Results of Directional Survey

API number:	30-025-37295			
OGRID:		Operator:	ENDURANCE RESOURCES LLC	
		Property:	STRATOCASTER 20 FEDERAL	# 1H

surface	ULSTR:	M	20	T	23S	R	34E
				660	FSL	660	FWL

BH Loc	ULSTR:	D	20	T	23S	R	34E
14350	MD	10542.1	TVD	339	FNL	649	FWL
				4941	FSL		

Top Perf/OH	ULSTR:	M	20	T	23S	R	34E
10750	MD	10524.3	TVD	1352	FSL	657	FWL

Bot Perf/OH	ULSTR:	D	20	T	23S	R	34E
14270	MD	10546.2	TVD	419	FNL	654	FWL
				4861	FSL		

	MD	N/S	E/W	VD
	10735	677.79	-4.81	10519.37
TOP PERFS/OH	**10750**	691.88	-3.30	10524.28
	10767	707.85	-1.59	10529.85
	14186	4117.12	-0.59	10550.15
BOT PERFS/OH	**14270**	4200.85	-6.00	10546.20
	14281	4211.82	-6.71	10545.68

NEXT TO LAST	14281	4211.82	-6.71	10545.68
LAST READING	14350	4280.57	-11.21	10542.05
TD	**14350**	4280.57	-11.21	10542.05

Surface Location	660	FS	660	FW
Projected BHL	4941	FS	649	FW
Location of				
Top Perfs/OH	1352	FS	657	FW
Bottom Perfs/OH	4861	FS	654	FW

SUMMARY of Subsurface Locations

Surface Location	M-20-23S-34E	660	FS	660	FW	Vert. Depth
Top Perfs/OH	M-20-23S-34E	1352	FS	657	FW	10524.28
Bottom Perfs/OH	D-20-23S-34E	4861	FS	654	FW	10546.20
Projected TD	D-20-23S-34E	4941	FS	649	FW	10542.05

Endurance Resources LLC

Lea County, NM (NAD 83)
Stratocaster 20 Fed
Stratocaster 20 Fed #1H

Wellbore #1

Design: Surveys

Sperry Drilling Services

Standard Report

27 August, 2013

Well Coordinates: 468,299.51 N, 799,333.76 E (32° 17' 04.81" N, 103° 29' 54.52" W)
Ground Level: 3,562.50 usft

Local Coordinate Origin:	Centered on Well Stratocaster 20 Fed #1H
Viewing Datum:	GE 3562.5 + KB 18' @ 3580.50usft (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 #1H - Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.37	326.75	100.00	0.27	-0.18	0.27	0.37
200.00	0.46	322.41	200.00	0.86	-0.60	0.86	0.10
300.00	0.50	340.11	299.99	1.59	-0.99	1.60	0.15
400.00	0.37	337.52	399.99	2.30	-1.26	2.31	0.13
500.00	0.50	323.09	499.99	2.94	-1.65	2.96	0.17
600.00	0.63	335.31	599.98	3.79	-2.14	3.81	0.18
700.00	0.61	339.42	699.98	4.79	-2.56	4.81	0.05
800.00	0.52	339.30	799.97	5.71	-2.91	5.74	0.09
900.00	0.58	324.05	899.97	6.55	-3.36	6.58	0.16
1,000.00	0.69	346.29	999.96	7.54	-3.80	7.58	0.27
1,100.00	0.71	5.31	1,099.95	8.74	-3.89	8.78	0.23
1,200.00	0.81	359.79	1,199.95	10.07	-3.83	10.10	0.12
1,300.00	1.01	4.66	1,299.93	11.65	-3.76	11.69	0.21
1,400.00	0.80	2.10	1,399.92	13.23	-3.67	13.26	0.21
1,500.00	0.97	2.72	1,499.91	14.77	-3.60	14.81	0.17
1,600.00	1.04	4.21	1,599.89	16.52	-3.49	16.56	0.07
1,700.00	1.06	7.97	1,699.88	18.34	-3.30	18.38	0.07
1,800.00	0.95	2.20	1,799.86	20.09	-3.14	20.12	0.15
1,900.00	1.05	359.91	1,899.85	21.83	-3.11	21.86	0.11
2,000.00	1.18	2.32	1,999.83	23.78	-3.07	23.81	0.14
2,100.00	1.18	5.40	2,099.81	25.83	-2.93	25.86	0.06
2,200.00	1.13	1.84	2,199.78	27.84	-2.80	27.87	0.09
2,300.00	1.32	0.30	2,299.76	29.98	-2.76	30.00	0.19
2,400.00	1.24	358.63	2,399.74	32.21	-2.78	32.24	0.09
2,500.00	1.44	0.72	2,499.71	34.55	-2.79	34.58	0.21
2,600.00	1.39	1.77	2,599.68	37.02	-2.74	37.04	0.06
2,700.00	1.53	359.96	2,699.65	39.57	-2.70	39.59	0.15
2,800.00	1.54	4.77	2,799.61	42.24	-2.59	42.26	0.13
2,900.00	1.68	2.39	2,899.57	45.04	-2.42	45.07	0.16
3,000.00	1.61	2.03	2,999.53	47.91	-2.31	47.93	0.07
3,100.00	1.79	8.36	3,099.49	50.86	-2.03	50.88	0.26
3,200.00	1.87	6.20	3,199.44	54.03	-1.63	54.04	0.11
3,300.00	1.85	8.48	3,299.38	57.25	-1.22	57.26	0.08
3,400.00	2.00	12.44	3,399.33	60.55	-0.60	60.55	0.20
3,500.00	2.12	10.52	3,499.26	64.07	0.11	64.07	0.14
3,600.00	2.01	11.13	3,599.20	67.61	0.79	67.60	0.11
3,700.00	2.09	14.30	3,699.13	71.10	1.58	71.08	0.14
3,800.00	2.18	12.01	3,799.06	74.72	2.42	74.70	0.12
3,900.00	2.04	12.29	3,899.00	78.32	3.20	78.29	0.14
4,000.00	2.20	20.20	3,998.93	81.86	4.24	81.82	0.33
4,100.00	2.38	21.09	4,098.85	85.60	5.65	85.54	0.18
4,200.00	2.58	26.91	4,198.75	89.55	7.42	89.47	0.32
4,300.00	3.22	25.06	4,298.62	94.10	9.62	93.99	0.65
4,400.00	3.53	21.89	4,398.45	99.50	11.96	99.37	0.36
4,500.00	3.55	22.09	4,498.26	105.22	14.27	105.07	0.02
4,600.00	3.87	24.41	4,598.05	111.17	16.83	110.99	0.35
4,700.00	4.11	24.90	4,697.81	117.49	19.74	117.28	0.24
4,800.00	4.12	24.67	4,797.55	124.00	22.74	123.76	0.02
4,900.00	3.80	24.22	4,897.31	130.29	25.60	130.02	0.32

Design Report for Stratocaster 20 Fed #1H - Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
5,000.00	3.58	23.54	4,997.10	136.18	28.21	135.88	0.22
5,100.00	3.49	23.43	5,096.91	141.83	30.67	141.51	0.09
5,200.00	3.12	24.43	5,196.75	147.10	33.00	146.75	0.37
5,300.00	3.08	23.90	5,296.60	152.03	35.22	151.67	0.05
5,400.00	2.91	22.85	5,396.46	156.83	37.29	156.44	0.18
5,500.00	2.80	21.83	5,496.34	161.44	39.18	161.03	0.12
5,600.00	2.52	22.80	5,596.23	165.73	40.94	165.30	0.28
5,700.00	2.49	22.91	5,696.14	169.76	42.64	169.31	0.03
5,800.00	2.51	20.91	5,796.04	173.80	44.27	173.34	0.09
5,900.00	2.24	20.81	5,895.96	177.68	45.74	177.20	0.27
6,000.00	2.00	17.59	5,995.89	181.17	46.97	180.68	0.27
6,100.00	1.85	16.86	6,095.83	184.37	47.96	183.87	0.15
6,200.00	1.58	16.27	6,195.79	187.24	48.82	186.73	0.27
6,300.00	1.44	18.59	6,295.75	189.76	49.60	189.24	0.15
6,400.00	1.44	19.94	6,395.72	192.13	50.43	191.60	0.03
6,500.00	1.34	23.30	6,495.69	194.38	51.32	193.85	0.13
6,600.00	1.29	23.36	6,595.66	196.49	52.23	195.95	0.05
6,700.00	1.24	22.24	6,695.64	198.53	53.09	197.97	0.06
6,800.00	1.25	22.99	6,795.62	200.53	53.92	199.97	0.02
6,900.00	1.22	21.85	6,895.59	202.52	54.74	201.95	0.04
7,000.00	1.19	19.43	6,995.57	204.49	55.49	203.91	0.06
7,100.00	1.09	20.62	7,095.55	206.36	56.17	205.77	0.10
7,200.00	1.01	14.78	7,195.53	208.10	56.73	207.51	0.13
7,300.00	0.76	9.47	7,295.52	209.61	57.06	209.01	0.26
7,400.00	0.63	354.07	7,395.52	210.81	57.11	210.21	0.23
7,500.00	0.60	350.27	7,495.51	211.87	56.97	211.28	0.05
7,600.00	0.63	346.85	7,595.50	212.93	56.75	212.33	0.05
7,700.00	0.59	338.98	7,695.50	213.94	56.44	213.35	0.09
7,800.00	0.47	342.84	7,795.49	214.81	56.14	214.23	0.13
7,900.00	0.41	319.72	7,895.49	215.48	55.79	214.90	0.19
8,000.00	0.26	307.21	7,995.49	215.89	55.37	215.31	0.17
8,100.00	0.40	291.66	8,095.49	216.15	54.87	215.58	0.16
8,200.00	0.56	262.88	8,195.48	216.22	54.06	215.66	0.28
8,300.00	0.64	253.56	8,295.48	216.00	53.04	215.45	0.13
8,400.00	0.84	270.33	8,395.47	215.85	51.77	215.31	0.29
8,500.00	0.90	282.10	8,495.46	216.02	50.27	215.49	0.19
8,600.00	1.10	279.90	8,595.44	216.35	48.56	215.84	0.20
8,700.00	1.20	284.47	8,695.42	216.78	46.60	216.29	0.14
8,800.00	1.45	285.36	8,795.40	217.37	44.36	216.91	0.25
8,900.00	2.16	300.98	8,895.35	218.68	41.53	218.24	0.86
9,000.00	2.58	297.57	8,995.26	220.69	37.92	220.29	0.44
9,100.00	2.70	295.94	9,095.15	222.76	33.80	222.40	0.14
9,200.00	2.46	280.69	9,195.05	224.19	29.58	223.88	0.72
9,300.00	2.46	280.44	9,294.96	224.98	25.36	224.71	0.01
9,400.00	2.57	282.10	9,394.87	225.84	21.05	225.61	0.13
9,500.00	2.73	281.35	9,494.76	226.77	16.53	226.59	0.16
9,600.00	2.73	284.70	9,594.65	227.85	11.89	227.71	0.16
9,700.00	2.20	285.51	9,694.55	228.97	7.74	228.87	0.53
9,800.00	1.84	287.52	9,794.49	229.96	4.35	229.90	0.37
9,900.00	1.85	289.35	9,894.44	230.98	1.30	230.95	0.06

Design Report for Stratocaster 20 Fed #1H - Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
9,903.00	1.76	294.29	9,897.44	231.01	1.21	230.99	5.99
9,943.00	4.04	337.25	9,937.39	232.57	0.11	232.55	7.51
9,975.00	6.42	312.99	9,969.26	234.83	-1.64	234.83	9.99
10,006.00	9.34	322.83	9,999.96	238.02	-4.43	238.05	10.34
10,038.00	12.32	329.19	10,031.39	243.02	-7.75	243.09	10.03
10,069.00	14.65	333.02	10,061.53	249.36	-11.22	249.46	8.03
10,101.00	16.12	336.44	10,092.38	257.04	-14.83	257.18	5.41
10,133.00	18.01	340.78	10,122.97	265.78	-18.24	265.96	7.11
10,164.00	20.54	343.29	10,152.23	275.52	-21.38	275.73	8.59
10,196.00	22.87	342.76	10,181.96	286.84	-24.84	287.08	7.31
10,227.00	24.26	343.23	10,210.38	298.69	-28.46	298.97	4.50
10,259.00	28.02	347.88	10,239.10	312.34	-31.94	312.65	13.38
10,291.00	32.27	353.92	10,266.77	328.20	-34.42	328.53	16.31
10,322.00	36.23	357.90	10,292.40	345.59	-35.64	345.94	14.65
10,354.00	38.91	0.17	10,317.76	365.09	-35.95	365.44	9.44
10,386.00	40.42	1.90	10,342.39	385.51	-35.58	385.86	5.84
10,418.00	42.09	3.31	10,366.45	406.59	-34.61	406.92	5.98
10,449.00	45.88	2.56	10,388.75	428.09	-33.52	428.41	12.34
10,481.00	50.83	2.68	10,410.01	451.97	-32.42	452.28	15.47
10,513.00	54.45	5.95	10,429.43	477.32	-30.49	477.61	13.92
10,544.00	59.45	8.56	10,446.33	503.08	-27.20	503.33	17.60
10,576.00	64.33	8.67	10,461.40	530.98	-22.97	531.19	15.25
10,608.00	66.70	8.20	10,474.66	559.78	-18.70	559.95	7.53
10,639.00	68.16	7.43	10,486.56	588.14	-14.81	588.26	5.24
10,671.00	69.42	6.47	10,498.14	617.75	-11.20	617.84	4.83
10,703.00	71.10	6.00	10,508.95	647.69	-7.93	647.74	5.43
10,735.00	70.87	5.83	10,519.37	677.79	-4.81	677.80	0.88
10,767.00	70.91	6.41	10,529.85	707.85	-1.59	707.83	1.72
10,798.00	72.16	7.66	10,539.67	737.03	2.02	736.97	5.56
10,830.00	74.30	5.39	10,548.90	767.47	5.49	767.37	9.53
10,862.00	76.64	2.85	10,556.93	798.36	7.71	798.24	10.61
10,894.00	78.75	0.94	10,563.75	829.61	8.75	829.47	8.80
10,926.00	81.71	359.43	10,569.18	861.14	8.85	861.00	10.35
10,957.00	84.48	358.63	10,572.91	891.90	8.32	891.77	9.30
10,989.00	86.92	356.07	10,575.31	923.78	6.85	923.66	11.03
11,021.00	89.07	355.56	10,576.43	955.67	4.51	955.57	6.90
11,052.00	90.15	355.97	10,576.64	986.58	2.23	986.51	3.73
11,084.00	91.88	356.07	10,576.07	1,018.50	0.00	1,018.45	5.42
11,147.00	95.06	355.78	10,572.26	1,081.22	-4.46	1,081.21	5.07
11,242.00	94.20	356.72	10,564.59	1,175.70	-10.66	1,175.75	1.34
11,337.00	93.29	357.94	10,558.38	1,270.39	-15.07	1,270.48	1.60
11,432.00	90.96	359.07	10,554.86	1,365.29	-17.55	1,365.40	2.73
11,527.00	91.51	2.45	10,552.81	1,460.24	-16.29	1,460.33	3.60
11,623.00	88.61	3.51	10,552.71	1,556.10	-11.30	1,556.14	3.22
11,718.00	89.54	2.70	10,554.25	1,650.95	-6.15	1,650.92	1.30
11,813.00	91.48	1.59	10,553.40	1,745.87	-2.60	1,745.81	2.35
11,908.00	90.80	3.06	10,551.51	1,840.77	1.26	1,840.66	1.70
12,003.00	89.78	2.81	10,551.03	1,935.64	6.12	1,935.48	1.11
12,098.00	88.46	2.41	10,552.49	2,030.53	10.45	2,030.32	1.45
12,193.00	89.29	2.26	10,554.35	2,125.43	14.32	2,125.18	0.89
12,289.00	90.28	1.39	10,554.71	2,221.38	17.37	2,221.09	1.37

Design Report for Stratocaster 20 Fed #1H - Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
12,384.00	90.95	0.20	10,553.69	2,316.37	18.69	2,316.05	1.44
12,479.00	89.51	0.68	10,553.31	2,411.36	19.42	2,411.03	1.60
12,573.00	90.99	1.09	10,552.90	2,505.34	20.87	2,505.00	1.63
12,668.00	89.72	1.28	10,552.31	2,600.32	22.84	2,599.95	1.35
12,763.00	89.04	1.46	10,553.34	2,695.29	25.11	2,694.89	0.74
12,858.00	90.06	1.78	10,554.09	2,790.24	27.79	2,789.81	1.13
12,953.00	89.91	0.55	10,554.11	2,885.22	29.73	2,884.77	1.30
13,048.00	91.16	1.45	10,553.23	2,980.20	31.38	2,979.72	1.62
13,143.00	90.31	0.85	10,552.01	3,075.17	33.29	3,074.67	1.10
13,238.00	89.97	1.34	10,551.78	3,170.16	35.10	3,169.63	0.63
13,333.00	89.14	0.19	10,552.51	3,265.14	36.37	3,264.60	1.49
13,427.00	88.49	358.75	10,554.46	3,359.11	35.50	3,358.57	1.68
13,552.00	89.26	357.42	10,556.91	3,484.02	31.33	3,483.51	1.23
13,617.00	89.97	357.25	10,557.35	3,548.94	28.31	3,548.47	1.12
13,712.00	90.86	357.53	10,556.66	3,643.84	23.98	3,643.41	0.98
13,806.00	90.22	356.46	10,555.77	3,737.71	19.05	3,737.32	1.33
13,902.00	89.91	357.36	10,555.67	3,833.57	13.88	3,833.22	0.99
13,996.00	90.77	357.37	10,555.11	3,927.46	9.56	3,927.16	0.91
14,091.00	91.42	357.02	10,553.29	4,022.33	4.91	4,022.07	0.78
14,186.00	92.37	356.34	10,550.15	4,117.12	-0.59	4,116.91	1.23
14,281.00	93.02	356.26	10,545.68	4,211.82	-6.71	4,211.66	0.69
14,350.00	93.02	356.26	10,542.05	4,280.57	-11.21	4,280.46	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,685.00	10,502.98	630.81	-9.74	HL Crossing @ 10685.00' MD; 10502.98' TVD; 630.88' VS
11,368.00	10,556.81	1,301.34	-16.08	HL Crossing @ 11368.00' MD; 10556.81' TVD; 1301.43' VS
11,498.00	10,553.54	1,431.27	-17.27	HL Crossing @ 11498.00' MD; 10553.54' TVD; 1431.37' VS
14,281.00	10,545.68	4,211.82	-6.71	Last MWD Survey @ 14281.00' MD
14,350.00	10,542.05	4,280.57	-11.21	Projection to TD @ 14350.00' 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)	359.41	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
100.00	9,903.00	Gyro	NS-GYRO-MS
9,943.00	14,350.00	Sperry MWD	MWD+SC

Design Report for Stratocaster 20 Fed #1H - Surveys

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Stratocaster 20 Fed	0.00	0.00	10,555.00	4,288.32	-43.97	472,587.83	799,289.79	32° 17' 47.246 N	103° 29' 54.645 W

- actual wellpath misses target center by 36.07usft at 14350.00usft MD (10542.05 TVD, 4280.57 N, -11.21 E)
- Point

North Reference Sheet for Stratocaster 20 Fed - Stratocaster 20 Fed #1H - 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 3562.5 + KB 18' @ 3580.50usft (McVay 6). Northing and Easting are relative to Stratocaster 20 Fed #1H

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: 0.99998532

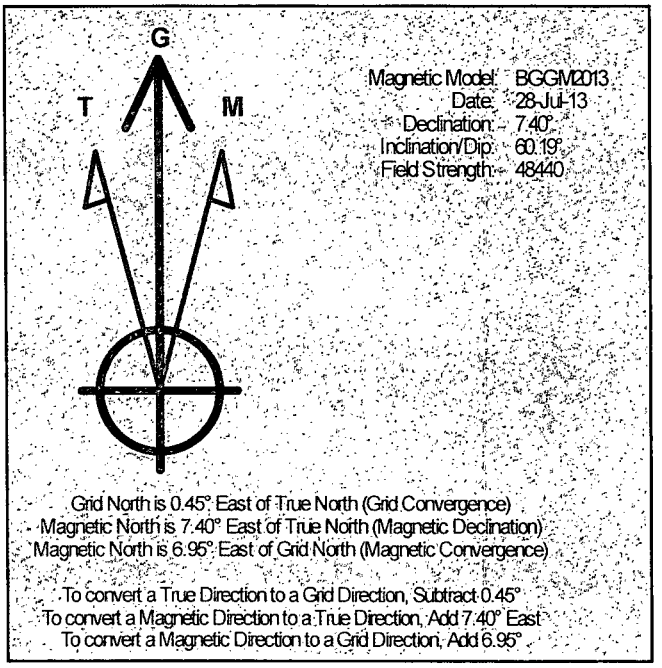
Grid Coordinates of Well: 468,299.51 usft N, 799,333.76 usft E

Geographical Coordinates of Well: 32° 17' 04.81" N, 103° 29' 54.52" W

Grid Convergence at Surface is: 0.45°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,350.00usft the Bottom Hole Displacement is 4,280.59usft in the Direction of 359.85° (Grid).

Magnetic Convergence at surface is: -6.95° (28 July 2013, , BGGM2013)



Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	2013-09-04
State:	New Mexico
County:	Lea
API Number:	3002537295
Operator Name:	Endurance Resources LLC
Well Name and Number:	Stratocaster 20 1H
Longitude:	-103.35
Latitude:	32.17
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	10,576
Total Water Volume (gal)*:	2,910,793

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid	Water	7732-18-5	100.00%	86.67174%	Density = 8.340
HYDROCHLORIC ACID 15%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	30.00%	0.33552%	
40/80	Halliburton	Proppant	Silicon Dioxide	7631-86-9	10.00%	0.04714%	Density = 21.267
			Mullite	1302-93-8	85.00%	0.40075%	
			Silca Crystalline-Cristobalite	14464-46-1	30.00%	0.14144%	
30/50	Halliburton	Proppant	Crystalline silica, cristobalite	14464-46-1	30.00%	1.65429%	
			Mullite	1302-93-8	100.00%	5.51429%	
			Silica, amorphous - fumed	7631-86-9	30.00%	1.65429%	
20/40	Halliburton	Proppant	Crystalline silica, cristobalite	14464-46-1	30.00%	1.73550%	
			Mullite	1302-93-8	100.00%	5.78499%	
			Silica, amorphous - fumed	7631-86-9	30.00%	1.73550%	
BE-9	Halliburton	Biocide	Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00%	0.00473%	
Cla-Web™	Halliburton	Additive	Ammonium salt	Confidential Business Information	60.00%	0.03422%	
FDP-S1047-12	Halliburton	Wetting Agent	Methanol	67-56-1	100.00%	0.07209%	
			Sulfonate	Confidential Business Information	10.00%	0.00721%	
BC-140 X2	Halliburton	Initiator	Ethylene glycol	107-21-1	30.00%	0.01655%	
			Monoethanolamine borate	26038-87-9	100.00%	0.05517%	
BA-40L BUFFERING AGENT	Halliburton	Buffer	Potassium carbonate	584-08-7	60.00%	0.00990%	
SandWedge ABC	Halliburton	Flow Enhancer	Ethoxylated amine	Confidential Business Information	5.00%	0.00133%	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00%	0.00796%	
			Naphthalene	91-20-3	5.00%	0.00133%	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00%	0.00157%	
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00%	0.15862%	
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00%	0.00023%	
OptiKleen-WF™	Halliburton	Concentrate	Sodium perborate tetrahydrate	10486-00-7	100.00%	0.00041%	
Ingredients Listed Below This Line Are Part of the Fluid Composition Provided by Halliburton Which Do Not Appear On the Material Safety Data Sheets (MSDS)							
			2,7-Naphthalenedisulfonic acid, 3-hydroxy-4-[(4-sulfor-1-naphthalenyl) azo] -, trisodium salt	915-67-3			
			Acetic acid	64-19-7			
			Alcohols, C12-16, ethoxylated	68551-12-2			
			Aluminum Silicate	1302-76-7			
			Amine salts	Confidential Business Information			
			Amine salts	Confidential Business Information			
			Ammonium chloride	12125-02-9			
			Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4			
			Crystalline Silica, Quartz	14808-60-7			
			Fatty acid amine salt mixture	68139-75-3			
			Fatty acid tall oil amide	Confidential Business Information			
			Polyacrylamide copolymer	Confidential Business Information			
			Potassium acetate	127-08-2			
			Quaternary amine	Confidential Business Information			

			Quaternary amine	Confidential Business Information			
			Quaternary amine	Confidential Business Information			
			Silica gel	112926-00-8			
			Sodium chloride	7647-14-5			
			Sodium sulfate	7757-82-6			
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6			
			Sorbitan, mono-9-octadecenoate, (Z)-	1338-43-8			
			Surfactant mixture	Confidential Business Information			
			Surfactant mixture	Confidential Business Information			
			Water	7732-18-5			

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.