



**Scientific
Drilling**

Survey Certification

7327 West Barton Road
Casper, WY 82604
(307)-472-6621 Fax (307) 472-5439

Operator	<u>KP Kauffman Co, Inc.</u>
Well Name & No.	<u>Rocky Mountain Fuel C-12</u>
County & State	<u>Weld County, CO</u>
SDI Job No.	<u>411213K91314</u>
Rig	<u>Ground Level</u>
Survey Date	<u>10-Dec-2013</u>

I, Steven F. Gottschalk, having personal knowledge of all the facts, hereby
certify that the attached directional survey run from a measured depth of 0 feet to a
measured depth of 6906.47 feet is true and correct as determined from all available records.


Signature

23-Jan-2014
Date

Steven F. Gottschalk
Rockies Region Well Planner
Scientific Drilling - Rocky Mountain District

KP Kauffman Co, Inc.

Weld County, CO

Rocky Mountain Fuel

Rocky Mountain Fuel C-12

OH

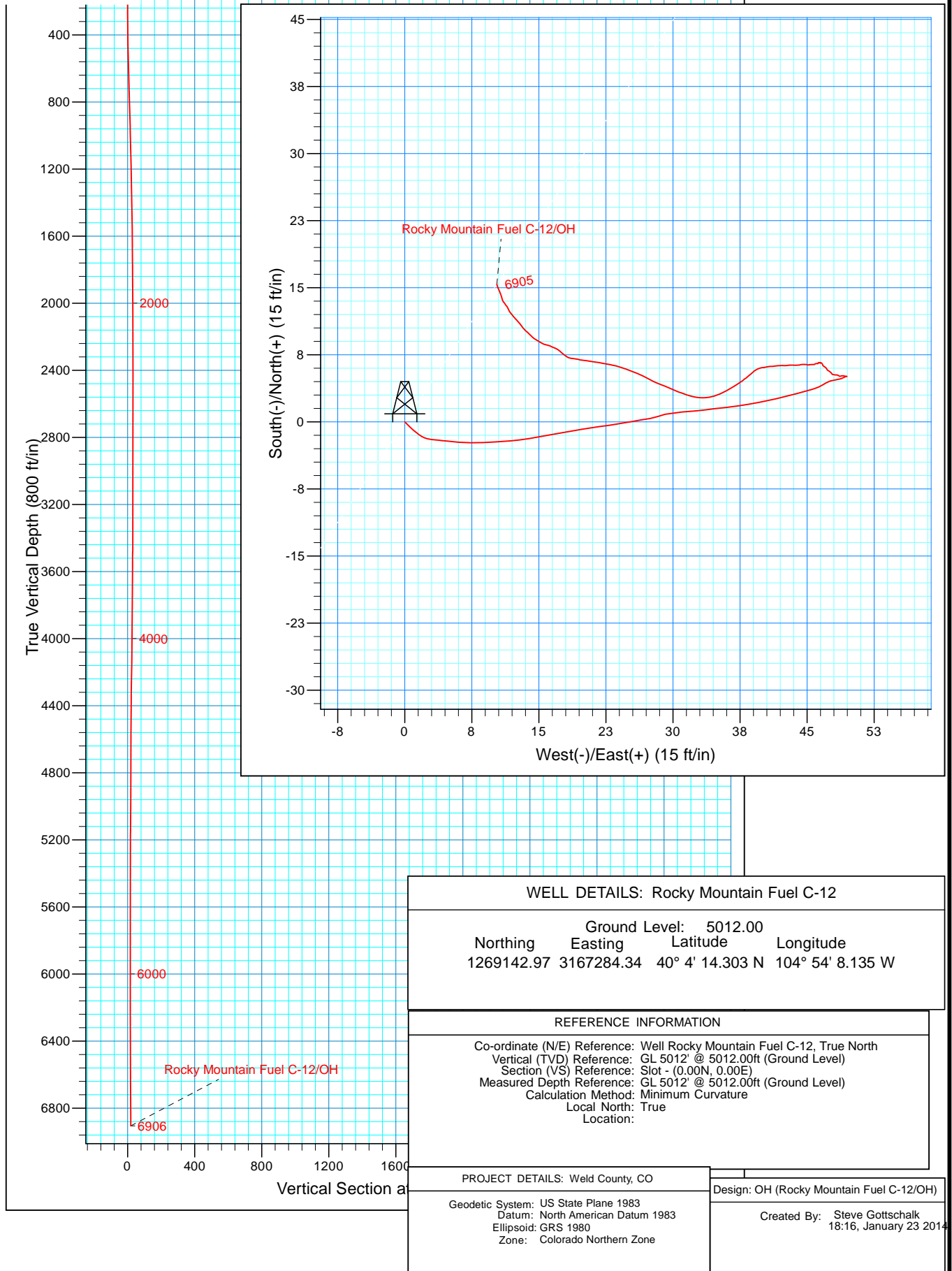
Design: OH

Standard Survey Report

23 January, 2014



Project: Weld County, CO
Site: Rocky Mountain Fuel
Well: Rocky Mountain Fuel C-12



Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel C-12
Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Project	Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Rocky Mountain Fuel			
Site Position:		Northing:	1,269,142.98 usft	Latitude:	40° 4' 14.303 N
From:	Lat/Long	Easting:	3,167,284.34 usft	Longitude:	104° 54' 8.135 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.39 °

Well	Rocky Mountain Fuel C-12, 660' FNL, 1980' FEL, SEC8 T1N R67W					
Well Position	+N/-S	0.00 ft	Northing:	1,269,142.97 usft	Latitude:	40° 4' 14.303 N
	+E/-W	0.00 ft	Easting:	3,167,284.34 usft	Longitude:	104° 54' 8.135 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,012.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	12/10/2013	8.61	66.67	52,604

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	33.74	

Survey Program	Date	1/23/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.01	6,906.47	Survey #1 Surface Gyro (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.01	0.88	135.50	100.01	-0.55	0.54	-0.16	0.88	0.88	0.00
First SDI Gyro Survey									
125.67	0.81	133.13	125.66	-0.81	0.81	-0.23	0.30	-0.27	-9.24
150.03	0.81	127.39	150.02	-1.03	1.07	-0.27	0.33	0.00	-23.56
175.20	0.77	127.33	175.19	-1.25	1.35	-0.29	0.16	-0.16	-0.24
200.02	0.81	124.93	200.01	-1.45	1.62	-0.30	0.21	0.16	-9.67
225.75	0.81	121.44	225.73	-1.65	1.93	-0.30	0.19	0.00	-13.56
250.17	0.84	109.14	250.15	-1.79	2.24	-0.25	0.73	0.12	-50.37
275.81	0.97	103.82	275.79	-1.91	2.63	-0.12	0.60	0.51	-20.75
300.14	1.16	95.53	300.11	-1.98	3.08	0.06	1.00	0.78	-34.07

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Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
325.66	1.23	94.98	325.63	-2.03	3.61	0.32	0.28	0.27	-2.16
351.13	1.35	96.86	351.09	-2.09	4.18	0.58	0.50	0.47	7.38
376.03	1.38	96.07	375.98	-2.16	4.77	0.86	0.14	0.12	-3.17
400.63	1.38	96.04	400.58	-2.22	5.36	1.13	0.00	0.00	-0.12
426.05	1.50	93.66	425.99	-2.27	5.99	1.44	0.53	0.47	-9.36
450.20	1.68	91.48	450.13	-2.30	6.66	1.79	0.79	0.75	-9.03
475.45	1.85	92.41	475.37	-2.33	7.44	2.20	0.68	0.67	3.68
500.72	1.93	88.17	500.62	-2.33	8.27	2.66	0.64	0.32	-16.78
525.52	1.99	86.86	525.41	-2.29	9.12	3.16	0.30	0.24	-5.28
550.93	2.06	86.45	550.80	-2.24	10.02	3.70	0.28	0.28	-1.61
575.23	2.12	86.76	575.09	-2.19	10.90	4.23	0.25	0.25	1.28
600.22	2.10	85.34	600.06	-2.13	11.82	4.80	0.22	-0.08	-5.68
625.14	2.42	82.53	624.96	-2.02	12.80	5.43	1.36	1.28	-11.28
650.49	2.49	80.79	650.29	-1.86	13.87	6.15	0.40	0.28	-6.86
675.89	2.62	79.59	675.66	-1.67	14.98	6.93	0.55	0.51	-4.72
700.63	2.64	80.58	700.38	-1.47	16.10	7.72	0.20	0.08	4.00
725.37	2.65	79.77	725.09	-1.28	17.23	8.50	0.16	0.04	-3.27
750.53	2.66	80.51	750.22	-1.08	18.38	9.31	0.14	0.04	2.94
775.55	2.65	79.82	775.22	-0.88	19.52	10.11	0.13	-0.04	-2.76
800.66	2.55	80.81	800.30	-0.69	20.64	10.89	0.44	-0.40	3.94
826.37	2.53	83.35	825.99	-0.53	21.77	11.65	0.44	-0.08	9.88
850.58	2.21	81.01	850.17	-0.40	22.76	12.31	1.38	-1.32	-9.67
875.48	2.18	80.22	875.06	-0.24	23.70	12.96	0.17	-0.12	-3.17
900.36	2.24	80.53	899.92	-0.08	24.65	13.62	0.25	0.24	1.25
925.44	2.04	80.41	924.98	0.07	25.57	14.26	0.80	-0.80	-0.48
950.00	2.18	80.25	949.52	0.22	26.46	14.88	0.57	0.57	-0.65
975.95	2.15	82.17	975.46	0.37	27.43	15.55	0.30	-0.12	7.40
1,000.96	1.99	67.07	1,000.45	0.61	28.30	16.22	2.27	-0.64	-60.38
1,025.30	2.09	80.98	1,024.77	0.84	29.12	16.88	2.07	0.41	57.15
1,050.96	2.11	82.33	1,050.42	0.98	30.05	17.51	0.21	0.08	5.26
1,075.96	2.14	83.31	1,075.40	1.09	30.97	18.11	0.19	0.12	3.92
1,101.01	2.15	86.33	1,100.43	1.18	31.91	18.70	0.45	0.04	12.06
1,125.47	2.09	84.24	1,124.88	1.25	32.81	19.26	0.40	-0.25	-8.54
1,151.05	1.94	82.27	1,150.44	1.36	33.70	19.85	0.65	-0.59	-7.70
1,175.35	1.97	83.95	1,174.73	1.46	34.52	20.39	0.27	0.12	6.91
1,200.51	1.92	83.53	1,199.87	1.55	35.37	20.94	0.21	-0.20	-1.67
1,226.01	1.86	83.61	1,225.36	1.64	36.21	21.48	0.24	-0.24	0.31
1,250.14	1.82	80.97	1,249.47	1.75	36.98	21.99	0.39	-0.17	-10.94
1,275.83	1.70	81.74	1,275.15	1.87	37.76	22.52	0.48	-0.47	3.00
1,300.95	1.66	80.60	1,300.26	1.98	38.48	23.02	0.21	-0.16	-4.54
1,325.22	1.62	79.82	1,324.52	2.10	39.17	23.50	0.19	-0.16	-3.21
1,350.12	1.55	78.36	1,349.41	2.23	39.85	23.98	0.32	-0.28	-5.86
1,375.39	1.43	81.32	1,374.67	2.34	40.49	24.44	0.56	-0.47	11.71

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Survey Report

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Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
1,401.01	1.32	73.97	1,400.29	2.47	41.09	24.88	0.81	-0.43	-28.69
1,425.57	1.26	78.40	1,424.84	2.61	41.63	25.29	0.47	-0.24	18.04
1,450.42	1.19	77.41	1,449.68	2.72	42.15	25.67	0.29	-0.28	-3.98
1,475.39	1.12	74.65	1,474.65	2.84	42.64	26.04	0.36	-0.28	-11.05
1,501.10	0.96	74.80	1,500.35	2.96	43.09	26.39	0.62	-0.62	0.58
1,525.60	0.87	71.81	1,524.85	3.07	43.46	26.70	0.42	-0.37	-12.20
1,550.82	0.84	76.60	1,550.07	3.18	43.82	26.98	0.31	-0.12	18.99
1,575.04	0.77	74.71	1,574.29	3.26	44.15	27.23	0.31	-0.29	-7.80
1,600.71	0.78	74.81	1,599.95	3.35	44.49	27.50	0.04	0.04	0.39
1,626.05	0.73	74.36	1,625.29	3.44	44.81	27.75	0.20	-0.20	-1.78
1,650.31	0.74	76.72	1,649.55	3.52	45.11	27.98	0.13	0.04	9.73
1,675.79	0.83	74.10	1,675.03	3.61	45.45	28.24	0.38	0.35	-10.28
1,700.99	0.82	71.01	1,700.23	3.72	45.79	28.52	0.18	-0.04	-12.26
1,725.31	0.77	68.04	1,724.54	3.83	46.11	28.80	0.27	-0.21	-12.21
1,750.04	0.72	65.51	1,749.27	3.96	46.41	29.07	0.24	-0.20	-10.23
1,775.55	0.67	59.90	1,774.78	4.10	46.68	29.34	0.33	-0.20	-21.99
1,800.38	0.62	60.69	1,799.61	4.24	46.92	29.59	0.20	-0.20	3.18
1,825.82	0.60	61.04	1,825.05	4.37	47.16	29.83	0.08	-0.08	1.38
1,850.84	0.51	62.66	1,850.06	4.49	47.37	30.04	0.37	-0.36	6.47
1,875.10	0.47	74.40	1,874.32	4.56	47.57	30.21	0.44	-0.16	48.39
1,900.55	0.51	78.59	1,899.77	4.61	47.78	30.37	0.21	0.16	16.46
1,925.11	0.48	79.40	1,924.33	4.65	47.98	30.52	0.13	-0.12	3.30
1,950.51	0.56	79.25	1,949.73	4.70	48.21	30.68	0.32	0.31	-0.59
1,975.53	0.48	76.61	1,974.75	4.74	48.43	30.85	0.33	-0.32	-10.55
2,000.72	0.51	78.60	1,999.94	4.79	48.65	31.00	0.14	0.12	7.90
2,025.10	0.44	67.29	2,024.32	4.85	48.84	31.16	0.48	-0.29	-46.39
2,050.74	0.39	66.82	2,049.96	4.92	49.01	31.31	0.20	-0.20	-1.83
2,075.10	0.39	65.19	2,074.32	4.99	49.16	31.45	0.05	0.00	-6.69
2,100.29	0.20	47.09	2,099.51	5.05	49.27	31.57	0.83	-0.75	-71.85
2,125.62	0.04	83.41	2,124.84	5.08	49.31	31.62	0.67	-0.63	143.39
2,151.07	0.06	71.31	2,150.29	5.09	49.33	31.63	0.09	0.08	-47.54
2,175.24	0.06	103.98	2,174.46	5.09	49.36	31.65	0.14	0.00	135.17
2,200.60	0.04	63.44	2,199.82	5.09	49.38	31.66	0.16	-0.08	-159.86
2,225.67	0.09	84.16	2,224.89	5.10	49.41	31.68	0.22	0.20	82.65
2,250.67	0.09	120.23	2,249.89	5.09	49.44	31.69	0.22	0.00	144.28
2,275.22	0.12	250.44	2,274.44	5.07	49.44	31.67	0.78	0.12	530.39
2,300.01	0.36	276.17	2,299.23	5.07	49.33	31.62	1.04	0.97	103.79
2,325.59	0.22	308.01	2,324.81	5.11	49.21	31.58	0.81	-0.55	124.47
2,350.23	0.36	274.40	2,349.45	5.14	49.10	31.55	0.87	0.57	-136.40
2,376.26	0.32	267.93	2,375.47	5.15	48.95	31.47	0.21	-0.15	-24.86
2,400.21	0.28	254.67	2,399.42	5.13	48.82	31.38	0.33	-0.17	-55.37
2,425.69	0.22	251.41	2,424.90	5.10	48.72	31.30	0.24	-0.24	-12.79
2,450.35	0.18	294.88	2,449.56	5.10	48.64	31.25	0.62	-0.16	176.28

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Survey Report

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Design:	OH	Database:	Casper District

Survey										
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2,475.07	0.23	300.90	2,474.28	5.14	48.56	31.25	0.22	0.20	24.35	
2,500.85	0.34	300.11	2,500.06	5.21	48.45	31.24	0.43	0.43	-3.06	
2,526.04	0.39	278.76	2,525.25	5.26	48.30	31.20	0.57	0.20	-84.76	
2,550.05	0.39	265.05	2,549.26	5.26	48.14	31.11	0.39	0.00	-57.10	
2,575.21	0.30	289.12	2,574.42	5.28	47.99	31.04	0.67	-0.36	95.67	
2,600.88	0.26	269.95	2,600.09	5.30	47.87	30.99	0.39	-0.16	-74.68	
2,625.55	0.21	324.22	2,624.76	5.33	47.78	30.98	0.89	-0.20	219.98	
2,650.95	0.23	326.18	2,650.16	5.41	47.73	31.01	0.08	0.08	7.72	
2,675.54	0.31	315.84	2,674.75	5.50	47.66	31.05	0.38	0.33	-42.05	
2,701.55	0.38	311.68	2,700.76	5.61	47.54	31.07	0.29	0.27	-15.99	
2,726.13	0.32	298.25	2,725.34	5.70	47.42	31.08	0.41	-0.24	-54.64	
2,751.11	0.25	300.34	2,750.32	5.76	47.31	31.07	0.28	-0.28	8.37	
2,776.00	0.16	329.68	2,775.21	5.82	47.25	31.08	0.54	-0.36	117.88	
2,800.82	0.19	333.95	2,800.03	5.88	47.21	31.11	0.13	0.12	17.20	
2,825.73	0.28	327.39	2,824.94	5.97	47.16	31.16	0.38	0.36	-26.33	
2,850.69	0.32	311.46	2,849.90	6.07	47.08	31.19	0.37	0.16	-63.82	
2,875.68	0.34	303.57	2,874.89	6.16	46.96	31.20	0.20	0.08	-31.57	
2,900.74	0.29	302.65	2,899.95	6.23	46.85	31.20	0.20	-0.20	-3.67	
2,925.80	0.18	322.68	2,925.01	6.30	46.77	31.21	0.54	-0.44	79.93	
2,950.98	0.11	356.19	2,950.19	6.35	46.74	31.25	0.43	-0.28	133.08	
2,976.03	0.46	330.66	2,975.24	6.46	46.69	31.31	1.45	1.40	-101.92	
3,000.86	0.23	301.02	3,000.07	6.58	46.60	31.35	1.14	-0.93	-119.37	
3,025.25	0.24	287.01	3,024.46	6.62	46.51	31.34	0.24	0.04	-57.44	
3,050.87	0.23	183.97	3,050.08	6.58	46.46	31.28	1.44	-0.04	-402.19	
3,075.19	0.07	27.51	3,074.40	6.55	46.46	31.25	1.22	-0.66	-643.34	
3,101.17	0.16	316.01	3,100.38	6.59	46.44	31.27	0.59	0.35	-275.21	
3,125.84	0.26	297.97	3,125.05	6.64	46.37	31.27	0.48	0.41	-73.13	
3,150.51	0.26	227.36	3,149.72	6.63	46.28	31.21	1.22	0.00	-286.22	
3,175.94	0.24	198.94	3,175.15	6.54	46.22	31.11	0.49	-0.08	-111.76	
3,200.24	0.07	26.60	3,199.45	6.50	46.21	31.07	1.27	-0.70	-709.22	
3,225.75	0.16	270.16	3,224.96	6.51	46.18	31.07	0.79	0.35	-456.45	
3,250.08	0.23	280.53	3,249.29	6.52	46.10	31.03	0.32	0.29	42.62	
3,275.63	0.27	251.85	3,274.84	6.51	45.99	30.96	0.51	0.16	-112.25	
3,300.68	0.26	234.70	3,299.89	6.46	45.89	30.86	0.32	-0.04	-68.46	
3,325.85	0.21	247.30	3,325.06	6.41	45.80	30.77	0.28	-0.20	50.06	
3,350.31	0.27	287.14	3,349.52	6.41	45.70	30.72	0.71	0.25	162.88	
3,375.60	0.46	262.74	3,374.80	6.42	45.54	30.63	0.95	0.75	-96.48	
3,400.41	0.51	261.85	3,399.61	6.39	45.34	30.49	0.20	0.20	-3.59	
3,426.04	0.40	269.55	3,425.24	6.37	45.13	30.37	0.49	-0.43	30.04	
3,450.19	0.47	280.98	3,449.39	6.39	44.95	30.28	0.46	0.29	47.33	
3,475.07	0.74	273.65	3,474.27	6.42	44.69	30.16	1.13	1.09	-29.46	
3,501.01	0.74	260.92	3,500.21	6.40	44.36	29.96	0.63	0.00	-49.07	
3,526.35	0.79	260.65	3,525.55	6.35	44.02	29.73	0.20	0.20	-1.07	
3,550.56	0.79	269.59	3,549.75	6.32	43.69	29.52	0.51	0.00	36.93	

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel C-12
Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
3,575.14	0.72	278.25	3,574.33	6.34	43.37	29.36	0.54	-0.28	35.23
3,600.08	0.70	264.47	3,599.27	6.35	43.06	29.20	0.69	-0.08	-55.25
3,625.04	0.67	259.47	3,624.23	6.31	42.77	29.00	0.27	-0.12	-20.03
3,650.01	0.63	270.51	3,649.20	6.28	42.49	28.82	0.53	-0.16	44.21
3,676.02	0.70	274.96	3,675.21	6.30	42.19	28.67	0.33	0.27	17.11
3,700.68	0.77	265.18	3,699.86	6.30	41.87	28.49	0.58	0.28	-39.66
3,726.04	0.62	259.20	3,725.22	6.26	41.57	28.29	0.66	-0.59	-23.58
3,751.08	0.60	265.88	3,750.26	6.22	41.30	28.12	0.29	-0.08	26.68
3,775.03	0.67	272.58	3,774.21	6.22	41.04	27.97	0.43	0.29	27.97
3,800.64	0.70	258.69	3,799.82	6.20	40.74	27.78	0.66	0.12	-54.24
3,825.24	0.61	252.99	3,824.41	6.13	40.46	27.57	0.45	-0.37	-23.17
3,850.18	0.59	268.82	3,849.35	6.09	40.21	27.39	0.67	-0.08	63.47
3,875.85	0.66	264.67	3,875.02	6.07	39.93	27.22	0.32	0.27	-16.17
3,900.07	0.64	243.74	3,899.24	6.00	39.67	27.02	0.98	-0.08	-86.42
3,925.33	0.52	242.18	3,924.50	5.88	39.44	26.80	0.48	-0.48	-6.18
3,950.60	0.58	250.05	3,949.77	5.78	39.22	26.59	0.38	0.24	31.14
3,974.59	0.64	223.12	3,973.76	5.65	39.01	26.36	1.21	0.25	-112.26
3,999.21	0.57	222.30	3,998.38	5.45	38.84	26.11	0.29	-0.28	-3.33
4,024.17	0.69	240.43	4,023.33	5.29	38.62	25.85	0.93	0.48	72.64
4,049.47	0.59	218.47	4,048.63	5.11	38.41	25.58	1.04	-0.40	-86.80
4,074.43	0.59	240.19	4,073.59	4.95	38.22	25.34	0.89	0.00	87.02
4,098.64	0.73	229.57	4,097.80	4.78	37.99	25.08	0.77	0.58	-43.87
4,124.98	0.69	232.20	4,124.14	4.58	37.74	24.77	0.20	-0.15	9.98
4,149.08	0.92	239.15	4,148.24	4.39	37.46	24.46	1.04	0.95	28.84
4,174.42	0.90	231.91	4,173.57	4.16	37.13	24.08	0.46	-0.08	-28.57
4,199.30	0.87	244.08	4,198.45	3.96	36.80	23.73	0.76	-0.12	48.91
4,224.25	0.97	237.17	4,223.40	3.76	36.45	23.38	0.60	0.40	-27.70
4,249.12	0.93	240.65	4,248.26	3.55	36.10	23.00	0.28	-0.16	13.99
4,274.64	0.93	241.69	4,273.78	3.35	35.74	22.64	0.07	0.00	4.08
4,298.83	0.92	245.00	4,297.97	3.17	35.39	22.30	0.22	-0.04	13.68
4,324.78	0.96	253.18	4,323.91	3.02	34.99	21.95	0.54	0.15	31.52
4,348.84	1.03	254.29	4,347.97	2.91	34.59	21.63	0.30	0.29	4.61
4,374.69	0.89	254.16	4,373.82	2.79	34.18	21.30	0.54	-0.54	-0.50
4,399.71	1.02	261.89	4,398.83	2.70	33.77	21.00	0.73	0.52	30.90
4,424.14	1.04	268.60	4,423.26	2.67	33.33	20.73	0.50	0.08	27.47
4,449.57	1.01	280.79	4,448.68	2.71	32.88	20.51	0.86	-0.12	47.94
4,474.15	1.11	280.29	4,473.26	2.79	32.43	20.33	0.41	0.41	-2.03
4,499.65	1.00	285.50	4,498.76	2.89	31.98	20.16	0.57	-0.43	20.43
4,523.97	1.13	289.95	4,523.07	3.03	31.55	20.04	0.63	0.53	18.30
4,549.00	1.10	286.31	4,548.10	3.18	31.08	19.91	0.31	-0.12	-14.54
4,574.55	1.10	291.45	4,573.64	3.34	30.62	19.78	0.39	0.00	20.12
4,599.20	1.15	294.76	4,598.29	3.53	30.17	19.70	0.33	0.20	13.43
4,624.55	1.08	290.45	4,623.63	3.72	29.72	19.60	0.43	-0.28	-17.00

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel C-12
Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
4,648.91	1.10	295.22	4,647.99	3.90	29.29	19.51	0.38	0.08	19.58
4,674.88	1.15	291.63	4,673.95	4.10	28.83	19.42	0.33	0.19	-13.82
4,699.68	1.06	289.27	4,698.75	4.27	28.38	19.31	0.41	-0.36	-9.52
4,724.05	1.16	294.74	4,723.11	4.45	27.94	19.22	0.60	0.41	22.45
4,749.98	1.16	300.66	4,749.04	4.69	27.48	19.16	0.46	0.00	22.83
4,774.45	1.03	295.87	4,773.50	4.91	27.07	19.12	0.65	-0.53	-19.57
4,799.53	1.12	294.94	4,798.58	5.12	26.64	19.05	0.37	0.36	-3.71
4,824.87	1.04	296.65	4,823.91	5.32	26.21	18.98	0.34	-0.32	6.75
4,849.99	1.17	288.49	4,849.03	5.51	25.76	18.89	0.81	0.52	-32.48
4,873.23	0.95	293.60	4,872.27	5.66	25.36	18.79	1.03	-0.95	21.99
4,899.96	1.11	290.09	4,898.99	5.84	24.92	18.69	0.64	0.60	-13.13
4,924.63	1.03	288.09	4,923.66	5.99	24.48	18.58	0.36	-0.32	-8.11
4,949.21	0.99	287.83	4,948.23	6.12	24.07	18.46	0.16	-0.16	-1.06
4,974.89	0.93	283.45	4,973.91	6.24	23.65	18.33	0.37	-0.23	-17.06
4,998.91	0.89	283.21	4,997.93	6.33	23.28	18.19	0.17	-0.17	-1.00
5,024.37	0.92	282.74	5,023.38	6.42	22.89	18.05	0.12	0.12	-1.85
5,049.87	1.04	276.27	5,048.88	6.49	22.46	17.87	0.64	0.47	-25.37
5,074.61	0.91	286.31	5,073.62	6.57	22.05	17.71	0.87	-0.53	40.58
5,099.93	0.76	276.76	5,098.93	6.64	21.69	17.57	0.81	-0.59	-37.72
5,123.82	0.76	274.31	5,122.82	6.67	21.38	17.42	0.14	0.00	-10.26
5,149.01	0.85	284.56	5,148.01	6.73	21.03	17.28	0.67	0.36	40.69
5,174.69	0.61	274.00	5,173.69	6.79	20.71	17.15	1.07	-0.93	-41.12
5,199.58	0.59	278.39	5,198.58	6.82	20.45	17.03	0.20	-0.08	17.64
5,224.82	0.69	278.09	5,223.81	6.86	20.17	16.91	0.40	0.40	-1.19
5,249.00	0.68	273.91	5,247.99	6.89	19.88	16.77	0.21	-0.04	-17.29
5,274.11	0.61	281.65	5,273.10	6.93	19.60	16.65	0.44	-0.28	30.82
5,299.66	0.49	289.89	5,298.65	6.99	19.37	16.57	0.56	-0.47	32.25
5,324.74	0.42	269.04	5,323.73	7.03	19.17	16.49	0.71	-0.28	-83.13
5,349.72	0.48	283.52	5,348.71	7.05	18.98	16.40	0.51	0.24	57.97
5,374.36	0.50	280.31	5,373.35	7.09	18.77	16.32	0.14	0.08	-13.03
5,399.23	0.37	270.22	5,398.22	7.11	18.59	16.24	0.60	-0.52	-40.57
5,424.52	0.34	290.32	5,423.51	7.14	18.43	16.17	0.50	-0.12	79.48
5,449.42	0.27	294.31	5,448.41	7.19	18.31	16.15	0.29	-0.28	16.02
5,473.98	0.30	295.82	5,472.97	7.24	18.20	16.13	0.13	0.12	6.15
5,499.92	0.32	304.18	5,498.90	7.31	18.08	16.12	0.19	0.08	32.23
5,524.38	0.30	304.13	5,523.36	7.38	17.97	16.12	0.08	-0.08	-0.20
5,549.24	0.24	299.35	5,548.22	7.45	17.87	16.12	0.26	-0.24	-19.23
5,574.44	0.24	321.11	5,573.42	7.51	17.79	16.13	0.36	0.00	86.35
5,599.27	0.33	306.40	5,598.25	7.60	17.70	16.15	0.46	0.36	-59.24
5,624.66	0.33	303.11	5,623.64	7.68	17.58	16.15	0.07	0.00	-12.96
5,649.65	0.24	319.56	5,648.63	7.76	17.49	16.16	0.48	-0.36	65.83
5,673.79	0.23	316.11	5,672.77	7.83	17.42	16.19	0.07	-0.04	-14.29
5,699.01	0.27	307.02	5,697.99	7.90	17.34	16.20	0.22	0.16	-36.04

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel C-12
Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)	
5,724.97	0.34	308.87	5,723.95	7.99	17.23	16.21	0.27	0.27	7.13	
5,749.36	0.35	303.42	5,748.34	8.08	17.11	16.22	0.14	0.04	-22.35	
5,774.45	0.32	295.80	5,773.43	8.15	16.98	16.21	0.21	-0.12	-30.37	
5,799.24	0.26	299.66	5,798.22	8.21	16.87	16.20	0.25	-0.24	15.57	
5,823.73	0.39	291.36	5,822.71	8.26	16.75	16.17	0.56	0.53	-33.89	
5,848.94	0.46	292.06	5,847.92	8.33	16.57	16.14	0.28	0.28	2.78	
5,874.04	0.48	293.98	5,873.02	8.41	16.38	16.10	0.10	0.08	7.65	
5,899.41	0.35	302.58	5,898.39	8.50	16.22	16.08	0.57	-0.51	33.90	
5,924.77	0.46	280.27	5,923.75	8.56	16.06	16.04	0.75	0.43	-87.97	
5,948.74	0.44	282.97	5,947.72	8.60	15.87	15.96	0.12	-0.08	11.26	
5,974.80	0.42	284.82	5,973.78	8.64	15.68	15.90	0.09	-0.08	7.10	
5,999.09	0.43	296.01	5,998.07	8.71	15.51	15.86	0.34	0.04	46.07	
6,024.41	0.50	297.63	6,023.38	8.80	15.33	15.83	0.28	0.28	6.40	
6,049.34	0.44	297.51	6,048.31	8.89	15.15	15.81	0.24	-0.24	-0.48	
6,074.62	0.50	305.07	6,073.59	9.00	14.97	15.80	0.34	0.24	29.91	
6,099.40	0.49	298.55	6,098.37	9.11	14.79	15.80	0.23	-0.04	-26.31	
6,124.32	0.55	300.83	6,123.29	9.23	14.60	15.78	0.25	0.24	9.15	
6,148.91	0.67	309.57	6,147.88	9.38	14.38	15.79	0.62	0.49	35.54	
6,174.21	0.71	315.92	6,173.18	9.59	14.16	15.84	0.34	0.16	25.10	
6,199.72	0.69	314.20	6,198.69	9.81	13.94	15.90	0.11	-0.08	-6.74	
6,224.59	0.69	311.28	6,223.55	10.01	13.72	15.94	0.14	0.00	-11.74	
6,249.54	0.78	313.60	6,248.50	10.23	13.48	15.99	0.38	0.36	9.30	
6,274.43	0.64	315.76	6,273.39	10.44	13.26	16.05	0.57	-0.56	8.68	
6,298.92	0.72	323.75	6,297.88	10.66	13.08	16.13	0.51	0.33	32.63	
6,324.49	0.66	328.29	6,323.45	10.92	12.91	16.25	0.32	-0.23	17.76	
6,349.26	0.55	314.30	6,348.22	11.12	12.75	16.33	0.74	-0.44	-56.48	
6,374.46	0.62	319.47	6,373.41	11.31	12.57	16.39	0.35	0.28	20.52	
6,399.98	0.64	316.39	6,398.93	11.52	12.38	16.46	0.15	0.08	-12.07	
6,424.81	0.63	319.90	6,423.76	11.72	12.20	16.53	0.16	-0.04	14.14	
6,449.88	0.49	326.03	6,448.83	11.92	12.05	16.60	0.61	-0.56	24.45	
6,474.35	0.44	314.96	6,473.30	12.07	11.93	16.66	0.42	-0.20	-45.24	
6,498.68	0.41	322.32	6,497.63	12.21	11.81	16.71	0.26	-0.12	30.25	
6,524.75	0.41	329.92	6,523.70	12.36	11.70	16.78	0.21	0.00	29.15	
6,549.31	0.52	331.11	6,548.26	12.53	11.60	16.87	0.45	0.45	4.85	
6,573.91	0.44	339.10	6,572.86	12.72	11.52	16.98	0.42	-0.33	32.48	
6,599.57	0.43	323.71	6,598.52	12.89	11.42	17.07	0.46	-0.04	-59.98	
6,624.53	0.38	318.64	6,623.47	13.03	11.31	17.12	0.25	-0.20	-20.31	
6,649.49	0.36	328.95	6,648.43	13.16	11.22	17.17	0.28	-0.08	41.31	
6,674.61	0.39	320.30	6,673.55	13.29	11.12	17.23	0.25	0.12	-34.43	
6,699.08	0.34	319.19	6,698.02	13.41	11.02	17.27	0.21	-0.20	-4.54	
6,723.87	0.48	345.09	6,722.81	13.57	10.95	17.36	0.92	0.56	104.48	
6,749.44	0.60	341.79	6,748.38	13.80	10.88	17.52	0.48	0.47	-12.91	
6,774.96	0.57	343.30	6,773.90	14.05	10.80	17.68	0.13	-0.12	5.92	
6,799.32	0.67	338.58	6,798.26	14.29	10.71	17.84	0.46	0.41	-19.38	

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel C-12
Project:	Weld County, CO	TVD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5012' @ 5012.00ft (Ground Level)
Well:	Rocky Mountain Fuel C-12	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

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)
6,823.95	0.65	337.14	6,822.89	14.56	10.61	18.00	0.11	-0.08	-5.85
6,849.43	0.60	335.58	6,848.37	14.81	10.50	18.15	0.21	-0.20	-6.12
6,873.95	0.57	340.27	6,872.88	15.04	10.40	18.29	0.23	-0.12	19.13
6,899.07	0.71	340.39	6,898.00	15.31	10.31	18.45	0.56	0.56	0.48
6,906.47	0.65	349.31	6,905.40	15.39	10.28	18.51	1.64	-0.81	120.54
Last SDI Gyro Survey									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
100.01	100.01	-0.55	0.54	First SDI Gyro Survey
6,906.47	6,905.40	15.39	10.28	Last SDI Gyro Survey

Checked By: _____ Approved By: _____ Date: _____