



PHOENIX

TECHNOLOGY SERVICES USA INC.

3610 Elkins Road, Midland, Texas 79705 T. 432.684.0057 F. 432.686.7964 www.phxtech.com

30-025-43394

Celebrating 20 Years of Focused Solutions

November 7, 2016

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

Dear District 1 - Hobbs

Attention: Regulatory Department

Re Mewbourne Oil
El Nino 13 B3DM State Com 1H ✓
Lea County, New Mexico
API #30-025-43394
Job No. 60491

HOBBS
NOV 21 2016
RECEIVED

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Andy Askew	1H	0	9880	11/3/16	11/3/16	Gyro

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

KZ

SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



Company: Mewbourne Oil

Job #: 60491

Well Name: El Nino 13 B3DM State Com 1H

County/State: Lea/ New Mexico

Survey Instrument Type: North Seek Rate Gyro

API # 30-025-43394

TIE-IN DATA

Measure Depth (ft)	Vertical Depth (ft)	Inclination (°)	Azimuth (°)	N-S Coordinates	E-W Coordinates	Data Source
0	0	0	0	0	0	Surface

First Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2016-11-03	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2016-11-03	9880	2.19	265.42

Projected TD Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
0	0	0	0

Grid Correction
-0.48

Gyro Operator: Phoenix Technology Services USA Ltd.

Gyro Supervisor: Angel Guebara

To the best of my knowledge I certify this survey data to be correct and true

Date: 11-3-16

Print Name: Andy Askew

Signature:



Company: Mewbourne Oil
 Well: El Nino 13 B3DM State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 250

Job Number: 60491
 Grid Corr.: -0.48
 Lat: 32.39
 Long: -103.43

Date: 11-03-16
 Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 26.6
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Enter Tie-In Survey on Line 10													
FIELD COPY, NON-DEFINITIVE													
TIE IN	0			0	0	0	0	0					
Gyro	100.00	0.27	229.17	100	100.00	-0.15	0.15 S	0.18 W	0.24	229.17	0.27	0.27	229.17
	200.00	0.40	182.85	100	200.00	-0.66	0.66 S	0.37 W	0.76	209.66	0.29	0.13	-46.32
	300.00	0.22	137.32	100	300.00	-1.15	1.15 S	0.26 W	1.18	192.83	0.29	-0.18	-45.53
	400.00	0.39	246.09	100	400.00	-1.43	1.43 S	0.44 W	1.49	197.23	0.51	0.17	108.77
	500.00	0.32	50.11	100	500.00	-1.38	1.38 S	0.54 W	1.49	201.27	0.70	-0.07	-195.98
	600.00	0.57	253.18	100	599.99	-1.35	1.35 S	0.80 W	1.57	210.69	0.87	0.25	203.07
	700.00	0.34	355.01	100	699.99	-1.20	1.20 S	1.30 W	1.77	227.41	0.72	-0.23	101.83
	800.00	0.35	265.89	100	799.99	-0.92	0.92 S	1.63 W	1.88	240.50	0.48	0.01	-89.12
	900.00	0.42	253.89	100	899.99	-1.05	1.05 S	2.29 W	2.52	245.42	0.11	0.07	-12.00
	1000.00	0.59	255.02	100	999.98	-1.28	1.28 S	3.14 W	3.39	247.78	0.17	0.17	1.13
	1100.00	0.36	216.59	100	1099.98	-1.67	1.67 S	3.82 W	4.17	246.44	0.38	-0.23	-38.43
	1200.00	0.61	38.79	100	1199.98	-1.50	1.50 S	3.68 W	3.97	247.75	0.97	0.25	-177.80
	1300.00	0.62	43.85	100	1299.97	-0.70	0.70 S	2.97 W	3.05	256.74	0.06	0.01	5.06
	1400.00	0.62	256.99	100	1399.97	-0.43	0.43 S	3.12 W	3.15	262.13	1.19	0.00	213.14
	1500.00	0.55	173.81	100	1499.97	-1.03	1.03 S	3.60 W	3.74	254.02	0.78	-0.07	-83.18
	1600.00	0.47	308.17	100	1599.97	-1.25	1.25 S	3.87 W	4.07	252.04	0.94	-0.08	134.36
	1700.00	0.48	341.32	100	1699.96	-0.60	0.60 S	4.32 W	4.37	262.05	0.27	0.01	33.15
	1800.00	0.89	281.65	100	1799.96	-0.05	0.05 S	5.22 W	5.22	269.45	0.77	0.41	-59.67
	1900.00	0.78	291.42	100	1899.95	0.36	0.36 N	6.61 W	6.62	273.07	0.18	-0.11	9.77
	2000.00	0.82	302.44	100	1999.94	0.99	0.99 N	7.85 W	7.91	277.17	0.16	0.04	11.02
	2100.00	0.71	319.81	100	2099.93	1.84	1.84 N	8.86 W	9.05	281.77	0.26	-0.11	17.37
	2200.00	0.73	342.62	100	2199.92	2.93	2.93 N	9.45 W	9.89	287.21	0.29	0.02	22.81
	2300.00	0.67	349.25	100	2299.91	4.11	4.11 N	9.74 W	10.58	292.86	0.10	-0.06	6.63
	2400.00	0.62	7.16	100	2399.91	5.22	5.22 N	9.79 W	11.09	298.07	0.21	-0.05	-342.09
	2500.00	0.56	18.88	100	2499.90	6.22	6.22 N	9.56 W	11.41	303.04	0.13	-0.06	11.72
	2600.00	0.33	344.22	100	2599.90	6.96	6.96 N	9.48 W	11.76	306.28	0.34	-0.23	325.34
	2700.00	0.46	319.19	100	2699.90	7.54	7.54 N	9.82 W	12.38	307.51	0.21	0.13	-25.03



Company: Mewbourne Oil
 Well: El Nino 13 B3DM State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 250

Job Number: 60491
 Grid Corr.: -0.48
 Lat: 32.39
 Long: -103.43

Calculation Method: Minimum Curvature
 Proposed Azimuth: _____
 RKB - MSL in feet: 26.6
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	2800.00	0.75	8.01	100	2799.89	8.49	8.49 N	9.99 W	13.11	310.36	0.57	0.29	-311.18
	2900.00	2.23	37.11	100	2899.85	10.69	10.69 N	8.73 W	13.80	320.77	1.62	1.48	29.10
	3000.00	3.49	50.43	100	2999.73	14.18	14.18 N	5.21 W	15.11	339.84	1.42	1.26	13.32
	3100.00	4.23	45.57	100	3099.50	18.70	18.70 N	0.23 W	18.70	359.30	0.81	0.74	-4.86
	3200.00	4.56	49.31	100	3199.21	23.88	23.88 N	5.42 E	24.48	12.79	0.44	0.33	3.74
	3300.00	4.76	51.61	100	3298.88	29.04	29.04 N	11.69 E	31.31	21.92	0.27	0.20	2.30
	3400.00	4.90	59.82	100	3398.52	33.77	33.77 N	18.63 E	38.57	28.89	0.70	0.14	8.21
	3500.00	4.99	63.72	100	3498.15	37.84	37.84 N	26.22 E	46.04	34.72	0.35	0.09	3.90
	3600.00	4.29	66.39	100	3597.82	41.26	41.26 N	33.55 E	53.18	39.11	0.73	-0.70	2.67
	3700.00	3.75	73.62	100	3697.58	43.68	43.68 N	40.11 E	59.31	42.56	0.74	-0.54	7.23
	3800.00	3.21	63.01	100	3797.39	45.88	45.88 N	45.75 E	64.79	44.92	0.84	-0.54	-10.61
	3900.00	2.96	66.09	100	3897.25	48.19	48.19 N	50.60 E	69.88	46.40	0.30	-0.25	3.08
	4000.00	2.85	70.00	100	3997.12	50.09	50.09 N	55.30 E	74.61	47.83	0.23	-0.11	3.91
	4100.00	2.99	71.14	100	4096.99	51.78	51.78 N	60.10 E	79.33	49.25	0.15	0.14	1.14
	4200.00	3.31	79.00	100	4196.84	53.18	53.18 N	65.40 E	84.30	50.89	0.54	0.32	7.86
	4300.00	3.86	80.75	100	4296.64	54.27	54.27 N	71.56 E	89.81	52.82	0.56	0.55	1.75
	4400.00	4.27	78.35	100	4396.39	55.56	55.56 N	78.53 E	96.20	54.72	0.44	0.41	-2.40
	4500.00	4.81	80.58	100	4496.08	57.00	57.00 N	86.31 E	103.43	56.56	0.57	0.54	2.23
	4600.00	5.86	83.35	100	4595.64	58.28	58.28 N	95.52 E	111.89	58.61	1.08	1.05	2.77
	4700.00	6.62	85.13	100	4695.05	59.36	59.36 N	106.33 E	121.78	60.83	0.78	0.76	1.78
	4800.00	6.84	87.34	100	4794.36	60.12	60.12 N	118.02 E	132.46	63.00	0.34	0.22	2.21
	4900.00	6.98	85.94	100	4893.63	60.83	60.83 N	130.03 E	143.56	64.93	0.22	0.14	-1.40
	5000.00	7.30	84.42	100	4992.86	61.88	61.88 N	142.42 E	155.28	66.52	0.37	0.32	-1.52
	5100.00	7.97	82.90	100	5091.97	63.35	63.35 N	155.62 E	168.02	67.85	0.70	0.67	-1.52
	5200.00	8.94	85.34	100	5190.88	64.84	64.84 N	170.24 E	182.17	69.15	1.03	0.97	2.44
	5300.00	9.53	86.99	100	5289.59	65.91	65.91 N	186.26 E	197.57	70.51	0.65	0.59	1.65
	5400.00	10.99	86.57	100	5387.99	66.91	66.91 N	204.04 E	214.73	71.84	1.46	1.46	-0.42
	5500.00	12.65	89.24	100	5485.86	67.63	67.63 N	224.50 E	234.47	73.24	1.75	1.66	2.67
	5600.00	14.60	90.96	100	5583.05	67.56	67.56 N	248.06 E	257.09	74.76	1.99	1.95	1.72
	5700.00	16.02	92.06	100	5679.49	66.86	66.86 N	274.45 E	282.47	76.31	1.45	1.42	1.10



Company: Mewbourne Oil
 Well: El Nino 13 B3DM State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 250

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Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 26.6
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	5800.00	13.50	91.77	100	5776.19	66.00	66.00 N	299.91 E	307.09	77.59	2.52	-2.52	-0.29
	5900.00	7.77	94.73	100	5874.43	65.08	65.08 N	318.33 E	324.91	78.45	5.75	-5.73	2.96
	6000.00	5.35	88.46	100	5973.77	64.65	64.65 N	329.73 E	336.01	78.91	2.52	-2.42	-6.27
	6100.00	3.40	68.39	100	6073.48	65.87	65.87 N	337.15 E	343.52	78.95	2.45	-1.95	-20.07
	6200.00	2.75	62.50	100	6173.33	68.07	68.07 N	342.03 E	348.74	78.74	0.72	-0.65	-5.89
	6300.00	2.39	63.59	100	6273.23	70.10	70.10 N	346.03 E	353.06	78.55	0.36	-0.36	1.09
	6400.00	2.00	50.41	100	6373.16	72.14	72.14 N	349.24 E	356.61	78.33	0.64	-0.39	-13.18
	6500.00	1.78	60.12	100	6473.10	74.03	74.03 N	351.93 E	359.63	78.12	0.39	-0.22	9.71
	6600.00	1.93	47.51	100	6573.05	75.94	75.94 N	354.52 E	362.56	77.91	0.43	0.15	-12.61
	6700.00	1.79	56.36	100	6673.00	77.94	77.94 N	357.06 E	365.47	77.69	0.32	-0.14	8.85
	6800.00	1.69	58.01	100	6772.95	79.59	79.59 N	359.61 E	368.31	77.52	0.11	-0.10	1.65
	6900.00	1.66	61.43	100	6872.91	81.06	81.06 N	362.13 E	371.09	77.38	0.10	-0.03	3.42
	7000.00	1.44	64.85	100	6972.87	82.29	82.29 N	364.54 E	373.71	77.28	0.24	-0.22	3.42
	7100.00	1.17	65.15	100	7072.85	83.25	83.25 N	366.61 E	375.94	77.21	0.27	-0.27	0.30
	7200.00	1.35	62.18	100	7172.82	84.23	84.23 N	368.58 E	378.08	77.13	0.19	0.18	-2.97
	7300.00	1.23	67.58	100	7272.80	85.19	85.19 N	370.61 E	380.27	77.05	0.17	-0.12	5.40
	7400.00	1.14	77.73	100	7372.78	85.81	85.81 N	372.57 E	382.33	77.03	0.23	-0.09	10.15
	7500.00	1.12	86.32	100	7472.76	86.08	86.08 N	374.52 E	384.29	77.06	0.17	-0.02	8.59
	7600.00	1.08	81.26	100	7572.74	86.29	86.29 N	376.43 E	386.19	77.09	0.11	-0.04	-5.06
	7700.00	1.20	91.31	100	7672.72	86.41	86.41 N	378.41 E	388.15	77.14	0.23	0.12	10.05
	7800.00	1.32	89.68	100	7772.70	86.39	86.39 N	380.60 E	390.29	77.21	0.13	0.12	-1.63
	7900.00	1.11	93.11	100	7872.67	86.34	86.34 N	382.72 E	392.34	77.29	0.22	-0.21	3.43
	8000.00	1.28	89.23	100	7972.65	86.31	86.31 N	384.81 E	394.37	77.36	0.19	0.17	-3.88
	8100.00	1.14	95.27	100	8072.63	86.23	86.23 N	386.91 E	396.41	77.44	0.19	-0.14	6.04
	8200.00	1.30	90.95	100	8172.61	86.12	86.12 N	389.04 E	398.46	77.52	0.18	0.16	-4.32
	8300.00	1.02	88.18	100	8272.59	86.13	86.13 N	391.06 E	400.44	77.58	0.29	-0.28	-2.77
	8400.00	0.61	118.82	100	8372.58	85.90	85.90 N	392.42 E	401.71	77.65	0.58	-0.41	30.64
	8500.00	0.39	147.44	100	8472.57	85.36	85.36 N	393.07 E	402.23	77.75	0.33	-0.22	28.62
	8600.00	0.39	330.96	100	8572.57	85.37	85.37 N	393.09 E	402.25	77.75	0.78	0.00	183.52
	8700.00	0.75	306.65	100	8672.57	86.06	86.06 N	392.40 E	401.72	77.63	0.43	0.36	-24.31



Company: Mewbourne Oil
 Well: El Nino 13 B3DM State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 250

Job Number: 60491
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Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 26.6
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	8800.00	1.71	236.16	100	8772.55	85.62	85.62 N	390.63 E	399.90	77.64	1.62	0.96	-70.49
	8900.00	2.19	231.09	100	8872.49	83.59	83.59 N	387.91 E	396.81	77.84	0.51	0.48	-5.07
	9000.00	1.69	258.13	100	8972.43	82.08	82.08 N	384.98 E	393.63	77.96	1.03	-0.50	27.04
	9100.00	2.48	260.85	100	9072.37	81.43	81.43 N	381.40 E	389.99	77.95	0.80	0.79	2.72
	9200.00	2.29	270.18	100	9172.28	81.10	81.10 N	377.26 E	385.88	77.87	0.43	-0.19	9.33
	9300.00	2.14	289.09	100	9272.21	81.71	81.71 N	373.50 E	382.33	77.66	0.74	-0.15	18.91
	9400.00	2.87	304.50	100	9372.11	83.74	83.74 N	369.67 E	379.04	77.24	0.99	0.73	15.41
	9500.00	1.84	294.20	100	9472.03	85.82	85.82 N	366.15 E	376.07	76.81	1.11	-1.03	-10.30
	9600.00	1.17	288.77	100	9571.99	86.81	86.81 N	363.71 E	373.93	76.58	0.68	-0.67	-5.43
	9700.00	2.03	272.69	100	9671.95	87.22	87.22 N	360.98 E	371.37	76.42	0.96	0.86	-16.08
	9800.00	2.07	278.50	100	9771.89	87.57	87.57 N	357.42 E	367.99	76.23	0.21	0.04	5.81
	9880.00	2.19	265.42	80	9851.83	87.66	87.66 N	354.47 E	365.15	76.11	0.62	0.15	-16.35