

OPERATOR
WELL/LEASE
COUNTY

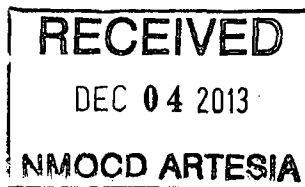
MEWBOURNE OIL COMPANY
ZIRCON 12-7 BC FED COM 1H
EDDY

080-0143

STATE OF NEW MEXICO
DEVIATION REPORT

15-41717

460	1.65
943	0.60
1,400	0.50
2,051	1.50
2,526	0.70
3,007	0.20
3,454	1.08
3,927	1.10
4,402	2.50
4,878	1.80
5,354	2.90
5,667	3.30
5,858	3.65
6,048	4.60
6,209	4.48
6,399	2.50
6,660	1.91
6,975	1.85
7,230	0.87



BY: Steve Moore

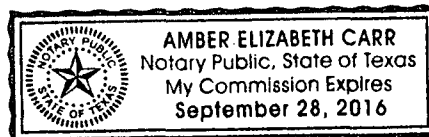
STATE OF TEXAS

COUNTY OF MIDLAND

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

11/11/13, by

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



Company: Mewbourne Oil Company
Lease/Well: Zircon 12 7 BC Fed Com/No. 001H



Rig Name: Patterson Rig #118
State/County: New Mexico/Eddy
Latitude: 32.68, Longitude: -104.03
GRID North is 0.16 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: zircon-12-7 bc fed com #1h_01.ut

Minimum Curvature Method

Report Date/Time: 10/18/2013 / 15:15

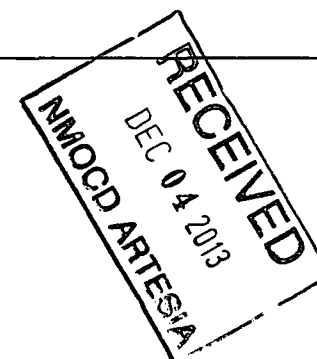
Vaughn Energy Services

Ft.Worth, TX

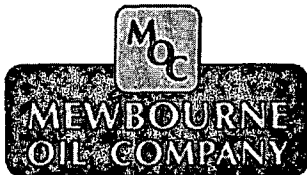
817-741-3610

Surveyor: Kenny Gabel

Zircon 12 7 BC Fed Com No. 001H / API 30-015-41717



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	0.77	297.70	100.00	0.31	-0.59	0.31	0.67	297.70	0.77
200.00	0.98	280.71	199.99	0.78	-2.03	0.78	2.17	291.10	0.33
300.00	1.46	238.23	299.96	0.27	-3.95	0.27	3.96	273.91	0.99
400.00	1.22	212.29	399.94	-1.30	-5.60	-1.30	5.75	256.94	0.65
500.00	0.85	217.73	499.92	-2.78	-6.62	-2.78	7.18	247.19	0.38
600.00	0.77	232.14	599.91	-3.78	-7.61	-3.78	8.50	243.55	0.22
700.00	0.51	233.02	699.91	-4.47	-8.49	-4.47	9.60	242.27	0.26
800.00	0.58	283.43	799.90	-4.62	-9.35	-4.62	10.42	243.72	0.47
900.00	0.60	20.81	899.90	-4.01	-9.66	-4.01	10.45	247.46	0.89
1000.00	0.79	26.69	999.89	-2.90	-9.16	-2.90	9.61	252.43	0.21
1100.00	1.16	53.70	1099.88	-1.68	-8.03	-1.68	8.21	258.17	0.58
1200.00	1.23	72.48	1199.85	-0.76	-6.19	-0.76	6.24	263.01	0.39
1300.00	0.90	65.23	1299.84	-0.11	-4.46	-0.11	4.46	268.59	0.35
1400.00	0.67	42.95	1399.83	0.65	-3.35	0.65	3.41	280.95	0.37
1500.00	0.41	41.25	1499.82	1.35	-2.72	1.35	3.03	296.36	0.27
1600.00	0.49	282.80	1599.82	1.71	-2.90	1.71	3.37	300.49	0.78
1700.00	0.82	287.45	1699.82	2.02	-4.00	2.02	4.48	296.76	0.33
1800.00	0.99	303.84	1799.80	2.71	-5.40	2.71	6.04	296.67	0.31



Mewbourne Oil Company .

Eddy County, New Mexico

Section 12/7-19S-29E Zircon 12/7 BC Federal Com

Zircon 12/7 BC Federal Com #1H

OH

Design: OH

Standard Survey Report

11 November, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Zircon 12/7 BC Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL 3396 +20 @ 3416.0usft (Patterson# 80)
Site:	Section 12/7-19S-29E Zircon 12/7 BC Federal Com	MD Reference:	GL 3396 +20 @ 3416.0usft (Patterson# 80)
Well:	Zircon 12/7 BC Federal Com #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM/5000.1 Single User Db

Project	Eddy County New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section 12/7-19S-29E Zircon 12/7 BC Federal Com		
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Site Position:	Map	Northing:	611,361.60 usft	Latitude:	32° 40' 49.303 N
From:		Easting:	593,842.90 usft	Longitude:	104° 1' 42.010 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well	Zircon 12/7 BC Federal Com #1H		
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Well Position	+N-S	0.0 usft	Northing:	611,361.60 usft	Latitude:	32° 40' 49.303 N
	+E-W	0.0 usft	Easting:	593,842.90 usft	Longitude:	104° 1' 42.010 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,396.0 usft

Wellbore	OH		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/24/2013	7.55	60.47	48,613

Survey Program	Date 11/11/2013		
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,525.0	Gyro Survey #1 (OH)	GyroFlex	
7,619.0	13,150.0	MWD Survey #2 (OH)	MWD	MWD - Standard

Survey									
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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.77	297.70	100.0	0.3	-0.6	-0.6	0.77	0.77	0.00
200.0	0.98	280.71	200.0	0.8	-2.0	-2.0	0.33	0.21	-16.99
300.0	1.46	238.23	300.0	0.3	-4.0	-4.0	0.99	0.48	-42.48
400.0	1.22	212.29	399.9	-1.3	-5.6	-5.6	0.65	-0.24	-25.94
500.0	0.85	217.73	499.9	-2.8	-6.6	-6.6	0.38	-0.37	5.44
600.0	0.77	232.14	599.9	-3.8	-7.6	-7.6	0.22	-0.08	14.41
700.0	0.51	233.02	699.9	-4.5	-8.5	-8.5	0.26	-0.26	0.88
800.0	0.58	283.43	799.9	-4.6	-9.3	-9.3	0.47	0.07	50.41
900.0	0.60	20.81	899.9	-4.0	-9.7	-9.6	0.89	0.02	97.38
1,000.0	0.79	26.69	999.9	-2.9	-9.2	-9.1	0.20	0.19	5.88
1,100.0	1.16	53.70	1,099.9	-1.7	-8.0	-8.0	0.58	0.37	27.01
1,200.0	1.23	72.48	1,199.9	-0.8	-6.2	-6.2	0.40	0.07	18.78
1,300.0	0.90	65.23	1,299.8	-0.1	-4.5	-4.5	0.36	-0.33	-7.25
1,400.0	0.67	42.95	1,399.8	0.6	-3.3	-3.3	0.38	-0.23	-22.28
1,500.0	0.41	41.25	1,499.8	1.3	-2.7	-2.7	0.26	-0.26	-1.70



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Zircon 12/7 BC Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3396 + 20 @ 3416.0usft (Patterson #80)
Site:	Section 12/7-19S-29E Zircon 12/7 BC Federal Com	MD Reference:	GL 3396 + 20 @ 3416.0usft (Patterson #80)
Well:	Zircon 12/7 BC Federal Com #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
1,600.0	0.49	282.80	1,599.8	1.7	-2.9	-2.9	0.77	0.08	-118.45
1,700.0	0.82	287.45	1,699.8	2.0	-4.0	-4.0	0.33	0.33	4.65
1,800.0	0.99	303.84	1,799.8	2.7	-5.4	-5.4	0.31	0.17	16.39
1,900.0	0.88	302.48	1,899.8	3.6	-6.8	-6.8	0.11	-0.11	-1.36
2,000.0	0.97	292.28	1,999.8	4.3	-8.2	-8.2	0.19	0.09	-10.20
2,100.0	0.96	291.45	2,099.8	5.0	-9.7	-9.8	0.02	-0.01	-0.83
2,200.0	0.94	286.77	2,199.7	5.5	-11.3	-11.3	0.08	-0.02	-4.68
2,300.0	1.07	295.61	2,299.7	6.1	-12.9	-13.0	0.20	0.13	8.84
2,400.0	0.72	290.80	2,399.7	6.8	-14.4	-14.4	0.36	-0.35	-4.81
2,500.0	0.99	270.27	2,499.7	7.0	-15.8	-15.9	0.40	0.27	-20.53
2,600.0	0.91	280.18	2,599.7	7.1	-17.5	-17.5	0.18	-0.08	9.91
2,700.0	0.77	288.33	2,699.7	7.5	-18.9	-18.9	0.18	-0.14	8.15
2,800.0	0.72	289.42	2,799.7	7.9	-20.1	-20.2	0.05	-0.05	1.09
2,900.0	0.72	301.67	2,899.7	8.5	-21.2	-21.3	0.15	0.00	12.25
3,000.0	0.89	291.73	2,999.7	9.1	-22.5	-22.6	0.22	0.17	-9.94
3,100.0	0.56	289.42	3,099.7	9.5	-23.7	-23.7	0.33	-0.33	-2.31
3,200.0	0.72	287.66	3,199.6	9.9	-24.7	-24.8	0.16	0.16	-1.76
3,300.0	0.85	284.81	3,299.6	10.3	-26.1	-26.1	0.14	0.13	-2.85
3,400.0	0.69	293.91	3,399.6	10.7	-27.3	-27.4	0.20	-0.16	9.10
3,500.0	0.84	300.28	3,499.6	11.3	-28.5	-28.6	0.17	0.15	6.37
3,600.0	0.92	302.49	3,599.6	12.1	-29.8	-29.9	0.09	0.08	2.21
3,700.0	1.01	315.18	3,699.6	13.2	-31.1	-31.2	0.23	0.09	12.69
3,800.0	0.96	308.42	3,799.6	14.3	-32.4	-32.5	0.13	-0.05	-6.76
3,900.0	1.08	305.98	3,899.6	15.4	-33.8	-33.9	0.13	0.12	-2.44
4,000.0	0.82	306.95	3,999.5	16.4	-35.1	-35.2	0.26	-0.26	0.97
4,100.0	1.16	318.44	4,099.5	17.6	-36.4	-36.5	0.39	0.34	11.49
4,200.0	1.94	327.03	4,199.5	19.7	-38.0	-38.1	0.81	0.78	8.59
4,300.0	2.19	332.41	4,299.4	22.8	-39.8	-39.9	0.32	0.25	5.38
4,400.0	2.15	333.22	4,399.4	26.2	-41.5	-41.7	0.05	-0.04	0.81
4,500.0	1.93	338.92	4,499.3	29.5	-43.0	-43.2	0.30	-0.22	5.70
4,600.0	1.86	345.51	4,599.2	32.6	-44.0	-44.2	0.23	-0.07	6.59
4,700.0	1.83	355.08	4,699.2	35.8	-44.5	-44.7	0.31	-0.03	9.57
4,800.0	1.84	355.39	4,799.1	39.0	-44.8	-45.0	0.01	0.01	0.31
4,900.0	1.39	338.83	4,899.1	41.7	-45.4	-45.6	0.64	-0.45	-16.56
5,000.0	1.63	315.96	4,999.1	43.8	-46.8	-47.1	0.64	0.24	-22.87
5,100.0	2.44	300.33	5,099.0	45.9	-49.6	-49.9	0.97	0.81	-15.63
5,200.0	2.70	283.71	5,198.9	47.6	-53.7	-54.0	0.79	0.26	-16.62
5,300.0	2.84	279.49	5,298.8	48.5	-58.5	-58.8	0.25	0.14	-4.22
5,400.0	3.18	279.65	5,398.6	49.4	-63.6	-63.9	0.34	0.34	0.16
5,500.0	3.19	276.43	5,498.5	50.2	-69.1	-69.5	0.18	0.01	-3.22
5,600.0	3.31	282.12	5,598.3	51.1	-74.7	-75.0	0.34	0.12	5.69
5,700.0	3.49	280.13	5,698.2	52.2	-80.6	-80.9	0.22	0.18	-1.99
5,800.0	3.73	276.92	5,798.0	53.2	-86.8	-87.1	0.31	0.24	-3.21



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Zircon 12/7 BC Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3396 + 20 @ 3416.0usft (Patterson# 80)
Site:	Section 12/7-19S-29E Zircon 12/7 BC Federal Com	MD Reference:	GL 3396 + 20 @ 3416.0usft (Patterson# 80)
Well:	Zircon 12/7 BC Federal Com #1H	North Reference:	Grid:
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User.Dbt

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)
5,900.0	4.21	271.59	5,897.7	53.7	-93.7	-94.0	0.60	0.48	-5.33
6,000.0	4.71	274.42	5,997.4	54.1	-101.4	-101.8	0.55	0.50	2.83
6,100.0	4.52	274.04	6,097.1	54.7	-109.5	-109.8	0.19	-0.19	-0.38
6,200.0	4.38	274.94	6,196.8	55.3	-117.2	-117.5	0.16	-0.14	0.90
6,300.0	4.09	282.03	6,296.5	56.4	-124.5	-124.8	0.60	-0.29	7.09
6,400.0	4.07	287.29	6,396.3	58.2	-131.4	-131.7	0.37	-0.02	5.26
6,500.0	3.33	294.62	6,496.1	60.4	-137.4	-137.8	0.88	-0.74	7.33
6,600.0	2.76	296.25	6,595.9	62.7	-142.2	-142.6	0.58	-0.57	1.63
6,700.0	2.26	310.36	6,695.8	65.0	-145.9	-146.3	0.79	-0.50	14.11
6,800.0	1.48	321.70	6,795.8	67.3	-148.2	-148.6	0.86	-0.78	11.34
6,900.0	1.00	2.60	6,895.7	69.2	-148.9	-149.3	0.98	-0.48	40.90
7,000.0	1.17	20.28	6,995.7	71.0	-148.5	-149.0	0.37	0.17	17.68
7,100.0	1.14	10.39	7,095.7	73.0	-148.0	-148.4	0.20	-0.03	-9.89
7,200.0	0.76	15.16	7,195.7	74.6	-147.6	-148.1	0.39	-0.38	4.77
7,300.0	0.65	17.29	7,295.7	75.8	-147.3	-147.8	0.11	-0.11	2.13
7,400.0	0.76	48.26	7,395.7	76.8	-146.6	-147.1	0.39	0.11	30.97
7,500.0	1.08	64.43	7,495.7	77.6	-145.3	-145.8	0.41	0.32	16.17
7,525.0	1.51	72.85	7,520.7	77.8	-144.8	-145.2	1.88	1.72	33.68
7525 MD VES Gryo									
7,619.0	1.10	74.00	7,614.6	78.4	-142.7	-143.2	0.44	-0.44	1.22
7,651.0	5.30	79.50	7,646.6	78.8	-141.0	-141.4	13.14	13.13	17.19
7,683.0	10.70	79.60	7,678.3	79.6	-136.6	-137.1	16.88	16.88	0.31
7,714.0	16.10	76.30	7,708.4	81.1	-129.6	-130.1	17.59	17.42	-10.65
7,746.0	22.20	77.20	7,738.6	83.5	-119.4	-119.9	19.08	19.06	2.81
7,778.0	27.30	81.20	7,767.7	86.0	-106.2	-106.7	16.77	15.94	12.50
7,809.0	32.50	86.70	7,794.5	87.5	-90.8	-91.4	18.95	16.77	17.74
7,841.0	35.30	91.10	7,821.1	87.9	-73.0	-73.6	11.63	8.75	13.75
7,873.0	34.80	94.80	7,847.3	86.9	-54.7	-55.2	6.82	-1.56	11.56
7,905.0	35.50	94.60	7,873.5	85.4	-36.3	-36.8	2.22	2.19	-0.63
7,936.0	36.10	97.40	7,898.6	83.5	-18.3	-18.8	5.63	1.94	9.03
7,968.0	38.90	97.90	7,924.0	80.9	1.0	0.5	8.80	8.75	1.56
8,000.0	41.90	100.20	7,948.4	77.6	21.5	21.0	10.47	9.38	7.19
8,031.0	43.10	100.40	7,971.2	73.9	42.1	41.7	3.90	3.87	0.65
8,063.0	44.60	97.40	7,994.3	70.5	64.0	63.6	8.01	4.69	-9.38
8,095.0	48.20	93.90	8,016.4	68.2	87.1	86.6	13.76	11.25	-10.94
8,126.0	50.50	94.10	8,036.6	66.6	110.5	110.1	7.44	7.42	0.65
8,158.0	52.90	95.60	8,056.4	64.4	135.5	135.1	8.35	7.50	4.69
8,190.0	56.40	98.80	8,074.9	61.2	161.4	161.0	13.64	10.94	10.00
8,222.0	61.30	97.60	8,091.4	57.3	188.5	188.2	15.64	15.31	-3.75
8,254.0	63.80	100.70	8,106.2	52.7	216.5	216.2	11.62	7.81	9.69
8,285.0	66.20	100.20	8,119.3	47.6	244.2	243.9	7.88	7.74	-1.61
8,317.0	68.50	99.50	8,131.6	42.6	273.3	273.0	7.47	7.19	-2.19



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Zircon 12/7-BC Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3396 +20' @ 3416.0usft (Patterson# 80)
Site:	Section 12/7-19S-29E, Zircon 12/7-BC Federal Com	MD Reference:	GL 3396 +20' @ 3416.0usft (Patterson# 80)
Well:	Zircon 12/7-BC Federal Com #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,349.0	73.30	98.10	8,142.1	38.0	303.1	302.9	15.56	15.00	-4.38
8,381.0	78.80	96.00	8,149.8	34.2	333.9	333.7	18.33	17.19	-6.56
8,412.0	84.90	94.10	8,154.2	31.5	364.5	364.3	20.59	19.68	-6.13
8,444.0	90.70	92.60	8,155.4	29.6	396.4	396.2	18.72	18.13	-4.69
8,476.0	92.70	92.10	8,154.5	28.3	428.4	428.2	6.44	6.25	-1.56
8,507.0	93.60	91.60	8,152.8	27.3	459.3	459.1	3.32	2.90	-1.61
8,537.0	94.40	91.60	8,150.7	26.5	489.2	489.0	2.67	2.67	0.00
8,631.0	91.60	94.20	8,145.8	21.7	582.9	582.8	4.06	-2.98	2.77
8,726.0	89.80	93.50	8,144.6	15.3	677.7	677.6	2.03	-1.89	-0.74
8,821.0	87.10	93.00	8,147.2	10.0	772.5	772.5	2.89	-2.84	-0.53
8,916.0	87.80	91.90	8,151.4	5.9	867.3	867.3	1.37	0.74	-1.16
9,011.0	89.50	90.50	8,153.6	3.9	962.3	962.2	2.32	1.79	-1.47
9,106.0	90.20	88.80	8,153.9	4.5	1,057.3	1,057.2	1.94	0.74	-1.79
9,201.0	88.70	86.70	8,154.8	8.2	1,152.2	1,152.1	2.72	-1.58	-2.21
9,296.0	89.80	89.50	8,156.0	11.4	1,247.1	1,247.0	3.17	1.16	2.95
9,391.0	90.70	89.10	8,155.6	12.5	1,342.1	1,342.0	1.04	0.95	-0.42
9,486.0	90.30	87.20	8,154.8	15.6	1,437.1	1,436.9	2.04	-0.42	-2.00
9,581.0	90.10	90.40	8,154.5	17.6	1,532.0	1,531.9	3.37	-0.21	3.37
9,677.0	89.40	93.00	8,154.9	14.7	1,628.0	1,627.9	2.80	-0.73	2.71
9,771.0	89.20	92.80	8,156.0	10.0	1,721.8	1,721.8	0.30	-0.21	-0.21
9,866.0	88.40	91.20	8,158.0	6.7	1,816.8	1,816.7	1.88	-0.84	-1.68
9,961.0	88.90	92.30	8,160.3	3.8	1,911.7	1,911.6	1.27	0.53	1.16
10,056.0	88.90	91.60	8,162.1	0.5	2,006.6	2,006.6	0.74	0.00	-0.74
10,151.0	88.10	90.90	8,164.6	-1.5	2,101.6	2,101.5	1.12	-0.84	-0.74
10,246.0	90.00	90.40	8,166.1	-2.6	2,196.5	2,196.5	2.07	2.00	-0.53
10,340.0	91.50	91.10	8,164.9	-3.8	2,290.5	2,290.5	1.76	1.60	0.74
10,435.0	91.00	91.10	8,162.8	-5.7	2,385.5	2,385.5	0.53	-0.53	0.00
10,529.0	90.00	90.70	8,162.0	-7.1	2,479.5	2,479.5	1.15	-1.06	-0.43
10,624.0	89.10	90.00	8,162.8	-7.7	2,574.5	2,574.5	1.20	-0.95	-0.74
10,719.0	87.80	89.70	8,165.3	-7.5	2,669.4	2,669.4	1.40	-1.37	-0.32
10,813.0	88.70	89.70	8,168.2	-7.0	2,763.4	2,763.4	0.96	0.96	0.00
10,908.0	89.10	87.90	8,170.0	-5.0	2,858.3	2,858.3	1.94	0.42	-1.89
11,003.0	89.50	88.60	8,171.2	-2.1	2,953.3	2,953.2	0.85	0.42	0.74
11,098.0	89.00	90.40	8,172.4	-1.3	3,048.3	3,048.2	1.97	-0.53	1.89
11,193.0	89.00	90.00	8,174.1	-1.6	3,143.2	3,143.2	0.42	0.00	-0.42
11,288.0	88.10	90.90	8,176.5	-2.3	3,238.2	3,238.2	1.34	-0.95	0.95
11,383.0	87.30	91.10	8,180.3	-4.0	3,333.1	3,333.1	0.87	-0.84	0.21
11,478.0	87.00	90.70	8,185.0	-5.5	3,428.0	3,428.0	0.53	-0.32	-0.42
11,573.0	90.40	91.20	8,187.2	-7.1	3,522.9	3,522.9	3.62	3.58	0.53
11,668.0	91.50	90.20	8,185.6	-8.2	3,617.9	3,617.9	1.56	1.16	-1.05
11,763.0	90.20	88.80	8,184.2	-7.4	3,712.9	3,712.9	2.01	-1.37	-1.47
11,858.0	89.40	89.50	8,184.5	-6.0	3,807.9	3,807.9	1.12	-0.84	0.74
11,953.0	90.70	91.10	8,184.5	-6.5	3,902.9	3,902.8	2.17	1.37	1.68



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Zircon 12/7 BC Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3396 +20 @ 3416.0usft (Patterson# 80)
Site:	Section 12/7-19S-29E Zircon 12/7 BC Federal Com	MD Reference:	GL 3396 +20 @ 3416.0usft (Patterson# 80)
Well:	Zircon 12/7 BC Federal Com #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,048.0	88.40	88.80	8,185.2	-6.4	3,997.9	3,997.8	3.42	-2.42	-2.42
12,143.0	88.20	88.40	8,188.0	-4.1	4,092.8	4,092.7	0.47	-0.21	-0.42
12,238.0	90.00	90.20	8,189.5	-2.9	4,187.8	4,187.7	2.68	1.89	1.89
12,333.0	89.40	91.60	8,190.0	-4.4	4,282.8	4,282.7	1.60	-0.63	1.47
12,428.0	89.60	92.60	8,190.8	-7.9	4,377.7	4,377.6	1.07	0.21	1.05
12,523.0	91.10	93.20	8,190.3	-12.7	4,472.6	4,472.5	1.70	1.58	0.63
12,619.0	91.20	93.20	8,188.3	-18.1	4,568.4	4,568.4	0.10	0.10	0.00
12,713.0	90.20	90.90	8,187.2	-21.4	4,662.3	4,662.4	2.67	-1.06	-2.45
12,808.0	90.90	87.90	8,186.3	-20.4	4,757.3	4,757.3	3.24	0.74	-3.16
12,903.0	89.00	88.20	8,186.4	-17.2	4,852.2	4,852.2	2.02	-2.00	0.32
12,999.0	87.80	86.70	8,189.0	-12.9	4,948.1	4,948.1	2.00	-1.25	-1.56
13,089.0	86.20	86.50	8,193.7	-7.6	5,037.8	5,037.8	1.79	-1.78	-0.22
13,150.0	87.00	86.70	8,197.4	-4.0	5,098.6	5,098.5	1.35	1.31	0.33
13150' MD Projected to Bit									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,525.0	7,520.7	77.8	-144.8	7525' MD VES Gryo
13,150.0	8,197.4	-4.0	5,098.6	13150' MD Projected to Bit



COMPANY: Mewbourne Oil Company
WELL: Zircon 12/7 BC Federal Com #1H
COUNTY: Eddy County, New Mexico
DATUM: NAD 1927 (NADCON CONUS)



RIG: Patterson# 80
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.39°

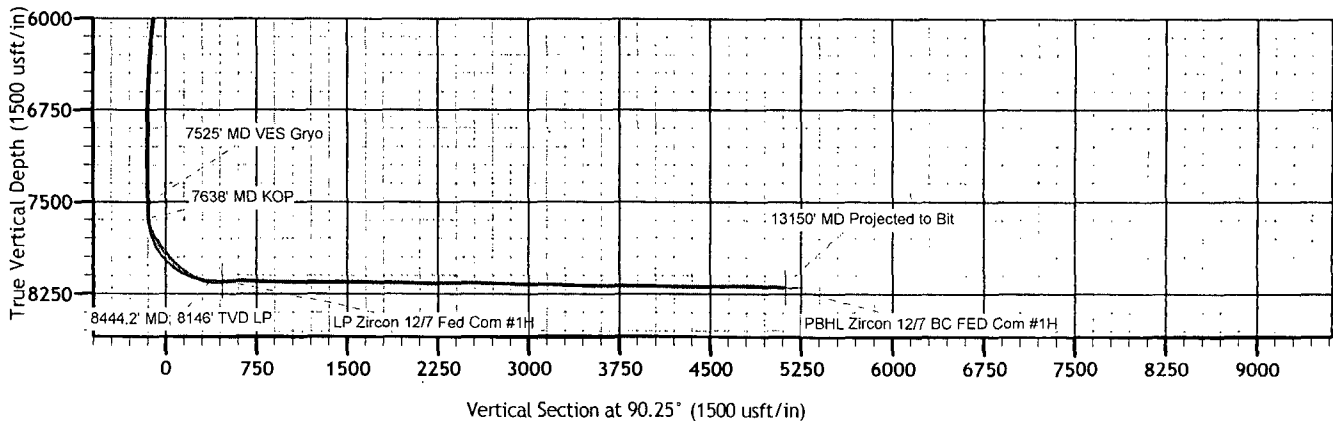
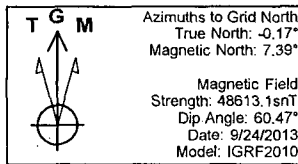
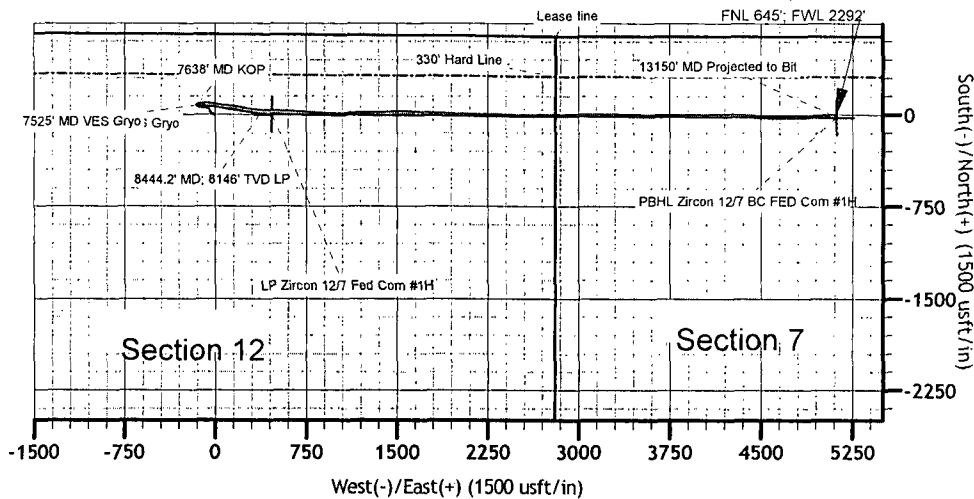
OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001
GL 3396 + 20 @ 3418.0usft (Patterson# 80)
GROUND ELEVATION: 3396.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	611361.60	593842.90	32° 40' 49.303 N	104° 1' 42.010 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	7525.0	1.51	72.85	7520.7	77.8	-144.8	0.00	0.00	-145.1	
2	7638.0	1.51	72.85	7633.6	78.7	-141.9	0.00	0.00	-142.3	
3	8436.8	88.83	98.76	8144.3	6.3	365.4	10.95	25.93	365.4	
4	8544.2	89.38	90.25	8146.0	-2.1	472.3	7.95	-86.35	472.3	LP Zircon 12/7 Fed Com #1H
5	13195.9	89.38	90.25	8196.0	-22.3	5123.7	0.00	0.00	5123.7	PBHL Zircon 12/7 BC FED Com #1H



Operating Company Mewbourne
 Well Name & Number Zircon 12 7 BC Fed Com #1H
 Sales Ticket Number 5890337
 Date 10/23/2013

Company Rep Travis Ingerson
 Field 2nd Bone Springs
 BOT Service Rep John Davis
 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	8,601.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,835.16	12,410	10,680
Bott Liner										
TVD	8,186.00		KOP		7,668.00		Open Hole	6.125	Casing Vol. (bbl)	317.8
Carry Fluid Weight (ppg)	8.6		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	10292414	JR Setting Sleeve_RH Profile	8304.84						

Zone Length										
20		JR Sleeve S3 Hyd Set Packer	8304.84	9.11	5.813	3.875				
		4-1/2-13.5 LTC Nipple	8313.95	7.50	5.000	3.920				
		9 Joints of 4-1/2-13.5 LTC Casing	8321.45	346.30	5.000	3.920				
		3.625 EX Frac Sleeve	8667.75	2.40	5.750		3.525	2286		
19		3 Joint of 4-1/2-13.5 LTC Casing	8670.15	115.36	5.000	3.920				
		Baker Open Hole Packer	8785.51	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	8789.40	112.02	5.000	3.920				
		3.500 EX Frac Sleeve	8901.42	2.40	5.750		3.400	2286		
18		4 Joint of 4-1/2-13.5 LTC Casing	8903.82	153.89	5.000	3.920				
		Baker Open Hole Packer	9057.71	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9061.60	115.37	5.000	3.920				
		3.375 EX Frac Sleeve	9176.97	2.40	5.750		3.275	2286		
17		3 Joint of 4-1/2-13.5 LTC Casing	9179.37	115.56	5.000	3.920				
		Baker Open Hole Packer	9294.93	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9298.82	115.56	5.000	3.920				
		3.250 EX Frac Sleeve	9414.88	2.40	5.750		3.150	2286		
16		3 Joint of 4-1/2-13.5 LTC Casing	9416.78	115.38	5.000	3.920				
		Baker Open Hole Packer	9532.16	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9536.05	115.36	5.000	3.920				
		3.125 EX Frac Sleeve	9651.41	2.40	5.750		3.025	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	9653.81	115.37	5.000	3.920				
		Baker Open Hole Packer	9769.19	3.89	5.820	3.875		2154		

Operating Company Mewbourne
 Well Name & Number Zircon 12 7 BC Fed Com #1H
 Sales Ticket Number 5890337

Company Rep Travis Ingerson
 Field 2nd Bone Springs
 BOT Service Rep John Davis



Date 10/23/2013

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	18,601.00	19,960	16,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,835.16	12,410	10,680
Bott Liner										
TVD	8,186.00		KOP		7,668.00		Open Hole	6.125	Casing Vol. (bbl)	317.8
Carry Fluid Weight (ppg)	8.6		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)
15		3 Joints of 4-1/2-13.5 LTC Casing	9773.07	115.41	5.000	3.920				
		3.000 EX Frac sleeve	9888.48	2.40	5.750		2.900	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9890.88	115.68	5.000	3.920				
14		Baker Open Hole Packer	10006.56	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10010.45	115.69	5.000	3.920				
		2.875 EX Frac Sleeve	10126.14	2.40	5.750		2.775	2286		
13		3 Joints of 4-1/2-13.5 LTC Casing	10128.54	115.34	5.000	3.920				
		Baker Open Hole Packer	10243.88	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10247.77	115.41	5.000	3.920				
12		2.750 EX Frac Sleeve	10363.18	2.40	5.750		2.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	10365.58	115.39	5.000	3.920				
		Baker Open Hole Packer	10480.97	3.89	5.820	3.875		2154		
11		2 Joints of 4-1/2-13.5 LTC Casing	10484.86	77.86	5.000	3.920				
		2.625 EX Frac Sleeve	10562.72	2.40	5.750		2.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10565.12	119.28	5.000	3.920				
10		Baker Open Hole Packer	10684.40	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10688.29	118.18	5.000	3.920				
		2.500 EX Frac Sleeve	10806.47	2.40	5.750		2.400	2286		
9		3 Joint of 4-1/2-13.5 LTC Casing	10808.87	119.31	5.000	3.920				
		Baker Open Hole Packer	10928.18	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10932.07	122.18	5.000	3.920				
		2.375 EX Frac Sleeve	11054.25	2.40	5.750		2.275	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11056.65	119.52	5.000	3.920				
		Baker Open Hole Packer	11176.17	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11180.06	117.37	5.000	3.920				
		2.250 EX Frac Sleeve	11297.43	2.40	5.750		2.150	2286		

Operating Company Mewbourne
 Well Name & Number Zircon 12 7 BC Fed Com #1H
 Sales Ticket Number 5890337

Company Rep Travis Ingerson
 Field 2nd Bone Springs
 BOT Service Rep John Davis



Date 10/23/2013

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	8,601.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,835.16	12,410	10,680	
Bott Liner											
TVD		8,186.00		KOP		7,668.00		Open Hole	6.125	Casing Vol. (bbl)	317.8
Carry Fluid Weight (ppg)			8.6		Propanant 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		3 Joints of 4-1/2-13.5 LTC Casing	11299.83	122.01	5.000	3.920				
		Baker Open Hole Packer	11421.84	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11425.73	118.85	5.000	3.920				
		2.125 EX Frac Sleeve	11544.68	2.40	5.750		2.025	2286		
7		3 Joints of 4-1/2-13.5 LTC Casing	11546.98	121.22	5.000	3.920				
		Baker Open Hole Packer	11668.20	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11672.09	79.17	5.000	3.920				
		2.000 EX Frac Sleeve	11751.26	2.40	5.750		1.900	2286		
6		3 Joints of 4-1/2-13.5 LTC Casing	11753.66	118.43	5.000	3.920				
		Baker Open Hole Packer	11872.09	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11875.98	119.41	5.000	3.920				
		1.875 EX Frac Sleeve	11995.39	2.40	5.750		1.775	2286		
5		3 Joints of 4-1/2-13.5 LTC Casing	11997.79	117.02	5.000	3.920				
		Baker Open Hole Packer	12114.81	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12118.70	120.18	5.000	3.920				
		1.750 EX Frac Sleeve	12238.88	2.40	5.750		1.650	2286		
4		2 Joint of 4-1/2-13.5 LTC Casing	12241.28	79.87	5.000	3.920				
		Baker Open Hole Packer	12321.15	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12325.04	120.84	5.000	3.920				
		1.625 EX Frac Sleeve	12445.88	2.40	5.750		1.525	2286		
3		3 Joints of 4-1/2-13.5 LTC Casing	12448.28	120.09	5.000	3.920				
		Baker Open Hole Packer	12568.37	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12572.26	115.02	5.000	3.920				
		1.500 DBL Ball Frac Sleeve	12687.28	2.40	5.750		1.400	2286		
		2 Joint of 4-1/2-13.5 LTC Casing	12689.68	77.25	5.000	3.920				
		Baker Open Hole Packer	12766.93	3.89	5.820	3.875		2154		

Company Rep	<u>Travis Ingerson</u>
Field	<u>2nd Bone Springs</u>
BOT Service Rep	John Davis



Date 10/23/2013

District Location Odessa, Texas, USA

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P110	6.276	6.151	LT&C	0.03826	8,601.00	19,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,835.16	12,410	10,680
Bott Liner										
TVD	8,186.00			KOP	7,668.00		Open Hole	6.125	Casing Vol. (bbl)	317.8
Carry Fluid Weight (ppg)			8.6		Propant Content (ppa)				Max Drill Out Size	0

[illegible]