

AUG 03 2018

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JDC 7

Chisholm Energy Holdings

Eddy County, NM (NAD 83) Salt Draw 10 State Com

API#

WCB 2H

30-015-44681

OH

Design: Actuals

Sperry Drilling Services Combo Report

20 June, 2018

Well Coordinates: 32° 09' 04.68" N
104° 04' 15.68" W

North American Datum 1983
New Mexico Eastern Zone
418,877.25 N
622,517.13 E

Ground Level: 2,974.60 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well WCB 2H
GE 2974.60 + 31 @ 3005.60usft (JDC 7)
N
Grid
API US Survey Feet

Version: 5000.1 Build: 81E

Report Version: Midcon Combo v1.12

HALLIBURTON

Design Report for WCB 2H - Actuals

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
0.00	0.00	0.00	0.00	0.00 N	0.00 E	418,877.25	622,517.13	0.00	0.00	0.00	
195.00	0.28	195.00	195.00	0.46 S	0.12 W	418,876.79	622,517.01	0.14	0.46	195.00	
362.00	0.26	166.67	362.00	1.22 S	0.14 W	418,876.03	622,516.99	0.08	1.22	-112.51	
404.00	1.43	144.50	403.99	1.74 S	0.18 E	418,875.51	622,517.31	2.84	1.74	-26.89	
503.00	1.79	133.08	502.95	3.80 S	2.03 E	418,873.45	622,519.16	0.49	3.80	-47.51	
592.00	0.97	83.68	591.93	4.67 S	3.80 E	418,872.58	622,520.93	1.54	4.67	-147.56	
690.00	0.47	20.99	689.92	4.20 S	4.76 E	418,873.05	622,521.89	0.88	4.20	-151.03	
784.00	0.37	44.38	783.92	3.63 S	5.11 E	418,873.62	622,522.24	0.21	3.63	131.60	
879.00	0.73	63.04	878.92	3.13 S	5.87 E	418,874.12	622,523.00	0.42	3.13	35.99	
973.00	1.23	100.46	972.90	3.05 S	7.39 E	418,874.20	622,524.52	0.84	3.05	71.72	
1,067.00	1.64	111.64	1,066.87	3.72 S	9.64 E	418,873.53	622,526.77	0.53	3.72	40.00	
1,162.00	1.44	116.91	1,161.84	4.77 S	11.96 E	418,872.48	622,529.09	0.26	4.77	147.31	
1,257.00	1.35	139.82	1,256.81	6.16 S	13.75 E	418,871.09	622,530.88	0.59	6.16	110.50	
1,351.00	1.33	139.62	1,350.79	7.84 S	15.17 E	418,869.41	622,532.30	0.02	7.84	-166.94	
1,445.00	1.49	138.81	1,444.76	9.59 S	16.68 E	418,867.66	622,533.81	0.17	9.59	-7.51	
1,548.00	1.84	138.25	1,547.71	11.83 S	18.67 E	418,865.42	622,535.80	0.34	11.83	-2.94	
1,635.00	1.52	129.55	1,634.68	13.61 S	20.49 E	418,863.64	622,537.62	0.47	13.61	-145.74	
1,729.00	1.78	121.76	1,728.64	15.17 S	22.69 E	418,862.08	622,539.82	0.36	15.17	-44.72	
1,824.00	2.46	105.92	1,823.57	16.51 S	25.90 E	418,860.74	622,543.03	0.94	16.51	-48.85	
1,919.00	4.51	100.48	1,918.39	17.74 S	31.54 E	418,859.51	622,548.67	2.18	17.74	-11.89	
2,018.00	3.90	98.81	2,017.12	18.97 S	38.69 E	418,858.28	622,555.82	0.63	18.97	-169.48	
2,112.00	0.63	87.97	2,111.04	19.44 S	42.37 E	418,857.81	622,559.50	3.49	19.44	-177.93	
2,207.00	0.77	101.92	2,206.03	19.55 S	43.52 E	418,857.70	622,560.65	0.23	19.55	57.71	
2,302.00	1.91	103.49	2,301.00	20.05 S	45.68 E	418,857.20	622,562.81	1.20	20.05	2.63	
2,396.00	1.31	100.26	2,394.97	20.61 S	48.26 E	418,856.64	622,565.39	0.65	20.61	-173.01	
2,491.00	1.75	282.40	2,489.95	20.49 S	47.91 E	418,856.76	622,565.04	3.22	20.49	-178.78	
2,585.00	0.94	2.47	2,583.93	19.41 S	46.54 E	418,857.84	622,563.67	1.96	19.41	149.75	
2,679.00	0.89	87.12	2,677.93	18.61 S	47.31 E	418,858.64	622,564.44	1.31	18.61	134.04	
2,774.00	3.43	323.95	2,772.87	16.27 S	46.37 E	418,860.98	622,563.50	4.20	16.27	-133.92	
2,868.00	5.80	277.01	2,866.59	13.42 S	40.00 E	418,863.83	622,557.13	4.54	13.42	-82.78	
2,963.00	5.46	275.81	2,961.13	12.37 S	30.74 E	418,864.88	622,547.87	0.38	12.37	-161.50	
3,057.00	4.41	266.91	3,054.79	12.12 S	22.68 E	418,865.13	622,539.81	1.38	12.12	-148.28	
3,152.00	3.12	266.85	3,149.58	12.45 S	16.45 E	418,864.80	622,533.58	1.36	12.45	-179.85	
3,246.00	1.13	233.07	3,243.51	13.15 S	13.16 E	418,864.10	622,530.29	2.41	13.15	-163.92	
3,341.00	1.03	224.36	3,338.50	14.33 S	11.81 E	418,862.92	622,528.94	0.20	14.33	-125.65	
3,435.00	1.26	228.93	3,432.48	15.61 S	10.44 E	418,861.64	622,527.57	0.26	15.61	23.95	

Design Report for WCB 2H - Actuals

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Tooface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
3,529.00	0.77	224.23	3,526.46	16.74 S	9.22 E	418,860.51	622,526.35	0.53	16.74	-172.70	
3,624.00	1.01	242.28	3,621.45	17.59 S	8.03 E	418,859.66	622,525.16	0.39	17.59	58.70	
3,718.00	1.16	224.72	3,715.43	18.65 S	6.63 E	418,858.60	622,523.76	0.39	18.65	-74.67	
3,813.00	1.33	240.79	3,810.41	19.87 S	4.99 E	418,857.38	622,522.12	0.41	19.87	72.22	
3,908.00	0.88	232.85	3,905.39	20.85 S	3.45 E	418,856.40	622,520.58	0.50	20.85	-165.15	
4,002.00	0.81	246.67	3,999.38	21.55 S	2.26 E	418,855.70	622,519.39	0.23	21.55	115.78	
4,096.00	0.94	241.71	4,093.37	22.18 S	0.97 E	418,855.07	622,518.10	0.16	22.18	-32.72	
4,191.00	0.52	254.05	4,188.36	22.66 S	0.13 W	418,854.59	622,517.00	0.47	22.66	165.57	
4,286.00	0.93	224.14	4,283.36	23.34 S	1.08 W	418,853.91	622,516.05	0.57	23.34	-58.32	
4,380.00	0.76	201.09	4,377.35	24.46 S	1.83 W	418,852.79	622,515.30	0.40	24.46	-127.78	
4,475.00	0.68	194.87	4,472.34	25.60 S	2.21 W	418,851.65	622,514.92	0.12	25.60	-138.75	
4,569.00	0.39	288.39	4,566.34	26.04 S	2.65 W	418,851.21	622,514.48	0.86	26.04	151.06	
4,664.00	0.90	266.14	4,661.33	25.98 S	3.70 W	418,851.27	622,513.43	0.59	25.98	-37.57	
4,758.00	0.55	308.75	4,755.32	25.75 S	4.79 W	418,851.50	622,512.34	0.66	25.75	143.06	
4,853.00	0.75	290.99	4,850.32	25.24 S	5.73 W	418,852.01	622,511.40	0.30	25.24	-54.32	
4,947.00	0.61	254.27	4,944.31	25.16 S	6.78 W	418,852.09	622,510.35	0.48	25.16	-125.59	
5,041.00	0.56	261.87	5,038.31	25.36 S	7.72 W	418,851.89	622,509.41	0.10	25.36	126.56	
5,136.00	0.90	245.82	5,133.30	25.73 S	8.86 W	418,851.52	622,508.27	0.41	25.73	-39.21	
5,231.00	0.78	309.75	5,228.29	25.62 S	10.04 W	418,851.63	622,507.09	0.94	25.62	128.49	
5,325.00	0.47	359.29	5,322.28	24.83 S	10.54 W	418,852.42	622,506.59	0.63	24.83	143.03	
5,420.00	0.53	318.08	5,417.28	24.11 S	10.83 W	418,853.14	622,506.30	0.38	24.11	-101.54	
5,514.00	0.47	232.86	5,511.28	24.02 S	11.43 W	418,853.23	622,505.70	0.72	24.02	-136.34	
5,608.00	0.17	312.62	5,605.28	24.16 S	11.84 W	418,853.09	622,505.29	0.50	24.16	159.17	
5,703.00	0.31	247.95	5,700.28	24.16 S	12.18 W	418,853.09	622,504.95	0.30	24.16	-97.60	
5,797.00	0.34	343.92	5,794.28	23.99 S	12.50 W	418,853.26	622,504.63	0.51	23.99	135.60	
5,891.00	0.07	25.08	5,888.28	23.67 S	12.55 W	418,853.58	622,504.58	0.31	23.67	170.89	
5,986.00	0.52	205.14	5,983.27	24.00 S	12.71 W	418,853.25	622,504.42	0.62	24.00	-179.95	
6,080.00	0.26	234.85	6,077.27	24.51 S	13.06 W	418,852.74	622,504.07	0.34	24.51	156.35	
6,175.00	0.24	192.67	6,172.27	24.83 S	13.28 W	418,852.42	622,503.85	0.19	24.83	-117.01	
6,269.00	0.44	144.53	6,266.27	25.32 S	13.12 W	418,851.93	622,504.01	0.35	25.32	-80.71	
6,364.00	0.56	201.76	6,361.27	26.05 S	13.08 W	418,851.20	622,504.05	0.52	26.05	106.21	
6,458.00	0.93	202.65	6,455.26	27.18 S	13.54 W	418,850.07	622,503.59	0.39	27.18	2.24	
6,552.00	0.66	207.52	6,549.25	28.36 S	14.09 W	418,848.89	622,503.04	0.30	28.36	168.38	
6,647.00	0.88	265.60	6,644.24	28.90 S	15.07 W	418,848.35	622,502.06	0.81	28.90	104.61	
6,741.00	0.52	278.76	6,738.24	28.89 S	16.21 W	418,848.36	622,500.92	0.42	28.89	162.42	
6,836.00	0.77	205.76	6,833.23	29.40 S	16.91 W	418,847.85	622,500.22	0.83	29.40	-111.82	
6,930.00	0.97	221.55	6,927.22	30.57 S	17.71 W	418,846.68	622,499.42	0.33	30.57	58.24	

HALLIBURTON

Chisholm Energy Holdings
Eddy County, NM (NAD 83)

Design Report for WCB 2H - Actuals

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
7,025.00	0.69	197.78	7,022.21	31.71 S	18.42 W	418,845.54	622,498.71	0.46	31.71	-140.60	
7,120.00	0.18	144.47	7,117.21	32.38 S	18.51 W	418,844.87	622,498.62	0.63	32.38	-168.08	
7,214.00	0.53	209.28	7,211.21	32.88 S	18.64 W	418,844.37	622,498.49	0.51	32.88	84.57	
7,309.00	0.59	260.52	7,306.20	33.34 S	19.33 W	418,843.91	622,497.80	0.51	33.34	109.24	
7,404.00	0.31	293.73	7,401.20	33.32 S	20.05 W	418,843.93	622,497.08	0.39	33.32	152.82	
7,485.00	0.66	234.14	7,482.20	33.50 S	20.63 W	418,843.75	622,496.50	0.70	33.50	-87.58	
7,580.00	0.83	206.94	7,577.19	34.44 S	21.38 W	418,842.81	622,495.75	0.41	34.44	-78.35	
7,674.00	0.89	204.34	7,671.18	35.71 S	21.99 W	418,841.54	622,495.14	0.08	35.71	-34.34	
7,769.00	0.83	165.68	7,766.17	37.05 S	22.13 W	418,840.20	622,495.00	0.60	37.05	-115.01	
7,863.00	0.32	224.36	7,860.16	37.90 S	22.14 W	418,839.35	622,494.99	0.76	37.90	157.61	
7,958.00	0.88	270.23	7,955.16	38.08 S	23.06 W	418,839.17	622,494.07	0.73	38.08	65.13	
8,052.00	0.04	49.86	8,049.15	38.06 S	23.75 W	418,839.19	622,493.38	0.97	38.06	178.37	
8,147.00	1.07	108.26	8,144.15	38.32 S	22.89 W	418,838.93	622,494.24	1.10	38.32	60.26	
8,241.00	1.49	122.11	8,238.13	39.24 S	21.02 W	418,838.01	622,496.11	0.55	39.24	43.43	
8,336.00	1.42	145.53	8,333.10	40.87 S	19.31 W	418,836.38	622,497.82	0.63	40.87	108.33	
8,431.00	1.35	158.18	8,428.07	42.88 S	18.22 W	418,834.37	622,498.91	0.33	42.88	109.17	
8,525.00	1.30	181.05	8,522.04	44.97 S	17.83 W	418,832.28	622,499.30	0.56	44.97	106.76	
8,620.00	1.04	209.25	8,617.02	46.80 S	18.27 W	418,830.45	622,498.86	0.66	46.80	127.96	
8,715.00	0.52	245.88	8,712.02	47.73 S	19.09 W	418,829.52	622,498.04	0.73	47.73	153.51	
8,809.00	0.72	147.14	8,806.01	48.40 S	19.16 W	418,828.85	622,497.97	1.01	48.40	-131.49	
8,903.00	1.46	162.94	8,899.99	50.04 S	18.48 W	418,827.21	622,498.65	0.84	50.04	30.13	
8,968.00	1.93	176.28	8,964.97	51.92 S	18.17 W	418,825.33	622,498.96	0.94	51.92	46.81	
9,102.00	2.27	192.47	9,098.88	56.77 S	18.60 W	418,820.48	622,498.53	0.51	56.77	68.44	
9,197.00	2.08	194.48	9,193.81	60.27 S	19.43 W	418,816.98	622,497.70	0.22	60.27	159.13	
9,291.00	2.11	190.62	9,287.75	63.63 S	20.18 W	418,813.62	622,496.95	0.15	63.63	-79.93	
9,385.00	1.51	201.54	9,381.70	66.48 S	20.95 W	418,810.77	622,496.18	0.73	66.48	155.49	
9,480.00	1.70	199.68	9,476.66	68.97 S	21.89 W	418,808.28	622,495.24	0.21	68.97	-16.26	
9,574.00	1.79	188.49	9,570.62	71.73 S	22.57 W	418,805.52	622,494.56	0.37	71.73	-80.84	
9,668.00	1.80	199.97	9,664.57	74.57 S	23.30 W	418,802.68	622,493.83	0.38	74.57	94.15	
9,763.00	1.67	204.37	9,759.53	77.24 S	24.38 W	418,800.01	622,492.75	0.20	77.24	136.48	
9,857.00	1.22	216.75	9,853.50	79.29 S	25.54 W	418,797.96	622,491.59	0.58	79.29	151.33	
9,952.00	1.21	237.72	9,948.48	80.63 S	26.99 W	418,796.62	622,490.14	0.47	80.63	101.76	
10,002.00	1.18	241.83	9,998.47	81.16 S	27.89 W	418,796.09	622,489.24	0.18	81.16	111.34	
10,033.00	0.93	265.99	10,029.46	81.33 S	28.43 W	418,795.92	622,488.70	1.63	81.33	131.05	
10,065.00	2.74	263.17	10,061.44	81.44 S	29.44 W	418,795.81	622,487.69	5.66	81.44	-4.27	
10,096.00	7.46	271.70	10,092.31	81.46 S	32.19 W	418,795.79	622,484.94	15.38	81.46	13.40	
10,128.00	10.77	273.83	10,123.91	81.20 S	37.25 W	418,796.05	622,479.88	10.40	81.20	6.87	

Design Report for WCB 2H - Actuals

Measured Depth (usft)	Inclination (")	Grid Azimuth (")	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate ("/100usft)	Vertical Section (usft)	Toolface Angle (")	Comments
Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)								
10,160.00	14.54	262.45	10,155.13	81.53 S	44.22 W	418,795.72	622,472.91	14.07	81.53	-39.12	
10,191.00	18.77	256.94	10,184.82	83.17 S	52.94 W	418,794.08	622,464.19	14.55	83.17	-23.13	
10,222.00	22.97	262.13	10,213.78	85.13 S	63.80 W	418,792.12	622,453.33	14.79	85.13	26.21	
10,254.00	26.85	258.73	10,242.80	87.39 S	77.08 W	418,789.86	622,440.05	12.92	87.39	-21.81	
10,286.00	30.76	259.67	10,270.84	90.28 S	92.22 W	418,786.97	622,424.91	12.30	90.28	7.02	
10,317.00	34.42	255.64	10,296.96	93.87 S	108.52 W	418,783.38	622,408.61	13.72	93.87	-32.38	
10,349.00	38.14	253.75	10,322.75	98.88 S	126.77 W	418,778.37	622,390.36	12.14	98.88	-17.50	
10,380.00	42.62	255.85	10,346.36	104.13 S	146.15 W	418,773.12	622,370.98	15.10	104.13	17.70	
10,411.00	45.95	257.18	10,368.55	109.17 S	167.19 W	418,768.08	622,349.94	11.15	109.17	16.06	
10,443.00	48.62	255.44	10,390.25	114.74 S	190.03 W	418,762.51	622,327.10	9.25	114.74	-26.18	
10,474.00	51.14	256.74	10,410.23	120.43 S	213.04 W	418,756.82	622,304.09	8.74	120.43	21.95	
10,506.00	53.54	255.09	10,429.78	126.60 S	237.61 W	418,750.65	622,279.52	8.54	126.60	-29.07	
10,537.00	56.71	257.13	10,447.50	132.70 S	262.29 W	418,744.55	622,254.84	11.56	132.70	28.42	
10,632.00	63.60	254.41	10,494.76	153.00 S	342.09 W	418,724.25	622,175.04	7.67	153.00	-19.59	
10,726.00	66.39	246.03	10,534.55	181.86 S	422.12 W	418,695.39	622,095.01	8.60	181.86	-71.64	
10,821.00	66.43	236.79	10,572.63	223.46 S	498.46 W	418,653.79	622,018.67	8.91	223.46	-91.58	
10,915.00	68.53	227.33	10,608.70	276.81 S	566.80 W	418,600.44	621,950.33	9.56	276.81	-78.33	
10,942.00	69.52	224.88	10,618.37	294.29 S	584.97 W	418,582.96	621,932.16	9.23	294.29	-67.04	
10,974.00	70.64	222.94	10,629.27	315.97 S	605.83 W	418,561.28	621,911.30	6.69	315.97	-58.78	
11,005.00	71.52	220.81	10,639.33	337.80 S	625.40 W	418,539.45	621,891.73	7.09	337.80	-66.76	
11,037.00	72.66	219.33	10,649.17	361.10 S	645.00 W	418,516.15	621,872.13	5.66	361.10	-51.24	
11,068.00	73.52	217.14	10,658.19	384.40 S	663.35 W	418,492.85	621,853.78	7.31	384.40	-68.01	
11,100.00	74.42	214.76	10,667.02	409.29 S	681.41 W	418,467.96	621,835.72	7.68	409.29	-68.85	
11,132.00	74.71	212.11	10,675.54	435.03 S	698.40 W	418,442.22	621,818.73	8.03	435.03	-83.88	
11,163.00	75.10	209.82	10,683.62	460.70 S	713.80 W	418,416.55	621,803.33	7.24	460.70	-80.30	
11,195.00	75.58	207.43	10,691.71	487.87 S	728.63 W	418,389.38	621,788.50	7.38	487.87	-78.58	
11,226.00	76.80	205.30	10,699.12	514.84 S	741.99 W	418,362.41	621,775.14	7.75	514.84	-59.72	
11,258.00	78.01	203.01	10,706.09	543.33 S	754.77 W	418,333.92	621,762.36	7.94	543.33	-61.82	
11,289.00	79.64	200.04	10,712.10	571.62 S	765.93 W	418,305.63	621,751.20	10.77	571.62	-61.07	
11,321.00	81.90	197.22	10,717.24	601.55 S	776.01 W	418,275.70	621,741.12	11.20	601.55	-51.16	
11,352.00	83.96	193.81	10,721.05	631.19 S	784.24 W	418,246.06	621,732.89	12.78	631.19	-58.89	
11,384.00	86.06	190.91	10,723.84	662.32 S	791.06 W	418,214.93	621,726.07	11.16	662.32	-54.12	
11,415.00	87.84	187.59	10,725.49	692.87 S	796.03 W	418,184.38	621,721.10	12.14	692.87	-61.86	
11,478.00	88.30	180.43	10,727.61	755.64 S	800.43 W	418,121.61	621,716.70	11.38	755.64	-86.45	
11,573.00	90.77	181.17	10,728.38	850.62 S	801.76 W	418,026.63	621,715.37	2.71	850.62	16.68	
11,667.00	91.51	181.20	10,726.51	944.58 S	803.70 W	417,932.67	621,713.43	0.79	944.58	2.32	

Design Report for WCB 2H - Actuals

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
11,762.00	92.28	180.52	10,723.37	1,039.51 S	805.13 W	417,837.74	621,712.00	1.08	1,039.51	-41.42	
11,856.00	90.09	177.76	10,721.43	1,133.47 S	803.72 W	417,743.78	621,713.41	3.75	1,133.47	-128.40	
11,951.00	88.98	176.59	10,722.20	1,228.35 S	799.03 W	417,648.90	621,718.10	1.70	1,228.35	-133.50	
12,045.00	89.88	176.29	10,723.13	1,322.16 S	793.20 W	417,555.09	621,723.93	1.01	1,322.16	-18.44	
12,140.00	90.12	176.41	10,723.13	1,416.97 S	787.15 W	417,460.28	621,729.98	0.28	1,416.97	26.57	
12,234.00	91.17	180.78	10,722.07	1,510.91 S	784.85 W	417,366.34	621,732.28	4.78	1,510.91	76.47	
12,329.00	90.99	181.00	10,720.28	1,605.88 S	786.32 W	417,271.37	621,730.81	0.30	1,605.88	129.29	
12,423.00	90.96	179.40	10,718.68	1,699.86 S	786.65 W	417,177.39	621,730.48	1.70	1,699.86	-91.06	
12,517.00	90.86	177.62	10,717.19	1,793.82 S	784.21 W	417,083.43	621,732.92	1.90	1,793.82	-93.20	
12,612.00	89.07	179.47	10,717.25	1,888.78 S	781.79 W	416,988.47	621,735.34	2.71	1,888.78	134.05	
12,706.00	88.43	182.34	10,719.30	1,982.73 S	783.28 W	416,894.52	621,733.85	3.13	1,982.73	102.60	Last MWD Survey OH - 12706.00' MD
12,769.00	88.43	182.34	10,721.03	2,045.66 S	785.85 W	416,831.59	621,731.28	0.00	2,045.66	0.00	Projection to TD OH - 12769.00' MD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,706.00	10,719.30	-1,982.73	-783.28	Last MWD Survey OH - 12706.00' MD
12,769.00	10,721.03	-2,045.66	-785.85	Projection to TD OH - 12769.00' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	180.00	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
195.00	12,706.00	MWD	MWD
12,769.00	12,769.00	Projection to TD	Blind (OWSG)

Log Report for WCB 2H - Actuals

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
9,028.00	9 5/8"		9-5/8	12-1/4

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (°)	+N/-S (°)	+E/-W (°)	Northing (°)	Easting (°)	Latitude	Longitude
()									

Directional Difficulty Index

Average Dogleg over Survey:	1.87 °/100usft	Maximum Dogleg over Survey:	15.38 °/100usft at 10,096.00 usft
Net Tortousity applicable to Plans:	0.56 °/100usft	Directional Difficulty Index:	5.873

Audit Info

North Reference Sheet for Salt Draw 10 State Com - WCB 2H - OH

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 2974.60 + 31 @ 3005.60usft (JDC 7). Northing and Easting are relative to WCB 2H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W*, Longitude Origin: 0° 0' 0.000 E*, Latitude Origin: 0° 0' 0.000 N*

False Easting: 541,337.50usft, False Northing: 0.00usft, Scale Reduction: 0.99991664

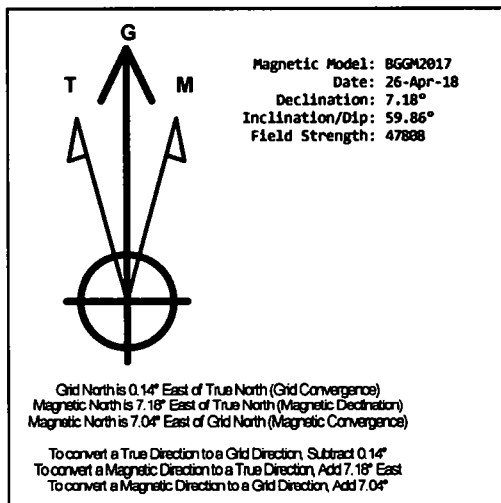
Grid Coordinates of Well: 418,877.25 usft N, 622,517.13 usft E

Geographical Coordinates of Well: 32° 09' 04.68" N, 104° 04' 15.68" W

Grid Convergence at Surface is: 0.14°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,769.00usft
the Bottom Hole Displacement is 2,191.41usft in the Direction of 201.01° (Grid).

Magnetic Convergence at surface is: -7.04° (26 April 2018, , BGGM2017)





Chisholm Energy Holdings

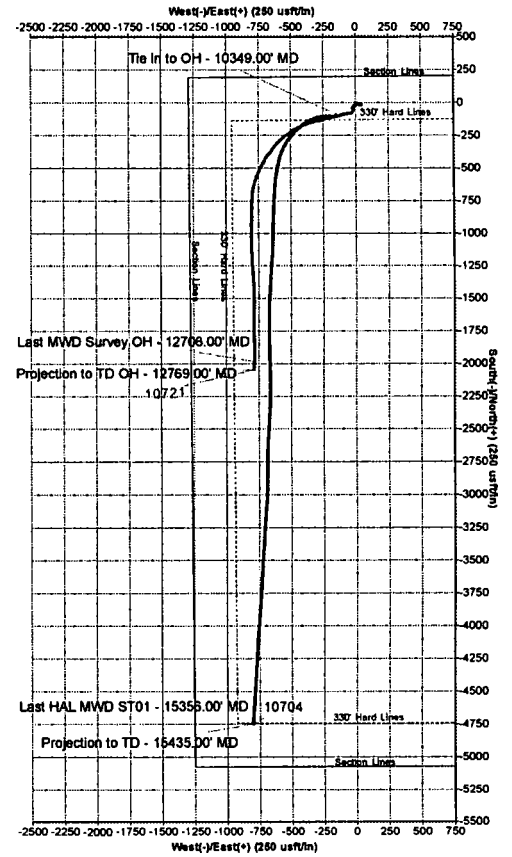
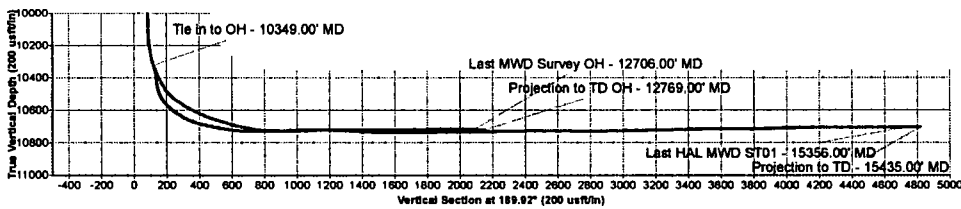
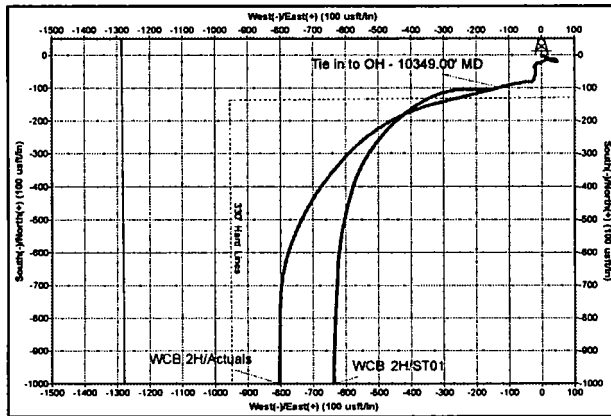
GE 2974.60 + 31 @ 3005.60usft (JDC 7)
Ground Level: 2974.60

Project: Eddy County, NM (NAD 83)
Site: Salt Draw 10 State Com
Well: WCB 2H
Wellbore: ST01
Design: ST01
Rig: JDC 7

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Atchutha to Grid North
True North: -0.14°
Magnetic North: 7.01°
Magnetic Field
Strength: 47783.3nT
Dip Angle: 69.88°
Date: 6/22/2018
Model: SOG2018

WELL DETAILS					
		Ground Level:	2974.60		
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	416877.25	622517.13	32° 8' 4.661 N	104° 4' 15.680 W



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