

Well Name: Andrews 26-13

Surface Location: Andrews 26-23 Pad Sec.26-T7N-R65W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4871.0
Northing 1441084.58 Easting 3240505.67 Latitude 40.540956 Longitude -104.634644 Slot
Original Well Elev WELL @ 4885.0ft (Original Well Elev)

+N/-S +E/-W
0.0 0.0

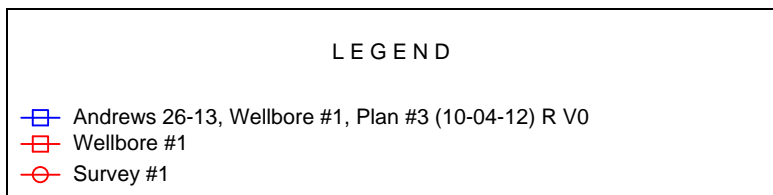
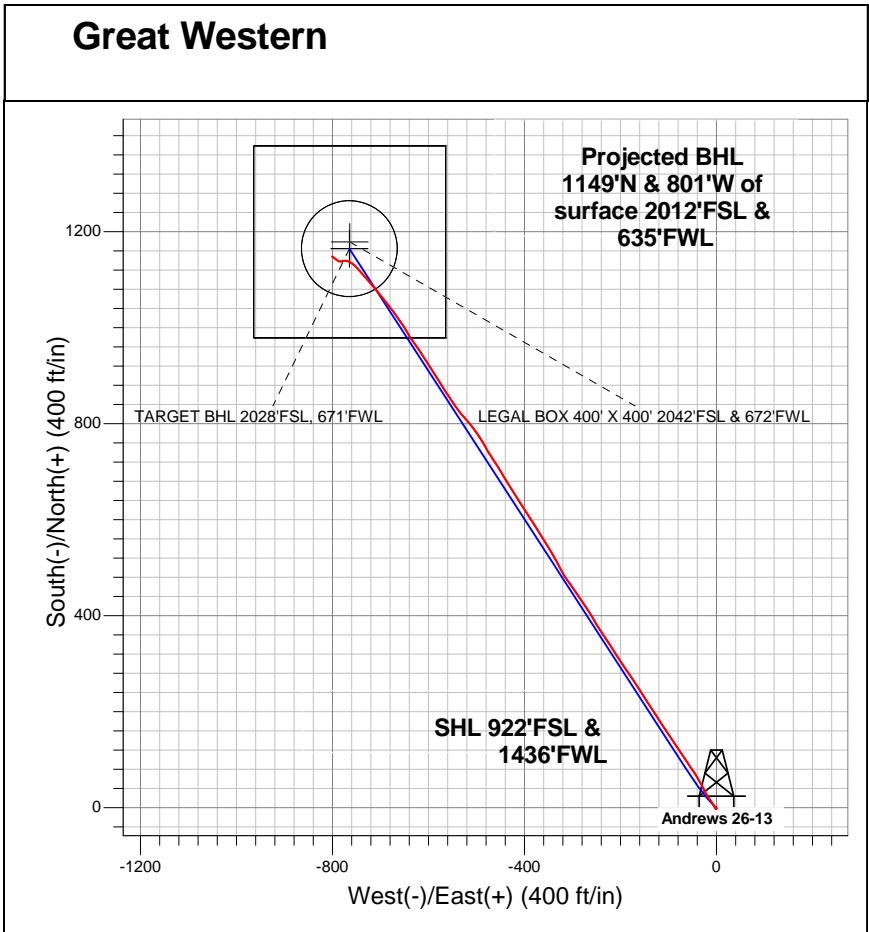
Northing
1441084.58

Easting
3240505.67

Latitude
40.540956

Longitude
-104.634644

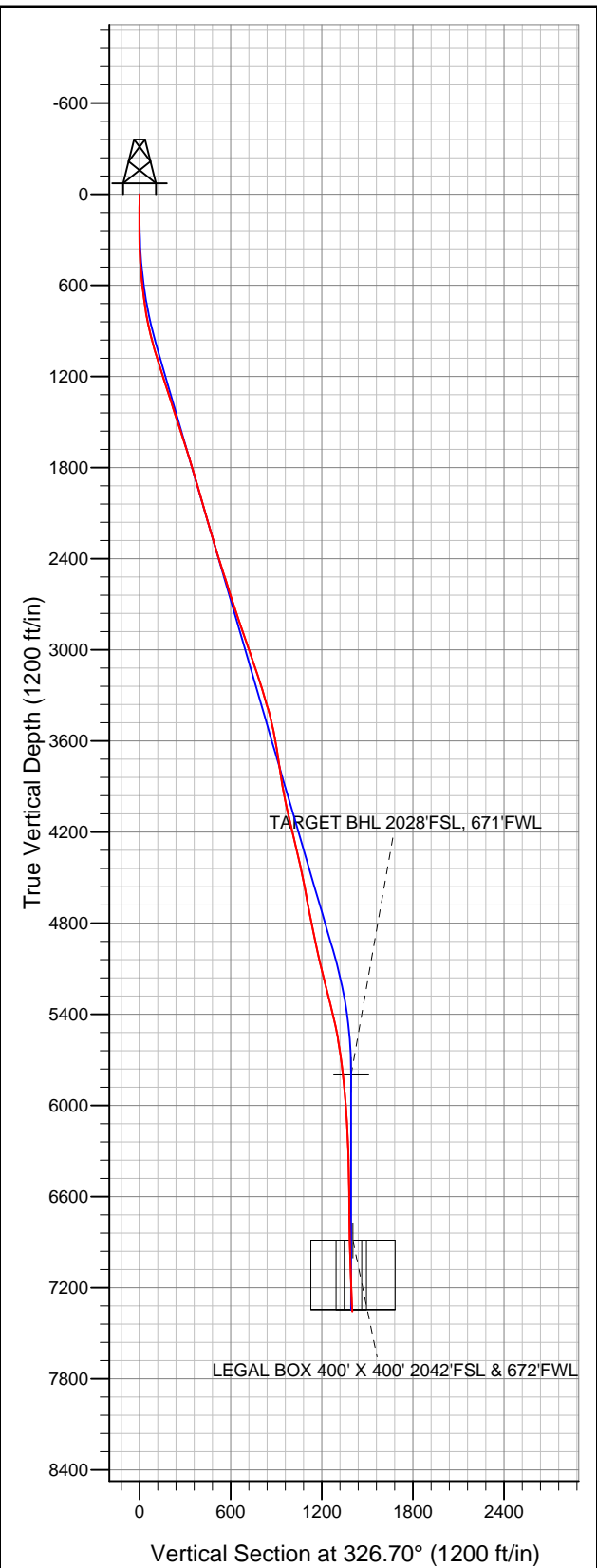
Slot



Final Survey Plot

Projected Final Survey -
7535'MD & 7356'TVD @ 1400'VS
2.70 deg Inc 307.00 deg AZ

Project: SEC.26-T7N-R65W
Site: Andrews 26-23 Pad Sec.26-T7N-R65W
Well: Andrews 26-13
Plan: Wellbore #1





Directional

Great Western

SEC.26-T7N-R65W

Andrews 26-23 Pad Sec.26-T7N-R65W

Andrews 26-13

Wellbore #1

Survey: Survey #1

Standard Survey Report

11 October, 2012

Company:	Great Western	Local Co-ordinate Reference:	Well Andrews 26-13
Project:	SEC.26-T7N-R65W	TVD Reference:	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	MD Reference:	WELL @ 4885.0ft (Original Well Elev)
Well:	Andrews 26-13	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.26-T7N-R65W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Andrews 26-23 Pad Sec.26-T7N-R65W				
Site Position:		Northing:	1,441,120.20ft	Latitude:	40.541053
From:	Lat/Long	Easting:	3,240,533.12ft	Longitude:	-104.634544
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.56 °

Well	Andrews 26-13					
Well Position	+N/-S	0.0 ft	Northing:	1,441,084.58 ft	Latitude:	40.540956
	+E/-W	0.0 ft	Easting:	3,240,505.67 ft	Longitude:	-104.634644
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,871.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/4/2012	8.63	67.14	53,081

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	326.70	

Survey Program	Date	10/11/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
88.0	7,535.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
88.0	1.20	175.10	88.0	-0.9	0.1	-0.8	1.36	1.36	0.00	
180.0	0.90	217.30	180.0	-2.5	-0.3	-1.9	0.88	-0.33	45.87	
272.0	0.70	273.00	272.0	-3.0	-1.3	-1.8	0.83	-0.22	60.54	
363.0	2.00	336.30	362.9	-1.5	-2.5	0.1	1.98	1.43	69.56	
453.0	4.00	334.70	452.8	2.8	-4.4	4.7	2.22	2.22	-1.78	
544.0	5.20	322.20	543.5	8.9	-8.3	12.0	1.71	1.32	-13.74	
635.0	6.90	324.90	634.0	16.6	-14.0	21.6	1.89	1.87	2.97	
689.0	7.70	328.20	687.6	22.3	-17.8	28.4	1.67	1.48	6.11	
727.0	8.20	329.80	725.2	26.9	-20.5	33.7	1.44	1.32	4.21	
821.0	10.80	332.80	817.9	40.5	-27.9	49.1	2.81	2.77	3.19	
916.0	13.20	330.80	910.8	57.9	-37.2	68.8	2.56	2.53	-2.11	
1,011.0	15.30	325.60	1,002.9	77.7	-49.6	92.2	2.59	2.21	-5.47	

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Well:	Andrews 26-13	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,105.0	17.80	326.10	1,093.0	99.8	-64.6	118.9	2.66	2.66	0.53	
1,200.0	18.20	325.90	1,183.4	124.2	-81.0	148.3	0.43	0.42	-0.21	
1,295.0	17.90	326.30	1,273.7	148.6	-97.5	177.7	0.34	-0.32	0.42	
1,389.0	17.40	326.80	1,363.3	172.4	-113.2	206.2	0.56	-0.53	0.53	
1,484.0	18.40	327.00	1,453.7	196.9	-129.1	235.4	1.05	1.05	0.21	
1,578.0	17.90	327.30	1,543.0	221.5	-145.0	264.7	0.54	-0.53	0.32	
1,673.0	17.30	327.20	1,633.5	245.6	-160.5	293.4	0.63	-0.63	-0.11	
1,768.0	17.80	326.50	1,724.1	269.6	-176.2	322.1	0.57	0.53	-0.74	
1,862.0	16.40	325.90	1,814.0	292.6	-191.6	349.7	1.50	-1.49	-0.64	
1,960.0	16.40	325.90	1,908.0	315.5	-207.1	377.4	0.00	0.00	0.00	
2,054.0	16.20	328.20	1,998.2	337.6	-221.4	403.8	0.72	-0.21	2.45	
2,149.0	15.90	325.60	2,089.5	359.6	-235.8	430.0	0.82	-0.32	-2.74	
2,244.0	15.60	329.60	2,180.9	381.4	-249.6	455.8	1.19	-0.32	4.21	
2,338.0	16.80	328.60	2,271.2	403.9	-263.1	482.0	1.31	1.28	-1.06	
2,433.0	17.00	325.40	2,362.1	427.0	-278.1	509.6	1.00	0.21	-3.37	
2,528.0	18.40	324.90	2,452.6	450.7	-294.6	538.5	1.48	1.47	-0.53	
2,622.0	17.40	325.20	2,542.0	474.4	-311.2	567.3	1.07	-1.06	0.32	
2,717.0	17.50	332.80	2,632.7	498.8	-325.8	595.7	2.40	0.11	8.00	
2,812.0	18.90	330.00	2,722.9	524.8	-340.0	625.3	1.74	1.47	-2.95	
2,906.0	18.40	327.90	2,812.0	550.5	-355.5	655.3	0.89	-0.53	-2.23	
3,001.0	18.80	327.90	2,902.0	576.2	-371.6	685.6	0.42	0.42	0.00	
3,095.0	18.60	328.40	2,991.1	601.8	-387.5	715.8	0.27	-0.21	0.53	
3,190.0	20.50	326.80	3,080.6	628.6	-404.6	747.5	2.08	2.00	-1.68	
3,285.0	17.60	326.50	3,170.4	654.5	-421.6	778.6	3.05	-3.05	-0.32	
3,381.0	16.70	330.10	3,262.1	678.6	-436.5	806.8	1.45	-0.94	3.75	
3,475.0	17.30	328.00	3,352.0	702.2	-450.6	834.3	0.91	0.64	-2.23	
3,570.0	14.20	326.50	3,443.4	723.9	-464.6	860.1	3.29	-3.26	-1.58	
3,665.0	11.50	328.40	3,536.0	741.7	-476.0	881.2	2.88	-2.84	2.00	
3,759.0	10.10	333.00	3,628.4	757.0	-484.6	898.8	1.75	-1.49	4.89	
3,854.0	8.50	324.50	3,722.1	770.1	-492.5	914.0	2.22	-1.68	-8.95	
3,949.0	8.10	325.60	3,816.1	781.4	-500.3	927.8	0.45	-0.42	1.16	
4,043.0	10.10	322.80	3,908.9	793.4	-509.1	942.6	2.18	2.13	-2.98	
4,138.0	11.70	318.90	4,002.2	807.3	-520.4	960.5	1.85	1.68	-4.11	
4,233.0	13.00	319.80	4,095.0	822.7	-533.7	980.6	1.38	1.37	0.95	
4,327.0	14.60	325.70	4,186.3	840.6	-547.2	1,003.0	2.26	1.70	6.28	
4,422.0	12.80	328.00	4,278.6	859.4	-559.5	1,025.4	1.98	-1.89	2.42	
4,517.0	12.80	327.00	4,371.2	877.1	-570.8	1,046.5	0.23	0.00	-1.05	
4,611.0	12.50	327.50	4,463.0	894.4	-581.9	1,067.1	0.34	-0.32	0.53	
4,706.0	9.80	327.00	4,556.2	909.9	-591.9	1,085.4	2.84	-2.84	-0.53	
4,802.0	10.80	328.70	4,650.6	924.4	-601.0	1,102.6	1.09	1.04	1.77	
4,896.0	11.00	326.10	4,742.9	939.4	-610.6	1,120.4	0.56	0.21	-2.77	
4,991.0	11.90	327.20	4,836.0	955.2	-620.9	1,139.2	0.97	0.95	1.16	
5,086.0	12.00	322.80	4,929.0	971.3	-632.2	1,158.9	0.96	0.11	-4.63	
5,180.0	13.20	330.00	5,020.7	988.3	-643.5	1,179.3	2.10	1.28	7.66	
5,275.0	13.50	327.70	5,113.1	1,007.1	-654.8	1,201.3	0.64	0.32	-2.42	
5,370.0	13.50	322.20	5,205.5	1,025.2	-667.5	1,223.4	1.35	0.00	-5.79	
5,464.0	15.00	322.10	5,296.6	1,043.5	-681.7	1,246.5	1.60	1.60	-0.11	
5,559.0	13.60	323.80	5,388.7	1,062.2	-695.9	1,269.9	1.54	-1.47	1.79	
5,653.0	12.00	318.90	5,480.3	1,078.5	-708.8	1,290.6	2.06	-1.70	-5.21	
5,748.0	9.00	319.10	5,573.7	1,091.6	-720.2	1,307.8	3.16	-3.16	0.21	
5,843.0	8.00	318.50	5,667.7	1,102.1	-729.4	1,321.7	1.06	-1.05	-0.63	
5,937.0	6.90	319.60	5,760.9	1,111.3	-737.4	1,333.7	1.18	-1.17	1.17	
5,982.5	6.56	319.10	5,806.1	1,115.4	-740.9	1,339.0	0.75	-0.74	-1.09	
TARGET BHL 2028'FSL, 671'FWL										

