



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site:</b>	S17-T4N-R66W (Hodgson)	<b>North Reference:</b>	True
<b>Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

<b>Project</b>	Wattenberg		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		S17-T4N-R66W (Hodgson)			
Site Position:		Northing:	1,359,519.21 ft	Latitude:	40.318220
From:	Lat/Long	Easting:	3,192,341.49 ft	Longitude:	-104.810240
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.45 °

Well	Hodgson 17-5H					
Well Position	+N/-S	0.0 ft	Northing:	1,359,420.91 ft	Latitude:	40.317950
	+E/-W	0.0 ft	Easting:	3,192,350.62 ft	Longitude:	-104.810210
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,707.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/12/2013	8.60	66.91	52,866

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<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	102.75

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,160.2	12.10	180.49	2,151.2	-127.3	-1.1	1.00	1.00	0.00	180.49	
6,637.3	12.10	180.49	6,528.8	-1,065.9	-9.1	0.00	0.00	0.00	0.00	
7,542.1	90.39	90.00	7,089.8	-1,187.1	567.7	10.00	8.65	-10.00	-90.40	
12,072.1	90.39	90.00	7,059.0	-1,187.1	5,097.6	0.00	0.00	0.00	0.00	Hodgson 17-5H PBHL

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<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site:</b>	S17-T4N-R66W (Hodgson)	<b>North Reference:</b>	True
<b>Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	KOP @ 950'
1,000.0	0.50	180.49	1,000.0	-0.2	0.0	0.0	1.00	1.00	
1,100.0	1.50	180.49	1,100.0	-2.0	0.0	0.4	1.00	1.00	
1,200.0	2.50	180.49	1,199.9	-5.5	0.0	1.2	1.00	1.00	
1,300.0	3.50	180.49	1,299.8	-10.7	-0.1	2.3	1.00	1.00	
1,400.0	4.50	180.49	1,399.5	-17.7	-0.2	3.8	1.00	1.00	
1,500.0	5.50	180.49	1,499.2	-26.4	-0.2	5.6	1.00	1.00	
1,600.0	6.50	180.49	1,598.6	-36.8	-0.3	7.8	1.00	1.00	
1,700.0	7.50	180.49	1,697.9	-49.0	-0.4	10.4	1.00	1.00	
1,800.0	8.50	180.49	1,796.9	-62.9	-0.5	13.4	1.00	1.00	
1,900.0	9.50	180.49	1,895.7	-78.6	-0.7	16.7	1.00	1.00	
2,000.0	10.50	180.49	1,994.1	-95.9	-0.8	20.4	1.00	1.00	
2,100.0	11.50	180.49	2,092.3	-115.0	-1.0	24.4	1.00	1.00	
2,160.2	12.10	180.49	2,151.2	-127.3	-1.1	27.0	1.00	1.00	EOB; Inc=12.1°
2,200.0	12.10	180.49	2,190.1	-135.7	-1.2	28.8	0.00	0.00	
2,300.0	12.10	180.49	2,287.9	-156.6	-1.3	33.3	0.00	0.00	
2,400.0	12.10	180.49	2,385.7	-177.6	-1.5	37.7	0.00	0.00	
2,500.0	12.10	180.49	2,483.5	-198.6	-1.7	42.2	0.00	0.00	
2,600.0	12.10	180.49	2,581.2	-219.5	-1.9	46.6	0.00	0.00	
2,700.0	12.10	180.49	2,679.0	-240.5	-2.0	51.1	0.00	0.00	
2,800.0	12.10	180.49	2,776.8	-261.5	-2.2	55.5	0.00	0.00	
2,900.0	12.10	180.49	2,874.6	-282.4	-2.4	60.0	0.00	0.00	
3,000.0	12.10	180.49	2,972.4	-303.4	-2.6	64.4	0.00	0.00	
3,100.0	12.10	180.49	3,070.1	-324.4	-2.8	68.9	0.00	0.00	
3,200.0	12.10	180.49	3,167.9	-345.3	-2.9	73.3	0.00	0.00	
3,300.0	12.10	180.49	3,265.7	-366.3	-3.1	77.8	0.00	0.00	
3,400.0	12.10	180.49	3,363.5	-387.2	-3.3	82.2	0.00	0.00	
3,500.0	12.10	180.49	3,461.2	-408.2	-3.5	86.7	0.00	0.00	
3,600.0	12.10	180.49	3,559.0	-429.2	-3.7	91.1	0.00	0.00	
3,700.0	12.10	180.49	3,656.8	-450.1	-3.8	95.6	0.00	0.00	
3,800.0	12.10	180.49	3,754.6	-471.1	-4.0	100.0	0.00	0.00	
3,900.0	12.10	180.49	3,852.4	-492.1	-4.2	104.5	0.00	0.00	
4,000.0	12.10	180.49	3,950.1	-513.0	-4.4	108.9	0.00	0.00	
4,100.0	12.10	180.49	4,047.9	-534.0	-4.5	113.4	0.00	0.00	
4,200.0	12.10	180.49	4,145.7	-555.0	-4.7	117.8	0.00	0.00	
4,300.0	12.10	180.49	4,243.5	-575.9	-4.9	122.3	0.00	0.00	
4,400.0	12.10	180.49	4,341.2	-596.9	-5.1	126.7	0.00	0.00	
4,500.0	12.10	180.49	4,439.0	-617.9	-5.3	131.2	0.00	0.00	
4,600.0	12.10	180.49	4,536.8	-638.8	-5.4	135.6	0.00	0.00	
4,700.0	12.10	180.49	4,634.6	-659.8	-5.6	140.1	0.00	0.00	
4,800.0	12.10	180.49	4,732.4	-680.7	-5.8	144.5	0.00	0.00	
4,900.0	12.10	180.49	4,830.1	-701.7	-6.0	149.0	0.00	0.00	

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<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site:</b>	S17-T4N-R66W (Hodgson)	<b>North Reference:</b>	True
<b>Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
5,000.0	12.10	180.49	4,927.9	-722.7	-6.2	153.4	0.00	0.00	
5,100.0	12.10	180.49	5,025.7	-743.6	-6.3	157.9	0.00	0.00	
5,200.0	12.10	180.49	5,123.5	-764.6	-6.5	162.3	0.00	0.00	
5,300.0	12.10	180.49	5,221.2	-785.6	-6.7	166.8	0.00	0.00	
5,400.0	12.10	180.49	5,319.0	-806.5	-6.9	171.2	0.00	0.00	
5,500.0	12.10	180.49	5,416.8	-827.5	-7.0	175.7	0.00	0.00	
5,600.0	12.10	180.49	5,514.6	-848.5	-7.2	180.2	0.00	0.00	
5,700.0	12.10	180.49	5,612.4	-869.4	-7.4	184.6	0.00	0.00	
5,800.0	12.10	180.49	5,710.1	-890.4	-7.6	189.1	0.00	0.00	
5,900.0	12.10	180.49	5,807.9	-911.4	-7.8	193.5	0.00	0.00	
6,000.0	12.10	180.49	5,905.7	-932.3	-7.9	198.0	0.00	0.00	
6,100.0	12.10	180.49	6,003.5	-953.3	-8.1	202.4	0.00	0.00	
6,200.0	12.10	180.49	6,101.2	-974.2	-8.3	206.9	0.00	0.00	
6,300.0	12.10	180.49	6,199.0	-995.2	-8.5	211.3	0.00	0.00	
6,400.0	12.10	180.49	6,296.8	-1,016.2	-8.7	215.8	0.00	0.00	
6,500.0	12.10	180.49	6,394.6	-1,037.1	-8.8	220.2	0.00	0.00	
6,600.0	12.10	180.49	6,492.4	-1,058.1	-9.0	224.7	0.00	0.00	
6,637.3	12.10	180.49	6,528.8	-1,065.9	-9.1	226.3	0.00	0.00	Start build/turn @ 6637' MD
6,700.0	13.57	152.74	6,590.0	-1,079.0	-5.8	232.5	10.00	2.34	
6,800.0	20.11	125.92	6,685.8	-1,099.6	13.6	255.9	10.00	6.54	
6,900.0	28.67	113.17	6,776.9	-1,119.2	49.7	295.4	10.00	8.55	
7,000.0	37.89	106.07	6,860.4	-1,137.2	101.4	349.8	10.00	9.23	
7,100.0	47.40	101.46	6,933.9	-1,153.0	167.1	417.4	10.00	9.50	
7,200.0	57.04	98.08	6,995.1	-1,166.3	244.9	496.2	10.00	9.64	
7,300.0	66.75	95.37	7,042.2	-1,176.5	332.4	583.8	10.00	9.71	
7,400.0	76.50	93.03	7,073.6	-1,183.4	426.9	677.5	10.00	9.75	
7,500.0	86.27	90.88	7,088.6	-1,186.7	525.6	774.5	10.00	9.77	
7,542.1	90.39	90.00	7,089.8	-1,187.1	567.7	815.6	10.00	9.78	LP @ 7089' TVD; 90.39°
7,600.0	90.39	90.00	7,089.4	-1,187.1	625.6	872.1	0.00	0.00	
7,700.0	90.39	90.00	7,088.8	-1,187.1	725.6	969.6	0.00	0.00	
7,800.0	90.39	90.00	7,088.1	-1,187.1	825.6	1,067.1	0.00	0.00	
7,900.0	90.39	90.00	7,087.4	-1,187.1	925.6	1,164.7	0.00	0.00	
8,000.0	90.39	90.00	7,086.7	-1,187.1	1,025.6	1,262.2	0.00	0.00	
8,100.0	90.39	90.00	7,086.0	-1,187.1	1,125.6	1,359.7	0.00	0.00	
8,200.0	90.39	90.00	7,085.4	-1,187.1	1,225.6	1,457.3	0.00	0.00	
8,300.0	90.39	90.00	7,084.7	-1,187.1	1,325.6	1,554.8	0.00	0.00	
8,400.0	90.39	90.00	7,084.0	-1,187.1	1,425.6	1,652.3	0.00	0.00	
8,500.0	90.39	90.00	7,083.3	-1,187.1	1,525.6	1,749.9	0.00	0.00	
8,600.0	90.39	90.00	7,082.6	-1,187.1	1,625.6	1,847.4	0.00	0.00	
8,700.0	90.39	90.00	7,082.0	-1,187.1	1,725.6	1,944.9	0.00	0.00	
8,800.0	90.39	90.00	7,081.3	-1,187.1	1,825.6	2,042.5	0.00	0.00	
8,900.0	90.39	90.00	7,080.6	-1,187.1	1,925.6	2,140.0	0.00	0.00	
9,000.0	90.39	90.00	7,079.9	-1,187.1	2,025.6	2,237.5	0.00	0.00	
9,100.0	90.39	90.00	7,079.2	-1,187.1	2,125.5	2,335.1	0.00	0.00	
9,200.0	90.39	90.00	7,078.5	-1,187.1	2,225.5	2,432.6	0.00	0.00	
9,300.0	90.39	90.00	7,077.9	-1,187.1	2,325.5	2,530.1	0.00	0.00	
9,400.0	90.39	90.00	7,077.2	-1,187.1	2,425.5	2,627.7	0.00	0.00	
9,500.0	90.39	90.00	7,076.5	-1,187.1	2,525.5	2,725.2	0.00	0.00	
9,600.0	90.39	90.00	7,075.8	-1,187.1	2,625.5	2,822.7	0.00	0.00	
9,700.0	90.39	90.00	7,075.1	-1,187.1	2,725.5	2,920.3	0.00	0.00	
9,800.0	90.39	90.00	7,074.5	-1,187.1	2,825.5	3,017.8	0.00	0.00	
9,900.0	90.39	90.00	7,073.8	-1,187.1	2,925.5	3,115.3	0.00	0.00	

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<b>Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
10,000.0	90.39	90.00	7,073.1	-1,187.1	3,025.5	3,212.9	0.00	0.00	
10,100.0	90.39	90.00	7,072.4	-1,187.1	3,125.5	3,310.4	0.00	0.00	
10,200.0	90.39	90.00	7,071.7	-1,187.1	3,225.5	3,407.9	0.00	0.00	
10,300.0	90.39	90.00	7,071.1	-1,187.1	3,325.5	3,505.5	0.00	0.00	
10,400.0	90.39	90.00	7,070.4	-1,187.1	3,425.5	3,603.0	0.00	0.00	
10,500.0	90.39	90.00	7,069.7	-1,187.1	3,525.5	3,700.5	0.00	0.00	
10,600.0	90.39	90.00	7,069.0	-1,187.1	3,625.5	3,798.1	0.00	0.00	
10,700.0	90.39	90.00	7,068.3	-1,187.1	3,725.5	3,895.6	0.00	0.00	
10,800.0	90.39	90.00	7,067.7	-1,187.1	3,825.5	3,993.1	0.00	0.00	
10,900.0	90.39	90.00	7,067.0	-1,187.1	3,925.5	4,090.7	0.00	0.00	
11,000.0	90.39	90.00	7,066.3	-1,187.1	4,025.5	4,188.2	0.00	0.00	
11,100.0	90.39	90.00	7,065.6	-1,187.1	4,125.5	4,285.7	0.00	0.00	
11,200.0	90.39	90.00	7,064.9	-1,187.1	4,225.5	4,383.3	0.00	0.00	
11,300.0	90.39	90.00	7,064.3	-1,187.1	4,325.5	4,480.8	0.00	0.00	
11,400.0	90.39	90.00	7,063.6	-1,187.1	4,425.5	4,578.3	0.00	0.00	
11,500.0	90.39	90.00	7,062.9	-1,187.1	4,525.5	4,675.9	0.00	0.00	
11,600.0	90.39	90.00	7,062.2	-1,187.1	4,625.5	4,773.4	0.00	0.00	
11,700.0	90.39	90.00	7,061.5	-1,187.1	4,725.5	4,870.9	0.00	0.00	
11,800.0	90.39	90.00	7,060.9	-1,187.1	4,825.5	4,968.5	0.00	0.00	
11,900.0	90.39	90.00	7,060.2	-1,187.1	4,925.5	5,066.0	0.00	0.00	
12,000.0	90.39	90.00	7,059.5	-1,187.1	5,025.5	5,163.5	0.00	0.00	
12,072.1	90.39	90.00	7,059.0	-1,187.1	5,097.6	5,233.9	0.00	0.00	TD at 12072.1 - Hodgson 17-5H PBHL

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Hodgson 17-5H PBHL	0.00	0.00	7,059.0	-1,187.1	5,097.6	1,358,273.55	3,197,457.28	40.314690	-104.791930
- plan hits target center									
- Point									

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
950.0	950.0	0.0	0.0	KOP @ 950'
2,160.2	2,151.2	-127.3	-1.1	EOB; Inc=12.1°
6,637.3	6,528.8	-1,065.9	-9.1	Start build/turn @ 6637' MD
7,542.1	7,089.8	-1,187.1	567.7	LP @ 7089' TVD; 90.39°
12,072.1	7,059.0	-1,187.1	5,097.6	TD at 12072.1

# **K. P. Kauffman Company, Inc.**

**Wattenberg**

**S17-T4N-R66W (Hodgson)**

**Hodgson 17-5H**

**Hz**

**Plan #1**

## **Anticollision Report**

**12 July, 2013**

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/12/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,072.1	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S17-T4N-R66W (Hodgson)						
FRONT RANGE 11-17-5 (EXISTING) - KPK WELL - SUR	7,465.5	7,493.3	435.4	391.8	9.998	CC, ES, SF
FRONT RANGE 11-17-6 (EXISTING) - KPK WELL - SUR						Out of range
FRONT RANGE 11-17-7 (EXISTING) - KPK WELL - SUR						Out of range
FRONT RANGE 11-17-8 (EXISTING) - KPK WELL - SUR						Out of range
FRONT RANGE 1-17 (EXISTING) - KPK WELL - NO SU						Out of range
FRONT RANGE 2-17 (EXISTING) - KPK WELL - NO SU	7,360.3	7,060.1	431.9	403.3	15.104	CC, ES
FRONT RANGE 2-17 (EXISTING) - KPK WELL - NO SU	7,400.0	7,070.6	433.9	404.9	14.922	SF
Hodgson 17-1H - Hz - Plan #1	900.0	900.0	98.7	95.6	32.028	CC
Hodgson 17-1H - Hz - Plan #1	1,000.0	1,000.0	98.9	95.5	28.834	ES
Hodgson 17-1H - Hz - Plan #1	1,600.0	1,603.2	124.8	119.3	22.630	SF
Hodgson 17-2H - Hz - Plan #1	900.0	900.0	73.3	70.3	23.793	CC
Hodgson 17-2H - Hz - Plan #1	1,000.0	1,000.0	73.6	70.1	21.436	ES
Hodgson 17-2H - Hz - Plan #1	1,600.0	1,604.1	91.1	85.6	16.516	SF
Hodgson 17-3H - Hz - Plan #1	900.0	900.0	51.3	48.2	16.645	CC
Hodgson 17-3H - Hz - Plan #1	1,000.0	1,000.0	51.5	48.1	15.015	ES
Hodgson 17-3H - Hz - Plan #1	1,800.0	1,806.9	65.0	58.8	10.473	SF
Hodgson 17-4H - Hz - Plan #1	900.0	900.0	25.7	22.6	8.323	CC
Hodgson 17-4H - Hz - Plan #1	1,000.0	1,000.0	25.9	22.4	7.539	ES
Hodgson 17-4H - Hz - Plan #1	12,072.1	12,017.3	331.5	78.0	1.308	Level 3, SF
Hodgson 17-6H - Hz - Plan #1	900.0	900.0	25.7	22.6	8.323	CC, ES
Hodgson 17-6H - Hz - Plan #1	12,072.1	12,119.0	291.4	38.0	1.150	Level 2, SF
Hodgson 17-7H - Hz - Plan #1	832.0	833.0	51.1	48.2	17.944	CC
Hodgson 17-7H - Hz - Plan #1	900.0	900.5	51.3	48.2	16.639	ES
Hodgson 17-7H - Hz - Plan #1	2,300.0	2,285.1	75.7	67.8	9.570	SF
Hodgson 17-8H - Hz - Plan #1	766.3	767.3	76.7	74.1	29.305	CC
Hodgson 17-8H - Hz - Plan #1	800.0	801.0	76.7	74.0	28.046	ES
Hodgson 17-8H - Hz - Plan #1	2,300.0	2,276.5	112.9	105.0	14.305	SF
LEWIS 1 C (EXISTING) - KPK WELL - NO SURVEYS						Out of range
LEWIS 2-20 (EXISTING) - KPK WELL - NO SURVEYS						Out of range
TIGGER K 17-02 (EXISTING) - KPK WELL - NO SURVE						Out of range

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										S17-T4N-R66W (Hodgson) - FRONT RANGE 11-17-5 (EXISTING) - KPK WELL - SURVEYS					Offset Site Error:		0.0 ft
Survey Program:										128-Geolink MWD					Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)							
7,300.0	7,042.2	7,466.5	7,092.1	25.1	40.7	86.77	-1,622.0	476.1	471.1	428.9	42.17	11.171					
7,400.0	7,073.6	7,486.8	7,112.2	25.9	40.7	93.15	-1,620.1	474.9	441.3	397.8	43.50	10.144					
7,465.5	7,085.4	7,493.3	7,118.7	26.4	40.7	94.82	-1,619.5	474.5	435.4	391.8	43.55	9.998 CC, ES, SF					
7,500.0	7,088.6	7,494.4	7,119.8	26.7	40.7	94.88	-1,619.4	474.4	437.1	393.6	43.46	10.057					
7,600.0	7,089.4	7,490.4	7,115.9	27.7	40.7	93.76	-1,619.8	474.7	459.2	414.7	44.55	10.309					



## Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S17-T4N-R66W (Hodgson) - FRONT RANGE 2-17 (EXISTING) - KPK WELL - NO SURVEYS														<b>Offset Site Error:</b>	0.0 ft
Survey Program: 8000-Geolink MWD														<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
7,100.0	6,933.9	6,930.9	6,930.9	24.0	12.1	65.32	-1,612.0	359.2	497.5	473.4	24.16	20.594			
7,200.0	6,995.1	6,992.1	6,992.1	24.5	12.2	77.33	-1,612.0	359.2	460.1	434.3	25.85	17.797			
7,300.0	7,042.2	7,039.2	7,039.2	25.1	12.3	86.47	-1,612.0	359.2	436.3	408.6	27.68	15.764			
7,360.3	7,063.1	7,060.1	7,060.1	25.5	12.3	90.00	-1,612.0	359.2	431.9	403.3	28.60	15.104	CC, ES		
7,400.0	7,073.6	7,070.6	7,070.6	25.9	12.3	91.39	-1,612.0	359.2	433.9	404.9	29.08	14.922	SF		
7,500.0	7,088.6	7,085.6	7,085.6	26.7	12.3	91.39	-1,612.0	359.2	456.7	426.3	30.37	15.035			

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-1H - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-4.86	98.4	-8.4	98.7					
100.0	100.0	100.0	100.0	0.1	0.1	-4.86	98.4	-8.4	98.7	98.4	0.29	340.730		
200.0	200.0	200.0	200.0	0.3	0.3	-4.86	98.4	-8.4	98.7	98.1	0.64	154.539		
300.0	300.0	300.0	300.0	0.5	0.5	-4.86	98.4	-8.4	98.7	97.7	0.99	99.931		
400.0	400.0	400.0	400.0	0.7	0.7	-4.86	98.4	-8.4	98.7	97.4	1.34	73.840		
500.0	500.0	500.0	500.0	0.8	0.8	-4.86	98.4	-8.4	98.7	97.0	1.69	58.552		
600.0	600.0	600.0	600.0	1.0	1.0	-4.86	98.4	-8.4	98.7	96.7	2.04	48.509		
700.0	700.0	700.0	700.0	1.2	1.2	-4.86	98.4	-8.4	98.7	96.3	2.38	41.406		
800.0	800.0	800.0	800.0	1.4	1.4	-4.86	98.4	-8.4	98.7	96.0	2.73	36.118		
900.0	900.0	900.0	900.0	1.5	1.5	-4.86	98.4	-8.4	98.7	95.6	3.08	32.028 CC		
927.8	927.8	927.8	927.8	1.6	1.6	174.65	98.4	-8.4	98.8	95.6	3.18	31.061		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	174.66	98.4	-8.4	98.9	95.5	3.43	28.834 ES		
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	174.75	98.4	-8.4	100.7	96.9	3.78	26.636		
1,200.0	1,199.9	1,199.9	1,199.9	2.1	2.1	174.93	98.4	-8.4	104.1	100.0	4.13	25.236		
1,300.0	1,299.8	1,301.7	1,301.7	2.3	2.2	175.13	97.5	-8.4	108.5	104.0	4.48	24.232		
1,400.0	1,399.5	1,403.6	1,403.5	2.4	2.4	175.34	94.7	-8.4	112.8	108.0	4.83	23.370		
1,500.0	1,499.2	1,503.5	1,503.4	2.6	2.6	175.56	91.2	-8.3	117.9	112.7	5.17	22.804		
1,600.0	1,598.6	1,603.2	1,603.1	2.9	2.8	175.82	87.6	-8.3	124.8	119.3	5.51	22.630 SF		
1,700.0	1,697.9	1,702.9	1,702.6	3.1	3.0	176.10	84.0	-8.3	133.4	127.5	5.86	22.779		
1,800.0	1,796.9	1,802.3	1,802.0	3.3	3.1	176.39	80.5	-8.3	143.7	137.5	6.20	23.198		
1,900.0	1,895.7	1,901.6	1,901.2	3.6	3.3	176.68	76.9	-8.3	155.8	149.3	6.53	23.845		
2,000.0	1,994.1	2,000.6	2,000.2	3.9	3.5	176.96	73.4	-8.3	169.6	162.7	6.87	24.688		
2,100.0	2,092.3	2,099.4	2,098.9	4.2	3.7	177.22	69.9	-8.3	185.2	178.0	7.20	25.700		
2,200.0	2,190.1	2,197.9	2,197.4	4.6	3.9	177.46	66.4	-8.3	202.3	194.7	7.54	26.819		
2,300.0	2,287.9	2,296.4	2,295.8	4.9	4.0	177.68	62.8	-8.2	219.7	211.8	7.89	27.852		
2,400.0	2,385.7	2,394.8	2,394.2	5.3	4.2	177.86	59.3	-8.2	237.2	228.9	8.24	28.798		
2,500.0	2,483.5	2,493.3	2,492.6	5.7	4.4	178.01	55.8	-8.2	254.6	246.0	8.58	29.669		
2,600.0	2,581.2	2,591.8	2,591.0	6.0	4.6	178.15	52.3	-8.2	272.1	263.1	8.93	30.472		
2,700.0	2,679.0	2,690.2	2,689.4	6.4	4.8	178.27	48.8	-8.2	289.5	280.2	9.27	31.216		
2,800.0	2,776.8	2,788.7	2,787.8	6.8	4.9	178.38	45.2	-8.2	307.0	297.3	9.62	31.907		
2,900.0	2,874.6	2,887.2	2,886.2	7.2	5.1	178.47	41.7	-8.2	324.4	314.4	9.97	32.549		
3,000.0	2,972.4	2,985.6	2,984.6	7.6	5.3	178.56	38.2	-8.2	341.9	331.5	10.31	33.149		
3,100.0	3,070.1	3,084.1	3,083.0	7.9	5.5	178.63	34.7	-8.1	359.3	348.6	10.66	33.710		
3,200.0	3,167.9	3,182.6	3,181.4	8.3	5.7	178.70	31.2	-8.1	376.8	365.7	11.00	34.236		
3,300.0	3,265.7	3,281.0	3,279.8	8.7	5.8	178.77	27.6	-8.1	394.2	382.9	11.35	34.730		
3,400.0	3,363.5	3,379.5	3,378.2	9.1	6.0	178.83	24.1	-8.1	411.7	400.0	11.70	35.195		
3,500.0	3,461.2	3,478.0	3,476.6	9.5	6.2	178.88	20.6	-8.1	429.1	417.1	12.04	35.633		
3,600.0	3,559.0	3,576.4	3,575.0	9.9	6.4	178.93	17.1	-8.1	446.6	434.2	12.39	36.047		
3,700.0	3,656.8	3,674.9	3,673.4	10.3	6.6	178.97	13.6	-8.1	464.0	451.3	12.73	36.439		
3,800.0	3,754.6	3,773.3	3,771.8	10.7	6.7	179.02	10.0	-8.1	481.5	468.4	13.08	36.810		
3,900.0	3,852.4	3,871.8	3,870.2	11.1	6.9	179.06	6.5	-8.0	498.9	485.5	13.43	37.161		

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-2H - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-6.55	72.9	-8.4	73.3						
100.0	100.0	100.0	100.0	0.1	0.1	-6.55	72.9	-8.4	73.3	73.0	0.29	253.126			
200.0	200.0	200.0	200.0	0.3	0.3	-6.55	72.9	-8.4	73.3	72.7	0.64	114.806			
300.0	300.0	300.0	300.0	0.5	0.5	-6.55	72.9	-8.4	73.3	72.3	0.99	74.238			
400.0	400.0	400.0	400.0	0.7	0.7	-6.55	72.9	-8.4	73.3	72.0	1.34	54.855			
500.0	500.0	500.0	500.0	0.8	0.8	-6.55	72.9	-8.4	73.3	71.7	1.69	43.498			
600.0	600.0	600.0	600.0	1.0	1.0	-6.55	72.9	-8.4	73.3	71.3	2.04	36.037			
700.0	700.0	700.0	700.0	1.2	1.2	-6.55	72.9	-8.4	73.3	71.0	2.38	30.761			
800.0	800.0	800.0	800.0	1.4	1.4	-6.55	72.9	-8.4	73.3	70.6	2.73	26.832			
900.0	900.0	900.0	900.0	1.5	1.5	-6.55	72.9	-8.4	73.3	70.3	3.08	23.793 CC			
927.8	927.8	927.8	927.8	1.6	1.6	172.97	72.9	-8.4	73.4	70.2	3.18	23.078			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	172.98	72.9	-8.4	73.6	70.1	3.43	21.436 ES			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	173.14	72.9	-8.4	75.3	71.5	3.78	19.919			
1,200.0	1,199.9	1,201.3	1,201.3	2.1	2.1	173.37	72.0	-8.4	77.9	73.7	4.13	18.859			
1,300.0	1,299.8	1,302.7	1,302.6	2.3	2.2	173.58	69.3	-8.4	80.4	76.0	4.48	17.961			
1,400.0	1,399.5	1,404.1	1,403.9	2.4	2.4	173.76	64.8	-8.5	83.0	78.2	4.83	17.192			
1,500.0	1,499.2	1,504.2	1,503.9	2.6	2.6	173.98	59.3	-8.5	86.2	81.0	5.17	16.662			
1,600.0	1,598.6	1,604.1	1,603.6	2.9	2.8	174.29	53.8	-8.6	91.1	85.6	5.52	16.516 SF			
1,700.0	1,697.9	1,703.8	1,703.2	3.1	3.0	174.67	48.3	-8.7	97.8	91.9	5.86	16.687			
1,800.0	1,796.9	1,803.5	1,802.7	3.3	3.2	175.07	42.8	-8.7	106.2	100.0	6.20	17.124			
1,900.0	1,895.7	1,902.9	1,902.0	3.6	3.4	175.49	37.3	-8.8	116.3	109.8	6.54	17.785			
2,000.0	1,994.1	2,002.2	2,001.2	3.9	3.5	175.89	31.8	-8.8	128.2	121.3	6.88	18.639			
2,100.0	2,092.3	2,101.3	2,100.1	4.2	3.7	176.27	26.4	-8.9	141.8	134.6	7.21	19.659			
2,200.0	2,190.1	2,200.1	2,198.8	4.6	3.9	176.62	20.9	-9.0	157.0	149.5	7.55	20.789			
2,300.0	2,287.9	2,298.9	2,297.4	4.9	4.1	176.92	15.5	-9.0	172.5	164.6	7.90	21.839			
2,400.0	2,385.7	2,397.7	2,396.0	5.3	4.3	177.17	10.0	-9.1	188.0	179.8	8.25	22.801			
2,500.0	2,483.5	2,496.5	2,494.7	5.7	4.5	177.38	4.6	-9.2	203.6	195.0	8.59	23.685			
2,600.0	2,581.2	2,595.3	2,593.3	6.0	4.7	177.56	-0.9	-9.2	219.1	210.2	8.94	24.502			
2,700.0	2,679.0	2,694.1	2,692.0	6.4	4.9	177.72	-6.3	-9.3	234.6	225.3	9.29	25.258			
2,800.0	2,776.8	2,792.8	2,790.6	6.8	5.1	177.86	-11.8	-9.3	250.2	240.5	9.64	25.960			
2,900.0	2,874.6	2,891.6	2,889.2	7.2	5.3	177.98	-17.2	-9.4	265.7	255.7	9.98	26.613			
3,000.0	2,972.4	2,990.4	2,987.9	7.6	5.5	178.09	-22.7	-9.5	281.2	270.9	10.33	27.222			
3,100.0	3,070.1	3,089.2	3,086.5	7.9	5.7	178.18	-28.1	-9.5	296.8	286.1	10.68	27.792			
3,200.0	3,167.9	3,188.0	3,185.1	8.3	5.9	178.27	-33.6	-9.6	312.3	301.3	11.02	28.327			
3,300.0	3,265.7	3,286.8	3,283.8	8.7	6.0	178.35	-39.0	-9.7	327.8	316.4	11.37	28.828			
3,400.0	3,363.5	3,385.6	3,382.4	9.1	6.2	178.42	-44.5	-9.7	343.4	331.6	11.72	29.301			
3,500.0	3,461.2	3,484.3	3,481.0	9.5	6.4	178.49	-49.9	-9.8	358.9	346.8	12.07	29.746			
3,600.0	3,559.0	3,583.1	3,579.7	9.9	6.6	178.55	-55.4	-9.9	374.4	362.0	12.41	30.166			
3,700.0	3,656.8	3,681.9	3,678.3	10.3	6.8	178.60	-60.8	-9.9	390.0	377.2	12.76	30.564			
3,800.0	3,754.6	3,780.7	3,776.9	10.7	7.0	178.65	-66.3	-10.0	405.5	392.4	13.11	30.940			
3,900.0	3,852.4	3,879.5	3,875.6	11.1	7.2	178.70	-71.7	-10.0	421.0	407.6	13.45	31.298			
4,000.0	3,950.1	3,978.3	3,974.2	11.5	7.4	178.74	-77.2	-10.1	436.6	422.8	13.80	31.637			
4,100.0	4,047.9	4,077.1	4,072.8	11.9	7.6	178.79	-82.6	-10.2	452.1	438.0	14.15	31.960			
4,200.0	4,145.7	4,175.8	4,171.5	12.3	7.8	178.82	-88.1	-10.2	467.6	453.2	14.49	32.267			
4,300.0	4,243.5	4,274.6	4,270.1	12.7	8.0	178.86	-93.5	-10.3	483.2	468.3	14.84	32.560			
4,400.0	4,341.2	4,373.4	4,368.7	13.1	8.2	178.89	-99.0	-10.4	498.7	483.5	15.19	32.840			

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-3H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-6.24	51.0	-5.6	51.3					
100.0	100.0	100.0	100.0	0.1	0.1	-6.24	51.0	-5.6	51.3	51.0	0.29	177.081		
200.0	200.0	200.0	200.0	0.3	0.3	-6.24	51.0	-5.6	51.3	50.7	0.64	80.316		
300.0	300.0	300.0	300.0	0.5	0.5	-6.24	51.0	-5.6	51.3	50.3	0.99	51.935		
400.0	400.0	400.0	400.0	0.7	0.7	-6.24	51.0	-5.6	51.3	50.0	1.34	38.375		
500.0	500.0	500.0	500.0	0.8	0.8	-6.24	51.0	-5.6	51.3	49.6	1.69	30.430		
600.0	600.0	600.0	600.0	1.0	1.0	-6.24	51.0	-5.6	51.3	49.3	2.04	25.211		
700.0	700.0	700.0	700.0	1.2	1.2	-6.24	51.0	-5.6	51.3	48.9	2.38	21.519		
800.0	800.0	800.0	800.0	1.4	1.4	-6.24	51.0	-5.6	51.3	48.6	2.73	18.771		
900.0	900.0	900.0	900.0	1.5	1.5	-6.24	51.0	-5.6	51.3	48.2	3.08	16.645 CC		
927.8	927.8	927.8	927.8	1.6	1.6	173.28	51.0	-5.6	51.3	48.2	3.18	16.148		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	173.30	51.0	-5.6	51.5	48.1	3.43	15.015 ES		
1,100.0	1,100.0	1,100.4	1,100.4	1.9	1.9	173.49	50.8	-5.6	53.0	49.3	3.78	14.029		
1,200.0	1,199.9	1,201.4	1,201.4	2.1	2.1	173.72	49.0	-5.6	54.8	50.6	4.13	13.259		
1,300.0	1,299.8	1,302.3	1,302.3	2.3	2.2	173.94	45.4	-5.6	56.5	52.0	4.48	12.606		
1,400.0	1,399.5	1,403.3	1,403.1	2.4	2.4	174.17	40.1	-5.6	58.1	53.3	4.83	12.046		
1,500.0	1,499.2	1,504.4	1,503.9	2.6	2.6	174.40	33.0	-5.6	59.8	54.6	5.17	11.558		
1,600.0	1,598.6	1,605.4	1,604.5	2.9	2.8	174.63	24.1	-5.5	61.4	55.9	5.52	11.130		
1,700.0	1,697.9	1,706.5	1,705.0	3.1	3.0	174.86	13.4	-5.5	63.1	57.2	5.87	10.751		
1,800.0	1,796.9	1,806.9	1,804.7	3.3	3.3	175.12	1.4	-5.5	65.0	58.8	6.21	10.473 SF		
1,900.0	1,895.7	1,906.8	1,903.9	3.6	3.5	175.47	-10.6	-5.5	68.6	62.1	6.55	10.477		
2,000.0	1,994.1	2,006.6	2,003.0	3.9	3.7	175.89	-22.6	-5.5	74.0	67.1	6.89	10.736		
2,100.0	2,092.3	2,106.4	2,102.1	4.2	4.0	176.33	-34.7	-5.5	81.1	73.9	7.23	11.214		
2,200.0	2,190.1	2,206.0	2,200.9	4.6	4.2	176.75	-46.7	-5.5	89.8	82.2	7.57	11.855		
2,300.0	2,287.9	2,305.6	2,299.8	4.9	4.5	177.12	-58.7	-5.4	98.8	90.9	7.92	12.468		
2,400.0	2,385.7	2,405.2	2,398.7	5.3	4.7	177.42	-70.7	-5.4	107.8	99.5	8.27	13.031		
2,500.0	2,483.5	2,504.8	2,497.5	5.7	5.0	177.68	-82.7	-5.4	116.8	108.2	8.62	13.548		
2,600.0	2,581.2	2,604.4	2,596.4	6.0	5.2	177.90	-94.7	-5.4	125.8	116.9	8.97	14.025		
2,700.0	2,679.0	2,704.0	2,695.3	6.4	5.5	178.09	-106.7	-5.4	134.9	125.5	9.32	14.466		
2,800.0	2,776.8	2,803.6	2,794.1	6.8	5.7	178.26	-118.7	-5.4	143.9	134.2	9.67	14.876		
2,900.0	2,874.6	2,903.1	2,893.0	7.2	6.0	178.40	-130.7	-5.4	152.9	142.9	10.02	15.257		
3,000.0	2,972.4	3,002.7	2,991.9	7.6	6.3	178.53	-142.7	-5.3	161.9	151.6	10.37	15.613		
3,100.0	3,070.1	3,102.3	3,090.7	7.9	6.5	178.65	-154.7	-5.3	170.9	160.2	10.72	15.946		
3,200.0	3,167.9	3,201.9	3,189.6	8.3	6.8	178.75	-166.7	-5.3	180.0	168.9	11.07	16.257		
3,300.0	3,265.7	3,301.5	3,288.5	8.7	7.1	178.85	-178.7	-5.3	189.0	177.6	11.42	16.550		
3,400.0	3,363.5	3,401.1	3,387.3	9.1	7.3	178.94	-190.7	-5.3	198.0	186.3	11.77	16.826		
3,500.0	3,461.2	3,500.7	3,486.2	9.5	7.6	179.01	-202.7	-5.3	207.0	194.9	12.12	17.085		
3,600.0	3,559.0	3,600.3	3,585.1	9.9	7.8	179.09	-214.7	-5.3	216.1	203.6	12.47	17.330		
3,700.0	3,656.8	3,699.9	3,683.9	10.3	8.1	179.15	-226.7	-5.2	225.1	212.3	12.82	17.562		
3,800.0	3,754.6	3,799.5	3,782.8	10.7	8.4	179.21	-238.7	-5.2	234.1	221.0	13.17	17.782		
3,900.0	3,852.4	3,899.1	3,881.7	11.1	8.6	179.27	-250.7	-5.2	243.2	229.6	13.52	17.990		
4,000.0	3,950.1	3,998.7	3,980.5	11.5	8.9	179.32	-262.7	-5.2	252.2	238.3	13.87	18.188		
4,100.0	4,047.9	4,098.2	4,079.4	11.9	9.2	179.37	-274.7	-5.2	261.2	247.0	14.21	18.376		
4,200.0	4,145.7	4,197.8	4,178.3	12.3	9.4	179.42	-286.7	-5.2	270.2	255.7	14.56	18.555		
4,300.0	4,243.5	4,297.4	4,277.1	12.7	9.7	179.46	-298.7	-5.2	279.3	264.4	14.91	18.725		
4,400.0	4,341.2	4,397.0	4,376.0	13.1	10.0	179.50	-310.7	-5.1	288.3	273.0	15.26	18.888		
4,500.0	4,439.0	4,496.6	4,474.9	13.5	10.2	179.54	-322.7	-5.1	297.3	281.7	15.61	19.044		
4,600.0	4,536.8	4,596.2	4,573.7	13.9	10.5	179.58	-334.7	-5.1	306.3	290.4	15.96	19.193		
4,700.0	4,634.6	4,695.8	4,672.6	14.3	10.8	179.61	-346.7	-5.1	315.4	299.1	16.31	19.335		
4,800.0	4,732.4	4,795.4	4,771.4	14.7	11.0	179.64	-358.7	-5.1	324.4	307.7	16.66	19.472		
4,900.0	4,830.1	4,895.0	4,870.3	15.1	11.3	179.67	-370.7	-5.1	333.4	316.4	17.01	19.603		
5,000.0	4,927.9	4,994.6	4,969.2	15.5	11.6	179.70	-382.7	-5.1	342.5	325.1	17.36	19.728		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-3H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,025.7	5,094.2	5,068.0	15.9	11.9	179.73	-394.7	-5.0	351.5	333.8	17.71	19.849		
5,200.0	5,123.5	5,193.7	5,166.9	16.3	12.1	179.75	-406.7	-5.0	360.5	342.5	18.06	19.965		
5,300.0	5,221.2	5,293.3	5,265.8	16.7	12.4	179.77	-418.7	-5.0	369.6	351.1	18.41	20.077		
5,400.0	5,319.0	5,392.9	5,364.6	17.1	12.7	179.80	-430.7	-5.0	378.6	359.8	18.76	20.184		
5,500.0	5,416.8	5,492.5	5,463.5	17.5	12.9	179.82	-442.7	-5.0	387.6	368.5	19.11	20.288		
5,600.0	5,514.6	5,592.1	5,562.4	17.9	13.2	179.84	-454.7	-5.0	396.6	377.2	19.46	20.387		
5,700.0	5,612.4	5,691.7	5,661.2	18.3	13.5	179.86	-466.7	-5.0	405.7	385.9	19.80	20.484		
5,800.0	5,710.1	5,791.3	5,760.1	18.7	13.7	179.88	-478.7	-4.9	414.7	394.5	20.15	20.577		
5,900.0	5,807.9	5,890.9	5,859.0	19.1	14.0	179.90	-490.7	-4.9	423.7	403.2	20.50	20.666		
6,000.0	5,905.7	5,990.5	5,957.8	19.5	14.3	179.92	-502.7	-4.9	432.8	411.9	20.85	20.753		
6,100.0	6,003.5	6,090.1	6,056.7	19.9	14.6	179.93	-514.7	-4.9	441.8	420.6	21.20	20.837		
6,200.0	6,101.2	6,189.7	6,155.6	20.3	14.8	179.95	-526.7	-4.9	450.8	429.3	21.55	20.918		
6,300.0	6,199.0	6,289.3	6,254.4	20.7	15.1	179.97	-538.7	-4.9	459.8	437.9	21.90	20.997		
6,400.0	6,296.8	6,388.8	6,353.3	21.1	15.4	179.98	-550.7	-4.9	468.9	446.6	22.25	21.073		
6,500.0	6,394.6	6,488.4	6,452.2	21.5	15.6	179.99	-562.7	-4.8	477.9	455.3	22.60	21.147		
6,600.0	6,492.4	6,587.8	6,550.8	21.9	15.9	-179.90	-574.7	-4.0	486.9	464.0	22.95	21.219		
6,700.0	6,590.0	6,685.2	6,646.5	22.3	16.2	-151.06	-586.3	9.3	496.2	472.8	23.35	21.251		

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-6.24	25.5	-2.8	25.7					
100.0	100.0	100.0	100.0	0.1	0.1	-6.24	25.5	-2.8	25.7	25.4	0.29	88.541		
200.0	200.0	200.0	200.0	0.3	0.3	-6.24	25.5	-2.8	25.7	25.0	0.64	40.158		
300.0	300.0	300.0	300.0	0.5	0.5	-6.24	25.5	-2.8	25.7	24.7	0.99	25.968		
400.0	400.0	400.0	400.0	0.7	0.7	-6.24	25.5	-2.8	25.7	24.3	1.34	19.188		
500.0	500.0	500.0	500.0	0.8	0.8	-6.24	25.5	-2.8	25.7	24.0	1.69	15.215		
600.0	600.0	600.0	600.0	1.0	1.0	-6.24	25.5	-2.8	25.7	23.6	2.04	12.605		
700.0	700.0	700.0	700.0	1.2	1.2	-6.24	25.5	-2.8	25.7	23.3	2.38	10.760		
800.0	800.0	800.0	800.0	1.4	1.4	-6.24	25.5	-2.8	25.7	22.9	2.73	9.386		
900.0	900.0	900.0	900.0	1.5	1.5	-6.24	25.5	-2.8	25.7	22.6	3.08	8.323 CC		
927.8	927.8	927.8	927.8	1.6	1.6	173.28	25.5	-2.8	25.7	22.5	3.18	8.079		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	173.33	25.5	-2.8	25.9	22.4	3.43	7.539 ES		
1,100.0	1,100.0	1,100.5	1,100.4	1.9	1.9	173.54	24.6	-2.8	26.7	23.0	3.78	7.071		
1,200.0	1,199.9	1,200.9	1,200.9	2.1	2.1	173.72	22.0	-2.8	27.6	23.5	4.13	6.682		
1,300.0	1,299.8	1,301.4	1,301.3	2.3	2.2	173.88	17.6	-2.9	28.4	24.0	4.48	6.352		
1,400.0	1,399.5	1,401.9	1,401.6	2.4	2.4	174.02	11.4	-3.0	29.3	24.5	4.82	6.069		
1,500.0	1,499.2	1,502.4	1,501.8	2.6	2.6	174.14	3.5	-3.0	30.1	24.9	5.17	5.823		
1,600.0	1,598.6	1,603.0	1,601.8	2.9	2.8	174.24	-6.2	-3.2	30.9	25.4	5.52	5.607		
1,700.0	1,697.9	1,703.5	1,701.7	3.1	3.1	174.33	-17.6	-3.3	31.8	25.9	5.86	5.416		
1,800.0	1,796.9	1,804.1	1,801.4	3.3	3.3	174.40	-30.8	-3.4	32.6	26.4	6.21	5.245		
1,900.0	1,895.7	1,904.5	1,900.8	3.6	3.6	174.46	-45.7	-3.6	33.4	26.8	6.55	5.095		
2,000.0	1,994.1	2,004.5	1,999.6	3.9	3.8	174.69	-61.1	-3.8	35.4	28.5	6.90	5.129		
2,100.0	2,092.3	2,104.4	2,098.3	4.2	4.1	175.12	-76.5	-4.0	39.1	31.8	7.24	5.401		
2,200.0	2,190.1	2,204.3	2,197.0	4.6	4.4	175.64	-91.9	-4.2	44.4	36.8	7.58	5.858		
2,300.0	2,287.9	2,304.1	2,295.6	4.9	4.7	176.08	-107.3	-4.3	50.0	42.1	7.93	6.309		
2,400.0	2,385.7	2,404.0	2,394.3	5.3	5.0	176.43	-122.7	-4.5	55.7	47.4	8.28	6.722		
2,500.0	2,483.5	2,503.8	2,492.9	5.7	5.3	176.71	-138.1	-4.7	61.3	52.7	8.63	7.102		
2,600.0	2,581.2	2,603.6	2,591.5	6.0	5.6	176.95	-153.4	-4.9	67.0	58.0	8.98	7.453		
2,700.0	2,679.0	2,703.5	2,690.2	6.4	5.9	177.15	-168.8	-5.0	72.6	63.3	9.33	7.777		
2,800.0	2,776.8	2,803.3	2,788.8	6.8	6.2	177.32	-184.2	-5.2	78.2	68.6	9.69	8.078		
2,900.0	2,874.6	2,903.2	2,887.5	7.2	6.5	177.47	-199.6	-5.4	83.9	73.8	10.04	8.358		
3,000.0	2,972.4	3,003.0	2,986.1	7.6	6.8	177.60	-215.0	-5.6	89.5	79.1	10.39	8.619		
3,100.0	3,070.1	3,102.8	3,084.8	7.9	7.1	177.71	-230.4	-5.8	95.2	84.4	10.74	8.864		
3,200.0	3,167.9	3,202.7	3,183.4	8.3	7.4	177.81	-245.7	-5.9	100.8	89.7	11.09	9.092		
3,300.0	3,265.7	3,302.5	3,282.1	8.7	7.7	177.90	-261.1	-6.1	106.5	95.0	11.44	9.307		
3,400.0	3,363.5	3,402.4	3,380.7	9.1	8.0	177.98	-276.5	-6.3	112.1	100.3	11.79	9.509		
3,500.0	3,461.2	3,502.2	3,479.4	9.5	8.3	178.06	-291.9	-6.5	117.8	105.6	12.14	9.700		
3,600.0	3,559.0	3,602.1	3,578.0	9.9	8.6	178.12	-307.3	-6.6	123.4	110.9	12.49	9.880		
3,700.0	3,656.8	3,701.9	3,676.7	10.3	8.9	178.19	-322.7	-6.8	129.1	116.2	12.84	10.050		
3,800.0	3,754.6	3,801.7	3,775.3	10.7	9.3	178.24	-338.0	-7.0	134.7	121.5	13.19	10.211		
3,900.0	3,852.4	3,901.6	3,874.0	11.1	9.6	178.29	-353.4	-7.2	140.3	126.8	13.54	10.363		
4,000.0	3,950.1	4,001.4	3,972.6	11.5	9.9	178.34	-368.8	-7.4	146.0	132.1	13.89	10.508		
4,100.0	4,047.9	4,101.3	4,071.3	11.9	10.2	178.38	-384.2	-7.5	151.6	137.4	14.24	10.646		
4,200.0	4,145.7	4,201.1	4,169.9	12.3	10.5	178.42	-399.6	-7.7	157.3	142.7	14.59	10.777		
4,300.0	4,243.5	4,300.9	4,268.6	12.7	10.8	178.46	-415.0	-7.9	162.9	148.0	14.94	10.903		
4,400.0	4,341.2	4,400.8	4,367.2	13.1	11.1	178.50	-430.3	-8.1	168.6	153.3	15.29	11.022		
4,500.0	4,439.0	4,500.6	4,465.9	13.5	11.4	178.53	-445.7	-8.3	174.2	158.6	15.65	11.136		
4,600.0	4,536.8	4,600.5	4,564.5	13.9	11.8	178.56	-461.1	-8.4	179.9	163.9	16.00	11.245		
4,700.0	4,634.6	4,700.3	4,663.2	14.3	12.1	178.59	-476.5	-8.6	185.5	169.2	16.35	11.350		
4,800.0	4,732.4	4,800.1	4,761.8	14.7	12.4	178.62	-491.9	-8.8	191.2	174.5	16.70	11.450		
4,900.0	4,830.1	4,900.0	4,860.5	15.1	12.7	178.64	-507.3	-9.0	196.8	179.8	17.05	11.546		
5,000.0	4,927.9	4,999.8	4,959.1	15.5	13.0	178.67	-522.7	-9.1	202.5	185.1	17.40	11.638		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,025.7	5,099.7	5,057.7	15.9	13.3	178.69	-538.0	-9.3	208.1	190.4	17.75	11.726		
5,200.0	5,123.5	5,199.5	5,156.4	16.3	13.7	178.71	-553.4	-9.5	213.8	195.7	18.10	11.811		
5,300.0	5,221.2	5,299.3	5,255.0	16.7	14.0	178.73	-568.8	-9.7	219.4	201.0	18.45	11.893		
5,400.0	5,319.0	5,399.2	5,353.7	17.1	14.3	178.75	-584.2	-9.9	225.1	206.3	18.80	11.972		
5,500.0	5,416.8	5,499.0	5,452.3	17.5	14.6	178.77	-599.6	-10.0	230.7	211.6	19.15	12.048		
5,600.0	5,514.6	5,598.9	5,551.0	17.9	14.9	178.79	-615.0	-10.2	236.3	216.8	19.50	12.121		
5,700.0	5,612.4	5,698.7	5,649.6	18.3	15.2	178.81	-630.3	-10.4	242.0	222.1	19.85	12.192		
5,800.0	5,710.1	5,798.5	5,748.3	18.7	15.6	178.82	-645.7	-10.6	247.6	227.4	20.20	12.260		
5,900.0	5,807.9	5,898.4	5,846.9	19.1	15.9	178.84	-661.1	-10.8	253.3	232.7	20.55	12.326		
6,000.0	5,905.7	5,998.2	5,945.6	19.5	16.2	178.85	-676.5	-10.9	258.9	238.0	20.90	12.389		
6,100.0	6,003.5	6,098.1	6,044.2	19.9	16.5	178.87	-691.9	-11.1	264.6	243.3	21.25	12.451		
6,200.0	6,101.2	6,197.9	6,142.9	20.3	16.8	178.88	-707.3	-11.3	270.2	248.6	21.60	12.510		
6,300.0	6,199.0	6,297.7	6,241.5	20.7	17.2	178.89	-722.6	-11.5	275.9	253.9	21.95	12.568		
6,400.0	6,296.8	6,397.6	6,340.2	21.1	17.5	178.91	-738.0	-11.6	281.5	259.2	22.30	12.624		
6,500.0	6,394.6	6,497.4	6,438.8	21.5	17.8	178.92	-753.4	-11.8	287.2	264.5	22.65	12.678		
6,600.0	6,492.4	6,597.3	6,537.5	21.9	18.1	178.97	-768.8	-11.8	292.8	269.8	23.00	12.731		
6,700.0	6,590.0	6,696.8	6,635.1	22.3	18.4	-152.08	-784.0	-0.8	298.5	275.1	23.36	12.778		
6,800.0	6,685.8	6,794.7	6,727.8	22.7	18.7	-124.14	-798.5	26.5	304.3	280.4	23.89	12.735		
6,900.0	6,776.9	6,891.2	6,813.5	23.1	19.1	-110.48	-811.9	68.7	310.0	285.3	24.70	12.554		
7,000.0	6,860.4	6,986.6	6,890.0	23.5	19.4	-102.73	-823.9	124.1	315.5	289.7	25.80	12.227		
7,100.0	6,933.9	7,080.9	6,955.8	24.0	19.9	-97.78	-834.2	190.7	320.4	293.2	27.23	11.768		
7,200.0	6,995.1	7,174.3	7,009.5	24.5	20.4	-94.44	-842.7	266.6	324.6	295.6	28.98	11.203		
7,300.0	7,042.2	7,267.1	7,050.0	25.1	21.1	-92.18	-849.1	349.7	327.9	296.9	31.06	10.560		
7,400.0	7,073.6	7,359.3	7,076.6	25.9	21.9	-90.77	-853.4	437.8	330.2	296.8	33.44	9.874		
7,500.0	7,088.6	7,450.0	7,088.9	26.7	22.9	-90.08	-855.4	527.5	331.4	295.3	36.07	9.187		
7,600.0	7,089.4	7,548.1	7,089.4	27.7	24.2	-90.00	-855.5	625.6	331.5	292.0	39.50	8.392		
7,700.0	7,088.8	7,648.1	7,088.7	28.9	25.7	-90.00	-855.5	725.6	331.5	288.0	43.51	7.619		
7,800.0	7,088.1	7,748.1	7,088.1	30.3	27.3	-90.00	-855.5	825.6	331.5	283.8	47.69	6.951		
7,900.0	7,087.4	7,848.1	7,087.4	31.8	29.1	-90.00	-855.5	925.6	331.5	279.5	52.01	6.374		
8,000.0	7,086.7	7,948.1	7,086.7	33.5	31.0	-90.00	-855.5	1,025.6	331.5	275.1	56.43	5.874		
8,100.0	7,086.0	8,048.1	7,086.0	35.3	33.0	-90.00	-855.5	1,125.6	331.5	270.6	60.94	5.440		
8,200.0	7,085.4	8,148.1	7,085.3	37.1	35.1	-90.00	-855.5	1,225.6	331.5	266.0	65.50	5.061		
8,300.0	7,084.7	8,248.1	7,084.7	39.1	37.2	-90.00	-855.5	1,325.6	331.5	261.4	70.12	4.727		
8,400.0	7,084.0	8,348.1	7,084.0	41.1	39.4	-90.00	-855.5	1,425.6	331.5	256.7	74.78	4.433		
8,500.0	7,083.3	8,448.1	7,083.3	43.2	41.6	-90.00	-855.5	1,525.6	331.5	252.0	79.48	4.171		
8,600.0	7,082.6	8,548.1	7,082.6	45.3	43.9	-90.00	-855.5	1,625.6	331.5	247.3	84.21	3.937		
8,700.0	7,082.0	8,648.1	7,081.9	47.5	46.1	-90.00	-855.5	1,725.6	331.5	242.5	88.96	3.727		
8,800.0	7,081.3	8,748.1	7,081.3	49.7	48.4	-90.00	-855.5	1,825.6	331.5	237.8	93.73	3.537		
8,900.0	7,080.6	8,848.1	7,080.6	51.9	50.7	-90.00	-855.5	1,925.6	331.5	233.0	98.51	3.365		
9,000.0	7,079.9	8,948.1	7,079.9	54.2	53.1	-90.00	-855.5	2,025.6	331.5	228.2	103.32	3.209		
9,100.0	7,079.2	9,048.1	7,079.2	56.5	55.4	-90.00	-855.5	2,125.5	331.5	223.4	108.13	3.066		
9,200.0	7,078.5	9,148.1	7,078.5	58.8	57.8	-90.00	-855.5	2,225.5	331.5	218.5	112.96	2.935		
9,300.0	7,077.9	9,248.1	7,077.8	61.1	60.1	-90.00	-855.5	2,325.5	331.5	213.7	117.80	2.814		
9,400.0	7,077.2	9,348.1	7,077.2	63.4	62.5	-90.00	-855.5	2,425.5	331.5	208.9	122.65	2.703		
9,500.0	7,076.5	9,448.1	7,076.5	65.8	64.9	-90.00	-855.5	2,525.5	331.5	204.0	127.50	2.600		
9,600.0	7,075.8	9,548.1	7,075.8	68.1	67.3	-90.00	-855.5	2,625.5	331.5	199.1	132.36	2.505		
9,700.0	7,075.1	9,648.1	7,075.1	70.5	69.7	-90.00	-855.5	2,725.5	331.5	194.3	137.23	2.416		
9,800.0	7,074.5	9,748.1	7,074.4	72.8	72.1	-90.00	-855.5	2,825.5	331.5	189.4	142.10	2.333		
9,900.0	7,073.8	9,848.1	7,073.8	75.2	74.5	-90.00	-855.5	2,925.5	331.5	184.5	146.98	2.255		
10,000.0	7,073.1	9,948.1	7,073.1	77.6	76.9	-90.00	-855.5	3,025.5	331.5	179.6	151.86	2.183		
10,100.0	7,072.4	10,048.1	7,072.4	80.0	79.3	-90.00	-855.5	3,125.5	331.5	174.8	156.75	2.115		
10,200.0	7,071.7	10,148.1	7,071.7	82.4	81.7	-90.00	-855.5	3,225.5	331.5	169.9	161.64	2.051		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
10,300.0	7,071.1	10,248.1	7,071.0	84.8	84.1	-90.00	-855.5	3,325.5	331.5	165.0	166.54	1.991		
10,400.0	7,070.4	10,348.1	7,070.4	87.2	86.6	-90.00	-855.5	3,425.5	331.5	160.1	171.43	1.934		
10,500.0	7,069.7	10,448.1	7,069.7	89.6	89.0	-90.00	-855.5	3,525.5	331.5	155.2	176.33	1.880		
10,600.0	7,069.0	10,548.1	7,069.0	92.0	91.4	-90.00	-855.5	3,625.5	331.5	150.3	181.24	1.829		
10,700.0	7,068.3	10,648.1	7,068.3	94.4	93.8	-90.00	-855.5	3,725.5	331.5	145.4	186.14	1.781		
10,800.0	7,067.7	10,748.1	7,067.6	96.8	96.3	-90.00	-855.5	3,825.5	331.5	140.5	191.05	1.735		
10,900.0	7,067.0	10,848.1	7,067.0	99.2	98.7	-90.00	-855.5	3,925.5	331.5	135.5	195.96	1.692		
11,000.0	7,066.3	10,948.1	7,066.3	101.7	101.1	-90.00	-855.5	4,025.5	331.5	130.6	200.87	1.650		
11,100.0	7,065.6	11,048.1	7,065.6	104.1	103.6	-90.00	-855.5	4,125.5	331.5	125.7	205.78	1.611		
11,200.0	7,064.9	11,148.1	7,064.9	106.5	106.0	-90.00	-855.5	4,225.5	331.5	120.8	210.70	1.573		
11,300.0	7,064.3	11,248.1	7,064.2	108.9	108.5	-90.00	-855.5	4,325.5	331.5	115.9	215.61	1.537		
11,400.0	7,063.6	11,348.1	7,063.6	111.4	110.9	-90.00	-855.5	4,425.5	331.5	111.0	220.53	1.503		
11,500.0	7,062.9	11,448.1	7,062.9	113.8	113.4	-90.00	-855.5	4,525.5	331.5	106.1	225.45	1.470	Level 3	
11,600.0	7,062.2	11,548.1	7,062.2	116.2	115.8	-90.00	-855.5	4,625.5	331.5	101.1	230.37	1.439	Level 3	
11,700.0	7,061.5	11,648.1	7,061.5	118.7	118.3	-90.00	-855.5	4,725.5	331.5	96.2	235.29	1.409	Level 3	
11,800.0	7,060.9	11,748.1	7,060.8	121.1	120.7	-90.00	-855.5	4,825.5	331.5	91.3	240.22	1.380	Level 3	
11,900.0	7,060.2	11,848.1	7,060.2	123.6	123.2	-90.00	-855.5	4,925.5	331.5	86.4	245.14	1.352	Level 3	
12,000.0	7,059.5	11,948.1	7,059.5	126.0	125.6	-90.00	-855.5	5,025.5	331.5	81.4	250.06	1.326	Level 3	
12,052.1	7,059.1	12,000.1	7,059.1	127.3	126.9	-90.00	-855.5	5,077.6	331.5	78.9	252.63	1.312	Level 3	
12,072.1	7,059.0	12,017.3	7,059.0	127.8	127.3	-90.00	-855.5	5,094.7	331.5	78.0	253.55	1.308	Level 3, SF	



# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-6H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	173.76	-25.5	2.8	25.7					
100.0	100.0	100.0	100.0	0.1	0.1	173.76	-25.5	2.8	25.7	25.4	0.29	88.541		
200.0	200.0	200.0	200.0	0.3	0.3	173.76	-25.5	2.8	25.7	25.0	0.64	40.158		
300.0	300.0	300.0	300.0	0.5	0.5	173.76	-25.5	2.8	25.7	24.7	0.99	25.968		
400.0	400.0	400.0	400.0	0.7	0.7	173.76	-25.5	2.8	25.7	24.3	1.34	19.188		
500.0	500.0	500.0	500.0	0.8	0.8	173.76	-25.5	2.8	25.7	24.0	1.69	15.215		
600.0	600.0	600.0	600.0	1.0	1.0	173.76	-25.5	2.8	25.7	23.6	2.04	12.605		
700.0	700.0	700.0	700.0	1.2	1.2	173.76	-25.5	2.8	25.7	23.3	2.38	10.760		
800.0	800.0	800.0	800.0	1.4	1.4	173.76	-25.5	2.8	25.7	22.9	2.73	9.386		
900.0	900.0	900.0	900.0	1.5	1.5	173.76	-25.5	2.8	25.7	22.6	3.08	8.323 CC, ES		
1,000.0	1,000.0	999.6	999.5	1.7	1.7	-6.56	-26.4	2.8	26.3	22.9	3.43	7.666		
1,100.0	1,100.0	1,099.1	1,099.0	1.9	1.9	-6.36	-29.0	2.8	27.2	23.4	3.78	7.187		
1,200.0	1,199.9	1,198.6	1,198.5	2.1	2.1	-6.17	-33.3	2.7	28.0	23.9	4.13	6.788		
1,300.0	1,299.8	1,298.1	1,297.8	2.3	2.3	-5.99	-39.3	2.7	28.8	24.4	4.47	6.450		
1,400.0	1,399.5	1,397.6	1,397.0	2.4	2.5	-5.83	-47.1	2.6	29.7	24.9	4.82	6.159		
1,500.0	1,499.2	1,497.1	1,496.0	2.6	2.7	-5.68	-56.6	2.5	30.5	25.3	5.16	5.907		
1,600.0	1,598.6	1,596.5	1,594.8	2.9	2.9	-5.54	-67.8	2.4	31.3	25.8	5.51	5.685		
1,700.0	1,697.9	1,696.0	1,693.4	3.1	3.1	-5.41	-80.7	2.3	32.1	26.3	5.85	5.488		
1,800.0	1,796.9	1,795.4	1,791.8	3.3	3.4	-5.28	-95.3	2.2	32.9	26.7	6.20	5.312		
1,900.0	1,895.7	1,894.8	1,889.9	3.6	3.7	-5.17	-111.7	2.1	33.7	27.2	6.54	5.153		
2,000.0	1,994.1	1,994.3	1,987.6	3.9	4.0	-5.06	-129.7	1.9	34.5	27.6	6.88	5.009		
2,100.0	2,092.3	2,093.6	2,085.0	4.2	4.3	-4.97	-149.4	1.8	35.2	28.0	7.22	4.878		
2,200.0	2,190.1	2,193.0	2,182.1	4.6	4.7	-4.86	-170.8	1.6	36.1	28.6	7.57	4.772		
2,300.0	2,287.9	2,292.4	2,278.7	4.9	5.1	-4.58	-193.8	1.4	38.4	30.5	7.92	4.850		
2,400.0	2,385.7	2,391.9	2,375.2	5.3	5.5	-4.17	-218.5	1.2	42.3	34.0	8.28	5.107		
2,500.0	2,483.5	2,491.8	2,471.9	5.7	5.9	-3.82	-243.4	1.0	46.3	37.7	8.63	5.371		
2,600.0	2,581.2	2,591.8	2,568.7	6.0	6.3	-3.52	-268.3	0.8	50.4	41.4	8.98	5.615		
2,700.0	2,679.0	2,691.7	2,665.4	6.4	6.8	-3.26	-293.2	0.6	54.5	45.2	9.33	5.840		
2,800.0	2,776.8	2,791.6	2,762.2	6.8	7.2	-3.04	-318.1	0.4	58.6	48.9	9.69	6.049		
2,900.0	2,874.6	2,891.5	2,859.0	7.2	7.6	-2.85	-343.1	0.2	62.7	52.6	10.04	6.244		
3,000.0	2,972.4	2,991.4	2,955.7	7.6	8.1	-2.69	-368.0	0.0	66.8	56.4	10.39	6.425		
3,100.0	3,070.1	3,091.3	3,052.5	7.9	8.5	-2.54	-392.9	-0.2	70.8	60.1	10.74	6.595		
3,200.0	3,167.9	3,191.3	3,149.2	8.3	9.0	-2.41	-417.8	-0.4	74.9	63.8	11.10	6.754		
3,300.0	3,265.7	3,291.2	3,246.0	8.7	9.4	-2.29	-442.8	-0.6	79.0	67.6	11.45	6.903		
3,400.0	3,363.5	3,391.1	3,342.8	9.1	9.9	-2.18	-467.7	-0.8	83.1	71.3	11.80	7.044		
3,500.0	3,461.2	3,491.0	3,439.5	9.5	10.3	-2.09	-492.6	-1.0	87.2	75.0	12.15	7.176		
3,600.0	3,559.0	3,590.9	3,536.3	9.9	10.8	-2.00	-517.5	-1.2	91.3	78.8	12.50	7.301		
3,700.0	3,656.8	3,690.8	3,633.0	10.3	11.2	-1.92	-542.5	-1.4	95.4	82.5	12.85	7.419		
3,800.0	3,754.6	3,790.8	3,729.8	10.7	11.7	-1.84	-567.4	-1.6	99.5	86.2	13.21	7.531		
3,900.0	3,852.4	3,890.7	3,826.5	11.1	12.2	-1.78	-592.3	-1.8	103.5	90.0	13.56	7.637		
4,000.0	3,950.1	3,990.6	3,923.3	11.5	12.6	-1.71	-617.2	-2.0	107.6	93.7	13.91	7.738		
4,100.0	4,047.9	4,090.5	4,020.1	11.9	13.1	-1.66	-642.2	-2.2	111.7	97.5	14.26	7.834		
4,200.0	4,145.7	4,190.4	4,116.8	12.3	13.5	-1.60	-667.1	-2.4	115.8	101.2	14.61	7.925		
4,300.0	4,243.5	4,290.3	4,213.6	12.7	14.0	-1.55	-692.0	-2.7	119.9	104.9	14.96	8.012		
4,400.0	4,341.2	4,390.3	4,310.3	13.1	14.5	-1.50	-716.9	-2.9	124.0	108.7	15.32	8.095		
4,500.0	4,439.0	4,490.2	4,407.1	13.5	14.9	-1.46	-741.9	-3.1	128.1	112.4	15.67	8.174		
4,600.0	4,536.8	4,590.1	4,503.8	13.9	15.4	-1.42	-766.8	-3.3	132.2	116.1	16.02	8.250		
4,700.0	4,634.6	4,690.0	4,600.6	14.3	15.8	-1.38	-791.7	-3.5	136.2	119.9	16.37	8.323		
4,800.0	4,732.4	4,789.9	4,697.4	14.7	16.3	-1.34	-816.6	-3.7	140.3	123.6	16.72	8.392		
4,900.0	4,830.1	4,889.8	4,794.1	15.1	16.8	-1.31	-841.6	-3.9	144.4	127.3	17.07	8.459		
5,000.0	4,927.9	4,989.8	4,890.9	15.5	17.2	-1.28	-866.5	-4.1	148.5	131.1	17.42	8.523		
5,100.0	5,025.7	5,089.7	4,987.6	15.9	17.7	-1.24	-891.4	-4.3	152.6	134.8	17.78	8.584		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-6H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,123.5	5,189.6	5,084.4	16.3	18.2	-1.22	-916.3	-4.5	156.7	138.6	18.13	8.644		
5,300.0	5,221.2	5,289.5	5,181.1	16.7	18.6	-1.19	-941.2	-4.7	160.8	142.3	18.48	8.700		
5,400.0	5,319.0	5,389.4	5,277.9	17.1	19.1	-1.16	-966.2	-4.9	164.9	146.0	18.83	8.755		
5,500.0	5,416.8	5,489.3	5,374.7	17.5	19.6	-1.14	-991.1	-5.1	169.0	149.8	19.18	8.808		
5,600.0	5,514.6	5,589.3	5,471.4	17.9	20.0	-1.11	-1,016.0	-5.3	173.0	153.5	19.53	8.859		
5,700.0	5,612.4	5,689.2	5,568.2	18.3	20.5	-1.09	-1,040.9	-5.5	177.1	157.2	19.88	8.908		
5,800.0	5,710.1	5,789.1	5,664.9	18.7	21.0	-1.07	-1,065.9	-5.7	181.2	161.0	20.24	8.955		
5,900.0	5,807.9	5,889.0	5,761.7	19.1	21.4	-1.05	-1,090.8	-5.9	185.3	164.7	20.59	9.001		
6,000.0	5,905.7	5,988.9	5,858.4	19.5	21.9	-1.03	-1,115.7	-6.1	189.4	168.5	20.94	9.045		
6,100.0	6,003.5	6,088.8	5,955.2	19.9	22.3	-1.01	-1,140.6	-6.3	193.5	172.2	21.29	9.088		
6,200.0	6,101.2	6,188.8	6,052.0	20.3	22.8	-0.99	-1,165.6	-6.5	197.6	175.9	21.64	9.129		
6,300.0	6,199.0	6,288.7	6,148.7	20.7	23.3	-0.97	-1,190.5	-6.7	201.7	179.7	21.99	9.170		
6,400.0	6,296.8	6,388.6	6,245.5	21.1	23.7	-0.96	-1,215.4	-6.9	205.7	183.4	22.34	9.208		
6,500.0	6,394.6	6,488.5	6,342.2	21.5	24.2	-0.94	-1,240.3	-7.1	209.8	187.1	22.69	9.246		
6,600.0	6,492.4	6,588.4	6,439.0	21.9	24.7	-0.92	-1,265.3	-7.3	213.9	190.9	23.05	9.282		
6,700.0	6,590.0	6,688.2	6,535.6	22.3	25.1	26.82	-1,290.2	-7.5	218.0	194.6	23.39	9.321		
6,800.0	6,685.8	6,788.4	6,632.2	22.7	25.6	54.94	-1,315.1	1.1	222.4	198.6	23.85	9.327		
6,900.0	6,776.9	6,890.6	6,727.5	23.1	26.1	68.81	-1,340.0	27.5	227.3	202.7	24.59	9.243		
7,000.0	6,860.4	6,994.7	6,818.4	23.5	26.6	76.77	-1,363.8	72.1	232.4	206.7	25.65	9.060		
7,100.0	6,933.9	7,100.9	6,901.5	24.0	27.1	81.91	-1,385.9	134.2	237.4	210.4	27.02	8.785		
7,200.0	6,995.1	7,209.0	6,973.1	24.5	27.6	85.41	-1,405.2	212.6	242.1	213.3	28.73	8.425		
7,300.0	7,042.2	7,318.7	7,029.9	25.1	28.3	87.78	-1,420.7	304.9	246.1	215.3	30.79	7.993		
7,400.0	7,073.6	7,429.7	7,068.9	25.9	29.0	89.25	-1,431.9	408.1	249.3	216.1	33.22	7.504		
7,500.0	7,088.6	7,541.6	7,088.1	26.7	29.8	89.93	-1,438.0	518.0	251.4	215.4	35.98	6.987		
7,600.0	7,089.4	7,647.0	7,089.5	27.7	30.8	90.00	-1,439.4	623.4	252.4	213.0	39.45	6.399		
7,700.0	7,088.8	7,747.0	7,088.8	28.9	31.8	90.00	-1,440.3	723.4	253.3	209.8	43.44	5.831		
7,800.0	7,088.1	7,847.0	7,088.1	30.3	33.0	90.00	-1,441.2	823.4	254.1	206.5	47.61	5.338		
7,900.0	7,087.4	7,947.0	7,087.4	31.8	34.3	90.00	-1,442.1	923.4	255.0	203.1	51.92	4.912		
8,000.0	7,086.7	8,047.0	7,086.7	33.5	35.8	90.00	-1,442.9	1,023.3	255.9	199.6	56.33	4.542		
8,100.0	7,086.0	8,147.0	7,086.1	35.3	37.4	90.00	-1,443.8	1,123.3	256.8	195.9	60.83	4.221		
8,200.0	7,085.4	8,247.0	7,085.4	37.1	39.1	90.00	-1,444.7	1,223.3	257.6	192.2	65.39	3.940		
8,300.0	7,084.7	8,347.0	7,084.7	39.1	40.9	90.00	-1,445.5	1,323.3	258.5	188.5	70.01	3.693		
8,400.0	7,084.0	8,447.0	7,084.0	41.1	42.8	90.00	-1,446.4	1,423.3	259.4	184.7	74.66	3.474		
8,500.0	7,083.3	8,547.0	7,083.3	43.2	44.8	90.00	-1,447.3	1,523.3	260.3	180.9	79.36	3.279		
8,600.0	7,082.6	8,647.0	7,082.7	45.3	46.8	90.00	-1,448.2	1,623.3	261.1	177.0	84.08	3.106		
8,700.0	7,082.0	8,747.0	7,082.0	47.5	48.9	90.00	-1,449.0	1,723.3	262.0	173.2	88.83	2.950		
8,800.0	7,081.3	8,847.0	7,081.3	49.7	51.0	90.00	-1,449.9	1,823.3	262.9	169.3	93.59	2.809		
8,900.0	7,080.6	8,947.0	7,080.6	51.9	53.2	90.00	-1,450.8	1,923.3	263.7	165.4	98.38	2.681		
9,000.0	7,079.9	9,047.0	7,079.9	54.2	55.4	90.00	-1,451.7	2,023.2	264.6	161.4	103.18	2.565		
9,100.0	7,079.2	9,147.0	7,079.2	56.5	57.6	90.00	-1,452.5	2,123.2	265.5	157.5	108.00	2.458		
9,200.0	7,078.5	9,247.0	7,078.6	58.8	59.9	90.00	-1,453.4	2,223.2	266.4	153.5	112.82	2.361		
9,300.0	7,077.9	9,347.0	7,077.9	61.1	62.1	90.00	-1,454.3	2,323.2	267.2	149.6	117.66	2.271		
9,400.0	7,077.2	9,447.0	7,077.2	63.4	64.4	90.00	-1,455.1	2,423.2	268.1	145.6	122.50	2.189		
9,500.0	7,076.5	9,547.0	7,076.5	65.8	66.7	90.00	-1,456.0	2,523.2	269.0	141.6	127.36	2.112		
9,600.0	7,075.8	9,647.0	7,075.8	68.1	69.0	90.00	-1,456.9	2,623.2	269.8	137.6	132.22	2.041		
9,700.0	7,075.1	9,747.0	7,075.2	70.5	71.3	90.00	-1,457.8	2,723.2	270.7	133.6	137.08	1.975		
9,800.0	7,074.5	9,847.0	7,074.5	72.8	73.7	90.00	-1,458.6	2,823.2	271.6	129.6	141.95	1.913		
9,900.0	7,073.8	9,947.0	7,073.8	75.2	76.0	90.00	-1,459.5	2,923.2	272.5	125.6	146.83	1.856		
10,000.0	7,073.1	10,047.0	7,073.1	77.6	78.4	90.00	-1,460.4	3,023.1	273.3	121.6	151.71	1.802		
10,100.0	7,072.4	10,147.0	7,072.4	80.0	80.7	90.00	-1,461.3	3,123.1	274.2	117.6	156.60	1.751		
10,200.0	7,071.7	10,246.9	7,071.8	82.4	83.1	90.00	-1,462.1	3,223.1	275.1	113.6	161.49	1.703		
10,300.0	7,071.1	10,346.9	7,071.1	84.8	85.5	90.00	-1,463.0	3,323.1	276.0	109.6	166.38	1.659		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-6H - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
10,400.0	7,070.4	10,446.9	7,070.4	87.2	87.9	90.00	-1,463.9	3,423.1	276.8	105.6	171.28	1.616		
10,500.0	7,069.7	10,546.9	7,069.7	89.6	90.2	90.00	-1,464.7	3,523.1	277.7	101.5	176.18	1.576		
10,600.0	7,069.0	10,646.9	7,069.0	92.0	92.6	90.00	-1,465.6	3,623.1	278.6	97.5	181.08	1.538		
10,700.0	7,068.3	10,746.9	7,068.4	94.4	95.0	90.00	-1,466.5	3,723.1	279.4	93.5	185.98	1.503		
10,800.0	7,067.7	10,846.9	7,067.7	96.8	97.4	90.00	-1,467.4	3,823.1	280.3	89.4	190.89	1.468 Level 3		
10,900.0	7,067.0	10,946.9	7,067.0	99.2	99.8	90.00	-1,468.2	3,923.1	281.2	85.4	195.80	1.436 Level 3		
11,000.0	7,066.3	11,046.9	7,066.3	101.7	102.2	90.00	-1,469.1	4,023.0	282.1	81.4	200.71	1.405 Level 3		
11,100.0	7,065.6	11,146.9	7,065.6	104.1	104.7	90.00	-1,470.0	4,123.0	282.9	77.3	205.62	1.376 Level 3		
11,200.0	7,064.9	11,246.9	7,065.0	106.5	107.1	90.00	-1,470.9	4,223.0	283.8	73.3	210.54	1.348 Level 3		
11,300.0	7,064.3	11,346.9	7,064.3	108.9	109.5	90.00	-1,471.7	4,323.0	284.7	69.2	215.45	1.321 Level 3		
11,400.0	7,063.6	11,446.9	7,063.6	111.4	111.9	90.00	-1,472.6	4,423.0	285.6	65.2	220.37	1.296 Level 3		
11,500.0	7,062.9	11,546.9	7,062.9	113.8	114.3	90.00	-1,473.5	4,523.0	286.4	61.1	225.29	1.271 Level 3		
11,600.0	7,062.2	11,646.9	7,062.2	116.2	116.8	90.00	-1,474.3	4,623.0	287.3	57.1	230.21	1.248 Level 2		
11,700.0	7,061.5	11,746.9	7,061.6	118.7	119.2	90.00	-1,475.2	4,723.0	288.2	53.0	235.13	1.226 Level 2		
11,800.0	7,060.9	11,846.9	7,060.9	121.1	121.6	90.00	-1,476.1	4,823.0	289.0	49.0	240.05	1.204 Level 2		
11,900.0	7,060.2	11,946.9	7,060.2	123.6	124.0	90.00	-1,477.0	4,923.0	289.9	44.9	244.98	1.183 Level 2		
12,000.0	7,059.5	12,046.9	7,059.5	126.0	126.5	90.00	-1,477.8	5,022.9	290.8	40.9	249.90	1.164 Level 2		
12,072.1	7,059.0	12,119.0	7,059.0	127.8	128.2	90.00	-1,478.5	5,095.0	291.4	38.0	253.45	1.150 Level 2, SF		

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-7H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	176.87	-51.0	2.8	51.1					
100.0	100.0	101.0	101.0	0.1	0.1	176.87	-51.0	2.8	51.1	50.8	0.29	175.239		
200.0	200.0	201.0	201.0	0.3	0.3	176.87	-51.0	2.8	51.1	50.4	0.64	79.741		
300.0	300.0	301.0	301.0	0.5	0.5	176.87	-51.0	2.8	51.1	50.1	0.99	51.614		
400.0	400.0	401.0	401.0	0.7	0.7	176.87	-51.0	2.8	51.1	49.7	1.34	38.155		
500.0	500.0	501.0	501.0	0.8	0.8	176.87	-51.0	2.8	51.1	49.4	1.69	30.264		
600.0	600.0	601.0	601.0	1.0	1.0	176.87	-51.0	2.8	51.1	49.0	2.04	25.077		
700.0	700.0	701.0	701.0	1.2	1.2	176.87	-51.0	2.8	51.1	48.7	2.39	21.408		
800.0	800.0	801.0	801.0	1.4	1.4	176.87	-51.0	2.8	51.1	48.3	2.73	18.676		
832.0	832.0	833.0	833.0	1.4	1.4	176.87	-51.0	2.8	51.1	48.2	2.85	17.944 CC		
900.0	900.0	900.5	900.5	1.5	1.5	176.88	-51.2	2.8	51.3	48.2	3.08	16.639 ES		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-3.53	-53.0	2.8	52.8	49.4	3.43	15.397		
1,100.0	1,100.0	1,098.7	1,098.6	1.9	1.9	-3.47	-56.4	2.8	54.6	50.8	3.78	14.443		
1,200.0	1,199.9	1,197.7	1,197.5	2.1	2.1	-3.45	-61.5	2.9	56.3	52.2	4.12	13.647		
1,300.0	1,299.8	1,296.7	1,296.3	2.3	2.3	-3.45	-68.4	2.9	58.0	53.5	4.47	12.972		
1,400.0	1,399.5	1,395.7	1,394.9	2.4	2.5	-3.47	-77.0	3.0	59.7	54.8	4.81	12.393		
1,500.0	1,499.2	1,494.6	1,493.3	2.6	2.7	-3.52	-87.2	3.0	61.3	56.2	5.16	11.889		
1,600.0	1,598.6	1,593.6	1,591.5	2.9	2.9	-3.60	-99.2	3.1	63.0	57.5	5.50	11.446		
1,700.0	1,697.9	1,692.4	1,689.4	3.1	3.2	-3.69	-112.8	3.2	64.6	58.8	5.84	11.054		
1,800.0	1,796.9	1,791.3	1,787.1	3.3	3.4	-3.80	-128.1	3.3	66.2	60.0	6.19	10.703		
1,900.0	1,895.7	1,890.1	1,884.4	3.6	3.7	-3.93	-145.2	3.4	67.8	61.3	6.53	10.387		
2,000.0	1,994.1	1,988.9	1,981.5	3.9	4.1	-4.07	-163.8	3.5	69.4	62.5	6.87	10.101		
2,100.0	2,092.3	2,087.7	2,078.1	4.2	4.4	-4.23	-184.2	3.7	70.9	63.7	7.21	9.839		
2,200.0	2,190.1	2,186.5	2,174.4	4.6	4.8	-4.39	-206.2	3.8	72.6	65.1	7.56	9.610		
2,300.0	2,287.9	2,285.1	2,270.2	4.9	5.2	-4.49	-229.8	4.0	75.7	67.8	7.91	9.570 SF		
2,400.0	2,385.7	2,383.7	2,365.4	5.3	5.6	-4.50	-255.0	4.1	80.5	72.2	8.26	9.741		
2,500.0	2,483.5	2,482.0	2,460.1	5.7	6.1	-4.43	-281.9	4.3	87.0	78.4	8.62	10.098		
2,600.0	2,581.2	2,580.2	2,554.0	6.0	6.5	-4.31	-310.2	4.5	95.2	86.3	8.97	10.617		
2,700.0	2,679.0	2,678.0	2,647.1	6.4	7.1	-4.16	-340.1	4.7	105.1	95.8	9.32	11.281		
2,800.0	2,776.8	2,776.1	2,740.0	6.8	7.6	-3.99	-371.6	4.9	116.7	107.0	9.67	12.061		
2,900.0	2,874.6	2,875.3	2,833.9	7.2	8.1	-3.84	-403.8	5.1	128.5	118.5	10.03	12.822		
3,000.0	2,972.4	2,974.6	2,927.9	7.6	8.7	-3.71	-436.0	5.3	140.4	130.1	10.38	13.532		
3,100.0	3,070.1	3,073.9	3,021.8	7.9	9.3	-3.61	-468.2	5.5	152.3	141.6	10.73	14.195		
3,200.0	3,167.9	3,173.2	3,115.7	8.3	9.8	-3.52	-500.4	5.7	164.2	153.1	11.08	14.815		
3,300.0	3,265.7	3,272.5	3,209.6	8.7	10.4	-3.44	-532.6	6.0	176.1	164.7	11.44	15.398		
3,400.0	3,363.5	3,371.8	3,303.5	9.1	10.9	-3.37	-564.9	6.2	188.0	176.2	11.79	15.946		
3,500.0	3,461.2	3,471.1	3,397.5	9.5	11.5	-3.31	-597.1	6.4	199.9	187.8	12.14	16.462		
3,600.0	3,559.0	3,570.4	3,491.4	9.9	12.1	-3.26	-629.3	6.6	211.8	199.3	12.50	16.949		
3,700.0	3,656.8	3,669.7	3,585.3	10.3	12.7	-3.21	-661.5	6.8	223.7	210.8	12.85	17.409		
3,800.0	3,754.6	3,769.0	3,679.2	10.7	13.2	-3.17	-693.7	7.0	235.6	222.4	13.20	17.845		
3,900.0	3,852.4	3,868.2	3,773.1	11.1	13.8	-3.13	-725.9	7.2	247.5	233.9	13.55	18.259		
4,000.0	3,950.1	3,967.5	3,867.1	11.5	14.4	-3.09	-758.1	7.4	259.4	245.5	13.91	18.651		
4,100.0	4,047.9	4,066.8	3,961.0	11.9	15.0	-3.06	-790.3	7.6	271.3	257.0	14.26	19.024		
4,200.0	4,145.7	4,166.1	4,054.9	12.3	15.5	-3.03	-822.5	7.9	283.2	268.6	14.61	19.379		
4,300.0	4,243.5	4,265.4	4,148.8	12.7	16.1	-3.00	-854.8	8.1	295.1	280.1	14.96	19.718		
4,400.0	4,341.2	4,364.7	4,242.7	13.1	16.7	-2.98	-887.0	8.3	307.0	291.6	15.32	20.041		
4,500.0	4,439.0	4,464.0	4,336.7	13.5	17.3	-2.95	-919.2	8.5	318.9	303.2	15.67	20.349		
4,600.0	4,536.8	4,563.3	4,430.6	13.9	17.9	-2.93	-951.4	8.7	330.8	314.7	16.02	20.644		
4,700.0	4,634.6	4,662.6	4,524.5	14.3	18.4	-2.91	-983.6	8.9	342.6	326.3	16.37	20.927		
4,800.0	4,732.4	4,761.9	4,618.4	14.7	19.0	-2.89	-1,015.8	9.1	354.5	337.8	16.73	21.197		
4,900.0	4,830.1	4,861.1	4,712.3	15.1	19.6	-2.88	-1,048.0	9.3	366.4	349.4	17.08	21.457		
5,000.0	4,927.9	4,960.4	4,806.3	15.5	20.2	-2.86	-1,080.2	9.5	378.3	360.9	17.43	21.705		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-7H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,025.7	5,059.7	4,900.2	15.9	20.8	-2.85	-1,112.4	9.8	390.2	372.4	17.78	21.945		
5,200.0	5,123.5	5,159.0	4,994.1	16.3	21.3	-2.83	-1,144.6	10.0	402.1	384.0	18.13	22.174		
5,300.0	5,221.2	5,258.3	5,088.0	16.7	21.9	-2.82	-1,176.9	10.2	414.0	395.5	18.49	22.396		
5,400.0	5,319.0	5,357.6	5,181.9	17.1	22.5	-2.80	-1,209.1	10.4	425.9	407.1	18.84	22.608		
5,500.0	5,416.8	5,456.9	5,275.9	17.5	23.1	-2.79	-1,241.3	10.6	437.8	418.6	19.19	22.814		
5,600.0	5,514.6	5,556.2	5,369.8	17.9	23.7	-2.78	-1,273.5	10.8	449.7	430.2	19.54	23.011		
5,700.0	5,612.4	5,655.5	5,463.7	18.3	24.3	-2.77	-1,305.7	11.0	461.6	441.7	19.89	23.202		
5,800.0	5,710.1	5,754.8	5,557.6	18.7	24.8	-2.76	-1,337.9	11.2	473.5	453.2	20.25	23.386		
5,900.0	5,807.9	5,854.0	5,651.5	19.1	25.4	-2.75	-1,370.1	11.5	485.4	464.8	20.60	23.564		
6,000.0	5,905.7	5,953.3	5,745.5	19.5	26.0	-2.74	-1,402.3	11.7	497.3	476.3	20.95	23.736		

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S17-T4N-R66W (Hodgson) - Hodgson 17-8H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	175.83	-76.5	5.6	76.7					
100.0	100.0	101.0	101.0	0.1	0.1	175.83	-76.5	5.6	76.7	76.4	0.29	263.163		
200.0	200.0	201.0	201.0	0.3	0.3	175.83	-76.5	5.6	76.7	76.1	0.64	119.750		
300.0	300.0	301.0	301.0	0.5	0.5	175.83	-76.5	5.6	76.7	75.7	0.99	77.510		
400.0	400.0	401.0	401.0	0.7	0.7	175.83	-76.5	5.6	76.7	75.4	1.34	57.299		
500.0	500.0	501.0	501.0	0.8	0.8	175.83	-76.5	5.6	76.7	75.0	1.69	45.448		
600.0	600.0	601.0	601.0	1.0	1.0	175.83	-76.5	5.6	76.7	74.7	2.04	37.659		
700.0	700.0	701.0	701.0	1.2	1.2	175.83	-76.5	5.6	76.7	74.3	2.39	32.149		
766.3	766.3	767.3	767.3	1.3	1.3	175.83	-76.5	5.6	76.7	74.1	2.62	29.305 CC		
800.0	800.0	801.0	801.0	1.4	1.4	175.83	-76.5	5.6	76.7	74.0	2.73	28.046 ES		
900.0	900.0	900.0	900.0	1.5	1.5	175.88	-77.4	5.6	77.6	74.5	3.08	25.170		
1,000.0	1,000.0	998.3	998.2	1.7	1.7	-4.48	-79.9	5.6	80.0	76.5	3.43	23.322		
1,100.0	1,100.0	1,096.9	1,096.7	1.9	1.9	-4.35	-84.2	5.5	82.5	78.7	3.77	21.865		
1,200.0	1,199.9	1,195.4	1,195.1	2.1	2.1	-4.24	-90.1	5.5	85.1	80.9	4.12	20.649		
1,300.0	1,299.8	1,293.9	1,293.3	2.3	2.3	-4.13	-97.8	5.5	87.6	83.1	4.46	19.619		
1,400.0	1,399.5	1,392.3	1,391.3	2.4	2.5	-4.04	-107.1	5.4	90.1	85.3	4.81	18.733		
1,500.0	1,499.2	1,490.7	1,489.0	2.6	2.7	-3.96	-118.1	5.4	92.5	87.4	5.15	17.963		
1,600.0	1,598.6	1,589.1	1,586.6	2.9	2.9	-3.89	-130.8	5.3	95.0	89.5	5.49	17.286		
1,700.0	1,697.9	1,687.4	1,683.9	3.1	3.2	-3.83	-145.1	5.3	97.4	91.6	5.84	16.686		
1,800.0	1,796.9	1,785.7	1,780.8	3.3	3.5	-3.77	-161.1	5.2	99.8	93.6	6.18	16.149		
1,900.0	1,895.7	1,883.9	1,877.5	3.6	3.8	-3.72	-178.7	5.1	102.1	95.6	6.52	15.666		
2,000.0	1,994.1	1,982.1	1,973.8	3.9	4.1	-3.68	-198.0	5.0	104.5	97.6	6.86	15.227		
2,100.0	2,092.3	2,080.3	2,069.7	4.2	4.5	-3.64	-219.0	4.9	106.7	99.5	7.20	14.827		
2,200.0	2,190.1	2,178.4	2,165.2	4.6	4.9	-3.61	-241.5	4.8	109.1	101.6	7.54	14.469		
2,300.0	2,287.9	2,276.5	2,260.2	4.9	5.3	-3.54	-265.7	4.7	112.9	105.0	7.89	14.305 SF		
2,400.0	2,385.7	2,374.3	2,354.6	5.3	5.7	-3.43	-291.4	4.6	118.4	110.2	8.25	14.363		
2,500.0	2,483.5	2,472.0	2,448.4	5.7	6.2	-3.28	-318.7	4.5	125.6	117.0	8.60	14.614		
2,600.0	2,581.2	2,569.4	2,541.4	6.0	6.7	-3.12	-347.5	4.3	134.5	125.6	8.95	15.037		
2,700.0	2,679.0	2,666.5	2,633.6	6.4	7.2	-2.94	-377.8	4.2	145.1	135.8	9.29	15.610		
2,800.0	2,776.8	2,763.2	2,725.0	6.8	7.8	-2.77	-409.6	4.0	157.4	147.7	9.64	16.318		
2,900.0	2,874.6	2,859.4	2,815.4	7.2	8.3	-2.59	-442.7	3.9	171.3	161.3	9.99	17.145		
3,000.0	2,972.4	2,955.2	2,904.8	7.6	8.9	-2.42	-477.1	3.7	186.9	176.5	10.34	18.078		
3,100.0	3,070.1	3,050.5	2,993.1	7.9	9.6	-2.26	-512.8	3.6	204.1	193.4	10.68	19.107		
3,200.0	3,167.9	3,145.7	3,080.7	8.3	10.2	-2.12	-550.0	3.4	222.9	211.9	11.03	20.218		
3,300.0	3,265.7	3,243.8	3,170.8	8.7	10.9	-1.98	-588.8	3.2	242.4	231.0	11.38	21.305		
3,400.0	3,363.5	3,341.9	3,260.9	9.1	11.5	-1.87	-627.6	3.0	261.8	250.1	11.73	22.327		
3,500.0	3,461.2	3,439.9	3,350.9	9.5	12.2	-1.77	-666.5	2.9	281.3	269.2	12.08	23.291		
3,600.0	3,559.0	3,538.0	3,441.0	9.9	12.9	-1.69	-705.3	2.7	300.7	288.3	12.43	24.200		
3,700.0	3,656.8	3,636.1	3,531.1	10.3	13.6	-1.61	-744.1	2.5	320.2	307.4	12.78	25.060		
3,800.0	3,754.6	3,734.2	3,621.2	10.7	14.2	-1.55	-783.0	2.3	339.6	326.5	13.13	25.874		
3,900.0	3,852.4	3,832.3	3,711.2	11.1	14.9	-1.49	-821.8	2.1	359.1	345.6	13.48	26.646		
4,000.0	3,950.1	3,930.4	3,801.3	11.5	15.6	-1.43	-860.6	2.0	378.6	364.7	13.83	27.380		
4,100.0	4,047.9	4,028.5	3,891.4	11.9	16.3	-1.39	-899.4	1.8	398.0	383.8	14.18	28.077		
4,200.0	4,145.7	4,126.6	3,981.5	12.3	17.0	-1.34	-938.3	1.6	417.5	402.9	14.52	28.741		
4,300.0	4,243.5	4,224.7	4,071.5	12.7	17.7	-1.30	-977.1	1.4	436.9	422.0	14.87	29.374		
4,400.0	4,341.2	4,322.7	4,161.6	13.1	18.3	-1.27	-1,015.9	1.2	456.4	441.1	15.22	29.978		
4,500.0	4,439.0	4,420.8	4,251.7	13.5	19.0	-1.23	-1,054.8	1.1	475.8	460.2	15.57	30.555		
4,600.0	4,536.8	4,518.9	4,341.8	13.9	19.7	-1.20	-1,093.6	0.9	495.3	479.4	15.92	31.107		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	K. P. Kauffman Company, Inc.	<b>Local Co-ordinate Reference:</b>	Well Hodgson 17-5H
<b>Project:</b>	Wattenberg	<b>TVD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Reference Site:</b>	S17-T4N-R66W (Hodgson)	<b>MD Reference:</b>	WELL @ 4724.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hodgson 17-5H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4724.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Hodgson 17-5H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.45°

