

CHISHOLM
ENERGY

HOBBS OCD

JUN 5 2019

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Chisholm Energy

Eddy Co, NM

Libby Berry

SWD #2

SWD #2

Design: SWD #2

Standard Survey Report

02 May, 2019

gyro/data



Chisholm Energy
Eddy Co. NM
Libby Berry
SWD #2

gyrodata

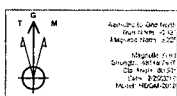
Plan: Design #1 (SWD #2/SWD #2)
Patriot #5 @ 3684.96usft (Patriot #6 @ 3661 GE + 23.5 KB = 3684.5)

Vertical Section at 3.00° (1750 usft)

2000 1500 1000 500 0 500 1000 1500 2000 2500

SECTION DETAILS									
Sec	MD	Inc	AD	TVD	NS	EW	Dir	Face	Target
1	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	13500.00	0.00	0.00	13500.00	0.00	0.00	0.00	0.00	0.00

WELLBORE TARGET DETAILS					
Name	TVD	NS	EW	Northing	Eastings
BHL - Libby Berry SWD #2	13500.00	0.00	0.00	569975.63	755524.83

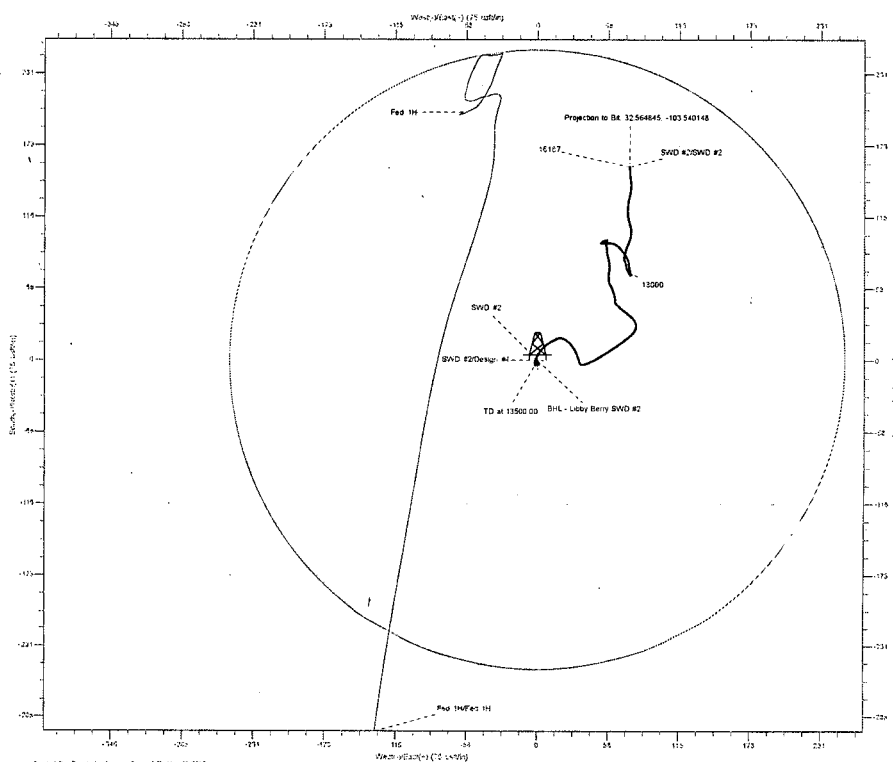


Notice: Section Lines and Handlines are estimates only and are subject to customer approval

FORMATION TOPS ALONG WELLBORE
No formation data is available

PROJECT DETAILS Eddy Co. NM
Geographic System: US State Plane 1983 Datum: North American Datum 1983 Elevation: 1983 Zone: North American Datum System: Datum: Mean Sea Level To convert a Magnetic Direction to a Grid Direction: Add 10.00° East To convert a Magnetic Direction to a True Direction: Add 10.00° East To convert a True Direction to a Grid Direction: Subtract 10.00° East

CASING DETAILS
No casing data is available
Notice: Casing Depths are Estimates Only





Company:	Chisholm Energy	Local Co-ordinate Reference:	Well SWD #2
Project:	Eddy Co, NM	TVD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Site:	Libby Berry	MD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Well:	SWD #2	North Reference:	Grid
Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Project: Eddy Co. NM	
Map System:	US State Plane 1983
Geo Datum:	North American Datum 1983
Map Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

Site:		Libby Berry			
Site Position:		Northing:	569,975.69 usft	Latitude:	32.564418
From:	Map	Easting:	785,624.85 usft	Longitude:	-103.540394
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.43 °

Well	SWD #2					
Well Position	+N/-S	0.00 usft	Northing:	569,975.69 usfi	Latitude:	32.564418
	+E/-W	0.00 usft	Easting:	785,624.85 usfi	Longitude:	-103.540394
Position Uncertainty		0.00 usft	Wellhead Elevation:	usfi	Ground Level:	3,661.00 usfi

Wellbore		SWD #2			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM-2019	2/25/2019	6.65	60.50	48,148.72

Design:		SWD #2			
Audit Notes:					
Version:		1.0	Phase:		ACTUAL
			Tie On Depth:		0.00
Vertical Section:		Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)
				Direction (°)	
		0.00	0.00	0.00	0.00

Survey Program	Date	5/2/2019
From	To	
(usft)	(usft)	
	Survey (Wellbore)	
	Tool Name	
	Description	
128.00	16,194.00	Survey #1 (SWD #2)
		MWD+HRGM
		OWSG MWD + HRGM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128.00	0.36	213.89	128.00	-0.33	-0.22	-0.33	0.28	0.28	0.00
217.00	0.39	256.16	217.00	-0.64	-0.67	-0.64	0.31	0.03	47.49
303.00	0.39	266.14	303.00	-0.73	-1.25	-0.73	0.08	0.00	11.60
384.00	0.39	217.98	383.99	-0.96	-1.70	-0.96	0.39	0.00	-59.46
472.00	0.76	156.99	471.99	-1.74	-1.65	-1.74	0.76	0.42	-69.31
557.00	0.73	126.36	556.98	-2.58	-0.99	-2.58	0.46	-0.04	-36.04
680.00	0.55	120.74	679.98	-3.34	0.14	-3.34	0.15	-0.15	-4.57
775.00	0.37	64.44	774.97	-3.44	0.81	-3.44	0.49	-0.19	-59.26



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Site:	Libby Berry	MD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Well:	SWD #2	North Reference:	Grid
Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
871.00	0.40	24.70	870.97	-3.01	1.23	-3.01	0.27	0.03	-41.40
966.00	0.39	342.11	965.97	-2.40	1.27	-2.40	0.30	-0.01	-44.83
1,061.00	0.28	307.32	1,060.97	-1.95	0.99	-1.95	0.24	-0.12	-36.62
1,157.00	0.47	286.84	1,156.96	-1.69	0.42	-1.69	0.24	0.20	-21.33
1,252.00	0.76	215.61	1,251.96	-2.09	-0.32	-2.09	0.79	0.31	-74.98
1,348.00	0.35	197.81	1,347.96	-2.89	-0.78	-2.89	0.46	-0.43	-18.54
1,443.00	0.24	243.11	1,442.95	-3.25	-1.04	-3.25	0.26	-0.12	47.68
1,538.00	0.52	226.33	1,537.95	-3.64	-1.53	-3.64	0.31	0.29	-17.66
1,569.00	0.44	244.74	1,568.95	-3.79	-1.74	-3.79	0.56	-0.26	59.39
1,644.00	0.49	332.09	1,643.95	-3.63	-2.15	-3.63	0.86	0.07	116.47
1,740.00	0.86	8.43	1,739.94	-2.55	-2.24	-2.55	0.57	0.39	37.85
1,835.00	2.41	15.85	1,834.90	0.07	-1.59	0.07	1.64	1.63	7.81
1,930.00	2.91	27.14	1,929.80	4.14	0.06	4.14	0.76	0.53	11.88
2,026.00	3.16	40.33	2,025.67	8.33	2.88	8.33	0.77	0.26	13.74
2,121.00	3.08	48.62	2,120.53	12.01	6.49	12.01	0.48	-0.08	8.73
2,216.00	3.01	60.74	2,215.39	14.92	10.58	14.92	0.68	-0.07	12.76
2,312.00	3.11	66.43	2,311.26	17.19	15.17	17.19	0.33	0.10	5.93
2,407.00	1.88	94.07	2,406.17	18.11	19.08	18.11	1.78	-1.29	29.09
2,503.00	2.46	121.50	2,502.10	16.92	22.41	16.92	1.22	0.60	28.57
2,598.00	3.84	132.20	2,596.96	13.72	26.51	13.72	1.57	1.45	11.26
2,693.00	3.97	151.72	2,691.74	8.68	30.42	8.68	1.40	0.14	20.55
2,788.00	3.35	164.61	2,786.55	3.11	32.72	3.11	1.08	-0.65	13.57
2,883.00	2.16	161.19	2,881.44	-1.26	34.03	-1.26	1.26	-1.25	-3.60
2,979.00	1.16	113.54	2,977.40	-3.36	35.50	-3.36	1.69	-1.04	-49.64
3,074.00	1.98	76.79	3,072.36	-3.37	37.98	-3.37	1.33	0.86	-38.68
3,170.00	2.95	62.99	3,168.27	-1.87	41.80	-1.87	1.18	1.01	-14.37
3,265.00	3.41	64.78	3,263.13	0.45	46.53	0.45	0.50	0.48	1.88
3,360.00	3.75	59.02	3,357.94	3.25	51.75	3.25	0.52	0.36	-6.06
3,455.00	6.02	56.69	3,452.59	7.58	58.58	7.58	2.40	2.39	-2.45
3,551.00	7.51	54.72	3,547.92	13.97	67.91	13.97	1.57	1.55	-2.05
3,647.00	4.00	47.55	3,643.42	19.86	75.50	19.86	3.73	-3.66	-7.47
3,742.00	1.83	29.91	3,738.30	23.41	78.71	23.41	2.45	-2.28	-18.57
3,838.00	1.56	22.56	3,834.25	25.95	79.97	25.95	0.36	-0.28	-7.66
3,933.00	1.61	346.85	3,929.22	28.44	80.16	28.44	1.02	0.05	-37.59
4,028.00	2.03	337.30	4,024.17	31.29	79.21	31.29	0.54	0.44	-10.05
4,123.00	2.56	313.62	4,119.10	34.31	77.03	34.31	1.13	0.56	-24.93
4,218.00	4.48	307.13	4,213.91	38.01	72.53	38.01	2.06	2.02	-6.83
4,314.00	3.99	308.64	4,309.65	42.36	66.93	42.36	0.52	-0.51	1.57
4,409.00	1.99	328.85	4,404.52	45.84	63.50	45.84	2.35	-2.11	21.27
4,505.00	0.71	8.53	4,500.49	47.85	62.72	47.85	1.58	-1.33	41.33
4,600.00	1.30	1.33	4,595.48	49.51	62.84	49.51	0.63	0.62	-7.58
4,696.00	1.61	344.39	4,691.45	51.90	62.50	51.90	0.55	0.32	-17.65



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Site:	Libby Berry	MD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Well:	SWD #2	North Reference:	Grid
Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,789.00	1.63	336.59	4,784.41	54.37	61.62	54.37	0.24	0.02	-8.39
4,885.00	1.53	345.69	4,880.37	56.86	60.76	56.86	0.28	-0.10	9.48
4,980.00	1.29	336.01	4,975.35	59.07	60.01	59.07	0.36	-0.25	-10.19
5,076.00	0.93	329.49	5,071.33	60.73	59.18	60.73	0.40	-0.37	-6.79
5,171.00	0.70	331.76	5,166.32	61.90	58.51	61.90	0.24	-0.24	2.39
5,267.00	1.21	339.25	5,262.30	63.37	57.88	63.37	0.55	0.53	7.80
5,362.00	0.93	359.21	5,357.29	65.08	57.51	65.08	0.49	-0.29	21.01
5,458.00	0.87	8.93	5,453.28	66.58	57.61	66.58	0.17	-0.06	10.12
5,553.00	1.08	349.25	5,548.26	68.17	57.56	68.17	0.41	0.22	-20.72
5,648.00	1.68	15.12	5,643.24	70.39	57.75	70.39	0.90	0.63	27.23
5,680.00	2.01	12.44	5,675.22	71.39	58.00	71.39	1.07	1.03	-8.37
5,745.00	1.81	3.85	5,740.18	73.53	58.31	73.53	0.54	-0.31	-13.22
5,841.00	1.61	357.30	5,836.14	76.39	58.35	76.39	0.29	-0.21	-6.82
5,936.00	1.47	350.16	5,931.11	78.92	58.08	78.92	0.25	-0.15	-7.52
6,031.00	1.50	347.68	6,026.07	81.34	57.61	81.34	0.07	0.03	-2.61
6,127.00	1.38	344.04	6,122.04	83.68	57.02	83.68	0.16	-0.12	-3.79
6,222.00	1.22	349.08	6,217.02	85.77	56.51	85.77	0.21	-0.17	5.31
6,318.00	1.33	359.47	6,313.00	87.89	56.31	87.89	0.27	0.11	10.82
6,413.00	1.25	351.99	6,407.97	90.02	56.16	90.02	0.20	-0.08	-7.87
6,508.00	0.87	351.82	6,502.95	91.76	55.91	91.76	0.40	-0.40	-0.18
6,604.00	0.99	350.40	6,598.94	93.30	55.67	93.30	0.13	0.12	-1.48
6,698.00	0.90	10.17	6,692.93	94.82	55.66	94.82	0.36	-0.10	21.03
6,793.00	0.40	32.71	6,787.92	95.84	55.97	95.84	0.58	-0.53	23.73
6,889.00	0.56	31.76	6,883.92	96.52	56.40	96.52	0.17	0.17	-0.99
6,984.00	0.18	321.02	6,978.92	97.03	56.55	97.03	0.56	-0.40	-74.46
7,079.00	0.02	153.22	7,073.92	97.13	56.46	97.13	0.21	-0.17	-176.63
7,175.00	0.44	229.65	7,169.92	96.88	56.19	96.88	0.45	0.44	79.61
7,270.00	0.10	168.12	7,264.92	96.56	55.93	96.56	0.42	-0.36	-64.77
7,366.00	0.27	289.16	7,360.92	96.55	55.73	96.55	0.35	0.18	126.08
7,461.00	0.11	40.31	7,455.92	96.69	55.58	96.69	0.34	-0.17	117.00
7,556.00	0.29	271.65	7,550.91	96.77	55.40	96.77	0.39	0.19	-135.43
7,651.00	0.37	286.32	7,645.91	96.86	54.86	96.86	0.12	0.08	15.44
7,747.00	0.30	187.79	7,741.91	96.70	54.53	96.70	0.53	-0.07	-102.64
7,842.00	0.31	261.20	7,836.91	96.42	54.25	96.42	0.38	0.01	77.27
7,938.00	0.46	263.31	7,932.91	96.33	53.61	96.33	0.16	0.16	2.20
8,033.00	0.28	268.12	8,027.91	96.28	53.00	96.28	0.19	-0.19	5.06
8,129.00	0.45	211.17	8,123.91	95.95	52.57	95.95	0.39	0.18	-59.32
8,224.00	0.18	200.37	8,218.90	95.49	52.32	95.49	0.29	-0.28	-11.37
8,319.00	0.42	212.19	8,313.90	95.06	52.08	95.06	0.26	0.25	12.44
8,415.00	0.31	249.34	8,409.90	94.67	51.65	94.67	0.27	-0.11	38.70
8,510.00	0.10	335.05	8,504.90	94.65	51.38	94.65	0.34	-0.22	90.22
8,605.00	0.46	125.48	8,599.90	94.51	51.65	94.51	0.58	0.38	158.35



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Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,701.00	0.42	106.21	8,695.90	94.18	52.30	94.18	0.16	-0.04	-20.07
8,796.00	0.71	61.42	8,790.89	94.37	53.16	94.37	0.53	0.31	-47.15
8,892.00	0.21	222.86	8,886.89	94.52	53.56	94.52	0.95	-0.52	168.17
8,987.00	0.31	120.83	8,981.89	94.26	53.66	94.26	0.43	0.11	-107.40
9,082.00	0.71	72.99	9,076.89	94.30	54.44	94.30	0.58	0.42	-50.36
9,178.00	1.57	88.25	9,172.87	94.52	56.33	94.52	0.94	0.90	15.90
9,273.00	1.47	89.37	9,267.83	94.57	58.85	94.57	0.11	-0.11	1.18
9,368.00	1.51	106.17	9,362.80	94.24	61.27	94.24	0.46	0.04	17.68
9,465.00	1.29	122.94	9,459.77	93.29	63.41	93.29	0.48	-0.23	17.29
9,560.00	1.21	125.85	9,554.75	92.12	65.12	92.12	0.11	-0.08	3.06
9,656.00	1.43	139.49	9,650.72	90.61	66.72	90.61	0.40	0.23	14.21
9,751.00	1.46	133.97	9,745.69	88.87	68.36	88.87	0.15	0.03	-5.81
9,846.00	1.54	146.51	9,840.66	86.97	69.94	86.97	0.35	0.08	13.20
9,941.00	1.33	150.13	9,935.63	84.95	71.19	84.95	0.24	-0.22	3.81
10,037.00	1.11	152.75	10,031.61	83.15	72.17	83.15	0.24	-0.23	2.73
10,132.00	1.03	155.03	10,126.59	81.56	72.95	81.56	0.10	-0.08	2.40
10,227.00	0.82	162.60	10,221.58	80.14	73.52	80.14	0.26	-0.22	7.97
10,322.00	1.12	164.89	10,316.57	78.59	73.96	78.59	0.32	0.32	2.41
10,418.00	1.06	179.25	10,412.55	76.80	74.22	76.80	0.29	-0.06	14.96
10,511.00	0.98	169.48	10,505.54	75.16	74.38	75.16	0.21	-0.09	-10.51
10,607.00	0.96	168.25	10,601.52	73.56	74.69	73.56	0.03	-0.02	-1.28
10,702.00	0.75	168.72	10,696.51	72.17	74.97	72.17	0.22	-0.22	0.49
10,796.00	0.75	176.46	10,790.50	70.96	75.13	70.96	0.11	0.00	8.23
10,892.00	0.40	181.27	10,886.50	70.00	75.16	70.00	0.37	-0.36	5.01
10,988.00	0.28	173.83	10,982.50	69.43	75.18	69.43	0.13	-0.12	-7.75
11,011.00	0.54	187.90	11,005.50	69.26	75.17	69.26	1.20	1.13	61.17
11,102.00	0.16	28.14	11,096.50	68.95	75.17	68.95	0.76	-0.42	-175.56
11,197.00	0.25	102.50	11,191.49	69.02	75.44	69.02	0.27	0.09	78.27
11,292.00	0.13	112.48	11,286.49	68.94	75.74	68.94	0.13	-0.13	10.51
11,387.00	0.14	48.95	11,381.49	68.97	75.93	68.97	0.15	0.01	-66.87
11,483.00	0.12	183.28	11,477.49	68.95	76.01	68.95	0.25	-0.02	139.93
11,578.00	0.10	98.80	11,572.49	68.84	76.09	68.84	0.16	-0.02	-88.93
11,673.00	0.16	32.06	11,667.49	68.94	76.24	68.94	0.16	0.06	-70.25
11,769.00	0.07	177.78	11,763.49	68.99	76.31	68.99	0.23	-0.09	151.79
11,864.00	0.22	282.98	11,858.49	68.97	76.14	68.97	0.26	0.16	110.74
11,959.00	0.25	359.52	11,953.49	69.22	75.96	69.22	0.31	0.03	80.57
12,053.00	0.24	42.96	12,047.49	69.57	76.09	69.57	0.19	-0.01	46.21
12,148.00	0.12	214.19	12,142.49	69.63	76.17	69.63	0.38	-0.13	180.24
12,243.00	0.10	174.52	12,237.49	69.47	76.12	69.47	0.08	-0.02	-41.76
12,339.00	0.75	234.76	12,333.49	69.02	75.62	69.02	0.74	0.68	62.75
12,434.00	0.15	240.36	12,428.49	68.60	75.00	68.60	0.63	-0.63	5.89
12,530.00	0.19	27.98	12,524.49	68.68	74.96	68.68	0.34	0.04	153.77



Company:	Chisholm Energy	Local Co-ordinate Reference:	Well SWD #2
Project:	Eddy Co, NM	TVD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Site:	Libby Berry	MD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Well:	SWD #2	North Reference:	Grid
Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,625.00	0.14	359.64	12,619.48	68.94	75.04	68.94	0.10	-0.05	-29.83
12,720.00	0.34	305.52	12,714.48	69.22	74.81	69.22	0.30	0.21	-56.97
12,816.00	0.60	323.80	12,810.48	69.79	74.28	69.79	0.31	0.27	19.04
12,911.00	0.65	330.68	12,905.48	70.66	73.72	70.66	0.09	0.05	7.24
13,006.00	0.93	340.29	13,000.47	71.86	73.20	71.86	0.33	0.29	10.12
13,101.00	0.76	340.14	13,095.46	73.17	72.72	73.17	0.18	-0.18	-0.16
13,197.00	0.95	353.03	13,191.44	74.56	72.41	74.56	0.28	0.20	13.43
13,291.00	1.05	344.85	13,285.43	76.17	72.09	76.17	0.19	0.11	-8.70
13,386.00	1.00	338.61	13,380.42	77.78	71.56	77.78	0.13	-0.05	-6.57
13,482.00	1.11	339.53	13,476.40	79.43	70.93	79.43	0.12	0.11	0.96
13,504.48	1.14	340.94	13,498.87	79.85	70.78	79.85	0.19	0.14	6.26
BHL - Libby Berry SWD #2									
13,577.00	1.25	344.97	13,571.38	81.29	70.34	81.29	0.19	0.15	5.56
13,672.00	1.23	10.67	13,666.36	83.30	70.26	83.30	0.58	-0.02	27.05
13,768.00	1.09	13.52	13,762.34	85.20	70.66	85.20	0.16	-0.15	2.97
13,863.00	1.42	19.64	13,857.31	87.18	71.27	87.18	0.37	0.35	6.44
13,959.00	1.45	14.45	13,953.28	89.48	71.97	89.48	0.14	0.03	-5.41
14,054.00	1.79	18.21	14,048.25	92.05	72.74	92.05	0.37	0.36	3.96
14,149.00	1.67	24.13	14,143.20	94.73	73.77	94.73	0.23	-0.13	6.23
14,245.00	1.54	23.64	14,239.17	97.18	74.86	97.18	0.14	-0.14	-0.51
14,340.00	1.62	10.36	14,334.13	99.68	75.61	99.68	0.39	0.08	-13.98
14,436.00	1.46	2.02	14,430.10	102.23	75.90	102.23	0.29	-0.17	-8.69
14,531.00	1.67	359.81	14,525.06	104.83	75.94	104.83	0.23	0.22	-2.33
14,600.00	1.47	348.49	14,594.03	106.70	75.76	106.70	0.53	-0.29	-16.41
14,675.00	1.51	343.54	14,669.01	108.59	75.28	108.59	0.18	0.05	-6.60
14,770.00	1.72	343.55	14,763.97	111.16	74.52	111.16	0.22	0.22	0.01
14,865.00	1.45	349.06	14,858.93	113.70	73.89	113.70	0.33	-0.28	5.80
14,960.00	1.50	351.09	14,953.90	116.11	73.47	116.11	0.08	0.05	2.14
15,055.00	1.50	351.29	15,048.87	118.57	73.09	118.57	0.01	0.00	0.21
15,151.00	1.42	7.12	15,144.84	120.99	73.05	120.99	0.43	-0.08	16.49
15,246.00	1.65	6.05	15,239.81	123.52	73.34	123.52	0.24	0.24	-1.13
15,341.00	1.47	3.86	15,334.77	126.10	73.56	126.10	0.20	-0.19	-2.31
15,436.00	1.83	13.44	15,429.73	128.79	74.00	128.79	0.48	0.38	10.08
15,530.00	1.69	11.51	15,523.69	131.61	74.62	131.61	0.16	-0.15	-2.05
15,626.00	1.83	12.05	15,619.64	134.49	75.23	134.49	0.15	0.15	0.56
15,725.00	1.89	8.19	15,718.59	137.65	75.79	137.65	0.14	0.06	-3.90
15,819.00	2.40	359.49	15,812.52	141.16	75.99	141.16	0.64	0.54	-9.26
15,914.00	2.06	350.64	15,907.45	144.83	75.70	144.83	0.51	-0.36	-9.32
16,009.00	2.31	352.64	16,002.38	148.41	75.17	148.41	0.28	0.26	2.11
16,105.00	2.53	359.16	16,098.30	152.45	74.90	152.45	0.37	0.23	6.79
16,145.00	2.35	357.85	16,138.26	154.15	74.85	154.15	0.47	-0.45	-3.27
16,194.00	2.35	357.85	16,187.22	156.16	74.78	156.16	0.00	0.00	0.00



Company:	Chisholm Energy	Local Co-ordinate Reference:	Well SWD #2
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Site:	Libby Berry	MD Reference:	Patriot #5 @ 3684.50usft (Patriot #5 (3661 GE + 23.5 KB = 3684.5))
Well:	SWD #2	North Reference:	Grid
Wellbore:	SWD #2	Survey Calculation Method:	Minimum Curvature
Design:	SWD #2	Database:	Gyrodata NWDB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Projection to Bit: 32.564845, -103.540148									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,194.00	16,187.22	156.16	74.78	Projection to Bit: 32.564845, -103.540148

Checked By: _____	Approved By: _____	Date: _____
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