Laramie Energy II, LLC

Helmer Gulch
SWSE Sec 22-T7S-R95W (Furr)
Furr 22-15A

Plan #2

Design: Actual Field Surveys

Sperry Drilling Services

Final Survey Report

18 September, 2009

Well Coordinates: 1,586,658.65 N, 2,299,586.85 E (39° 25' 04.44" N, 107° 58' 46.30" W)
Ground Level: 6,976.00 ft

Local Coordinate Origin:	Centered on Well Furr 22-15A
Viewing Datum:	RKB @ 6997.0ft (Original Well Elev)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet

Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

HALLIBURTON

Project: Helmer Gulch
Site: SWSE Sec 22-T7S-R95W (Furr)
Well: Furr 22-15A
Wellbore: Plan #2
Plan: Actual Field Surveys

Laramie Energy II, LLC

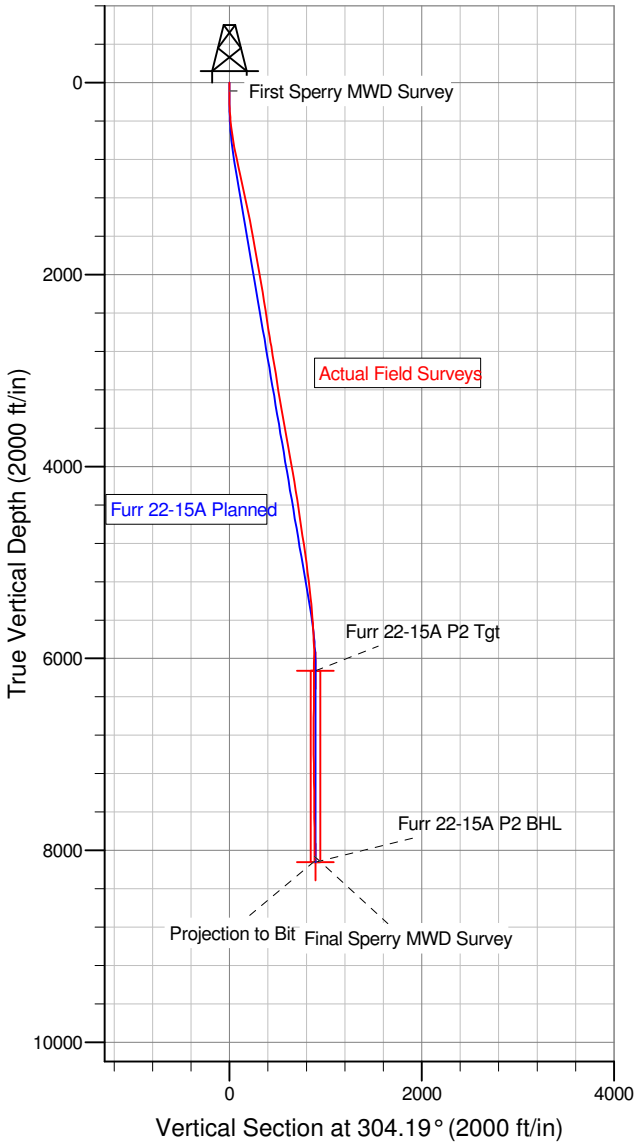
HALLIBURTON
Drilling and Formation Evaluation

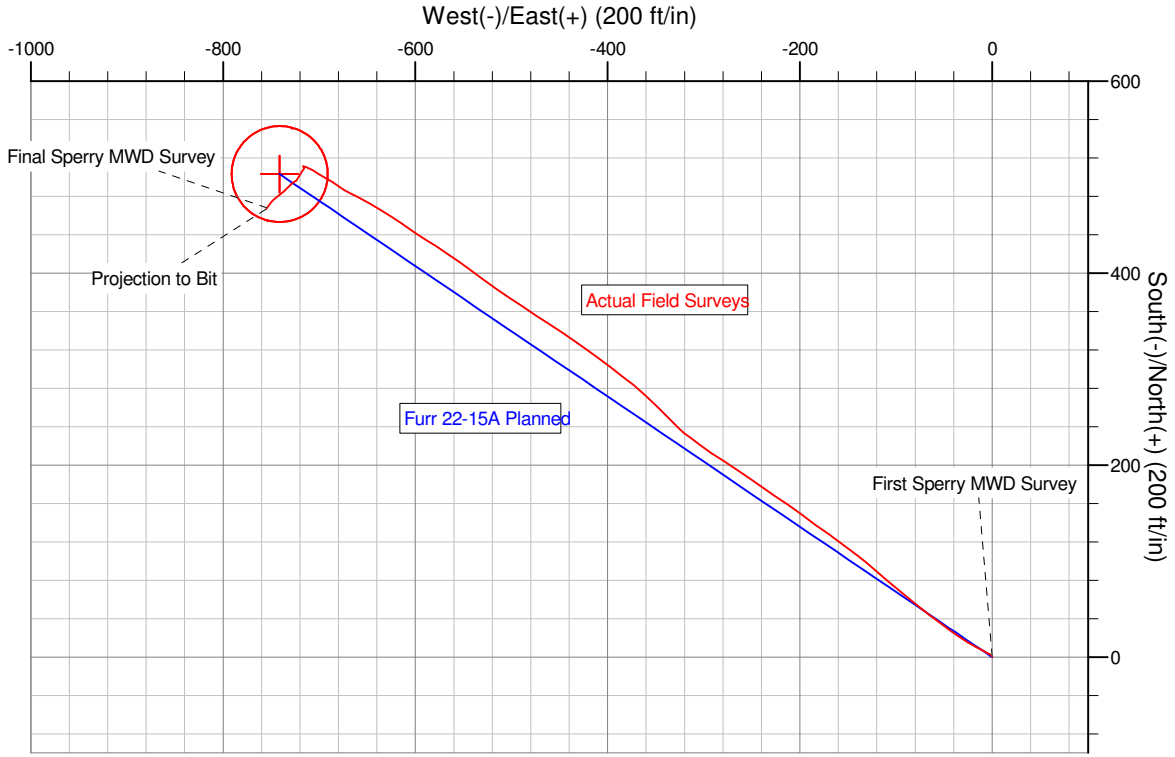
Top of Gas: 1282 FSL, 2237 FEL
LAT: 39.419299 N, LON: 107.982060 W

BHL: 1239 FSL, 2277 FEL
LAT: 39.419180 N, LON: 107.982200 W

Permitted BHL: 39° 25' 9.412 N (39.419281 N), 107° 58' 55.740 W (107.98215 W)

Surface: 39° 25' 4.436 N (39.417899 N), 107° 58' 46.297 W (107.979527 W)





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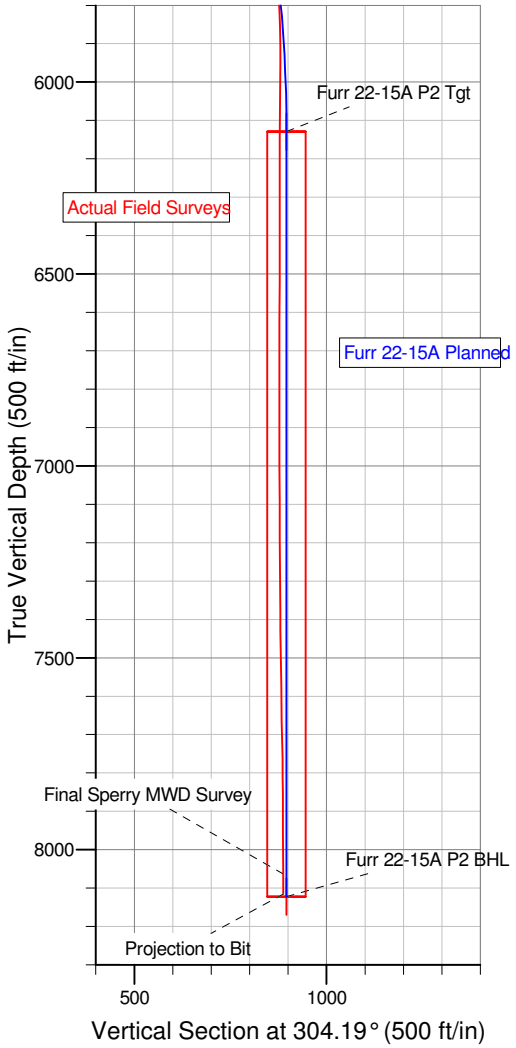

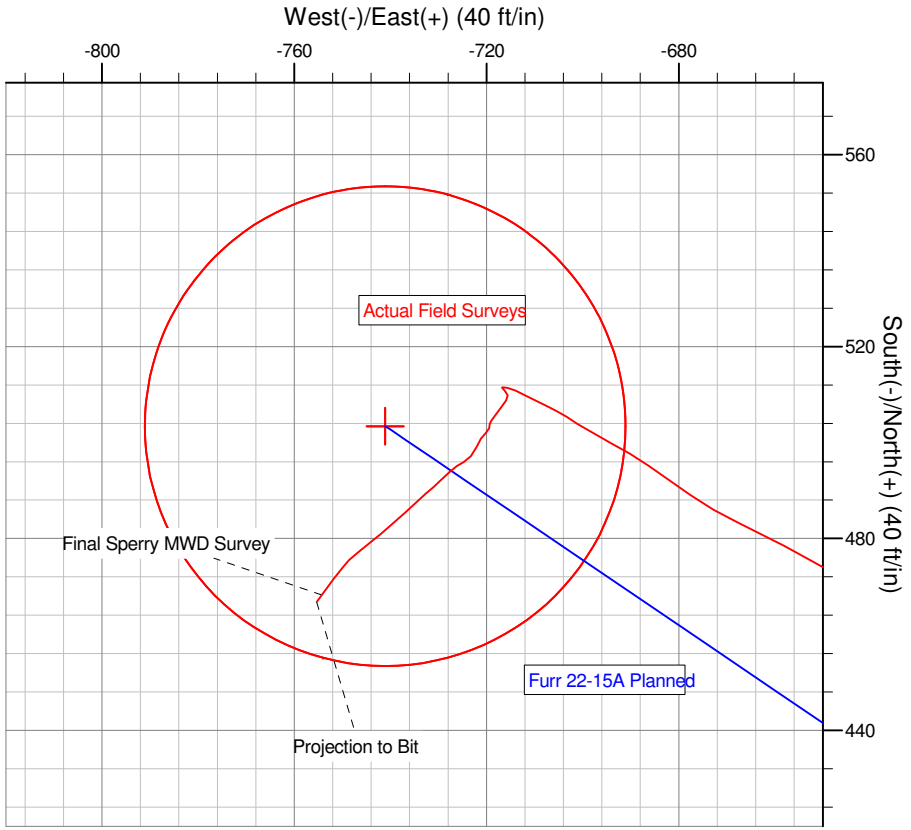

Design Report for Furr 22-15A - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
87.0	0.60	14.30	87.0	0.4	0.1	0.2	0.69
First Sperry MWD Survey							
178.0	0.90	315.60	178.0	1.4	-0.3	1.0	0.86
269.0	2.30	299.70	269.0	2.8	-2.4	3.5	1.60
360.0	4.60	297.40	359.8	5.4	-7.2	9.0	2.53
451.0	6.60	298.10	450.3	9.6	-15.0	17.8	2.20
543.0	8.00	301.40	541.6	15.4	-25.2	29.5	1.59
634.0	9.70	303.70	631.5	22.9	-36.9	43.5	1.91
724.0	11.40	307.40	720.0	32.5	-50.3	59.9	2.03
817.0	12.70	307.20	810.9	44.3	-65.8	79.3	1.40
884.0	13.00	308.60	876.3	53.5	-77.5	94.2	0.65
978.0	12.80	310.60	967.9	66.8	-93.7	115.1	0.52
1,073.0	12.00	310.10	1,060.7	80.0	-109.2	135.3	0.85
1,168.0	11.60	311.70	1,153.7	92.8	-123.9	154.6	0.54
1,264.0	12.30	306.40	1,247.6	105.3	-139.4	174.4	1.36
1,358.0	11.40	307.20	1,339.6	116.8	-154.8	193.7	0.97
1,453.0	11.10	305.90	1,432.8	127.8	-169.7	212.2	0.41
1,549.0	10.80	305.70	1,527.0	138.5	-184.5	230.4	0.31
1,643.0	10.60	307.00	1,619.4	148.9	-198.6	247.9	0.33
1,739.0	10.20	304.80	1,713.8	159.0	-212.6	265.2	0.59
1,834.0	9.60	302.70	1,807.4	168.1	-226.2	281.5	0.74
1,930.0	9.90	305.90	1,902.0	177.3	-239.6	297.8	0.65
2,025.0	9.80	304.60	1,995.6	186.6	-252.8	314.0	0.26
2,121.0	9.50	303.90	2,090.2	195.7	-266.2	330.1	0.34
2,216.0	9.40	303.80	2,183.9	204.4	-279.1	345.7	0.11
2,311.0	8.80	301.80	2,277.7	212.5	-291.7	360.7	0.71
2,407.0	8.90	308.70	2,372.6	221.1	-303.8	375.5	1.11
2,502.0	8.00	304.30	2,466.6	229.4	-315.0	389.4	1.17
2,598.0	8.90	313.50	2,561.5	238.2	-325.9	403.4	1.69
2,693.0	9.50	317.20	2,655.3	249.1	-336.5	418.3	0.89
2,788.0	10.60	314.50	2,748.9	260.9	-348.1	434.6	1.26
2,884.0	10.10	312.30	2,843.3	272.8	-360.6	451.6	0.66
2,979.0	9.40	309.00	2,936.9	283.3	-372.8	467.6	0.94
3,075.0	9.10	308.01	3,031.7	292.9	-384.9	482.9	0.35
3,170.0	8.50	307.50	3,125.6	301.8	-396.4	497.4	0.64
3,265.0	9.00	307.40	3,219.5	310.6	-407.8	511.9	0.53
3,360.0	9.60	304.50	3,313.2	319.6	-420.3	527.2	0.80
3,456.0	10.50	305.20	3,407.7	329.2	-434.0	544.0	0.95
3,551.0	10.00	304.10	3,501.2	338.8	-447.9	560.9	0.57
3,646.0	9.40	302.11	3,594.9	347.5	-461.3	576.9	0.72
3,742.0	10.30	304.50	3,689.4	356.5	-475.0	593.3	1.03
3,837.0	9.80	303.30	3,783.0	365.8	-488.8	609.9	0.57
3,932.0	9.70	302.50	3,876.6	374.5	-502.3	626.0	0.18
4,029.0	9.90	306.10	3,972.2	383.8	-515.9	642.5	0.66
4,122.0	9.80	306.30	4,063.8	393.2	-528.8	658.4	0.11
4,218.0	9.50	307.50	4,158.5	402.9	-541.6	674.4	0.38
4,313.0	9.10	304.30	4,252.2	411.9	-554.1	689.8	0.69
4,408.0	8.90	305.00	4,346.0	420.3	-566.3	704.6	0.24
4,502.0	8.50	302.20	4,439.0	428.2	-578.1	718.8	0.62

Design Report for Furr 22-15A - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,599.0	7.90	300.90	4,535.0	435.5	-589.9	732.7	0.65
4,694.0	9.30	305.20	4,628.9	443.2	-601.8	746.9	1.62
4,790.0	8.70	304.30	4,723.7	451.8	-614.1	761.9	0.64
4,885.0	8.20	302.50	4,817.7	459.5	-625.8	775.8	0.60
4,981.0	7.80	301.30	4,912.8	466.6	-637.1	789.2	0.45
5,076.0	7.20	300.10	5,006.9	472.9	-647.8	801.6	0.65
5,171.0	6.90	297.10	5,101.2	478.5	-658.0	813.2	0.50
5,265.0	6.70	295.90	5,194.6	483.4	-668.0	824.2	0.26
5,360.0	6.90	305.20	5,288.9	489.2	-677.6	835.4	1.18
5,455.0	5.90	304.50	5,383.3	495.2	-686.3	846.0	1.06
5,550.0	4.90	296.70	5,477.9	499.8	-693.9	854.9	1.30
5,645.0	5.10	303.60	5,572.5	504.0	-701.1	863.1	0.67
5,741.0	3.10	295.40	5,668.3	507.4	-707.0	869.9	2.17
5,836.0	3.40	297.50	5,763.1	509.8	-711.8	875.3	0.34
5,931.0	1.60	281.40	5,858.0	511.4	-715.6	879.3	2.02
6,027.0	0.30	150.20	5,954.0	511.4	-716.8	880.3	1.89
6,122.0	0.80	127.10	6,049.0	510.8	-716.1	879.4	0.57
6,201.9	0.68	167.93	6,128.9	510.0	-715.6	878.5	0.66
Furr 22-15A P2 Tgt							
6,216.0	0.70	175.50	6,143.0	509.9	-715.6	878.4	0.66
6,311.0	0.70	219.80	6,238.0	508.8	-715.9	878.1	0.56
6,406.0	1.10	210.00	6,333.0	507.6	-716.7	878.1	0.45
6,501.0	1.90	220.60	6,428.0	505.6	-718.2	878.2	0.89
6,597.0	0.60	188.70	6,523.9	503.9	-719.3	878.2	1.49
6,692.0	0.50	192.00	6,618.9	503.0	-719.5	877.8	0.11
6,788.0	0.90	225.90	6,714.9	502.1	-720.1	877.8	0.58
6,883.0	1.10	213.80	6,809.9	500.8	-721.1	877.9	0.31
6,978.0	1.20	200.60	6,904.9	499.1	-722.0	877.7	0.30
7,073.0	1.60	223.80	6,999.9	497.2	-723.3	877.7	0.72
7,169.0	0.80	240.40	7,095.8	495.9	-724.8	878.2	0.90
7,264.0	1.10	237.00	7,190.8	495.1	-726.1	878.8	0.32
7,359.0	1.30	227.70	7,285.8	493.9	-727.7	879.5	0.29
7,454.0	1.90	226.90	7,380.8	492.1	-729.6	880.1	0.63
7,550.0	3.00	227.90	7,476.7	489.3	-732.7	881.0	1.15
7,645.0	4.00	227.30	7,571.5	485.4	-736.9	882.3	1.05
7,740.0	4.00	230.00	7,666.3	481.0	-741.9	884.0	0.20
7,836.0	3.40	231.60	7,762.1	477.1	-746.7	885.8	0.63
7,930.0	1.90	216.70	7,856.0	474.1	-749.8	886.7	1.74
8,025.0	2.10	218.50	7,950.9	471.5	-751.8	886.9	0.22
8,138.0	2.00	215.00	8,063.8	468.3	-754.3	887.0	0.14
Final Sperry MWD Survey							
8,190.0	2.00	215.00	8,115.8	466.8	-755.3	887.1	0.00
Projection to Bit - Furr 22-15A P2 BHL							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
87.0	87.0	0.4	0.1	First Sperry MWD Survey
8,138.0	8,063.8	468.3	-754.3	Final Sperry MWD Survey
8,190.0	8,115.8	466.8	-755.3	Projection to Bit

Design Report for Furr 22-15A - Actual Field Surveys

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Furr 22-15A P2 BHL	304.19	Slot	0.0	0.0	0.0

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
87.0	8,190.0	Sperry MWD Surveys	MWD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Furr 22-15A P2 BHL	0.00	0.00	8,122.0	503.4	-741.1	1,587,182.10	2,298,859.85	39° 25' 9.412 N	107° 58' 55.740 W
- actual wellpath misses target center by 39.8ft at 8190.0ft MD (8115.8 TVD, 466.8 N, -755.3 E) - Point									
Furr 22-15A P2 Tgt	0.00	0.00	6,129.0	503.4	-741.1	1,587,182.10	2,298,859.85	39° 25' 9.412 N	107° 58' 55.740 W
- actual wellpath misses target center by 26.3ft at 6202.0ft MD (6129.0 TVD, 510.0 N, -715.6 E) - Circle (radius 50.0)									