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Mewbourne Oil Co

Eddy County, New Mexico

Sec 2-T19S-R29E

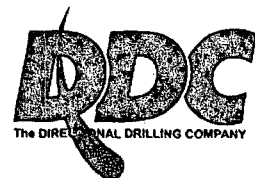
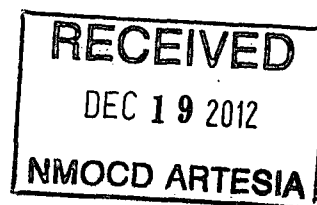
Zircon 2 EH State Com #1H

Wellbore #1

Survey: MWD

DDC Survey Report

01 November, 2012



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Zircon 2 EH State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3423.0usft (Patterson UTI #46)
Site:	Sec 2-T19S-R29E	MD Reference:	WELL @ 3423.0usft (Patterson UTI #46)
Well:	Zircon 2 EH State 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 2-T19S-R29E			
Site Position:		Northing:	615,349.41 usft	Latitude:	32° 41' 28.972 N
From:	Map	Easting:	586,232.29 usft	Longitude:	104° 3' 10.932 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well:	Zircon 2 EH State Com #1H					
Well Position	+N-S	0.0 usft	Northing:	615,349.41 usft	Latitude:	32° 41' 28.972 N
	+E-W	0.0 usft	Easting:	586,232.29 usft	Longitude:	104° 3' 10.932 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,403.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/19/2012	7.68	60.50	48,710

Design:	Wellbore #1				
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	0.00	

Survey Program		Date	11/1/2012	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,200.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
7,397.0	12,520.0	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)
TIE IN @ 7200' MD / 7199' TVD									
7,200.0	1.30	72.00	7,198.8	69.7	-7.5	69.7	0.00	0.00	0.00
7,397.0	1.80	66.10	7,395.7	71.6	-2.5	71.6	0.27	0.25	-2.99
7,429.0	1.80	56.60	7,427.7	72.1	-1.6	72.1	0.93	0.00	-29.69
7,460.0	2.00	66.40	7,458.7	72.6	-0.7	72.6	1.23	0.65	31.61
7,492.0	3.00	74.60	7,490.6	73.1	0.6	73.1	3.31	3.13	25.63
7,524.0	8.00	83.10	7,522.5	73.5	3.6	73.5	15.79	15.63	26.56
7,556.0	12.80	83.40	7,553.9	74.2	9.4	74.2	15.00	15.00	0.94
7,587.0	16.60	84.10	7,583.9	75.1	17.2	75.1	12.27	12.26	2.26
7,619.0	20.10	86.30	7,614.3	75.9	27.2	75.9	11.15	10.94	6.88

DDC Survey Report



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Site:	Sec 2-T19S-R29E	MD Reference:	WELL @ 3423.0usft (Patterson UTI #46)
Well:	Zircon 2 EH State 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)
7,651.0	23.90	88.40	7,644.0	76.4	39.2	76.4	12.12	11.88	6.56
7,682.0	27.00	89.60	7,671.9	76.7	52.5	76.7	10.14	10.00	3.87
7,714.0	30.00	90.10	7,700.1	76.7	67.8	76.7	9.40	9.38	1.56
7,746.0	33.50	89.90	7,727.3	76.7	84.6	76.7	10.94	10.94	-0.63
7,777.0	35.80	89.60	7,752.8	76.8	102.2	76.8	7.44	7.42	-0.97
7,809.0	40.00	88.70	7,778.0	77.1	121.9	77.1	13.24	13.13	-2.81
7,841.0	44.10	89.20	7,801.8	77.5	143.3	77.5	12.86	12.81	1.56
CROSSED HARD LINE @ 7859' MD / 7815' TVD									
7,859.3	46.58	89.56	7,814.6	77.6	156.3	77.6	13.62	13.55	1.99
7,872.0	48.30	89.80	7,823.2	77.7	165.7	77.7	13.62	13.55	1.86
7,904.0	51.70	90.80	7,843.8	77.5	190.2	77.5	10.89	10.63	3.13
7,936.0	55.40	92.70	7,862.8	76.7	215.9	76.7	12.51	11.56	5.94
7,967.0	58.50	93.20	7,879.7	75.4	241.8	75.4	10.09	10.00	1.61
7,999.0	61.40	92.90	7,895.7	73.9	269.5	73.9	9.10	9.06	-0.94
8,031.0	64.80	92.30	7,910.2	72.6	298.0	72.6	10.76	10.63	-1.88
8,062.0	68.10	91.70	7,922.6	71.6	326.4	71.6	10.79	10.65	-1.94
8,094.0	71.90	92.10	7,933.5	70.6	356.5	70.6	11.93	11.88	1.25
8,126.0	75.70	92.60	7,942.5	69.4	387.1	69.4	11.97	11.88	1.56
8,157.0	79.10	92.30	7,949.2	68.1	417.4	68.1	11.01	10.97	-0.97
8,184.0	82.30	92.30	7,953.6	67.0	444.0	67.0	11.85	11.85	0.00
8,259.0	87.80	91.70	7,960.0	64.4	518.6	64.4	7.38	7.33	-0.80
8,291.0	87.60	90.90	7,961.3	63.7	550.6	63.7	2.57	-0.63	-2.50
8,323.0	87.50	90.60	7,962.7	63.3	582.6	63.3	0.99	-0.31	-0.94
8,354.0	87.70	90.20	7,964.0	63.0	613.5	63.0	1.44	0.65	-1.29
8,386.0	87.60	89.90	7,965.3	63.0	645.5	63.0	0.99	-0.31	-0.94
8,417.0	87.70	89.70	7,966.6	63.1	676.5	63.1	0.72	0.32	-0.65
8,449.0	88.30	90.10	7,967.7	63.2	708.5	63.2	2.25	1.88	1.25
8,480.0	88.60	90.20	7,968.5	63.1	739.5	63.1	1.02	0.97	0.32
8,512.0	88.80	90.00	7,969.3	63.0	771.4	63.0	0.88	0.63	-0.63
8,544.0	88.90	89.70	7,969.9	63.1	803.4	63.1	0.99	0.31	-0.94
8,575.0	89.20	89.30	7,970.4	63.4	834.4	63.4	1.61	0.97	-1.29
8,606.0	88.80	90.50	7,971.0	63.4	865.4	63.4	4.08	-1.29	3.87
8,638.0	89.00	90.40	7,971.6	63.2	897.4	63.2	0.70	0.63	-0.31
8,670.0	88.50	90.90	7,972.3	62.8	929.4	62.8	2.21	-1.56	1.56
8,701.0	89.10	91.80	7,972.9	62.1	960.4	62.1	3.49	1.94	2.90
8,733.0	88.40	93.30	7,973.6	60.7	992.4	60.7	5.17	-2.19	4.69
8,764.0	88.10	93.30	7,974.6	58.9	1,023.3	58.9	0.97	-0.97	0.00
8,796.0	86.70	92.60	7,976.0	57.3	1,055.2	57.3	4.89	-4.38	-2.19
8,859.0	87.70	92.60	7,979.1	54.4	1,118.1	54.4	1.59	1.59	0.00
8,923.0	88.50	92.60	7,981.2	51.5	1,182.0	51.5	1.25	1.25	0.00
8,986.0	87.20	92.30	7,983.6	48.8	1,244.9	48.8	2.12	-2.06	-0.48
9,049.0	86.90	92.30	7,986.8	46.3	1,307.7	46.3	0.48	-0.48	0.00
9,112.0	87.20	92.00	7,990.1	43.9	1,370.6	43.9	0.67	0.48	-0.48

DDC Survey Report



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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)
9,176.0	87.30	91.60	7,993.1	41.9	1,434.5	41.9	0.64	0.16	-0.63
9,239.0	87.70	92.90	7,995.9	39.4	1,497.4	39.4	2.16	0.63	2.06
9,302.0	87.80	91.90	7,998.4	36.8	1,560.3	36.8	1.59	0.16	-1.59
9,365.0	87.70	91.80	8,000.8	34.8	1,623.2	34.8	0.22	-0.16	-0.16
9,429.0	88.50	91.00	8,003.0	33.2	1,687.2	33.2	1.77	1.25	-1.25
9,492.0	88.00	89.10	8,004.9	33.2	1,750.1	33.2	3.12	-0.79	-3.02
9,555.0	89.40	88.70	8,006.3	34.4	1,813.1	34.4	2.31	2.22	-0.63
9,617.0	89.30	88.30	8,007.0	36.0	1,875.1	36.0	0.66	-0.16	-0.65
9,681.0	89.20	88.70	8,007.8	37.7	1,939.0	37.7	0.64	-0.16	0.63
9,744.0	89.60	88.70	8,008.5	39.1	2,002.0	39.1	0.63	0.63	0.00
9,807.0	89.40	88.00	8,009.1	40.9	2,065.0	40.9	1.16	-0.32	-1.11
9,870.0	88.50	87.90	8,010.2	43.2	2,127.9	43.2	1.44	-1.43	-0.16
9,933.0	88.00	88.60	8,012.1	45.1	2,190.9	45.1	1.37	-0.79	1.11
9,996.0	86.70	89.80	8,015.0	46.0	2,253.8	46.0	2.81	-2.06	1.90
10,059.0	86.50	90.50	8,018.8	45.8	2,316.7	45.8	1.15	-0.32	1.11
10,122.0	87.50	90.80	8,022.1	45.1	2,379.6	45.1	1.66	1.59	0.48
10,186.0	88.90	91.10	8,024.1	44.0	2,443.6	44.0	2.24	2.19	0.47
10,249.0	89.30	91.20	8,025.1	42.8	2,506.5	42.8	0.65	0.63	0.16
10,313.0	89.00	90.20	8,026.0	42.0	2,570.5	42.0	1.63	-0.47	-1.56
10,376.0	89.80	90.90	8,026.7	41.4	2,633.5	41.4	1.69	1.27	1.11
10,439.0	89.60	92.40	8,027.0	39.6	2,696.5	39.6	2.40	-0.32	2.38
10,503.0	89.20	91.40	8,027.7	37.4	2,760.4	37.4	1.68	-0.63	-1.56
10,566.0	89.10	90.00	8,028.6	36.7	2,823.4	36.7	2.23	-0.16	-2.22
10,598.0	89.20	89.50	8,029.1	36.8	2,855.4	36.8	1.59	0.31	-1.56
10,630.0	89.00	90.90	8,029.6	36.7	2,887.4	36.7	4.42	-0.63	4.38
10,662.0	87.50	91.20	8,030.6	36.1	2,919.4	36.1	4.78	-4.69	0.94
10,693.0	87.40	92.30	8,032.0	35.2	2,950.4	35.2	3.56	-0.32	3.55
10,725.0	87.40	92.60	8,033.4	33.8	2,982.3	33.8	0.94	0.00	0.94
10,756.0	88.10	93.20	8,034.6	32.2	3,013.2	32.2	2.97	2.26	1.94
10,820.0	87.80	92.30	8,036.9	29.2	3,077.1	29.2	1.48	-0.47	-1.41
10,883.0	88.00	93.10	8,039.2	26.2	3,140.0	26.2	1.31	0.32	1.27
10,947.0	87.60	92.80	8,041.7	22.9	3,203.9	22.9	0.78	-0.63	-0.47
11,010.0	87.90	91.80	8,044.2	20.4	3,266.8	20.4	1.66	0.48	-1.59
11,074.0	88.10	92.20	8,046.4	18.1	3,330.7	18.1	0.70	0.31	0.63
11,136.0	88.30	91.70	8,048.3	16.0	3,392.6	16.0	0.87	0.32	-0.81
11,200.0	89.00	91.80	8,049.8	14.1	3,456.6	14.1	1.10	1.09	0.16
11,264.0	90.20	90.90	8,050.3	12.6	3,520.6	12.6	2.34	1.88	-1.41
11,327.0	90.50	90.70	8,049.9	11.7	3,583.6	11.7	0.57	0.48	-0.32
11,390.0	90.20	90.80	8,049.5	10.9	3,646.5	10.9	0.50	-0.48	0.16
11,453.0	89.90	91.60	8,049.5	9.6	3,709.5	9.6	1.36	-0.48	1.27
11,517.0	88.50	92.60	8,050.4	7.2	3,773.5	7.2	2.69	-2.19	1.56
11,580.0	88.30	92.30	8,052.1	4.5	3,836.4	4.5	0.57	-0.32	-0.48
11,643.0	87.90	90.70	8,054.2	2.9	3,899.3	2.9	2.62	-0.63	-2.54
11,706.0	88.50	90.40	8,056.2	2.3	3,962.3	2.3	1.06	0.95	-0.48

DDC Survey Report



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Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3423.0usft (Patterson UTI #46)
Site:	Sec 2-T19S-R29E	MD Reference:	WELL @ 3423.0usft (Patterson UTI #46)
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

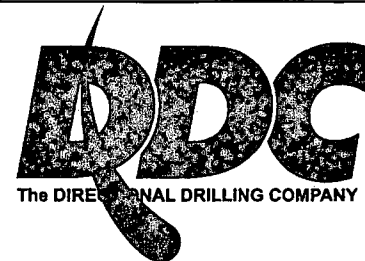
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,770.0	88.30	89.60	8,058.0	2.3	4,026.3	2.3	1.29	-0.31	-1.25
11,834.0	88.10	88.40	8,060.0	3.4	4,090.2	3.4	1.90	-0.31	-1.88
11,897.0	88.10	88.90	8,062.1	4.9	4,153.2	4.9	0.79	0.00	0.79
11,960.0	87.50	88.20	8,064.5	6.5	4,216.1	6.5	1.46	-0.95	-1.11
12,024.0	87.50	88.60	8,067.3	8.2	4,280.0	8.2	0.62	0.00	0.63
12,087.0	88.80	88.80	8,069.3	9.7	4,343.0	9.7	2.09	2.06	0.32
12,151.0	88.80	88.20	8,070.7	11.3	4,406.9	11.3	0.94	0.00	-0.94
12,214.0	88.90	87.30	8,071.9	13.8	4,469.9	13.8	1.44	0.16	-1.43
12,278.0	88.90	86.40	8,073.2	17.3	4,533.8	17.3	1.41	0.00	-1.41
12,341.0	88.40	85.50	8,074.6	21.8	4,596.6	21.8	1.63	-0.79	-1.43
12,405.0	88.30	85.10	8,076.5	27.0	4,660.4	27.0	0.64	-0.16	-0.63
12,468.0	88.60	84.60	8,078.2	32.7	4,723.1	32.7	0.93	0.48	-0.79
TD @ 12520' MD / 8080' TVD									
12,520.0	88.60	84.60	8,079.5	37.6	4,774.8	37.6	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,200.0	7,198.8	69.7	-7.5	TIE IN @ 7200' MD / 7199' TVD
7,859.3	7,814.6	77.6	156.3	CROSSED HARD LINE @ 7859' MD / 7815' TVD
12,520.0	8,079.5	37.6	4,774.8	TD @ 12520' MD / 8080' TVD

Checked By: _____	Approved By: _____	Date: _____
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Company Name: Mewbourne Oil Co
Zircon 2 EH State Com #1H
Eddy County, New Mexico
Rig: Patterson UTI #46
Created By: Dina Chance
Date: 11/2/2012

Zircon 2 EH State Com #1H
Eddy County, New Mexico
Q120598 & WT-12785
Design #2



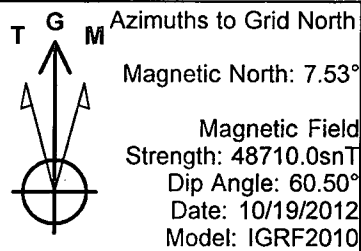
Mewbourne Oil Company

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: Zircon 2 EH State Com #1H

Ground Level: 3403.0
+N/-S +E/-W 0.0 0.0
Northing 615349.41
Easting 598232.29
Latitude 32° 41' 28.763 N
Longitude 104° 3' 10.932 W



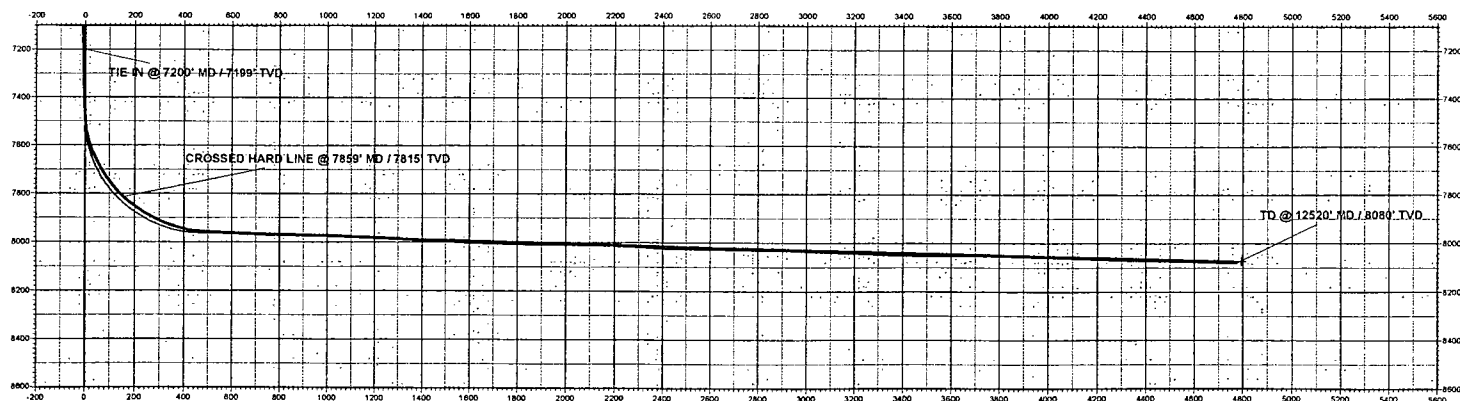
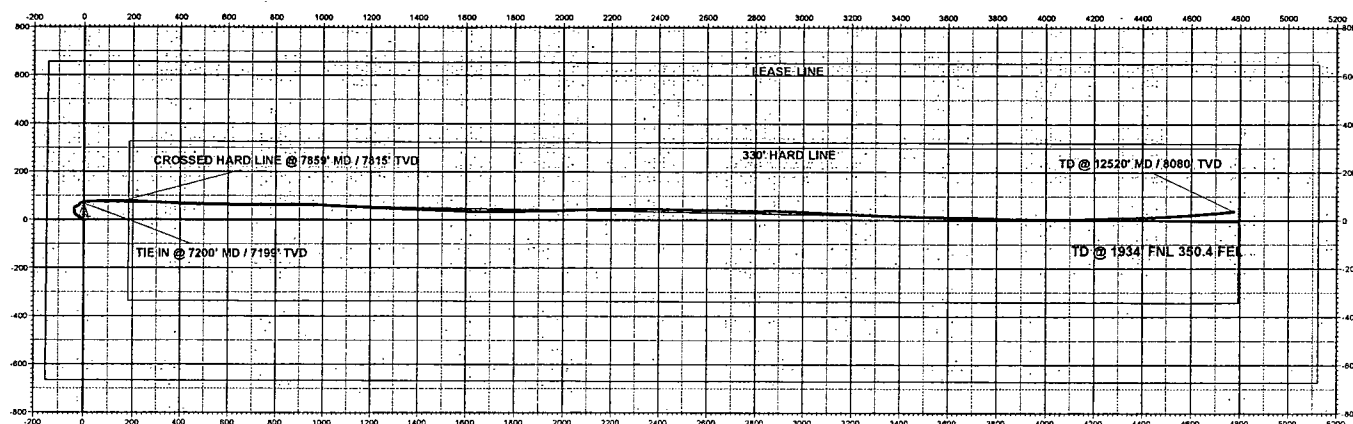
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Zircon 2 EH State Com #1H	8073.0	-8.1	4794.1	615341.27	591026.39	32° 41' 28.763 N	104° 3' 14.934 W

- plan hits target center

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7200.0	1.30	72.00	7198.3	69.7	-7.5	69.7	124.6	TIE IN @ 7200' MD / 7199° TVD
7859.3	46.68	89.56	7814.6	77.6	156.3	77.6	289.4	CROSSED HARD LINE @ 7859' MD / 7815° TVD
12520.0	88.60	84.80	8079.5	37.6	4774.8	37.6	4910.7	TD @ 12520' MD / 8080° TVD



Vertical Section at 90.10° (200 usf/in)