

HOBBS OCD

DEC 05 2014

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Mewbourne Oil Co

Lea County, New Mexico

Sec 11, T-22-S, R34E

Cabra Loca 11 B3OB State #1H

Wellbore #1

Design: Wellbore #1

DDC Survey Report

23 October, 2014

30-025-42002



DEC 05 2014

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Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well: Cabra Loca 11' B3OB State #1H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3520.0usft (Patterson #75)
Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11' B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

Project	Lea 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 11, T-22-S, R34E											
Site Position:			Northing:			510,170.90 usft			Latitude:			32° 23' 57.834 N					
From:			Map			Easting:			776,139.80 usft			Longitude:			103° 26' 19.177 W		
Position Uncertainty:			0.0 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.48 °		

Cabra Loca 11 B3OB State #1H						
Well Position	+N/-S	0.0 usft	Northing:	510,170.90 usft	Latitude:	32° 23' 57.834 N
	+E/-W	0.0 usft	Easting:	776,139.80 usft	Longitude:	103° 26' 19.177 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,500.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/25/2014	7.14	60.29	48,416

Design		Wellbore #1			
Audit Notes:					
Version:		1.0	Phase:		ACTUAL
			Tie On Depth:		0.0
Vertical Section:		Depth From (TVD)	+N/-S	+E/-W	Direction
		(usft)	(usft)	(usft)	(°)
		0.0	0.0	0.0	359.65

Survey Program		Date 10/23/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,600.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro
10,679.0	15,740.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.59	91.13	100.0	0.0	0.5	0.0	0.59	0.59	0.00
200.0	0.56	93.82	200.0	-0.1	1.5	-0.1	0.04	-0.03	2.69
300.0	0.63	93.33	300.0	-0.1	2.6	-0.1	0.07	0.07	-0.49
400.0	0.65	92.78	400.0	-0.2	3.7	-0.2	0.02	0.02	-0.55
500.0	0.76	91.79	500.0	-0.2	4.9	-0.3	0.11	0.11	-0.99
600.0	0.97	83.49	600.0	-0.1	6.4	-0.2	0.24	0.21	-8.30
700.0	1.54	88.54	699.9	0.0	8.6	-0.1	0.58	0.57	5.05
800.0	2.00	94.14	799.9	-0.1	11.7	-0.2	0.49	0.46	5.60
900.0	2.72	101.34	899.8	-0.7	15.7	-0.8	0.78	0.72	7.20

Survey Report



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Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11 B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

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	3.24	106.86	999.7	-2.0	20.8	-2.1	0.59	0.52	5.52
1,100.0	3.39	109.64	1,099.5	-3.8	26.3	-4.0	0.22	0.15	2.78
1,200.0	4.01	109.23	1,199.3	-5.9	32.3	-6.1	0.62	0.62	-0.41
1,300.0	5.12	109.99	1,299.0	-8.6	39.8	-8.9	1.11	1.11	0.76
1,400.0	6.35	107.70	1,398.5	-11.8	49.3	-12.1	1.25	1.23	-2.29
1,500.0	7.01	106.55	1,497.8	-15.3	60.4	-15.6	0.67	0.66	-1.15
1,600.0	7.10	107.22	1,597.0	-18.8	72.2	-19.3	0.12	0.09	0.67
1,700.0	6.42	104.47	1,696.3	-22.0	83.5	-22.6	0.75	-0.68	-2.75
1,800.0	4.55	94.68	1,795.9	-23.8	92.9	-24.3	2.08	-1.87	-9.79
1,900.0	3.18	81.86	1,895.7	-23.7	99.6	-24.3	1.61	-1.37	-12.82
2,000.0	1.81	55.93	1,995.6	-22.4	103.6	-23.1	1.74	-1.37	-25.93
2,100.0	1.43	42.35	2,095.5	-20.6	105.8	-21.3	0.54	-0.38	-13.58
2,200.0	1.15	32.78	2,195.5	-18.8	107.1	-19.5	0.35	-0.28	-9.57
2,300.0	0.62	19.34	2,295.5	-17.5	107.9	-18.2	0.57	-0.53	-13.44
2,400.0	0.55	21.20	2,395.5	-16.5	108.2	-17.2	0.07	-0.07	1.86
2,500.0	0.50	15.90	2,495.5	-15.7	108.5	-16.3	0.07	-0.05	-5.30
2,600.0	0.41	353.72	2,595.5	-14.9	108.6	-15.6	0.20	-0.09	-22.18
2,700.0	0.34	351.99	2,695.5	-14.2	108.5	-14.9	0.07	-0.07	-1.73
2,800.0	0.26	17.46	2,795.5	-13.7	108.5	-14.4	0.15	-0.08	25.47
2,900.0	0.52	56.98	2,895.5	-13.3	109.0	-13.9	0.36	0.26	39.52
3,000.0	0.76	59.60	2,995.5	-12.7	109.9	-13.4	0.24	0.24	2.62
3,100.0	0.91	48.22	3,095.4	-11.8	111.1	-12.5	0.22	0.15	-11.38
3,200.0	0.80	40.09	3,195.4	-10.8	112.1	-11.4	0.16	-0.11	-8.13
3,300.0	0.70	43.88	3,295.4	-9.8	113.0	-10.5	0.11	-0.10	3.79
3,400.0	0.72	56.86	3,395.4	-9.0	114.0	-9.7	0.16	0.02	12.98
3,500.0	0.82	47.21	3,495.4	-8.2	115.0	-8.9	0.16	0.10	-9.65
3,600.0	0.26	34.56	3,595.4	-7.5	115.7	-8.2	0.57	-0.56	-12.65
3,700.0	0.12	42.45	3,695.4	-7.2	115.9	-7.9	0.14	-0.14	7.89
3,800.0	0.25	110.25	3,795.4	-7.2	116.1	-7.9	0.23	0.13	67.80
3,900.0	0.31	46.33	3,895.4	-7.1	116.5	-7.8	0.30	0.06	-63.92
4,000.0	0.08	135.11	3,995.4	-7.0	116.8	-7.7	0.32	-0.23	88.78
4,100.0	0.08	171.79	4,095.4	-7.1	116.8	-7.8	0.05	0.00	36.68
4,200.0	0.25	132.91	4,195.4	-7.3	117.0	-8.0	0.19	0.17	-38.88
4,300.0	0.29	177.66	4,295.4	-7.7	117.2	-8.4	0.21	0.04	44.75
4,400.0	0.43	151.44	4,395.4	-8.3	117.4	-9.0	0.21	0.14	-26.22
4,500.0	0.87	125.60	4,495.4	-9.1	118.2	-9.8	0.52	0.44	-25.84
4,600.0	2.23	90.86	4,595.4	-9.5	120.7	-10.3	1.59	1.36	-34.74
4,700.0	2.61	74.71	4,695.3	-9.0	124.9	-9.7	0.78	0.38	-16.15
4,800.0	2.03	57.36	4,795.2	-7.4	128.6	-8.2	0.90	-0.58	-17.35
4,900.0	1.62	95.45	4,895.1	-6.6	131.5	-7.4	1.25	-0.41	38.09
5,000.0	2.19	109.33	4,995.1	-7.4	134.7	-8.2	0.73	0.57	13.88
5,100.0	2.58	111.46	5,095.0	-8.8	138.6	-9.7	0.40	0.39	2.13
5,200.0	2.79	118.81	5,194.9	-10.8	142.8	-11.7	0.40	0.21	7.35

Survey Report



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Well:	Cabra Loca 11-B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

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)
5,300.0	2.74	109.00	5,294.8	-12.8	147.2	-13.7	0.48	-0.05	-9.81
5,400.0	2.65	94.31	5,394.7	-13.7	151.8	-14.6	0.69	-0.09	-14.69
5,500.0	2.11	65.75	5,494.6	-13.1	155.7	-14.1	1.29	-0.54	-28.56
5,600.0	0.77	72.43	5,594.5	-12.2	158.1	-13.1	1.35	-1.34	6.68
5,700.0	0.32	351.91	5,694.5	-11.7	158.7	-12.7	0.78	-0.45	-80.52
5,800.0	0.67	328.30	5,794.5	-10.9	158.3	-11.9	0.40	0.35	-23.61
5,900.0	0.78	327.59	5,894.5	-9.9	157.6	-10.8	0.11	0.11	-0.71
6,000.0	0.94	305.70	5,994.5	-8.8	156.6	-9.8	0.36	0.16	-21.89
6,100.0	1.03	305.84	6,094.5	-7.8	155.2	-8.7	0.09	0.09	0.14
6,200.0	0.92	322.05	6,194.5	-6.6	154.0	-7.6	0.30	-0.11	16.21
6,300.0	1.06	313.68	6,294.5	-5.4	152.8	-6.3	0.20	0.14	-8.37
6,400.0	0.89	319.79	6,394.5	-4.1	151.7	-5.1	0.20	-0.17	6.11
6,500.0	1.06	313.65	6,494.4	-2.9	150.5	-3.8	0.20	0.17	-6.14
6,600.0	1.13	323.15	6,594.4	-1.5	149.2	-2.4	0.19	0.07	9.50
6,700.0	0.92	312.39	6,694.4	-0.1	148.0	-1.0	0.28	-0.21	-10.76
6,800.0	1.08	318.86	6,794.4	1.1	146.8	0.2	0.20	0.16	6.47
6,900.0	1.05	319.41	6,894.4	2.5	145.6	1.6	0.03	-0.03	0.55
7,000.0	1.01	319.60	6,994.4	3.9	144.5	3.0	0.04	-0.04	0.19
7,100.0	1.38	322.43	7,094.3	5.5	143.1	4.6	0.37	0.37	2.83
7,200.0	1.31	305.38	7,194.3	7.1	141.5	6.3	0.40	-0.07	-17.05
7,300.0	1.17	288.20	7,294.3	8.1	139.6	7.3	0.40	-0.14	-17.18
7,400.0	1.54	267.41	7,394.3	8.4	137.3	7.5	0.61	0.37	-20.79
7,500.0	1.39	266.95	7,494.2	8.2	134.7	7.4	0.15	-0.15	-0.46
7,600.0	1.44	266.46	7,594.2	8.1	132.2	7.3	0.05	0.05	-0.49
7,700.0	1.26	268.74	7,694.2	8.0	129.9	7.2	0.19	-0.18	2.28
7,800.0	0.75	268.06	7,794.2	7.9	128.1	7.2	0.51	-0.51	-0.68
7,900.0	0.59	253.91	7,894.1	7.8	127.0	7.0	0.23	-0.16	-14.15
8,000.0	0.30	304.66	7,994.1	7.8	126.3	7.0	0.46	-0.29	50.75
8,100.0	0.21	82.73	8,094.1	8.0	126.2	7.2	0.48	-0.09	138.07
8,200.0	0.22	104.51	8,194.1	7.9	126.6	7.2	0.08	0.01	21.78
8,300.0	0.27	60.51	8,294.1	8.0	127.0	7.2	0.19	0.05	-44.00
8,400.0	0.14	142.21	8,394.1	8.0	127.3	7.2	0.29	-0.13	81.70
8,500.0	0.18	173.73	8,494.1	7.8	127.4	7.0	0.10	0.04	31.52
8,600.0	0.44	167.95	8,594.1	7.2	127.5	6.5	0.26	0.26	-5.78
8,700.0	0.49	164.44	8,694.1	6.4	127.7	5.7	0.06	0.05	-3.51
8,800.0	0.75	175.67	8,794.1	5.4	127.8	4.6	0.29	0.26	11.23
8,900.0	1.10	174.15	8,894.1	3.8	128.0	3.0	0.35	0.35	-1.52
9,000.0	1.64	191.44	8,994.1	1.4	127.8	0.6	0.67	0.54	17.29
9,100.0	1.92	215.00	9,094.0	-1.4	126.6	-2.1	0.78	0.28	23.56
9,200.0	2.30	240.98	9,194.0	-3.7	123.8	-4.5	1.02	0.38	25.98
9,300.0	2.40	243.22	9,293.9	-5.6	120.2	-6.4	0.14	0.10	2.24
9,400.0	2.57	245.77	9,393.8	-7.5	116.3	-8.2	0.20	0.17	2.55
9,500.0	1.83	251.94	9,493.7	-8.9	112.7	-9.6	0.78	-0.74	6.17

Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Cabra Loca 11 B3OB State #1H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3520.0usft (Patterson #75)
Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11 B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

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)	
9,600.0	1.61	256.25	9,593.7	-9.7	109.9	-10.4	0.26	-0.22	4.31	
9,700.0	1.33	253.11	9,693.6	-10.4	107.4	-11.1	0.29	-0.28	-3.14	
9,800.0	0.97	243.01	9,793.6	-11.1	105.5	-11.8	0.41	-0.36	-10.10	
9,900.0	0.95	221.74	9,893.6	-12.1	104.2	-12.8	0.35	-0.02	-21.27	
10,000.0	1.02	229.62	9,993.6	-13.3	103.0	-13.9	0.15	0.07	7.88	
10,100.0	1.21	191.73	10,093.6	-14.9	102.1	-15.5	0.75	0.19	-37.89	
10,200.0	1.24	186.22	10,193.6	-17.0	101.8	-17.7	0.12	0.03	-5.51	
10,300.0	1.48	197.80	10,293.5	-19.3	101.2	-20.0	0.36	0.24	11.58	
10,400.0	1.63	194.66	10,393.5	-21.9	100.5	-22.6	0.17	0.15	-3.14	
10,500.0	1.35	188.15	10,493.5	-24.5	100.0	-25.1	0.33	-0.28	-6.51	
TIE IN @ 10600' MD/ 10593' TVD										
10,600.0	1.70	197.79	10,593.4	-27.1	99.3	-27.7	0.43	0.35	9.64	
10,679.0	2.60	342.30	10,672.4	-26.5	98.4	-27.1	5.20	1.14	182.92	
10,711.0	6.60	354.10	10,704.3	-24.0	98.0	-24.6	12.78	12.50	36.88	
10,743.0	10.50	359.60	10,735.9	-19.2	97.8	-19.8	12.44	12.19	17.19	
10,774.0	14.40	2.40	10,766.2	-12.5	98.0	-13.1	12.73	12.58	9.03	
10,806.0	17.50	1.70	10,797.0	-3.7	98.3	-4.3	9.71	9.69	-2.19	
10,838.0	20.70	359.80	10,827.2	6.7	98.4	6.1	10.19	10.00	-5.94	
10,869.0	23.80	358.70	10,855.9	18.5	98.2	17.9	10.09	10.00	-3.55	
10,901.0	27.10	356.90	10,884.8	32.2	97.7	31.6	10.59	10.31	-5.63	
10,933.0	30.20	356.60	10,912.9	47.5	96.8	46.9	9.70	9.69	-0.94	
10,965.0	33.30	357.60	10,940.1	64.3	96.0	63.7	9.83	9.69	3.13	
10,996.0	36.00	358.00	10,965.6	81.9	95.3	81.4	8.74	8.71	1.29	
11,028.0	38.70	359.80	10,991.0	101.3	94.9	100.8	9.10	8.44	5.63	
11,060.0	42.20	0.80	11,015.3	122.1	95.0	121.5	11.12	10.94	3.13	
Crossed Hard Line @ 11072' MD/ 11024' TVD										
11,072.0	43.48	0.72	11,024.1	130.3	95.2	129.7	10.65	10.64	-0.67	
11,091.0	45.50	0.60	11,037.7	143.6	95.3	143.0	10.65	10.65	-0.63	
11,123.0	47.40	1.50	11,059.7	166.8	95.7	166.2	6.28	5.94	2.81	
11,155.0	49.10	1.50	11,081.1	190.6	96.4	190.0	5.31	5.31	0.00	
11,186.0	52.70	1.30	11,100.6	214.7	97.0	214.1	11.62	11.61	-0.65	
11,218.0	56.90	0.10	11,119.0	240.8	97.3	240.2	13.48	13.13	-3.75	
11,249.0	61.10	358.90	11,135.0	267.4	97.0	266.8	13.95	13.55	-3.87	
11,281.0	65.30	358.00	11,149.4	295.9	96.2	295.3	13.36	13.13	-2.81	
11,313.0	68.40	357.80	11,162.0	325.3	95.2	324.7	9.70	9.69	-0.63	
11,344.0	72.10	358.20	11,172.5	354.5	94.2	353.9	12.00	11.94	1.29	
11,376.0	75.00	358.70	11,181.5	385.2	93.3	384.6	9.19	9.06	1.56	
11,407.0	75.70	358.20	11,189.4	415.1	92.5	414.6	2.74	2.26	-1.61	
11,439.0	77.50	359.20	11,196.8	446.3	91.8	445.7	6.39	5.63	3.13	
11,471.0	79.30	359.60	11,203.2	477.6	91.5	477.0	5.76	5.63	1.25	
11,503.0	81.90	0.40	11,208.5	509.2	91.5	508.6	8.49	8.13	2.50	
11,534.0	85.20	1.30	11,211.9	540.0	91.9	539.4	11.03	10.65	2.90	
11,551.0	86.20	1.70	11,213.2	556.9	92.4	556.3	6.33	5.88	2.35	
11,681.0	90.00	2.70	11,217.5	686.7	97.4	686.1	3.02	2.92	0.77	

Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well, Cabra Loca 11, B3OB State #1H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3520.0usft (Patterson #75)
Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11, B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM, Compass

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)
11,712.0	89.00	1.50	11,217.8	717.7	98.5	717.1	5.04	-3.23	-3.87
11,744.0	89.30	0.40	11,218.3	749.7	99.0	749.1	3.56	0.94	-3.44
11,775.0	88.90	0.10	11,218.8	780.7	99.2	780.1	1.61	-1.29	-0.97
11,839.0	87.10	359.20	11,221.0	844.6	98.8	844.0	3.14	-2.81	-1.41
11,902.0	86.20	358.20	11,224.7	907.5	97.4	906.9	2.13	-1.43	-1.59
11,965.0	85.70	357.80	11,229.1	970.3	95.2	969.7	1.02	-0.79	-0.63
12,028.0	86.40	356.10	11,233.5	1,033.1	91.8	1,032.5	2.91	1.11	-2.70
12,092.0	87.30	355.90	11,237.0	1,096.8	87.4	1,096.3	1.44	1.41	-0.31
12,155.0	87.80	356.20	11,239.7	1,159.6	83.0	1,159.1	0.93	0.79	0.48
12,218.0	88.90	355.70	11,241.5	1,222.4	78.6	1,221.9	1.92	1.75	-0.79
12,281.0	89.60	356.60	11,242.3	1,285.3	74.3	1,284.8	1.81	1.11	1.43
12,345.0	89.80	356.40	11,242.6	1,349.2	70.4	1,348.7	0.44	0.31	-0.31
12,408.0	89.50	356.40	11,243.0	1,412.0	66.5	1,411.6	0.48	-0.48	0.00
12,471.0	89.00	356.20	11,243.9	1,474.9	62.4	1,474.5	0.85	-0.79	-0.32
12,535.0	89.70	356.60	11,244.6	1,538.8	58.4	1,538.4	1.26	1.09	0.63
12,598.0	90.40	356.40	11,244.5	1,601.6	54.6	1,601.3	1.16	1.11	-0.32
12,661.0	91.10	357.50	11,243.7	1,664.6	51.2	1,664.2	2.07	1.11	1.75
12,724.0	90.90	357.50	11,242.6	1,727.5	48.5	1,727.2	0.32	-0.32	0.00
12,788.0	90.60	356.60	11,241.8	1,791.4	45.2	1,791.1	1.48	-0.47	-1.41
12,851.0	90.50	356.80	11,241.2	1,854.3	41.5	1,854.0	0.35	-0.16	0.32
12,914.0	89.90	356.60	11,240.9	1,917.2	37.9	1,916.9	1.00	-0.95	-0.32
12,977.0	91.10	357.30	11,240.4	1,980.1	34.6	1,979.8	2.21	1.90	1.11
13,009.0	90.90	358.50	11,239.8	2,012.1	33.4	2,011.8	3.80	-0.63	3.75
13,041.0	90.60	357.60	11,239.4	2,044.0	32.3	2,043.8	2.96	-0.94	-2.81
13,073.0	90.10	358.20	11,239.2	2,076.0	31.1	2,075.8	2.44	-1.56	1.88
13,104.0	87.80	356.40	11,239.8	2,107.0	29.7	2,106.7	9.42	-7.42	-5.81
13,136.0	86.30	355.40	11,241.4	2,138.8	27.4	2,138.6	5.63	-4.69	-3.13
13,167.0	86.30	355.70	11,243.4	2,169.7	25.0	2,169.5	0.97	0.00	0.97
13,199.0	87.50	356.60	11,245.2	2,201.6	22.8	2,201.4	4.69	3.75	2.81
13,231.0	89.80	357.30	11,245.9	2,233.5	21.1	2,233.3	7.51	7.19	2.19
13,262.0	89.60	356.10	11,246.1	2,264.5	19.3	2,264.3	3.92	-0.65	-3.87
13,294.0	89.50	355.70	11,246.3	2,296.4	17.1	2,296.2	1.29	-0.31	-1.25
13,325.0	90.90	356.10	11,246.2	2,327.3	14.8	2,327.2	4.70	4.52	1.29
13,357.0	92.20	356.60	11,245.4	2,359.2	12.8	2,359.1	4.35	4.06	1.56
13,389.0	92.40	356.80	11,244.1	2,391.1	11.0	2,391.0	0.88	0.63	0.63
13,421.0	92.50	357.60	11,242.7	2,423.1	9.4	2,423.0	2.52	0.31	2.50
13,452.0	91.30	356.80	11,241.7	2,454.0	7.9	2,453.9	4.65	-3.87	-2.58
13,484.0	90.90	355.90	11,241.1	2,485.9	5.9	2,485.9	3.08	-1.25	-2.81
13,516.0	93.30	357.10	11,239.9	2,517.9	3.9	2,517.8	8.38	7.50	3.75
13,547.0	93.70	356.40	11,238.0	2,548.8	2.1	2,548.7	2.60	1.29	-2.26
13,579.0	92.60	354.80	11,236.2	2,580.6	-0.3	2,580.6	6.06	-3.44	-5.00
13,610.0	92.80	355.20	11,234.8	2,611.5	-3.0	2,611.4	1.44	0.65	1.29
13,642.0	94.20	355.20	11,232.8	2,643.3	-5.7	2,643.3	4.38	4.38	0.00

Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well: Cabra Loca 11 B3OB State #1H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3520.0usft (Patterson #75)
Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11 B3OB State #1H	North Reference:	Grid:
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

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)
13,657.0	94.70	356.80	11,231.7	2,658.2	-6.7	2,658.2	11.14	3.33	10.67
13,688.0	94.60	356.40	11,229.1	2,689.0	-8.6	2,689.0	1.33	-0.32	-1.29
13,720.0	92.20	358.50	11,227.2	2,721.0	-10.0	2,721.0	9.96	-7.50	6.56
13,751.0	91.80	358.50	11,226.2	2,751.9	-10.8	2,751.9	1.29	-1.29	0.00
13,815.0	91.20	359.90	11,224.5	2,815.9	-11.7	2,815.9	2.38	-0.94	2.19
13,878.0	90.20	0.30	11,223.7	2,878.9	-11.6	2,878.9	1.71	-1.59	0.63
13,941.0	91.40	359.00	11,222.8	2,941.9	-12.0	2,941.9	2.81	1.90	-2.06
14,004.0	91.40	358.50	11,221.3	3,004.8	-13.3	3,004.9	0.79	0.00	-0.79
14,068.0	92.00	358.90	11,219.4	3,068.8	-14.8	3,068.8	1.13	0.94	0.63
14,131.0	92.50	359.80	11,216.9	3,131.7	-15.5	3,131.8	1.63	0.79	1.43
14,194.0	91.90	359.00	11,214.5	3,194.7	-16.2	3,194.7	1.59	-0.95	-1.27
14,257.0	91.30	359.80	11,212.8	3,257.7	-16.8	3,257.7	1.59	-0.95	1.27
14,289.0	90.60	359.90	11,212.2	3,289.7	-16.9	3,289.7	2.21	-2.19	0.31
14,321.0	89.80	0.60	11,212.1	3,321.7	-16.8	3,321.7	3.32	-2.50	2.19
14,352.0	89.30	1.30	11,212.4	3,352.7	-16.2	3,352.7	2.77	-1.61	2.26
14,415.0	89.20	0.60	11,213.2	3,415.6	-15.2	3,415.7	1.12	-0.16	-1.11
14,479.0	88.70	359.90	11,214.4	3,479.6	-14.9	3,479.7	1.34	-0.78	-1.09
14,542.0	89.00	0.40	11,215.6	3,542.6	-14.8	3,542.6	0.93	0.48	0.79
14,605.0	89.30	359.00	11,216.6	3,605.6	-15.1	3,605.6	2.27	0.48	-2.22
14,668.0	90.50	359.00	11,216.7	3,668.6	-16.2	3,668.6	1.90	1.90	0.00
14,732.0	89.30	357.30	11,216.8	3,732.6	-18.2	3,732.6	3.25	-1.88	-2.66
14,795.0	89.80	358.20	11,217.3	3,795.5	-20.7	3,795.6	1.63	0.79	1.43
14,858.0	90.00	359.20	11,217.4	3,858.5	-22.1	3,858.6	1.62	0.32	1.59
14,890.0	89.60	358.90	11,217.5	3,890.5	-22.7	3,890.6	1.56	-1.25	-0.94
14,953.0	90.00	358.90	11,217.7	3,953.5	-23.9	3,953.5	0.63	0.63	0.00
15,016.0	91.50	359.90	11,216.9	4,016.5	-24.5	4,016.5	2.86	2.38	1.59
15,079.0	91.90	0.30	11,215.0	4,079.4	-24.4	4,079.5	0.90	0.63	0.63
15,143.0	90.80	0.10	11,213.5	4,143.4	-24.2	4,143.5	1.75	-1.72	-0.31
15,205.0	90.10	359.20	11,213.0	4,205.4	-24.6	4,205.5	1.84	-1.13	-1.45
15,269.0	89.70	358.90	11,213.1	4,269.4	-25.7	4,269.5	0.78	-0.63	-0.47
15,332.0	90.50	358.90	11,213.0	4,332.4	-26.9	4,332.5	1.27	1.27	0.00
15,395.0	90.70	359.20	11,212.4	4,395.4	-27.9	4,395.5	0.57	0.32	0.48
15,458.0	90.60	358.50	11,211.6	4,458.4	-29.2	4,458.5	1.12	-0.16	-1.11
15,522.0	90.60	358.90	11,211.0	4,522.3	-30.6	4,522.4	0.62	0.00	0.63
15,585.0	91.00	359.60	11,210.1	4,585.3	-31.5	4,585.4	1.28	0.63	1.11
15,648.0	90.80	1.00	11,209.1	4,648.3	-31.1	4,648.4	2.24	-0.32	2.22
15,685.0	90.80	1.10	11,208.6	4,685.3	-30.4	4,685.4	0.27	0.00	0.27
TD WELL @ 15740' MD/ 11208' TVD									
15,740.0	90.80	1.10	11,207.8	4,740.3	-29.4	4,740.4	0.00	0.00	0.00

Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well: Cabra Loca 11 B3OB State #1H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3520.0usft (Patterson #75)
Site:	Sec 11, T-22-S, R34E	MD Reference:	Well @ 3520.0usft (Patterson #75)
Well:	Cabra Loca 11 B3OB State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM/Compass

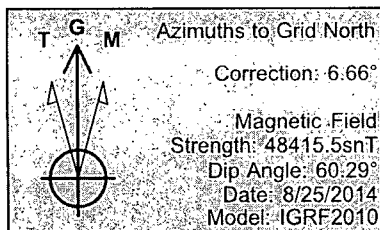
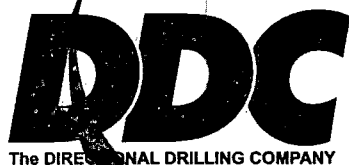
Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,600.0	10,593.4	-27.1	99.3	TIE IN @ 10600' MD/ 10593' TVD
11,072.0	11,024.1	130.3	95.2	Crossed Hard Line @ 11072' MD / 11024' TVD
15,740.0	11,207.8	4,740.3	-29.4	TD WELL @ 15740' MD/ 11208' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: Mewbourne Oil Co
Cabra Loca 11 B3OB State #1H
Lea County, New Mexico
Rig: Patterson #75
Created By: Jordan Park
Date: 10/22/2014

Cabra Loca 11 B3OB State #1H
Lea County, New Mexico
Quote 140960 & WT-140911
Design #2 - Tie Into Gyro

Mewbourne Oil Company



PROJECT DETAILS: Lea 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: Cabra Loca 11 B3OB State #1H

Ground Level: 3590.0
+N/-S 0.0 +E/-W 0.0 Northing 510170.90 Easting 776139.80 Latitude 32° 23' 57.834 N Longitude 103° 26' 19.177 W

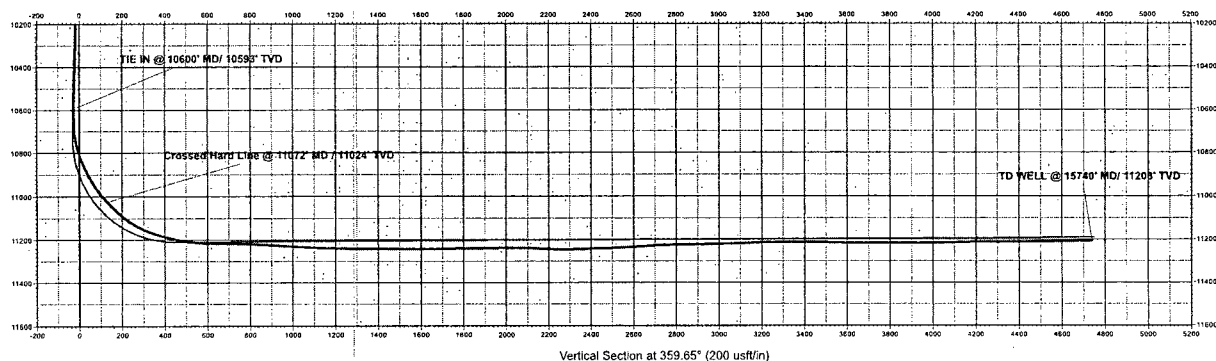
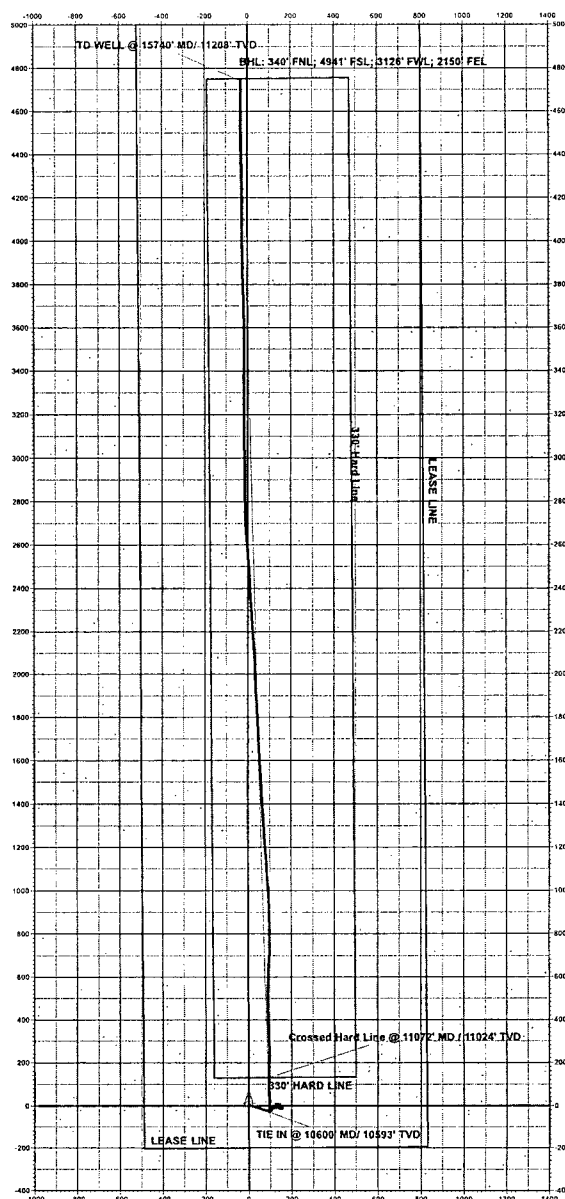
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Cabra Loca 11 B3OB State #1H	11190.0	4740.8	-28.9	514920.70	776110.87	32° 24' 44.835 N	103° 26' 19.551 W

- plan hits target center

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
10600.0	1.70	197.79	10593.4	-27.1	99.3	-27.7	269.4	TIE IN @ 10600' MD/ 10593' TVD
11072.0	43.48	0.72	11024.1	130.3	95.2	129.7	429.4	Crossed Hard Line @ 11072' MD / 11024' TVD
15740.0	90.90	1.10	11207.8	4740.3	-29.4	4740.4	5043.1	TD WELL @ 15740' MD/ 11208' TVD



Vertical Section at 359.65° (200 usft/in)