

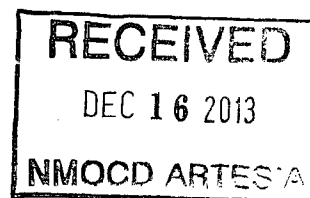
OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE ZIRCON 12-7 BC FED COM 1H
COUNTY EDDY

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:

A handwritten signature in cursive script, appearing to read "Steve Moore".

STATE OF TEXAS

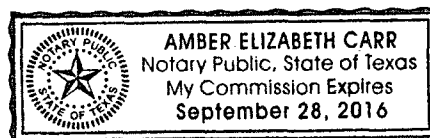
COUNTY OF MIDLAND

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

11/11/13

, by

A handwritten signature in cursive script, appearing to read "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

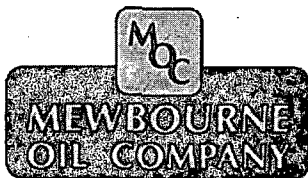
Ft.Worth, TX

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		
Site Position:		Northing:	611,361.60 usft
From:	Map	Easting:	593,842.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 49.303 N
		Longitude:	104° 1' 42.010 W
		Grid Convergence:	0.16 °

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

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

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

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 #1	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)
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 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)
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)

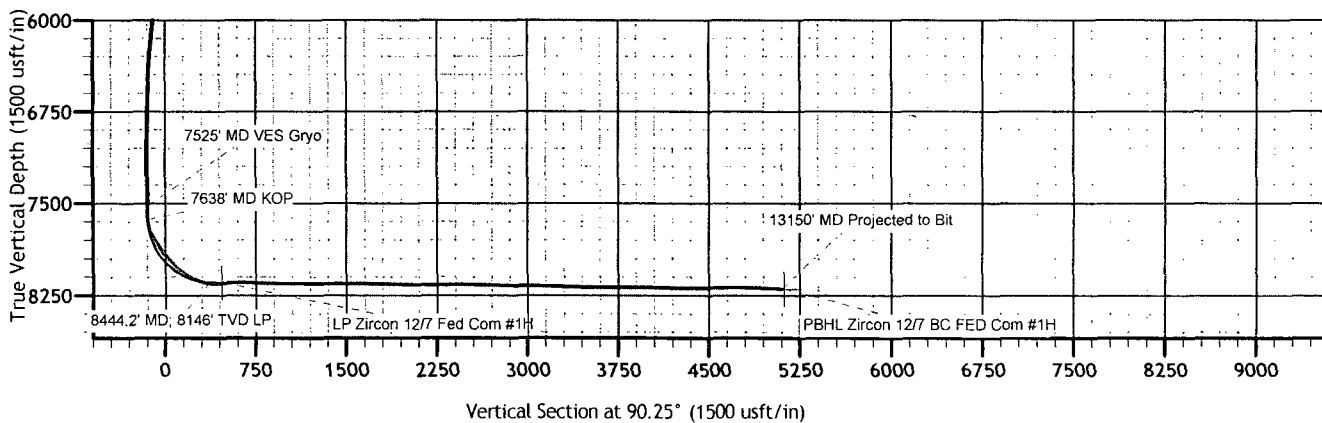
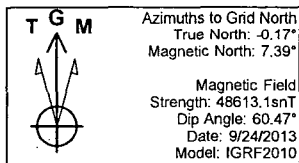
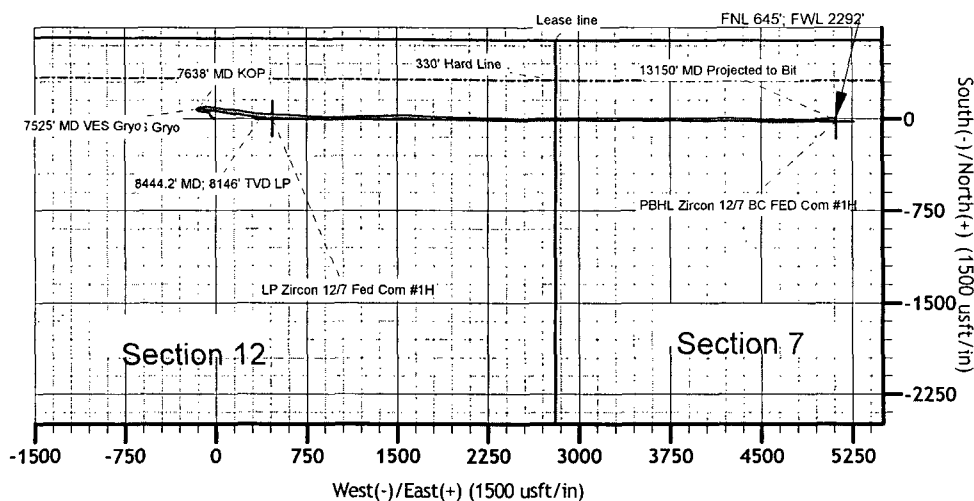


RIG: Patterson# 80
 GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.39°

OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001						
GL 3396 + 20 @ 3416.0usft (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

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		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			
	3 Joint of 4-1/2-13.5 LTC Casing	8670.15	115.36	5.000	3.920					
19	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			
	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			
18	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			
	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					
17	3.250 EX Frac Sleeve	9414.38	2.40	5.750		3.150	2286			
	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			
16	3 Joints of 4-1/2-13.5 LTC Casing	9653.81	115.37	5.000	3.920					
	Baker Open Hole Packer	9769.18	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	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		Propan Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
15		3 Joints of 4-1/2-13.5 LTC Casing	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
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



District Location	Odessa, Texas, USA
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