

Results of Directional Survey

API number:	30-025-40687		
OGRID:		Operator:	MEWBOURNE OIL CO
		Property:	REDHILLS WEST UNIT 3 # 4H

surface	ULSTR:	C	10	T	26S	R	32E
				440	FNL	1755	FWL

BH Loc	ULSTR:	C	03	T	26S	R	32E
14761	MD	9469.3	TVD	289	FNL	1614	FWL
				4991	FSL		

Top Perf/OH	ULSTR:	C	10	T	26S	R	32E
9875	MD	9485.8	TVD	112	FSL	1786	FWL

Bot Perf/OH	ULSTR:	C	03	T	26S	R	32E
14731	MD	9469.4	TVD	319	FSL	1616	FWL
				4961	FSL		

	MD	N/S	E/W	VD
	9854	531.50	31.60	9484.9
TOP PERFS/OH	9875	552.47	31.21	9485.75
	9918	595.40	30.40	9487.50
	14711	5381.20	-136.80	9469.40
BOT PERFS/OH	14731	5401.12	-138.52	9469.36
	14761	5431.00	-141.10	9469.30

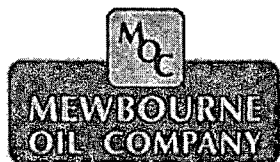
NEXT TO LAST	14711	5381.20	-136.80	9469.40
LAST READING	14761	5431.00	-141.10	9469.30
TD	14761	5431.00	-141.10	9469.30

Surface Location	440	FN	1755	FW
Projected BHL	4991	FS	1614	FW
Location of				
Top Perfs/OH	112	FS	1786	FW
Bottom Perfs/OH	4961	FS	1616	FW

SUMMARY of Subsurface Locations

Surface Location	C-10-26S-32E	440	FN	1755	FW	Vert. Depth
Top Perfs/OH	C-10-26S-32E	112	FS	1786	FW	9485.75
Bottom Perfs/OH	C-03-26S-32E	4961	FS	1616	FW	9469.36
Projected TD	C-03-26S-32E	4991	FS	1614	FW	9469.30

MAR 21 2013



Company: Mewbourne Oil Company
Lease/Well: Red Hills West Unit / No. 004H

Rig Name: Patterson 41
State/County: New Mexico / Lea
Latitude: 32.06, Longitude: -103.67
GRID North is 0.35 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 17'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 12/28/2012 / 14:22

Vaughn Energy Services
Midland, Texas
432-563-5444

Surveyor: Tim Dillon
Red Hills West Unit 3 No. 004H / API 30-025-40687

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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	0.37	4.47	100.00	0.32	0.02	0.32	0.32	4.47	0.37
200.00	0.48	18.26	200.00	1.04	0.18	1.04	1.05	9.92	0.15
300.00	0.49	16.93	299.99	1.85	0.44	1.85	1.90	13.35	0.02
400.00	0.48	15.59	399.99	2.66	0.68	2.66	2.75	14.25	0.01
500.00	0.47	28.39	499.99	3.43	0.99	3.43	3.57	16.03	0.11
600.00	0.46	41.19	599.98	4.10	1.45	4.10	4.35	19.45	0.10
700.00	0.47	14.83	699.98	4.80	1.82	4.80	5.14	20.75	0.21
800.00	0.49	48.47	799.98	5.48	2.24	5.48	5.93	22.24	0.28
900.00	0.47	61.17	899.97	5.96	2.92	5.96	6.64	26.10	0.11
1000.00	0.46	133.87	999.97	5.88	3.57	5.88	6.88	31.26	0.55
1100.00	0.57	179.21	1099.97	5.11	3.87	5.11	6.41	37.12	0.41
1200.00	0.67	224.56	1199.96	4.20	3.46	4.20	5.44	39.52	0.49
1300.00	0.75	223.53	1299.95	3.31	2.60	3.31	4.21	38.19	0.07
1400.00	0.80	222.51	1399.94	2.32	1.68	2.32	2.87	35.94	0.05
1500.00	0.81	221.06	1499.93	1.28	0.75	1.28	1.48	30.40	0.03
1600.00	0.81	219.62	1599.92	0.20	-0.17	0.20	0.26	320.46	0.02
1700.00	1.05	204.78	1699.91	-1.18	-1.00	-1.18	1.54	220.35	0.34
1800.00	1.30	189.94	1799.89	-3.13	-1.58	-3.13	3.50	206.81	0.39

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
1900.00	1.58	184.14	1899.86	-5.62	-1.88	-5.62	5.92	198.46	0.32
2000.00	1.86	178.33	1999.81	-8.61	-1.93	-8.61	8.83	192.61	0.33
2100.00	1.85	178.45	2099.76	-11.85	-1.84	-11.85	11.99	188.81	0.01
2200.00	1.83	178.58	2199.71	-15.06	-1.75	-15.06	15.17	186.64	0.03
2300.00	1.61	183.34	2299.66	-18.06	-1.80	-18.06	18.15	185.68	0.26
2400.00	1.38	188.10	2399.63	-20.66	-2.05	-20.66	20.76	185.66	0.25
2500.00	1.11	224.01	2499.61	-22.55	-2.89	-22.55	22.73	187.30	0.81
2600.00	0.83	259.91	2599.59	-23.37	-4.28	-23.37	23.76	190.37	0.65
2700.00	0.53	259.62	2699.59	-23.58	-5.45	-23.58	24.20	193.00	0.30
2800.00	0.21	259.33	2799.59	-23.70	-6.08	-23.70	24.47	194.40	0.32
2900.00	0.25	212.59	2899.58	-23.92	-6.38	-23.92	24.76	194.94	0.19
3000.00	0.30	165.85	2999.58	-24.36	-6.44	-24.36	25.20	194.81	0.22
3100.00	0.93	127.89	3099.58	-25.11	-5.74	-25.11	25.76	192.87	0.72
3200.00	1.56	93.93	3199.55	-25.70	-3.73	-25.70	25.97	188.26	0.95
3300.00	2.25	77.99	3299.50	-25.39	-0.45	-25.39	25.39	181.02	0.86
3400.00	2.94	66.04	3399.40	-23.94	3.82	-23.94	24.24	170.94	0.87
3500.00	2.95	65.31	3499.26	-21.82	8.50	-21.82	23.42	158.72	0.04
3600.00	2.99	64.58	3599.13	-19.62	13.19	-19.62	23.65	146.08	0.05
3700.00	2.77	69.14	3699.00	-17.65	17.80	-17.65	25.07	134.75	0.32
3800.00	2.54	73.70	3798.90	-16.17	22.19	-16.17	27.45	126.07	0.31
3900.00	2.78	81.70	3898.79	-15.19	26.72	-15.19	30.74	119.62	0.44
4000.00	3.02	89.70	3998.66	-14.83	31.76	-14.83	35.05	115.03	0.47
4100.00	3.08	90.48	4098.52	-14.84	37.09	-14.84	39.94	111.80	0.07
4200.00	3.17	91.26	4198.37	-14.92	42.54	-14.92	45.08	109.33	0.09
4300.00	3.06	96.35	4298.22	-15.27	47.95	-15.27	50.32	107.67	0.30
4400.00	2.96	101.44	4398.09	-16.08	53.14	-16.08	55.52	106.84	0.29
4500.00	2.35	101.85	4497.98	-17.02	57.68	-17.02	60.13	106.44	0.61
4600.00	1.73	102.25	4597.91	-17.76	61.16	-17.76	63.68	106.19	0.63
4700.00	1.67	100.81	4697.87	-18.35	64.06	-18.35	66.64	105.98	0.07
4800.00	1.64	99.37	4797.83	-18.86	66.91	-18.86	69.52	105.74	0.05
4900.00	1.44	111.98	4897.79	-19.56	69.49	-19.56	72.19	105.72	0.39
5000.00	1.23	124.59	4997.76	-20.64	71.54	-20.64	74.45	106.10	0.36
5100.00	1.16	135.07	5097.74	-21.97	73.14	-21.97	76.37	106.72	0.23
5200.00	1.09	145.54	5197.72	-23.47	74.39	-23.47	78.01	107.51	0.22
5300.00	1.12	154.31	5297.71	-25.14	75.35	-25.14	79.44	108.45	0.17
5400.00	1.15	163.08	5397.69	-26.98	76.07	-26.98	80.71	109.53	0.18
5500.00	0.96	165.92	5497.67	-28.76	76.57	-28.76	81.79	110.59	0.20
5600.00	0.78	168.77	5597.66	-30.24	76.91	-30.24	82.64	111.47	0.19
5700.00	0.81	176.49	5697.65	-31.62	77.08	-31.62	83.31	112.30	0.11

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
5800.00	0.85	184.21	5797.64	-33.07	77.07	-33.07	83.86	113.22	0.12
5900.00	1.12	179.37	5897.62	-34.78	77.03	-34.78	84.52	114.30	0.28
6000.00	1.36	174.53	5997.60	-36.94	77.15	-36.94	85.54	115.58	0.27
6100.00	1.30	174.46	6097.57	-39.25	77.37	-39.25	86.76	116.90	0.06
6200.00	1.27	174.39	6197.55	-41.49	77.59	-41.49	87.99	118.13	0.04
6300.00	1.22	173.37	6297.52	-43.64	77.82	-43.64	89.22	119.28	0.05
6400.00	1.15	172.34	6397.50	-45.69	78.08	-45.69	90.46	120.33	0.07
6500.00	1.07	169.76	6497.48	-47.60	78.38	-47.60	91.70	121.27	0.09
6600.00	1.01	167.17	6597.47	-49.37	78.74	-49.37	92.94	122.09	0.07
6700.00	0.99	173.16	6697.45	-51.09	79.04	-51.09	94.11	122.88	0.11
6800.00	0.96	179.15	6797.44	-52.79	79.15	-52.79	95.14	123.70	0.10
6900.00	0.98	181.48	6897.42	-54.48	79.14	-54.48	96.08	124.54	0.04
7000.00	1.02	183.82	6997.41	-56.23	79.06	-56.23	97.02	125.42	0.06
7100.00	1.03	176.53	7097.39	-58.01	79.06	-58.01	98.06	126.27	0.13
7200.00	0.98	169.24	7197.38	-59.75	79.27	-59.75	99.27	127.01	0.14
7300.00	0.84	164.31	7297.36	-61.30	79.63	-61.30	100.49	127.59	0.17
7400.00	0.69	159.37	7397.35	-62.57	80.04	-62.57	101.60	128.02	0.16
7500.00	0.75	161.33	7497.35	-63.76	80.46	-63.76	102.66	128.39	0.06
7600.00	0.78	163.29	7597.34	-65.03	80.87	-65.03	103.77	128.80	0.04
7700.00	0.79	162.74	7697.33	-66.34	81.27	-66.34	104.91	129.22	0.01
7800.00	0.81	162.19	7797.32	-67.67	81.69	-67.67	106.07	129.64	0.03
7900.00	0.87	165.61	7897.31	-69.07	82.09	-69.07	107.29	130.08	0.08
8000.00	0.95	169.03	7997.29	-70.62	82.44	-70.62	108.55	130.59	0.10
8100.00	1.07	169.24	8097.28	-72.35	82.77	-72.35	109.94	131.16	0.12
8200.00	1.17	169.45	8197.26	-74.28	83.13	-74.28	111.48	131.78	0.10
8300.00	1.09	179.95	8297.24	-76.24	83.32	-76.24	112.94	132.46	0.22
8400.00	1.00	190.44	8397.22	-78.04	83.16	-78.04	114.05	133.18	0.21
8500.00	0.95	203.25	8497.21	-79.67	82.68	-79.67	114.81	133.94	0.22
8600.00	0.97	216.05	8597.20	-81.11	81.85	-81.11	115.24	134.74	0.21
8700.00	1.06	235.99	8697.18	-82.32	80.59	-82.32	115.20	135.61	0.36
8775.00	1.29	246.38	8772.16	-83.04	79.23	-83.04	114.78	136.34	0.42

Mewbourne Oil Co

Eddy County, New Mexico
Sec 10, T26S, R32E New SHL
Red Hills West Unit #004H

Wellbore #1

Survey: MWD

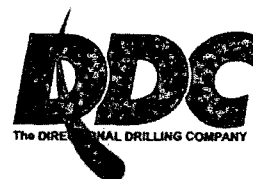
DDC Survey Report

03 January, 2013

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MAR 07 2013

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DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Red Hills West Unit #004H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3286.0usft (Patterson #41)
Site:	Sec 10, T26S, R32E New SHL	MD Reference:	WELL @ 3286.0usft (Patterson #41)
Well:	Red Hills West Unit #004H	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 10, T26S, R32E New SHL		
Site Position:		Northing:	387,522.31 usft
From:	Map	Easting:	706,948.87 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 49.152 N
		Longitude:	103° 39' 55.043 W
		Grid Convergence:	0.35 °

Well	Red Hills West Unit #004H		
Well Position	+N/-S	0.0 usft	Northing: 387,522.31 usft
	+E/-W	0.0 usft	Easting: 706,948.87 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 3' 49.152 N
		Longitude:	103° 39' 55.043 W
		Ground Level:	3,266.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	11/9/2012	7.45
			Dip Angle (°)
			59.99
			Field Strength (nT)
			48,370

Design	Wellbore #1		
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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	358.35

Survey Program	Date 1/3/2013		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	8,775.0	Gyro (Wellbore #1)	Good_gyro
8,914.0	14,761.0	MWD (Wellbore #1)	MWD default
			Description
			Good Gyro
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
TIE IN @ 8775' MD / 8772' TVD									
8,775.0	1.29	246.38	8,772.2	-83.0	79.2	-85.3	0.00	0.00	0.00
8,914.0	2.20	287.20	8,911.1	-82.9	75.2	-85.0	1.07	0.65	29.37
8,946.0	4.90	325.30	8,943.0	-81.6	73.8	-83.7	10.77	8.44	119.06
8,977.0	8.20	333.50	8,973.8	-78.5	72.1	-80.5	11.04	10.65	26.45
9,009.0	11.40	337.30	9,005.4	-73.5	69.9	-75.5	10.20	10.00	11.88
9,040.0	14.70	339.60	9,035.6	-67.0	67.3	-68.9	10.77	10.65	7.42
9,072.0	17.90	340.00	9,066.3	-58.6	64.2	-60.4	10.01	10.00	1.25
9,104.0	21.10	341.50	9,096.4	-48.5	60.7	-50.2	10.12	10.00	4.69
9,135.0	24.70	343.70	9,125.0	-37.0	57.1	-38.6	11.93	11.61	7.10

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Red Hills West Unit #004H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3286.0usft (Patterson #41)
Site:	Sec 10, T26S, R32E New SHL	MD Reference:	WELL @ 3286.0usft (Patterson #41)
Well:	Red Hills West Unit #004H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000:1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,167.0	27.30	347.20	9,153.7	-23.4	53.6	-25.0	9.43	8.13	10.94
9,198.0	29.90	350.40	9,181.0	-8.9	50.7	-10.3	9.73	8.39	10.32
9,230.0	32.20	353.50	9,208.4	7.5	48.5	6.1	8.75	7.19	9.69
9,261.0	34.40	357.70	9,234.3	24.4	47.2	23.1	10.28	7.10	13.55
9,293.0	37.50	359.20	9,260.2	43.2	46.7	41.8	10.07	9.69	4.69
9,324.0	40.20	359.30	9,284.3	62.7	46.4	61.3	8.71	8.71	0.32
9,356.0	43.70	357.00	9,308.1	84.0	45.7	82.7	11.94	10.94	-7.19
9,387.0	46.90	355.60	9,329.9	106.0	44.3	104.7	10.81	10.32	-4.52
9,419.0	49.80	356.90	9,351.2	129.9	42.7	128.6	9.56	9.06	4.06
9,450.0	51.60	359.10	9,370.8	153.8	41.9	152.6	7.99	5.81	7.10
9,482.0	54.80	0.10	9,390.0	179.5	41.7	178.2	10.31	10.00	3.13
9,513.0	57.70	359.60	9,407.2	205.2	41.6	203.9	9.45	9.35	-1.61
9,545.0	61.70	358.20	9,423.4	232.8	41.1	231.6	13.06	12.50	-4.38
9,576.0	64.80	357.00	9,437.3	260.5	39.9	259.2	10.58	10.00	-3.87
9,608.0	68.70	356.40	9,449.9	289.8	38.3	288.6	12.31	12.19	-1.88
9,639.0	72.10	356.10	9,460.3	319.0	36.3	317.8	11.01	10.97	-0.97
9,671.0	76.00	356.20	9,469.1	349.7	34.3	348.5	12.19	12.19	0.31
9,703.0	80.20	357.80	9,475.7	380.9	32.6	379.8	14.01	13.13	5.00
9,734.0	83.70	359.40	9,480.1	411.6	31.9	410.5	12.39	11.29	5.16
CROSSED LEASE LINE @ 9763' MD / 9482' TVD									
9,762.9	87.67	0.21	9,482.2	440.4	31.8	439.3	14.03	13.75	2.81
9,766.0	88.10	0.30	9,482.4	443.5	31.8	442.4	14.03	13.75	2.80
9,772.0	88.10	0.10	9,482.6	449.5	31.8	448.4	3.33	0.00	-3.33
9,854.0	88.60	359.60	9,484.9	531.5	31.6	530.4	0.86	0.61	-0.61
9,918.0	86.70	358.20	9,487.5	595.4	30.4	594.3	3.69	-2.97	-2.19
9,981.0	88.50	357.70	9,490.2	658.3	28.1	657.2	2.97	2.86	-0.79
10,044.0	91.90	358.80	9,490.0	721.3	26.2	720.2	5.67	5.40	1.75
10,075.0	89.80	357.40	9,489.5	752.3	25.2	751.2	8.14	-6.77	-4.52
CROSSED HARD LINE @ 10093' MD / 9490' TVD									
10,093.0	89.69	356.89	9,489.6	770.2	24.3	769.2	2.88	-0.63	-2.81
10,107.0	89.60	356.50	9,489.7	784.2	23.5	783.2	2.88	-0.62	-2.81
10,139.0	90.50	356.60	9,489.6	816.2	21.6	815.2	2.83	2.81	0.31
10,170.0	91.30	356.60	9,489.2	847.1	19.7	846.2	2.58	2.58	0.00
10,202.0	91.30	356.50	9,488.4	879.0	17.8	878.2	0.31	0.00	-0.31
10,234.0	91.80	357.20	9,487.6	911.0	16.0	910.1	2.69	1.56	2.19
10,265.0	92.20	357.00	9,486.5	941.9	14.5	941.1	1.44	1.29	-0.65
10,297.0	91.70	356.90	9,485.4	973.8	12.8	973.1	1.59	-1.56	-0.31
10,328.0	90.60	357.50	9,484.8	1,004.8	11.3	1,004.1	4.04	-3.55	1.94
10,391.0	90.20	357.20	9,484.3	1,067.7	8.3	1,067.0	0.79	-0.63	-0.48
10,454.0	89.50	356.50	9,484.5	1,130.6	4.9	1,130.0	1.57	-1.11	-1.11
10,518.0	89.00	356.80	9,485.3	1,194.5	1.1	1,194.0	0.91	-0.78	0.47
10,581.0	90.40	356.60	9,485.7	1,257.4	-2.5	1,257.0	2.24	2.22	-0.32
10,644.0	91.00	356.50	9,484.9	1,320.3	-6.3	1,319.9	0.97	0.95	-0.16

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Red Hills West Unit #004H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3286.0usft (Patterson #41)
Site:	Sec 10, T26S, R32E New SHL	MD Reference:	WELL @ 3286.0usft (Patterson #41)
Well:	Red Hills West Unit #004H	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)
10,708.0	90.20	357.00	9,484.2	1,384.2	-9.9	1,383.9	1.47	-1.25	0.78
10,770.0	90.50	356.90	9,483.8	1,446.1	-13.2	1,445.9	0.51	0.48	-0.16
10,833.0	91.40	357.70	9,482.8	1,509.0	-16.2	1,508.9	1.91	1.43	1.27
10,896.0	90.90	358.00	9,481.5	1,572.0	-18.5	1,571.8	0.93	-0.79	0.48
10,959.0	89.40	357.30	9,481.4	1,634.9	-21.1	1,634.8	2.63	-2.38	-1.11
11,022.0	88.70	357.00	9,482.4	1,697.8	-24.2	1,697.8	1.21	-1.11	-0.48
11,085.0	89.80	358.10	9,483.2	1,760.8	-26.9	1,760.8	2.47	1.75	1.75
11,149.0	91.50	359.30	9,482.5	1,824.7	-28.4	1,824.8	3.25	2.66	1.88
11,212.0	90.20	358.00	9,481.6	1,887.7	-29.9	1,887.8	2.92	-2.06	-2.06
11,275.0	94.00	359.30	9,479.3	1,950.6	-31.4	1,950.7	6.37	6.03	2.06
11,307.0	92.80	0.00	9,477.4	1,982.6	-31.6	1,982.7	4.34	-3.75	2.19
11,338.0	92.30	359.90	9,476.0	2,013.5	-31.6	2,013.6	1.64	-1.61	-0.32
11,370.0	92.00	0.40	9,474.8	2,045.5	-31.5	2,045.6	1.82	-0.94	1.56
11,402.0	90.80	0.50	9,474.0	2,077.5	-31.2	2,077.5	3.76	-3.75	0.31
11,433.0	89.90	0.70	9,473.8	2,108.5	-30.9	2,108.5	2.97	-2.90	0.65
11,465.0	88.40	0.40	9,474.3	2,140.5	-30.6	2,140.5	4.78	-4.69	-0.94
11,497.0	87.80	359.80	9,475.4	2,172.5	-30.6	2,172.5	2.65	-1.88	-1.88
11,528.0	88.40	0.20	9,476.4	2,203.5	-30.6	2,203.4	2.33	1.94	1.29
11,560.0	89.20	0.10	9,477.1	2,235.5	-30.5	2,235.4	2.52	2.50	-0.31
11,591.0	89.50	0.00	9,477.4	2,266.5	-30.4	2,266.4	1.02	0.97	-0.32
11,623.0	88.70	359.70	9,477.9	2,298.5	-30.5	2,298.4	2.67	-2.50	-0.94
11,655.0	86.80	359.70	9,479.2	2,330.4	-30.7	2,330.3	5.94	-5.94	0.00
11,687.0	86.40	359.40	9,481.1	2,362.4	-31.0	2,362.3	1.56	-1.25	-0.94
11,718.0	85.00	359.30	9,483.4	2,393.3	-31.3	2,393.2	4.53	-4.52	-0.32
11,750.0	85.00	358.80	9,486.2	2,425.2	-31.8	2,425.1	1.56	0.00	-1.56
11,781.0	85.70	359.20	9,488.7	2,456.0	-32.4	2,456.0	2.60	2.26	1.29
11,813.0	86.10	359.60	9,491.0	2,488.0	-32.7	2,487.9	1.77	1.25	1.25
11,845.0	87.90	359.40	9,492.7	2,519.9	-33.0	2,519.8	5.66	5.63	-0.63
11,876.0	89.10	359.80	9,493.5	2,550.9	-33.2	2,550.8	4.08	3.87	1.29
11,907.0	89.50	0.40	9,493.8	2,581.9	-33.1	2,581.8	2.33	1.29	1.94
11,939.0	91.10	0.80	9,493.7	2,613.9	-32.8	2,613.8	5.15	5.00	1.25
11,971.0	91.50	1.30	9,493.0	2,645.9	-32.2	2,645.7	2.00	1.25	1.56
12,002.0	91.70	1.00	9,492.1	2,676.9	-31.6	2,676.7	1.16	0.65	-0.97
12,034.0	91.40	1.00	9,491.2	2,708.8	-31.0	2,708.6	0.94	-0.94	0.00
12,066.0	91.30	1.20	9,490.5	2,740.8	-30.4	2,740.6	0.70	-0.31	0.63
12,098.0	91.70	1.40	9,489.6	2,772.8	-29.7	2,772.5	1.40	1.25	0.63
12,130.0	91.70	1.00	9,488.7	2,804.8	-29.0	2,804.5	1.25	0.00	-1.25
12,161.0	91.80	1.30	9,487.7	2,835.8	-28.4	2,835.4	1.02	0.32	0.97
12,193.0	92.10	1.00	9,486.6	2,867.7	-27.8	2,867.4	1.33	0.94	-0.94
12,224.0	92.20	1.20	9,485.5	2,898.7	-27.2	2,898.3	0.72	0.32	0.65
12,256.0	92.50	0.60	9,484.2	2,930.7	-26.7	2,930.2	2.09	0.94	-1.88
12,288.0	93.00	0.80	9,482.6	2,962.6	-26.3	2,962.2	1.68	1.56	0.63
12,319.0	92.50	1.60	9,481.1	2,993.6	-25.6	2,993.1	3.04	-1.61	2.58
12,351.0	91.70	1.40	9,480.0	3,025.6	-24.8	3,025.0	2.58	-2.50	-0.63

DDC
Survey Report



Company: Mewbourne Oil Co	Local Co-ordinate Reference: Well Red Hills West Unit #004H
Project: Eddy County, New Mexico	TVD Reference: WELL @ 3286.0usft (Patterson #41)
Site: Sec 10, T26S, R32E New SHL	MD Reference: WELL @ 3286.0usft (Patterson #41)
Well: Red Hills West Unit #004H	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)
12,383.0	90.20	1.50	9,479.4	3,057.6	-24.0	3,057.0	4.70	-4.69	0.31
12,414.0	89.40	1.30	9,479.5	3,088.5	-23.2	3,087.9	2.66	-2.58	-0.65
12,445.0	87.70	0.10	9,480.3	3,119.5	-22.9	3,118.9	6.71	-5.48	-3.87
12,477.0	87.80	359.90	9,481.6	3,151.5	-22.9	3,150.9	0.70	0.31	-0.63
12,508.0	89.40	359.10	9,482.3	3,182.5	-23.1	3,181.8	5.77	5.16	-2.58
12,540.0	89.20	358.70	9,482.7	3,214.5	-23.7	3,213.8	1.40	-0.63	-1.25
12,572.0	90.40	358.00	9,482.9	3,246.5	-24.7	3,245.8	4.34	3.75	-2.19
12,603.0	91.70	358.50	9,482.3	3,277.5	-25.6	3,276.8	4.49	4.19	1.61
12,635.0	92.20	358.10	9,481.2	3,309.4	-26.6	3,308.8	2.00	1.56	-1.25
12,666.0	93.10	358.00	9,479.8	3,340.4	-27.6	3,339.8	2.92	2.90	-0.32
12,698.0	93.40	358.30	9,477.9	3,372.3	-28.6	3,371.7	1.32	0.94	0.94
12,754.0	92.60	0.80	9,475.0	3,428.2	-29.1	3,427.6	4.68	-1.43	4.46
12,785.0	91.70	0.30	9,473.9	3,459.2	-28.8	3,458.6	3.32	-2.90	-1.61
12,817.0	91.80	0.70	9,472.9	3,491.2	-28.5	3,490.6	1.29	0.31	1.25
12,849.0	91.50	0.20	9,472.0	3,523.2	-28.2	3,522.5	1.82	-0.94	-1.56
12,880.0	90.20	0.50	9,471.5	3,554.2	-28.1	3,553.5	4.30	-4.19	0.97
12,911.0	89.30	359.10	9,471.6	3,585.2	-28.2	3,584.5	5.37	-2.90	-4.52
12,943.0	88.80	359.00	9,472.2	3,617.1	-28.7	3,616.5	1.59	-1.56	-0.31
12,975.0	88.90	359.40	9,472.8	3,649.1	-29.1	3,648.5	1.29	0.31	1.25
13,006.0	89.10	359.90	9,473.3	3,680.1	-29.3	3,679.5	1.74	0.65	1.61
13,038.0	89.30	359.10	9,473.8	3,712.1	-29.6	3,711.4	2.58	0.63	-2.50
13,070.0	89.40	359.60	9,474.2	3,744.1	-30.0	3,743.4	1.59	0.31	1.56
13,101.0	89.60	359.10	9,474.4	3,775.1	-30.3	3,774.4	1.74	0.65	-1.61
13,133.0	89.30	358.50	9,474.7	3,807.1	-31.0	3,806.4	2.10	-0.94	-1.88
13,165.0	89.00	358.40	9,475.2	3,839.1	-31.9	3,838.4	0.99	-0.94	-0.31
13,196.0	88.80	357.70	9,475.8	3,870.1	-32.9	3,869.4	2.35	-0.65	-2.26
13,228.0	88.70	358.50	9,476.5	3,902.0	-34.0	3,901.4	2.52	-0.31	2.50
13,259.0	88.70	357.70	9,477.2	3,933.0	-35.0	3,932.4	2.58	0.00	-2.58
13,291.0	88.90	357.30	9,477.9	3,965.0	-36.4	3,964.4	1.40	0.63	-1.25
13,323.0	89.20	356.30	9,478.4	3,996.9	-38.2	3,996.4	3.26	0.94	-3.13
13,354.0	89.20	356.40	9,478.8	4,027.9	-40.2	4,027.4	0.32	0.00	0.32
13,386.0	89.10	356.50	9,479.3	4,059.8	-42.1	4,059.3	0.44	-0.31	0.31
13,418.0	89.20	356.20	9,479.8	4,091.7	-44.2	4,091.3	0.99	0.31	-0.94
13,449.0	89.80	355.60	9,480.1	4,122.7	-46.4	4,122.3	2.74	1.94	-1.94
13,481.0	89.80	355.80	9,480.2	4,154.6	-48.8	4,154.2	0.62	0.00	0.63
13,544.0	90.10	356.60	9,480.2	4,217.4	-53.0	4,217.2	1.36	0.48	1.27
13,607.0	90.40	356.70	9,479.9	4,280.3	-56.7	4,280.2	0.50	0.48	0.16
13,670.0	90.20	355.90	9,479.6	4,343.2	-60.7	4,343.1	1.31	-0.32	-1.27
13,733.0	90.70	355.90	9,479.1	4,406.0	-65.2	4,406.1	0.79	0.79	0.00
13,797.0	90.50	356.50	9,478.5	4,469.9	-69.5	4,470.0	0.99	-0.31	0.94
13,860.0	89.60	356.40	9,478.4	4,532.8	-73.4	4,533.0	1.44	-1.43	-0.16
13,923.0	90.10	355.00	9,478.6	4,595.6	-78.1	4,595.9	2.36	0.79	-2.22
13,985.0	90.60	355.20	9,478.2	4,657.3	-83.4	4,657.8	0.87	0.81	0.32

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Red Hills West Unit #004H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3286.0usft (Patterson #41)
Site:	Sec 10, T26S, R32E New SHL	MD Reference:	WELL @ 3286.0usft (Patterson #41)
Well:	Red Hills West Unit #004H	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)
14,049.0	90.60	355.60	9,477.5	4,721.1	-88.5	4,721.7	0.62	0.00	0.63
14,112.0	91.00	355.30	9,476.6	4,783.9	-93.5	4,784.6	0.79	0.63	-0.48
14,175.0	91.70	355.40	9,475.1	4,846.7	-98.6	4,847.5	1.12	1.11	0.16
14,238.0	92.10	355.90	9,473.1	4,909.5	-103.4	4,910.4	1.02	0.63	0.79
14,302.0	92.00	356.50	9,470.8	4,973.3	-107.6	4,974.3	0.95	-0.16	0.94
14,365.0	90.70	357.10	9,469.3	5,036.2	-111.1	5,037.3	2.27	-2.06	0.95
14,428.0	90.20	356.40	9,468.8	5,099.1	-114.7	5,100.3	1.37	-0.79	-1.11
14,491.0	89.70	355.20	9,468.8	5,161.9	-119.3	5,163.2	2.06	-0.79	-1.90
14,554.0	90.00	355.50	9,469.0	5,224.7	-124.4	5,226.1	0.67	0.48	0.48
14,617.0	89.80	355.40	9,469.1	5,287.5	-129.4	5,289.0	0.35	-0.32	-0.16
14,679.0	89.60	355.70	9,469.4	5,349.3	-134.2	5,351.0	0.58	-0.32	0.48
14,711.0	90.40	355.10	9,469.4	5,381.2	-136.8	5,382.9	3.12	2.50	-1.88
TD @ 14761' MD / 9469' TVD									
14,761.0	90.00	355.10	9,469.3	5,431.0	-141.1	5,432.8	0.80	-0.80	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,775.0	8,772.2	-83.0	79.2	TIE IN @ 8775' MD / 8772' TVD
9,762.9	9,482.2	440.4	31.8	CROSSED LEASE LINE @ 9763' MD / 9482' TVD
10,093.0	9,489.6	770.2	24.3	CROSSED HARD LINE @ 10093' MD / 9490' TVD
14,761.0	9,469.3	5,431.0	-141.1	TD @ 14761' MD / 9469' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: Mewbourne Oil Co
 Red Hills West Unit #004H
 Eddy County, New Mexico
 Rig: Patterson #41
 Created By: DINA CHANCE
 Date: 1/3/2013

Red Hills West Unit #004H
 Eddy County, New Mexico
 Q120203 & WT-12942
 Design #3

Mewbourne Oil Company

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: Red Hills West Unit #004H

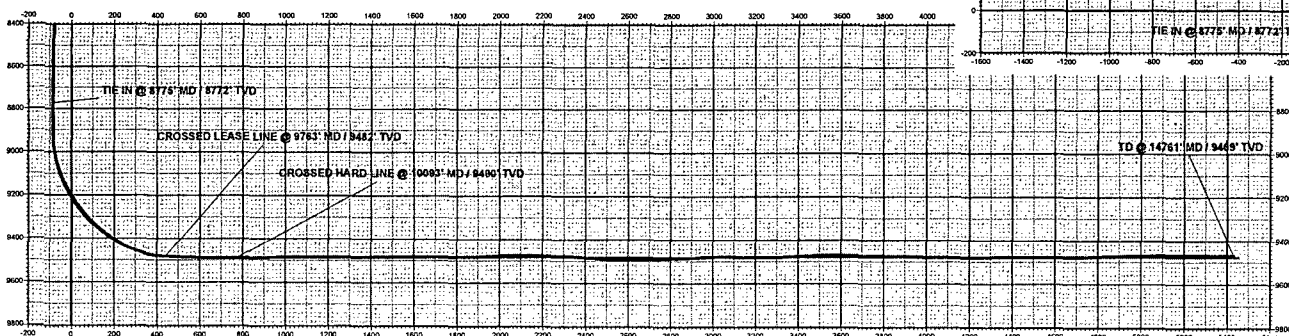
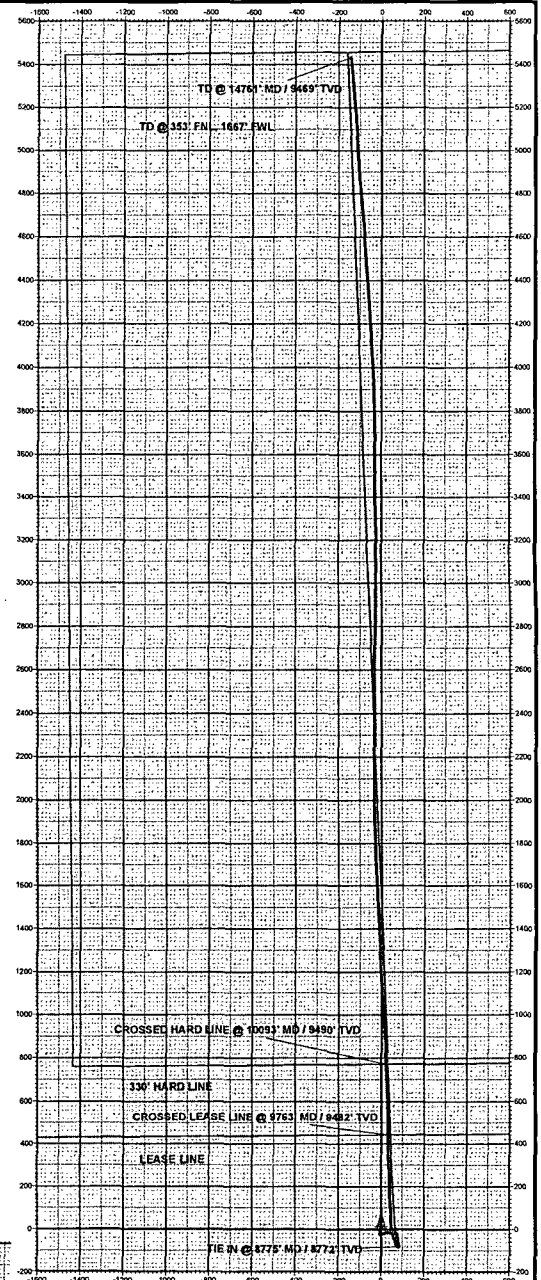
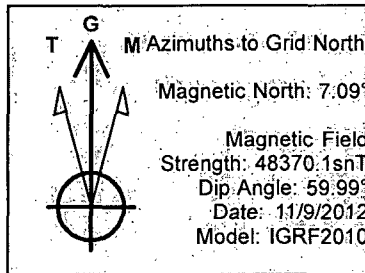
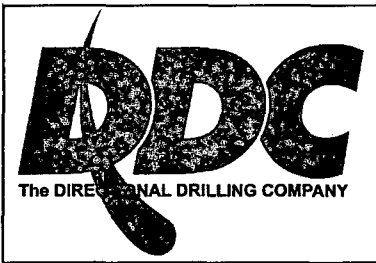
Ground Level: 3266.0
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.0 0.0 387622.31 706548.87 32° 3' 49.162 N 103° 39' 55.043 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Red Hills West Unit #004H Design #2 New 58476.0	6453.8	-157.1	332976.22	706791.77	32° 4' 43.134 N	103° 39' 55.476 W	
-plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
8775.0	1.29	246.38	8772.2	-85.0	79.2	-85.3	190.8	TIE IN @ 8775' MD / 8772' TVD
8762.9	87.87	0.21	8482.2	440.4	31.8	439.3	723.5	CROSSED LEASE LINE @ 8763' MD / 8482' TVD
10093.0	89.89	356.89	9489.6	770.2	24.3	769.2	1053.4	CROSSED HARD LINE @ 10093' MD / 9490' TVD
14761.0	90.00	355.10	9469.3	6451.0	-141.1	6432.8	8719.7	TD @ 14761' MD / 9469' TVD



Vertical Section at 358.35° (200 usf/in)

Operating Company Mewbourne
 Well Name & Number Red Hills West Unit 00 #4H
 Sales Ticket Number 4707060
 Date 12/31/2012

Company Rep Dave Berryman
 Field Santo Nino
 BOT Service Rep Hector R Magallanes
 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		0.03826	9,825.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	5,150.05	12,410	10,680
Bott Liner										

TVD	9,148.00	KOP	8,602.00	Open Hole	6.125	Casing Vol. (bbl)	367.0
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Carry Fluid Weight (ppg)	8.4	Proppant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ (BBL)
Liner Top	1	10292414	JR Setting Sleeve_RH Profile	9592.95	4.00	5.188	5.250			

Zone Length													
	H4090400008	JR Sleeve_S3 Hyd Set Packer	9596.95	4.65	5.813	3.875							
	10825400	4-1/2-13.5 LTC Nipple	9601.60	8.09	5.000	3.920							
		7 Joints of 4-1/2-13.5 LTC Casing	9609.69	265.55	5.000	3.920							
30	H809870074	3.625 EX-Frac Sleeve	9875.24	3.90	5.750		3.525	2286	310	514			
363.6		2 Joint of 4-1/2-13.5 LTC Casing	9879.14	77.47	5.000	3.920							
	H409360008	Baker Open Hole Packer	9956.61	3.89	5.820	3.875		2154					
		2 Joints of 4-1/2-13.5 LTC Casing	9960.50	74.38	5.000	3.920							
29	H809490001	3.500 EX-C Frac Sleeve	10034.88	3.53	5.750		3.448	2375	302	517			
160.6		2 Joint of 4-1/2-13.5 LTC Casing	10038.41	74.89	5.000	3.920							
	H409360008	Baker Open Hole Packer	10113.30	3.89	5.820	3.875		2154					
		2 Joints of 4-1/2-13.5 LTC Casing	10117.19	74.74	5.000	3.920							
28	H809490002	3.438 EX-C Frac Sleeve	10191.93	3.53	5.750		3.385	2375	291	519			
160.4		2 Joint of 4-1/2-13.5 LTC Casing	10195.46	74.34	5.000	3.920							
	H409360008	Baker Open Hole Packer	10269.80	3.89	5.820	3.875		2154					
		2 Joints of 4-1/2-13.5 LTC Casing	10273.69	74.07	5.000	3.920							
27	H809490003	3.375 EX-C Frac Sleeve	10347.78	3.53	5.750		3.323	2375	281	521			
161.6		2 Joint of 4-1/2-13.5 LTC Casing	10351.29	76.21	5.000	3.920							
	H409360008	Baker Open Hole Packer	10427.50	3.89	5.820	3.875		2154					
		2 Joints of 4-1/2-13.5 LTC Casing	10431.39	76.41	5.000	3.920							
26	H809490004	3.313 EX-C Frac Sleeve	10507.80	3.53	5.750		3.260	2375	270	524			
199.7		3 Joints of 4-1/2-13.5 LTC Casing	10511.33	111.98	5.000	3.920							
	H409360008	Baker Open Hole Packer	10623.31	3.89	5.820	3.875		2154					

Operating Company Mewbourne
Well Name & Number Red Hills West Unit 00 #4H
Sales Ticket Number 4707060
Date 12/31/2012

Company Rep Dave Berryman
Field Santo Nino
BOT Service Rep Hector R Magallanes
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		0.03826	9,825.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	5,150.05	12,410	10,680	
Bott Liner											
TVD	9,148.00		KOP		8,602.00		Open Hole	6.125	Casing Vol. (bbl)	367.0	
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)
25 163.5'		2 Joints of 4-1/2-13.5 LTC Casing	10627.20	74.51	5.000	3.920				
	H809490005	3.250 EX-C Frac Sleeve	10701.74	3.53	5.750		3.198	2375	260	527
24 196.75'		2 Joint of 4-1/2-13.5 LTC Casing	10705.24	77.69	5.000	3.920				
	H409360008	Baker Open Hole Packer	10782.93	3.89	5.820	3.875		2154		
23 162.67'		2 Joints of 4-1/2-13.5 LTC Casing	10786.82	72.70	5.000	3.920				
	H809490006	3.188 EX-C Frac Sleeve	10859.52	3.53	5.750		3.135	2375	250	529
22 163.78'		3 Joints of 4-1/2-13.5 LTC Casing	10863.05	112.74	5.000	3.920				
	H409360008	Baker Open Hole Packer	10975.79	3.89	5.820	3.875		2154		
21 161.99'		2 Joints of 4-1/2-13.5 LTC Casing	10979.68	74.70	5.000	3.920				
	H809490007	3.125 EX-C Frac Sleeve	11054.38	3.53	5.750		3.073	2375	240	532
20 164.94'		2 Joint of 4-1/2-13.5 LTC Casing	11057.91	76.66	5.000	3.920				
	H409360008	Baker Open Hole Packer	11134.57	3.89	5.820	3.875		2154		
19		2 Joints of 4-1/2-13.5 LTC Casing	11138.46	75.22	5.000	3.920				
	H809490008	3.063 EX-C Frac Sleeve	11213.68	3.53	5.750		3.010	2375	230	534
		2 Joints of 4-1/2-13.5 LTC Casing	11217.21	77.25	5.000	3.920				
	H409360008	Baker Open Hole Packer	11294.46	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11298.35	75.52	5.000	3.920				
	H809490009	3.000 EX-C Frac sleeve	11373.87	3.53	5.750		2.948	2375	221	537
		2 Joint of 4-1/2-13.5 LTC Casing	11377.40	75.16	5.000	3.920				
	H409360008	Baker Open Hole Packer	11452.56	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11456.45	77.09	5.000	3.920				
	H809490010	2.938 EX-C Frac Sleeve	11533.54	3.53	5.750		2.885	2375	212	539
		2 Joints of 4-1/2-13.5 LTC Casing	11537.07	76.54	5.000	3.920				
	H409360008	Baker Open Hole Packer	11613.61	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11617.50	76.68	5.000	3.920				
	H809490011	2.875 EX-C Frac Sleeve	11694.18	3.53	5.750		2.823	2375	203	542

Operating Company Mewbourne
 Well Name & Number Red Hills West Unit 00 #4H
 Sales Ticket Number 4707060
 Date 12/31/2012

Company Rep Dave Berryman
 Field Santo Nino
 BOT Service Rep Hector R Magallanes
 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		0.03826	9,825.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	5,150.05	12,410	10,680
Bott Liner										

TVD	9,148.00	KOP	8,602.00	Open Hole	6.125	Casing Vol. (bbl)	367.0
Carry Fluid Weight (ppg)	8.4	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)
163.79'		2 Joints of 4-1/2-13.5 LTC Casing	11697.71	75.80	5.000	3.920				
	H409360008	Baker Open Hole Packer	11773.51	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11777.40	73.07	5.000	3.920				
18	H809490012	2.813 EX C Frac Sleeve	11850.47	3.53	5.750		2.760	2375	194	544
160.80'		2 Joints of 4-1/2-13.5 LTC Casing	11854.00	76.42	5.000	3.920				
	H409360008	Baker Open Hole Packer	11930.42	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11934.31	73.74	5.000	3.920				
17	H809490013	2.750 EX C Frac Sleeve	12008.05	3.53	5.750		2.698	2375	185	546
161.13'		2 Joints of 4-1/2-13.5 LTC Casing	12011.58	76.08	5.000	3.920				
	H409360008	Baker Open Hole Packer	12087.66	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	12091.55	76.16	5.000	3.920				
16	H809490014	2.688 EX C Frac Sleeve	12167.71	3.53	5.750		2.635	2375	177	549
162.32'		2 Joints of 4-1/2-13.5 LTC Casing	12171.24	74.85	5.000	3.920				
	H409360008	Baker Open Hole Packer	12246.09	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12249.98	74.64	5.000	3.920				
15	H809490015	2.625 EX C Frac Sleeve	12324.82	3.53	5.750		2.573	2375	168	551
161.05'		2 Joint of 4-1/2-13.5 LTC Casing	12328.15	75.10	5.000	3.920				
	H409360008	Baker Open Hole Packer	12403.25	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12407.14	76.85	5.000	3.920				
14	H809490016	2.563 EX C Frac Sleeve	12483.99	3.53	5.750		2.510	2375	160	553
200.63'		3 Joints of 4-1/2-13.5 LTC Casing	12487.52	112.47	5.000	3.920				
	H409360008	Baker Open Hole Packer	12599.99	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12603.88	74.57	5.000	3.920				
13	H809490017	2.500 EX C Frac Sleeve	12678.45	3.53	5.750		2.448	2375	152	556
160.96'		2 Joint of 4-1/2-13.5 LTC Casing	12681.98	75.08	5.000	3.920				
	H409360008	Baker Open Hole Packer	12757.06	3.89	5.820	3.875		2154		

Operating Company Mewbourne
 Well Name & Number Red Hills West Unit 00 #4H
 Sales Ticket Number 4707060
 Date 12/31/2012

Company Rep Dave Berryman
 Field Santo Nino
 BOT Service Rep Hector R Magallanes
 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		0.03826	9,825.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	5,150.05	12,410	10,680
Bott Liner										
TVD	9,148.00		KOP		8,602.00		Open Hole	6.125	Casing Vol. (bbl)	367.0
Carry Fluid Weight (ppg)	8.4		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)
12 200.39'		2 Joints of 4-1/2-13.5 LTC Casing	12760.95	76.33	5.000	3.920				
	H809490018	2.438 EX C Frac Sleeve	12837.28	3.53	5.750		2.386	2375		
		3 Joints of 4-1/2-13.5 LTC Casing	12840.81	112.75	5.000	3.920				
11 161.27'	H409360008	Baker Open Hole Packer	12953.56	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12957.45	74.74	5.000	3.920				
	H809490019	2.375 EX C Frac Sleeve	13032.19	3.53	5.750		2.323	2375	137	367
10 162.08'		2 Joint of 4-1/2-13.5 LTC Casing	13035.72	75.22	5.000	3.920				
	H409360008	Baker Open Hole Packer	13110.94	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	13114.83	75.68	5.000	3.920				
9 199.73'	H809490020	2.313 EX C Frac Sleeve	13190.51	3.53	5.750		2.261	2375	130	367
		2 Joints of 4-1/2-13.5 LTC Casing	13194.04	75.09	5.000	3.920				
	H409360008	Baker Open Hole Packer	13269.13	3.89	5.820	3.875		2154		
8 162.13'		2 Joints of 4-1/2-13.5 LTC Casing	13273.02	75.45	5.000	3.920				
	H809870047	2.250 EX Frac Sleeve	13348.47	3.90	5.750		2.150	2286	115	367
		3 Joint of 4-1/2-13.5 LTC Casing	13352.37	112.60	5.000	3.920				
7 164.27'	H409360008	Baker Open Hole Packer	13464.97	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	13468.86	75.38	5.000	3.920				
	H809870042	2.125 EX Frac Sleeve	13544.24	3.90	5.750		2.025	2286	102	367
6		2 Joint of 4-1/2-13.5 LTC Casing	13548.14	75.07	5.000	3.920				
	H409360008	Baker Open Hole Packer	13623.21	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	13627.10	76.33	5.000	3.920				
	H809870088	2.000 EX Frac Sleeve	13703.43	3.90	5.750		1.900	2286	90	367
		2 Joints of 4-1/2-13.5 LTC Casing	13707.33	76.26	5.000	3.920				
	H409360008	Baker Open Hole Packer	13783.59	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	13787.48	74.53	5.000	3.920				
	H809870087	1.875 EX Frac Sleeve	13862.01	3.90	5.750		1.775	2286	79	367

Company Rep	Dave Berryman
Field	Santo Nino
BOT Service Rep	Hector R Magallanes
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		0.03826	9,825.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	5,150.05	12,410	10,680
Bott Liner										
TVD		9,148.00	KOP		8,602.00	Open Hole	6.125	Casing Vol. (bbl)	367.0	
Carry Fluid Weight (ppg)			8.4	Propant Content (ppa)				Max Drill Out Size		0

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