

OPERATOR
WELL/LEASE
COUNTY

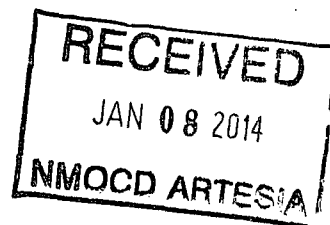
MEWBOURNE OIL COMPANY
ARIES 20 MP FED COM 1H
EDDY, NM

045-0099

STATE OF NEW MEXICO
DEVIATION REPORT

15-41695

245	1.00
372	0.60
551	0.59
1,010	0.80
1,295	1.67
1,613	2.29
1,847	1.61
2,089	2.86
2,204	3.03
2,371	3.34
2,501	2.91
2,625	3.23
2,753	2.80
2,947	3.42
3,265	2.57
3,547	2.39
4,281	1.53
4,695	0.60
4,912	2.05
5,298	2.91
5,389	2.93
5,554	3.68
5,649	3.08
5,741	1.28
5,841	1.72
6,063	0.90



STATE OF TEXAS

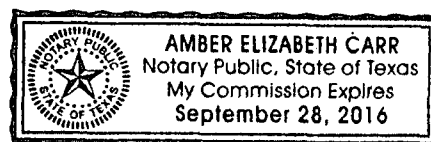
BY: Steve Moore

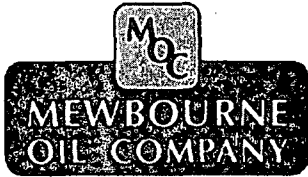
COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Steve Moore on behalf of Patterson-UTI Drilling Company LLC.

12/18/13, by

Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:





Mewbourne Oil Company .

Eddy County, New Mexico

Section 20-18S-30E Aries 20 MP Federal Com

Aries 20 MP Federal Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

25 November, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Aries 20 MP Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL 3485 + 20' @ 3505'0usft (Patterson #45)
Site:	Section 20-18S-30E Aries 20 MP Federal Com	MD Reference:	GL 3485 + 20' @ 3505'0usft (Patterson #45)
Well:	Aries 20 MP Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User.Db

Project:	Eddy County New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Section 20-18S-30E Aries 20 MP Federal Com
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Site Position:		Northing:	628,434.00 usft	Latitude:	32° 43' 37.995 N
From:	Map	Easting:	602,159.70 usft	Longitude:	104° 0' 4.077 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well:	Aries 20 MP Federal Com #1H				
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Well Position	+N/-S	0.0 usft	Northing:	628,434.00 usft	Latitude:	32° 43' 37.995 N
	+E/-W	0.0 usft	Easting:	602,159.70 usft	Longitude:	104° 0' 4.077 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,485.0 usft	

Wellbore:	Original Hole				
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/29/2013	(°)	(°)	(nT)
			7.53	60.52	48,634

Survey Program	Date 11/25/2013				
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	6,760.0	MS Gyro Survey #1 (Original Hole)	GyroFlex	
6,770.0	11,720.0	Survey #2 (Original Hole)	MWD	MWD - Standard

Survey:	399.4 11720.0 11720.0 11720.0 11720.0 11720.0 11720.0 11720.0 11720.0 11720.0									
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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.08	113.85	100.0	0.0	0.1	0.1	0.08	0.08	0.00
200.0	0.07	229.62	200.0	-0.1	0.1	0.1	0.13	-0.01	115.77
300.0	0.13	218.34	300.0	-0.2	0.0	0.0	0.06	0.06	-11.28
400.0	0.13	212.90	400.0	-0.4	-0.2	-0.2	0.01	0.00	-5.44
500.0	0.23	221.20	500.0	-0.7	-0.4	-0.4	0.10	0.10	8.30
600.0	0.14	221.35	600.0	-0.9	-0.6	-0.6	0.09	-0.09	0.15
700.0	0.10	281.45	700.0	-1.0	-0.7	-0.7	0.13	-0.04	60.10
800.0	0.04	167.60	800.0	-1.0	-0.8	-0.8	0.12	-0.06	-113.85
900.0	0.24	43.24	900.0	-0.9	-0.7	-0.7	0.26	0.20	-124.36
1,000.0	0.46	45.77	1,000.0	-0.4	-0.2	-0.2	0.22	0.22	2.53
1,100.0	1.03	70.17	1,100.0	0.1	0.9	0.9	0.64	0.57	24.40
1,200.0	1.41	70.68	1,200.0	0.9	2.9	2.9	0.38	0.38	0.51
1,300.0	1.42	70.68	1,299.9	1.7	5.2	5.2	0.01	0.01	0.00
1,400.0	1.47	68.80	1,399.9	2.5	7.6	7.6	0.07	0.05	-1.88
1,500.0	1.68	62.77	1,499.9	3.7	10.1	10.0	0.27	0.21	-6.03



Stryker Directional Survey Report



Company:	Meybourne Oil Company	Local Co-ordinate Reference:	Well Aries 20 MP Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL 3485 + 20 @ 3505.0usft (Patterson #45)
Site:	Section 20 18S 30E Aries 20 MP Federal Com	MD Reference:	GL 3485 + 20 @ 3505.0usft (Patterson #45)
Well:	Aries 20 MP Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
1,600.0	1.99	55.52	1,599.8	5.3	12.8	12.7	0.39	0.31	-7.25
1,700.0	2.17	49.21	1,699.7	7.6	15.7	15.6	0.29	0.18	-6.31
1,800.0	2.32	40.94	1,799.7	10.3	18.5	18.3	0.36	0.15	-8.27
1,900.0	2.28	37.33	1,899.6	13.4	21.0	20.8	0.15	-0.04	-3.61
2,000.0	2.43	42.09	1,999.5	16.6	23.6	23.3	0.25	0.15	4.76
2,100.0	2.59	40.26	2,099.4	19.9	26.5	26.2	0.18	0.16	-1.83
2,200.0	2.72	39.10	2,199.3	23.5	29.5	29.1	0.14	0.13	-1.16
2,300.0	2.88	33.61	2,299.2	27.4	32.3	31.9	0.31	0.16	-5.49
2,400.0	2.99	30.58	2,399.1	31.7	35.1	34.5	0.19	0.11	-3.03
2,500.0	3.06	33.24	2,498.9	36.2	37.8	37.3	0.16	0.07	2.66
2,600.0	2.97	33.30	2,598.8	40.6	40.7	40.1	0.09	-0.09	0.06
2,700.0	3.07	32.94	2,698.6	45.0	43.6	42.9	0.10	0.10	-0.36
2,800.0	3.03	33.13	2,798.5	49.5	46.5	45.7	0.04	-0.04	0.19
2,900.0	3.14	34.07	2,898.3	54.0	49.5	48.6	0.12	0.11	0.94
3,000.0	3.12	34.24	2,998.2	58.5	52.6	51.6	0.02	-0.02	0.17
3,100.0	3.24	30.74	3,098.0	63.2	55.5	54.5	0.23	0.12	-3.50
3,200.0	2.81	29.49	3,197.9	67.7	58.2	57.1	0.44	-0.43	-1.25
3,300.0	2.48	36.21	3,297.8	71.6	60.7	59.5	0.45	-0.33	6.72
3,400.0	2.30	36.66	3,397.7	74.9	63.1	61.9	0.18	-0.18	0.45
3,500.0	1.90	36.19	3,497.6	77.9	65.3	64.0	0.40	-0.40	-0.47
3,600.0	1.85	40.52	3,597.6	80.5	67.3	66.0	0.15	-0.05	4.33
3,700.0	1.35	40.52	3,697.6	82.6	69.2	67.8	0.50	-0.50	0.00
3,800.0	1.27	40.88	3,797.5	84.3	70.7	69.3	0.08	-0.08	0.36
3,900.0	1.32	39.27	3,897.5	86.0	72.1	70.7	0.06	0.05	-1.61
4,000.0	1.23	31.94	3,997.5	87.8	73.4	72.0	0.19	-0.09	-7.33
4,100.0	1.40	24.71	4,097.5	89.9	74.5	73.0	0.24	0.17	-7.23
4,200.0	0.82	48.29	4,197.4	91.5	75.5	74.0	0.73	-0.58	23.58
4,300.0	0.58	75.07	4,297.4	92.1	76.6	75.0	0.40	-0.24	26.78
4,400.0	0.42	157.87	4,397.4	91.9	77.2	75.7	0.67	-0.16	82.80
4,500.0	0.56	196.29	4,497.4	91.0	77.2	75.7	0.35	0.14	38.42
4,600.0	0.84	218.29	4,597.4	90.0	76.6	75.1	0.38	0.28	22.00
4,700.0	1.36	230.47	4,697.4	88.7	75.2	73.8	0.57	0.52	12.18
4,800.0	1.97	227.74	4,797.3	86.8	73.0	71.6	0.61	0.61	-2.73
4,900.0	2.07	226.78	4,897.3	84.4	70.4	69.1	0.11	0.10	-0.96
5,000.0	2.21	234.14	4,997.2	82.0	67.6	66.2	0.31	0.14	7.36
5,100.0	2.37	239.31	5,097.1	79.8	64.2	62.9	0.26	0.16	5.17
5,200.0	2.55	239.63	5,197.0	77.6	60.5	59.3	0.18	0.18	0.32
5,300.0	2.75	238.59	5,296.9	75.3	56.6	55.3	0.21	0.20	-1.04
5,400.0	2.94	241.30	5,396.8	72.8	52.3	51.1	0.23	0.19	2.71
5,500.0	2.85	241.47	5,496.7	70.4	47.8	46.7	0.09	-0.09	0.17
5,600.0	2.31	242.34	5,596.6	68.2	43.9	42.7	0.54	-0.54	0.87
5,700.0	1.81	240.35	5,696.5	66.5	40.7	39.6	0.51	-0.50	-1.99
5,800.0	1.90	244.91	5,796.5	65.0	37.8	36.8	0.17	0.09	4.56
5,900.0	2.23	258.81	5,896.4	64.0	34.4	33.4	0.60	0.33	13.90



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Aries 20 MP Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3485 +20 @ 3505.0usft (Patterson #45)
Site:	Section 20-18S-30E Aries 20 MP Federal Com	MD Reference:	GL 3485 +20 @ 3505.0usft (Patterson #45)
Well:	Aries 20 MP Federal Com #1H	North Reference:	Grid:
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
6,000.0	1.40	241.44	5,996.4	63.0	31.4	30.4	0.99	-0.83	-17.37
6,100.0	0.75	199.80	6,096.3	61.8	30.1	29.1	0.98	-0.65	-41.64
6,200.0	0.93	152.00	6,196.3	60.5	30.3	29.3	0.70	0.18	-47.80
6,300.0	1.05	148.98	6,296.3	59.0	31.2	30.2	0.13	0.12	-3.02
6,400.0	0.38	339.73	6,396.3	58.5	31.5	30.6	1.43	-0.67	-169.25
6,500.0	0.95	316.52	6,496.3	59.4	30.8	29.9	0.62	0.57	-23.21
6,600.0	1.21	298.28	6,596.3	60.5	29.3	28.3	0.43	0.26	-18.24
6,700.0	1.50	286.62	6,696.3	61.4	27.1	26.1	0.40	0.29	-11.66
6,760.0	1.47	285.25	6,756.2	61.8	25.6	24.6	0.08	-0.05	-2.28
6760 MD MS Gyro Survey									
6,796.0	0.40	42.40	6,792.2	62.0	25.3	24.3	4.70	-2.97	325.42
6,828.0	3.30	97.90	6,824.2	62.0	26.3	25.3	9.66	9.06	173.44
6,860.0	6.30	99.20	6,856.1	61.6	28.9	27.9	9.38	9.38	4.06
6,891.0	9.50	97.60	6,886.8	61.0	33.1	32.1	10.35	10.32	-5.16
6,923.0	12.40	95.80	6,918.2	60.3	39.2	38.2	9.12	9.06	-5.63
6,955.0	15.90	94.90	6,949.2	59.5	47.0	46.0	10.96	10.94	-2.81
6,987.0	19.00	97.20	6,979.8	58.5	56.5	55.5	9.92	9.69	7.19
7,018.0	21.40	99.20	7,008.9	57.0	67.1	66.2	8.06	7.74	6.45
7,050.0	23.70	100.60	7,038.4	54.9	79.2	78.3	7.38	7.19	4.38
7,082.0	26.50	101.50	7,067.4	52.2	92.5	91.6	8.83	8.75	2.81
7,113.0	30.00	101.50	7,094.7	49.3	106.9	106.1	11.29	11.29	0.00
7,145.0	33.50	101.40	7,121.9	46.0	123.4	122.6	10.94	10.94	-0.31
7,177.0	36.70	100.80	7,148.1	42.4	141.4	140.7	10.06	10.00	-1.88
7,209.0	40.40	99.80	7,173.1	38.9	161.0	160.4	11.73	11.56	-3.13
7,240.0	44.40	98.10	7,196.0	35.6	181.7	181.1	13.42	12.90	-5.48
7,272.0	49.80	97.10	7,217.8	32.6	204.9	204.4	17.03	16.88	-3.13
7,304.0	53.60	97.10	7,237.6	29.5	229.8	229.3	11.88	11.88	0.00
7,336.0	56.00	97.80	7,256.0	26.1	255.8	255.3	7.71	7.50	2.19
7,367.0	58.60	98.10	7,272.8	22.4	281.6	281.2	8.43	8.39	0.97
7,399.0	60.90	98.10	7,288.9	18.6	309.0	308.6	7.19	7.19	0.00
7,431.0	63.50	97.60	7,303.8	14.7	337.0	336.7	8.24	8.13	-1.56
7,463.0	67.00	97.00	7,317.2	11.0	365.8	365.6	11.07	10.94	-1.88
7,494.0	71.70	96.20	7,328.1	7.7	394.6	394.5	15.35	15.16	-2.58
7,526.0	76.40	95.40	7,336.9	4.6	425.2	425.1	14.88	14.69	-2.50
7,558.0	80.40	94.50	7,343.4	1.9	456.5	456.4	12.80	12.50	-2.81
7,653.0	86.40	93.20	7,354.3	-4.5	550.6	550.6	6.46	6.32	-1.37
7,685.0	86.40	92.70	7,356.3	-6.1	582.5	582.5	1.56	0.00	-1.56
7,717.0	88.80	91.60	7,357.6	-7.3	614.4	614.4	8.25	7.50	-3.44
7,748.0	90.50	89.80	7,357.8	-7.7	645.4	645.4	7.99	5.48	-5.81
7,812.0	90.20	89.50	7,357.4	-7.3	709.4	709.4	0.66	-0.47	-0.47
7,875.0	88.80	91.60	7,358.0	-7.9	772.4	772.4	4.01	-2.22	3.33
7,937.0	88.30	91.10	7,359.5	-9.4	834.4	834.4	1.14	-0.81	-0.81
8,001.0	88.00	90.90	7,361.6	-10.5	898.3	898.4	0.56	-0.47	-0.31



Stryker Directional Survey Report



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Project:	Eddy County New Mexico	TVD Reference:	GL 3485 + 20' @ 3505.0usft (Patterson #45)
Site:	Section 20-18S-30E Aries 20 MP Federal Com	MD Reference:	GL 3485 + 20' @ 3505.0usft (Patterson #45)
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Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
8,064.0	88.70	90.90	7,363.4	-11.5	961.3	961.3	1.11	1.11	0.00
8,127.0	88.00	90.40	7,365.2	-12.2	1,024.2	1,024.3	1.37	-1.11	-0.79
8,190.0	91.30	90.40	7,365.6	-12.6	1,087.2	1,087.3	5.24	5.24	0.00
8,253.0	92.10	89.80	7,363.8	-12.7	1,150.2	1,150.3	1.59	1.27	-0.95
8,316.0	91.80	91.40	7,361.6	-13.4	1,213.2	1,213.2	2.58	-0.48	2.54
8,379.0	89.90	91.60	7,360.7	-15.0	1,276.1	1,276.2	3.03	-3.02	0.32
8,443.0	88.20	91.20	7,361.7	-16.6	1,340.1	1,340.2	2.73	-2.66	-0.63
8,506.0	88.20	92.00	7,363.7	-18.4	1,403.0	1,403.2	1.27	0.00	1.27
8,569.0	88.00	92.10	7,365.8	-20.6	1,466.0	1,466.1	0.35	-0.32	0.16
8,632.0	89.30	91.80	7,367.3	-22.8	1,528.9	1,529.1	2.12	2.06	-0.48
8,695.0	88.80	91.40	7,368.3	-24.5	1,591.9	1,592.1	1.02	-0.79	-0.63
8,759.0	89.20	91.20	7,369.5	-26.0	1,655.9	1,656.1	0.70	0.63	-0.31
8,822.0	89.70	90.90	7,370.1	-27.1	1,718.8	1,719.1	0.93	0.79	-0.48
8,885.0	88.50	91.10	7,371.0	-28.2	1,781.8	1,782.0	1.93	-1.90	0.32
8,948.0	88.50	91.40	7,372.7	-29.6	1,844.8	1,845.0	0.48	0.00	0.48
9,012.0	87.90	91.60	7,374.7	-31.3	1,908.7	1,909.0	0.99	-0.94	0.31
9,074.0	89.20	90.40	7,376.3	-32.3	1,970.7	1,971.0	2.85	2.10	-1.94
9,138.0	90.00	91.10	7,376.7	-33.2	2,034.7	2,035.0	1.66	1.25	1.09
9,201.0	89.90	90.90	7,376.8	-34.3	2,097.7	2,098.0	0.35	-0.16	-0.32
9,264.0	88.60	88.40	7,377.6	-33.9	2,160.7	2,160.9	4.47	-2.06	-3.97
9,328.0	87.40	87.00	7,379.8	-31.3	2,224.6	2,224.8	2.88	-1.88	-2.19
9,359.0	88.50	86.70	7,380.9	-29.6	2,255.5	2,255.7	3.68	3.55	-0.97
9,390.0	90.10	86.70	7,381.3	-27.8	2,286.5	2,286.6	5.16	5.16	0.00
9,422.0	91.00	87.60	7,381.0	-26.3	2,318.4	2,318.5	3.98	2.81	2.81
9,453.0	91.80	88.80	7,380.3	-25.3	2,349.4	2,349.5	4.65	2.58	3.87
9,485.0	92.60	89.70	7,379.0	-24.9	2,381.4	2,381.4	3.76	2.50	2.81
9,517.0	92.40	89.70	7,377.6	-24.7	2,413.3	2,413.4	0.63	-0.63	0.00
9,549.0	91.60	90.90	7,376.5	-24.9	2,445.3	2,445.4	4.51	-2.50	3.75
9,580.0	91.20	90.70	7,375.8	-25.3	2,476.3	2,476.4	1.44	-1.29	-0.65
9,612.0	89.70	92.80	7,375.5	-26.3	2,508.3	2,508.4	8.06	-4.69	6.56
9,643.0	88.00	91.60	7,376.1	-27.5	2,539.2	2,539.4	6.71	-5.48	-3.87
9,675.0	87.10	90.70	7,377.5	-28.1	2,571.2	2,571.3	3.98	-2.81	-2.81
9,707.0	86.90	91.10	7,379.2	-28.6	2,603.2	2,603.3	1.40	-0.63	1.25
9,739.0	88.30	91.60	7,380.5	-29.4	2,635.1	2,635.3	4.65	4.38	1.56
9,770.0	89.00	91.80	7,381.2	-30.3	2,666.1	2,666.2	2.35	2.26	0.65
9,834.0	88.30	91.60	7,382.8	-32.2	2,730.1	2,730.2	1.14	-1.09	-0.31
9,897.0	89.90	91.80	7,383.7	-34.0	2,793.0	2,793.2	2.56	2.54	0.32
9,960.0	91.10	90.90	7,383.2	-35.5	2,856.0	2,856.2	2.38	1.90	-1.43
10,024.0	90.30	89.30	7,382.4	-35.6	2,920.0	2,920.2	2.79	-1.25	-2.50
10,087.0	90.70	89.80	7,381.9	-35.2	2,983.0	2,983.2	1.02	0.63	0.79
10,150.0	91.50	91.10	7,380.6	-35.6	3,046.0	3,046.1	2.42	1.27	2.06
10,213.0	89.10	92.00	7,380.3	-37.3	3,108.9	3,109.1	4.07	-3.81	1.43
10,277.0	89.30	92.70	7,381.2	-40.0	3,172.9	3,173.1	1.14	0.31	1.09



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Aries 20 MP Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL 3485 +20 @ 3505.0usft (Patterson #45)
Site:	Section 20-18S-30E Aries 20 MP Federal Com	MD Reference:	GL 3485 +20 @ 3505.0usft (Patterson #45)
Well:	Aries 20 MP Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
10,340.0	89.30	94.20	7,382.0	-43.8	3,235.8	3,236.0	2.38	0.00	2.38
10,372.0	89.40	94.60	7,382.3	-46.2	3,267.7	3,268.0	1.29	0.31	1.25
10,403.0	87.90	93.40	7,383.1	-48.4	3,298.6	3,298.9	6.20	-4.84	-3.87
10,435.0	87.40	93.20	7,384.4	-50.2	3,330.5	3,330.9	1.68	-1.56	-0.63
10,467.0	87.40	93.40	7,385.8	-52.1	3,362.4	3,362.8	0.62	0.00	0.63
10,530.0	87.60	92.50	7,388.6	-55.3	3,425.3	3,425.7	1.46	0.32	-1.43
10,562.0	87.50	92.50	7,390.0	-56.7	3,457.2	3,457.7	0.31	-0.31	0.00
10,625.0	88.70	92.00	7,392.0	-59.2	3,520.1	3,520.6	2.06	1.90	-0.79
10,688.0	88.30	91.80	7,393.7	-61.3	3,583.1	3,583.6	0.71	-0.63	-0.32
10,752.0	90.10	91.60	7,394.6	-63.2	3,647.0	3,647.6	2.83	2.81	-0.31
10,815.0	91.40	91.80	7,393.8	-65.0	3,710.0	3,710.6	2.09	2.06	0.32
10,878.0	89.40	91.40	7,393.3	-66.8	3,773.0	3,773.5	3.24	-3.17	-0.63
10,941.0	90.10	92.10	7,393.6	-68.7	3,835.9	3,836.5	1.57	1.11	1.11
11,005.0	90.20	92.50	7,393.4	-71.3	3,899.9	3,900.5	0.64	0.16	0.63
11,068.0	86.90	87.20	7,395.0	-71.1	3,962.8	3,963.5	9.91	-5.24	-8.41
11,100.0	87.10	87.60	7,396.7	-69.7	3,994.8	3,995.4	1.40	0.63	1.25
11,131.0	88.60	89.00	7,397.9	-68.7	4,025.7	4,026.3	6.62	4.84	4.52
11,163.0	90.10	88.60	7,398.2	-68.1	4,057.7	4,058.3	4.85	4.69	-1.25
11,194.0	90.50	88.80	7,398.1	-67.4	4,088.7	4,089.3	1.44	1.29	0.65
11,258.0	90.10	88.40	7,397.7	-65.8	4,152.7	4,153.2	0.88	-0.63	-0.63
11,321.0	91.30	90.20	7,397.0	-65.0	4,215.7	4,216.2	3.43	1.90	2.86
11,353.0	91.10	90.20	7,396.3	-65.1	4,247.7	4,248.2	0.63	-0.63	0.00
11,384.0	90.10	89.10	7,396.0	-65.0	4,278.7	4,279.1	4.80	-3.23	-3.55
11,416.0	89.20	87.40	7,396.2	-64.0	4,310.6	4,311.1	6.01	-2.81	-5.31
11,448.0	88.80	89.30	7,396.7	-63.1	4,342.6	4,343.1	6.07	-1.25	5.94
11,511.0	89.10	89.00	7,397.9	-62.1	4,405.6	4,406.0	0.67	0.48	-0.48
11,574.0	89.20	89.80	7,398.8	-61.5	4,468.6	4,469.0	1.28	0.16	1.27
11,638.0	88.80	89.00	7,399.9	-60.8	4,532.6	4,533.0	1.40	-0.63	-1.25
11,666.0	87.50	87.70	7,400.8	-60.0	4,560.5	4,560.9	6.56	-4.64	-4.64
11,720.0	87.50	87.70	7,403.2	-57.8	4,614.5	4,614.8	0.00	0.00	0.00

11720' MD Projected to Bit

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,760.0	6,756.2	61.8	25.6	6760' MD MS Gyro Survey
11,720.0	7,403.2	-57.8	4,614.5	11720' MD Projected to Bit

Company Rep	Jake Nave
Field	0
BOT Service Rep	John Davis
District Location	Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse			
Casing	7.000	26.00	P-110	6.276	6.154	LTC / 8RD	0.03826	7,616.00	9,960	6,230			
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,331.03	12,410	10,680			
Botl Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-			
TVD		7400.00		KOP		6877.00		Open Hole		6.125	Casing Vol. (bbl)	282.2	
Carry Fluid Weight (ppg)		8.4		Propanl Content (ppa)					Max Drill Out Size			0	
	Comm. Number	Description				Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ (BBL)
Liner Top						7375.97							

Zone Length		JR Sleeve S3 Hyd Set Packer	7375.97	8.64	5.313	3.875			
20		4-1/2-13.5 LTC Nipple	7384.61	8.11	5.000	3.920			
		7 Joints of 4-1/2-13.5 LTC Casing	7392.72	280.00	5.000	3.920			
		3.625 EX Frac Sleeve	7672.72	2.40	5.750		3.525	2286	
19		3 Joint of 4-1/2-13.5 LTC Casing	7675.12	117.98	5.000	3.920			
		Baker Open Hole Packer	7793.10	3.89	5.820	3.875		2154	
		3 Joints of 4-1/2-13.5 LTC Casing	7796.99	122.20	5.000	3.920			
18		3.600 EX Frac Sleeve	7919.19	2.40			3.400	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	7921.59	120.20	5.000	3.920			
		Baker Open Hole Packer	8041.78	3.89		3.875		2154	
17		2 Joints of 4-1/2-13.5 LTC Casing	8045.68	78.87	5.000	3.920			
		3.375 EX Frac Sleeve	8124.55	2.40			3.275	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	8126.95	119.02	5.000	3.920			
16		Baker Open Hole Packer	8246.97	3.89		3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	8249.86	78.79	5.000	3.920			
		3.250 EX Frac Sleeve	8328.65	2.40			3.150	2286	
15		3 Joint of 4-1/2-13.5 LTC Casing	8331.05	120.44	5.000	3.920			
		Baker Open Hole Packer	8451.48	3.89		3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	8455.38	78.89	5.000	3.920			
14		3.125 EX Frac Sleeve	8534.27	2.40			3.025	2286	
		3 Joints of 4-1/2-13.5 LTC Casing	8536.67	117.56	5.000	3.920			
		Baker Open Hole Packer	8654.73	3.89		3.875		2154	
13		2 Joints of 4-1/2-13.5 LTC Casing	8658.12	80.20	5.000	3.920			
		3.000 EX Frac Sleeve	8738.32	2.40			2.900	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	8740.72	116.79	5.000	3.920			
12		Baker Open Hole Packer	8857.51	3.89		3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	8861.40	74.48	5.000	3.920			
		2.875 EX Frac Sleeve	8935.88	2.40			2.775	2286	
11		3 Joints of 4-1/2-13.5 LTC Casing	8938.28	119.49	5.000	3.920			
		Baker Open Hole Packer	9057.77	3.89		3.875		2154	
		3 Joints of 4-1/2-13.5 LTC Casing	9061.66	118.46	5.000	3.920			
10		2.750 EX Frac Sleeve	9180.12	2.40			2.650	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	9182.52	118.68	5.000	3.920			
		Baker Open Hole Packer	9301.20	3.89		3.875		2154	

Operating Company Mewbourne Oil Co.
Well Name & Number ARIES 20 MP FED COM #1H
Sales Ticket Number 0005965283-1
Date 11/23/2013

Company Rep Jake Nave
Field 0
BOT Service Rep John Davis
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse			
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	7,616.00	9,960	6,230			
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,331.03	12,410	10,680			
Botl Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-			
TVD		7400.00		KOP		6877.00		Open Hole		6.125	Casing Vol. (bbl)	282.2	
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size				0
	Comm. Number	Description				Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ (BBL)
12		2 Joints of 4-1/2-13.5 LTC Casing				9305.09	79.58	5.000	3.920				
		2.625 EX-Frac Sleeve				9384.67	2.40			2.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				9387.07	118.70	5.000	3.920				
		Baker Open Hole Packer				9505.77	3.89		3.875		2154		
11		2 Joints of 4-1/2-13.5 LTC Casing				9509.66	79.94	5.000	3.920				
		2.500 EX-Frac Sleeve				9589.60	2.40			2.400	2286		
		3 Joint of 4-1/2-13.5 LTC Casing				9592.00	118.28	5.000	3.920				
		Baker Open Hole Packer				9710.28	3.89		3.875		2154		
10		2 Joints of 4-1/2-13.5 LTC Casing				9714.17	79.38	5.000	3.920				
		2.375 EX-Frac Sleeve				9793.55	2.40			2.275	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				9795.95	118.74	5.000	3.920				
		Baker Open Hole Packer				9914.69	3.89		3.875		2154		
9		2 Joint of 4-1/2-13.5 LTC Casing				9918.58	79.18	5.000	3.920				
		2.250 EX-Frac Sleeve				9997.76	2.40			2.150	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				10000.16	117.44	5.000	3.920				
		Baker Open Hole Packer				10117.60	3.89		3.875		2154		
8		2 Joint of 4-1/2-13.5 LTC Casing				10121.49	79.01	5.000	3.920				
		2.125 EX-Frac Sleeve				10200.60	2.40			2.025	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				10202.90	119.78	5.000	3.920				
		Baker Open Hole Packer				10322.68	3.89		3.875		2154		
7		3 Joint of 4-1/2-13.5 LTC Casing				10326.57	118.72	5.000	3.920				
		2.000 EX-Frac Sleeve				10445.29	2.40			1.900	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				10447.69	122.24	5.000	3.920				
		Baker Open Hole Packer				10569.93	3.89		3.875		2154		
6		2 Joint of 4-1/2-13.5 LTC Casing				10573.82	78.01	5.000	3.920				
		1.875 EX-Frac Sleeve				10651.83	2.40			1.775	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				10654.23	118.50	5.000	3.920				
		Baker Open Hole Packer				10772.73	3.89		3.875		2154		
5		2 Joints of 4-1/2-13.5 LTC Casing				10776.62	79.13	5.000	3.920				
		1.750 EX-Frac Sleeve				10855.75	2.40			1.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing				10858.15	118.96	5.000	3.920				
		Baker Open Hole Packer				10977.33	3.89		3.875		2154		
4		2 Joints of 4-1/2-13.5 LTC Casing				10981.00	79.15	5.000	3.920				
		1.625 EX-Frac Sleeve				11080.15	2.40			1.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing				11062.55	115.26	5.000	3.920				
		Baker Open Hole Packer				11776.81	3.89		3.875		2154		
3		2 Joints of 4-1/2-13.5 LTC Casing				11181.70	77.37	5.000	3.920				
		1.500 DBL-Ball Frac Sleeve				11259.07	2.40			1.400	2286		

Company Rep	Jake Nave
Field	0
BOT Service Rep	John Davis
District Location	Odessa, TX

[illegible]