

Attachement to C-105: Inclination Report

HOBBS OGD
JUN 11 2018
RECEIVED

Surveys from surface to 14551 measured by Phoenix Technology Services
Surveys from 14551 to 15950 measured by True Shot, LLC

Form W-12
(1-1-71)

INCLINATION REPORT (One Copy Must Be Filed With Each Completion Report)		API# 30-025-44288
1. FIELD NAME (as per RRC Records or Wildcat)	2. LEASE NAME Libby Berry Fee SWD	6. Well Number 1
3. OPERATOR 3 Bear Field Services, LLC		7. County Lea
4. ADDRESS 1512 Larimer St #540 Denver, CO 80202		
5. LOCATION (Section, Block, and Survey) Surface - Sec. 26, T20S, R34E: 2510' Fnl, 710' FEL, BHL Sec. 26, T20S, R34E: 2367' Fnl, 692' FEL		

RECORD OF INCLINATION

* 11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	* 13. Angle of Inclination (Degrees)	14. Displacement per Hundred Feet (Sine of Angle X100)	15. Course Displacement (feet)	16. Accumulative Displacement (feet)
500	5	0.8	1.40	6.98	6.98
956	4.56	0.7	1.22	5.57	12.55
1424	4.68	0.4	0.70	3.27	15.82
1869	4.45	0.3	0.52	2.33	18.15
2244	3.75	0.2	0.35	1.31	19.46
2621	3.77	0.2	0.35	1.32	20.77
3001	3.8	0.9	1.57	5.97	26.74
3381	3.8	1.9	3.32	12.60	39.34
3760	3.79	1.2	2.09	7.94	47.27
4139	3.79	1.2	2.09	7.94	55.21
4518	3.79	1	1.75	6.61	61.82
4899	3.81	1.1	1.92	7.31	69.14
5279	3.8	1.02	1.78	6.76	75.90
5739	4.6	0.9	1.57	7.22	83.12

8. Accumulative total displacement of well bore at total depth 15950 feet = 486.56 feet.

*9. Inclination measurements were ☐ Tubing ☐ Casing ☐ Open hole ☒ Drill Pipe

INCLINATION DATA CERTIFICATION	OPERATOR CERTIFICATION
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge. This certification covers all data as indicated by asterisks (*) by the item numbers on this form. <u>1</u> Signature of Authorized Representative Dustin Trevino, Vice President Name of Person and Title (type or print) True Shot, LLC. Name of Company Telephone: (972) 505-0433 Area Code	I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code that I am authorized to make this certification, that I have personal knowledge of all information presented in this report, and that all data presented on both sides of this form are true, correct, and complete to the best of my knowledge. This certification covers all data and information presented herein except inclination data as indicated by asterisks (*) by the item numbers on this form. <u>1</u> Signature of Authorized Representative Phelps White Name of Person and Title (type or print) Consultant Operator 3Bear Field Services, LLC Telephone: 575 626 7660 Area Code

RECORD OF INCLINATION (Continued from reverse side)

* 11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	* 13. Angle of Inclination (Degrees)	14. Displacement per Hundred Feet (Sine of Angle X100)	15. Course Displacement (feet)	16. Accumulative Displacement (feet)
6133	3.94	1.5	2.62	10.31	93.44
6508	3.75	2.1	3.66	13.74	107.18
6913	4.05	1.1	1.92	7.77	114.95
7382	4.69	2.9	5.06	23.73	138.68
7819	4.37	2.2	3.84	16.77	155.45
8196	3.77	3	5.23	19.73	175.18
8573	3.77	2.6	4.54	17.10	192.28
8947	3.74	1.7	2.97	11.09	203.37
9324	3.77	1.9	3.32	12.50	215.87
9698	3.74	2	3.49	13.05	228.92
10073	3.75	2.3	4.01	15.05	243.97
10447	3.74	2.2	3.84	14.36	258.32
10821	3.74	1.8	3.14	11.75	270.07
11194	3.73	0.9	1.57	5.86	275.93
11572	3.78	0.2	0.35	1.32	277.25
11950	3.78	0.5	0.87	3.30	280.55
12327	3.77	1.5	2.62	9.87	290.41
12702	3.75	1.8	3.14	11.78	302.19
13077	3.75	1.1	1.92	7.20	309.39
13457	3.8	2.6	4.54	17.24	326.63
13838	3.81	1.7	2.97	11.30	337.93
14218	3.8	1.9	3.32	12.60	350.53
14551	3.33	2.4	4.19	13.94	364.47
14944	3.93	4.2	7.32	28.78	393.25
15318	3.74	5.7	9.93	37.14	430.39
15759	4.41	5.1	8.89	39.20	469.59
15950	1.91	5.1	8.89	16.98	486.56

If additional space is needed, attach separate sheet and check here.



REMARKS:



PHOENIX
TECHNOLOGY SERVICES

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JUN 11 2018
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3 Bear Field Services, LLC

Lea County, NM (NAD83)

Libby Berry Fee SWD

1

ST01/ 62593

Survey: Phoenix MWD Surveys

Standard Survey Report

26 April, 2018

Survey Report

Company:	3 Bear Field Services, LLC	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Site:	Libby Berry Fee SWD	MD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Well:	1	North Reference:	Grid
Wellbore:	ST01 / 62593	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 8)	Database:	USA Compass

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Libby Berry Fee SWD			
Site Position:		Northing:	562,750.30 usft	Latitude: 32° 32' 40.04572 N
From:	Map	Easting:	790,535.50 usft	Longitude: 103° 31' 28.68221 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.44 °

Well	1			
Well Position	+N/-S	0.00 usft	Northing:	562,750.30 usft
	+E/-W	0.00 usft	Easting:	790,535.50 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft
			Ground Level:	3,707.00 usft

Wellbore	ST01 / 62593				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/31/2017	6.70	60.53	48,253.70000000

Design	Surveys (Silver Oak 8)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 500.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.00

Survey Program	Date 4/26/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	500.00	Phoenix Gyro Surveys (OH)	SPT_GTD	Continuous north-seeking gyro
518.00	14,551.00	Phoenix MWD Surveys (ST01 / 62593)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

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)
500.00	0.81	216.73	499.98	-3.75	-1.33	-3.75	0.00	0.00	0.00
Tie In									
518.00	0.40	137.70	517.98	-3.90	-1.37	-3.90	4.62	-2.28	-439.06
First Phoenix MWD Survey									
549.00	1.10	76.10	548.98	-3.91	-1.00	-3.91	3.15	2.26	-198.71
580.00	1.60	62.90	579.97	-3.64	-0.33	-3.64	1.89	1.61	-42.58
675.00	2.00	66.00	674.92	-2.36	2.37	-2.36	0.43	0.42	3.26
770.00	1.10	66.00	769.89	-1.31	4.71	-1.31	0.95	-0.95	0.00
863.00	0.90	41.60	862.87	-0.40	6.01	-0.40	0.50	-0.22	-26.24

Survey Report

Company:	3 Bear Field Services, LLC	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Site:	Libby Berry Fee SWD	MD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Well:	1	North Reference:	Grid
Wellbore:	ST01 / 62593	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 8)	Database:	USA Compass

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)
956.00	0.70	358.40	955.86	0.71	6.48	0.71	0.66	-0.22	-46.45
1,049.00	0.60	347.60	1,048.86	1.75	6.36	1.75	0.17	-0.11	-11.61
1,143.00	0.70	334.40	1,142.85	2.75	6.01	2.75	0.19	0.11	-14.04
1,237.00	0.50	324.60	1,236.85	3.60	5.52	3.60	0.24	-0.21	-10.43
1,330.00	0.50	313.00	1,329.84	4.21	4.99	4.21	0.11	0.00	-12.47
1,424.00	0.40	301.40	1,423.84	4.66	4.41	4.66	0.14	-0.11	-12.34
1,518.00	0.40	292.10	1,517.84	4.96	3.83	4.96	0.07	0.00	-9.89
1,613.00	0.40	278.90	1,612.84	5.13	3.19	5.13	0.10	0.00	-13.89
1,745.00	0.34	12.58	1,744.83	5.59	2.82	5.59	0.41	-0.05	70.97
1,869.00	0.25	53.30	1,868.83	6.11	3.12	6.11	0.18	-0.07	32.84
2,057.00	0.09	357.77	2,056.83	6.50	3.44	6.50	0.11	-0.09	-29.54
2,244.00	0.21	136.35	2,243.83	6.40	3.67	6.40	0.15	0.06	74.11
2,431.00	0.20	44.19	2,430.83	6.38	4.14	6.38	0.16	-0.01	-49.28
2,621.00	0.20	122.85	2,620.83	6.44	4.65	6.44	0.13	0.00	41.40
2,811.00	0.34	63.05	2,810.83	6.52	5.43	6.52	0.16	0.07	-31.47
3,001.00	0.85	66.59	3,000.82	7.33	7.22	7.33	0.27	0.27	1.86
3,191.00	1.55	68.33	3,190.77	8.84	10.90	8.84	0.37	0.37	0.92
3,381.00	1.92	69.79	3,380.69	10.89	16.28	10.89	0.20	0.19	0.77
3,570.00	1.56	59.22	3,569.60	13.30	21.46	13.30	0.25	-0.19	-5.59
3,760.00	1.20	48.14	3,759.54	15.95	25.16	15.95	0.24	-0.19	-5.83
3,950.00	1.35	45.68	3,949.50	18.84	28.25	18.84	0.08	0.08	-1.29
4,139.00	1.18	34.75	4,138.45	22.00	30.95	22.00	0.16	-0.09	-5.78
4,328.00	0.92	40.05	4,327.42	24.76	33.04	24.76	0.15	-0.14	2.80
4,518.00	1.02	22.46	4,517.39	27.49	34.66	27.49	0.16	0.05	-9.26
4,708.00	0.98	35.60	4,707.36	30.37	36.26	30.37	0.12	-0.02	6.92
4,899.00	1.09	16.15	4,898.33	33.45	37.71	33.45	0.19	0.06	-10.18
5,089.00	0.96	13.25	5,088.30	36.73	38.58	36.73	0.07	-0.07	-1.53
5,279.00	1.02	22.45	5,278.27	39.84	39.59	39.84	0.09	0.03	4.84
5,466.00	0.82	10.32	5,465.25	42.70	40.46	42.70	0.15	-0.11	-6.49
5,656.00	0.84	359.37	5,655.23	45.43	40.69	45.43	0.08	0.01	-5.76
5,739.00	0.90	4.45	5,738.22	46.69	40.74	46.69	0.12	0.07	6.12
5,944.00	1.15	358.65	5,943.19	50.35	40.81	50.35	0.13	0.12	-2.83
6,133.00	1.46	319.34	6,132.14	54.07	39.20	54.07	0.49	0.16	-20.80
6,320.00	1.45	325.04	6,319.08	57.82	36.29	57.82	0.08	-0.01	3.05
6,508.00	2.10	295.08	6,507.00	61.23	31.81	61.23	0.59	0.35	-15.94
6,696.00	1.70	301.24	6,694.89	64.13	26.31	64.13	0.24	-0.21	3.28
6,913.00	1.13	287.05	6,911.83	66.43	21.51	66.43	0.31	-0.26	-6.54
7,070.00	2.04	265.79	7,068.76	66.68	17.24	66.68	0.68	0.58	-13.54
7,257.00	1.91	266.77	7,255.65	66.26	10.81	66.26	0.07	-0.07	0.52
7,382.00	2.92	265.59	7,380.54	65.90	5.56	65.90	0.81	0.81	-0.94
7,445.00	2.86	265.25	7,443.46	65.64	2.39	65.64	0.10	-0.10	-0.54
7,633.00	2.39	264.89	7,631.26	64.91	-6.19	64.91	0.25	-0.25	-0.19
7,819.00	2.20	267.68	7,817.11	64.42	-13.62	64.42	0.12	-0.10	1.50

Survey Report

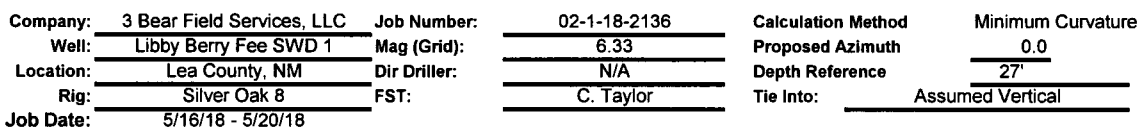
Company:	3 Bear Field Services, LLC	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Site:	Libby Berry Fee SWD	MD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Well:	1	North Reference:	Grid
Wellbore:	ST01 / 62593	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 8)	Database:	USA Compass

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)	
8,007.00	3.38	267.32	8,004.89	64.01	-22.76	64.01	0.63	0.63	-0.19	
8,196.00	2.98	268.68	8,193.60	63.64	-33.24	63.64	0.22	-0.21	0.72	
8,384.00	2.83	266.13	8,381.35	63.21	-42.75	63.21	0.11	-0.08	-1.36	
8,573.00	2.61	276.74	8,570.14	63.40	-51.68	63.40	0.29	-0.12	5.61	
8,760.00	2.43	287.97	8,756.96	65.12	-59.68	65.12	0.28	-0.10	6.01	
8,947.00	1.74	272.58	8,943.84	66.47	-66.29	66.47	0.47	-0.37	-8.23	
9,135.00	2.41	211.50	9,131.74	63.23	-71.21	63.23	1.16	0.36	-32.49	
9,324.00	1.91	217.42	9,320.60	57.34	-75.20	57.34	0.29	-0.26	3.13	
9,486.00	1.84	210.13	9,482.51	52.95	-78.14	52.95	0.15	-0.04	-4.50	
9,512.00	2.16	213.64	9,508.50	52.18	-78.62	52.18	1.32	1.23	13.50	
9,698.00	1.96	216.18	9,694.38	46.69	-82.44	46.69	0.12	-0.11	1.37	
9,886.00	1.76	233.40	9,882.28	42.38	-86.66	42.38	0.31	-0.11	9.16	
10,073.00	2.30	236.73	10,069.16	38.61	-92.10	38.61	0.30	0.29	1.78	
10,261.00	1.88	243.30	10,257.04	35.15	-98.01	35.15	0.26	-0.22	3.49	
10,447.00	2.22	255.32	10,442.92	32.87	-104.22	32.87	0.29	0.18	6.46	
10,633.00	1.28	252.66	10,628.83	31.34	-109.69	31.34	0.51	-0.51	-1.43	
10,821.00	1.76	232.72	10,816.77	28.96	-113.99	28.96	0.38	0.26	-10.61	
11,007.00	1.21	251.63	11,002.70	26.61	-118.13	26.61	0.39	-0.30	10.17	
11,194.00	0.86	254.80	11,189.67	25.62	-121.36	25.62	0.19	-0.19	1.70	
11,382.00	0.36	228.47	11,377.66	24.86	-123.16	24.86	0.30	-0.27	-14.01	
11,572.00	0.20	157.15	11,567.66	24.16	-123.48	24.16	0.18	-0.08	-37.54	
11,762.00	0.22	162.37	11,757.66	23.51	-123.24	23.51	0.01	0.01	2.75	
11,950.00	0.49	48.51	11,945.66	23.70	-122.53	23.70	0.33	0.14	-60.56	
12,139.00	0.98	56.49	12,134.64	25.12	-120.57	25.12	0.26	0.26	4.22	
12,327.00	1.47	56.69	12,322.60	27.33	-117.22	27.33	0.26	0.26	0.11	
12,515.00	1.50	61.82	12,510.53	29.82	-113.03	29.82	0.07	0.02	2.73	
12,702.00	1.79	69.87	12,697.46	31.98	-108.13	31.98	0.20	0.16	4.30	
12,888.00	1.77	62.36	12,883.37	34.31	-102.86	34.31	0.13	-0.01	-4.04	
13,077.00	1.14	63.21	13,072.31	36.52	-98.60	36.52	0.33	-0.33	0.45	
13,267.00	1.60	73.02	13,262.25	38.14	-94.37	38.14	0.27	0.24	5.16	
13,457.00	2.63	58.33	13,452.12	41.21	-88.13	41.21	0.61	0.54	-7.73	
13,648.00	2.05	64.21	13,642.96	44.99	-81.32	44.99	0.33	-0.30	3.08	
13,838.00	1.67	69.34	13,832.86	47.45	-75.67	47.45	0.22	-0.20	2.70	
14,028.00	1.76	68.26	14,022.77	49.51	-70.37	49.51	0.05	0.05	-0.57	
14,218.00	1.92	60.67	14,212.68	52.15	-64.88	52.15	0.15	0.08	-3.99	
14,407.00	2.09	50.67	14,401.56	55.88	-59.46	55.88	0.21	0.09	-5.29	
14,551.00	2.36	46.10	14,545.45	59.60	-55.29	59.60	0.22	0.19	-3.17	
Current Survey										

Survey Report

Company:	3 Bear Field Services, LLC	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Site:	Libby Berry Fee SWD	MD Reference:	RKB @ 3728.00usft (Silver Oak 8)
Well:	1	North Reference:	Grid
Wellbore:	ST01 / 62593	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 8)	Database:	USA Compass

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	499.98	-3.75	-1.33	Tie In
518.00	517.98	-3.90	-1.37	First Phoenix MWD Survey
14,551.00	14,545.45	59.60	-55.29	Current Survey

[illegible]