

# Laramie Energy, LLC

Mesa County, CO

Sec. 26-T8S-R92W

Hells Gulch Federal 26-3C

Plan #1

Survey: MWD Survey

## Sperry Drilling Services

### Standard Report

19 June, 2007

Well Coordinates: 1,553,978.42 N, 2,395,255.72 E (39° 20' 05.56" N, 107° 38' 17.75" W)

Ground Level: 7,333.00 ft

Local Coordinate Origin:

Centered on Well Hells Gulch Federal 26-3C

Viewing Datum:

RKB @ 7351.00ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet

Geodetic Scale Factor Applied

Version: 2003.14 Build: 57

**HALLIBURTON**

**Survey Report for Hells Gulch Federal 26-3C - Plan #1 - MWD Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	43.50	0.25	0.00	0.00	0.00	0.00
<b>BHL: 1338' FNL, 1980' FWL</b>							
0.50	0.00	43.50	0.50	0.00	0.00	0.00	0.67
<b>BHL: 39° 20' 05.786" (39.33494°)N, 107° 38' 11.271" (107.63646°)W</b>							
0.75	0.00	43.50	0.75	0.00	0.00	0.00	0.34
<b>Top of Gas: 1312' FNL, 1967' FWL</b>							
1.00	0.00	43.50	1.00	0.00	0.00	0.00	0.34
<b>Top of Gas: 39° 20' 06.048" (39.33501°)N, 107° 38' 11.440" (107.63651°)W</b>							
1.25	0.00	43.50	1.25	0.00	0.00	0.00	0.34
<b>Surface: 39° 20' 05.561" (39.33488°)N, 107° 38' 17.747" (107.63826°)W</b>							
1.50	0.01	43.50	1.50	0.00	0.00	0.00	0.34
<b>Permitted BHL: 39° 20' 05.971" (39.33499°)N, 107° 38' 11.321" (107.63648°)W</b>							
119.00	0.40	43.50	119.00	0.30	0.29	0.31	0.34
<b>First MWD Survey</b>							
240.00	1.60	73.10	239.98	1.10	2.19	2.28	1.05
332.00	3.20	79.50	331.90	1.94	5.95	6.09	1.76
424.00	3.20	77.80	423.75	2.95	10.98	11.19	0.10
516.00	4.20	83.90	515.56	3.85	16.84	17.10	1.17
608.00	4.60	79.50	607.29	4.88	23.82	24.14	0.57
701.00	5.00	78.70	699.96	6.36	31.46	31.87	0.44
793.00	5.20	78.50	791.60	7.97	39.48	40.00	0.22
885.00	5.40	85.10	883.21	9.17	47.88	48.47	0.70
979.00	5.60	88.30	976.77	9.69	56.87	57.47	0.39
1,075.00	6.20	89.10	1,072.26	9.91	66.73	67.32	0.63
1,169.00	6.80	93.10	1,165.66	9.69	77.36	77.90	0.80
1,265.00	7.00	91.10	1,260.96	9.27	88.89	89.35	0.33
1,360.00	7.40	90.70	1,355.21	9.08	100.79	101.20	0.42
1,494.00	8.00	87.90	1,488.01	9.32	118.74	119.10	0.53
1,613.00	8.20	86.30	1,605.82	10.17	135.48	135.86	0.25
1,709.00	8.00	87.90	1,700.86	10.85	148.99	149.38	0.31
1,804.00	8.00	89.50	1,794.94	11.15	162.21	162.58	0.23
1,901.00	7.80	88.30	1,891.02	11.41	175.54	175.88	0.27
1,997.00	7.40	87.50	1,986.17	11.87	188.23	188.57	0.43
2,092.00	7.20	87.10	2,080.40	12.44	200.28	200.63	0.22
2,187.00	6.80	89.10	2,174.70	12.83	211.85	212.19	0.49
2,283.00	6.60	89.10	2,270.04	13.01	223.05	223.37	0.21
2,379.00	6.40	90.30	2,365.42	13.06	233.92	234.20	0.25
2,475.00	6.60	91.50	2,460.81	12.89	244.78	245.02	0.25
2,571.00	6.20	87.10	2,556.21	13.01	255.48	255.68	0.66
2,667.00	5.60	78.70	2,651.70	14.19	265.25	265.52	1.09
2,763.00	5.60	78.30	2,747.24	16.06	274.43	274.82	0.04
2,859.00	6.20	89.10	2,842.74	17.09	284.20	284.64	1.31
2,953.00	6.60	91.60	2,936.15	17.02	294.67	295.08	0.52
3,049.00	6.40	91.20	3,031.53	16.75	305.54	305.88	0.21
3,144.00	6.20	85.40	3,125.96	17.05	315.94	316.28	0.70
3,240.00	5.60	84.70	3,221.45	17.90	325.78	326.15	0.63
3,337.00	5.00	83.90	3,318.04	18.79	334.69	335.11	0.62
3,433.00	5.40	81.40	3,413.64	19.91	343.32	343.79	0.48
3,529.00	5.40	77.50	3,509.22	21.56	352.19	352.78	0.38
3,625.00	5.20	76.30	3,604.80	23.57	360.83	361.55	0.24
3,720.00	5.10	76.10	3,699.42	25.60	369.11	369.97	0.11
3,816.00	5.80	86.30	3,794.99	26.94	378.10	379.03	1.24
3,912.00	5.80	95.90	3,890.50	26.75	387.76	388.65	1.01
4,008.00	5.30	96.40	3,986.05	25.76	396.99	397.77	0.52
4,104.00	5.60	90.70	4,081.62	25.21	406.08	406.78	0.64

**Survey Report for Hells Gulch Federal 26-3C - Plan #1 - MWD Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,200.00	5.60	88.70	4,177.16	25.26	415.45	416.12	0.20
4,296.00	5.60	89.60	4,272.70	25.40	424.82	425.47	0.09
4,392.00	5.40	80.30	4,368.26	26.19	433.95	434.64	0.95
4,487.00	4.80	75.10	4,462.88	27.97	442.20	443.00	0.80
4,584.00	4.80	73.50	4,559.54	30.16	450.01	450.97	0.14
4,678.00	4.60	71.10	4,653.23	32.50	457.35	458.47	0.30
4,774.00	3.80	63.50	4,748.97	35.17	463.84	465.16	1.01
4,870.00	4.00	73.10	4,844.75	37.56	469.89	471.39	0.71
4,966.00	4.00	73.10	4,940.51	39.51	476.30	477.93	0.00
5,062.00	3.20	65.10	5,036.33	41.61	481.93	483.72	0.98
5,158.00	3.00	62.00	5,132.18	43.92	486.58	488.54	0.27
5,255.00	2.40	57.90	5,229.08	46.19	490.54	492.68	0.65
5,349.00	1.40	39.10	5,323.02	48.12	492.93	495.22	1.24
5,445.00	1.20	66.30	5,419.00	49.44	494.59	496.98	0.67
5,541.00	0.40	171.50	5,514.99	49.51	495.56	497.95	1.42
5,637.00	1.00	210.30	5,610.99	48.46	495.19	497.49	0.76
5,732.00	1.40	183.20	5,705.97	46.58	494.71	496.86	0.72
5,830.00	1.80	172.30	5,803.93	43.86	494.85	496.78	0.51
5,926.00	1.00	144.30	5,899.90	41.69	495.54	497.29	1.07
6,022.00	0.80	123.10	5,995.89	40.64	496.59	498.25	0.40
6,118.00	0.60	137.90	6,091.88	39.90	497.49	499.08	0.28
6,214.00	0.60	132.70	6,187.88	39.19	498.19	499.73	0.06
6,309.00	1.00	128.70	6,282.87	38.33	499.20	500.67	0.42
6,405.00	1.00	151.10	6,378.85	37.07	500.26	501.62	0.40
6,500.00	1.20	152.70	6,473.83	35.47	501.12	502.34	0.21
6,596.00	1.40	149.50	6,569.81	33.56	502.18	503.24	0.22
6,690.00	1.00	162.70	6,663.79	31.79	503.00	503.92	0.51
6,787.00	1.20	178.70	6,760.77	29.97	503.28	504.04	0.38
6,882.00	1.00	125.50	6,855.76	28.49	503.98	504.61	1.05
6,978.00	0.30	40.20	6,951.75	28.19	504.82	505.43	1.06
7,074.00	0.20	153.50	7,047.75	28.24	505.06	505.67	0.44
7,171.00	0.80	156.70	7,144.75	27.46	505.40	505.95	0.62
7,267.00	0.60	146.70	7,240.74	26.43	505.94	506.40	0.24
7,362.00	1.00	142.40	7,335.73	25.36	506.72	507.09	0.43
7,495.00	1.00	139.90	7,468.71	23.55	508.18	508.40	0.03
<b>Final MWD Survey</b>							
7,550.00	1.00	139.90	7,523.70	22.81	508.79	508.95	0.00
<b>Survey Projection to TD</b>							

**Survey Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
0.25	0.25	0.00	0.00	BHL: 1338' FNL, 1980' FWL
0.50	0.50	0.00	0.00	BHL: 39° 20' 05.786" (39.33494°)N, 107° 38' 11.271" (107.63646°)W
0.75	0.75	0.00	0.00	Top of Gas: 1312' FNL, 1967' FWL
1.00	1.00	0.00	0.00	Top of Gas: 39° 20' 06.048" (39.33501°)N, 107° 38' 11.440" (107.63651°)W
1.25	1.25	0.00	0.00	Surface: 39° 20' 05.561" (39.33488°)N, 107° 38' 17.747" (107.63826°)W
1.50	1.50	0.00	0.00	Permitted BHL: 39° 20' 05.971" (39.33499°)N, 107° 38' 11.321" (107.63648°)W
119.00	119.00	0.30	0.29	First MWD Survey
7,495.00	7,468.71	23.55	508.18	Final MWD Survey
7,550.00	7,523.70	22.81	508.79	Survey Projection to TD

## Survey Report for Hells Gulch Federal 26-3C - Plan #1 - MWD Survey

### Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/_S (ft)	+E/-W (ft)	
User	No Target (Freehand)	85.30	Slot	0.00	0.00	0.00

BHL: 1338' FNL, 1980' FWL

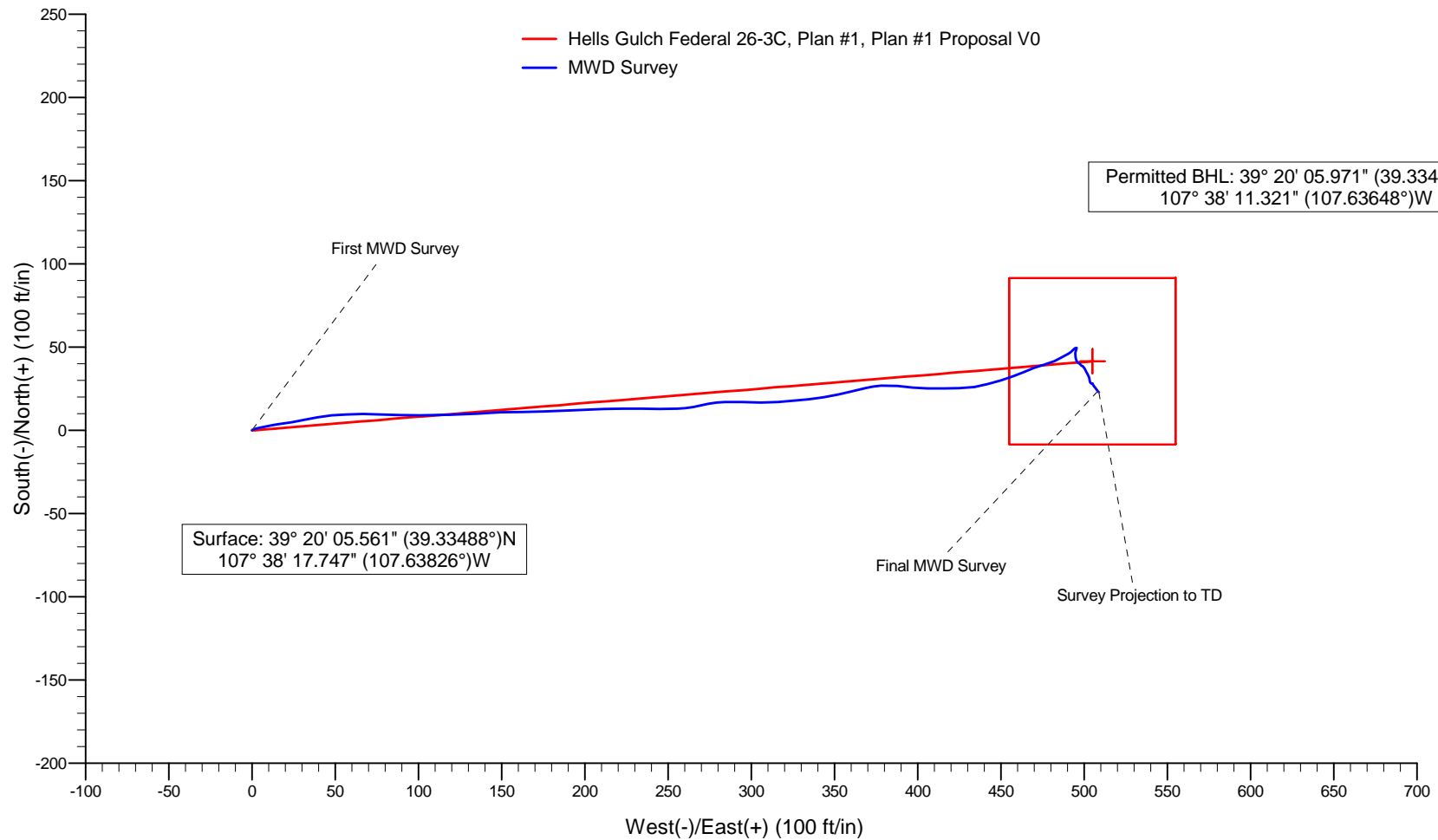
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107° 38' 11.271" (107.63646°)W

Top of Gas: 39° 20' 06.048" (39.33501°)N  
107° 38' 11.440" (107.63651°)W

## LEGEND

- Hells Gulch Federal 26-3C, Plan #1, Plan #1 Proposal V0
- MWD Survey



Project: Mesa County, CO  
Site: Sec. 26-T8S-R92W  
Well: Hells Gulch Federal 26-3C

# Laramie Energy, LLC

HALLIBURTON

BHL: 1338' FNL, 1980' FWL

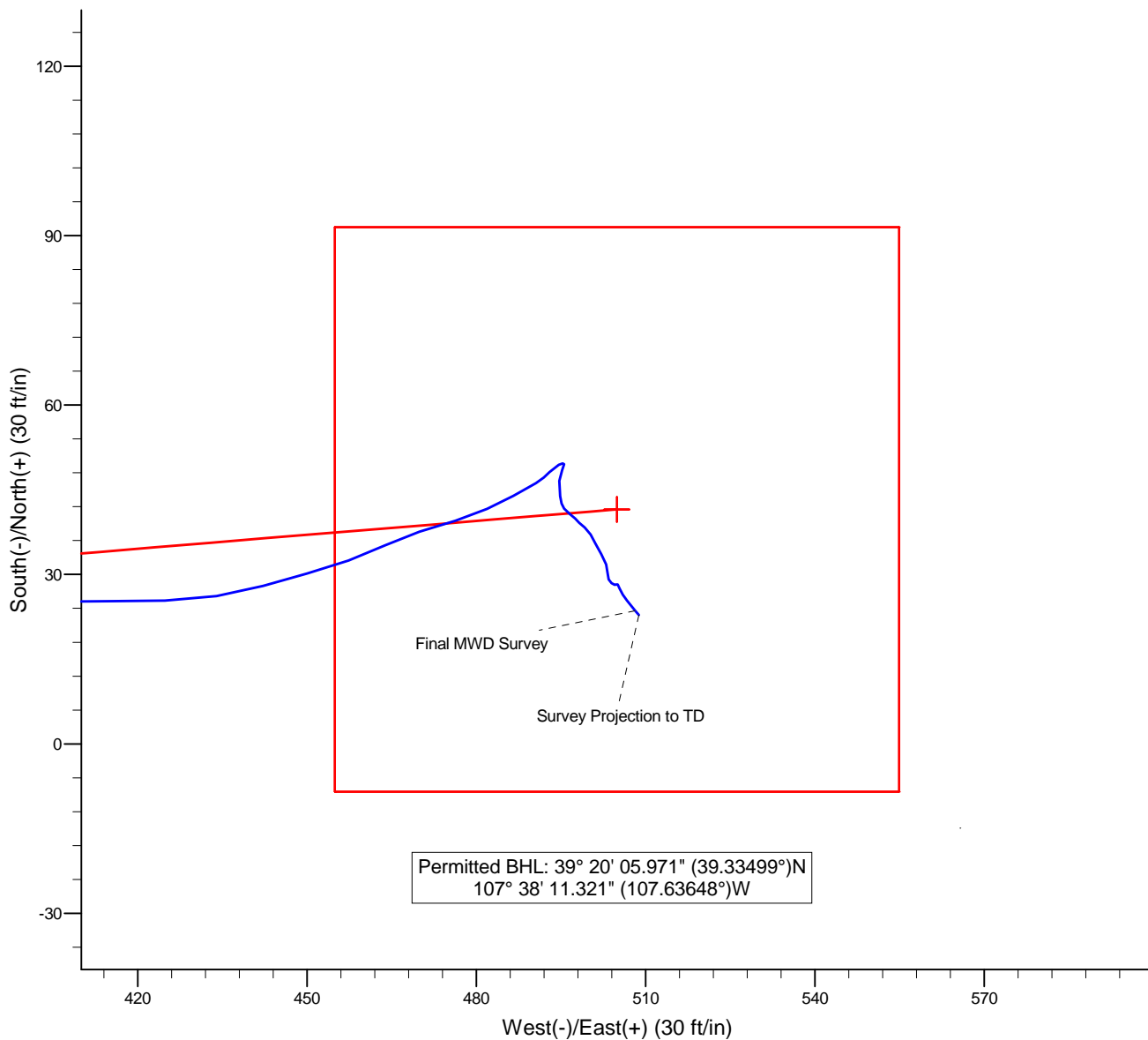
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