62	-522.63	-33.03	523.67	183.62	0.11
69	5939.00	11.10	185.60	5890.34	184.24	-540.18	-34.83	541.30	183.69	0.85
70	6034.00	10.30	186.60	5983.68	190.93	-557.72	-36.70	558.92	183.76	0.86
71	6128.00	9.80	186.60	6076.24	197.29	-574.01	-38.58	575.31	183.85	0.53
72	6223.00	9.30	187.00	6169.92	203.45	-589.66	-40.45	591.05	183.92	0.53
73	6318.00	9.00	186.80	6263.71	209.38	-604.66	-42.26	606.13	184.00	0.32
74	6412.00	9.30	188.20	6356.52	215.39	-619.48	-44.22	621.05	184.08	0.40
75	6507.00	9.40	190.80	6450.26	222.09	-634.70	-46.76	636.42	184.21	0.46
76	6614.00	9.50	191.00	6555.80	230.09	-651.95	-50.09	653.87	184.39	0.10
77	6705.00	9.40	190.50	6645.57	236.27	-666.63	-52.87	668.72	184.53	0.14
78	6767.00	11.40	197.30	6706.55	242.53	-677.46	-55.62	679.73	184.69	3.78
79	6798.00	14.20	203.10	6736.78	246.63	-683.88	-58.02	686.34	184.65	9.93
80	6830.00	17.60	205.80	6767.55	252.35	-691.85	-61.67	694.59	185.09	10.87
81	6861.00	21.20	207.90	6796.79	259.39	-701.02	-66.33	704.16	185.41	11.83
82	6892.00	24.50	210.30	6825.35	267.96	-711.53	-72.20	715.18	185.79	11.06
83	6923.00	27.30	214.70	6853.24	278.14	-722.93	-79.49	727.29	186.28	10.95
84	6954.00	30.40	219.30	6880.39	290.13	-734.85	-88.51	740.16	186.87	12.29
85	6985.00	33.00	225.30	6906.77	304.02	-746.86	-99.48	753.46	187.59	13.17
86	7016.00	34.20	229.50	6932.59	319.38	-758.46	-112.11	766.70	188.41	8.44
87	7048.00	36.00	232.10	6958.77	336.32	-770.68	-126.37	780.38	189.32	7.31
88	7079.00	37.80	233.00	6983.56	353.67	-781.39	-141.15	794.04	190.24	6.06
89	7109.00	40.40	232.30	7006.84	371.32	-792.87	-156.19	808.11	191.14	8.79
90	7140.00	43.40	230.20	7029.91	390.43	-805.84	-172.32	824.06	192.07	10.68
91	7171.00	45.10	228.50	7052.12	410.12	-819.93	-188.73	841.37	192.96	6.69
92	7201.00	47.60	226.70	7072.83	429.59	-834.57	-204.75	859.32	193.78	9.40
93	7232.00	51.30	226.00	7092.98	450.49	-850.83	-221.79	879.26	194.61	12.96
94	7264.00	55.30	226.90	7112.10	473.28	-868.50	-240.39	901.15	195.47	12.70
95	7295.00	57.90	227.80	7129.16	496.45	-886.03	-259.42	923.23	196.32	8.73
96	7323.00	60.10	227.80	7143.58	518.02	-902.15	-277.20	943.78	197.08	7.86
97	7357.00	63.70	227.60	7159.59	544.95	-922.33	-299.38	969.70	197.98	10.60
98	7389.00	67.20	228.30	7172.89	571.15	-941.82	-320.99	995.02	198.82	11.12
99	7420.00	71.00	229.70	7183.94	597.43	-960.81	-342.84	1020.15	199.64	12.96
100	7452.00	74.50	231.10	7193.43	625.48	-980.29	-366.39	1046.52	200.49	11.71
101	7492.00	77.30	232.10	7203.17	661.40	-1004.38	-396.79	1079.92	201.56	7.41



102	7524.00	80.20	232.30	7209.42	690.58	-1023.62	-421.59	1107.03	202.38	9.08
103	7555.00	83.10	232.10	7213.92	719.10	-1042.41	-445.82	1133.75	203.16	9.38
104	7586.00	85.90	232.00	7216.89	747.75	-1061.39	-470.15	1160.85	203.89	9.04
105	7617.00	87.80	232.00	7218.59	776.49	-1080.44	-494.54	1188.24	204.59	6.13
106	7648.00	90.10	231.40	7219.16	805.21	-1099.65	-518.86	1215.92	205.26	7.67
107	7679.00	92.00	231.40	7218.59	833.87	-1118.99	-543.08	1243.81	205.89	6.13
108	7710.00	93.90	232.50	7217.00	862.60	-1138.07	-567.46	1271.70	206.50	7.08
109	7742.00	94.90	233.70	7214.54	892.45	-1157.22	-592.98	1300.30	207.13	4.87
110	7773.00	95.20	235.10	7211.81	921.58	-1175.20	-618.08	1327.83	207.74	4.60
111	7803.00	94.50	237.20	7209.28	950.06	-1191.85	-642.91	1354.19	208.34	7.35
112	7835.00	92.80	239.90	7207.24	980.87	-1208.51	-670.15	1381.88	209.01	9.96
113	7867.00	91.40	242.50	7206.07	1012.08	-1223.91	-698.17	1409.04	209.70	9.22
114	7899.00	90.80	244.60	7205.45	1043.56	-1238.16	-726.81	1435.72	210.41	6.82
115	7930.00	91.80	247.10	7204.75	1074.25	-1250.84	-755.09	1461.08	211.12	8.68
116	7962.00	92.70	249.00	7203.49	1106.07	-1262.79	-784.74	1486.76	211.86	6.57
117	7993.00	92.80	251.10	7202.00	1136.96	-1273.36	-813.85	1511.22	212.58	6.77
118	8025.00	91.60	252.70	7200.78	1168.92	-1283.29	-844.24	1536.09	213.34	6.25
119	8055.00	90.70	253.90	7200.17	1198.91	-1291.91	-872.97	1559.20	214.05	5.00
120	8086.00	89.40	255.00	7200.15	1229.91	-1300.22	-902.83	1582.93	214.77	5.49
121	8114.00	88.80	256.60	7200.59	1257.89	-1307.09	-929.97	1604.16	215.43	6.10
122	8145.00	88.40	257.50	7201.34	1288.83	-1314.03	-960.18	1627.46	216.16	3.18
123	8176.00	88.20	257.80	7202.26	1319.74	-1320.66	-990.45	1650.79	216.87	1.16
124	8207.00	89.00	258.70	7203.02	1350.64	-1326.97	-1020.79	1674.17	217.57	3.88
125	8238.00	88.80	258.70	7203.62	1381.52	-1333.04	-1051.18	1697.64	218.26	0.65
126	8269.00	89.40	259.00	7204.10	1412.40	-1339.04	-1081.59	1721.30	218.93	2.16
127	8301.00	89.90	260.30	7204.30	1444.23	-1344.79	-1113.07	1745.67	219.61	4.35
128	8332.00	90.00	261.50	7204.33	1474.99	-1349.69	-1143.68	1769.08	220.28	3.88
129	8363.00	90.90	263.40	7204.08	1505.63	-1353.76	-1174.41	1792.18	220.94	6.78
130	8457.00	91.10	266.10	7202.44	1597.89	-1362.36	-1267.99	1861.13	222.95	2.88
131	8549.00	90.00	266.10	7201.56	1687.77	-1368.62	-1359.77	1929.27	224.81	1.20
132	8644.00	90.00	268.00	7201.56	1780.24	-1373.51	-1454.64	2000.62	226.64	2.00
133	8739.00	90.90	269.20	7200.81	1872.08	-1375.83	-1549.61	2072.24	228.40	1.58
134	8834.00	91.40	270.80	7198.91	1963.28	-1375.83	-1644.58	2144.19	230.08	1.76
135	8928.00	90.70	271.70	7197.18	2052.93	-1373.78	-1738.54	2215.81	231.68	1.21
136	9023.00	89.90	272.00	7196.69	2143.25	-1370.71	-1833.49	2289.22	233.22	0.90
137	9117.00	89.60	270.50	7197.10	2232.91	-1368.66	-1927.47	2363.97	234.62	1.63
138	9212.00	89.30	269.90	7198.01	2324.04	-1368.33	-2022.46	2441.86	235.92	0.71
139	9307.00	90.00	269.10	7198.59	2415.49	-1369.16	-2117.45	2521.55	237.11	1.12
140	9402.00	90.50	268.00	7198.17	2507.35	-1371.56	-2212.42	2603.07	238.20	1.27
141	9497.00	89.80	267.70	7197.92	2599.50	-1375.13	-2307.35	2686.05	239.21	0.80
142	9591.00	90.60	269.10	7197.60	2690.46	-1377.75	-2401.31	2768.48	240.16	1.72
143	9685.00	90.00	269.60	7197.10	2781.01	-1378.82	-2495.30	2850.91	241.08	0.83
144	9780.00	90.90	269.10	7196.36	2872.53	-1379.89	-2590.29	2934.92	241.96	1.08
145	9874.00	91.90	267.30	7194.06	2963.54	-1382.85	-2684.21	3019.48	242.74	2.19
146	9969.00	92.00	267.50	7190.83	3055.82	-1387.15	-2779.06	3106.02	243.47	0.24
147	10063.00	91.30	267.00	7188.12	3147.20	-1391.66	-2872.91	3192.23	244.15	0.92
148	10158.00	91.30	268.70	7185.97	3239.32	-1395.22	-2967.82	3279.42	244.82	1.79
149	10252.00	90.60	269.20	7184.41	3330.04	-1396.95	-3061.79	3365.41	245.48	0.92
150	10347.00	90.50	269.60	7183.50	3421.53	-1397.94	-3156.78	3452.46	246.11	0.43
151	10438.00	91.50	269.40	7181.91	3509.12	-1398.73	-3247.76	3536.16	246.70	1.12
152	10531.00	92.10	271.00	7178.99	3598.28	-1398.41	-3340.71	3621.59	247.29	1.84
153	10625.00	93.20	271.50	7174.64	3687.85	-1396.36	-3434.59	3707.59	247.88	1.29
154	10720.00	92.20	272.00	7170.17	3778.12	-1393.46	-3529.44	3794.56	248.46	1.18
155	10815.00	92.10	272.00	7166.60	3868.30	-1390.15	-3624.31	3881.77	249.02	0.11
156	10909.00	91.10	271.70	7163.98	3957.63	-1387.12	-3718.22	3968.54	249.54	1.11
157	11001.00	89.30	271.70	7163.66	4045.17	-1384.39	-3810.18	4053.89	250.03	1.96
158	11093.00	86.70	271.50	7165.26	4132.75	-1381.82	-3902.13	4139.57	250.50	0.69
159	11189.00	89.90	272.00	7166.43	4224.06	-1378.89	-3998.07	4229.18	250.97	1.35



160	11284.00	88.90	271.50	7167.43	4314.42	-1375.99	-4093.02	4318.12	251.42	1.18
161	11379.00	89.60	271.00	7168.67	4405.04	-1373.92	-4187.99	4407.60	251.84	0.91
162	11473.00	90.60	271.50	7168.51	4494.71	-1371.86	-4281.97	4496.36	252.24	1.19
163	11568.00	90.00	269.40	7168.01	4585.71	-1371.12	-4376.96	4586.69	252.61	2.30
164	11661.00	90.90	269.80	7167.28	4675.19	-1371.77	-4469.95	4675.70	252.94	1.06
165	11761.00	91.70	269.90	7165.01	4771.26	-1372.03	-4569.92	4771.44	253.29	0.81
PTB	11826.00	91.70	269.90	7163.08	4833.68	-1372.14	-4634.90	4833.74	253.51	0.00



**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 3 2015

RECEIVED

Well Name and Num: Wolf AJA Fed Com 18H
Location: Sec 25, T21S, R31E
Operator: Yates
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.32	200	9.30	6223	91.70	11826
0.24	350	9.50	6614		
0.32	500	27.30	6923		
0.89	650	43.40	7140		
1.41	900	74.50	7452		
1.00	1203	92.00	7715		
0.70	1678	89.40	8086		
0.40	2058	89.90	8301		
1.50	2477	90.00	8644		
4.10	2944	90.70	8928		
9.10	3324	89.30	9212		
11.60	3577	91.90	9874		
10.90	4052	91.30	10158		
9.10	4551	90.50	10347		
11.40	4806	93.10	10531		
11.20	5369	91.10	10914		
10.40	5559	89.60	11379		

By: [Signature]

Subscribed and sworn to before me this 8th day of September, 2014

[Signature]
Notary Public, Lea County, New Mexico

