Chisholm Energy Holdings

Cottonwood 28-33 Fed Com 2BS #6H

Eddy County, NM (NAD 83)
Nabors M55

30-015-44649

Sperry Drilling Services

End Of Well Report

16 April, 2018

HALLIBURTON

Nabors M55

Chisholm Energy Holdings

Eddy County, NM (NAD 83) Cottonwood 28-33 Federal

API#

Cottonwood 28-33 Fed Com 2BS #6H

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report

16 April, 2018

Well Coordinates:	32° 01' 14.73" N 104° 17' 33.41" W	North American Datum 1983 New Mexico Eastern Zone 371,292.90 N 553,956.90 E
Ground Level: 3,384.00 usft		
Local Coordinate Origin:		Centered on Well Cottonwood 28-33 Fed Com 2BS #6H
Viewing Datum:		GL 3384', RKB + 22' @ 3406.00usft (Nabors M55)
TVDs to System:		N
North Reference:		**Grid**
Unit System:		API US Survey Feet

Version: 5000.1 Build: 81E

Report Version: Midcon Combo v1.12

HALLIBURTON

End Of Well Report

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CHISHOLM ENERGY

Chisholm Energy Holdings

GL 3384', RKB + 27' @ 3406.00usft (Nabors M55)

Ground Level: 3384.00

Project: Eddy County, NM (NAD 83)
Site: Cottonwood 28-33 Federal
Well: Cottonwood 28-33 Fed Com 2BS #6H
Wellbore: Wellbore #1
Design: Wellbore #1
Rig: Nabors M55

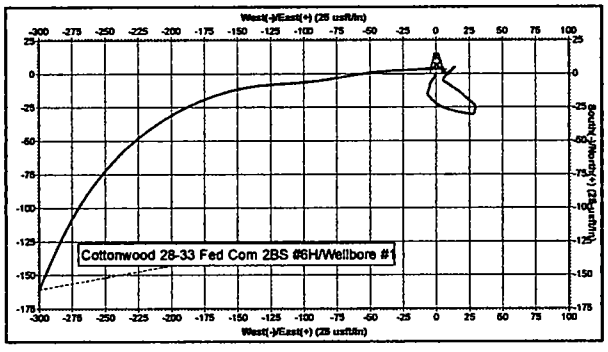
Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

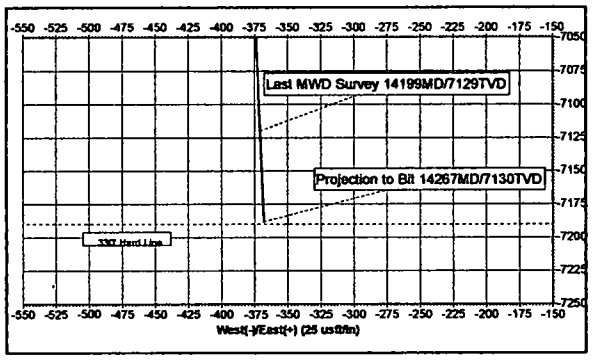
Azimuths to Grid North
True North: -0.02°
Magnetic North: 7.39°

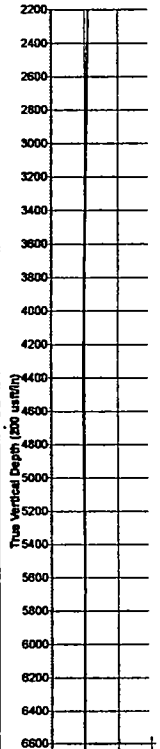
Magnetic Field
Strength: 47711.1nT
Dip Angle: 59.70°
Date: 3/15/2018
Model: BGGM2017

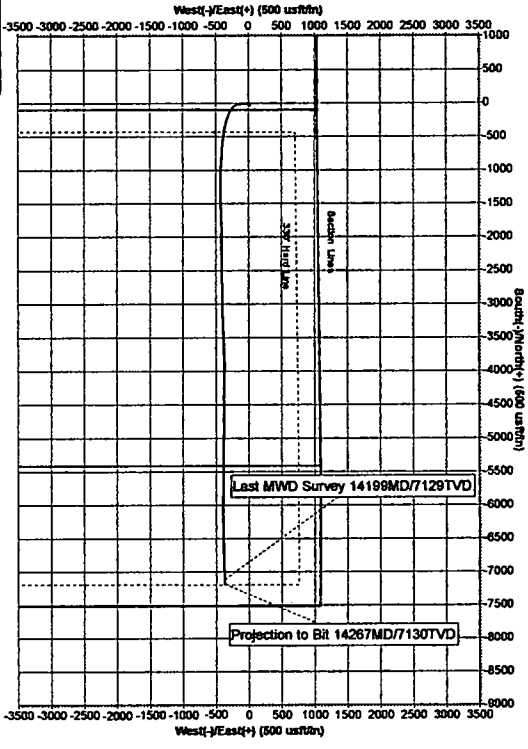
WELL DETAILS
Ground Level: 3384.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	371292.90	553956.90	32° 1' 14.728 N	104° 17' 33.413 W









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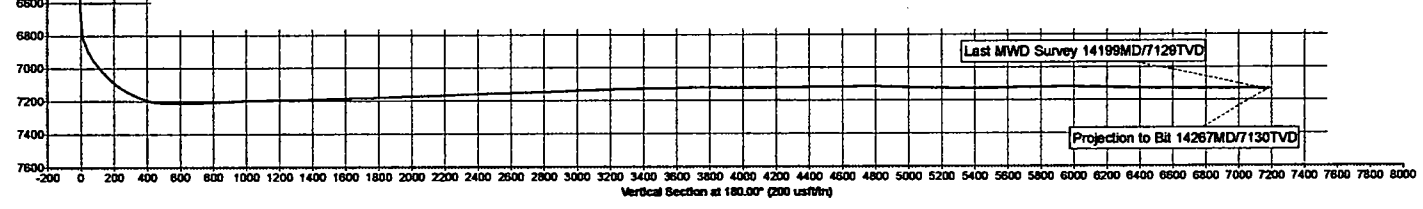

Design Report for Cottonwood 28-33 Fed Com 2BS #6H - Wellbore #1

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
0.00	0.00	0.00	0.00	0.00 N	0.00 E	371,292.90	553,956.90	0.00	0.00	0.00	
126.00	0.36	226.69	126.00	0.27 S	0.29 W	371,292.63	553,956.61	0.29	0.27	226.69	
184.00	0.37	191.25	184.00	0.58 S	0.46 W	371,292.32	553,956.44	0.38	0.58	-105.26	
244.00	0.63	195.48	244.00	1.09 S	0.58 W	371,291.81	553,956.32	0.44	1.09	10.20	
363.00	0.68	206.61	362.99	2.35 S	1.07 W	371,290.55	553,955.83	0.11	2.35	74.17	
472.00	1.06	223.08	471.98	3.66 S	2.05 W	371,289.24	553,954.85	0.41	3.66	41.77	
561.00	1.57	215.00	560.95	5.26 S	3.31 W	371,287.64	553,953.59	0.61	5.26	-24.05	
650.00	1.23	204.81	649.93	7.13 S	4.41 W	371,285.77	553,952.49	0.47	7.13	-148.81	
747.00	1.06	178.86	746.91	8.97 S	4.83 W	371,283.93	553,952.07	0.56	8.97	-120.83	
842.00	1.01	199.18	841.89	10.64 S	5.09 W	371,282.26	553,951.81	0.39	10.64	107.84	
937.00	1.88	199.81	936.86	12.90 S	5.89 W	371,280.00	553,951.01	0.92	12.90	1.36	
1,032.00	0.83	193.15	1,031.83	15.03 S	6.58 W	371,277.87	553,950.32	1.12	15.03	-174.79	
1,126.00	0.90	135.90	1,125.82	16.23 S	6.22 W	371,276.67	553,950.68	0.88	16.23	-114.38	
1,221.00	1.23	126.34	1,220.81	17.37 S	4.88 W	371,275.53	553,952.02	0.39	17.37	-33.14	
1,315.00	2.26	147.50	1,314.76	19.53 S	3.07 W	371,273.37	553,953.83	1.27	19.53	42.90	
1,410.00	4.42	121.69	1,409.60	23.03 S	1.05 E	371,269.87	553,957.95	2.72	23.03	-48.19	
1,505.00	5.46	107.68	1,504.25	26.33 S	8.47 E	371,266.57	553,965.37	1.67	26.33	-56.36	
1,590.00	5.17	102.80	1,588.88	28.41 S	16.06 E	371,264.49	553,972.96	0.63	28.41	-125.10	
1,664.00	4.50	98.62	1,662.62	29.58 S	22.18 E	371,263.32	553,979.08	1.02	29.58	-154.33	
1,727.00	2.99	97.68	1,725.48	30.17 S	26.25 E	371,262.73	553,983.15	2.40	30.17	-178.10	
1,759.00	1.99	91.26	1,757.45	30.29 S	27.64 E	371,262.61	553,984.54	3.24	30.29	-167.64	
1,822.00	1.11	2.06	1,820.44	29.71 S	28.75 E	371,263.19	553,985.65	3.60	29.71	-150.65	
1,917.00	1.31	9.87	1,915.42	27.72 S	28.97 E	371,265.18	553,985.87	0.27	27.72	43.46	
2,011.00	1.39	23.48	2,009.39	25.61 S	29.61 E	371,267.29	553,986.51	0.35	25.61	82.86	
2,105.00	1.19	316.20	2,103.37	23.86 S	29.39 E	371,269.04	553,986.29	1.53	23.86	-130.28	
2,200.00	1.66	314.38	2,198.34	22.19 S	27.72 E	371,270.71	553,984.62	0.50	22.19	-6.48	
2,295.00	1.82	305.98	2,293.30	20.34 S	25.52 E	371,272.56	553,982.42	0.32	20.34	-62.07	
2,390.00	1.61	310.87	2,388.26	18.58 S	23.29 E	371,274.32	553,980.19	0.27	18.58	147.56	
2,485.00	1.43	315.50	2,483.22	16.86 S	21.45 E	371,276.04	553,978.35	0.23	16.86	147.99	
2,580.00	1.55	313.50	2,578.19	15.13 S	19.68 E	371,277.77	553,976.58	0.14	15.13	-24.43	
2,675.00	1.63	309.33	2,673.15	13.39 S	17.71 E	371,279.51	553,974.61	0.15	13.39	-57.44	
2,769.00	1.54	298.43	2,767.12	11.94 S	15.56 E	371,280.96	553,972.46	0.33	11.94	-112.02	
2,865.00	1.43	305.71	2,863.09	10.63 S	13.46 E	371,282.27	553,970.36	0.23	10.63	123.85	
2,959.00	1.45	303.30	2,957.06	9.29 S	11.51 E	371,283.61	553,968.41	0.07	9.29	-72.93	
3,054.00	1.34	308.42	3,052.03	7.94 S	9.63 E	371,284.96	553,966.53	0.17	7.94	133.97	
3,149.00	1.37	296.45	3,147.00	6.74 S	7.75 E	371,286.16	553,964.65	0.30	6.74	-89.96	

Design Report for Cottonwood 28-33 Fed Com 2BS #6H - Wellbore #1

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
3,244.00	1.26	296.01	3,241.98	5.78 S	5.79 E	371,287.12	553,962.69	0.12	5.78	-174.98	
3,339.00	1.32	21.64	3,336.96	4.31 S	5.26 E	371,288.59	553,962.16	1.85	4.31	131.37	
3,433.00	1.11	36.52	3,430.94	2.57 S	6.20 E	371,290.33	553,963.10	0.40	2.57	130.94	
3,528.00	1.11	43.96	3,525.92	1.17 S	7.38 E	371,291.73	553,964.28	0.15	1.17	93.72	
3,623.00	1.17	40.69	3,620.90	0.23 N	8.66 E	371,293.13	553,965.56	0.09	-0.23	-48.98	
3,717.00	1.08	50.45	3,714.88	1.51 N	9.95 E	371,294.41	553,966.85	0.23	-1.51	124.90	
3,812.00	1.20	53.69	3,809.87	2.66 N	11.43 E	371,295.56	553,968.33	0.16	-2.66	26.16	
3,907.00	0.71	59.98	3,904.85	3.55 N	12.74 E	371,296.45	553,969.64	0.53	-3.55	171.06	
4,001.00	0.46	43.77	3,998.85	4.11 N	13.51 E	371,297.01	553,970.41	0.32	-4.11	-154.42	
4,096.00	0.25	12.00	4,093.85	4.59 N	13.81 E	371,297.49	553,970.71	0.30	-4.59	-151.99	
4,191.00	0.13	39.19	4,188.85	4.87 N	13.93 E	371,297.77	553,970.83	0.15	-4.87	156.15	
4,286.00	0.09	67.84	4,283.85	4.99 N	14.06 E	371,297.89	553,970.96	0.07	-4.99	139.78	
4,380.00	0.12	351.13	4,377.85	5.11 N	14.12 E	371,298.01	553,971.02	0.14	-5.11	-118.12	
4,476.00	0.15	293.75	4,473.84	5.26 N	13.99 E	371,298.16	553,970.89	0.14	-5.26	-107.21	
4,570.00	0.23	236.32	4,567.84	5.21 N	13.72 E	371,298.11	553,970.62	0.21	-5.21	-97.69	
4,665.00	0.22	215.85	4,662.84	4.95 N	13.45 E	371,297.85	553,970.35	0.08	-4.95	-107.25	
4,759.00	0.28	225.77	4,756.84	4.65 N	13.18 E	371,297.55	553,970.08	0.08	-4.65	40.83	
4,854.00	0.46	224.37	4,851.84	4.21 N	12.75 E	371,297.11	553,969.65	0.19	-4.21	-3.58	
4,948.00	0.45	218.87	4,945.84	3.65 N	12.25 E	371,296.55	553,969.15	0.05	-3.65	-105.64	
5,043.00	0.43	201.48	5,040.83	3.03 N	11.89 E	371,295.93	553,968.79	0.14	-3.03	-107.15	
5,138.00	0.45	222.50	5,135.83	2.42 N	11.50 E	371,295.32	553,968.40	0.17	-2.42	93.53	
5,233.00	0.53	235.56	5,230.83	1.90 N	10.89 E	371,294.80	553,967.79	0.14	-1.90	61.03	
5,327.00	0.77	218.52	5,324.82	1.16 N	10.14 E	371,294.06	553,967.04	0.33	-1.16	-47.58	
5,421.00	1.09	213.38	5,418.81	0.08 S	9.25 E	371,292.82	553,966.15	0.35	0.08	-17.26	
5,516.00	0.59	305.54	5,513.80	0.55 S	8.36 E	371,292.35	553,965.26	1.33	0.55	152.07	
5,611.00	0.50	306.34	5,608.80	0.02 S	7.63 E	371,292.88	553,964.53	0.10	0.02	175.57	
5,706.00	0.80	316.59	5,703.79	0.71 N	6.84 E	371,293.61	553,963.74	0.34	-0.71	26.36	
5,801.00	0.92	301.30	5,798.78	1.59 N	5.73 E	371,294.49	553,962.63	0.27	-1.59	-70.18	
5,894.00	0.44	321.13	5,891.78	2.25 N	4.87 E	371,295.15	553,961.77	0.57	-2.25	163.57	
5,989.00	0.48	8.85	5,986.77	2.93 N	4.70 E	371,295.83	553,961.60	0.39	-2.93	108.25	
6,083.00	0.37	15.62	6,080.77	3.61 N	4.84 E	371,296.51	553,961.74	0.13	-3.61	158.82	
6,178.00	0.26	12.78	6,175.77	4.12 N	4.97 E	371,297.02	553,961.87	0.12	-4.12	-173.34	
6,273.00	0.07	262.82	6,270.77	4.32 N	4.96 E	371,297.22	553,961.86	0.31	-4.32	-166.95	
6,323.00	0.18	290.12	6,320.77	4.34 N	4.86 E	371,297.24	553,961.76	0.24	-4.34	42.55	
6,418.00	0.30	218.49	6,415.77	4.20 N	4.56 E	371,297.10	553,961.46	0.31	-4.20	-106.71	
6,450.00	0.43	269.42	6,447.77	4.13 N	4.39 E	371,297.03	553,961.29	1.05	-4.13	94.96	
6,481.00	2.92	272.41	6,478.75	4.16 N	3.49 E	371,297.06	553,960.39	8.03	-4.16	3.51	

HALLIBURTON

Design Report for Cottonwood 28-33 Fed Com 2BS #6H - Wellbore #1

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
6,513.00	7.86	267.93	6,510.60	4.12 N	0.48 E	371,297.02	553,957.38	15.48	-4.12	-7.11	
6,544.00	12.75	265.26	6,541.09	3.76 N	5.05 W	371,296.66	553,951.85	15.85	-3.76	-6.90	
6,576.00	17.06	266.62	6,572.01	3.19 N	13.26 W	371,296.09	553,943.64	13.51	-3.19	5.30	
6,607.00	18.82	267.68	6,601.50	2.72 N	22.79 W	371,295.62	553,934.11	5.77	-2.72	11.01	
6,639.00	21.58	266.73	6,631.53	2.18 N	33.83 W	371,295.08	553,923.07	8.69	-2.18	-7.22	
6,671.00	25.14	264.32	6,660.90	1.17 N	46.47 W	371,294.07	553,910.43	11.52	-1.17	-16.14	
6,702.00	29.22	261.09	6,688.47	0.66 S	60.51 W	371,292.24	553,896.39	13.99	0.66	-21.33	
6,733.00	33.02	260.16	6,715.01	3.27 S	76.31 W	371,289.63	553,880.59	12.36	3.27	-7.61	
6,764.00	36.81	263.75	6,740.43	5.73 S	93.87 W	371,287.17	553,863.03	13.90	5.73	29.95	
6,796.00	40.50	267.37	6,765.41	7.25 S	113.79 W	371,285.65	553,843.11	13.52	7.25	32.93	
6,828.00	42.56	263.42	6,789.37	8.97 S	134.93 W	371,283.93	553,821.97	10.41	8.97	-53.30	
6,859.00	41.90	255.33	6,812.34	12.79 S	155.37 W	371,280.11	553,801.53	17.66	12.79	-99.91	
6,891.00	40.48	248.69	6,836.43	19.28 S	175.40 W	371,273.62	553,781.50	14.36	19.28	-110.47	
6,923.00	39.72	241.89	6,860.92	27.88 S	194.10 W	371,265.02	553,762.80	13.89	27.88	-102.43	
6,954.00	40.42	238.74	6,884.65	38.06 S	211.25 W	371,254.84	553,745.65	10.93	38.06	-80.06	
6,986.00	40.07	230.37	6,909.09	50.32 S	227.86 W	371,242.58	553,729.04	12.90	50.32	-97.29	
7,017.00	40.82	223.25	6,932.69	64.07 S	242.50 W	371,228.83	553,714.40	15.09	64.07	-83.50	
7,049.00	42.36	217.89	6,956.63	80.21 S	256.29 W	371,212.69	553,700.61	12.11	80.21	-68.62	
7,080.00	43.35	213.07	6,979.37	97.37 S	268.51 W	371,195.53	553,688.39	11.04	97.37	-74.97	
7,112.00	44.23	207.49	7,002.47	116.48 S	279.66 W	371,176.42	553,677.24	12.37	116.48	-79.19	
7,144.00	43.73	204.42	7,025.50	136.45 S	289.39 W	371,156.45	553,667.51	6.84	136.45	-104.30	
7,175.00	45.82	203.03	7,047.51	156.44 S	298.17 W	371,136.46	553,658.73	7.44	156.44	-25.60	
7,206.00	48.99	202.05	7,068.49	177.52 S	306.91 W	371,115.38	553,649.99	10.49	177.52	-13.15	
7,237.00	53.16	200.47	7,087.96	199.99 S	315.64 W	371,092.91	553,641.26	14.02	199.99	-16.93	
7,268.00	56.77	197.97	7,105.76	223.96 S	323.98 W	371,068.94	553,632.92	13.39	223.96	-30.28	
7,300.00	59.22	197.14	7,122.72	249.83 S	332.16 W	371,043.07	553,624.74	7.97	249.83	-16.25	
7,332.00	60.80	194.85	7,138.71	276.47 S	339.80 W	371,016.43	553,617.10	7.92	276.47	-52.04	
7,364.00	63.00	193.02	7,153.78	303.88 S	346.59 W	370,989.04	553,610.31	8.53	303.88	-38.71	
7,395.00	64.62	193.47	7,167.47	330.94 S	352.96 W	370,961.98	553,603.94	5.39	330.94	14.10	
7,427.00	68.38	192.13	7,180.22	359.55 S	359.48 W	370,933.35	553,597.44	12.38	359.55	-18.37	
7,458.00	71.95	192.62	7,190.74	388.03 S	365.71 W	370,904.87	553,591.19	11.61	388.03	7.44	
7,490.00	77.21	191.60	7,199.25	418.18 S	372.17 W	370,874.72	553,584.73	16.72	418.18	-10.73	
7,521.00	81.11	190.80	7,205.08	448.04 S	378.09 W	370,844.86	553,578.81	12.83	448.04	-11.47	
7,553.00	86.15	189.34	7,208.63	479.34 S	383.64 W	370,813.56	553,573.26	16.39	479.34	-16.15	
7,648.00	90.06	183.91	7,211.77	573.61 S	394.59 W	370,719.29	553,562.31	7.04	573.61	-54.34	
7,743.00	90.93	183.76	7,210.95	668.39 S	400.94 W	370,624.51	553,555.96	0.93	668.39	-9.78	
7,837.00	91.85	183.94	7,208.67	762.15 S	407.25 W	370,530.75	553,549.65	1.00	762.15	11.06	

Design Report for Cottonwood 28-33 Fed Com 2BS #6H - Wellbore #1

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
7,931.00	92.90	184.35	7,204.77	855.82 S	414.04 W	370,437.08	553,542.66	1.20	855.82	21.30	
8,026.00	92.84	183.56	7,200.02	950.47 S	420.58 W	370,342.43	553,536.32	0.83	950.47	-94.33	
8,121.00	91.42	183.04	7,196.48	1,045.25 S	426.05 W	370,247.65	553,530.85	1.59	1,045.25	-159.89	
8,215.00	90.00	180.00	7,195.32	1,139.19 S	428.54 W	370,153.71	553,528.36	3.57	1,139.19	-115.01	
8,310.00	90.43	178.74	7,194.96	1,234.19 S	427.49 W	370,058.71	553,529.41	1.40	1,234.19	-71.16	
8,405.00	91.48	178.93	7,193.38	1,329.15 S	425.56 W	369,963.75	553,531.34	1.12	1,329.15	10.25	
8,499.00	92.78	178.99	7,189.89	1,423.07 S	423.88 W	369,869.83	553,533.04	1.38	1,423.07	2.64	
8,594.00	91.05	178.33	7,186.71	1,517.99 S	421.64 W	369,774.91	553,535.26	1.95	1,517.99	-159.12	
8,688.00	91.98	178.61	7,184.23	1,611.92 S	419.13 W	369,680.98	553,537.77	1.03	1,611.92	16.75	
8,783.00	91.17	178.81	7,181.62	1,706.86 S	416.99 W	369,586.04	553,539.91	0.88	1,706.86	166.13	
8,877.00	91.73	179.20	7,179.24	1,800.81 S	415.36 W	369,492.09	553,541.54	0.73	1,800.81	34.84	
8,972.00	92.60	179.27	7,175.65	1,895.74 S	414.09 W	369,397.16	553,542.81	0.92	1,895.74	4.60	
9,066.00	91.42	178.82	7,172.35	1,989.66 S	412.52 W	369,303.24	553,544.38	1.34	1,989.66	-159.13	
9,162.00	91.92	179.51	7,169.55	2,085.61 S	411.13 W	369,207.29	553,545.77	0.89	2,085.61	54.05	
9,256.00	92.84	179.72	7,165.65	2,179.53 S	410.50 W	369,113.37	553,546.40	1.00	2,179.53	12.84	
9,351.00	91.97	179.70	7,161.66	2,274.44 S	410.01 W	369,018.46	553,546.89	0.92	2,274.44	-178.68	
9,446.00	92.60	179.42	7,157.88	2,369.36 S	409.29 W	368,923.54	553,547.61	0.73	2,369.36	-23.94	
9,541.00	91.36	179.27	7,154.59	2,464.30 S	408.20 W	368,828.60	553,548.70	1.31	2,464.30	-173.10	
9,636.00	91.60	179.22	7,152.14	2,559.26 S	406.95 W	368,733.64	553,549.95	0.26	2,559.26	-11.76	
9,731.00	91.85	179.15	7,149.26	2,654.20 S	405.60 W	368,638.70	553,551.30	0.27	2,654.20	-15.63	
9,826.00	91.85	178.78	7,146.21	2,749.14 S	403.88 W	368,543.76	553,553.02	0.39	2,749.14	-89.99	
9,921.00	92.04	179.09	7,142.99	2,844.07 S	402.12 W	368,448.83	553,554.78	0.38	2,844.07	58.48	
10,015.00	92.78	178.90	7,139.04	2,937.97 S	400.47 W	368,354.93	553,556.43	0.81	2,937.97	-14.38	
10,110.00	91.36	179.21	7,135.60	3,032.89 S	398.91 W	368,260.01	553,557.99	1.53	3,032.89	167.69	
10,205.00	91.85	179.12	7,132.94	3,127.84 S	397.52 W	368,165.06	553,559.38	0.52	3,127.84	-10.40	
10,300.00	92.35	178.36	7,129.48	3,222.76 S	395.43 W	368,070.14	553,561.47	0.96	3,222.76	-56.63	
10,394.00	91.23	178.45	7,126.53	3,316.67 S	392.82 W	367,976.23	553,564.08	1.20	3,316.67	175.41	
10,489.00	90.25	177.41	7,125.30	3,411.60 S	389.39 W	367,881.30	553,567.51	1.50	3,411.60	-133.29	
10,584.00	90.86	176.95	7,124.38	3,506.48 S	384.71 W	367,786.42	553,572.19	0.80	3,506.48	-37.02	
10,678.00	91.98	176.75	7,122.05	3,600.31 S	379.55 W	367,692.59	553,577.35	1.21	3,600.31	-10.12	
10,773.00	90.99	177.10	7,119.59	3,695.14 S	374.46 W	367,597.76	553,582.44	1.11	3,695.14	160.53	
10,868.00	89.57	178.58	7,119.12	3,790.06 S	370.88 W	367,502.84	553,586.02	2.16	3,790.06	133.81	
10,963.00	89.20	180.24	7,120.14	3,885.05 S	369.90 W	367,407.85	553,587.00	1.79	3,885.05	102.57	
11,058.00	89.75	181.25	7,121.01	3,980.04 S	371.13 W	367,312.86	553,585.77	1.21	3,980.04	61.43	
11,153.00	90.99	181.58	7,120.40	4,075.00 S	373.48 W	367,217.90	553,583.42	1.35	4,075.00	14.90	
11,247.00	90.06	181.45	7,119.54	4,168.97 S	375.96 W	367,123.93	553,580.94	1.00	4,168.97	-172.04	

HALLIBURTON

Design Report for Cottonwood 28-33 Fed Com 2BS #6H - Wellbore #1

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
11,342.00	90.62	181.30	7,118.98	4,263.94 S	378.24 W	367,028.96	553,578.68	0.61	4,263.94	-14.99	
11,437.00	90.43	180.59	7,118.10	4,358.92 S	379.81 W	366,933.98	553,577.09	0.77	4,358.92	-104.98	
11,532.00	90.31	179.94	7,117.49	4,453.92 S	380.25 W	366,838.98	553,576.65	0.70	4,453.92	-100.46	
11,626.00	90.60	180.01	7,116.58	4,547.91 S	380.21 W	366,744.99	553,576.69	0.53	4,547.91	8.13	
11,721.00	91.54	179.91	7,114.64	4,642.89 S	380.14 W	366,650.01	553,576.76	0.79	4,642.89	-7.69	
11,816.00	90.62	179.86	7,112.85	4,737.87 S	379.95 W	366,555.03	553,576.95	0.97	4,737.87	-176.89	
11,911.00	88.70	180.48	7,113.41	4,832.87 S	380.22 W	366,460.03	553,576.68	2.12	4,832.87	162.65	
12,006.00	88.15	180.30	7,116.03	4,927.83 S	380.85 W	366,365.07	553,576.05	0.60	4,927.83	-163.79	
12,099.00	87.72	180.68	7,119.38	5,020.76 S	381.64 W	366,272.14	553,575.26	0.62	5,020.76	138.56	
12,194.00	88.45	181.12	7,122.55	5,115.70 S	383.13 W	366,177.20	553,573.77	0.90	5,115.70	31.07	
12,289.00	89.44	181.44	7,124.30	5,210.66 S	385.26 W	366,082.24	553,571.64	1.10	5,210.66	17.91	
12,384.00	89.63	180.69	7,125.07	5,305.64 S	387.02 W	365,987.26	553,569.88	0.81	5,305.64	-75.79	
12,479.00	90.19	180.44	7,125.22	5,400.63 S	387.96 W	365,892.27	553,568.94	0.65	5,400.63	-24.06	
12,573.00	90.99	180.31	7,124.25	5,494.62 S	388.57 W	365,798.28	553,568.33	0.86	5,494.62	-9.23	
12,668.00	90.99	180.08	7,122.61	5,589.61 S	388.90 W	365,703.29	553,568.00	0.24	5,589.61	-90.00	
12,763.00	90.93	180.34	7,121.02	5,684.59 S	389.24 W	365,608.31	553,567.66	0.28	5,684.59	102.99	
12,857.00	90.87	180.57	7,119.54	5,778.58 S	389.99 W	365,514.32	553,566.91	0.25	5,778.58	104.62	
12,952.00	91.05	180.34	7,117.95	5,873.56 S	390.74 W	365,419.34	553,566.16	0.31	5,873.56	-51.95	
13,046.00	89.81	180.35	7,117.25	5,967.56 S	391.31 W	365,325.34	553,565.59	1.32	5,967.56	179.54	
13,141.00	89.13	179.91	7,118.12	6,062.55 S	391.53 W	365,230.35	553,565.37	0.85	6,062.55	-147.10	
13,236.00	88.77	180.17	7,119.87	6,157.54 S	391.59 W	365,135.36	553,565.31	0.47	6,157.54	144.17	
13,331.00	88.64	179.31	7,122.01	6,252.51 S	391.18 W	365,040.39	553,565.74	0.92	6,252.51	-98.61	
13,426.00	89.07	179.27	7,123.91	6,347.48 S	389.98 W	364,945.42	553,566.92	0.45	6,347.48	-5.31	
13,520.00	88.76	179.18	7,125.69	6,441.46 S	388.71 W	364,851.44	553,568.19	0.34	6,441.46	-163.81	
13,552.00	89.26	179.14	7,126.24	6,473.45 S	388.24 W	364,819.45	553,568.66	1.57	6,473.45	-4.57	
13,615.00	88.70	179.00	7,127.37	6,536.43 S	387.22 W	364,756.47	553,569.68	0.92	6,536.43	-165.97	
13,646.00	89.94	178.96	7,127.73	6,567.42 S	386.67 W	364,725.48	553,570.23	4.00	6,567.42	-1.85	
13,710.00	89.75	178.97	7,127.91	6,631.41 S	385.51 W	364,661.49	553,571.39	0.30	6,631.41	176.99	
13,805.00	90.06	178.72	7,128.06	6,726.39 S	383.60 W	364,566.51	553,573.30	0.42	6,726.39	-38.88	
13,898.00	89.81	178.43	7,128.17	6,819.38 S	381.29 W	364,473.54	553,575.61	0.41	6,819.38	-130.76	
13,993.00	89.44	178.36	7,128.79	6,914.32 S	378.63 W	364,378.58	553,578.27	0.40	6,914.32	-169.29	
14,088.00	90.25	177.74	7,129.05	7,009.27 S	375.39 W	364,283.63	553,581.51	1.07	7,009.27	-37.43	
14,183.00	89.51	177.60	7,129.25	7,104.19 S	371.53 W	364,188.71	553,585.37	0.79	7,104.19	-169.29	
14,199.00	89.32	177.57	7,129.41	7,120.17 S	370.86 W	364,172.73	553,586.04	1.20	7,120.17	-171.03	
14,267.00	89.32	177.57	7,130.22	7,188.11 S	367.97 W	364,104.79	553,588.93	0.00	7,188.11	0.00	