



PHOENIX

TECHNOLOGY SERVICES USA INC.

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

Celebrating 20 Years of Focused Solutions

March 29, 2018

Oil Conservation Division
State of New Mexico
1625 N. French Drive
District 1 - Hobbs
Hobbs, New Mexico 88240

HOBBS OCD
APR 16 2018
RECEIVED

Attention: Regulatory Department

Re: Legacy Reserves
Lea Unit # 42H
Lea County, New Mexico
API # 30-025-44354
Job No. 62523

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	
Noe Garza	42H	0	5,528	3/29/18	3/29/18	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,

Provide survey 5528 - TD
B

Brittany Carley

Brittany Carley
Operations Administrator

SURVEY CERTIFICATION FORM



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

Company: Legacy

Job #: 62523

Well Name: Lea Unit # 42H

County/State: Lea Co., New Mexico

Survey Instrument Type: North Seek Rate Gyro

API #: 30-025-44354

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 (°)
2018-03-29	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2018-03-29	5528	1.15	98.63

Projected TD Survey

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

Grid Correction
-0.44

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: 03-29-18

Print Name: Noe Garza

Signature: 



Company: Legacy
 Well: Lea Unit # 42H
 Location: Lea Co., New Mexico
 Rig: McVay 4

Job Number: 62523
 Grid Corr.: -0.44
 Lat: 32.56
 Long: -103.51

Date: 03-29-18
 Calculation Method: Minimum Curvature
 Proposed Azimuth: _____
 RKB - MSL in feet: 19.5
 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	0.14	101.04	100	100.00	-0.02	0.02 S	0.12 E	0.12	101.04	0.14	0.14	101.04
	200.00	0.30	231.97	100	200.00	-0.21	0.21 S	0.03 E	0.21	170.83	0.41	0.16	130.93
	300.00	0.35	237.31	100	300.00	-0.53	0.53 S	0.43 W	0.69	218.80	0.06	0.05	5.34
	400.00	0.58	237.28	100	399.99	-0.97	0.97 S	1.11 W	1.48	228.83	0.23	0.23	-0.03
	500.00	0.51	246.97	100	499.99	-1.42	1.42 S	1.95 W	2.41	233.90	0.12	-0.07	9.69
	600.00	0.40	306.65	100	599.99	-1.39	1.39 S	2.64 W	2.98	242.27	0.46	-0.11	59.68
	700.00	0.37	307.81	100	699.98	-0.98	0.98 S	3.17 W	3.32	252.83	0.03	-0.03	1.16
	800.00	0.39	307.77	100	799.98	-0.57	0.57 S	3.70 W	3.74	261.18	0.02	0.02	-0.04
	900.00	0.23	308.82	100	899.98	-0.24	0.24 S	4.12 W	4.13	266.68	0.16	-0.16	1.05
	1000.00	0.30	235.15	100	999.98	-0.26	0.26 S	4.49 W	4.50	266.65	0.32	0.07	-73.67
	1100.00	0.02	321.32	100	1099.98	-0.40	0.40 S	4.72 W	4.74	265.17	0.30	-0.28	86.17
	1200.00	0.23	241.32	100	1199.98	-0.48	0.48 S	4.91 W	4.93	264.39	0.23	0.21	-80.00
	1300.00	0.07	276.18	100	1299.98	-0.57	0.57 S	5.14 W	5.17	263.66	0.18	-0.16	34.86
	1400.00	0.09	243.25	100	1399.98	-0.60	0.60 S	5.27 W	5.31	263.51	0.05	0.02	-32.93
	1500.00	0.32	319.69	100	1499.98	-0.42	0.42 S	5.52 W	5.54	265.62	0.31	0.23	76.44
	1600.00	0.49	298.59	100	1599.98	-0.01	0.01 S	6.08 W	6.08	269.95	0.22	0.17	-21.10
	1700.00	0.53	295.80	100	1699.97	0.40	0.40 N	6.87 W	6.88	273.34	0.05	0.04	-2.79
	1800.00	0.97	288.78	100	1799.96	0.87	0.87 N	8.09 W	8.14	276.17	0.45	0.44	-7.02
	1900.00	0.58	311.93	100	1899.95	1.49	1.49 N	9.27 W	9.39	279.10	0.49	-0.39	23.15
	2000.00	0.82	64.16	100	1999.95	2.14	2.14 N	9.00 W	9.25	283.35	1.17	0.24	-247.77
	2100.00	1.11	61.72	100	2099.94	2.91	2.91 N	7.50 W	8.05	291.17	0.29	0.29	-2.44
	2200.00	0.80	33.04	100	2199.92	3.95	3.95 N	6.27 W	7.41	302.21	0.56	-0.31	-28.68
	2300.00	0.77	20.30	100	2299.91	5.17	5.17 N	5.66 W	7.66	312.40	0.18	-0.03	-12.74
	2400.00	0.66	31.01	100	2399.90	6.29	6.29 N	5.13 W	8.11	320.82	0.17	-0.11	10.71
	2500.00	0.43	52.22	100	2499.90	7.01	7.01 N	4.53 W	8.35	327.12	0.30	-0.23	21.21
	2600.00	0.32	54.41	100	2599.90	7.41	7.41 N	4.01 W	8.42	331.57	0.11	-0.11	2.19
	2700.00	0.25	11.94	100	2699.90	7.78	7.78 N	3.74 W	8.63	334.34	0.22	-0.07	-42.47



Company: Legacy
 Well: Lea Unit # 42H
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 Rig: McVay 4

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							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	2800.00	0.26	58.64	100	2799.90	8.11	8.11 N	3.50 W	8.84	336.67	0.20	0.01	46.70
	2900.00	0.23	46.66	100	2899.89	8.37	8.37 N	3.16 W	8.95	339.32	0.06	-0.03	-11.98
	3000.00	0.68	19.08	100	2999.89	9.07	9.07 N	2.82 W	9.50	342.73	0.49	0.45	-27.58
	3100.00	0.76	24.48	100	3099.88	10.23	10.23 N	2.35 W	10.50	347.06	0.10	0.08	5.40
	3200.00	0.92	37.22	100	3199.87	11.47	11.47 N	1.59 W	11.58	352.11	0.25	0.16	12.74
	3300.00	0.53	49.34	100	3299.86	12.42	12.42 N	0.75 W	12.44	356.53	0.42	-0.39	12.12
	3400.00	0.80	64.66	100	3399.86	13.02	13.02 N	0.23 E	13.02	1.01	0.32	0.27	15.32
	3500.00	0.94	65.11	100	3499.85	13.66	13.66 N	1.60 E	13.75	6.70	0.14	0.14	0.45
	3600.00	0.77	117.40	100	3599.84	13.70	13.70 N	2.94 E	14.01	12.13	0.77	-0.17	52.29
	3700.00	0.59	87.53	100	3699.83	13.41	13.41 N	4.06 E	14.01	16.83	0.39	-0.18	-29.87
	3800.00	0.31	104.41	100	3799.83	13.36	13.36 N	4.83 E	14.21	19.88	0.31	-0.28	16.88
	3900.00	0.31	16.07	100	3899.83	13.56	13.56 N	5.17 E	14.51	20.87	0.43	0.00	-88.34
	4000.00	0.14	84.53	100	3999.82	13.83	13.83 N	5.36 E	14.83	21.21	0.29	-0.17	68.46
	4100.00	0.12	57.99	100	4099.82	13.89	13.89 N	5.58 E	14.97	21.86	0.06	-0.02	-26.54
	4200.00	0.25	65.94	100	4199.82	14.04	14.04 N	5.86 E	15.21	22.67	0.13	0.13	7.95
	4300.00	0.30	36.76	100	4299.82	14.34	14.34 N	6.22 E	15.63	23.45	0.15	0.05	-29.18
	4400.00	0.73	35.42	100	4399.82	15.07	15.07 N	6.75 E	16.51	24.12	0.43	0.43	-1.34
	4500.00	0.98	115.74	100	4499.81	15.21	15.21 N	7.88 E	17.14	27.39	1.12	0.25	80.32
	4600.00	1.01	101.70	100	4599.80	14.66	14.66 N	9.52 E	17.48	32.99	0.25	0.03	-14.04
	4700.00	1.01	105.40	100	4699.78	14.25	14.25 N	11.23 E	18.14	38.24	0.07	0.00	3.70
	4800.00	0.71	101.57	100	4799.77	13.89	13.89 N	12.69 E	18.81	42.40	0.31	-0.30	-3.83
	4900.00	1.07	109.54	100	4899.76	13.46	13.46 N	14.17 E	19.54	46.49	0.38	0.36	7.97
	5000.00	0.91	67.79	100	4999.74	13.44	13.44 N	15.79 E	20.74	49.59	0.72	-0.16	-41.75
	5100.00	1.16	75.46	100	5099.73	14.00	14.00 N	17.50 E	22.41	51.35	0.29	0.25	7.67
	5200.00	1.26	74.72	100	5199.70	14.54	14.54 N	19.54 E	24.36	53.35	0.10	0.10	-0.74
	5300.00	1.17	88.04	100	5299.68	14.87	14.87 N	21.63 E	26.24	55.49	0.30	-0.09	13.32
	5400.00	1.21	96.53	100	5399.66	14.78	14.78 N	23.70 E	27.93	58.04	0.18	0.04	8.49
	5500.00	1.10	73.69	100	5499.64	14.93	14.93 N	25.67 E	29.69	59.81	0.47	-0.11	-22.84
	5528.00	1.15	98.63	28	5527.63	14.97	14.97 N	26.20 E	30.17	60.27	1.74	0.18	89.07