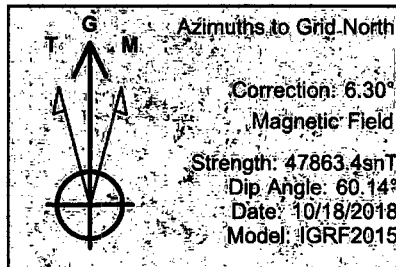
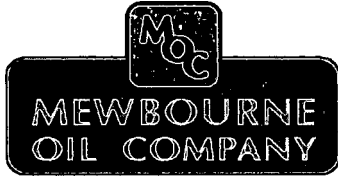


FEB 08 2019

RECEIVED

Company Name: Mewbourne Oil Company
Antelope 9 B2PA State #2H
Lea County, New Mexico (Nad 83)
Rig: Patterson #230
Created By: Shane Robbins
Date: 11/22/2018

Antelope 9 B2PA State #2H
Lea County, New Mexico (Nad 83)
Q181529 & WT-181280
Design #2



PROJECT DETAILS: Lea County, New Mexico (Nad 83)

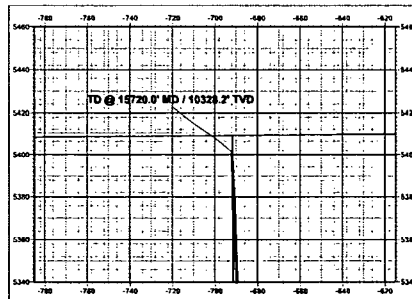
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: Antelope 9 B2PA State #2H

3403.0
+N-S +E-W Northing Easting 478046.70 803254.40
0.0 0.0 32° 18' 42.475 N 103° 27' 57.687 W

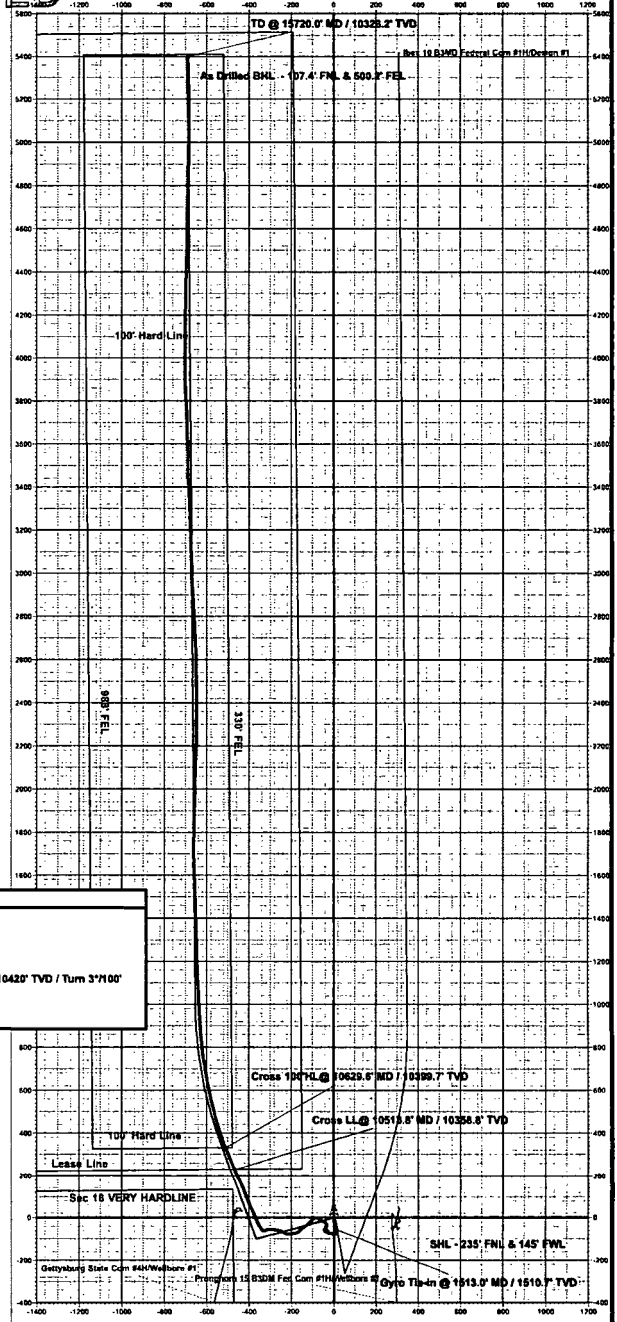
DESIGN ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSec	Departure	Annotation
4978.0	0.00	0.00	4978.0	0.0	0.0	0.0	0.0	Build 2°/100'
5203.5	4.57	254.69	5203.3	-2.4	-8.8	-1.3	0.1	EOB @ 4.57° Inc / 254.69° Azm
9728.0	4.57	254.69	9714.4	-87.6	-356.5	-51.8	389.8	Drop 2°/100'
9957.5	0.00	0.00	9942.6	-100.0	-365.3	-52.8	378.7	EOB @ Vert / Build 12°/100'
10716.0	91.02	339.64	10420.0	355.6	-534.4	420.6	864.7	EOB @ 91.02° Inc / 339.64° Azm / 10420° TVD / Turn 3°/100'
11378.0	91.02	359.50	10408.1	1003.3	-653.6	1078.2	1528.6	EOT @ 359.5° Azm
15784.2	91.02	359.50	10330.0	5408.7	-681.8	5452.7	5932.1	TD @ 15784° MD / 10330° TVD

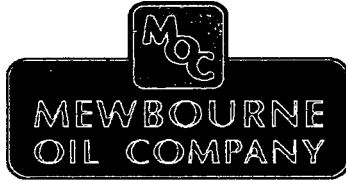


ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSec	Departure	Annotation
1513.0	5.59	173.39	1510.7	-55.1	10.7	-56.0	64.6	Gyro Tie-in @ 1513.0° MD / 1510.7° TVD
10513.8	85.78	336.16	10358.9	231.1	-69.3	288.8	854.2	Cross LL @ 10513.8° MD / 10358.9° TVD
10629.6	74.15	337.74	10399.7	330.7	-511.8	393.0	892.4	Cross 100°VLL @ 10629.6° MD / 10399.7° TVD
15720.0	91.70	358.00	10328.2	6401.3	-682.0	5448.5	6079.9	TD @ 15720.0° MD / 10328.2° TVD



Vertical Section at 352.71° (200 usft/in)



Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 15, T23S, R34E

Antelope 9 B2PA State #2H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

22 November, 2018





Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, New Mexico (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	Sec 15, T23S, R34E				
Site Position:		Northing:	478,076.70 usft	Latitude:	32° 18' 40.772 N
From:	Map	Easting:	809,284.20 usft	Longitude:	103° 27' 57.696 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	Antelope 9 B2PA State #2H					
Well Position	+N/-S	0.0 usft	Northing:	478,046.70 usft	Latitude:	32° 18' 40.475 N
	+E/-W	0.0 usft	Easting:	809,284.40 usft	Longitude:	103° 27' 57.697 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,403.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/18/2018	6.77	60.14	47,863.41533831

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.0	0.0	0.0	352.71	

Survey Program	Date 11/22/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
66.0	1,513.0	TRUEshot Surveys (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro
1,606.0	15,720.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	478,046.70	809,284.40	32° 18' 40.475 N	103° 27' 57.697 W
66.0	0.60	50.70	66.0	0.2	0.3	478,046.92	809,284.67	32° 18' 40.478 N	103° 27' 57.694 W
238.0	0.30	216.00	238.0	0.4	0.7	478,047.13	809,285.10	32° 18' 40.480 N	103° 27' 57.689 W
358.0	0.60	94.40	358.0	0.1	1.1	478,046.82	809,285.54	32° 18' 40.477 N	103° 27' 57.683 W
478.0	0.80	346.80	478.0	0.9	1.6	478,047.59	809,285.97	32° 18' 40.484 N	103° 27' 57.678 W
599.0	0.50	2.60	599.0	2.2	1.4	478,048.94	809,285.81	32° 18' 40.497 N	103° 27' 57.680 W
720.0	0.80	174.50	720.0	1.9	1.5	478,048.63	809,285.91	32° 18' 40.494 N	103° 27' 57.679 W
849.0	3.10	172.80	848.9	-2.4	2.0	478,044.27	809,286.43	32° 18' 40.451 N	103° 27' 57.673 W
944.0	2.90	170.30	943.8	-7.3	2.8	478,039.35	809,287.16	32° 18' 40.402 N	103° 27' 57.665 W
1,040.0	4.20	174.80	1,039.6	-13.2	3.5	478,033.46	809,287.89	32° 18' 40.344 N	103° 27' 57.657 W
1,134.0	5.40	169.50	1,133.2	-21.0	4.6	478,025.68	809,289.01	32° 18' 40.267 N	103° 27' 57.645 W



Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,229.0	5.50	171.60	1,227.8	-29.9	6.1	478,016.78	809,290.49	32° 18' 40.179 N	103° 27' 57.629 W
1,325.0	5.10	168.90	1,323.4	-38.7	7.6	478,008.04	809,291.98	32° 18' 40.092 N	103° 27' 57.612 W
1,419.0	4.90	167.00	1,417.1	-46.7	9.3	478,000.03	809,293.69	32° 18' 40.013 N	103° 27' 57.593 W
1,513.0	5.50	173.30	1,510.7	-55.1	10.7	477,991.64	809,295.12	32° 18' 39.930 N	103° 27' 57.577 W
Gyro Tie-in @ 1513.0' MD / 1510.7' TVD									
1,606.0	4.50	172.10	1,603.3	-63.1	11.7	477,983.60	809,296.14	32° 18' 39.850 N	103° 27' 57.566 W
1,701.0	3.50	187.90	1,698.1	-69.7	11.9	477,977.04	809,296.25	32° 18' 39.785 N	103° 27' 57.565 W
1,800.0	2.70	212.50	1,796.9	-74.6	10.2	477,972.08	809,294.58	32° 18' 39.736 N	103° 27' 57.585 W
1,894.0	1.60	248.70	1,890.9	-77.0	7.8	477,969.74	809,292.17	32° 18' 39.713 N	103° 27' 57.613 W
1,989.0	1.50	273.70	1,985.8	-77.4	5.3	477,969.33	809,289.69	32° 18' 39.709 N	103° 27' 57.642 W
2,083.0	1.70	277.90	2,079.8	-77.1	2.7	477,969.61	809,287.09	32° 18' 39.712 N	103° 27' 57.673 W
2,178.0	2.00	277.20	2,174.8	-76.7	-0.4	477,970.01	809,284.04	32° 18' 39.717 N	103° 27' 57.708 W
2,272.0	2.20	275.60	2,268.7	-76.3	-3.8	477,970.39	809,280.62	32° 18' 39.721 N	103° 27' 57.748 W
2,367.0	2.50	274.70	2,363.6	-76.0	-7.7	477,970.74	809,276.74	32° 18' 39.724 N	103° 27' 57.793 W
2,462.0	2.60	280.90	2,458.5	-75.4	-11.8	477,971.31	809,272.56	32° 18' 39.730 N	103° 27' 57.842 W
2,556.0	2.80	277.40	2,552.4	-74.7	-16.2	477,972.01	809,268.19	32° 18' 39.738 N	103° 27' 57.893 W
2,651.0	3.00	281.60	2,647.3	-73.9	-20.9	477,972.81	809,263.45	32° 18' 39.746 N	103° 27' 57.948 W
2,746.0	3.20	291.10	2,742.2	-72.4	-25.9	477,974.27	809,258.55	32° 18' 39.761 N	103° 27' 58.005 W
2,841.0	3.20	296.90	2,837.0	-70.3	-30.7	477,976.42	809,253.71	32° 18' 39.782 N	103° 27' 58.061 W
2,935.0	3.30	301.80	2,930.9	-67.7	-35.3	477,979.03	809,249.07	32° 18' 39.809 N	103° 27' 58.115 W
3,030.0	3.30	306.50	3,025.7	-64.6	-39.9	477,982.10	809,244.55	32° 18' 39.839 N	103° 27' 58.167 W
3,124.0	3.30	314.10	3,119.5	-61.1	-44.0	477,985.59	809,240.43	32° 18' 39.874 N	103° 27' 58.215 W
3,219.0	2.10	332.00	3,214.4	-57.7	-46.8	477,989.03	809,237.65	32° 18' 39.909 N	103° 27' 58.247 W
3,313.0	0.50	51.30	3,308.4	-55.9	-47.2	477,990.81	809,237.16	32° 18' 39.926 N	103° 27' 58.252 W
3,408.0	1.30	111.90	3,403.4	-56.0	-45.9	477,990.67	809,238.48	32° 18' 39.925 N	103° 27' 58.237 W
3,502.0	1.90	102.30	3,497.4	-56.8	-43.4	477,989.94	809,240.99	32° 18' 39.917 N	103° 27' 58.208 W
3,597.0	2.30	93.00	3,592.3	-57.2	-40.0	477,989.50	809,244.44	32° 18' 39.913 N	103° 27' 58.168 W
3,691.0	3.10	103.20	3,686.2	-57.9	-35.6	477,988.82	809,248.80	32° 18' 39.906 N	103° 27' 58.117 W
3,785.0	2.60	130.10	3,780.1	-59.8	-31.5	477,986.87	809,252.90	32° 18' 39.886 N	103° 27' 58.069 W
3,880.0	1.70	159.90	3,875.0	-62.5	-29.4	477,984.16	809,255.03	32° 18' 39.859 N	103° 27' 58.045 W
3,975.0	1.70	258.20	3,970.0	-64.2	-30.3	477,982.55	809,254.14	32° 18' 39.843 N	103° 27' 58.055 W
4,069.0	1.80	284.20	4,064.0	-64.1	-33.1	477,982.62	809,251.34	32° 18' 39.844 N	103° 27' 58.088 W
4,164.0	1.70	284.20	4,158.9	-63.4	-35.9	477,983.33	809,248.53	32° 18' 39.851 N	103° 27' 58.121 W
4,258.0	1.50	294.00	4,252.9	-62.5	-38.3	477,984.18	809,246.05	32° 18' 39.860 N	103° 27' 58.149 W
4,353.0	1.40	309.50	4,347.8	-61.3	-40.4	477,985.42	809,244.02	32° 18' 39.872 N	103° 27' 58.173 W
4,447.0	1.60	332.70	4,441.8	-59.4	-41.9	477,987.32	809,242.53	32° 18' 39.891 N	103° 27' 58.190 W
4,542.0	1.60	2.30	4,536.8	-56.9	-42.4	477,989.82	809,241.98	32° 18' 39.916 N	103° 27' 58.196 W
4,636.0	2.20	9.60	4,630.7	-53.8	-42.1	477,992.91	809,242.33	32° 18' 39.947 N	103° 27' 58.192 W
4,731.0	2.30	19.50	4,725.6	-50.2	-41.1	477,996.51	809,243.27	32° 18' 39.982 N	103° 27' 58.181 W
4,825.0	2.50	30.90	4,819.6	-46.7	-39.4	478,000.04	809,244.96	32° 18' 40.017 N	103° 27' 58.161 W
4,909.0	2.70	31.30	4,903.5	-43.4	-37.5	478,003.31	809,246.92	32° 18' 40.049 N	103° 27' 58.137 W
5,018.0	3.30	32.10	5,012.3	-38.5	-34.5	478,008.16	809,249.93	32° 18' 40.097 N	103° 27' 58.102 W
5,112.0	3.90	355.00	5,106.2	-33.1	-33.3	478,013.63	809,251.08	32° 18' 40.151 N	103° 27' 58.088 W
5,208.0	4.60	318.00	5,201.9	-27.0	-36.2	478,019.75	809,248.22	32° 18' 40.212 N	103° 27' 58.121 W
5,302.0	5.20	302.80	5,295.6	-21.8	-42.3	478,024.86	809,242.12	32° 18' 40.263 N	103° 27' 58.191 W
5,397.0	5.70	304.40	5,390.1	-16.8	-49.8	478,029.85	809,234.61	32° 18' 40.313 N	103° 27' 58.278 W
5,492.0	5.80	301.40	5,484.7	-11.7	-57.8	478,035.02	809,226.62	32° 18' 40.364 N	103° 27' 58.371 W
5,587.0	6.20	302.80	5,579.1	-6.4	-66.2	478,040.30	809,218.21	32° 18' 40.417 N	103° 27' 58.469 W
5,681.0	6.70	283.50	5,672.6	-2.4	-75.8	478,044.33	809,208.61	32° 18' 40.458 N	103° 27' 58.580 W
5,776.0	7.00	261.00	5,766.9	-2.0	-86.9	478,044.72	809,197.50	32° 18' 40.463 N	103° 27' 58.709 W
5,871.0	5.70	240.40	5,861.3	-5.2	-96.7	478,041.48	809,187.68	32° 18' 40.432 N	103° 27' 58.824 W
5,965.0	5.10	219.40	5,954.9	-10.8	-103.4	478,035.95	809,180.97	32° 18' 40.377 N	103° 27' 58.903 W
6,060.0	5.20	218.30	6,049.5	-17.4	-108.8	478,029.31	809,175.62	32° 18' 40.312 N	103° 27' 58.966 W
6,154.0	4.30	228.10	6,143.2	-23.1	-114.0	478,023.61	809,170.36	32° 18' 40.256 N	103° 27' 59.028 W
6,248.0	4.00	232.90	6,237.0	-27.4	-119.3	478,019.28	809,165.12	32° 18' 40.214 N	103° 27' 59.089 W



Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,343.0	4.10	232.20	6,331.7	-31.5	-124.6	478,015.20	809,159.79	32° 18' 40.174 N	103° 27' 59.152 W
6,438.0	4.10	234.60	6,426.5	-35.6	-130.1	478,011.15	809,154.34	32° 18' 40.134 N	103° 27' 59.215 W
6,532.0	4.00	236.90	6,520.2	-39.3	-135.5	478,007.41	809,148.86	32° 18' 40.098 N	103° 27' 59.280 W
6,626.0	4.00	234.30	6,614.0	-43.0	-141.0	478,003.71	809,143.45	32° 18' 40.061 N	103° 27' 59.343 W
6,721.0	4.00	234.10	6,708.8	-46.9	-146.3	477,999.83	809,138.07	32° 18' 40.023 N	103° 27' 59.406 W
6,815.0	3.90	230.40	6,802.6	-50.8	-151.4	477,995.87	809,132.95	32° 18' 39.985 N	103° 27' 59.466 W
6,910.0	4.00	224.30	6,897.3	-55.3	-156.2	477,991.44	809,128.15	32° 18' 39.941 N	103° 27' 59.522 W
7,004.0	4.20	221.50	6,991.1	-60.2	-160.8	477,986.52	809,123.58	32° 18' 39.893 N	103° 27' 59.576 W
7,099.0	4.10	231.00	7,085.8	-64.9	-165.8	477,981.78	809,118.64	32° 18' 39.846 N	103° 27' 59.634 W
7,194.0	4.50	248.00	7,180.6	-68.5	-171.9	477,978.24	809,112.54	32° 18' 39.812 N	103° 27' 59.706 W
7,288.0	4.50	246.40	7,274.3	-71.3	-178.7	477,975.38	809,105.74	32° 18' 39.784 N	103° 27' 59.785 W
7,382.0	4.10	249.10	7,368.0	-74.0	-185.2	477,972.71	809,099.22	32° 18' 39.758 N	103° 27' 59.861 W
7,477.0	3.40	267.20	7,462.8	-75.3	-191.2	477,971.36	809,093.24	32° 18' 39.745 N	103° 27' 59.931 W
7,571.0	3.30	268.00	7,556.7	-75.6	-196.6	477,971.13	809,087.75	32° 18' 39.743 N	103° 27' 59.995 W
7,665.0	3.10	269.10	7,650.5	-75.7	-201.9	477,970.99	809,082.50	32° 18' 39.742 N	103° 28' 0.056 W
7,760.0	2.80	262.10	7,745.4	-76.1	-206.8	477,970.64	809,077.64	32° 18' 39.739 N	103° 28' 0.113 W
7,854.0	2.40	265.00	7,839.3	-76.6	-211.0	477,970.15	809,073.40	32° 18' 39.735 N	103° 28' 0.162 W
7,949.0	2.10	263.80	7,934.2	-76.9	-214.7	477,969.79	809,069.69	32° 18' 39.732 N	103° 28' 0.206 W
8,043.0	2.20	269.30	8,028.2	-77.1	-218.2	477,969.58	809,066.17	32° 18' 39.730 N	103° 28' 0.247 W
8,138.0	3.00	283.50	8,123.1	-76.6	-222.5	477,970.14	809,061.93	32° 18' 39.736 N	103° 28' 0.296 W
8,232.0	4.40	294.90	8,216.9	-74.5	-228.1	477,972.23	809,056.27	32° 18' 39.757 N	103° 28' 0.362 W
8,326.0	4.20	297.60	8,310.6	-71.4	-234.4	477,975.34	809,049.95	32° 18' 39.788 N	103° 28' 0.435 W
8,421.0	4.00	301.40	8,405.4	-68.0	-240.4	477,978.68	809,044.04	32° 18' 39.822 N	103° 28' 0.504 W
8,515.0	3.80	304.10	8,499.1	-64.6	-245.7	477,982.13	809,038.66	32° 18' 39.856 N	103° 28' 0.566 W
8,610.0	4.20	290.20	8,593.9	-61.6	-251.6	477,985.10	809,032.79	32° 18' 39.886 N	103° 28' 0.634 W
8,704.0	4.90	278.10	8,687.6	-59.8	-258.8	477,986.86	809,025.58	32° 18' 39.904 N	103° 28' 0.718 W
8,799.0	4.60	284.40	8,782.3	-58.3	-266.5	477,988.37	809,017.88	32° 18' 39.920 N	103° 28' 0.808 W
8,894.0	4.60	277.90	8,877.0	-56.9	-274.0	477,989.85	809,010.41	32° 18' 39.935 N	103° 28' 0.894 W
8,988.0	4.30	272.60	8,970.7	-56.2	-281.2	477,990.52	809,003.16	32° 18' 39.942 N	103° 28' 0.979 W
9,083.0	3.30	268.90	9,065.5	-56.1	-287.5	477,990.63	808,996.87	32° 18' 39.944 N	103° 28' 1.052 W
9,177.0	3.10	264.50	9,159.3	-56.4	-292.8	477,990.34	808,991.63	32° 18' 39.941 N	103° 28' 1.113 W
9,271.0	2.70	274.20	9,253.2	-56.4	-297.5	477,990.26	808,986.89	32° 18' 39.941 N	103° 28' 1.168 W
9,367.0	2.10	294.40	9,349.1	-55.6	-301.4	477,991.15	808,983.04	32° 18' 39.950 N	103° 28' 1.213 W
9,461.0	2.50	284.60	9,443.1	-54.3	-304.9	477,992.38	808,979.49	32° 18' 39.962 N	103° 28' 1.255 W
9,555.0	3.50	256.30	9,536.9	-54.5	-309.7	477,992.21	808,974.71	32° 18' 39.961 N	103° 28' 1.310 W
9,650.0	3.90	248.90	9,631.7	-56.3	-315.5	477,990.36	808,968.88	32° 18' 39.943 N	103° 28' 1.378 W
9,744.0	3.90	245.20	9,725.5	-58.8	-321.4	477,987.87	808,963.00	32° 18' 39.919 N	103° 28' 1.447 W
9,839.0	3.50	249.60	9,820.3	-61.2	-327.1	477,985.51	808,957.35	32° 18' 39.896 N	103° 28' 1.513 W
9,868.0	3.20	254.70	9,849.3	-61.7	-328.7	477,984.98	808,955.74	32° 18' 39.891 N	103° 28' 1.532 W
9,928.0	3.30	276.10	9,909.2	-62.0	-332.0	477,984.73	808,952.40	32° 18' 39.889 N	103° 28' 1.571 W
9,959.0	5.60	309.40	9,940.1	-60.9	-334.1	477,985.78	808,950.35	32° 18' 39.899 N	103° 28' 1.595 W
9,991.0	8.50	314.10	9,971.9	-58.3	-337.0	477,988.42	808,947.44	32° 18' 39.926 N	103° 28' 1.628 W
10,022.0	11.80	318.10	10,002.4	-54.3	-340.7	477,992.37	808,943.68	32° 18' 39.965 N	103° 28' 1.672 W
10,054.0	15.60	326.00	10,033.4	-48.3	-345.3	477,998.38	808,939.09	32° 18' 40.025 N	103° 28' 1.725 W
10,085.0	19.70	330.30	10,063.0	-40.3	-350.2	478,006.38	808,934.16	32° 18' 40.104 N	103° 28' 1.781 W
10,117.0	25.60	332.40	10,092.5	-29.5	-356.1	478,017.20	808,928.28	32° 18' 40.212 N	103° 28' 1.849 W
10,149.0	30.30	334.50	10,120.8	-16.1	-362.8	478,030.62	808,921.60	32° 18' 40.345 N	103° 28' 1.925 W
10,180.0	34.40	335.40	10,146.9	-1.1	-369.8	478,045.64	808,914.59	32° 18' 40.495 N	103° 28' 2.006 W
10,211.0	37.70	335.50	10,172.0	15.5	-377.4	478,062.24	808,907.01	32° 18' 40.659 N	103° 28' 2.092 W
10,243.0	41.40	336.10	10,196.7	34.1	-385.7	478,080.82	808,898.66	32° 18' 40.844 N	103° 28' 2.188 W
10,274.0	43.80	337.10	10,219.5	53.4	-394.1	478,100.08	808,890.33	32° 18' 41.035 N	103° 28' 2.283 W
10,306.0	45.80	337.80	10,242.2	74.2	-402.7	478,120.90	808,881.69	32° 18' 41.242 N	103° 28' 2.382 W
10,337.0	48.00	338.00	10,263.4	95.2	-411.2	478,141.87	808,873.17	32° 18' 41.450 N	103° 28' 2.479 W
10,369.0	50.90	337.50	10,284.2	117.7	-420.4	478,164.37	808,863.96	32° 18' 41.673 N	103° 28' 2.584 W
10,400.0	53.90	337.60	10,303.1	140.4	-429.8	478,187.07	808,854.59	32° 18' 41.899 N	103° 28' 2.692 W



Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,432.0	58.70	336.40	10,320.8	164.9	-440.2	478,211.57	808,844.18	32° 18' 42.142 N	103° 28' 2.810 W
10,463.0	61.50	336.40	10,336.3	189.5	-451.0	478,236.19	808,833.42	32° 18' 42.386 N	103° 28' 2.933 W
10,495.0	64.20	336.10	10,350.9	215.5	-462.4	478,262.25	808,821.96	32° 18' 42.645 N	103° 28' 3.065 W
10,513.8	65.78	336.16	10,358.8	231.1	-469.3	478,277.83	808,815.06	32° 18' 42.800 N	103° 28' 3.144 W
Cross LL@ 10513.8' MD / 10358.8' TVD									
10,526.0	66.80	336.20	10,363.8	241.3	-473.8	478,288.05	808,810.55	32° 18' 42.901 N	103° 28' 3.195 W
10,558.0	68.50	336.90	10,375.9	268.5	-485.6	478,315.20	808,798.77	32° 18' 43.171 N	103° 28' 3.330 W
10,590.0	69.80	337.10	10,387.3	296.0	-497.3	478,342.72	808,787.09	32° 18' 43.444 N	103° 28' 3.463 W
10,621.0	72.70	337.30	10,397.3	323.1	-508.7	478,369.78	808,775.72	32° 18' 43.713 N	103° 28' 3.593 W
10,629.6	74.15	337.74	10,399.7	330.7	-511.8	478,377.40	808,772.56	32° 18' 43.789 N	103° 28' 3.629 W
Cross 100'HL@ 10629.6' MD / 10399.7' TVD									
10,653.0	78.10	338.90	10,405.3	351.8	-520.2	478,398.51	808,764.18	32° 18' 43.998 N	103° 28' 3.725 W
10,684.0	82.20	340.80	10,410.6	380.5	-530.7	478,427.17	808,753.66	32° 18' 44.283 N	103° 28' 3.845 W
10,703.0	84.90	341.00	10,412.8	398.3	-536.9	478,445.01	808,747.48	32° 18' 44.460 N	103° 28' 3.915 W
10,767.0	88.70	344.50	10,416.3	459.3	-555.9	478,506.02	808,728.54	32° 18' 45.065 N	103° 28' 4.130 W
10,862.0	91.50	347.30	10,416.2	551.4	-579.0	478,598.14	808,705.40	32° 18' 45.978 N	103° 28' 4.391 W
10,957.0	92.30	349.30	10,413.0	644.4	-598.2	478,691.11	808,686.15	32° 18' 46.900 N	103° 28' 4.607 W
11,051.0	91.30	350.80	10,410.1	736.9	-614.5	478,783.64	808,669.92	32° 18' 47.816 N	103° 28' 4.787 W
11,147.0	90.80	354.40	10,408.3	832.1	-626.8	478,878.81	808,657.56	32° 18' 48.759 N	103° 28' 4.922 W
11,241.0	88.60	357.20	10,408.8	925.8	-633.7	478,972.54	808,650.67	32° 18' 49.687 N	103° 28' 5.094 W
11,336.0	88.90	356.30	10,410.9	1,020.7	-639.1	479,067.37	808,645.29	32° 18' 50.626 N	103° 28' 5.047 W
11,430.0	89.30	357.50	10,412.4	1,114.5	-644.2	479,161.22	808,640.21	32° 18' 51.555 N	103° 28' 5.098 W
11,525.0	92.00	358.90	10,411.3	1,209.5	-647.2	479,256.15	808,637.22	32° 18' 52.494 N	103° 28' 5.124 W
11,619.0	91.70	357.70	10,408.2	1,303.4	-650.0	479,350.06	808,634.44	32° 18' 53.424 N	103° 28' 5.147 W
11,714.0	92.00	357.70	10,405.2	1,398.2	-653.8	479,444.93	808,630.63	32° 18' 54.363 N	103° 28' 5.183 W
11,808.0	92.40	358.70	10,401.6	1,492.1	-656.7	479,538.82	808,627.68	32° 18' 55.292 N	103° 28' 5.208 W
11,903.0	92.90	357.90	10,397.2	1,587.0	-659.5	479,633.67	808,624.86	32° 18' 56.231 N	103° 28' 5.232 W
11,998.0	93.20	358.60	10,392.1	1,681.8	-662.4	479,728.49	808,621.96	32° 18' 57.169 N	103° 28' 5.257 W
12,092.0	91.70	1.40	10,388.1	1,775.7	-662.4	479,822.39	808,621.96	32° 18' 58.099 N	103° 28' 5.248 W
12,187.0	90.80	0.90	10,386.0	1,870.7	-660.5	479,917.35	808,623.87	32° 18' 59.038 N	103° 28' 5.217 W
12,281.0	90.40	1.70	10,385.0	1,964.6	-658.4	480,011.32	808,626.00	32° 18' 59.968 N	103° 28' 5.183 W
12,376.0	91.30	1.90	10,383.6	2,059.6	-655.4	480,106.26	808,628.99	32° 19' 0.907 N	103° 28' 5.140 W
12,470.0	89.20	1.40	10,383.2	2,153.5	-652.7	480,200.22	808,631.69	32° 19' 1.836 N	103° 28' 5.099 W
12,565.0	89.40	1.00	10,384.4	2,248.5	-650.7	480,295.19	808,633.68	32° 19' 2.776 N	103° 28' 5.067 W
12,659.0	90.00	0.20	10,384.9	2,342.5	-649.7	480,389.18	808,634.67	32° 19' 3.706 N	103° 28' 5.047 W
12,753.0	89.90	359.40	10,385.0	2,436.5	-650.1	480,483.18	808,634.34	32° 19' 4.636 N	103° 28' 5.042 W
12,847.0	90.40	358.90	10,384.7	2,530.5	-651.5	480,577.17	808,632.94	32° 19' 5.566 N	103° 28' 5.049 W
12,942.0	90.80	358.40	10,383.7	2,625.4	-653.7	480,672.14	808,630.71	32° 19' 6.506 N	103° 28' 5.066 W
13,036.0	90.80	357.50	10,382.4	2,719.4	-657.1	480,766.07	808,627.34	32° 19' 7.436 N	103° 28' 5.097 W
13,131.0	90.70	356.60	10,381.2	2,814.2	-661.9	480,860.93	808,622.46	32° 19' 8.375 N	103° 28' 5.145 W
13,226.0	90.90	356.30	10,379.8	2,909.0	-667.8	480,955.74	808,616.57	32° 19' 9.313 N	103° 28' 5.204 W
13,320.0	91.40	358.70	10,378.0	3,002.9	-671.9	481,049.62	808,612.47	32° 19' 10.242 N	103° 28' 5.243 W
13,415.0	91.50	358.70	10,375.5	3,097.9	-674.1	481,144.57	808,610.32	32° 19' 11.182 N	103° 28' 5.259 W
13,509.0	91.90	358.00	10,372.8	3,191.8	-676.8	481,238.49	808,607.61	32° 19' 12.112 N	103° 28' 5.282 W
13,603.0	92.20	357.50	10,369.4	3,285.7	-680.5	481,332.35	808,603.93	32° 19' 13.041 N	103° 28' 5.316 W
13,698.0	92.20	356.80	10,365.8	3,380.5	-685.2	481,427.17	808,599.21	32° 19' 13.979 N	103° 28' 5.362 W
13,793.0	91.80	359.40	10,362.4	3,475.3	-688.3	481,522.05	808,596.06	32° 19' 14.918 N	103° 28' 5.390 W
13,887.0	91.60	358.90	10,359.6	3,569.3	-689.7	481,616.00	808,594.67	32° 19' 15.848 N	103° 28' 5.397 W
13,981.0	90.50	358.20	10,357.9	3,663.2	-692.1	481,709.95	808,592.29	32° 19' 16.778 N	103° 28' 5.416 W
14,075.0	90.40	357.20	10,357.2	3,757.2	-695.9	481,803.87	808,588.52	32° 19' 17.707 N	103° 28' 5.451 W
14,170.0	90.80	356.80	10,356.2	3,852.0	-700.9	481,898.73	808,583.54	32° 19' 18.647 N	103° 28' 5.500 W
14,265.0	90.60	0.00	10,355.0	3,947.0	-703.5	481,993.68	808,580.89	32° 19' 19.586 N	103° 28' 5.522 W
14,360.0	90.00	0.50	10,354.5	4,042.0	-703.1	482,088.67	808,581.31	32° 19' 20.526 N	103° 28' 5.509 W
14,455.0	89.80	0.90	10,354.7	4,137.0	-701.9	482,183.67	808,582.47	32° 19' 21.466 N	103° 28' 5.486 W
14,549.0	89.90	0.30	10,354.9	4,231.0	-700.9	482,277.66	808,583.45	32° 19' 22.396 N	103° 28' 5.466 W



Survey Report - Geographic



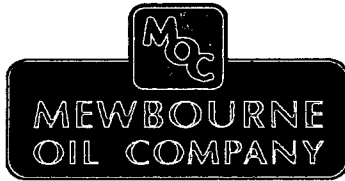
Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,644.0	92.00	1.70	10,353.4	4,325.9	-699.3	482,372.62	808,585.11	32° 19' 23.335 N	103° 28' 5.438 W
14,738.0	91.70	1.70	10,350.3	4,419.8	-696.5	482,466.53	808,587.90	32° 19' 24.264 N	103° 28' 5.396 W
14,833.0	91.40	1.20	10,347.8	4,514.8	-694.1	482,561.47	808,590.30	32° 19' 25.204 N	103° 28' 5.359 W
14,927.0	91.10	1.40	10,345.7	4,608.7	-692.0	482,655.42	808,592.43	32° 19' 26.133 N	103° 28' 5.326 W
15,022.0	90.90	0.90	10,344.1	4,703.7	-690.1	482,750.39	808,594.34	32° 19' 27.073 N	103° 28' 5.295 W
15,117.0	90.40	1.00	10,343.0	4,798.7	-688.5	482,845.37	808,595.91	32° 19' 28.012 N	103° 28' 5.267 W
15,211.0	90.30	0.50	10,342.4	4,892.7	-687.3	482,939.36	808,597.14	32° 19' 28.942 N	103° 28' 5.244 W
15,306.0	90.10	0.90	10,342.1	4,987.6	-686.1	483,034.35	808,598.30	32° 19' 29.882 N	103° 28' 5.222 W
15,400.0	92.80	359.80	10,339.7	5,081.6	-685.5	483,128.31	808,598.88	32° 19' 30.812 N	103° 28' 5.206 W
15,494.0	92.10	359.40	10,335.7	5,175.5	-686.2	483,222.22	808,598.22	32° 19' 31.741 N	103° 28' 5.205 W
15,588.0	92.00	358.60	10,332.3	5,269.4	-687.8	483,316.14	808,596.58	32° 19' 32.670 N	103° 28' 5.215 W
15,660.0	91.70	358.00	10,330.0	5,341.4	-690.0	483,388.07	808,594.45	32° 19' 33.382 N	103° 28' 5.233 W
15,720.0	91.70	358.00	10,328.2	5,401.3	-692.0	483,448.01	808,592.35	32° 19' 33.976 N	103° 28' 5.252 W
TD @ 15720.0' MD / 10328.2' TVD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,513.0	1,510.7	-55.1	10.7	Gyro Tie-in @ 1513.0' MD / 1510.7' TVD
10,513.8	10,358.8	231.1	-469.3	Cross LL@ 10513.8' MD / 10358.8' TVD
10,629.6	10,399.7	330.7	-511.8	Cross 100'HL@ 10629.6' MD / 10399.7' TVD
15,720.0	10,328.2	5,401.3	-692.0	TD @ 15720.0' MD / 10328.2' TVD



Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 15, T23S, R34E

Antelope 9 B2PA State #2H

Wellbore #1

Design: Wellbore #1

QES Survey Report

22 November, 2018





Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, New Mexico (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	Sec 15, T23S, R34E		
Site Position:		Northing:	478,076.70 usft
From:	Map	Easting:	809,284.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 18' 40.772 N
		Longitude:	103° 27' 57.696 W
		Grid Convergence:	0.46 °

Well	Antelope 9 B2PA State #2H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 18' 40.475 N
		Longitude:	103° 27' 57.697 W
		Ground Level:	3,403.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/18/2018	6.77	60.14	47,863.41533831

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	352.71

Survey Program	Date 11/22/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
66.0	1,513.0	TRUEshot Surveys (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro
1,606.0	15,720.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard

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
66.0	0.60	50.70	66.0	0.2	0.3	0.2	0.91	0.91	0.00
238.0	0.30	216.00	238.0	0.4	0.7	0.3	0.52	-0.17	96.10
358.0	0.60	94.40	358.0	0.1	1.1	0.0	0.67	0.25	-101.33
478.0	0.80	346.80	478.0	0.9	1.6	0.7	0.95	0.17	-89.67
599.0	0.50	2.60	599.0	2.2	1.4	2.0	0.29	-0.25	13.06
720.0	0.80	174.50	720.0	1.9	1.5	1.7	1.07	0.25	142.07
849.0	3.10	172.80	848.9	-2.4	2.0	-2.7	1.78	1.78	-1.32
944.0	2.90	170.30	943.8	-7.3	2.8	-7.6	0.25	-0.21	-2.63
1,040.0	4.20	174.80	1,039.6	-13.2	3.5	-13.6	1.38	1.35	4.69



Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
1,134.0	5.40	169.50	1,133.2	-21.0	4.6	-21.4	1.36	1.28	-5.64
1,229.0	5.50	171.60	1,227.8	-29.9	6.1	-30.5	0.23	0.11	2.21
1,325.0	5.10	168.90	1,323.4	-38.7	7.6	-39.3	0.49	-0.42	-2.81
1,419.0	4.90	167.00	1,417.1	-46.7	9.3	-47.5	0.28	-0.21	-2.02
Gyro Tie-in @ 1513.0' MD / 1510.7' TVD									
1,513.0	5.50	173.30	1,510.7	-55.1	10.7	-56.0	0.88	0.64	6.70
1,606.0	4.50	172.10	1,603.3	-63.1	11.7	-64.1	1.08	-1.08	-1.29
1,701.0	3.50	187.90	1,698.1	-69.7	11.9	-70.6	1.56	-1.05	16.63
1,800.0	2.70	212.50	1,796.9	-74.6	10.2	-75.3	1.55	-0.81	24.85
1,894.0	1.60	248.70	1,890.9	-77.0	7.8	-77.3	1.80	-1.17	38.51
1,989.0	1.50	273.70	1,985.8	-77.4	5.3	-77.4	0.71	-0.11	26.32
2,083.0	1.70	277.90	2,079.8	-77.1	2.7	-76.8	0.25	0.21	4.47
2,178.0	2.00	277.20	2,174.8	-76.7	-0.4	-76.0	0.32	0.32	-0.74
2,272.0	2.20	275.60	2,268.7	-76.3	-3.8	-75.2	0.22	0.21	-1.70
2,367.0	2.50	274.70	2,363.6	-76.0	-7.7	-74.4	0.32	0.32	-0.95
2,462.0	2.60	280.90	2,458.5	-75.4	-11.8	-73.3	0.31	0.11	6.53
2,556.0	2.80	277.40	2,552.4	-74.7	-16.2	-72.0	0.28	0.21	-3.72
2,651.0	3.00	281.60	2,647.3	-73.9	-20.9	-70.6	0.31	0.21	4.42
2,746.0	3.20	291.10	2,742.2	-72.4	-25.9	-68.6	0.58	0.21	10.00
2,841.0	3.20	296.90	2,837.0	-70.3	-30.7	-65.8	0.34	0.00	6.11
2,935.0	3.30	301.80	2,930.9	-67.7	-35.3	-62.6	0.31	0.11	5.21
3,030.0	3.30	306.50	3,025.7	-64.6	-39.9	-59.0	0.28	0.00	4.95
3,124.0	3.30	314.10	3,119.5	-61.1	-44.0	-55.0	0.47	0.00	8.09
3,219.0	2.10	332.00	3,214.4	-57.7	-46.8	-51.3	1.53	-1.26	18.84
3,313.0	0.50	51.30	3,308.4	-55.9	-47.2	-49.4	2.20	-1.70	84.36
3,408.0	1.30	111.90	3,403.4	-56.0	-45.9	-49.8	1.20	0.84	63.79
3,502.0	1.90	102.30	3,497.4	-56.8	-43.4	-50.8	0.70	0.64	-10.21
3,597.0	2.30	93.00	3,592.3	-57.2	-40.0	-51.7	0.55	0.42	-9.79
3,691.0	3.10	103.20	3,686.2	-57.9	-35.6	-52.9	0.99	0.85	10.85
3,785.0	2.60	130.10	3,780.1	-59.8	-31.5	-55.4	1.50	-0.53	28.62
3,880.0	1.70	159.90	3,875.0	-62.5	-29.4	-58.3	1.48	-0.95	31.37
3,975.0	1.70	258.20	3,970.0	-64.2	-30.3	-59.8	2.71	0.00	103.47
4,069.0	1.80	284.20	4,064.0	-64.1	-33.1	-59.4	0.84	0.11	27.66
4,164.0	1.70	284.20	4,158.9	-63.4	-35.9	-58.3	0.11	-0.11	0.00
4,258.0	1.50	294.00	4,252.9	-62.5	-38.3	-57.2	0.36	-0.21	10.43
4,353.0	1.40	309.50	4,347.8	-61.3	-40.4	-55.7	0.42	-0.11	16.32
4,447.0	1.60	332.70	4,441.8	-59.4	-41.9	-53.6	0.67	0.21	24.68
4,542.0	1.60	2.30	4,536.8	-56.9	-42.4	-51.0	0.86	0.00	31.16
4,636.0	2.20	9.60	4,630.7	-53.8	-42.1	-48.0	0.69	0.64	7.77
4,731.0	2.30	19.50	4,725.6	-50.2	-41.1	-44.6	0.42	0.11	10.42
4,825.0	2.50	30.90	4,819.6	-46.7	-39.4	-41.3	0.55	0.21	12.13
4,909.0	2.70	31.30	4,903.5	-43.4	-37.5	-38.3	0.24	0.24	0.48
5,018.0	3.30	32.10	5,012.3	-38.5	-34.5	-33.9	0.55	0.55	0.73

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
5,112.0	3.90	355.00	5,106.2	-33.1	-33.3	-28.6	2.51	0.64	-39.47
5,208.0	4.60	318.00	5,201.9	-27.0	-36.2	-22.1	2.89	0.73	-38.54
5,302.0	5.20	302.80	5,295.6	-21.8	-42.3	-16.3	1.52	0.64	-16.17
5,397.0	5.70	304.40	5,390.1	-16.8	-49.8	-10.4	0.55	0.53	1.68
5,492.0	5.80	301.40	5,484.7	-11.7	-57.8	-4.3	0.33	0.11	-3.16
5,587.0	6.20	302.80	5,579.1	-6.4	-66.2	2.1	0.45	0.42	1.47
5,681.0	6.70	283.50	5,672.6	-2.4	-75.8	7.3	2.35	0.53	-20.53
5,776.0	7.00	261.00	5,766.9	-2.0	-86.9	9.1	2.82	0.32	-23.68
5,871.0	5.70	240.40	5,861.3	-5.2	-96.7	7.1	2.74	-1.37	-21.68
5,965.0	5.10	219.40	5,954.9	-10.8	-103.4	2.5	2.18	-0.64	-22.34
6,060.0	5.20	218.30	6,049.5	-17.4	-108.8	-3.5	0.15	0.11	-1.16
6,154.0	4.30	228.10	6,143.2	-23.1	-114.0	-8.4	1.29	-0.96	10.43
6,248.0	4.00	232.90	6,237.0	-27.4	-119.3	-12.1	0.49	-0.32	5.11
6,343.0	4.10	232.20	6,331.7	-31.5	-124.6	-15.4	0.12	0.11	-0.74
6,438.0	4.10	234.60	6,426.5	-35.6	-130.1	-18.8	0.18	0.00	2.53
6,532.0	4.00	236.90	6,520.2	-39.3	-135.5	-21.8	0.20	-0.11	2.45
6,626.0	4.00	234.30	6,614.0	-43.0	-141.0	-24.8	0.19	0.00	-2.77
6,721.0	4.00	234.10	6,708.8	-46.9	-146.3	-27.9	0.01	0.00	-0.21
6,815.0	3.90	230.40	6,802.6	-50.8	-151.4	-31.2	0.29	-0.11	-3.94
6,910.0	4.00	224.30	6,897.3	-55.3	-156.2	-35.0	0.45	0.11	-6.42
7,004.0	4.20	221.50	6,991.1	-60.2	-160.8	-39.3	0.30	0.21	-2.98
7,099.0	4.10	231.00	7,085.8	-64.9	-165.8	-43.4	0.73	-0.11	10.00
7,194.0	4.50	248.00	7,180.6	-68.5	-171.9	-46.1	1.40	0.42	17.89
7,288.0	4.50	246.40	7,274.3	-71.3	-178.7	-48.1	0.13	0.00	-1.70
7,382.0	4.10	249.10	7,368.0	-74.0	-185.2	-49.9	0.48	-0.43	2.87
7,477.0	3.40	267.20	7,462.8	-75.3	-191.2	-50.5	1.44	-0.74	19.05
7,571.0	3.30	268.00	7,556.7	-75.6	-196.6	-50.0	0.12	-0.11	0.85
7,665.0	3.10	269.10	7,650.5	-75.7	-201.9	-49.5	0.22	-0.21	1.17
7,760.0	2.80	262.10	7,745.4	-76.1	-206.8	-49.2	0.49	-0.32	-7.37
7,854.0	2.40	265.00	7,839.3	-76.6	-211.0	-49.2	0.45	-0.43	3.09
7,949.0	2.10	263.80	7,934.2	-76.9	-214.7	-49.0	0.32	-0.32	-1.26
8,043.0	2.20	269.30	8,028.2	-77.1	-218.2	-48.8	0.24	0.11	5.85
8,138.0	3.00	283.50	8,123.1	-76.6	-222.5	-47.7	1.08	0.84	14.95
8,232.0	4.40	294.90	8,216.9	-74.5	-228.1	-44.9	1.68	1.49	12.13
8,326.0	4.20	297.60	8,310.6	-71.4	-234.4	-41.0	0.30	-0.21	2.87
8,421.0	4.00	301.40	8,405.4	-68.0	-240.4	-37.0	0.36	-0.21	4.00
8,515.0	3.80	304.10	8,499.1	-64.6	-245.7	-32.9	0.29	-0.21	2.87
8,610.0	4.20	290.20	8,593.9	-61.6	-251.6	-29.2	1.10	0.42	-14.63
8,704.0	4.90	278.10	8,687.6	-59.8	-258.8	-26.5	1.26	0.74	-12.87
8,799.0	4.60	284.40	8,782.3	-58.3	-266.5	-24.0	0.63	-0.32	6.63
8,894.0	4.60	277.90	8,877.0	-56.9	-274.0	-21.6	0.55	0.00	-6.84
8,988.0	4.30	272.60	8,970.7	-56.2	-281.2	-20.0	0.54	-0.32	-5.64
9,083.0	3.30	268.90	9,065.5	-56.1	-287.5	-19.1	1.08	-1.05	-3.89

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
9,177.0	3.10	264.50	9,159.3	-56.4	-292.8	-18.8	0.34	-0.21	-4.68
9,271.0	2.70	274.20	9,253.2	-56.4	-297.5	-18.2	0.67	-0.43	10.32
9,367.0	2.10	294.40	9,349.1	-55.6	-301.4	-16.9	1.07	-0.63	21.04
9,461.0	2.50	284.60	9,443.1	-54.3	-304.9	-15.2	0.60	0.43	-10.43
9,555.0	3.50	256.30	9,536.9	-54.5	-309.7	-14.8	1.87	1.06	-30.11
9,650.0	3.90	248.90	9,631.7	-56.3	-315.5	-15.8	0.65	0.42	-7.79
9,744.0	3.90	245.20	9,725.5	-58.8	-321.4	-17.6	0.27	0.00	-3.94
9,839.0	3.50	249.60	9,820.3	-61.2	-327.1	-19.2	0.52	-0.42	4.63
9,868.0	3.20	254.70	9,849.3	-61.7	-328.7	-19.5	1.46	-1.03	17.59
9,928.0	3.30	276.10	9,909.2	-62.0	-332.0	-19.3	2.02	0.17	35.67
9,959.0	5.60	309.40	9,940.1	-60.9	-334.1	-18.0	10.87	7.42	107.42
9,991.0	8.50	314.10	9,971.9	-58.3	-337.0	-15.1	9.23	9.06	14.69
10,022.0	11.80	318.10	10,002.4	-54.3	-340.7	-10.7	10.88	10.65	12.90
10,054.0	15.60	326.00	10,033.4	-48.3	-345.3	-4.1	13.21	11.88	24.69
10,085.0	19.70	330.30	10,063.0	-40.3	-350.2	4.4	13.87	13.23	13.87
10,117.0	25.60	332.40	10,092.5	-29.5	-356.1	15.9	18.61	18.44	6.56
10,149.0	30.30	334.50	10,120.8	-16.1	-362.8	30.1	15.00	14.69	6.56
10,180.0	34.40	335.40	10,146.9	-1.1	-369.8	45.9	13.32	13.23	2.90
10,211.0	37.70	335.50	10,172.0	15.5	-377.4	63.3	10.65	10.65	0.32
10,243.0	41.40	336.10	10,196.7	34.1	-385.7	82.8	11.62	11.56	1.88
10,274.0	43.80	337.10	10,219.5	53.4	-394.1	102.9	8.04	7.74	3.23
10,306.0	45.80	337.80	10,242.2	74.2	-402.7	124.7	6.44	6.25	2.19
10,337.0	48.00	338.00	10,263.4	95.2	-411.2	146.6	7.11	7.10	0.65
10,369.0	50.90	337.50	10,284.2	117.7	-420.4	170.1	9.14	9.06	-1.56
10,400.0	53.90	337.60	10,303.1	140.4	-429.8	193.8	9.68	9.68	0.32
10,432.0	58.70	336.40	10,320.8	164.9	-440.2	219.4	15.32	15.00	-3.75
10,463.0	61.50	336.40	10,336.3	189.5	-451.0	245.2	9.03	9.03	0.00
10,495.0	64.20	336.10	10,350.9	215.5	-462.4	272.5	8.48	8.44	-0.94
Cross LL@ 10513.8' MD / 10358.8' TVD									
10,513.8	65.78	336.16	10,358.8	231.1	-469.3	288.8	8.39	8.39	0.33
10,526.0	66.80	336.20	10,363.8	241.3	-473.8	299.5	8.39	8.39	0.32
10,558.0	68.50	336.90	10,375.9	268.5	-485.6	327.9	5.68	5.31	2.19
10,590.0	69.80	337.10	10,387.3	296.0	-497.3	356.7	4.10	4.06	0.63
10,621.0	72.70	337.30	10,397.3	323.1	-508.7	385.0	9.37	9.35	0.65
Cross 100'HL@ 10629.6' MD / 10399.7' TVD									
10,629.6	74.15	337.74	10,399.7	330.7	-511.8	393.0	17.55	16.86	5.09
10,653.0	78.10	338.90	10,405.3	351.8	-520.2	415.0	17.55	16.88	4.97
10,684.0	82.20	340.80	10,410.6	380.5	-530.7	444.7	14.54	13.23	6.13
10,703.0	84.90	341.00	10,412.8	398.3	-536.9	463.2	14.25	14.21	1.05
10,767.0	88.70	344.50	10,416.3	459.3	-555.9	526.1	8.07	5.94	5.47
10,862.0	91.50	347.30	10,416.2	551.4	-579.0	620.4	4.17	2.95	2.95
10,957.0	92.30	349.30	10,413.0	644.4	-598.2	715.1	2.27	0.84	2.11
11,051.0	91.30	350.80	10,410.1	736.9	-614.5	809.0	1.92	-1.06	1.60
11,147.0	90.80	354.40	10,408.3	832.1	-626.8	904.9	3.79	-0.52	3.75

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
11,241.0	88.60	357.20	10,408.8	925.8	-633.7	998.8	3.79	-2.34	2.98
11,336.0	88.90	356.30	10,410.9	1,020.7	-639.1	1,093.5	1.00	0.32	-0.95
11,430.0	89.30	357.50	10,412.4	1,114.5	-644.2	1,187.2	1.35	0.43	1.28
11,525.0	92.00	358.90	10,411.3	1,209.5	-647.2	1,281.8	3.20	2.84	1.47
11,619.0	91.70	357.70	10,408.2	1,303.4	-650.0	1,375.3	1.32	-0.32	-1.28
11,714.0	92.00	357.70	10,405.2	1,398.2	-653.8	1,469.9	0.32	0.32	0.00
11,808.0	92.40	358.70	10,401.6	1,492.1	-656.7	1,563.4	1.15	0.43	1.06
11,903.0	92.90	357.90	10,397.2	1,587.0	-659.5	1,657.8	0.99	0.53	-0.84
11,998.0	93.20	358.60	10,392.1	1,681.8	-662.4	1,752.3	0.80	0.32	0.74
12,092.0	91.70	1.40	10,388.1	1,775.7	-662.4	1,845.4	3.38	-1.60	2.98
12,187.0	90.80	0.90	10,386.0	1,870.7	-660.5	1,939.3	1.08	-0.95	-0.53
12,281.0	90.40	1.70	10,385.0	1,964.6	-658.4	2,032.3	0.95	-0.43	0.85
12,376.0	91.30	1.90	10,383.6	2,059.6	-655.4	2,126.1	0.97	0.95	0.21
12,470.0	89.20	1.40	10,383.2	2,153.5	-652.7	2,218.9	2.30	-2.23	-0.53
12,565.0	89.40	1.00	10,384.4	2,248.5	-650.7	2,312.9	0.47	0.21	-0.42
12,659.0	90.00	0.20	10,384.9	2,342.5	-649.7	2,406.0	1.06	0.64	-0.85
12,753.0	89.90	359.40	10,385.0	2,436.5	-650.1	2,499.3	0.86	-0.11	-0.85
12,847.0	90.40	358.90	10,384.7	2,530.5	-651.5	2,592.7	0.75	0.53	-0.53
12,942.0	90.80	358.40	10,383.7	2,625.4	-653.7	2,687.2	0.67	0.42	-0.53
13,036.0	90.80	357.50	10,382.4	2,719.4	-657.1	2,780.8	0.96	0.00	-0.96
13,131.0	90.70	356.60	10,381.2	2,814.2	-661.9	2,875.5	0.95	-0.11	-0.95
13,226.0	90.90	356.30	10,379.8	2,909.0	-667.8	2,970.3	0.38	0.21	-0.32
13,320.0	91.40	358.70	10,378.0	3,002.9	-671.9	3,063.9	2.61	0.53	2.55
13,415.0	91.50	358.70	10,375.5	3,097.9	-674.1	3,158.4	0.11	0.11	0.00
13,509.0	91.90	358.00	10,372.8	3,191.8	-676.8	3,251.9	0.86	0.43	-0.74
13,603.0	92.20	357.50	10,369.4	3,285.7	-680.5	3,345.4	0.62	0.32	-0.53
13,698.0	92.20	356.80	10,365.8	3,380.5	-685.2	3,440.1	0.74	0.00	-0.74
13,793.0	91.80	359.40	10,362.4	3,475.3	-688.3	3,534.6	2.77	-0.42	2.74
13,887.0	91.60	358.90	10,359.6	3,569.3	-689.7	3,628.0	0.57	-0.21	-0.53
13,981.0	90.50	358.20	10,357.9	3,663.2	-692.1	3,721.5	1.39	-1.17	-0.74
14,075.0	90.40	357.20	10,357.2	3,757.2	-695.9	3,815.1	1.07	-0.11	-1.06
14,170.0	90.80	356.80	10,356.2	3,852.0	-700.9	3,909.8	0.60	0.42	-0.42
14,265.0	90.60	0.00	10,355.0	3,947.0	-703.5	4,004.3	3.37	-0.21	3.37
14,360.0	90.00	0.50	10,354.5	4,042.0	-703.1	4,098.5	0.82	-0.63	0.53
14,455.0	89.80	0.90	10,354.7	4,137.0	-701.9	4,192.6	0.47	-0.21	0.42
14,549.0	89.90	0.30	10,354.9	4,231.0	-700.9	4,285.7	0.65	0.11	-0.64
14,644.0	92.00	1.70	10,353.4	4,325.9	-699.3	4,379.7	2.66	2.21	1.47
14,738.0	91.70	1.70	10,350.3	4,419.8	-696.5	4,472.5	0.32	-0.32	0.00
14,833.0	91.40	1.20	10,347.8	4,514.8	-694.1	4,566.3	0.61	-0.32	-0.53
14,927.0	91.10	1.40	10,345.7	4,608.7	-692.0	4,659.3	0.38	-0.32	0.21
15,022.0	90.90	0.90	10,344.1	4,703.7	-690.1	4,753.2	0.57	-0.21	-0.53
15,117.0	90.40	1.00	10,343.0	4,798.7	-688.5	4,847.2	0.54	-0.53	0.11
15,211.0	90.30	0.50	10,342.4	4,892.7	-687.3	4,940.3	0.54	-0.11	-0.53



Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Antelope 9 B2PA State #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3430.0usft (Patterson #230)
Site:	Sec 15, T23S, R34E	MD Reference:	WELL @ 3430.0usft (Patterson #230)
Well:	Antelope 9 B2PA State #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
15,306.0	90.10	0.90	10,342.1	4,987.6	-686.1	5,034.4	0.47	-0.21	0.42
15,400.0	92.80	359.80	10,339.7	5,081.6	-685.5	5,127.5	3.10	2.87	-1.17
15,494.0	92.10	359.40	10,335.7	5,175.5	-686.2	5,220.8	0.86	-0.74	-0.43
15,588.0	92.00	358.60	10,332.3	5,269.4	-687.8	5,314.1	0.86	-0.11	-0.85
15,660.0	91.70	358.00	10,330.0	5,341.4	-690.0	5,385.7	0.93	-0.42	-0.83
TD @ 15720.0' MD / 10328.2' TVD									
15,720.0	91.70	358.00	10,328.2	5,401.3	-692.0	5,445.5	0.00	0.00	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,513.0	1,510.7	-55.1	10.7	Gyro Tie-in @ 1513.0' MD / 1510.7' TVD
10,513.8	10,358.8	231.1	-469.3	Cross LL@ 10513.8' MD / 10358.8' TVD
10,629.6	10,399.7	330.7	-511.8	Cross 100'HL@ 10629.6' MD / 10399.7' TVD
15,720.0	10,328.2	5,401.3	-692.0	TD @ 15720.0' MD / 10328.2' TVD