



Company: Mewbourne Oil Company
Lease/Well: URSA 27 Federal Com /No. 004H
Location: Sec27 T18S R30E
Rig Name: Trinidad 110
State/County: New Mexico/Eddy
Latitude: 32.73, Longitude: -103.97
GRID North is 0.20 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 17.5 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ursa 27 fed com #4h-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/13/2013 / 15:04

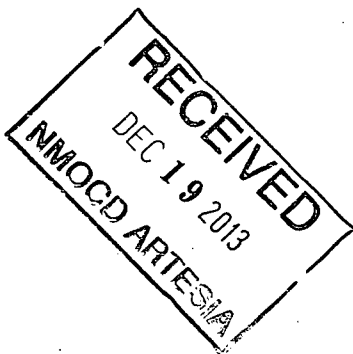
Vaughn Energy Services

West, Texas

432-563-5444

Surveyor: Chris Bankson

URSA 27 Federal Com No. 004H / API 30-015-39582



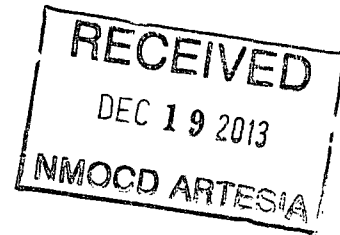
30 015 39582

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.27	127.12	100.00	-0.14	0.19	-0.14	0.24	127.12	0.27
200.00	0.21	344.82	200.00	-0.11	0.33	-0.11	0.35	107.87	0.46
300.00	0.45	344.60	300.00	0.45	0.18	0.45	0.49	21.23	0.24
400.00	0.38	337.25	399.99	1.14	-0.06	1.14	1.14	357.11	0.09
500.00	0.63	341.83	499.99	1.97	-0.36	1.97	2.01	349.71	0.25
600.00	0.76	357.13	599.98	3.16	-0.56	3.16	3.21	349.90	0.23
700.00	0.26	19.14	699.98	4.04	-0.52	4.04	4.07	352.65	0.53
800.00	0.43	21.24	799.98	4.60	-0.31	4.60	4.61	356.14	0.17
900.00	0.42	25.75	899.97	5.28	-0.01	5.28	5.28	359.85	0.03
1000.00	0.30	22.18	999.97	5.86	0.25	5.86	5.87	2.40	0.13
1100.00	0.64	22.00	1099.97	6.62	0.55	6.62	6.65	4.79	0.34
1200.00	0.77	43.07	1199.96	7.64	1.23	7.64	7.73	9.12	0.29
1300.00	1.59	62.99	1299.94	8.76	2.92	8.76	9.23	18.45	0.90
1400.00	1.84	68.25	1399.90	9.99	5.65	9.99	11.47	29.51	0.30
1500.00	1.39	62.61	1499.86	11.14	8.22	11.14	13.84	36.43	0.48
1600.00	1.28	50.05	1599.83	12.41	10.15	12.41	16.03	39.27	0.31
1700.00	0.93	49.76	1699.81	13.65	11.62	13.65	17.93	40.41	0.34
1800.00	0.67	27.69	1799.80	14.69	12.51	14.69	19.30	40.42	0.40

OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE URSA 27 FED COM #4H
COUNTY LEA

STATE OF NEW MEXICO
DEVIATION REPORT

500	0.50
900	0.50
1,399	2.00
1,551	0.80
1,988	0.80
2,393	0.60
2,815	0.40
3,266	0.50
3,628	0.80
4,062	0.30
4,890	1.10
5,251	1.10
5,657	1.50
6,063	2.90
6,334	3.60
6,514	4.50
6,691	4.00
6,791	2.50
6,876	3.00
6,971	2.50
7,160	2.50
7,349	1.50
7,699	0.60
DIRECTIONAL	



BY: Cyndi Reynolds

STATE OF TEXAS

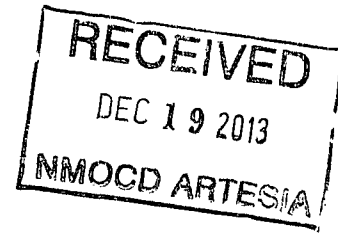
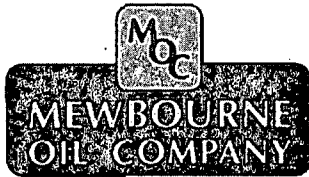
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me on
Cyndi Reynolds on behalf of Trinidad Drilling, LP.

10th of December 2013 by

Kristin Marie Arroyo
Notary Public for Harris County, Texas
My Commission Expires:





Mewbourne Oil Company .

Eddy County, New Mexico

URSA 27 Federal Com Section 27-18S-30E

URSA 27 Fed Com #4H

OH

Design: OH

Standard Survey Report

12 November, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: URSA 27 Fed Com #4H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 1.10)
Site:	URSA 27 Federal Com Section 27-18S-30E	MD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 1.10)
Well:	URSA 27 Fed Com #4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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	URSA 27 Federal Com Section 27-18S-30E		
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Site Position:		Northing:	627,011.64 usft	Latitude:	32° 43' 23.584 N
From:	Map	Easting:	612,460.98 usft	Longitude:	103° 58' 3.545 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.20 °

Well	URSA 27 Fed Com #4H				
Well Position	+N-S	0.0 usft	Northing:	627,011.64 usft	Latitude: 32° 43' 23.584 N
	+E-W	0.0 usft	Easting:	612,460.98 usft	Longitude: 103° 58' 3.545 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,440.0 usft

Wellbore	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/2/2013	7.54	60.53	48,660

Survey Program		Date 11/12/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,700.0	VES Gyro Survey #1 (OH)	GyroFlex	MWD - Standard	
7,744.0	12,770.0	Survey #2 (OH)	MWD		

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	0.27	127.12	100.0	-0.1	0.2	0.2	0.27	0.27	0.00
200.0	0.21	344.82	200.0	-0.1	0.3	0.3	0.45	-0.06	-142.30
300.0	0.45	344.60	300.0	0.4	0.2	0.2	0.24	0.24	-0.22
400.0	0.38	337.25	400.0	1.1	-0.1	0.0	0.09	-0.07	-7.35
500.0	0.63	341.83	500.0	2.0	-0.4	-0.3	0.25	0.25	4.58
600.0	0.76	357.13	600.0	3.1	-0.6	-0.4	0.23	0.13	15.30
700.0	0.26	19.14	700.0	4.0	-0.5	-0.4	0.53	-0.50	22.01
800.0	0.43	21.24	800.0	4.6	-0.3	-0.1	0.17	0.17	2.10
900.0	0.42	25.75	900.0	5.3	0.0	0.2	0.03	-0.01	4.51
1,000.0	0.30	22.18	1,000.0	5.8	0.2	0.5	0.12	-0.12	-3.57
1,100.0	0.64	22.00	1,100.0	6.6	0.6	0.8	0.34	0.34	-0.18
1,200.0	0.77	43.07	1,200.0	7.6	1.2	1.5	0.29	0.13	21.07
1,300.0	1.59	62.99	1,299.9	8.7	2.9	3.3	0.90	0.82	19.92
1,400.0	1.84	68.25	1,399.9	10.0	5.6	6.1	0.30	0.25	5.26
1,500.0	1.39	62.61	1,499.9	11.1	8.2	8.7	0.48	-0.45	-5.64



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well URSA 27-Fed.Com.#4H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad, 110)
Site:	URSA 27-Federal.Com. Section 27-18S-30E	MD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad, 110)
Well:	URSA 27-Fed.Com.#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
1,600.0	1.28	50.05	1,599.8	12.4	10.1	10.7	0.31	-0.11	-12.56
1,700.0	0.93	49.76	1,699.8	13.6	11.6	12.2	0.35	-0.35	-0.29
1,800.0	0.67	27.69	1,799.8	14.7	12.5	13.1	0.40	-0.26	-22.07
1,900.0	0.57	19.32	1,899.8	15.7	12.9	13.6	0.13	-0.10	-8.37
2,000.0	0.66	6.11	1,999.8	16.7	13.2	13.9	0.17	0.09	-13.21
2,100.0	0.57	2.15	2,099.8	17.8	13.3	14.0	0.10	-0.09	-3.96
2,200.0	0.59	1.26	2,199.8	18.8	13.3	14.1	0.02	0.02	-0.89
2,300.0	0.80	5.05	2,299.8	20.0	13.4	14.2	0.21	0.21	3.79
2,400.0	0.64	12.99	2,399.8	21.2	13.5	14.4	0.19	-0.16	7.94
2,500.0	0.45	13.90	2,499.8	22.2	13.8	14.7	0.19	-0.19	0.91
2,600.0	0.47	16.96	2,599.8	22.9	14.0	14.9	0.03	0.02	3.06
2,700.0	0.33	16.98	2,699.8	23.6	14.2	15.2	0.14	-0.14	0.02
2,800.0	0.39	31.49	2,799.8	24.2	14.4	15.4	0.11	0.06	14.51
2,900.0	0.29	38.97	2,899.7	24.6	14.8	15.8	0.11	-0.10	7.48
3,000.0	0.49	26.30	2,999.7	25.2	15.1	16.2	0.22	0.20	-12.67
3,100.0	0.34	23.73	3,099.7	25.9	15.4	16.5	0.15	-0.15	-2.57
3,200.0	0.39	25.56	3,199.7	26.5	15.7	16.8	0.05	0.05	1.83
3,300.0	0.47	23.75	3,299.7	27.1	16.0	17.1	0.08	0.08	-1.81
3,400.0	0.36	20.20	3,399.7	27.8	16.3	17.4	0.11	-0.11	-3.55
3,500.0	0.57	14.90	3,499.7	28.6	16.5	17.7	0.21	0.21	-5.30
3,600.0	0.66	17.14	3,599.7	29.6	16.8	18.0	0.09	0.09	2.24
3,700.0	0.72	19.67	3,699.7	30.8	17.2	18.5	0.07	0.06	2.53
3,800.0	0.43	28.65	3,799.7	31.7	17.6	18.9	0.30	-0.29	8.98
3,900.0	0.46	29.45	3,899.7	32.4	18.0	19.3	0.03	0.03	0.80
4,000.0	0.43	36.81	3,999.7	33.0	18.4	19.8	0.06	-0.03	7.36
4,100.0	0.38	42.11	4,099.7	33.6	18.8	20.2	0.06	-0.05	5.30
4,200.0	0.37	49.35	4,199.7	34.0	19.3	20.7	0.05	-0.01	7.24
4,300.0	0.61	58.81	4,299.7	34.5	20.0	21.4	0.25	0.24	9.46
4,400.0	0.79	64.46	4,399.7	35.1	21.1	22.5	0.19	0.18	5.65
4,500.0	0.77	61.51	4,499.7	35.7	22.3	23.8	0.04	-0.02	-2.95
4,600.0	0.97	57.06	4,599.7	36.5	23.6	25.1	0.21	0.20	-4.45
4,700.0	0.33	17.26	4,699.7	37.2	24.4	25.9	0.75	-0.64	-39.80
4,800.0	0.69	321.51	4,799.7	38.0	24.1	25.7	0.57	0.36	-55.75
4,900.0	0.85	307.37	4,899.7	38.9	23.1	24.7	0.25	0.16	-14.14
5,000.0	0.89	305.72	4,999.6	39.8	21.9	23.6	0.05	0.04	-1.65
5,100.0	0.85	311.46	5,099.6	40.7	20.7	22.4	0.10	-0.04	5.74
5,200.0	0.63	312.69	5,199.6	41.6	19.8	21.5	0.22	-0.22	1.23
5,300.0	1.12	341.75	5,299.6	42.9	19.1	20.8	0.65	0.49	29.06
5,400.0	1.16	347.73	5,399.6	44.8	18.5	20.4	0.13	0.04	5.98
5,500.0	0.95	358.12	5,499.6	46.6	18.3	20.2	0.28	-0.21	10.39
5,600.0	1.07	354.06	5,599.6	48.4	18.2	20.2	0.14	0.12	-4.06
5,700.0	1.58	346.80	5,699.5	50.6	17.8	19.9	0.54	0.51	-7.26
5,800.0	2.19	344.33	5,799.5	53.8	16.9	19.2	0.62	0.61	-2.47
5,900.0	2.82	341.15	5,899.4	58.0	15.6	18.0	0.64	0.63	-3.18



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well URSA 27: Fed Com #4H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Site:	URSA 27: Federal Com Section 27-18S-30E	MD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Well:	URSA 27: Fed Com #4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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	3.07	342.63	5,999.2	62.9	14.0	16.7	0.26	0.25	1.48
6,100.0	2.74	346.70	6,099.1	67.8	12.7	15.5	0.39	-0.33	4.07
6,200.0	2.80	347.22	6,199.0	72.5	11.6	14.6	0.07	0.06	0.52
6,300.0	3.31	343.44	6,298.9	77.6	10.2	13.5	0.55	0.51	-3.78
6,400.0	3.88	339.63	6,398.7	83.6	8.2	11.7	0.62	0.57	-3.81
6,500.0	4.25	344.77	6,498.4	90.3	6.1	9.9	0.52	0.37	5.14
6,600.0	4.40	343.77	6,598.1	97.6	4.0	8.1	0.17	0.15	-1.00
6,700.0	3.89	342.89	6,697.9	104.5	2.0	6.3	0.51	-0.51	-0.88
6,800.0	3.45	340.97	6,797.7	110.6	0.0	4.6	0.46	-0.44	-1.92
6,900.0	3.49	342.71	6,897.5	116.3	-1.9	3.0	0.11	0.04	1.74
7,000.0	2.75	341.89	6,997.3	121.5	-3.6	1.5	0.74	-0.74	-0.82
7,100.0	2.20	342.96	7,097.2	125.6	-4.9	0.4	0.55	-0.55	1.07
7,200.0	1.76	353.54	7,197.2	129.0	-5.6	-0.2	0.57	-0.44	10.58
7,300.0	1.50	353.38	7,297.1	131.8	-5.9	-0.4	0.26	-0.26	-0.16
7,400.0	1.37	355.42	7,397.1	134.3	-6.2	-0.5	0.14	-0.13	2.04
7,500.0	1.04	341.60	7,497.1	136.4	-6.5	-0.8	0.44	-0.33	-13.82
7,600.0	0.95	340.93	7,597.1	138.0	-7.1	-1.3	0.09	-0.09	-0.67
7,700.0	0.40	344.38	7,697.1	139.1	-7.5	-1.6	0.55	-0.55	3.45
7,700.0 MD VES Gyro Survey									
7,744.0	0.70	176.60	7,741.1	139.0	-7.5	-1.7	2.49	0.68	-381.32
7,789.0	6.20	136.20	7,786.0	137.0	-5.8	-0.1	12.63	12.22	-89.78
7,835.0	13.60	123.50	7,831.2	132.2	0.4	6.0	16.68	16.09	-27.61
7,880.0	20.00	125.30	7,874.3	124.8	11.1	16.4	14.27	14.22	4.00
7,925.0	24.80	125.30	7,915.9	114.9	25.1	29.9	10.67	10.67	0.00
7,970.0	29.20	124.90	7,956.0	103.2	41.8	46.1	9.79	9.78	-0.89
8,015.0	32.40	126.70	7,994.6	89.7	60.5	64.2	7.40	7.11	4.00
8,060.0	36.10	126.50	8,031.8	74.6	80.9	83.9	8.23	8.22	-0.44
8,105.0	39.70	121.30	8,067.3	59.2	103.8	106.2	10.69	8.00	-11.56
8,150.0	43.00	113.50	8,101.1	45.6	130.2	132.0	13.59	7.33	-17.33
8,195.0	45.80	105.10	8,133.3	35.3	159.9	161.2	14.46	6.22	-18.67
8,240.0	47.50	96.80	8,164.2	29.1	191.9	193.0	13.93	3.78	-18.44
8,285.0	52.10	90.70	8,193.3	26.9	226.2	227.1	14.54	10.22	-13.56
8,331.0	57.00	89.80	8,220.0	26.8	263.7	264.5	10.77	10.65	-1.96
8,376.0	61.60	89.40	8,242.9	27.1	302.3	303.2	10.25	10.22	-0.89
8,421.0	65.00	90.80	8,263.1	27.0	342.5	343.4	8.05	7.56	3.11
8,467.0	68.50	91.00	8,281.3	26.3	384.8	385.6	7.62	7.61	0.43
8,512.0	71.80	92.10	8,296.6	25.2	427.1	427.8	7.69	7.33	2.44
8,557.0	76.90	92.10	8,308.7	23.6	470.4	471.0	11.33	11.33	0.00
8,602.0	80.60	90.50	8,317.5	22.6	514.5	515.0	8.93	8.22	-3.56
8,627.0	83.40	89.60	8,321.0	22.6	539.2	539.7	11.75	11.20	-3.60
8,717.0	90.00	86.50	8,326.1	25.6	629.0	629.5	8.10	7.33	-3.44
8,748.0	90.00	86.50	8,326.1	27.5	659.9	660.5	0.00	0.00	0.00
8,780.0	91.10	87.30	8,325.8	29.2	691.9	692.5	4.25	3.44	2.50



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: URSA 27 Fed Com #4H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Site:	URSA 27 Federal Com Section 27-18S-30E	MD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Well:	URSA 27 Fed Com #4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
8,812.0	91.50	87.50	8,325.1	30.7	723.8	724.5	1.40	1.25	0.63
8,875.0	91.90	87.30	8,323.2	33.6	786.7	787.5	0.71	0.63	-0.32
8,970.0	91.00	87.50	8,320.8	37.9	881.6	882.4	0.97	-0.95	0.21
9,065.0	91.10	86.60	8,319.1	42.7	976.5	977.4	0.95	0.11	-0.95
9,160.0	90.80	87.30	8,317.5	47.8	1,071.3	1,072.4	0.80	-0.32	0.74
9,255.0	90.70	86.30	8,316.3	53.1	1,166.2	1,167.4	1.06	-0.11	-1.05
9,350.0	90.80	88.20	8,315.0	57.7	1,261.0	1,262.4	2.00	0.11	2.00
9,444.0	90.50	87.20	8,314.0	61.4	1,355.0	1,356.3	1.11	-0.32	-1.06
9,539.0	90.90	87.90	8,312.8	65.5	1,449.9	1,451.3	0.85	0.42	0.74
9,634.0	90.30	86.80	8,311.8	69.9	1,544.8	1,546.3	1.32	-0.63	-1.16
9,729.0	91.00	88.40	8,310.7	73.9	1,639.7	1,641.3	1.84	0.74	1.68
9,824.0	90.20	86.80	8,309.7	77.8	1,734.6	1,736.3	1.88	-0.84	-1.68
9,919.0	90.60	89.10	8,309.1	81.2	1,829.5	1,831.3	2.46	0.42	2.42
10,014.0	90.40	88.90	8,308.2	82.9	1,924.5	1,926.3	0.30	-0.21	-0.21
10,109.0	89.70	88.90	8,308.2	84.7	2,019.5	2,021.2	0.74	-0.74	0.00
10,204.0	91.40	88.90	8,307.3	86.5	2,114.4	2,116.2	1.79	1.79	0.00
10,298.0	90.70	87.70	8,305.5	89.3	2,208.4	2,210.2	1.48	-0.74	-1.28
10,394.0	90.60	88.90	8,304.4	92.2	2,304.3	2,306.2	1.25	-0.10	1.25
10,488.0	89.70	87.50	8,304.2	95.1	2,398.3	2,400.2	1.77	-0.96	-1.49
10,583.0	89.10	86.80	8,305.2	99.9	2,493.2	2,495.2	0.97	-0.63	-0.74
10,678.0	88.50	88.40	8,307.2	103.8	2,588.1	2,590.1	1.80	-0.63	1.68
10,773.0	88.50	88.20	8,309.7	106.7	2,683.0	2,685.1	0.21	0.00	-0.21
10,867.0	88.80	86.50	8,311.9	111.0	2,776.8	2,779.1	1.84	0.32	-1.81
10,962.0	90.40	87.00	8,312.5	116.4	2,871.7	2,874.0	1.76	1.68	0.53
11,057.0	90.10	88.90	8,312.1	119.8	2,966.6	2,969.0	2.02	-0.32	2.00
11,151.0	89.60	88.60	8,312.4	121.8	3,060.6	3,063.0	0.62	-0.53	-0.32
11,246.0	88.80	88.60	8,313.7	124.2	3,155.6	3,158.0	0.84	-0.84	0.00
11,340.0	89.70	87.00	8,314.9	127.8	3,249.5	3,252.0	1.95	0.96	-1.70
11,435.0	89.70	85.60	8,315.4	133.9	3,344.3	3,347.0	1.47	0.00	-1.47
11,529.0	88.50	87.20	8,316.9	139.8	3,438.1	3,440.9	2.13	-1.28	-1.70
11,624.0	90.40	86.80	8,317.8	144.8	3,532.9	3,535.9	2.04	2.00	-0.42
11,719.0	90.00	85.80	8,317.5	150.9	3,627.7	3,630.9	1.13	-0.42	-1.05
11,813.0	90.60	87.90	8,317.0	156.1	3,721.6	3,724.9	2.32	0.64	2.23
11,908.0	90.50	89.10	8,316.1	158.5	3,816.5	3,819.8	1.27	-0.11	1.26
12,002.0	88.70	89.10	8,316.7	160.0	3,910.5	3,913.8	1.91	-1.91	0.00
12,097.0	90.30	89.10	8,317.6	161.5	4,005.5	4,008.8	1.68	1.68	0.00
12,192.0	87.80	89.30	8,319.1	162.8	4,100.5	4,103.7	2.64	-2.63	0.21
12,287.0	87.40	89.40	8,323.1	163.9	4,195.4	4,198.6	0.43	-0.42	0.11
12,382.0	87.30	88.60	8,327.5	165.6	4,290.3	4,293.4	0.85	-0.11	-0.84
12,476.0	89.60	87.50	8,330.1	168.8	4,384.2	4,387.4	2.71	2.45	-1.17
12,571.0	88.60	86.30	8,331.5	173.9	4,479.0	4,482.4	1.64	-1.05	-1.26
12,770.0	88.60	86.30	8,336.4	186.7	4,677.6	4,681.3	0.00	0.00	0.00

12770 MD Projected to Bit



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well URSA 27 Fed Com #4H
Project:	Eddy County New Mexico	TVD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Site:	URSA 27 Federal Com Section 27-18S-30E	MD Reference:	GL 3400 + 20 @ 3460.0usft (Trinidad 110)
Well:	URSA 27 Fed Com #4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,700.0	7,697.1	139.1	-7.5	7700' MD VES Gyro Survey
12,770.0	8,336.4	186.7	4,677.6	12770' MD Projected to Bit

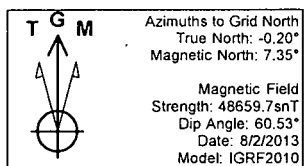


COMPANY: Mewbourne Oil Company
 WELL: URSA 27 Fed Com #4H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Trinidad 110



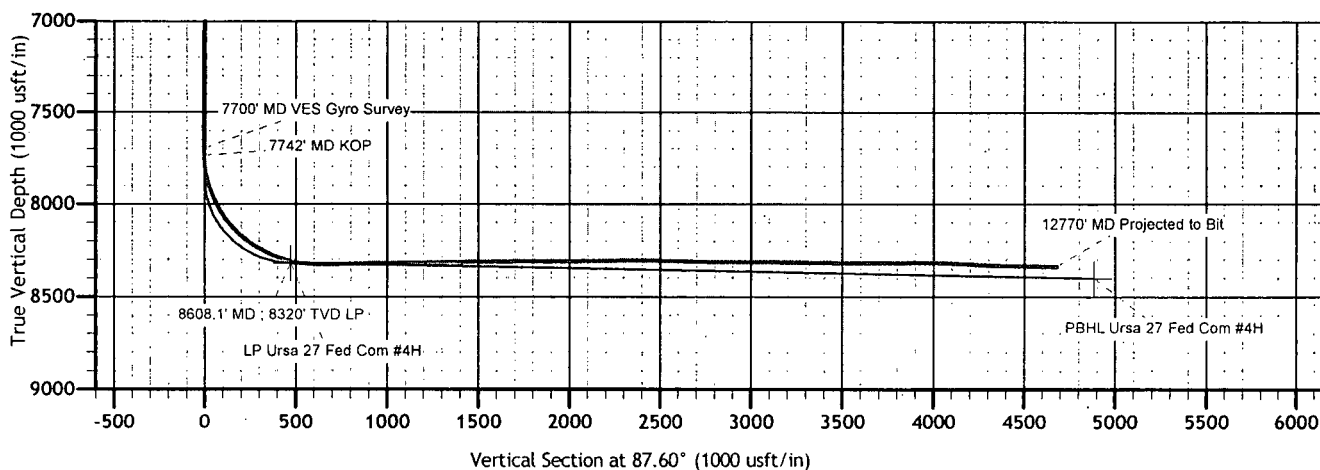
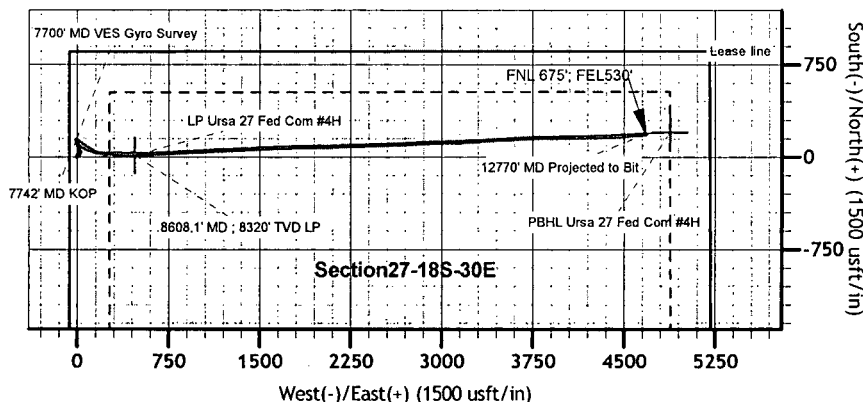
OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.35°



GEODETTIC ZONE: New Mexico East 3001					
GL 3400 + 20 @ 3460.0usft (Trinidad 110)					
GROUND ELEVATION: 3440.0					
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.0	0.0	627011.64	612460.98	32° 43' 23.584 N	103° 58' 3.545 W
					Slot

PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
1	7700.0	0.40	344.38	7697.1	139.1	-7.5	0.00	0.00	-1.6	
2	7742.0	0.40	344.38	7739.1	139.4	-7.6	0.00	0.00	-1.7	
3	7882.3	16.44	169.38	7877.5	120.2	-4.0	12.00	-175.11	1.0	
4	8608.1	88.96	87.52	8320.0	13.9	471.9	11.95	-82.48	472.1	LP Ursa 27 Fed Com #4H
5	13020.4	88.96	87.52	8400.0	204.5	4879.3	0.00	0.00	4883.6	PBHL Ursa 27 Fed Com #4H



Operating Company Mewbourne Oil Co.
Well Name & Number Ursa 27 Fed Com 4H
Sales Ticket Number 0005942439-1
Date 11/14/2013

Company Rep Gary Sutton
Field Fed Com Sec 27-18s-30E
BOT Service Rep John Davis
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	830000	6.276	6.276	LTC // 8RD	0.03826	8,678.00	9,960	6,230
Top Liner	4.500	13.50	422000	3.920	3.795	LTC / 8RD	0.01492	4,283.74	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	8331.00		KOP	7742.00		Open Hole	6.125		Casing Vol. (bbl)	323.3
Carry Fluid Weight (ppg)	9		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)
Liner Top 1		8450.27							

Zone Length	JR Sleeve	JR Setting Sleeve & S3	8450.27	8'67	5.813	3.875			
		Spacer Nipple	8458.94	8'05	4.500	3.920			
	7 Joints	Casing	8466.99	278.67	5.000	3.920			
		3.625" EX Frac Sleeve	8745.66	2'40	5.630	3.525	2286		
	2 joints	4 1/2 13.50# Casing	8748.06	77.90	5.000	3.920			
		582 OH Packer	8825.96	3'89	5.820	3.875	2154		
	3 joints	4 1/2 13.50# Casing	8829.85	118.77	5.000	3.920			
		3.50" EX Frac Sleeve	8948.62	2'40	5.630	3.875	3.400	2286	
	2 Joints	4 1/2 13.50# Casing	8951.02	78.18	5.000	3.920			
		582 OH Packer	9025.20	3'89	5.820	3.875	2154		
	3 Joints	4 1/2 13.50# Casing	9033.09	118.74	5.000	3.920			
		3.375" EX Frac Sleeve	9151.83	2'40	5.630	3.275	2286		
	2 Joints	4 1/2 13.50# Casing	9154.23	79.33	5.000	3.920			
		582 OH Packer	9223.56	3'89	5.820	3.875	2154		
	3 Joints	4 1/2 13.50# Casing	9237.45	118.29	5.000	3.920			
		3.25" EX Frac Sleeve	9355.74	2'40	5.630	3.150	2286		
	2 Joints	4 1/2 13.50# Casing	9358.14	77.05	5.000	3.920			
		582 OH Packer	9435.19	3'89	5.820	3.875	2154		
	3 Joints	4 1/2 13.50# Casing	9439.08	119.75	5.000	3.920			
		3.125" EX Frac Sleeve	9558.83	2'40	5.630	3.025	2286		
	3 Joints	4 1/2 13.50# Casing	9561.23	118.49	5.000	3.920			
		582 OH Packer	9679.72	3'89	5.820	3.875	2154		

Operating Company Mewbourne Oil Co.
Well Name & Number Ursa 27 Fed Com 4H
Sales Ticket Number 0005942439-1
Date 11/14/2013

Company Rep Gary Sutton
Field Fed Com Sec 27-18s-30E
BOT Service Rep John Davis
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	830000	6.276	6.276	LTC / 8RD	0.03826	8,678.00	9,960	6,230		
Top Liner	4.500	13.50	422000	3.920	3.795	LTC / 8RD	0.01492	4,283.74	12,410	10,690		
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-		
TVD		8331.00		KOP		7742.00		Open Hole		6.125	Casing Vol. (bbl)	323.3
Carry Fluid Weight (ppg)			9		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)
	3 Joints	4 1/2 13.50# Casing	9683.61	116.47	5.000	3.920				
		3.00" EX Frac Sleeve	9800.08	2.40	5.630		2.900	2286		
	2 Joints	4 1/2 13.50# Casing	9802.48	77.41	5.000	3.920				
		582 OH Packer	9879.89	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	9883.78	117.17	5.000	3.920				
		2.875" EX Frac Sleeve	10000.95	2.40	5.630		2.775	2286		
	2 Joints	4 1/2 13.50# Casing	10003.35	79.69	5.000	3.920				
		582 OH Packer	10083.04	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	10086.93	119.44	5.000	3.920				
		2.75" EX Frac Sleeve	10206.37	2.40	5.630		2.650	2286		
	2 Joints	4 1/2 13.50# Casing	10208.77	76.92	5.000	3.920				
		582 OH Packer	10285.69	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	10289.58	120.40	5.000	3.920				
		2.625" EX Frac Sleeve	10409.98	2.40	5.630		2.525	2286		
	2 Joints	4 1/2 13.50# Casing	10412.38	79.22	5.000	3.920				
		582 OH Packer	10491.60	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	10495.49	119.32	5.000	3.920				
		2.50" EX Frac Sleeve	10614.81	2.40	5.630		2.400	2286		
	2 Joints	4 1/2 13.50# Casing	10617.21	77.67	5.000	3.920				
		582 OH Packer	10694.68	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	10698.77	120.11	5.000	3.920				
		2.375" EX Frac Sleeve	10818.88	2.40	5.630		2.275	2286		
	2 Joints	4 1/2 13.50# Casing	10821.28	78.06	5.000	3.920				
		582 OH Packer	10898.34	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	10903.23	122.78	5.000	3.920				
		2.25" EX Frac Sleeve	11026.01	2.40	5.630		2.150	2286		

Operating Company Mewbourne Oil Co.
Well Name & Number Ursa 27 Fed Com 4H
Sales Ticket Number 0005942439-1
Date 11/14/2013

Company Rep Gary Sutton
Field Fed Com Sec 27-18s-30E
BOT Service Rep John Davis
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	830000	6.276	6.276	LTC / 8RD	0.03826	8,678.00	9,960	6,230	
Top Liner	4.500	13.50	422000	3.920	3.795	LTC / 8RD	0.01492	4,283.74	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		8331.00		KOP		7742.00		Open Hole	6.125	Casing Vol. (bbl)	323.3
Carry Fluid Weight (ppg)			9		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)
	2 Joints	4 1/2 13.50# Casing	11028.41	81.43	5.000	3.920				
		582 OH Packer	11109.84	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	11113.73	120.47	5.000	3.920				
		2.125" EX Frac Sleeve	11234.20	2.40	5.630		2.025	2286		
	2 Joints	4 1/2 13.50# Casing	11236.60	79.21	5.000	3.920				
		582 OH Packer	11315.81	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	11319.70	118.44	5.000	3.920				
		2.00" EX Frac Sleeve	11438.14	2.40	5.630		1.900	2286		
	3 Joints	4 1/2 13.50# Casing	11440.54	120.04	5.000	3.920				
		582 OH Packer	11560.58	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	11564.47	121.63	5.000	3.920				
		1.875" EX Frac Sleeve	11686.10	2.40	5.630		1.775	2286		
	2 Joints	4 1/2 13.50# Casing	11688.50	80.08	5.000	3.920				
		582 OH Packer	11768.98	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	11772.47	118.30	5.000	3.920				
		1.75" EX Frac Sleeve	11890.77	2.40	5.630		1.650	2286		
	2 Joints	4 1/2 13.50# Casing	11893.17	80.04	5.000	3.920				
		582 OH Packer	11973.21	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	11977.10	118.16	5.000	3.920				
		1.625" EX Frac Sleeve	12095.26	2.40	5.630		1.525	2286		
	2 Joints	4 1/2 13.50# Casing	12097.66	79.00	5.000	3.920				
		582 OH Packer	12176.65	3.89	5.820	3.875		2154		
	3 Joints	4 1/2 13.50# Casing	12180.55	122.96	5.000	3.920				
		1.50" EX Frac Sleeve, DB	12303.51	2.40	5.630		1.400	2286		
	2 Joints	4 1/2 13.50# Casing	12305.91	77.12	5.000	3.920				
		582 OH Packer	12383.03	3.89	5.820	3.875		2154		

Company Rep	Gary Sutton
Field	Fed Com Sec 27-18s-30E
BOT Service Rep	John Davis
District Location	Odessa, TX

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