

Results of Directional Survey

API number:	30-025-27051		
OGRID:		Operator:	ENDURANCE RESOURCES LLC
		Property:	STRATOCASTER 20 FEDERAL # 4H

surface	ULSTR:	I	20	T	23S	R	34E
				1980	FSL	660	FEL

BH Loc	ULSTR:	A	20	T	23S	R	34E
13315	MD	10536.6	TVD	351	FNL	702	FEL
				4929	FSL		

Top Perf/OH	ULSTR:	I	20	T	23S	R	34E
10840	MD	10521.5	TVD	2461	FSL	685	FEL

Bot Perf/OH	ULSTR:	A	20	T	23S	R	34E
13234	MD	10534.7	TVD	432	FNL	708	FEL
				4848	FSL		

	MD	N/S	E/W	VD
	10809	451.60	-16.60	10520.1
TOP PERFS/OH	10840	481.38	-25.05	10521.51
	10841	482.34	-25.32	10521.56
	13227	2861.14	-48.44	10534.56
BOT PERFS/OH	13234	2868.12	-47.96	10534.73
	13265	2899.04	-45.83	10535.49

NEXT TO LAST	13265	2899.04	-45.83	10535.49
LAST READING	13315	2948.91	-42.44	10536.59
TD	13315	2948.91	-42.44	10536.59

Surface Location	1980	FS	660	FE
Projected BHL	4929	FS	702	FE
Location of				
Top Perfs/OH	2461	FS	685	FE
Bottom Perfs/OH	4848	FS	708	FE

SUMMARY of Subsurface Locations

Surface Location	I-20-23S-34E	1980	FS	660	FE	Vert. Depth
Top Perfs/OH	I-20-23S-34E	2461	FS	685	FE	10521.51
Bottom Perfs/OH	A-20-23S-34E	4848	FS	708	FE	10534.73
Projected TD	A-20-23S-34E	4929	FS	702	FE	10536.59

DEC 30 2013

Endurance Resources LLC

Lea County, NM (NAD 83)

Stratocaster 20 Fed

Stratocaster 20 Fed #4H

Wellbore #1

Design: Surveys

Sperry Drilling Services Combo Report

11 September, 2013

Well Coordinates: 469,650.51 N, 803,277.59 E (32° 17' 17.87" N, 103° 29' 08.46" W)

Ground Level: 3,496.60 usft

Local Coordinate Origin:	Centered on Well Stratocaster 20 Fed #4H
Viewing Datum:	GE 3496.6' + KB 18' @ 3514.60usft (McVay 6)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - US Survey Feet

Version: 5000.1 Build: 65

HALLIBURTON

Design Report for Stratocaster 20 Fed #4H - Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
0.00	0.00	0.00	-3,514.60	0.00	0.00 N	0.00 E	469,650.51	803,277.59	0.00	0.00	
100.00	0.27	212.66	-3,414.60	100.00	0.20 S	0.13 W	469,650.31	803,277.46	0.27	-0.20	
200.00	0.28	185.45	-3,314.60	200.00	0.64 S	0.28 W	469,649.87	803,277.31	0.13	-0.64	
300.00	0.39	155.24	-3,214.60	300.00	1.19 S	0.16 W	469,649.32	803,277.43	0.20	-1.19	
400.00	0.57	136.51	-3,114.61	399.99	1.86 S	0.33 E	469,648.65	803,277.92	0.24	-1.87	
500.00	0.73	132.00	-3,014.61	499.99	2.65 S	1.14 E	469,647.86	803,278.73	0.17	-2.66	
600.00	0.62	129.90	-2,914.62	599.98	3.42 S	2.03 E	469,647.09	803,279.62	0.11	-3.44	
700.00	0.63	131.65	-2,814.63	699.97	4.14 S	2.86 E	469,646.37	803,280.45	0.02	-4.16	
800.00	0.54	135.50	-2,714.63	799.97	4.84 S	3.60 E	469,645.67	803,281.19	0.10	-4.87	
900.00	0.57	137.44	-2,614.64	899.96	5.54 S	4.26 E	469,644.97	803,281.85	0.04	-5.58	
1,000.00	0.47	141.24	-2,514.64	999.96	6.23 S	4.86 E	469,644.28	803,282.45	0.11	-6.27	
1,100.00	0.55	156.18	-2,414.64	1,099.96	6.98 S	5.31 E	469,643.53	803,282.90	0.15	-7.03	
1,200.00	0.59	142.96	-2,314.65	1,199.95	7.83 S	5.81 E	469,642.68	803,283.40	0.14	-7.89	
1,300.00	0.62	129.60	-2,214.65	1,299.95	8.59 S	6.54 E	469,641.92	803,284.13	0.14	-8.65	
1,400.00	0.55	132.49	-2,114.66	1,399.94	9.26 S	7.31 E	469,641.25	803,284.90	0.08	-9.32	
1,500.00	0.46	134.46	-2,014.66	1,499.94	9.86 S	7.95 E	469,640.65	803,285.54	0.09	-9.94	
1,600.00	0.19	154.31	-1,914.67	1,599.93	10.29 S	8.31 E	469,640.22	803,285.90	0.29	-10.37	
1,700.00	0.17	153.92	-1,814.67	1,699.93	10.58 S	8.45 E	469,639.93	803,286.04	0.02	-10.65	
1,800.00	0.24	140.91	-1,714.67	1,799.93	10.87 S	8.64 E	469,639.64	803,286.23	0.08	-10.95	
1,900.00	0.28	18.93	-1,614.67	1,899.93	10.80 S	8.85 E	469,639.71	803,286.44	0.46	-10.88	
2,000.00	0.46	40.34	-1,514.67	1,999.93	10.27 S	9.19 E	469,640.24	803,286.78	0.22	-10.35	
2,100.00	0.61	30.65	-1,414.67	2,099.93	9.50 S	9.73 E	469,641.01	803,287.32	0.17	-9.59	
2,200.00	0.28	17.17	-1,314.68	2,199.92	8.81 S	10.07 E	469,641.70	803,287.66	0.34	-8.90	
2,300.00	0.68	14.70	-1,214.68	2,299.92	8.01 S	10.29 E	469,642.50	803,287.88	0.40	-8.10	
2,400.00	0.74	19.08	-1,114.69	2,399.91	6.82 S	10.65 E	469,643.69	803,288.24	0.08	-6.92	
2,500.00	0.67	15.28	-1,014.70	2,499.90	5.65 S	11.02 E	469,644.86	803,288.61	0.08	-5.75	
2,600.00	0.96	37.13	-914.71	2,599.89	4.41 S	11.68 E	469,646.10	803,289.27	0.42	-4.52	
2,700.00	0.79	58.53	-814.72	2,699.88	3.39 S	12.77 E	469,647.12	803,290.36	0.37	-3.50	
2,800.00	0.91	36.54	-714.73	2,799.87	2.39 S	13.83 E	469,648.12	803,291.42	0.34	-2.51	
2,900.00	1.12	39.84	-614.74	2,899.86	1.00 S	14.93 E	469,649.51	803,292.52	0.22	-1.13	
3,000.00	1.27	47.79	-514.76	2,999.84	0.49 N	16.38 E	469,651.00	803,293.97	0.22	0.35	
3,100.00	1.07	40.83	-414.79	3,099.81	1.95 N	17.81 E	469,652.46	803,295.40	0.24	1.79	
3,200.00	1.27	38.29	-314.81	3,199.79	3.52 N	19.11 E	469,654.03	803,296.70	0.21	3.35	
3,300.00	1.38	47.80	-214.83	3,299.77	5.20 N	20.69 E	469,655.71	803,298.28	0.25	5.01	
3,400.00	1.32	44.65	-114.86	3,399.74	6.83 N	22.39 E	469,657.34	803,299.98	0.10	6.63	
3,500.00	1.33	41.84	-14.89	3,499.71	8.51 N	23.97 E	469,659.02	803,301.56	0.07	8.30	
3,600.00	1.44	47.95	85.08	3,599.68	10.22 N	25.68 E	469,660.73	803,303.27	0.18	9.99	
3,700.00	1.49	37.49	185.05	3,699.65	12.09 N	27.40 E	469,662.60	803,304.99	0.27	11.85	
3,800.00	1.40	43.08	285.02	3,799.62	14.02 N	29.03 E	469,664.53	803,306.62	0.17	13.75	
3,900.00	1.69	46.90	384.98	3,899.58	15.92 N	30.94 E	469,666.43	803,308.53	0.31	15.64	

HALLIBURTON**Design Report for Stratocaster 20 Fed #4H - Surveys**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
4,000.00	1.73	44.26	484.94	3,999.54	18.00 N	33.07 E	469,668.51	803,310.66	0.09	17.71	
4,100.00	1.94	52.26	584.89	4,099.49	20.12 N	35.46 E	469,670.63	803,313.05	0.33	19.80	
4,200.00	2.45	58.04	684.81	4,199.41	22.29 N	38.61 E	469,672.80	803,316.20	0.56	21.94	
4,300.00	2.90	61.25	784.70	4,299.30	24.64 N	42.64 E	469,675.15	803,320.23	0.47	24.25	
4,400.00	3.52	64.57	884.55	4,399.15	27.17 N	47.63 E	469,677.68	803,325.22	0.65	26.74	
4,500.00	4.20	69.43	984.32	4,498.92	29.78 N	53.84 E	469,680.29	803,331.43	0.75	29.29	
4,600.00	4.31	69.17	1,084.04	4,598.64	32.40 N	60.78 E	469,682.91	803,338.37	0.11	31.85	
4,700.00	4.44	72.29	1,183.75	4,698.35	34.91 N	67.98 E	469,685.42	803,345.57	0.27	34.30	
4,800.00	4.52	69.90	1,283.45	4,798.05	37.45 N	75.36 E	469,687.96	803,352.95	0.20	36.77	
4,900.00	4.28	69.78	1,383.15	4,897.75	40.09 N	82.56 E	469,690.60	803,360.15	0.24	39.35	
5,000.00	4.18	68.81	1,482.88	4,997.48	42.70 N	89.46 E	469,693.21	803,367.05	0.12	41.89	
5,100.00	3.47	71.74	1,582.66	5,097.26	44.96 N	95.74 E	469,695.47	803,373.33	0.74	44.10	
5,200.00	3.40	74.60	1,682.48	5,197.08	46.70 N	101.47 E	469,697.21	803,379.06	0.19	45.78	
5,300.00	3.31	70.23	1,782.31	5,296.91	48.46 N	107.04 E	469,698.97	803,384.63	0.27	47.50	
5,400.00	3.35	74.58	1,882.14	5,396.74	50.21 N	112.58 E	469,700.72	803,390.17	0.26	49.20	
5,500.00	3.15	70.61	1,981.98	5,496.58	51.90 N	117.99 E	469,702.41	803,395.58	0.30	50.84	
5,600.00	3.11	71.06	2,081.83	5,596.43	53.70 N	123.14 E	469,704.21	803,400.73	0.05	52.59	
5,700.00	3.15	70.39	2,181.68	5,696.28	55.50 N	128.30 E	469,706.01	803,405.89	0.05	54.34	
5,800.00	3.04	76.50	2,281.53	5,796.13	57.04 N	133.46 E	469,707.55	803,411.05	0.35	55.84	
5,900.00	2.80	73.43	2,381.40	5,896.00	58.36 N	138.38 E	469,708.87	803,415.97	0.29	57.11	
6,000.00	2.86	71.84	2,481.28	5,995.88	59.83 N	143.10 E	469,710.34	803,420.69	0.10	58.54	
6,100.00	2.58	71.56	2,581.17	6,095.77	61.32 N	147.60 E	469,711.83	803,425.19	0.28	59.99	
6,200.00	2.64	72.21	2,681.06	6,195.66	62.73 N	151.93 E	469,713.24	803,429.52	0.07	61.37	
6,300.00	2.76	77.05	2,780.95	6,295.55	63.98 N	156.47 E	469,714.49	803,434.06	0.26	62.57	
6,400.00	2.49	77.11	2,880.85	6,395.45	65.00 N	160.93 E	469,715.51	803,438.52	0.27	63.55	
6,500.00	2.41	74.50	2,980.76	6,495.36	66.05 N	165.08 E	469,716.56	803,442.67	0.14	64.56	
6,600.00	2.55	74.28	3,080.66	6,595.26	67.21 N	169.24 E	469,717.72	803,446.83	0.14	65.69	
6,700.00	2.57	72.78	3,180.56	6,695.16	68.48 N	173.53 E	469,718.99	803,451.12	0.07	66.92	
6,800.00	2.59	72.12	3,280.46	6,795.06	69.84 N	177.82 E	469,720.35	803,455.41	0.04	68.24	
6,900.00	2.53	76.31	3,380.36	6,894.96	71.05 N	182.11 E	469,721.56	803,459.70	0.20	69.42	
7,000.00	2.56	71.82	3,480.26	6,994.86	72.27 N	186.38 E	469,722.78	803,463.97	0.20	70.60	
7,100.00	2.34	78.41	3,580.17	7,094.77	73.38 N	190.50 E	469,723.89	803,468.09	0.36	71.67	
7,200.00	2.51	78.79	3,680.08	7,194.68	74.21 N	194.65 E	469,724.72	803,472.24	0.17	72.46	
7,300.00	2.54	83.06	3,779.99	7,294.59	74.91 N	199.00 E	469,725.42	803,476.59	0.19	73.12	
7,400.00	2.35	89.62	3,879.89	7,394.49	75.19 N	203.25 E	469,725.70	803,480.84	0.34	73.36	
7,500.00	2.11	89.69	3,979.82	7,494.42	75.21 N	207.14 E	469,725.72	803,484.73	0.24	73.35	
7,600.00	2.10	92.09	4,079.75	7,594.35	75.16 N	210.81 E	469,725.67	803,488.40	0.09	73.26	
7,700.00	2.01	97.11	4,179.69	7,694.29	74.87 N	214.38 E	469,725.38	803,491.97	0.20	72.94	
7,800.00	1.80	99.56	4,279.63	7,794.23	74.39 N	217.67 E	469,724.90	803,495.26	0.23	72.44	

HALLIBURTON**Design Report for Stratocaster 20 Fed #4H - Surveys**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
7,900.00	1.74	99.47	4,379.58	7,894.18	73.88 N	220.71 E	469,724.39	803,498.30	0.06	71.90	
8,000.00	1.88	97.49	4,479.53	7,994.13	73.42 N	223.84 E	469,723.93	803,501.43	0.15	71.41	
8,100.00	2.06	101.12	4,579.48	8,094.08	72.86 N	227.23 E	469,723.37	803,504.82	0.22	70.82	
8,200.00	2.01	109.33	4,679.41	8,194.01	71.93 N	230.65 E	469,722.44	803,508.24	0.30	69.86	
8,300.00	1.91	112.31	4,779.35	8,293.95	70.72 N	233.84 E	469,721.23	803,511.43	0.14	68.62	
8,400.00	1.73	104.03	4,879.30	8,393.90	69.72 N	236.85 E	469,720.23	803,514.44	0.32	67.59	
8,500.00	1.91	105.22	4,979.25	8,493.85	68.92 N	239.92 E	469,719.43	803,517.51	0.18	66.76	
8,600.00	1.71	108.98	5,079.20	8,593.80	67.99 N	242.94 E	469,718.50	803,520.53	0.23	65.81	
8,700.00	1.82	102.51	5,179.16	8,693.76	67.17 N	245.90 E	469,717.68	803,523.49	0.23	64.96	
8,800.00	1.59	98.65	5,279.11	8,793.71	66.61 N	248.82 E	469,717.12	803,526.41	0.26	64.38	
8,900.00	1.62	95.85	5,379.07	8,893.67	66.26 N	251.60 E	469,716.77	803,529.19	0.08	64.00	
9,000.00	1.64	95.36	5,479.03	8,993.63	65.98 N	254.43 E	469,716.49	803,532.02	0.02	63.70	
9,100.00	1.47	109.79	5,579.00	9,093.60	65.41 N	257.06 E	469,715.92	803,534.65	0.43	63.10	
9,200.00	1.25	115.70	5,678.97	9,193.57	64.51 N	259.25 E	469,715.02	803,536.84	0.26	62.18	
9,300.00	1.41	110.52	5,778.94	9,293.54	63.60 N	261.39 E	469,714.11	803,538.98	0.20	61.25	
9,400.00	0.91	110.99	5,878.92	9,393.52	62.89 N	263.28 E	469,713.40	803,540.87	0.50	60.52	
9,500.00	0.90	114.11	5,978.91	9,493.51	62.28 N	264.74 E	469,712.79	803,542.33	0.05	59.90	
9,600.00	0.77	82.77	6,078.90	9,593.50	62.05 N	266.12 E	469,712.56	803,543.71	0.47	59.65	
9,700.00	0.68	83.11	6,178.89	9,693.49	62.20 N	267.38 E	469,712.71	803,544.97	0.09	59.80	
9,800.00	0.48	12.68	6,278.88	9,793.48	62.68 N	268.06 E	469,713.19	803,545.65	0.69	60.27	
9,900.00	0.57	351.65	6,378.88	9,893.48	63.58 N	268.08 E	469,714.09	803,545.67	0.21	61.17	
10,000.00	0.98	343.30	6,478.87	9,993.47	64.89 N	267.76 E	469,715.40	803,545.35	0.42	62.49	
10,011.00	0.61	332.03	6,489.87	10,004.47	65.04 N	267.71 E	469,715.55	803,545.30	3.64	62.63	
10,048.00	4.83	18.19	6,526.82	10,041.42	66.69 N	268.10 E	469,717.20	803,545.69	11.97	64.28	
10,080.00	6.95	5.96	6,558.65	10,073.25	69.90 N	268.72 E	469,720.41	803,546.31	7.66	67.48	
10,112.00	9.83	357.64	6,590.31	10,104.91	74.55 N	268.81 E	469,725.06	803,546.40	9.74	72.14	
10,140.00	11.49	350.32	6,617.82	10,132.42	79.69 N	268.25 E	469,730.20	803,545.84	7.64	77.28	
10,172.00	13.76	340.28	6,649.05	10,163.65	86.42 N	266.43 E	469,736.93	803,544.02	9.84	84.02	
10,204.00	17.14	330.07	6,679.90	10,194.50	94.09 N	262.79 E	469,744.60	803,540.38	13.52	91.73	
10,236.00	19.84	323.07	6,710.25	10,224.85	102.52 N	257.17 E	469,753.03	803,534.76	10.91	100.21	
10,268.00	23.35	317.89	6,740.00	10,254.60	111.57 N	249.65 E	469,762.08	803,527.24	12.47	109.32	
10,300.00	28.81	314.59	6,768.73	10,283.33	121.69 N	239.90 E	469,772.20	803,517.49	17.65	119.53	
10,331.00	33.35	310.45	6,795.28	10,309.88	132.47 N	228.09 E	469,782.98	803,505.68	16.18	130.42	
10,363.00	36.91	305.33	6,821.45	10,336.05	143.74 N	213.55 E	469,794.25	803,491.14	14.43	141.82	
10,395.00	41.99	306.26	6,846.15	10,360.75	155.64 N	197.07 E	469,806.15	803,474.66	15.98	153.86	
10,427.00	46.39	307.24	6,869.09	10,383.69	168.99 N	179.20 E	469,819.50	803,456.79	13.91	167.37	
10,459.00	50.79	310.15	6,890.26	10,404.86	184.00 N	160.49 E	469,834.51	803,438.08	15.35	182.55	
10,491.00	56.26	313.29	6,909.27	10,423.87	201.13 N	141.32 E	469,851.64	803,418.91	18.82	199.85	
10,523.00	59.98	316.50	6,926.17	10,440.77	220.31 N	122.08 E	469,870.82	803,399.67	14.41	219.21	

HALLIBURTON**Design Report for Stratocaster 20 Fed #4H - Surveys**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
10,554.00	62.40	319.85	6,941.12	10,455.72	240.56 N	103.98 E	469,891.07	803,381.57	12.27	239.61	
10,586.00	65.07	322.92	6,955.28	10,469.88	262.98 N	86.08 E	469,913.49	803,363.67	11.98	262.19	
10,618.00	68.63	324.56	6,967.86	10,482.46	286.70 N	68.69 E	469,937.21	803,346.28	12.08	286.07	
10,650.00	71.95	326.56	6,978.65	10,493.25	311.54 N	51.66 E	469,962.05	803,329.25	11.93	311.07	
10,682.00	76.06	329.35	6,987.47	10,502.07	337.61 N	35.35 E	469,988.12	803,312.94	15.34	337.28	
10,714.00	79.21	332.32	6,994.32	10,508.92	364.90 N	20.13 E	470,015.41	803,297.72	13.38	364.71	
10,746.00	82.15	335.24	6,999.50	10,514.10	393.23 N	6.18 E	470,043.74	803,283.77	12.86	393.16	
10,778.00	84.69	338.67	7,003.17	10,517.77	422.47 N	6.26 W	470,072.98	803,271.33	13.28	422.51	
10,809.00	86.70	342.21	7,005.50	10,520.10	451.60 N	16.60 W	470,102.11	803,260.99	13.10	451.73	
10,841.00	88.06	346.12	7,006.96	10,521.56	482.34 N	25.32 W	470,132.85	803,252.27	12.92	482.55	
10,873.00	88.36	349.86	7,007.96	10,522.56	513.62 N	31.98 W	470,164.13	803,245.61	11.72	513.89	
10,905.00	88.61	349.84	7,008.81	10,523.41	545.11 N	37.61 W	470,195.62	803,239.98	0.78	545.43	
10,937.00	89.04	351.20	7,009.46	10,524.06	576.67 N	42.88 W	470,227.18	803,234.71	4.46	577.03	
11,032.00	89.48	352.38	7,010.69	10,525.29	670.68 N	56.45 W	470,321.19	803,221.14	1.33	671.16	
11,128.00	90.34	352.31	7,010.84	10,525.44	765.83 N	69.24 W	470,416.34	803,208.35	0.90	766.42	
11,223.00	89.51	354.58	7,010.97	10,525.57	860.20 N	80.08 W	470,510.71	803,197.51	2.54	860.88	
11,319.00	87.95	356.64	7,013.09	10,527.69	955.88 N	87.43 W	470,606.39	803,190.16	2.69	956.63	
11,415.00	88.31	356.84	7,016.23	10,530.83	1,051.68 N	92.88 W	470,702.19	803,184.71	0.43	1,052.47	
11,511.00	88.89	357.03	7,018.57	10,533.17	1,147.51 N	98.01 W	470,798.02	803,179.58	0.64	1,148.35	
11,607.00	89.01	357.07	7,020.33	10,534.93	1,243.37 N	102.95 W	470,893.88	803,174.64	0.13	1,244.24	
11,703.00	89.48	357.20	7,021.60	10,536.20	1,339.24 N	107.75 W	470,989.75	803,169.84	0.51	1,340.15	
11,799.00	90.12	359.14	7,021.93	10,536.53	1,435.19 N	110.82 W	471,085.70	803,166.77	2.13	1,436.12	
11,895.00	90.74	358.50	7,021.21	10,535.81	1,531.16 N	112.79 W	471,181.67	803,164.80	0.93	1,532.11	
11,990.00	90.43	359.93	7,020.24	10,534.84	1,626.14 N	114.10 W	471,276.65	803,163.49	1.54	1,627.10	
12,086.00	89.88	2.10	7,019.98	10,534.58	1,722.12 N	112.40 W	471,372.63	803,165.19	2.33	1,723.06	
12,182.00	90.61	1.64	7,019.57	10,534.17	1,818.07 N	109.26 W	471,468.58	803,168.33	0.90	1,818.98	
12,278.00	89.72	3.25	7,019.29	10,533.89	1,913.98 N	105.17 W	471,564.49	803,172.42	1.92	1,914.85	
12,373.00	90.15	2.44	7,019.40	10,534.00	2,008.86 N	100.45 W	471,659.37	803,177.14	0.97	2,009.68	
12,469.00	91.17	2.32	7,018.30	10,532.90	2,104.77 N	96.47 W	471,755.28	803,181.12	1.07	2,105.55	
12,565.00	89.14	3.59	7,018.04	10,532.64	2,200.64 N	91.52 W	471,851.15	803,186.07	2.49	2,201.37	
12,660.00	89.41	3.31	7,019.24	10,533.84	2,295.46 N	85.80 W	471,945.97	803,191.79	0.41	2,296.13	
12,755.00	90.22	3.83	7,019.54	10,534.14	2,390.27 N	79.89 W	472,040.78	803,197.70	1.01	2,390.89	
12,850.00	90.56	3.50	7,018.90	10,533.50	2,485.07 N	73.81 W	472,135.58	803,203.78	0.50	2,485.63	
12,943.00	91.45	3.44	7,017.27	10,531.87	2,577.89 N	68.19 W	472,228.40	803,209.40	0.96	2,578.39	
13,038.00	89.94	4.28	7,016.11	10,530.71	2,672.66 N	61.79 W	472,323.17	803,215.80	1.82	2,673.11	
13,132.00	88.49	3.97	7,017.40	10,532.00	2,766.41 N	55.03 W	472,416.92	803,222.56	1.58	2,766.79	
13,227.00	88.43	3.99	7,019.96	10,534.56	2,861.14 N	48.44 W	472,511.65	803,229.15	0.07	2,861.46	
13,265.00	88.74	3.89	7,020.89	10,535.49	2,899.04 N	45.83 W	472,549.55	803,231.76	0.86	2,899.34	
13,315.00	88.74	3.89	7,021.99	10,536.59	2,948.91 N	42.44 W	472,599.42	803,235.15	0.00	2,949.18	

Design Report for Stratocaster 20 Fed #4H - Surveys

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,772.00	10,517.19	416.92	-4.05	HL Crossing @ 10772.00' MD; 10517.19' TVD; 416.94' VS
13,265.00	10,535.49	2,899.04	-45.83	Last MWD Survey @ 12943.00' MD
13,315.00	10,536.59	2,948.91	-42.44	Projection to TD @ 13315.00' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
User	No Target (Freehand)	359.49	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
100.00	10,011.00	Gyo Surveys	NS-GYRO-MS
10,048.00	13,315.00	Sperry MWD	MWD+SC

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Stratocaster 20 4H F	0.00	0.00	10,531.00	2,970.39	-26.67	472,620.90	803,250.92	32° 17' 47.266 N	03° 29' 8.496 W
- actual wellpath misses target center by 27.23usft at 13315.00usft MD (10536.59 TVD, 2948.91 N, -42.44 E)									
- Point									

North Reference Sheet for Stratocaster 20 Fed - Stratocaster 20 Fed #4H - Wellbore #1

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

Vertical Depths are relative to GE 3496.6' + KB 18' @ 3514.60usft (McVay 6). Northing and Easting are relative to Stratocaster 20 Fed #4H

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: 0.99998767

Grid Coordinates of Well: 469,650.51 usft N, 803,277.59 usft E

Geographical Coordinates of Well: 32° 17' 17.87" N, 103° 29' 08.46" W

Grid Convergence at Surface is: 0.45°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,315.00usft
the Bottom Hole Displacement is 2,949.22usft in the Direction of 359.18° (Grid).

Magnetic Convergence at surface is: -6.97° (29 April 2013, , BGGM2013)

