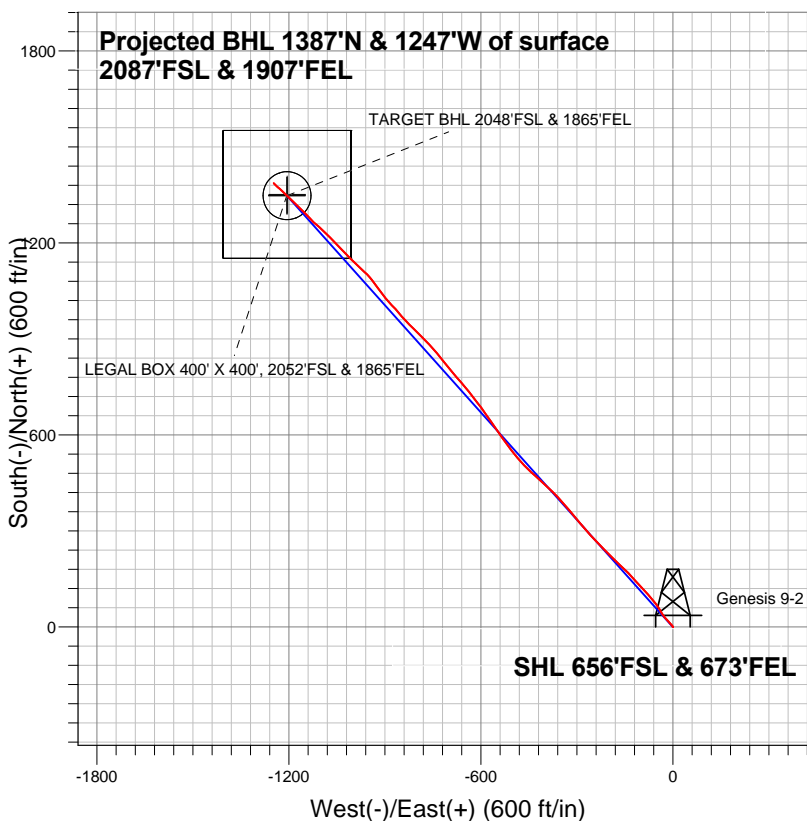


## KP KAUFFMAN



### LEGEND

- Genesis 9-2, Wellbore #1, Plan #2 (1-3-13) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
8015'MD & 7766'TVD @ 1865' VS  
4.3 deg Inc 314.0 deg AZ

Project: SEC.1-T5N-R67W  
Site: Genesis 9-1 Pad Sec.1-T5N-R67W  
Well: Genesis 9-2  
Plan: Wellbore #1



# **KP KAUFFMAN**

**SEC.1-T5N-R67W**

**Genesis 9-1 Pad Sec.1-T5N-R67W**

**Genesis 9-2**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**07 January, 2013**

<b>Company:</b>	KP KAUFFMAN	<b>Local Co-ordinate Reference:</b>	Well Genesis 9-2
<b>Project:</b>	SEC.1-T5N-R67W	<b>TVD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Site:</b>	Genesis 9-1 Pad Sec.1-T5N-R67W	<b>MD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Well:</b>	Genesis 9-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.1-T5N-R67W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Genesis 9-1 Pad Sec.1-T5N-R67W				
Site Position:		Northing:	1,397,750.69ft	Latitude:	40.423320
From:	Lat/Long	Easting:	3,185,230.25ft	Longitude:	-104.834690
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.43 °

Well	Genesis 9-2					
Well Position	+N/-S	0.0 ft	Northing:	1,397,750.33 ft	Latitude:	40.423320
	+E/-W	0.0 ft	Easting:	3,185,185.70 ft	Longitude:	-104.834850
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,880.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/28/2012	8.70	67.01	52,974

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	318.19	

<b>Survey Program</b>	<b>Date</b>	1/7/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
78.0	8,015.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
78.0	0.70	134.20	78.0	-0.3	0.3	-0.5	0.90	0.90	0.00	
167.0	0.50	350.10	167.0	-0.3	0.7	-0.7	1.28	-0.22	-161.91	
255.0	2.20	331.30	255.0	1.5	-0.2	1.3	1.97	1.93	-21.36	
371.0	4.10	317.90	370.8	6.6	-4.1	7.6	1.75	1.64	-11.55	
497.0	6.90	318.80	496.2	15.6	-12.1	19.7	2.22	2.22	0.71	
540.0	7.10	317.00	538.9	19.5	-15.6	24.9	0.69	0.47	-4.19	
589.0	7.10	317.00	587.5	23.9	-19.7	31.0	0.00	0.00	0.00	
642.0	7.40	318.60	640.1	28.9	-24.2	37.7	0.68	0.57	3.02	
771.0	9.90	330.70	767.6	44.8	-35.1	56.8	2.39	1.94	9.38	
899.0	12.80	326.30	893.1	66.2	-48.4	81.6	2.36	2.27	-3.44	
1,027.0	15.30	317.20	1,017.3	90.4	-67.7	112.5	2.60	1.95	-7.11	
1,156.0	16.50	318.40	1,141.3	116.6	-91.5	147.8	0.96	0.93	0.93	

<b>Company:</b>	KP KAUFFMAN	<b>Local Co-ordinate Reference:</b>	Well Genesis 9-2
<b>Project:</b>	SEC.1-T5N-R67W	<b>TVD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Site:</b>	Genesis 9-1 Pad Sec.1-T5N-R67W	<b>MD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Well:</b>	Genesis 9-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
1,284.0	15.90	318.60	1,264.3	143.3	-115.1	183.6	0.47	-0.47	0.16	
1,412.0	16.60	314.00	1,387.1	169.2	-139.9	219.3	1.14	0.55	-3.59	
1,540.0	15.90	314.60	1,510.0	194.2	-165.5	255.1	0.56	-0.55	0.47	
1,669.0	15.50	313.90	1,634.2	218.5	-190.5	289.9	0.34	-0.31	-0.54	
1,797.0	15.10	316.00	1,757.7	242.4	-214.4	323.6	0.53	-0.31	1.64	
1,925.0	16.20	316.10	1,880.9	267.2	-238.4	358.1	0.86	0.86	0.08	
2,053.0	15.70	317.40	2,004.0	292.9	-262.5	393.3	0.48	-0.39	1.02	
2,181.0	15.20	321.80	2,127.4	318.8	-284.6	427.3	1.00	-0.39	3.44	
2,309.0	15.60	318.10	2,250.8	344.8	-306.5	461.3	0.83	0.31	-2.89	
2,438.0	15.70	320.00	2,375.0	371.1	-329.3	496.1	0.40	0.08	1.47	
2,566.0	15.70	319.30	2,498.2	397.5	-351.7	530.7	0.15	0.00	-0.55	
2,696.0	16.70	313.00	2,623.1	423.5	-376.8	566.9	1.55	0.77	-4.85	
2,825.0	16.40	312.80	2,746.7	448.6	-403.7	603.5	0.24	-0.23	-0.16	
2,953.0	15.70	313.30	2,869.7	472.7	-429.6	638.7	0.56	-0.55	0.39	
3,081.0	15.80	313.00	2,992.9	496.5	-454.9	673.3	0.10	0.08	-0.23	
3,209.0	15.50	318.80	3,116.2	521.2	-479.0	707.8	1.24	-0.23	4.53	
3,337.0	15.70	323.50	3,239.5	548.0	-500.5	742.2	1.00	0.16	3.67	
3,466.0	15.00	322.50	3,363.9	575.3	-521.1	776.2	0.58	-0.54	-0.78	
3,594.0	16.00	325.60	3,487.2	603.0	-541.1	810.2	1.01	0.78	2.42	
3,723.0	18.20	324.90	3,610.5	634.1	-562.7	847.8	1.71	1.71	-0.54	
3,851.0	19.00	325.50	3,731.8	667.7	-586.0	888.4	0.64	0.63	0.47	
3,979.0	19.80	321.80	3,852.6	701.9	-611.3	930.7	1.15	0.63	-2.89	
4,107.0	18.60	321.90	3,973.5	735.0	-637.3	972.7	0.94	-0.94	0.08	
4,236.0	17.40	318.30	4,096.1	765.6	-662.8	1,012.5	1.27	-0.93	-2.79	
4,364.0	18.10	320.70	4,218.0	795.3	-688.1	1,051.5	0.79	0.55	1.88	
4,492.0	17.90	321.10	4,339.8	826.0	-713.1	1,091.0	0.18	-0.16	0.31	
4,619.0	17.10	320.70	4,460.9	855.6	-737.1	1,129.1	0.64	-0.63	-0.31	
4,747.0	15.90	316.00	4,583.6	882.8	-761.2	1,165.5	1.40	-0.94	-3.67	
4,876.0	15.70	315.30	4,707.8	907.9	-785.8	1,200.6	0.21	-0.16	-0.54	
5,004.0	16.50	314.60	4,830.7	933.0	-810.9	1,236.0	0.64	0.63	-0.55	
5,132.0	14.90	316.10	4,954.0	957.6	-835.3	1,270.6	1.29	-1.25	1.17	
5,261.0	14.20	320.70	5,078.8	981.8	-856.8	1,303.0	1.05	-0.54	3.57	
5,389.0	14.90	317.20	5,202.7	1,006.0	-877.9	1,335.1	0.88	0.55	-2.73	
5,517.0	16.40	319.50	5,326.0	1,031.8	-900.8	1,369.6	1.27	1.17	1.80	
5,645.0	13.50	327.00	5,449.6	1,058.1	-920.7	1,402.5	2.72	-2.27	5.86	
5,774.0	15.60	321.40	5,574.5	1,084.3	-939.7	1,434.7	1.96	1.63	-4.34	
5,902.0	16.10	313.20	5,697.7	1,109.9	-963.4	1,469.5	1.79	0.39	-6.41	
6,031.0	15.00	312.30	5,821.9	1,133.4	-988.8	1,504.0	0.87	-0.85	-0.70	
6,159.0	15.10	317.00	5,945.5	1,156.7	-1,012.4	1,537.1	0.96	0.08	3.67	
6,287.0	16.40	316.00	6,068.7	1,181.9	-1,036.4	1,571.8	1.04	1.02	-0.78	
6,415.0	16.70	316.10	6,191.4	1,208.2	-1,061.7	1,608.3	0.24	0.23	0.08	
6,544.0	16.10	312.80	6,315.2	1,233.7	-1,087.6	1,644.6	0.86	-0.47	-2.56	
6,672.0	13.50	311.20	6,438.9	1,255.6	-1,111.9	1,677.1	2.06	-2.03	-1.25	
6,800.0	14.30	316.30	6,563.2	1,276.8	-1,134.1	1,707.7	1.14	0.63	3.98	
6,929.0	11.20	315.30	6,689.0	1,297.3	-1,153.9	1,736.2	2.41	-2.40	-0.78	
7,057.0	10.80	314.70	6,814.6	1,314.5	-1,171.2	1,760.6	0.33	-0.31	-0.47	
7,087.1	10.26	314.29	6,844.2	1,318.4	-1,175.1	1,766.1	1.80	-1.79	-1.35	
TARGET CIRCLE 2048'FSL & 1865'FEL										
7,087.3	10.26	314.29	6,844.5	1,318.4	-1,175.1	1,766.1	0.00	0.00	0.00	
LEGAL BOX 400' X 400', 2052'FSL & 1865'FEL										
7,186.0	8.50	312.60	6,941.8	1,329.5	-1,186.8	1,782.1	1.81	-1.79	-1.72	
7,314.0	6.40	316.30	7,068.7	1,341.1	-1,198.7	1,798.7	1.68	-1.64	2.89	
7,442.0	6.30	314.40	7,195.9	1,351.1	-1,208.6	1,812.8	0.18	-0.08	-1.48	
7,571.0	6.10	314.40	7,324.2	1,360.9	-1,218.6	1,826.7	0.16	-0.16	0.00	

<b>Company:</b>	KP KAUFFMAN	<b>Local Co-ordinate Reference:</b>	Well Genesis 9-2
<b>Project:</b>	SEC.1-T5N-R67W	<b>TVD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Site:</b>	Genesis 9-1 Pad Sec.1-T5N-R67W	<b>MD Reference:</b>	WELL @ 4893.0ft (RKB Ensign 226-13')
<b>Well:</b>	Genesis 9-2	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
7,699.0	5.50	308.80	7,451.5	1,369.5	-1,228.2	1,839.6	0.64	-0.47	-4.38	
7,744.6	5.14	310.26	7,496.9	1,372.2	-1,231.5	1,843.7	0.84	-0.79	3.21	
TARGET BHL 2048'FSL & 1865'FEL										
7,827.0	4.50	313.50	7,579.0	1,376.8	-1,236.6	1,850.6	0.84	-0.78	3.93	
7,971.0	4.30	314.00	7,722.6	1,384.4	-1,244.6	1,861.6	0.14	-0.14	0.35	
8,015.0	4.30	314.00	7,766.5	1,386.7	-1,247.0	1,864.9	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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