

OPERATOR
WELL/LEASE
COUNTY

MEWBOURNE OIL COMPANY
MALAGA 13 CN FED COM 1H
EDDY

075-0093

STATE OF NEW MEXICO
DEVIATION REPORT

15-40974

376	2.34
770	2.71
1,055	1.03
1,437	1.43
1,852	0.80
2,234	2.23
2,721	1.86
3,134	1.18
3,515	0.83
3,958	0.70
4,435	1.52
4,817	1.98
5,295	1.71
5,772	2.29
6,313	1.75
6,727	4.75
6,886	3.51
7,139	0.45



BY:

Steve Moore

STATE OF TEXAS

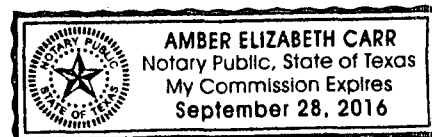
COUNTY OF MIDLAND

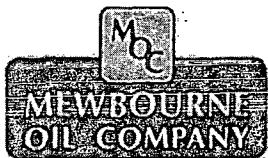
The foregoing instrument was acknowledged before me on
Steve Moore on behalf of Patterson-UTI Drilling Company LLC.

2/21/13

, by

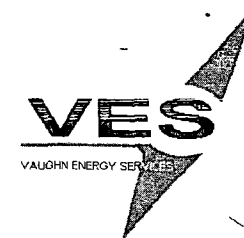
Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:





Company: Mewbourne Oil Company
Lease/Well: Malaga 13 CN Federal Com/No 001H

Rig Name: Patterson 75
State/County: New Mexico/Eddy
Latitude: 32.14, Longitude: -104.04
GRID North Is 0.15 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB= 23'

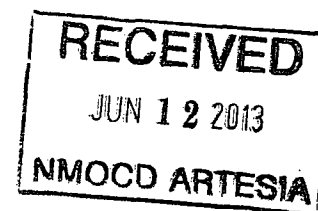
DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 2/25/2013 / 08:56

Vaughn Energy Services
Midland, Texas
432-563-5444

Surveyor: Tim Dillon

Malaga 13 CN Federal Com No 001H / API 30-015-40974



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	1.32	305.20	99.99	0.67	-0.94	0.67	1.15	305.20	1.32
200.00	1.93	311.57	199.95	2.45	-3.14	2.45	3.98	307.88	0.63
300.00	1.82	311.46	299.90	4.62	-5.59	4.62	7.25	309.52	0.10
400.00	1.74	311.35	399.85	6.67	-7.93	6.67	10.36	310.09	0.08
500.00	1.83	310.38	499.80	8.71	-10.29	8.71	13.48	310.27	0.10
600.00	1.90	309.41	599.75	10.81	-12.79	10.81	16.74	310.19	0.08
700.00	1.74	302.35	699.70	12.67	-15.36	12.67	19.91	309.53	0.28
800.00	1.57	295.30	799.65	14.07	-17.88	14.07	22.76	308.20	0.26
900.00	1.45	297.30	899.62	15.24	-20.25	15.24	25.34	306.97	0.14
1000.00	1.34	299.31	999.59	16.39	-22.39	16.39	27.75	306.21	0.12
1100.00	1.26	298.30	1099.56	17.49	-24.38	17.49	30.01	305.65	0.09
1200.00	1.15	297.30	1199.54	18.47	-26.24	18.47	32.09	305.14	0.11
1300.00	0.93	290.83	1299.53	19.22	-27.89	19.22	33.87	304.57	0.25
1400.00	0.71	274.36	1399.52	19.55	-29.27	19.55	35.20	303.75	0.32
1500.00	0.66	230.42	1499.51	19.23	-30.33	19.23	35.91	302.38	0.52
1600.00	0.61	176.49	1599.50	18.33	-30.74	18.33	35.79	300.81	0.58
1700.00	0.76	179.30	1699.50	17.14	-30.70	17.14	35.16	299.17	0.15
1800.00	0.88	182.10	1799.49	15.71	-30.72	15.71	34.50	297.08	0.13
1900.00	1.38	148.06	1899.47	13.92	-30.11	13.92	33.17	294.81	0.82
2000.00	1.88	124.01	1999.43	11.98	-28.12	11.98	30.56	293.08	0.84

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
2100.00	2.23	107.62	2099.36	10.47	-24.90	10.47	27.01	292.81	0.68
2200.00	2.58	101.23	2199.28	9.44	-20.84	9.44	22.88	294.38	0.44
2300.00	3.09	101.88	2299.15	8.45	-15.99	8.45	18.08	297.86	0.51
2400.00	3.61	102.52	2398.98	7.21	-10.27	7.21	12.55	305.07	0.52
2500.00	2.78	96.49	2498.83	6.26	-4.79	6.26	7.88	322.57	0.89
2600.00	1.96	90.45	2598.74	5.97	-0.67	5.97	6.01	353.62	0.86
2700.00	1.59	84.49	2698.69	6.09	2.43	6.09	6.55	21.72	0.41
2800.00	1.23	78.54	2798.66	6.43	4.86	6.43	8.06	37.07	0.39
2900.00	1.05	83.12	2898.64	6.76	6.82	6.76	9.60	45.28	0.20
3000.00	0.88	87.70	2998.63	6.90	8.50	6.90	10.95	50.95	0.19
3100.00	0.75	82.18	3098.62	7.02	9.92	7.02	12.15	54.72	0.15
3200.00	0.64	76.66	3198.61	7.24	11.11	7.24	13.26	56.93	0.13
3300.00	0.52	74.63	3298.60	7.49	12.09	7.49	14.22	58.24	0.13
3400.00	0.41	72.59	3398.60	7.71	12.87	7.71	15.00	59.06	0.11
3500.00	0.29	57.22	3498.60	7.96	13.42	7.96	15.60	59.34	0.15
3600.00	0.17	41.85	3598.60	8.21	13.74	8.21	16.00	59.14	0.13
3700.00	0.17	160.06	3698.60	8.18	13.89	8.18	16.12	59.49	0.29
3800.00	0.16	278.28	3798.60	8.06	13.80	8.06	15.98	59.69	0.28
3900.00	0.14	285.20	3898.60	8.12	13.54	8.12	15.79	59.06	0.03
4000.00	0.14	292.11	3998.60	8.19	13.31	8.19	15.63	58.38	0.02
4100.00	0.22	315.01	4098.60	8.37	13.06	8.37	15.52	57.34	0.10
4200.00	0.27	324.91	4198.60	8.70	12.80	8.70	15.47	55.78	0.07
4300.00	0.41	329.44	4298.59	9.20	12.48	9.20	15.50	53.59	0.14
4400.00	0.54	333.97	4398.59	9.93	12.09	9.93	15.65	50.59	0.14
4500.00	0.59	241.19	4498.59	10.11	11.43	10.11	15.26	48.50	0.82
4600.00	0.64	231.42	4598.58	9.51	10.54	9.51	14.19	47.93	0.12
4700.00	0.95	231.90	4698.57	8.65	9.45	8.65	12.81	47.52	0.31
4800.00	1.24	232.39	4798.55	7.48	7.94	7.48	10.91	46.71	0.29
4900.00	1.26	231.34	4898.53	6.13	6.23	6.13	8.74	45.42	0.04
5000.00	1.31	230.30	4998.50	4.71	4.48	4.71	6.50	43.56	0.05
5100.00	1.28	232.37	5098.48	3.30	2.72	3.30	4.27	39.46	0.06
5200.00	1.26	234.45	5198.45	1.98	0.94	1.98	2.19	25.34	0.05
5300.00	1.09	226.41	5298.43	0.69	-0.64	0.69	0.94	316.73	0.24
5400.00	0.91	218.37	5398.42	-0.59	-1.83	-0.59	1.92	252.03	0.22
5500.00	1.08	207.69	5498.40	-2.05	-2.76	-2.05	3.43	233.38	0.25
5600.00	1.24	197.01	5598.38	-3.92	-3.51	-3.92	5.26	221.86	0.27
5700.00	1.34	201.30	5698.36	-6.04	-4.25	-6.04	7.39	215.14	0.13
5800.00	1.43	205.58	5798.33	-8.25	-5.21	-8.25	9.76	212.28	0.14
5900.00	1.31	198.52	5898.30	-10.46	-6.11	-10.46	12.11	210.31	0.21
6000.00	1.19	191.46	5998.28	-12.56	-6.68	-12.56	14.23	208.02	0.19
6100.00	1.19	200.82	6098.25	-14.54	-7.26	-14.54	16.25	206.52	0.19
6200.00	1.18	212.17	6198.23	-16.39	-8.17	-16.39	18.31	206.51	0.23

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
6300.00	1.20	233.97	6298.21	-17.87	-9.57	-17.87	20.27	208.16	0.45
6400.00	1.21	253.77	6398.19	-18.78	-11.42	-18.78	21.98	211.31	0.41
6500.00	1.75	266.74	6498.16	-19.16	-13.96	-19.16	23.71	216.08	0.64
6600.00	2.30	279.70	6598.09	-18.91	-17.47	-18.91	25.74	222.72	0.71
6700.00	3.32	279.67	6697.97	-18.09	-22.30	-18.09	28.71	230.96	1.02
6800.00	4.35	285.63	6797.75	-16.58	-28.81	-16.58	33.24	240.08	1.10
6900.00	2.37	295.76	6897.57	-14.66	-34.32	-14.66	37.32	246.87	2.06
7000.00	0.39	290.89	6997.54	-13.64	-36.50	-13.64	38.97	249.51	1.98
7100.00	0.78	258.26	7097.53	-13.65	-37.49	-13.65	39.90	249.99	0.50
7200.00	1.06	203.11	7197.52	-14.64	-38.51	-14.64	41.20	249.18	0.89
7300.00	1.58	165.76	7297.50	-16.83	-38.54	-16.83	42.05	246.41	0.98
7400.00	1.45	131.70	7397.46	-19.01	-37.25	-19.01	41.82	242.97	0.90
7500.00	1.14	132.55	7497.44	-20.52	-35.58	-20.52	41.07	240.03	0.31
7600.00	0.60	128.64	7597.43	-21.52	-34.44	-21.52	40.61	238.00	0.54
7660.00	0.20	277.40	7657.43	-21.70	-34.30	-21.70	40.59	237.68	1.30

Mewbourne Oil Co

Eddy County, New Mexico
Sec 13, T25S, R28E
Malaga 13 CN Fed Com #1H

Wellbore #1

Design: Wellbore #1

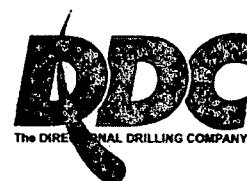
DDC Survey Report

27 February, 2013

RECEIVED

JUN 12 2013

NMOCD ARTES'A



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Malaga 13 CN Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13, T25S, R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga 13 CN Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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		Sec 13, T25S, R28E			
Site Position:		Northing:	413,530.91 usft	Latitude:	32° 8' 11.687 N
From:	Map	Easting:	589,931.62 usft	Longitude:	104° 2' 34.064 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well	Malaga 13 CN Fed Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	413,530.91 usft	Latitude:	32° 8' 11.687 N
	+E/-W	0.0 usft	Easting:	589,931.62 usft	Longitude:	104° 2' 34.064 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,893.0 usft

Wellbore:	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/8/2013	7.59	59.98	48,350

Design:	Wellbore #1
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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	178.75

Survey/Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	2/27/2013	100.0	7,660.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
		7,781.0	12,805.0	MWD (Wellbore #1)	MWD default	MWD - Standard

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)
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	100.0	1.32	305.20	100.0	0.7	-0.9	-0.7	1.32	1.32	0.00
	200.0	1.93	311.57	200.0	2.4	-3.1	-2.5	0.64	0.61	6.37
	300.0	1.82	311.46	299.9	4.6	-5.6	-4.7	0.11	-0.11	-0.11
	400.0	1.74	311.35	399.8	6.7	-7.9	-6.8	0.08	-0.08	-0.11
	500.0	1.83	310.38	499.8	8.7	-10.3	-8.9	0.09	0.09	-0.97
	600.0	1.90	309.41	599.7	10.8	-12.8	-11.1	0.08	0.07	-0.97
	700.0	1.74	302.35	699.7	12.7	-15.3	-13.0	0.28	-0.16	-7.06
	800.0	1.57	295.30	799.7	14.1	-17.9	-14.4	0.26	-0.17	-7.05
	900.0	1.45	297.30	899.6	15.2	-20.2	-15.7	0.13	-0.12	2.00

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Malaga 13 CN-Fed.Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13, T25S, R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga 13 CN-Fed.Com #1H	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)
1,000.0	1.34	299.31	999.6	16.4	-22.4	-16.9	0.12	-0.11	2.01
1,100.0	1.26	298.30	1,099.6	17.5	-24.4	-18.0	0.08	-0.08	-1.01
1,200.0	1.15	297.30	1,199.5	18.4	-26.2	-19.0	0.11	-0.11	-1.00
1,300.0	0.93	290.83	1,299.5	19.2	-27.9	-19.8	0.25	-0.22	-6.47
1,400.0	0.71	274.36	1,399.5	19.5	-29.2	-20.2	0.32	-0.22	-16.47
1,500.0	0.66	230.42	1,499.5	19.2	-30.3	-19.9	0.51	-0.05	-43.94
1,600.0	0.61	176.49	1,599.5	18.3	-30.7	-19.0	0.58	-0.05	-53.93
1,700.0	0.76	179.30	1,699.5	17.1	-30.7	-17.8	0.15	0.15	2.81
1,800.0	0.88	182.10	1,799.5	15.7	-30.7	-16.4	0.13	0.12	2.80
1,900.0	1.38	148.06	1,899.5	13.9	-30.1	-14.6	0.82	0.50	-34.04
2,000.0	1.88	124.01	1,999.4	12.0	-28.1	-12.6	0.84	0.50	-24.05
2,100.0	2.23	107.62	2,099.4	10.5	-24.9	-11.0	0.68	0.35	-16.39
2,200.0	2.58	101.23	2,199.3	9.4	-20.8	-9.9	0.44	0.35	-6.39
2,300.0	3.09	101.88	2,299.2	8.4	-16.0	-8.8	0.51	0.51	0.65
2,400.0	3.61	102.52	2,399.0	7.2	-10.3	-7.4	0.52	0.52	0.64
2,500.0	2.78	96.49	2,498.8	6.2	-4.8	-6.3	0.89	-0.83	-6.03
2,600.0	1.96	90.45	2,598.7	6.0	-0.7	-6.0	0.86	-0.82	-6.04
2,700.0	1.59	84.49	2,698.7	6.1	2.4	-6.0	0.41	-0.37	-5.96
2,800.0	1.23	78.54	2,798.7	6.4	4.9	-6.3	0.39	-0.36	-5.95
2,900.0	1.05	83.12	2,898.6	6.7	6.8	-6.6	0.20	-0.18	4.58
3,000.0	0.88	87.70	2,998.6	6.9	8.5	-6.7	0.19	-0.17	4.58
3,100.0	0.75	82.18	3,098.6	7.0	9.9	-6.8	0.15	-0.13	-5.52
3,200.0	0.64	76.66	3,198.6	7.2	11.1	-7.0	0.13	-0.11	-5.52
3,300.0	0.52	74.63	3,298.6	7.5	12.1	-7.2	0.12	-0.12	-2.03
3,400.0	0.41	72.59	3,398.6	7.7	12.9	-7.4	0.11	-0.11	-2.04
3,500.0	0.29	57.22	3,498.6	7.9	13.4	-7.6	0.15	-0.12	-15.37
3,600.0	0.17	41.85	3,598.6	8.2	13.7	-7.9	0.13	-0.12	-15.37
3,700.0	0.17	160.06	3,698.6	8.2	13.9	-7.9	0.29	0.00	118.21
3,800.0	0.16	278.28	3,798.6	8.0	13.8	-7.7	0.28	-0.01	118.22
3,900.0	0.14	285.20	3,898.6	8.1	13.5	-7.8	0.03	-0.02	6.92
4,000.0	0.14	292.11	3,998.6	8.2	13.3	-7.9	0.02	0.00	6.91
4,100.0	0.22	315.01	4,098.6	8.4	13.1	-8.1	0.11	0.08	22.90
4,200.0	0.27	324.91	4,198.6	8.7	12.8	-8.4	0.07	0.05	9.90
4,300.0	0.41	329.44	4,298.6	9.2	12.5	-8.9	0.14	0.14	4.53
4,400.0	0.54	333.97	4,398.6	9.9	12.1	-9.6	0.14	0.13	4.53
4,500.0	0.59	241.19	4,498.6	10.1	11.4	-9.8	0.82	0.05	-92.78
4,600.0	0.64	231.42	4,598.6	9.5	10.5	-9.3	0.12	0.05	-9.77
4,700.0	0.95	231.90	4,698.6	8.6	9.5	-8.4	0.31	0.31	0.48
4,800.0	1.24	232.39	4,798.6	7.5	7.9	-7.3	0.29	0.29	0.49
4,900.0	1.26	231.34	4,898.5	6.1	6.2	-6.0	0.03	0.02	-1.05
5,000.0	1.31	230.30	4,998.5	4.7	4.5	-4.6	0.06	0.05	-1.04
5,100.0	1.28	232.37	5,098.5	3.3	2.7	-3.2	0.06	-0.03	2.07
5,200.0	1.26	234.45	5,198.5	2.0	1.0	-1.9	0.05	-0.02	2.08

DDC
Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Malaga.13 CN Fed.Com #1H
Project:	Eddy County New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13 T25S R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga.13 CN Fed.Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
5,300.0	1.09	226.41	5,298.4	0.7	-0.6	-0.7	0.24	-0.17	-8.04
5,400.0	0.91	218.37	5,398.4	-0.6	-1.8	0.6	0.23	-0.18	-8.04
5,500.0	1.08	207.69	5,498.4	-2.1	-2.7	2.0	0.25	0.17	-10.68
5,600.0	1.24	197.01	5,598.4	-3.9	-3.5	3.9	0.27	0.16	-10.68
5,700.0	1.34	201.30	5,698.4	-6.1	-4.2	6.0	0.14	0.10	4.29
5,800.0	1.43	205.58	5,798.3	-8.3	-5.2	8.2	0.14	0.09	4.28
5,900.0	1.31	198.52	5,898.3	-10.5	-6.1	10.3	0.21	-0.12	-7.06
6,000.0	1.19	191.46	5,998.3	-12.6	-6.7	12.4	0.20	-0.12	-7.06
6,100.0	1.19	200.82	6,098.3	-14.6	-7.3	14.4	0.19	0.00	9.36
6,200.0	1.18	212.17	6,198.2	-16.4	-8.2	16.2	0.23	-0.01	11.35
6,300.0	1.20	233.97	6,298.2	-17.9	-9.6	17.7	0.45	0.02	21.80
6,400.0	1.21	253.77	6,398.2	-18.8	-11.4	18.6	0.41	0.01	19.80
6,500.0	1.75	266.74	6,498.2	-19.2	-14.0	18.9	0.63	0.54	12.97
6,600.0	2.30	279.70	6,598.1	-18.9	-17.5	18.6	0.71	0.55	12.96
6,700.0	3.32	279.67	6,698.0	-18.1	-22.3	17.6	1.02	1.02	-0.03
6,800.0	4.35	285.63	6,797.7	-16.6	-28.8	16.0	1.10	1.03	5.96
6,900.0	2.37	295.76	6,897.6	-14.7	-34.3	13.9	2.06	-1.98	10.13
7,000.0	0.39	290.89	6,997.5	-13.7	-36.5	12.9	1.98	-1.98	-4.87
7,100.0	0.78	258.26	7,097.5	-13.7	-37.5	12.9	0.50	0.39	-32.63
7,200.0	1.06	203.11	7,197.5	-14.7	-38.5	13.8	0.89	0.28	-55.15
7,300.0	1.58	165.76	7,297.5	-16.9	-38.5	16.0	0.98	0.52	-37.35
7,400.0	1.45	131.70	7,397.5	-19.0	-37.3	18.2	0.90	-0.13	-34.06
7,500.0	1.14	132.55	7,497.4	-20.6	-35.6	19.8	0.31	-0.31	0.85
7,600.0	0.60	128.64	7,597.4	-21.6	-34.4	20.8	0.54	-0.54	-3.91
TIE IN @ 7660 MD // 7657.4 TVD									
7,660.0	0.20	277.40	7,657.4	-21.7	-34.3	21.0	1.30	-0.67	247.93
7,781.0	1.80	172.10	7,778.4	-23.6	-34.2	22.8	1.54	1.32	-87.02
7,813.0	5.00	222.10	7,810.4	-25.1	-35.1	24.4	12.76	10.00	156.25
7,845.0	6.20	227.70	7,842.2	-27.3	-37.3	26.5	4.12	3.75	17.50
7,876.0	6.60	225.80	7,873.0	-29.7	-39.8	28.8	1.46	1.29	-6.13
7,908.0	8.30	223.10	7,904.7	-32.7	-42.7	31.7	5.42	5.31	-8.44
7,940.0	11.80	219.10	7,936.2	-36.9	-46.4	35.9	11.15	10.94	-12.50
7,972.0	14.90	209.90	7,967.4	-43.0	-50.5	41.9	11.72	9.69	-28.75
8,003.0	17.00	197.60	7,997.2	-50.8	-53.8	49.6	12.80	6.77	-39.68
8,035.0	18.60	184.30	8,027.7	-60.3	-55.6	59.1	13.62	5.00	-41.56
8,067.0	21.10	176.50	8,057.8	-71.2	-55.7	69.9	11.37	7.81	-24.38
CROSSED HARD LINE @ 8089 MD // 8078.1 TVD									
8,089.0	23.71	174.12	8,078.1	-79.5	-55.0	78.3	12.54	11.84	-10.80
8,099.0	24.90	173.20	8,087.2	-83.6	-54.5	82.4	12.54	11.95	-9.24
8,132.0	27.70	170.60	8,116.8	-98.1	-52.5	96.9	9.17	8.48	-7.88
8,163.0	31.90	166.30	8,143.7	-113.2	-49.3	112.1	15.19	13.55	-13.87
8,195.0	37.20	168.80	8,170.0	-130.9	-45.4	129.9	17.14	16.56	7.81
8,227.0	43.00	170.00	8,194.5	-151.1	-41.7	150.2	18.28	18.13	3.75
8,259.0	49.00	170.70	8,216.7	-173.8	-37.8	172.9	18.82	18.75	2.19

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Malaga 13 CN Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13, T25S, R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga 13 CN Fed Com #1H	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)
8,291.0	54.20	172.10	8,236.6	-198.6	-34.1	197.8	16.61	16.25	4.38
8,323.0	60.40	173.00	8,253.9	-225.3	-30.6	224.6	19.52	19.38	2.81
8,354.0	65.80	172.50	8,267.9	-252.7	-27.1	252.1	17.48	17.42	-1.61
8,386.0	71.10	173.00	8,279.7	-282.2	-23.4	281.6	16.63	16.56	1.56
8,393.0	72.30	172.30	8,281.9	-288.8	-22.5	288.2	19.60	17.14	-10.00
8,478.0	78.90	171.40	8,303.0	-370.3	-10.8	369.9	7.83	7.76	-1.06
8,510.0	80.30	171.30	8,308.8	-401.4	-6.1	401.1	4.39	4.38	-0.31
8,542.0	82.30	171.60	8,313.6	-432.7	-1.4	432.5	6.32	6.25	0.94
8,573.0	83.00	171.40	8,317.6	-463.1	3.1	463.0	2.35	2.26	-0.65
8,605.0	84.10	172.00	8,321.2	-494.5	7.7	494.6	3.91	3.44	1.88
8,637.0	84.70	173.20	8,324.3	-526.1	11.8	526.2	4.18	1.88	3.75
8,668.0	85.70	173.70	8,326.9	-556.8	15.4	557.0	3.60	3.23	1.61
8,700.0	88.50	174.80	8,328.5	-588.6	18.6	588.9	9.40	8.75	3.44
8,731.0	91.10	174.80	8,328.6	-619.5	21.4	619.8	8.39	8.39	0.00
8,762.0	92.80	174.80	8,327.5	-650.3	24.2	650.7	5.48	5.48	0.00
8,794.0	92.20	174.40	8,326.2	-682.1	27.2	682.6	2.25	-1.88	-1.25
8,826.0	92.30	174.60	8,324.9	-714.0	30.3	714.5	0.70	0.31	0.63
8,889.0	92.10	175.50	8,322.5	-776.7	35.7	777.3	1.46	-0.32	1.43
8,953.0	92.10	176.40	8,320.1	-840.5	40.2	841.2	1.41	0.00	1.41
9,017.0	92.10	176.70	8,317.8	-904.3	44.0	905.1	0.47	0.00	0.47
9,080.0	90.70	176.50	8,316.2	-967.2	47.8	968.0	2.24	-2.22	-0.32
9,144.0	89.60	176.40	8,316.1	-1,031.1	51.7	1,032.0	1.73	-1.72	-0.16
9,207.0	89.50	176.50	8,316.6	-1,093.9	55.6	1,094.9	0.22	-0.16	0.16
9,270.0	89.30	175.80	8,317.2	-1,156.8	59.9	1,157.8	1.16	-0.32	-1.11
9,334.0	88.80	175.30	8,318.3	-1,220.6	64.8	1,221.7	1.10	-0.78	-0.78
9,398.0	89.60	176.20	8,319.2	-1,284.4	69.6	1,285.6	1.88	1.25	1.41
9,461.0	89.50	178.10	8,319.7	-1,347.3	72.7	1,348.6	3.02	-0.16	3.02
9,524.0	89.10	178.10	8,320.5	-1,410.3	74.8	1,411.6	0.63	-0.63	0.00
9,587.0	88.90	177.40	8,321.6	-1,473.2	77.3	1,474.6	1.16	-0.32	-1.11
9,651.0	90.20	178.70	8,322.1	-1,537.2	79.5	1,538.6	2.87	2.03	2.03
9,715.0	90.90	178.30	8,321.4	-1,601.2	81.1	1,602.6	1.26	1.09	-0.63
9,778.0	90.70	177.90	8,320.6	-1,664.1	83.2	1,665.5	0.71	-0.32	-0.63
9,841.0	90.50	177.40	8,319.9	-1,727.1	85.8	1,728.5	0.85	-0.32	-0.79
9,905.0	89.30	176.40	8,320.0	-1,791.0	89.3	1,792.5	2.44	-1.88	-1.56
9,968.0	89.40	177.40	8,320.7	-1,853.9	92.7	1,855.5	1.60	0.16	1.59
10,032.0	90.00	177.90	8,321.1	-1,917.8	95.3	1,919.4	1.22	0.94	0.78
10,096.0	90.30	177.90	8,320.9	-1,981.8	97.6	1,983.4	0.47	0.47	0.00
10,159.0	90.30	178.80	8,320.6	-2,044.8	99.5	2,046.4	1.43	0.00	1.43
10,223.0	90.70	180.10	8,320.0	-2,108.7	100.1	2,110.4	2.13	0.63	2.03
10,286.0	90.00	179.90	8,319.6	-2,171.7	100.1	2,173.4	1.16	-1.11	-0.32
10,350.0	90.10	179.50	8,319.6	-2,235.7	100.4	2,237.4	0.64	0.16	-0.63
10,414.0	89.60	180.10	8,319.7	-2,299.7	100.6	2,301.4	1.22	-0.78	0.94
10,477.0	89.60	179.70	8,320.2	-2,362.7	100.7	2,364.4	0.63	0.00	-0.63

DDC Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Malaga 13 CN Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13, T25S, R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga 13 CN Fed Com #1H	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)
10,540.0	90.00	179.50	8,320.4	-2,425.7	101.2	2,427.4	0.71	0.63	-0.32
10,603.0	90.10	179.00	8,320.3	-2,488.7	102.0	2,490.4	0.81	0.16	-0.79
10,667.0	90.40	178.70	8,320.1	-2,552.7	103.3	2,554.4	0.66	0.47	-0.47
10,730.0	90.70	178.50	8,319.5	-2,615.7	104.8	2,617.4	0.57	0.48	-0.32
10,794.0	89.60	178.10	8,319.3	-2,679.7	106.7	2,681.4	1.83	-1.72	-0.63
10,858.0	89.30	177.90	8,319.9	-2,743.6	109.0	2,745.3	0.56	-0.47	-0.31
10,921.0	89.70	177.40	8,320.5	-2,806.6	111.5	2,808.3	1.02	0.63	-0.79
10,985.0	90.00	177.20	8,320.6	-2,870.5	114.6	2,872.3	0.56	0.47	-0.31
11,048.0	89.90	176.70	8,320.7	-2,933.4	117.9	2,935.3	0.81	-0.16	-0.79
11,112.0	90.00	176.50	8,320.7	-2,997.3	121.7	2,999.2	0.35	0.16	-0.31
11,175.0	90.50	177.90	8,320.5	-3,060.2	124.8	3,062.2	2.36	0.79	2.22
11,238.0	90.70	178.10	8,319.8	-3,123.2	127.0	3,125.2	0.45	0.32	0.32
11,301.0	90.70	178.30	8,319.0	-3,186.1	129.0	3,188.2	0.32	0.00	0.32
11,365.0	91.60	179.50	8,317.7	-3,250.1	130.2	3,252.2	2.34	1.41	1.88
11,429.0	90.70	179.70	8,316.5	-3,314.1	130.6	3,316.2	1.44	-1.41	0.31
11,492.0	89.70	180.20	8,316.2	-3,377.1	130.7	3,379.1	1.77	-1.59	0.79
11,555.0	88.10	181.10	8,317.4	-3,440.1	130.0	3,442.1	2.91	-2.54	1.43
11,619.0	88.40	180.90	8,319.4	-3,504.0	128.9	3,506.0	0.56	0.47	-0.31
11,682.0	88.50	180.40	8,321.1	-3,567.0	128.1	3,569.0	0.81	0.16	-0.79
11,745.0	89.50	181.50	8,322.2	-3,630.0	127.1	3,631.9	2.36	1.59	1.75
11,809.0	90.50	181.30	8,322.2	-3,694.0	125.5	3,695.8	1.59	1.56	-0.31
11,872.0	91.00	180.90	8,321.4	-3,757.0	124.3	3,758.8	1.02	0.79	-0.63
11,936.0	90.90	180.20	8,320.3	-3,820.9	123.7	3,822.7	1.10	-0.16	-1.09
11,999.0	91.70	180.60	8,318.9	-3,883.9	123.3	3,885.7	1.42	1.27	0.63
12,063.0	91.50	180.10	8,317.1	-3,947.9	122.9	3,949.6	0.84	-0.31	-0.78
12,126.0	90.70	179.50	8,315.9	-4,010.9	123.1	4,012.6	1.59	-1.27	-0.95
12,189.0	91.50	179.40	8,314.7	-4,073.9	123.7	4,075.6	1.28	1.27	-0.16
12,253.0	91.90	178.80	8,312.8	-4,137.8	124.7	4,139.6	1.13	0.63	-0.94
12,317.0	92.20	178.30	8,310.5	-4,201.8	126.3	4,203.5	0.91	0.47	-0.78
12,380.0	88.60	177.60	8,310.1	-4,264.7	128.6	4,266.5	5.82	-5.71	-1.11
12,444.0	88.10	177.60	8,311.9	-4,328.6	131.3	4,330.5	0.78	-0.78	0.00
12,507.0	88.40	177.20	8,313.8	-4,391.5	134.1	4,393.4	0.79	0.48	-0.63
12,571.0	88.90	176.50	8,315.3	-4,455.4	137.6	4,457.4	1.34	0.78	-1.09
12,635.0	89.20	176.40	8,316.4	-4,519.3	141.6	4,521.3	0.49	0.47	-0.16
12,698.0	91.90	176.00	8,315.8	-4,582.1	145.8	4,584.2	4.33	4.29	-0.63
12,751.0	92.00	175.70	8,314.0	-4,635.0	149.6	4,637.1	0.60	0.19	-0.57
TD @ 12805 MD/8312.1 TVD									
12,805.0	92.00	175.70	8,312.1	-4,688.8	153.6	4,691.0	0.00	0.00	0.00

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Malaga 13 CN Fed.Com #1H
Project:	Eddy County New Mexico	TVD Reference:	WELL @ 2913.0usft (Patterson #75)
Site:	Sec 13, T25S, R28E	MD Reference:	WELL @ 2913.0usft (Patterson #75)
Well:	Malaga 13 CN Fed.Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

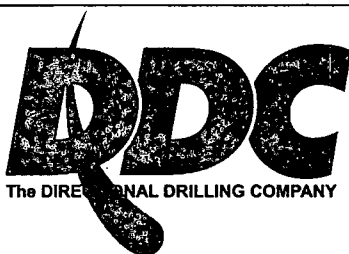
Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,660.0	7,657.4	-21.7	-34.3	TIE IN @ 7660' MD / 7657.4' TVD
8,089.0	8,078.1	-79.5	-55.0	CROSSED HARDLINE @ 8089' MD / 8078.1' TVD
12,805.0	8,312.1	-4,688.8	153.6	TD @ 12805' MD / 8312.1' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: Mewbourne Oil Co
 Malaga 13 CN Fed Com #1H
 Eddy County, New Mexico
 Rig: Patterson #75
 Created By: TIFFANI MIZELL
 Date: 2/27/2013

Malaga 13 CN Fed Com #1H
 Eddy County, New Mexico
 Q120828 & WT-13126
 Design #2

Mewbourne Oil Company



T G M Azimuths to Grid North
 Magnetic North: 7.44°
 Magnetic Field
 Strength: 48350.3snT
 Dip Angle: 59.98°
 Date: 2/8/2013
 Model: IGRF2010

PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

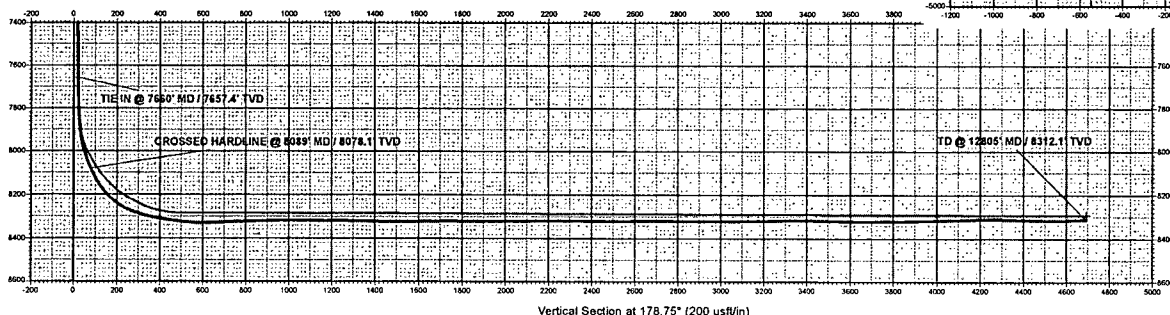
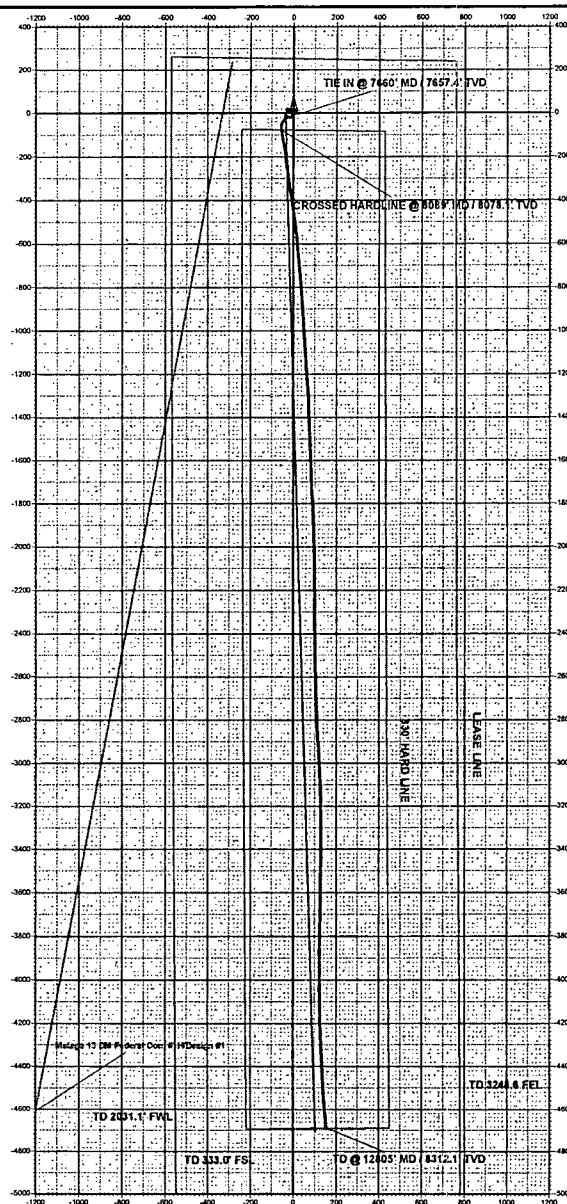
WELL DETAILS: Malaga 13 CN Fed Com #1H					
	Ground Level:	2893.0			
+N/-S	+E/-W	Northing	Eastings	Latitude	Longitude
0.0	0.0	413530.81	683951.81	32° 8' 11.887 N	104° 2' 34.064 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Eastings	Latitude	Longitude
PBHL Malaga 13 CN Federal Com #1H - plan hits target center	8293.0	-4691.4	102.6	408839.51	590034.21	32° 7' 25.256 N	104° 2' 33.018 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7650.0	0.30	277.40	7657.4	-21.7	-34.3	21.0	169.8	TIE IN @ 7660' MD / 7657.4' TVD
8089.0	23.71	174.13	8078.1	-79.6	-65.0	78.3	234.1	CROSSED HARDLINE @ 8089' MD / 8078.1' TVD
12805.0	92.00	176.70	8312.1	-4689.8	153.6	4691.0	4852.6	TD @ 12805' MD / 8312.1' TVD



Vertical Section at 178.75° (200 usft/in)

Operating Company Mewbourne
Well Name & Number malaga cn Fed Com #1H
Sales Ticket Number

Company Rep George Berryman
Field
BOT Service Rep obed jimenez C.mosley



Date 3/1/2013

District Location Odessa, Texas, USA

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,045.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,277.09	12,410	10,680
Bott Liner										
TVD	8,312.00		KOP		7,660.00		Open Hole	6.125	Casing Vol. (bbl)	313.3
Carry Fluid Weight (ppg)			8.8		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	JR Setting Sleeve RH Profile	8187.56						

Zone Length										
		JR Sleeve S3 Hyd Set Packer	8187.56	8.13	5.813	3.875				
		4-1/2-13.5 LTC Nipple	8195.69	8.10	5.000	3.920				
		8 Joints of 4-1/2-13.5 LTC Casing	8203.79	347.19	5.000	3.920				
20	20	3.625 EX Frac Sleeve	8550.98	3.90	5.750		3.525	2286	303	313
		3 Joint of 4-1/2-13.5 LTC Casing	8554.88	86.34	5.000	3.920				
		Baker Open Hole Packer	8641.22	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	8645.11	128.17	5.000	3.920				
19	19	3.500 EX Frac Sleeve	8773.28	3.90	5.750		3.400	2286	282	313
		2 Joint of 4-1/2-13.5 LTC Casing	8777.18	85.35	5.000	3.920				
		Baker Open Hole Packer	8862.53	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	8866.42	128.02	5.000	3.920				
18	18	3.375 EX Frac Sleeve	8994.44	3.90	5.750		3.275	2286	252	313
		2 Joint of 4-1/2-13.5 LTC Casing	8998.34	85.49	5.000	3.920				
		Baker Open Hole Packer	9083.83	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9087.72	125.52	5.000	3.920				
17	17	3.250 EX Frac Sleeve	9213.24	3.90	5.750		3.150	2286	242	313
		2 Joint of 4-1/2-13.5 LTC Casing	9217.14	86.80	5.000	3.920				
		Baker Open Hole Packer	9303.94	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9307.83	129.45	5.000	3.920				
16	16	3.125 EX Frac Sleeve	9437.28	3.90	5.750		3.025	2286	223	313
		2 Joints of 4-1/2-13.5 LTC Casing	9441.18	84.56	5.000	3.920				
		Baker Open Hole Packer	9525.74	3.89	5.820	3.875		2154		

Operating Company Mewbourne
 Well Name & Number malaga cn Fed Com #1H
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Company Rep George Berryman
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	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,045.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,277.09	12,410	10,680
Bott Liner										
TVD	8,312.00		KOP	7,660.00		Open Hole	6.125		Casing Vol. (bbl)	313.3
Carry Fluid Weight (ppg)	8.8		Propan Content (ppa)			Max Drill Out Size	0			

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ. (BBL)
15		3 Joints of 4-1/2-13.5 LTC Casing	9529.63	128.58	5.000	3.920				
	15	3.000 EX Frac sleeve	9658.21	3.90	5.750		2.900	2286	205	313
		2 Joint of 4-1/2-13.5 LTC Casing	9662.11	86.07	5.000	3.920				
14		Baker Open Hole Packer	9748.18	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9752.07	123.82	5.000	3.920				
	14	2.875 EX Frac Sleeve	9875.89	3.90	5.750		2.775	2286	183	313
13		2 Joints of 4-1/2-13.5 LTC Casing	9879.79	85.55	5.000	3.920				
		Baker Open Hole Packer	9965.34	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9969.23	121.02	5.000	3.920				
12	13	2.750 EX Frac Sleeve	10090.25	3.90	5.750		2.650	2286	171	313
		2 Joint of 4-1/2-13.5 LTC Casing	10094.15	79.90	5.000	3.920				
		Baker Open Hole Packer	10174.05	3.88	5.820	3.875		2154		
11		3 Joints of 4-1/2-13.5 LTC Casing	10177.94	124.06	5.000	3.920				
	12	2.625 EX Frac Sleeve	10302.00	3.90	5.750		2.525	2286	155	313
		2 Joints of 4-1/2-13.5 LTC Casing	10305.90	84.89	5.000	3.920				
10		Baker Open Hole Packer	10390.79	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10394.68	125.80	5.000	3.920				
	11	2.500 EX Frac Sleeve	10520.48	3.90	5.750		2.400	2286	140	313
9		3 Joint of 4-1/2-13.5 LTC Casing	10524.38	125.08	5.000	3.920				
		Baker Open Hole Packer	10649.46	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10653.35	124.94	5.000	3.920				
9	10	2.375 EX Frac Sleeve	10778.29	3.90	5.750		2.275	2286	126	313
		2 Joints of 4-1/2-13.5 LTC Casing	10782.19	79.06	5.000	3.920				
		Baker Open Hole Packer	10861.25	3.89	5.820	3.875		2154		
9		3 Joint of 4-1/2-13.5 LTC Casing	10865.14	126.46	5.000	3.920				
	9	2.250 EX Frac Sleeve	10991.60	3.90	5.750		2.150	2286	113	313

Operating Company Mewbourne
Well Name & Number malaga cn Fed Com #1H
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Field _____
BOT Service Rep obed jimenez C.mosley
District Location Odessa, Texas, USA



Date 3/1/2013

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,045.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,277.09	12,410	10,680	
Bott Liner											
TVD		8,312.00		KOP		7,660.00		Open Hole	6.125	Casing Vol. (bbl)	313.3
Carry Fluid Weight (ppg)			8.8		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)
8		2 Joints of 4-1/2-13.5 LTC Casing	10995.50	83.95	5.000	3.920				
		Baker Open Hole Packer	11079.45	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11083.34	127.05	5.000	3.920				
7	8	2.125 EX Frac Sleeve	11210.39	3.90	5.750		2.025	2286	100	313
		2 Joints of 4-1/2-13.5 LTC Casing	11214.29	83.54	5.000	3.920				
		Baker Open Hole Packer	11297.83	3.89	5.820	3.875		2154		
6		3 Joint of 4-1/2-13.5 LTC Casing	11301.72	126.68	5.000	3.920				
	7	2.000 EX Frac Sleeve	11428.40	3.90	5.750		1.900	2286	88	313
		2 Joints of 4-1/2-13.5 LTC Casing	11432.30	82.93	5.000	3.920				
5		Baker Open Hole Packer	11515.23	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11519.12	122.26	5.000	3.920				
	6	1.875 EX Frac Sleeve	11641.38	3.90	5.750		1.775	2286	77	313
4		2 Joints of 4-1/2-13.5 LTC Casing	11645.28	84.96	5.000	3.920				
		Baker Open Hole Packer	11730.24	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	11734.13	126.44	5.000	3.920				
3	5	1.750 EX Frac Sleeve	11860.57	3.90	5.750		1.650	2286	60	313
		2 Joint of 4-1/2-13.5 LTC Casing	11864.47	82.71	5.000	3.920				
		Baker Open Hole Packer	11947.18	3.89	5.820	3.875		2154		
2		3 Joints of 4-1/2-13.5 LTC Casing	11951.07	123.64	5.000	3.920				
	4	1.625 EX Frac Sleeve	12074.71	3.90	5.750		1.525	2286	57	313
		3 Joints of 4-1/2-13.5 LTC Casing	12078.61	118.83	5.000	3.920				
1		Baker Open Hole Packer	12197.44	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12201.33	124.28	5.000	3.920				
	3	1.500 DBL-Ball Frac Sleeve	12325.61	3.90	5.750		1.400	2286	48	313
		2 Joint of 4-1/2-13.5 LTC Casing	12329.51	82.52	5.000	3.920				
		Baker Open Hole Packer	12412.03	3.89	5.820	3.875		2154		

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	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,045.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,277.09	12,410	10,680
Bott Liner										
TVD		8,312.00	KOP		7,660.00	Open Hole		6.125	Casing Vol. (bbl)	313.3
Carry Fluid Weight (ppg)			8.8	Propant Content (ppa)				Max Drill Out Size		0

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