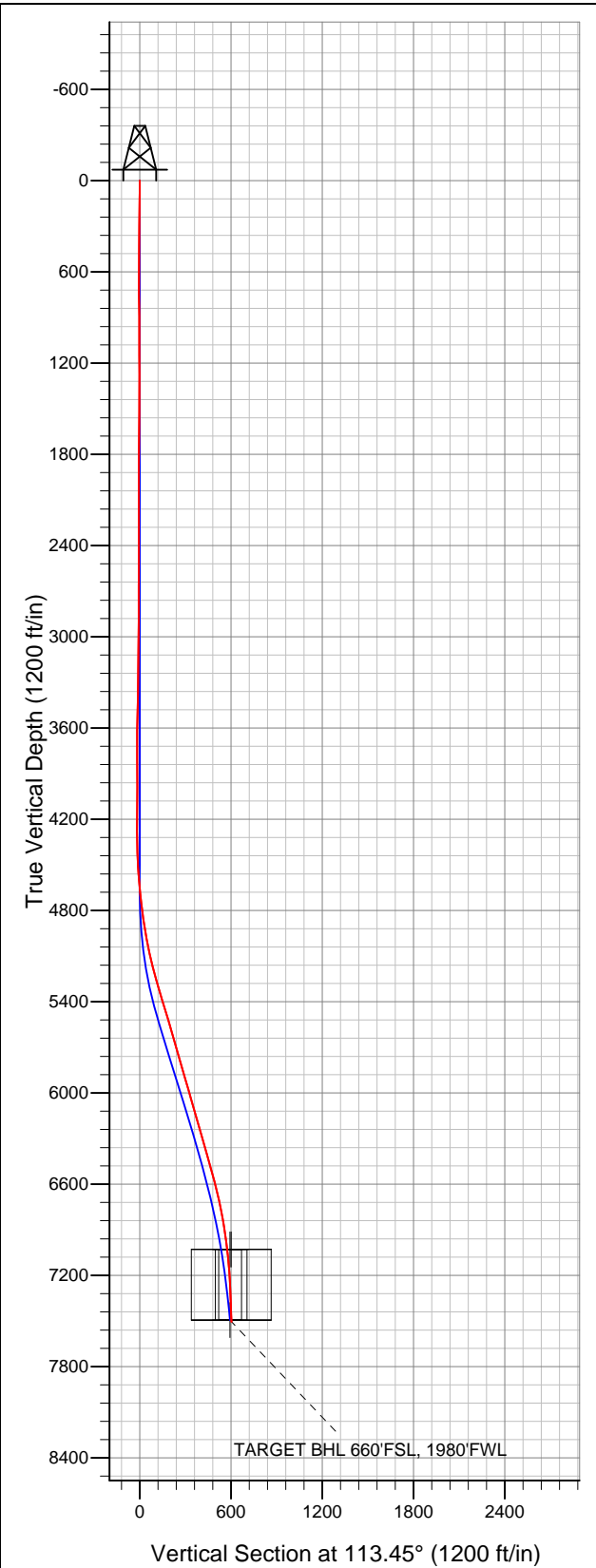


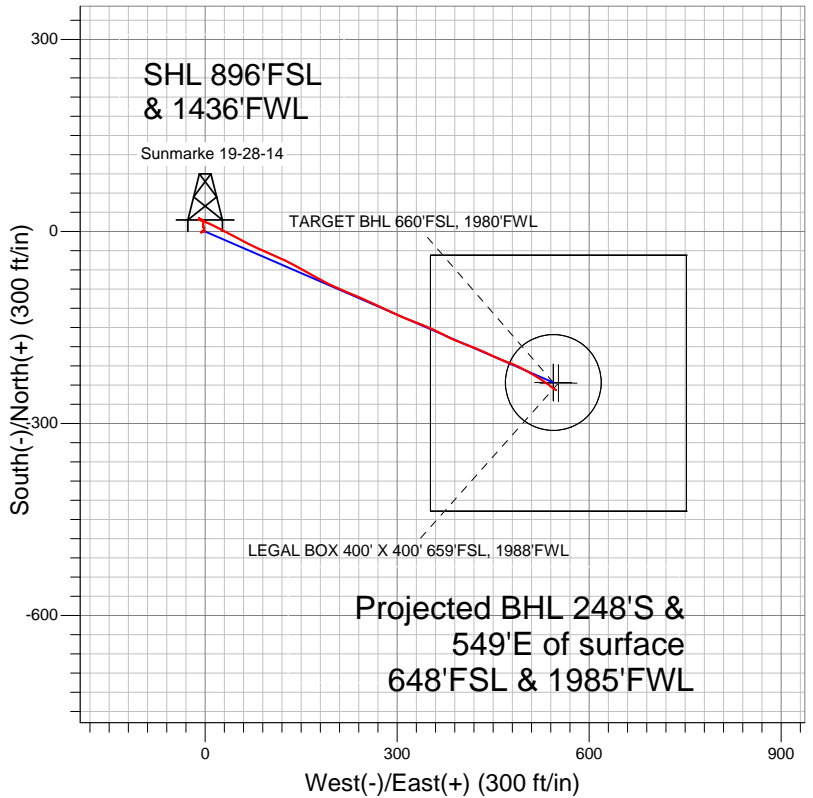
Well Name: Sunmarke 19-28-14

Surface Location: Sunmarke 19-28-11 Pad Sec.28-T4N-R67W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4975.0

+N/-S 0.0	+E/-W 0.0	Northing 1345093.63	Easting 3167403.99	Latitude 40.279127	Longitude -104.899996	Slot
		Original Well Elev	WELL @ 4989.0ft (Original Well Elev)			



KP KAUFFMAN



LEGEND

- Survey #1
- Sunmarke 19-28-14, Wellbore #1, Plan #1 (3-09-12)R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7579'MD & 7504'TVD @ 602'VS
1.60 deg Inc 123.90 deg AZ

Project: SEC.28-T4N-R67W
Site: Sunmarke 19-28-11 Pad Sec.28-T4N-R67W
Well: Sunmarke 19-28-14
Plan: Wellbore #1



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SEC.28-T4N-R67W

Sunmarke 19-28-11 Pad Sec.28-T4N-R67W

Sunmarke 19-28-14

Wellbore #1

Survey: Survey #1

Standard Survey Report

19 March, 2012

Company:	KP KAUFFMAN	Local Co-ordinate Reference:	Well Sunmarke 19-28-14
Project:	SEC.28-T4N-R67W	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site:	Sunmarke 19-28-11 Pad Sec.28-T4N-R67W	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Well:	Sunmarke 19-28-14	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.28-T4N-R67W, 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		Sunmarke 19-28-11 Pad Sec.28-T4N-R67W			
Site Position:		Northing:	1,345,122.23ft	Latitude:	40.279206
From:	Lat/Long	Easting:	3,167,375.90ft	Longitude:	-104.900096
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.39 °

Well	Sunmarke 19-28-14					
Well Position	+N/-S	0.0 ft	Northing:	1,345,093.63 ft	Latitude:	40.279127
	+E/-W	0.0 ft	Easting:	3,167,403.99 ft	Longitude:	-104.899996
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,975.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/9/2012	8.83	66.91	52,975

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	113.45	

Survey Program		Date	3/19/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.0	7,579.0	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
111.0	1.70	257.50	111.0	-0.4	-1.6	-1.3	1.53	1.53	0.00
202.0	0.90	265.40	202.0	-0.7	-3.6	-3.1	0.90	-0.88	8.68
293.0	0.30	247.40	293.0	-0.9	-4.6	-3.9	0.68	-0.66	-19.78
384.0	0.30	242.40	384.0	-1.1	-5.0	-4.2	0.03	0.00	-5.49
475.0	0.50	252.30	475.0	-1.3	-5.6	-4.6	0.23	0.22	10.88
570.0	0.30	240.90	569.9	-1.5	-6.2	-5.1	0.23	-0.21	-12.00
665.0	0.40	62.70	664.9	-1.5	-6.1	-5.0	0.74	0.11	-187.58
697.0	0.50	45.30	696.9	-1.4	-5.9	-4.9	0.53	0.31	-54.38
747.0	0.50	45.30	746.9	-1.0	-5.6	-4.7	0.00	0.00	0.00
767.0	0.70	52.70	766.9	-0.9	-5.5	-4.6	1.07	1.00	37.00
894.0	0.80	29.90	893.9	0.3	-4.4	-4.2	0.25	0.08	-17.95
1,020.0	0.60	58.40	1,019.9	1.4	-3.4	-3.7	0.31	-0.16	22.62

Company:	KP KAUFFMAN	Local Co-ordinate Reference:	Well Sunmarke 19-28-14
Project:	SEC.28-T4N-R67W	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site:	Sunmarke 19-28-11 Pad Sec.28-T4N-R67W	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Well:	Sunmarke 19-28-14	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)
1,147.0	0.40	36.30	1,146.9	2.1	-2.6	-3.2	0.22	-0.16	-17.40
1,273.0	0.50	40.80	1,272.9	2.9	-1.9	-2.9	0.08	0.08	3.57
1,400.0	0.90	5.80	1,399.9	4.3	-1.5	-3.1	0.45	0.31	-27.56
1,526.0	0.30	335.90	1,525.9	5.6	-1.5	-3.6	0.52	-0.48	-23.73
1,653.0	0.60	324.30	1,652.9	6.5	-2.0	-4.4	0.25	0.24	-9.13
1,780.0	0.40	283.00	1,779.9	7.1	-2.9	-5.5	0.31	-0.16	-32.52
1,906.0	0.10	216.50	1,905.9	7.1	-3.4	-5.9	0.29	-0.24	-52.78
2,064.0	0.10	249.00	2,063.9	6.9	-3.6	-6.0	0.04	0.00	20.57
2,159.0	0.20	313.10	2,158.9	7.0	-3.8	-6.3	0.19	0.11	67.47
2,286.0	0.20	59.80	2,285.9	7.3	-3.7	-6.3	0.25	0.00	84.02
2,412.0	0.40	43.60	2,411.9	7.7	-3.2	-6.0	0.17	0.16	-12.86
2,539.0	1.00	5.80	2,538.9	9.1	-2.8	-6.2	0.57	0.47	-29.76
2,665.0	1.20	353.80	2,664.9	11.5	-2.9	-7.2	0.24	0.16	-9.52
2,792.0	0.40	20.00	2,791.8	13.3	-2.9	-7.9	0.68	-0.63	20.63
2,918.0	0.60	18.10	2,917.8	14.3	-2.5	-8.0	0.16	0.16	-1.51
3,045.0	0.60	357.90	3,044.8	15.6	-2.3	-8.3	0.17	0.00	-15.91
3,171.0	0.70	328.20	3,170.8	16.9	-2.7	-9.3	0.28	0.08	-23.57
3,297.0	1.10	301.20	3,296.8	18.2	-4.2	-11.1	0.45	0.32	-21.43
3,424.0	0.90	284.20	3,423.8	19.1	-6.2	-13.3	0.28	-0.16	-13.39
3,550.0	1.30	288.80	3,549.8	19.8	-8.5	-15.7	0.32	0.32	3.65
3,677.0	0.30	31.20	3,676.8	20.5	-9.7	-17.1	1.10	-0.79	80.63
3,803.0	0.10	250.90	3,802.8	20.8	-9.6	-17.1	0.30	-0.16	-111.35
3,930.0	0.30	349.00	3,929.8	21.1	-9.8	-17.4	0.26	0.16	77.24
4,056.0	0.70	132.00	4,055.7	20.9	-9.3	-16.8	0.76	0.32	113.49
4,183.0	0.70	238.10	4,182.7	20.0	-9.4	-16.5	0.88	0.00	83.54
4,309.0	0.60	228.30	4,308.7	19.1	-10.5	-17.3	0.12	-0.08	-7.78
4,436.0	1.50	110.20	4,435.7	18.1	-9.5	-15.9	1.46	0.71	-92.99
4,562.0	4.80	108.20	4,561.5	15.9	-2.9	-9.0	2.62	2.62	-1.59
4,689.0	5.80	115.50	4,688.0	11.5	7.9	2.7	0.95	0.79	5.75
4,815.0	7.50	117.90	4,813.1	4.9	21.0	17.3	1.37	1.35	1.90
4,942.0	10.10	116.80	4,938.6	-4.0	38.2	36.7	2.05	2.05	-0.87
5,068.0	11.40	118.10	5,062.4	-14.9	59.1	60.1	1.05	1.03	1.03
5,195.0	14.60	114.70	5,186.1	-27.5	84.7	88.6	2.59	2.52	-2.68
5,321.0	16.00	113.20	5,307.7	-41.0	115.1	121.9	1.15	1.11	-1.19
5,448.0	17.50	120.00	5,429.3	-57.4	147.7	158.4	1.94	1.18	5.35
5,574.0	17.00	118.10	5,549.6	-75.6	180.4	195.5	0.60	-0.40	-1.51
5,701.0	15.30	112.50	5,671.6	-90.7	212.2	230.8	1.81	-1.34	-4.41
5,827.0	16.50	113.70	5,792.8	-104.3	244.0	265.3	0.99	0.95	0.95
5,954.0	16.70	116.30	5,914.5	-119.6	276.8	301.6	0.61	0.16	2.05
6,080.0	15.30	112.50	6,035.6	-134.0	308.4	336.3	1.39	-1.11	-3.02
6,207.0	16.20	110.90	6,157.8	-146.7	340.5	370.7	0.79	0.71	-1.26
6,333.0	16.30	118.00	6,278.8	-161.3	372.5	405.9	1.58	0.08	5.63
6,460.0	15.40	109.50	6,401.0	-175.3	404.1	440.5	1.96	-0.71	-6.69
6,587.0	15.80	115.60	6,523.3	-188.4	435.6	474.6	1.33	0.31	4.80
6,713.0	13.50	111.20	6,645.2	-201.1	464.8	506.5	2.03	-1.83	-3.49
6,840.0	11.50	114.50	6,769.2	-211.7	490.2	533.9	1.67	-1.57	2.60
6,966.0	8.70	123.30	6,893.3	-222.2	509.6	555.9	2.53	-2.22	6.98
7,093.0	6.90	118.80	7,019.1	-231.1	524.3	572.9	1.50	-1.42	-3.54
7,105.2	6.71	119.50	7,031.2	-231.8	525.5	574.4	1.70	-1.56	5.72
TARGET CIRCLE 660'FSL, 1980'FWL									
7,105.6	6.70	119.52	7,031.6	-231.9	525.6	574.4	1.70	-1.56	5.88
LEGAL BOX 400' X 400' 659'FSL, 1988'FWL									
7,219.0	5.00	128.50	7,144.4	-238.2	535.2	585.8	1.70	-1.50	7.92
7,346.0	2.70	127.10	7,271.1	-243.4	541.9	594.0	1.81	-1.81	-1.10

Company:	KP KAUFFMAN	Local Co-ordinate Reference:	Well Sunmarke 19-28-14
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Survey									
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7,472.0	1.80	123.80	7,397.0	-246.3	545.9	598.9	0.72	-0.71	-2.62
7,536.0	1.60	123.90	7,461.0	-247.4	547.5	600.7	0.31	-0.31	0.16
7,568.7	1.60	123.90	7,493.7	-247.9	548.3	601.6	0.00	0.00	0.00
TARGET BHL 660'FSL, 1980'FWL									
7,579.0	1.60	123.90	7,504.0	-248.1	548.5	601.9	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____