

Company Name: Newbourn Oil Company
 Red Hills West 21 W1CN Fed Com #2H
 Lea County, New Mexico (Nad 83)
 Rig: Patterson #230
 Created By: Shane Robbins
 Date: 1/18/2019

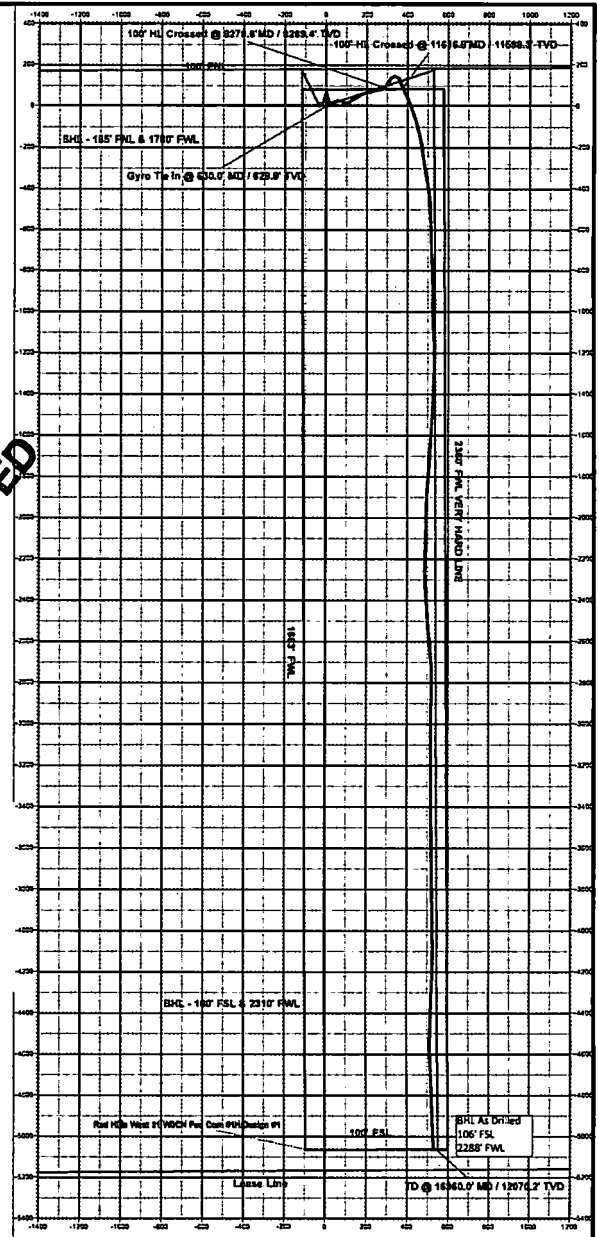
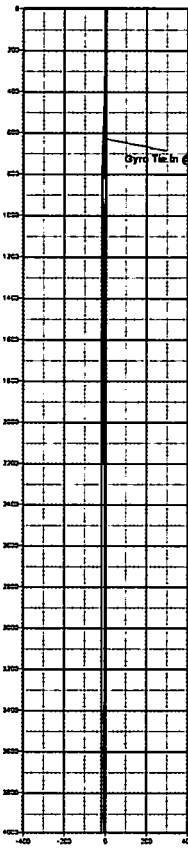
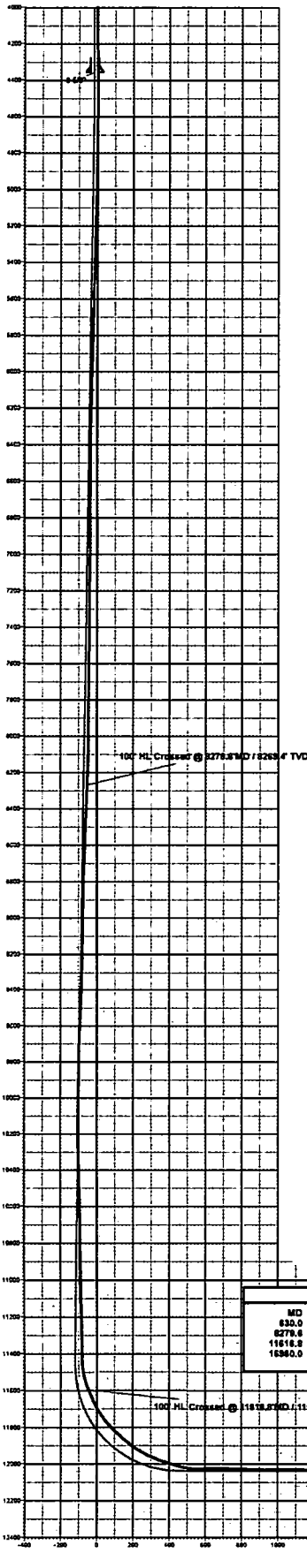
Red Hills West 21 W1CN Fed Com #2H
 Lea County, New Mexico (Nad 83)
 Q181801 & WT-181550
 Design #3

WELL DETAILS: Red Hills West 21 W1CN Fed Com #2H

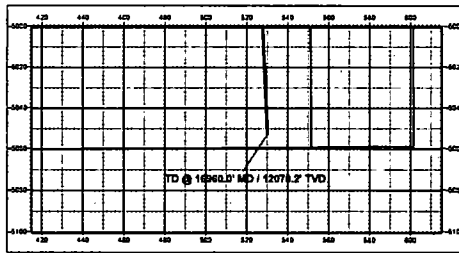
+N/A 0.0 +E/W 6.0 Northing 377087.30 Easting 742905.00 3163.0 Latitude 32° 7' 6.197" N Longitude 107° 40' 58.216" W

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

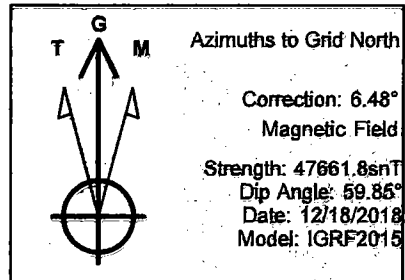
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



DESIGN ANNOTATIONS											
MD	Inc	Azi	TVD	+N/A	+E/W	VSec	Departure	Annotation			
830.0	7.08	70.24	828.9	12.7	25.2	-4.9	0.0	Gyro Tie-In @ 830.0' MD / 828.9' TVD / Hold			
730.0	7.08	70.24	728.2	16.9	38.9	-12.8	19.3	Drop 2' / 100'			
1082.5	0.00	0.00	1079.8	24.2	87.1	-17.9	33.9	EOB @ Vertical			
4435.0	0.00	0.00	4432.3	24.2	87.1	-17.9	33.9	Build 2' / 100'			
4843.3	4.17	71.88	4840.3	26.6	64.3	-18.4	41.8	EOB @ 4.17° Inc / 71.88° Azm			
11274.4	4.17	71.88	11261.9	178.9	623.0	-118.9	823.1	Drop 2' / 100'			
11482.8	0.00	0.00	11482.0	178.9	623.0	-120.5	830.7	EOB @ Vertical / Build 10' / 100'			
12350.9	88.82	178.78	12033.0	-392.3	631.6	647.5	1101.8	EOB @ 88.82° Inc / 178.78° Azm			
17047.5	89.82	178.78	12050.0	-608.9	651.4	668.6	8768.6	TD @ 17047.5' MD / 12050.0' TVD			



ANNOTATIONS											
MD	Inc	Azi	TVD	+N/A	+E/W	VSec	Departure	Annotation			
830.0	7.05	70.24	828.9	12.7	25.2	-4.9	0.0	Gyro Tie-In @ 830.0' MD / 828.9' TVD			
8278.6	3.91	42.48	8268.4	87.1	293.6	-65.9	320.1	100' HL Crossed @ 8278.6' MD / 8268.4' TVD			
11618.8	24.10	195.93	11598.3	87.9	378.6	-48.7	473.1	100' HL Crossed @ 11618.8' MD / 11598.3' TVD			
16960.0	88.10	177.50	12070.2	-5053.1	830.1	5080.7	5638.9	TD @ 16960.0' MD / 12070.2' TVD			





Mewbourne Oil Company

Lea County, New Mexico (Nad 83)

Sec 21 T26S R32E

Red Hills West 21 W1CN Fed Com #2H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

18 January, 2019



Survey Report - Geographic



Company: Mewbourne Oil Company
Project: Lea County, New Mexico (Nad 83)
Site: Sec 21 T26S R32E
Well: Red Hills West 21 W1CN Fed Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Red Hills West 21 W1CN Fed Com #2H
TVD Reference: WELL @ 3180.0usft (Patterson #230)
MD Reference: WELL @ 3180.0usft (Patterson #230)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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 21 T26S R32E			
Site Position:		Northing:	377,097.00 usft	Latitude:	32° 2' 6.186 N
From:	Map	Easting:	742,879.00 usft	Longitude:	103° 40' 58.559 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	Red Hills West 21 W1CN Fed Com #2H					
Well Position	+N/-S	0.0 usft	Northing:	377,097.30 usft	Latitude:	32° 2' 6.187 N
	+E/-W	0.0 usft	Easting:	742,908.00 usft	Longitude:	103° 40' 58.210 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,153.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	12/18/2018	(°)	(°)	(nT)
			6.83	59.85	47,661.80505408

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	173.78	

Survey Program	Date 1/18/2019				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.0	630.0	Gyros (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro	
732.0	16,960.0	QES MWD Survey (Wellbore #1)	MWD default	MWD - Standard	

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting	Latitude	Longitude
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	377,097.30	742,909.00	32° 2' 6.187 N	103° 40' 58.210 W
100.0	0.15	350.09	100.0	0.1	0.0	377,097.43	742,908.97	32° 2' 6.188 N	103° 40' 58.211 W
200.0	0.97	58.35	200.0	0.7	0.7	377,098.00	742,909.87	32° 2' 6.184 N	103° 40' 58.202 W
300.0	1.97	62.00	300.0	2.0	2.9	377,099.25	742,911.91	32° 2' 6.206 N	103° 40' 58.176 W
400.0	3.29	56.89	399.9	4.3	6.8	377,101.63	742,915.83	32° 2' 6.229 N	103° 40' 58.131 W
500.0	4.64	64.31	499.6	7.6	12.9	377,104.95	742,921.88	32° 2' 6.262 N	103° 40' 58.060 W
600.0	6.58	68.68	599.1	11.5	21.9	377,108.78	742,930.86	32° 2' 6.289 N	103° 40' 57.956 W
630.0	7.05	70.24	628.9	12.7	25.2	377,110.03	742,934.20	32° 2' 6.311 N	103° 40' 57.917 W
Gyro Tie In @ 630.0' MD / 628.9' TVD									
732.0	9.30	70.10	729.9	17.7	38.8	377,114.95	742,947.84	32° 2' 6.359 N	103° 40' 57.758 W
767.0	8.80	72.80	764.4	18.4	44.1	377,116.71	742,953.06	32° 2' 6.376 N	103° 40' 57.697 W

Survey Report - Geographic



Company: Mewbourne Oil Company
 Project: Lea County, New Mexico (Nad 83)
 Site: Sec 21 T28S R32E
 Well: Red Hills West 21 W1CN Fed Com #2H
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Red Hills West 21 W1CN Fed Com #2H
 TVD Reference: WELL @ 3180.0usft (Patterson #230)
 MD Reference: WELL @ 3180.0usft (Patterson #230)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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
830.0	7.30	76.30	826.8	21.8	52.8	377,119.08	742,961.55	32° 2' 6.399 N	103° 40' 57.598 W
925.0	5.20	90.00	921.3	23.2	62.7	377,120.51	742,971.72	32° 2' 6.413 N	103° 40' 57.480 W
1,019.0	3.90	87.00	1,015.0	23.4	70.2	377,120.68	742,979.17	32° 2' 6.414 N	103° 40' 57.394 W
1,113.0	2.20	100.20	1,108.8	23.2	75.1	377,120.53	742,984.14	32° 2' 6.412 N	103° 40' 57.336 W
1,207.0	1.60	128.80	1,202.8	22.1	77.9	377,119.38	742,986.94	32° 2' 6.401 N	103° 40' 57.303 W
1,302.0	1.30	130.20	1,297.7	20.6	79.8	377,117.86	742,988.80	32° 2' 6.386 N	103° 40' 57.282 W
1,396.0	1.30	142.50	1,391.7	19.0	81.3	377,116.32	742,990.26	32° 2' 6.370 N	103° 40' 57.265 W
1,491.0	0.70	147.60	1,486.7	17.7	82.2	377,114.98	742,991.23	32° 2' 6.357 N	103° 40' 57.254 W
1,585.0	0.70	139.80	1,580.7	16.8	82.9	377,114.05	742,991.80	32° 2' 6.348 N	103° 40' 57.246 W
1,679.0	0.40	110.20	1,674.7	16.2	83.6	377,113.50	742,992.58	32° 2' 6.342 N	103° 40' 57.238 W
1,774.0	0.30	173.10	1,769.7	15.8	83.9	377,113.14	742,992.92	32° 2' 6.339 N	103° 40' 57.234 W
1,868.0	0.00	240.80	1,864.7	15.8	84.0	377,112.89	742,992.95	32° 2' 6.336 N	103° 40' 57.234 W
1,963.0	0.30	213.40	1,958.7	15.4	83.8	377,112.69	742,992.82	32° 2' 6.334 N	103° 40' 57.236 W
2,058.0	0.30	264.80	2,053.7	15.2	83.4	377,112.46	742,992.43	32° 2' 6.332 N	103° 40' 57.240 W
2,152.0	0.30	173.80	2,147.7	14.9	83.2	377,112.19	742,992.21	32° 2' 6.329 N	103° 40' 57.243 W
2,247.0	0.30	234.30	2,242.7	14.6	83.0	377,111.80	742,992.04	32° 2' 6.325 N	103° 40' 57.245 W
2,342.0	0.10	95.10	2,337.7	14.3	82.9	377,111.65	742,991.92	32° 2' 6.324 N	103° 40' 57.246 W
2,436.0	0.20	130.80	2,431.7	14.2	83.1	377,111.53	742,992.13	32° 2' 6.323 N	103° 40' 57.244 W
2,531.0	0.40	222.50	2,526.7	13.9	83.0	377,111.18	742,992.03	32° 2' 6.319 N	103° 40' 57.245 W
2,626.0	0.40	222.50	2,621.7	13.4	82.6	377,110.69	742,991.58	32° 2' 6.314 N	103° 40' 57.250 W
2,721.0	0.30	199.30	2,716.7	12.9	82.3	377,110.21	742,991.27	32° 2' 6.310 N	103° 40' 57.254 W
2,815.0	0.30	222.70	2,810.7	12.5	82.0	377,109.80	742,991.02	32° 2' 6.306 N	103° 40' 57.257 W
2,910.0	0.20	306.70	2,905.7	12.4	81.7	377,109.71	742,990.72	32° 2' 6.305 N	103° 40' 57.260 W
3,004.0	0.30	68.00	2,999.7	12.6	81.8	377,109.90	742,990.82	32° 2' 6.307 N	103° 40' 57.259 W
3,099.0	0.80	80.00	3,094.7	12.8	82.7	377,110.11	742,991.70	32° 2' 6.309 N	103° 40' 57.249 W
3,194.0	0.90	96.50	3,189.7	12.8	84.1	377,110.14	742,993.10	32° 2' 6.309 N	103° 40' 57.232 W
3,288.0	0.90	61.30	3,283.6	13.1	85.5	377,110.41	742,994.48	32° 2' 6.312 N	103° 40' 57.216 W
3,383.0	1.00	58.20	3,378.6	13.9	86.8	377,111.21	742,995.84	32° 2' 6.319 N	103° 40' 57.201 W
3,478.0	0.80	72.80	3,473.6	14.5	88.2	377,111.84	742,997.18	32° 2' 6.326 N	103° 40' 57.185 W
3,573.0	0.30	97.70	3,568.6	14.7	89.1	377,112.01	742,998.06	32° 2' 6.327 N	103° 40' 57.175 W
3,667.0	0.40	74.30	3,662.6	14.8	89.8	377,112.06	742,998.62	32° 2' 6.328 N	103° 40' 57.168 W
3,762.0	0.60	90.50	3,757.6	14.8	90.4	377,112.15	742,999.43	32° 2' 6.328 N	103° 40' 57.159 W
3,856.0	0.50	95.60	3,851.6	14.8	91.3	377,112.10	743,000.33	32° 2' 6.328 N	103° 40' 57.148 W
3,951.0	0.90	103.90	3,946.6	14.6	92.5	377,111.88	743,001.47	32° 2' 6.326 N	103° 40' 57.135 W
4,045.0	0.50	128.80	4,040.6	14.1	93.5	377,111.45	743,002.51	32° 2' 6.321 N	103° 40' 57.123 W
4,140.0	1.10	126.90	4,135.6	13.3	94.6	377,110.64	743,003.56	32° 2' 6.313 N	103° 40' 57.111 W
4,234.0	1.20	131.10	4,229.6	12.2	96.0	377,109.45	743,005.02	32° 2' 6.301 N	103° 40' 57.094 W
4,329.0	0.60	145.20	4,324.6	11.1	97.1	377,108.39	743,006.05	32° 2' 6.291 N	103° 40' 57.082 W
4,339.0	0.60	107.00	4,334.6	11.0	97.1	377,108.33	743,006.13	32° 2' 6.290 N	103° 40' 57.081 W
4,429.0	0.30	156.90	4,424.6	10.7	97.7	377,107.98	743,006.68	32° 2' 6.287 N	103° 40' 57.075 W
4,524.0	0.80	64.10	4,519.5	10.7	98.4	377,108.04	743,007.37	32° 2' 6.287 N	103° 40' 57.067 W
4,618.0	1.50	68.20	4,613.5	11.5	100.1	377,108.78	743,009.10	32° 2' 6.295 N	103° 40' 57.047 W
4,712.0	1.60	59.20	4,707.5	12.6	102.4	377,109.91	743,011.37	32° 2' 6.306 N	103° 40' 57.020 W
4,807.0	2.30	69.20	4,802.4	14.0	105.3	377,111.27	743,014.30	32° 2' 6.319 N	103° 40' 56.986 W
4,901.0	2.70	67.10	4,896.3	15.5	109.1	377,112.80	743,018.10	32° 2' 6.334 N	103° 40' 56.942 W
4,996.0	3.30	62.70	4,991.2	17.6	113.6	377,114.92	743,022.59	32° 2' 6.354 N	103° 40' 56.880 W
5,091.0	4.00	56.60	5,086.0	20.7	118.8	377,118.00	743,027.79	32° 2' 6.385 N	103° 40' 56.829 W
5,186.0	3.80	57.80	5,180.8	24.2	124.2	377,121.50	743,033.22	32° 2' 6.419 N	103° 40' 56.766 W
5,280.0	3.60	62.20	5,274.6	27.2	129.5	377,124.54	743,038.46	32° 2' 6.449 N	103° 40' 56.704 W
5,374.0	3.30	63.40	5,368.4	29.8	134.5	377,127.13	743,043.49	32° 2' 6.474 N	103° 40' 56.646 W
5,469.0	3.10	62.90	5,463.3	32.2	139.2	377,129.52	743,048.22	32° 2' 6.497 N	103° 40' 56.591 W
5,563.0	3.00	60.10	5,557.2	34.6	143.6	377,131.90	743,052.62	32° 2' 6.521 N	103° 40' 56.540 W
5,657.0	3.30	58.00	5,651.0	37.3	148.0	377,134.64	743,056.99	32° 2' 6.548 N	103° 40' 56.488 W
5,751.0	3.10	55.00	5,744.9	40.3	152.3	377,137.61	743,061.32	32° 2' 6.577 N	103° 40' 56.438 W
5,845.0	3.30	55.70	5,838.7	43.3	156.6	377,140.60	743,065.64	32° 2' 6.606 N	103° 40' 56.388 W

Survey Report - Geographic



Company: Mewbourne Oil Company
 Project: Lea County, New Mexico (Nad 83)
 Site: Sec 21 T28S R32E
 Well: Red Hills West 21 W1CN Fed Com #2H
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Red Hills West 21 W1CN Fed Com #2H
 TVD Reference: WELL @ 3180.0usft (Patterson #230)
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 North Reference: Grid
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,939.0	3.40	54.10	5,932.6	46.5	161.1	377,143.76	743,070.13	32° 2' 6.637 N	103° 40' 56.335 W
6,034.0	3.70	57.60	6,027.4	49.8	166.0	377,147.05	743,075.00	32° 2' 6.669 N	103° 40' 56.278 W
6,128.0	4.00	64.10	6,121.2	52.8	171.5	377,150.11	743,080.51	32° 2' 6.699 N	103° 40' 56.214 W
6,223.0	3.50	65.70	6,216.0	55.5	177.1	377,152.75	743,086.13	32° 2' 6.725 N	103° 40' 56.149 W
6,317.0	3.70	71.20	6,309.8	57.6	182.6	377,154.91	743,091.62	32° 2' 6.746 N	103° 40' 56.085 W
6,412.0	3.40	77.00	6,404.6	59.2	188.3	377,156.53	743,097.27	32° 2' 6.762 N	103° 40' 56.019 W
6,507.0	2.90	77.10	6,499.5	60.4	193.4	377,157.70	743,102.35	32° 2' 6.773 N	103° 40' 55.960 W
6,601.0	3.00	74.70	6,593.3	61.6	198.0	377,158.88	743,107.04	32° 2' 6.784 N	103° 40' 55.905 W
6,696.0	2.40	84.70	6,688.2	62.4	202.4	377,159.72	743,111.42	32° 2' 6.792 N	103° 40' 55.854 W
6,791.0	2.00	90.30	6,783.2	62.6	206.1	377,159.89	743,115.06	32° 2' 6.794 N	103° 40' 55.812 W
6,885.0	2.10	84.20	6,877.1	62.8	209.4	377,160.06	743,118.41	32° 2' 6.795 N	103° 40' 55.773 W
6,980.0	2.50	68.50	6,872.0	63.7	213.1	377,160.99	743,122.07	32° 2' 6.804 N	103° 40' 55.731 W
7,074.0	2.70	68.70	7,065.9	65.3	217.0	377,162.55	743,126.04	32° 2' 6.820 N	103° 40' 55.684 W
7,168.0	2.40	65.00	7,159.8	66.9	220.9	377,164.19	743,129.89	32° 2' 6.836 N	103° 40' 55.640 W
7,263.0	2.90	67.70	7,254.7	68.6	224.9	377,165.94	743,133.92	32° 2' 6.853 N	103° 40' 55.593 W
7,357.0	3.20	76.80	7,348.6	70.1	229.7	377,167.44	743,138.67	32° 2' 6.867 N	103° 40' 55.537 W
7,451.0	3.20	75.00	7,442.4	71.4	234.8	377,168.72	743,143.76	32° 2' 6.880 N	103° 40' 55.478 W
7,546.0	3.30	78.90	7,537.3	72.6	240.0	377,169.93	743,149.00	32° 2' 6.891 N	103° 40' 55.417 W
7,641.0	3.50	78.90	7,632.1	73.7	245.5	377,171.01	743,154.53	32° 2' 6.902 N	103° 40' 55.353 W
7,735.0	4.10	78.20	7,725.9	75.0	251.6	377,172.25	743,160.64	32° 2' 6.914 N	103° 40' 55.282 W
7,829.0	3.80	79.60	7,819.7	76.2	258.0	377,173.50	743,166.99	32° 2' 6.926 N	103° 40' 55.208 W
7,924.0	3.50	82.10	7,914.5	77.2	264.0	377,174.47	743,172.96	32° 2' 6.935 N	103° 40' 55.139 W
8,018.0	3.30	81.50	8,008.3	78.0	269.5	377,175.27	743,178.48	32° 2' 6.942 N	103° 40' 55.074 W
8,113.0	3.50	60.30	8,103.2	79.8	274.7	377,177.11	743,183.70	32° 2' 6.960 N	103° 40' 55.014 W
8,208.0	4.30	49.50	8,198.0	83.6	279.9	377,180.86	743,188.93	32° 2' 6.997 N	103° 40' 54.953 W
8,279.6	3.91	42.48	8,269.4	87.1	283.6	377,184.40	743,192.62	32° 2' 7.032 N	103° 40' 54.909 W
100' HL Crossed @ 8279.6'MD / 8269.4' TVD									
8,302.0	3.80	40.00	8,291.7	88.2	284.6	377,185.53	743,193.61	32° 2' 7.043 N	103° 40' 54.898 W
8,397.0	3.20	38.30	8,386.5	92.7	288.3	377,190.02	743,197.28	32° 2' 7.087 N	103° 40' 54.855 W
8,492.0	2.80	36.20	8,481.4	96.7	291.3	377,193.98	743,200.29	32° 2' 7.126 N	103° 40' 54.820 W
8,586.0	3.00	26.20	8,575.3	100.7	293.7	377,198.04	743,202.73	32° 2' 7.166 N	103° 40' 54.791 W
8,681.0	3.00	28.30	8,670.2	105.2	296.0	377,202.46	743,205.01	32° 2' 7.210 N	103° 40' 54.764 W
8,775.0	2.30	42.70	8,764.1	108.7	298.5	377,206.01	743,207.45	32° 2' 7.245 N	103° 40' 54.736 W
8,869.0	1.10	34.10	8,858.0	110.8	300.2	377,208.14	743,209.24	32° 2' 7.266 N	103° 40' 54.715 W
8,964.0	0.60	37.90	8,953.0	112.0	301.1	377,209.29	743,210.06	32° 2' 7.277 N	103° 40' 54.705 W
9,059.0	1.20	56.20	9,048.0	112.9	302.2	377,210.23	743,211.19	32° 2' 7.286 N	103° 40' 54.692 W
9,154.0	2.70	63.40	9,142.9	114.8	304.8	377,212.12	743,213.81	32° 2' 7.305 N	103° 40' 54.661 W
9,248.0	3.20	43.00	9,238.8	118.1	308.4	377,215.36	743,217.38	32° 2' 7.337 N	103° 40' 54.620 W
9,342.0	1.70	33.20	9,330.7	121.1	310.9	377,218.45	743,219.93	32° 2' 7.367 N	103° 40' 54.590 W
9,437.0	1.90	22.80	9,425.7	123.8	312.3	377,221.08	743,221.31	32° 2' 7.393 N	103° 40' 54.574 W
9,531.0	2.70	29.50	9,519.6	127.1	314.0	377,224.44	743,223.01	32° 2' 7.426 N	103° 40' 54.554 W
9,626.0	2.50	37.20	9,614.5	130.7	316.4	377,228.04	743,225.36	32° 2' 7.462 N	103° 40' 54.526 W
9,721.0	2.50	44.80	9,709.4	133.9	319.1	377,231.16	743,228.07	32° 2' 7.492 N	103° 40' 54.494 W
9,815.0	2.50	47.80	9,803.3	136.7	322.0	377,233.99	743,231.04	32° 2' 7.520 N	103° 40' 54.460 W
9,910.0	2.00	59.90	9,898.3	138.9	325.0	377,236.21	743,234.01	32° 2' 7.542 N	103° 40' 54.425 W
10,005.0	2.50	68.00	9,993.2	140.5	328.4	377,237.82	743,237.36	32° 2' 7.558 N	103° 40' 54.386 W
10,099.0	1.90	71.50	10,087.1	141.8	331.7	377,239.08	743,240.74	32° 2' 7.570 N	103° 40' 54.347 W
10,193.0	1.50	84.90	10,181.1	142.4	334.4	377,239.69	743,243.44	32° 2' 7.576 N	103° 40' 54.315 W
10,288.0	2.20	106.50	10,276.0	142.0	337.4	377,239.28	743,246.43	32° 2' 7.572 N	103° 40' 54.280 W
10,383.0	2.60	108.40	10,370.9	140.8	341.2	377,238.08	743,250.22	32° 2' 7.560 N	103° 40' 54.236 W
10,477.0	3.10	113.50	10,464.8	139.1	345.6	377,236.40	743,254.58	32° 2' 7.543 N	103° 40' 54.186 W
10,572.0	2.50	118.10	10,558.7	137.1	349.8	377,234.40	743,258.76	32° 2' 7.523 N	103° 40' 54.138 W
10,667.0	1.70	128.10	10,654.6	135.3	352.7	377,232.55	743,261.70	32° 2' 7.504 N	103° 40' 54.104 W
10,761.0	1.40	104.70	10,748.6	134.1	354.9	377,231.40	743,263.90	32° 2' 7.493 N	103° 40' 54.078 W
10,856.0	1.10	106.30	10,843.6	133.6	356.9	377,230.85	743,265.90	32° 2' 7.487 N	103° 40' 54.055 W



Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1CN Fed Com #2H
Project:	Lea County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3180.0usft (Patterson #230)
Site:	Sec 21 T26S R32E	MD Reference:	WELL @ 3180.0usft (Patterson #230)
Well:	Red Hills West 21 W1CN Fed Com #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
10,950.0	1.10	135.10	10,937.6	132.7	358.4	377,229.96	743,267.41	32° 2' 7.478 N	103° 40' 54.037 W
11,045.0	1.40	162.40	11,032.5	130.9	359.4	377,228.20	743,268.40	32° 2' 7.461 N	103° 40' 54.026 W
11,140.0	1.50	191.10	11,127.5	128.6	359.5	377,225.88	743,268.51	32° 2' 7.438 N	103° 40' 54.025 W
11,234.0	1.30	195.10	11,221.5	126.3	359.0	377,223.64	743,268.00	32° 2' 7.416 N	103° 40' 54.031 W
11,329.0	1.10	182.10	11,316.5	124.4	358.7	377,221.69	743,267.68	32° 2' 7.396 N	103° 40' 54.035 W
11,351.0	1.10	187.00	11,338.5	124.0	358.7	377,221.27	743,267.65	32° 2' 7.392 N	103° 40' 54.035 W
11,451.0	0.70	172.80	11,438.5	122.4	358.6	377,219.71	743,267.61	32° 2' 7.377 N	103° 40' 54.036 W
11,482.0	4.80	141.70	11,469.4	121.2	359.4	377,218.50	743,268.44	32° 2' 7.365 N	103° 40' 54.026 W
11,514.0	10.60	151.30	11,501.1	117.6	361.7	377,214.87	743,270.68	32° 2' 7.329 N	103° 40' 54.000 W
11,545.0	16.50	153.80	11,531.2	111.1	365.0	377,208.41	743,274.00	32° 2' 7.265 N	103° 40' 53.962 W
11,577.0	20.70	155.70	11,561.6	101.9	369.3	377,199.18	743,278.33	32° 2' 7.173 N	103° 40' 53.913 W
11,608.0	23.90	156.10	11,590.2	91.1	374.1	377,188.44	743,283.13	32° 2' 7.066 N	103° 40' 53.858 W
11,616.8	24.10	155.93	11,598.3	87.9	375.6	377,185.17	743,284.59	32° 2' 7.034 N	103° 40' 53.841 W
100' HL Crossed @ 11616.8' MD / 11598.3' TVD									
11,639.0	24.60	155.50	11,618.5	79.5	379.4	377,176.83	743,288.35	32° 2' 6.951 N	103° 40' 53.798 W
11,671.0	24.50	155.50	11,647.6	67.4	384.9	377,164.73	743,293.87	32° 2' 6.831 N	103° 40' 53.735 W
11,702.0	27.70	155.50	11,675.4	55.0	390.5	377,152.32	743,299.52	32° 2' 6.708 N	103° 40' 53.670 W
11,734.0	32.10	156.90	11,703.2	40.4	396.9	377,137.72	743,305.95	32° 2' 6.563 N	103° 40' 53.596 W
11,765.0	35.60	156.40	11,728.9	24.6	403.8	377,121.87	743,312.79	32° 2' 6.406 N	103° 40' 53.518 W
11,797.0	39.10	156.40	11,754.4	6.8	411.6	377,104.09	743,320.56	32° 2' 6.229 N	103° 40' 53.429 W
11,828.0	42.20	158.90	11,777.9	-11.9	419.2	377,085.41	743,328.23	32° 2' 6.044 N	103° 40' 53.341 W
11,860.0	44.50	160.30	11,801.1	-32.5	426.9	377,064.82	743,335.88	32° 2' 5.840 N	103° 40' 53.254 W
11,891.0	46.90	162.60	11,822.8	-53.5	433.9	377,043.79	743,342.93	32° 2' 5.631 N	103° 40' 53.173 W
11,922.0	48.30	162.90	11,843.7	-75.4	440.7	377,021.93	743,349.71	32° 2' 5.415 N	103° 40' 53.096 W
11,954.0	49.70	164.30	11,864.7	-98.5	447.5	376,998.76	743,356.53	32° 2' 5.185 N	103° 40' 53.018 W
11,986.0	51.30	166.40	11,885.0	-122.4	453.8	376,974.87	743,362.77	32° 2' 4.948 N	103° 40' 52.948 W
12,017.0	54.00	167.30	11,903.8	-146.4	459.4	376,950.88	743,368.37	32° 2' 4.710 N	103° 40' 52.884 W
12,049.0	57.10	169.20	11,921.9	-172.2	465.0	376,925.09	743,373.96	32° 2' 4.455 N	103° 40' 52.821 W
12,080.0	60.90	170.30	11,937.9	-198.3	469.9	376,898.99	743,378.91	32° 2' 4.196 N	103° 40' 52.765 W
12,112.0	63.80	171.40	11,952.8	-226.3	474.4	376,871.01	743,383.41	32° 2' 3.919 N	103° 40' 52.715 W
12,143.0	67.40	172.40	11,965.6	-254.2	478.4	376,843.06	743,387.39	32° 2' 3.642 N	103° 40' 52.671 W
12,175.0	70.10	172.10	11,977.2	-283.8	482.4	376,813.51	743,391.41	32° 2' 3.350 N	103° 40' 52.626 W
12,206.0	71.80	171.00	11,987.3	-312.8	486.7	376,784.53	743,395.72	32° 2' 3.063 N	103° 40' 52.578 W
12,237.0	72.80	170.10	11,996.7	-341.9	491.6	376,755.40	743,400.57	32° 2' 2.774 N	103° 40' 52.524 W
12,269.0	73.90	170.10	12,005.9	-372.1	496.8	376,725.20	743,405.84	32° 2' 2.475 N	103° 40' 52.465 W
12,300.0	75.10	171.00	12,014.2	-401.6	501.7	376,695.73	743,410.74	32° 2' 2.183 N	103° 40' 52.410 W
12,332.0	77.50	172.20	12,021.7	-432.3	506.3	376,664.98	743,415.28	32° 2' 1.879 N	103° 40' 52.359 W
12,363.0	83.90	175.20	12,026.7	-462.7	509.6	376,634.59	743,418.63	32° 2' 1.578 N	103° 40' 52.322 W
12,393.0	89.70	177.70	12,028.4	-492.6	511.5	376,604.71	743,420.48	32° 2' 1.282 N	103° 40' 52.303 W
12,425.0	92.20	178.20	12,027.9	-524.6	512.6	376,572.74	743,421.62	32° 2' 0.965 N	103° 40' 52.292 W
12,457.0	92.40	178.40	12,026.6	-556.5	513.6	376,540.78	743,422.57	32° 2' 0.649 N	103° 40' 52.283 W
12,551.0	89.20	178.90	12,025.3	-650.5	515.8	376,446.83	743,424.79	32° 1' 59.719 N	103° 40' 52.264 W
12,645.0	85.90	176.80	12,029.3	-744.3	519.3	376,353.00	743,428.31	32° 1' 58.790 N	103° 40' 52.230 W
12,740.0	87.80	177.70	12,034.5	-839.0	523.9	376,258.25	743,432.86	32° 1' 57.853 N	103° 40' 52.184 W
12,834.0	91.90	180.90	12,034.8	-933.0	525.0	376,164.29	743,434.00	32° 1' 56.923 N	103° 40' 52.177 W
12,928.0	90.00	177.70	12,033.2	-1,028.0	526.2	376,069.33	743,435.17	32° 1' 55.983 N	103° 40' 52.170 W
13,023.0	88.00	176.30	12,034.8	-1,121.8	531.1	375,975.48	743,440.08	32° 1' 55.054 N	103° 40' 52.119 W
13,117.0	87.70	181.20	12,038.4	-1,215.7	533.1	375,881.60	743,442.13	32° 1' 54.125 N	103° 40' 52.102 W
13,212.0	87.70	181.00	12,042.2	-1,310.6	531.3	375,786.69	743,440.31	32° 1' 53.186 N	103° 40' 52.130 W
13,307.0	90.10	182.80	12,044.0	-1,405.5	528.2	375,691.77	743,437.16	32° 1' 52.247 N	103° 40' 52.173 W
13,402.0	90.40	183.10	12,043.6	-1,500.4	523.3	375,596.90	743,432.27	32° 1' 51.308 N	103° 40' 52.237 W
13,496.0	90.20	184.00	12,043.1	-1,594.2	517.5	375,503.08	743,426.45	32° 1' 50.380 N	103° 40' 52.311 W
13,591.0	91.00	183.10	12,042.1	-1,689.0	511.6	375,408.27	743,420.57	32° 1' 49.442 N	103° 40' 52.386 W
13,685.0	91.40	185.30	12,040.1	-1,782.7	504.7	375,314.55	743,413.69	32° 1' 48.515 N	103° 40' 52.472 W
13,780.0	92.10	183.10	12,037.2	-1,877.4	497.7	375,219.86	743,406.73	32° 1' 47.578 N	103° 40' 52.560 W

Survey Report - Geographic



Company: Mewbourne Oil Company
Project: Lea County, New Mexico (Nad 83)
Site: Sec 21 T26S R32E
Well: Red Hills West 21 W1CN Fed Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Red Hills West 21 W1CN Fed Com #2H
TVD Reference: WELL @ 3180.0usft (Patterson #230)
MD Reference: WELL @ 3180.0usft (Patterson #230)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
13,875.0	89.60	180.30	12,035.8	-1,972.4	494.9	375,124.93	743,403.92	32° 1' 46.639 N	103° 40' 52.599 W
13,969.0	90.10	182.40	12,036.1	-2,066.3	492.7	375,030.96	743,401.70	32° 1' 45.710 N	103° 40' 52.632 W
14,064.0	90.80	181.80	12,035.3	-2,161.3	489.1	374,936.03	743,398.14	32° 1' 44.770 N	103° 40' 52.680 W
14,158.0	87.30	179.30	12,036.9	-2,255.2	488.2	374,842.07	743,397.15	32° 1' 43.841 N	103° 40' 52.698 W
14,253.0	86.20	176.50	12,042.3	-2,350.0	491.6	374,747.30	743,400.63	32° 1' 42.903 N	103° 40' 52.664 W
14,347.0	86.80	176.60	12,048.0	-2,443.7	497.3	374,653.64	743,406.27	32° 1' 41.975 N	103° 40' 52.605 W
14,442.0	86.40	175.20	12,053.6	-2,538.2	504.1	374,559.05	743,413.05	32° 1' 41.039 N	103° 40' 52.533 W
14,537.0	89.50	174.40	12,057.0	-2,632.8	512.7	374,464.52	743,421.66	32° 1' 40.103 N	103° 40' 52.439 W
14,631.0	90.00	176.30	12,057.5	-2,726.5	520.3	374,370.83	743,429.28	32° 1' 39.175 N	103° 40' 52.357 W
14,726.0	92.70	181.20	12,055.2	-2,821.4	522.4	374,275.92	743,431.35	32° 1' 38.236 N	103° 40' 52.340 W
14,820.0	93.20	182.10	12,050.4	-2,915.2	519.7	374,182.08	743,428.65	32° 1' 37.308 N	103° 40' 52.378 W
14,915.0	92.10	180.70	12,046.0	-3,010.1	517.3	374,087.22	743,426.33	32° 1' 36.369 N	103° 40' 52.412 W
15,009.0	91.60	179.80	12,042.9	-3,104.0	516.9	373,993.27	743,425.92	32° 1' 35.439 N	103° 40' 52.423 W
15,104.0	92.10	179.10	12,039.9	-3,199.0	517.8	373,898.32	743,426.83	32° 1' 34.500 N	103° 40' 52.419 W
15,199.0	91.90	179.10	12,036.6	-3,293.9	519.3	373,803.39	743,428.32	32° 1' 33.560 N	103° 40' 52.408 W
15,294.0	90.40	180.30	12,034.7	-3,388.9	519.8	373,708.42	743,428.82	32° 1' 32.620 N	103° 40' 52.409 W
15,388.0	89.80	180.00	12,034.5	-3,482.9	519.6	373,614.42	743,428.57	32° 1' 31.690 N	103° 40' 52.419 W
15,483.0	88.40	179.10	12,036.0	-3,577.9	520.3	373,519.44	743,429.32	32° 1' 30.750 N	103° 40' 52.417 W
15,577.0	87.70	179.80	12,039.2	-3,671.8	521.2	373,425.50	743,430.22	32° 1' 29.821 N	103° 40' 52.413 W
15,672.0	87.10	179.40	12,043.5	-3,766.7	521.9	373,330.60	743,430.88	32° 1' 28.881 N	103° 40' 52.412 W
15,766.0	88.80	178.60	12,046.9	-3,860.6	523.5	373,236.68	743,432.52	32° 1' 27.952 N	103° 40' 52.399 W
15,861.0	89.00	178.80	12,048.7	-3,955.6	525.7	373,141.72	743,434.68	32° 1' 27.012 N	103° 40' 52.381 W
15,955.0	87.90	178.60	12,051.2	-4,049.5	527.8	373,047.78	743,436.81	32° 1' 26.082 N	103° 40' 52.363 W
16,050.0	89.60	180.90	12,053.3	-4,144.5	528.2	372,952.81	743,437.22	32° 1' 25.143 N	103° 40' 52.365 W
16,144.0	91.00	182.80	12,052.8	-4,238.4	525.2	372,858.87	743,434.19	32° 1' 24.213 N	103° 40' 52.406 W
16,239.0	91.20	182.30	12,051.0	-4,333.3	521.0	372,763.98	743,429.96	32° 1' 23.274 N	103° 40' 52.462 W
16,334.0	91.40	181.70	12,048.8	-4,428.2	517.7	372,669.06	743,426.65	32° 1' 22.335 N	103° 40' 52.507 W
16,428.0	92.10	181.70	12,046.0	-4,522.1	514.9	372,575.15	743,423.86	32° 1' 21.406 N	103° 40' 52.546 W
16,523.0	87.90	178.80	12,046.0	-4,617.1	514.5	372,480.18	743,423.45	32° 1' 20.466 N	103° 40' 52.558 W
16,618.0	84.60	178.00	12,052.2	-4,711.9	517.1	372,385.44	743,426.09	32° 1' 19.529 N	103° 40' 52.534 W
16,713.0	85.80	178.20	12,060.1	-4,806.5	520.2	372,290.82	743,429.23	32° 1' 18.592 N	103° 40' 52.504 W
16,807.0	88.10	177.70	12,065.1	-4,900.3	523.6	372,197.02	743,432.59	32° 1' 17.664 N	103° 40' 52.471 W
16,906.0	88.10	177.50	12,068.4	-4,999.1	527.7	372,098.16	743,436.73	32° 1' 16.685 N	103° 40' 52.430 W
16,960.0	88.10	177.50	12,070.2	-5,053.1	530.1	372,044.25	743,439.09	32° 1' 16.152 N	103° 40' 52.407 W

TD @ 16960.0' MD / 12070.2' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
630.0	628.9	12.7	25.2	Gyro Tie In @ 630.0' MD / 628.9' TVD
8,279.6	8,269.4	87.1	283.6	100' HL Crossed @ 8279.6' MD / 8269.4' TVD
11,616.8	11,598.3	87.9	375.6	100' HL Crossed @ 11616.8' MD / 11598.3' TVD
16,960.0	12,070.2	-5,053.1	530.1	TD @ 16960.0' MD / 12070.2' TVD