



**Scientific
Drilling**

Survey Certification

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

Operator	KP Kauffman Co, Inc.
Well Name & No.	Rocky Mountain Fuel 21-8
County & State	Weld County, CO
SDI Job No.	410214K116152
Rig	FMC 134
Survey Date	17-Feb-2014

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 4836.98 feet is true and correct as determined from all available records.

Signature

27-Feb-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 21-8

OH

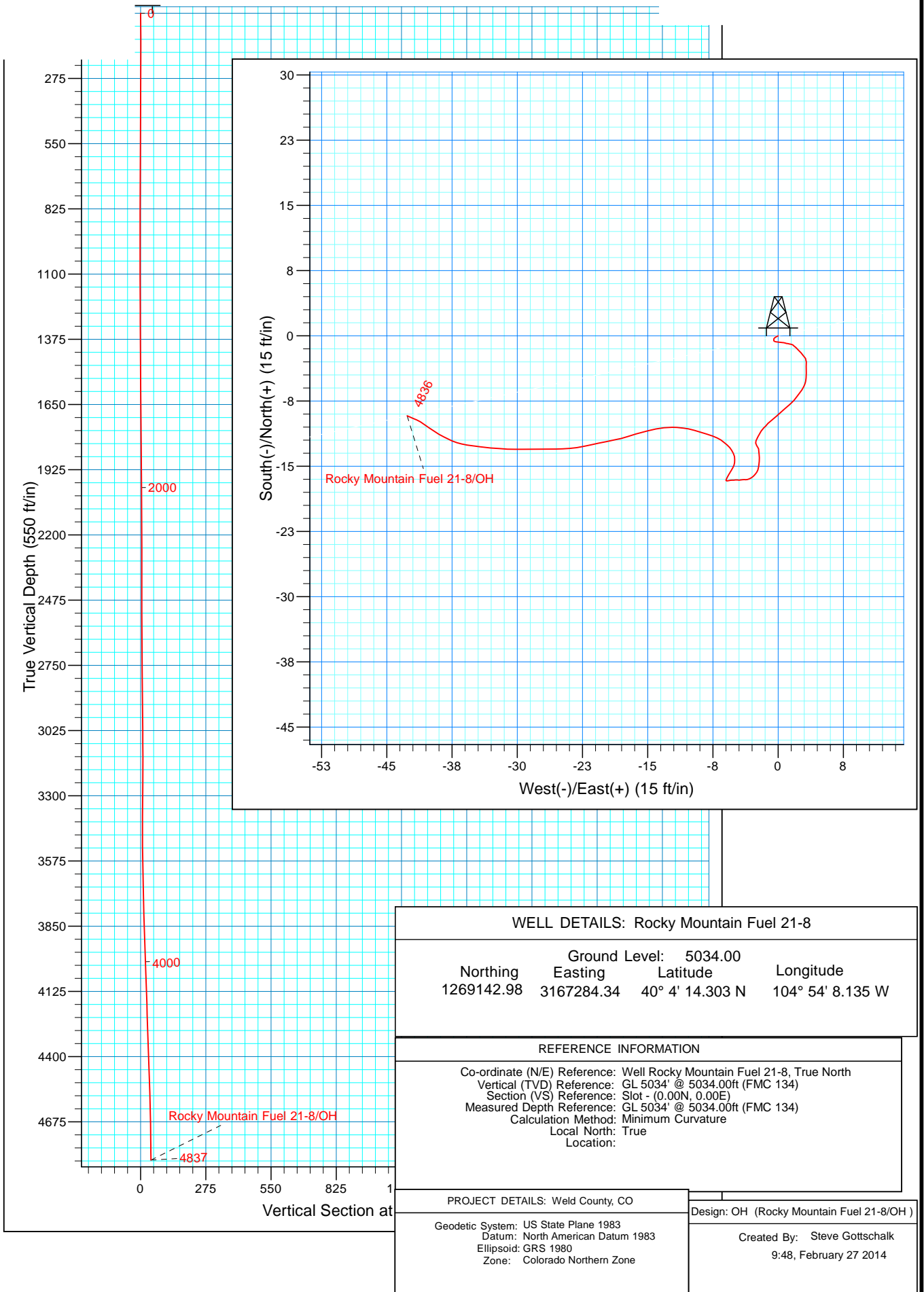
Design: OH

Standard Survey Report

27 February, 2014



Project: Weld County, CO
Site: Rocky Mountain Fuel
Well: Rocky Mountain Fuel 21-8



Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel 21-8
Project:	Weld County, CO	TVD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Well:	Rocky Mountain Fuel 21-8	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
From:	Lat/Long	Easting:	3,167,284.34 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	40° 4' 14.303 N
		Longitude:	104° 54' 8.135 W
		Grid Convergence:	0.39 °

Well	Rocky Mountain Fuel 21-8, 470' FNL, 1980' FWL, SEC8 T1N R67W		
Well Position	+N/-S	0.00 ft	Northing: 1,269,142.98 usft
	+E/-W	0.00 ft	Easting: 3,167,284.34 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Ground Level:	5,034.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	2/17/2014	8.59	66.66	52,580

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	257.82	

Survey Program	Date	2/27/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.77	4,836.98	Survey #1 Surface Gyros (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
100.77	0.33	241.40	100.77	-0.14	-0.25	0.28	0.33	0.33	0.00
First SDI Gyro Survey									
125.96	0.38	234.76	125.96	-0.22	-0.39	0.42	0.26	0.20	-26.36
151.21	0.21	202.34	151.21	-0.31	-0.47	0.53	0.92	-0.67	-128.40
175.47	0.19	186.82	175.47	-0.39	-0.49	0.57	0.24	-0.08	-63.97
200.80	0.18	175.35	200.80	-0.48	-0.50	0.59	0.15	-0.04	-45.28
226.20	0.09	174.97	226.20	-0.54	-0.49	0.59	0.35	-0.35	-1.50
250.75	0.17	149.15	250.75	-0.59	-0.47	0.58	0.40	0.33	-105.17
275.78	0.17	106.72	275.78	-0.63	-0.42	0.54	0.49	0.00	-169.52
300.13	0.23	106.49	300.13	-0.65	-0.33	0.46	0.25	0.25	-0.94

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Well:	Rocky Mountain Fuel 21-8	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)
325.78	0.40	100.51	325.78	-0.68	-0.20	0.34	0.67	0.66	-23.31
350.27	0.36	97.85	350.27	-0.71	-0.04	0.19	0.18	-0.16	-10.86
375.37	0.36	94.60	375.37	-0.73	0.12	0.04	0.08	0.00	-12.95
400.92	0.36	96.01	400.92	-0.74	0.28	-0.12	0.03	0.00	5.52
425.72	0.44	97.02	425.72	-0.76	0.45	-0.28	0.32	0.32	4.07
450.23	0.37	95.34	450.22	-0.78	0.62	-0.45	0.29	-0.29	-6.85
476.47	0.39	110.29	476.46	-0.82	0.79	-0.60	0.38	0.08	56.97
500.30	0.42	101.49	500.29	-0.86	0.95	-0.75	0.29	0.13	-36.93
525.98	0.46	98.15	525.97	-0.90	1.15	-0.93	0.18	0.16	-13.01
551.45	0.40	106.07	551.44	-0.94	1.33	-1.11	0.33	-0.24	31.10
575.06	0.45	101.67	575.05	-0.98	1.50	-1.26	0.25	0.21	-18.64
600.83	0.46	122.11	600.82	-1.05	1.69	-1.43	0.63	0.04	79.32
625.41	0.53	134.89	625.40	-1.19	1.86	-1.56	0.53	0.28	51.99
650.02	0.51	127.40	650.01	-1.33	2.02	-1.70	0.29	-0.08	-30.43
676.61	0.43	139.42	676.60	-1.48	2.18	-1.82	0.48	-0.30	45.20
700.29	0.54	133.64	700.28	-1.63	2.32	-1.93	0.51	0.46	-24.41
726.11	0.50	140.27	726.10	-1.80	2.48	-2.05	0.28	-0.15	25.68
750.74	0.49	133.55	750.73	-1.95	2.63	-2.15	0.24	-0.04	-27.28
775.39	0.51	142.58	775.37	-2.11	2.77	-2.26	0.33	0.08	36.63
800.77	0.48	141.77	800.75	-2.28	2.90	-2.36	0.12	-0.12	-3.19
825.40	0.48	138.15	825.38	-2.44	3.04	-2.45	0.12	0.00	-14.70
850.47	0.47	156.14	850.45	-2.61	3.15	-2.52	0.59	-0.04	71.76
875.17	0.42	169.43	875.15	-2.80	3.20	-2.54	0.46	-0.20	53.81
901.19	0.39	171.17	901.17	-2.98	3.24	-2.53	0.12	-0.12	6.69
925.24	0.50	189.97	925.22	-3.16	3.23	-2.49	0.75	0.46	78.17
950.12	0.51	182.47	950.10	-3.38	3.21	-2.42	0.27	0.04	-30.14
975.08	0.48	166.86	975.06	-3.59	3.23	-2.40	0.55	-0.12	-62.54
1,000.12	0.45	180.04	1,000.10	-3.79	3.25	-2.38	0.44	-0.12	52.64
1,025.05	0.39	180.62	1,025.03	-3.98	3.25	-2.34	0.24	-0.24	2.33
1,050.05	0.43	185.36	1,050.03	-4.15	3.24	-2.29	0.21	0.16	18.96
1,075.07	0.45	177.38	1,075.04	-4.35	3.23	-2.24	0.26	0.08	-31.89
1,100.07	0.49	188.38	1,100.04	-4.55	3.22	-2.19	0.39	0.16	44.00
1,125.09	0.50	180.80	1,125.06	-4.76	3.21	-2.13	0.26	0.04	-30.30
1,150.90	0.35	184.45	1,150.87	-4.96	3.20	-2.08	0.59	-0.58	14.14
1,175.30	0.38	190.12	1,175.27	-5.11	3.18	-2.03	0.19	0.12	23.24
1,200.20	0.37	191.42	1,200.17	-5.27	3.15	-1.97	0.05	-0.04	5.22
1,225.27	0.43	196.41	1,225.24	-5.44	3.11	-1.89	0.28	0.24	19.90
1,250.34	0.38	191.16	1,250.31	-5.61	3.06	-1.81	0.25	-0.20	-20.94
1,275.36	0.51	211.42	1,275.33	-5.79	2.99	-1.70	0.81	0.52	80.98
1,300.37	0.45	213.77	1,300.34	-5.96	2.88	-1.55	0.25	-0.24	9.40
1,325.46	0.47	212.68	1,325.43	-6.13	2.77	-1.41	0.09	0.08	-4.34
1,350.52	0.50	211.85	1,350.49	-6.31	2.65	-1.26	0.12	0.12	-3.31
1,375.51	0.47	213.97	1,375.48	-6.49	2.54	-1.11	0.14	-0.12	8.48

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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)	
1,400.21	0.42	218.80	1,400.17	-6.64	2.42	-0.97	0.25	-0.20	19.55	
1,425.53	0.46	218.79	1,425.49	-6.80	2.30	-0.82	0.16	0.16	-0.04	
1,450.63	0.51	216.90	1,450.59	-6.96	2.17	-0.65	0.21	0.20	-7.53	
1,475.62	0.42	210.00	1,475.58	-7.13	2.06	-0.51	0.42	-0.36	-27.61	
1,500.58	0.50	222.15	1,500.54	-7.29	1.94	-0.36	0.50	0.32	48.68	
1,525.05	0.54	225.68	1,525.01	-7.45	1.79	-0.17	0.21	0.16	14.43	
1,550.97	0.51	221.22	1,550.93	-7.62	1.62	0.02	0.20	-0.12	-17.21	
1,575.91	0.53	227.34	1,575.87	-7.78	1.47	0.21	0.24	0.08	24.54	
1,600.63	0.51	231.44	1,600.59	-7.93	1.30	0.41	0.17	-0.08	16.59	
1,625.38	0.56	229.30	1,625.34	-8.08	1.12	0.61	0.22	0.20	-8.65	
1,650.25	0.50	227.52	1,650.21	-8.23	0.95	0.81	0.25	-0.24	-7.16	
1,675.99	0.53	230.94	1,675.94	-8.38	0.77	1.02	0.17	0.12	13.29	
1,700.01	0.47	225.31	1,699.96	-8.52	0.61	1.20	0.32	-0.25	-23.44	
1,725.56	0.58	227.70	1,725.51	-8.68	0.44	1.40	0.44	0.43	9.35	
1,750.24	0.50	229.68	1,750.19	-8.84	0.27	1.60	0.33	-0.32	8.02	
1,775.11	0.64	232.35	1,775.06	-8.99	0.08	1.82	0.57	0.56	10.74	
1,800.95	0.58	224.57	1,800.90	-9.17	-0.13	2.06	0.40	-0.23	-30.11	
1,825.74	0.42	226.79	1,825.69	-9.32	-0.28	2.24	0.65	-0.65	8.96	
1,850.49	0.56	237.82	1,850.44	-9.45	-0.45	2.44	0.68	0.57	44.57	
1,875.29	0.58	223.97	1,875.24	-9.61	-0.64	2.65	0.56	0.08	-55.85	
1,900.09	0.41	228.44	1,900.03	-9.75	-0.80	2.84	0.70	-0.69	18.02	
1,925.98	0.57	233.95	1,925.92	-9.89	-0.97	3.03	0.64	0.62	21.28	
1,950.80	0.64	221.89	1,950.74	-10.07	-1.16	3.26	0.58	0.28	-48.59	
1,975.61	0.36	221.41	1,975.55	-10.23	-1.31	3.43	1.13	-1.13	-1.93	
2,000.42	0.56	225.76	2,000.36	-10.37	-1.44	3.60	0.82	0.81	17.53	
2,025.22	0.56	220.41	2,025.16	-10.55	-1.61	3.80	0.21	0.00	-21.57	
2,050.10	0.40	221.38	2,050.04	-10.71	-1.75	3.97	0.64	-0.64	3.90	
2,075.21	0.54	220.30	2,075.15	-10.86	-1.88	4.13	0.56	0.56	-4.30	
2,101.20	0.42	213.44	2,101.14	-11.04	-2.01	4.29	0.51	-0.46	-26.39	
2,125.96	0.31	206.75	2,125.90	-11.17	-2.09	4.40	0.48	-0.44	-27.02	
2,150.93	0.41	211.21	2,150.87	-11.31	-2.17	4.51	0.42	0.40	17.86	
2,175.40	0.31	193.54	2,175.34	-11.45	-2.23	4.59	0.61	-0.41	-72.21	
2,200.61	0.25	210.49	2,200.54	-11.56	-2.27	4.66	0.40	-0.24	67.24	
2,225.17	0.41	210.04	2,225.10	-11.68	-2.34	4.76	0.65	0.65	-1.83	
2,250.76	0.34	212.95	2,250.69	-11.83	-2.43	4.87	0.28	-0.27	11.37	
2,275.97	0.34	206.13	2,275.90	-11.96	-2.51	4.97	0.16	0.00	-27.05	
2,300.80	0.27	188.73	2,300.73	-12.08	-2.55	5.04	0.46	-0.28	-70.08	
2,326.04	0.27	191.51	2,325.97	-12.20	-2.57	5.08	0.05	0.00	11.01	
2,350.90	0.31	174.03	2,350.83	-12.32	-2.57	5.11	0.39	0.16	-70.31	
2,375.76	0.33	153.85	2,375.69	-12.45	-2.53	5.10	0.46	0.08	-81.17	
2,400.01	0.34	161.21	2,399.94	-12.58	-2.48	5.08	0.18	0.04	30.35	
2,425.24	0.34	148.40	2,425.17	-12.72	-2.42	5.05	0.30	0.00	-50.77	
2,451.05	0.37	143.52	2,450.98	-12.85	-2.33	4.99	0.16	0.12	-18.91	

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2,475.56	0.43	162.82	2,475.49	-13.00	-2.25	4.94	0.60	0.24	78.74	
2,500.82	0.91	177.37	2,500.75	-13.29	-2.22	4.97	2.00	1.90	57.60	
2,526.12	0.77	172.52	2,526.05	-13.66	-2.18	5.02	0.62	-0.55	-19.17	
2,550.61	0.94	179.97	2,550.53	-14.03	-2.16	5.07	0.83	0.69	30.42	
2,575.51	0.87	182.67	2,575.43	-14.42	-2.17	5.16	0.33	-0.28	10.84	
2,600.70	0.79	189.19	2,600.62	-14.78	-2.21	5.28	0.49	-0.32	25.88	
2,625.23	0.78	189.43	2,625.14	-15.11	-2.26	5.40	0.04	-0.04	0.98	
2,650.95	0.69	195.63	2,650.86	-15.43	-2.33	5.54	0.47	-0.35	24.11	
2,675.20	0.73	216.81	2,675.11	-15.70	-2.46	5.72	1.09	0.16	87.34	
2,700.71	0.64	218.46	2,700.62	-15.94	-2.65	5.95	0.36	-0.35	6.47	
2,725.58	0.68	230.67	2,725.49	-16.14	-2.85	6.19	0.59	0.16	49.10	
2,750.06	0.64	234.76	2,749.97	-16.31	-3.07	6.45	0.25	-0.16	16.71	
2,775.98	0.53	252.39	2,775.88	-16.43	-3.31	6.70	0.81	-0.42	68.02	
2,800.48	0.50	249.47	2,800.38	-16.51	-3.52	6.92	0.16	-0.12	-11.92	
2,826.06	0.42	271.41	2,825.96	-16.54	-3.71	7.12	0.75	-0.31	85.77	
2,850.24	0.45	275.82	2,850.14	-16.53	-3.90	7.30	0.19	0.12	18.24	
2,875.59	0.47	259.08	2,875.49	-16.54	-4.10	7.50	0.53	0.08	-66.04	
2,900.86	0.47	265.49	2,900.76	-16.57	-4.30	7.70	0.21	0.00	25.37	
2,925.04	0.40	265.55	2,924.94	-16.58	-4.49	7.88	0.29	-0.29	0.25	
2,950.34	0.47	276.68	2,950.24	-16.58	-4.68	8.07	0.43	0.28	43.99	
2,975.63	0.52	266.65	2,975.53	-16.57	-4.89	8.28	0.39	0.20	-39.66	
3,000.92	0.38	266.53	3,000.82	-16.58	-5.09	8.48	0.55	-0.55	-0.47	
3,025.10	0.48	271.92	3,025.00	-16.58	-5.27	8.65	0.45	0.41	22.29	
3,050.04	0.43	253.61	3,049.94	-16.61	-5.47	8.85	0.61	-0.20	-73.42	
3,075.90	0.43	263.97	3,075.80	-16.65	-5.66	9.04	0.30	0.00	40.06	
3,100.59	0.25	254.67	3,100.48	-16.67	-5.80	9.19	0.76	-0.73	-37.67	
3,125.09	0.26	278.93	3,124.98	-16.67	-5.91	9.29	0.44	0.04	99.02	
3,150.92	0.20	324.42	3,150.81	-16.63	-5.99	9.37	0.72	-0.23	176.11	
3,176.24	0.24	41.81	3,176.13	-16.55	-5.98	9.34	1.09	0.16	305.65	
3,200.68	0.49	18.48	3,200.57	-16.42	-5.92	9.25	1.17	1.02	-95.46	
3,226.05	0.56	31.99	3,225.94	-16.21	-5.82	9.10	0.56	0.28	53.25	
3,250.36	0.70	28.80	3,250.25	-15.98	-5.68	8.92	0.59	0.58	-13.12	
3,275.95	0.65	30.26	3,275.84	-15.72	-5.53	8.72	0.21	-0.20	5.71	
3,300.33	0.73	32.17	3,300.22	-15.46	-5.38	8.52	0.34	0.33	7.83	
3,325.77	0.74	27.08	3,325.66	-15.18	-5.22	8.30	0.26	0.04	-20.01	
3,350.15	0.73	25.78	3,350.03	-14.90	-5.08	8.11	0.08	-0.04	-5.33	
3,375.39	0.79	3.29	3,375.27	-14.58	-5.00	7.96	1.20	0.24	-89.10	
3,400.55	0.77	1.23	3,400.43	-14.24	-4.99	7.88	0.14	-0.08	-8.19	
3,426.09	0.88	349.27	3,425.97	-13.88	-5.02	7.83	0.80	0.43	-46.83	
3,450.60	0.84	332.79	3,450.47	-13.53	-5.14	7.88	1.02	-0.16	-67.24	
3,476.16	0.98	329.67	3,476.03	-13.18	-5.33	7.99	0.58	0.55	-12.21	
3,500.33	0.91	318.95	3,500.20	-12.85	-5.56	8.15	0.79	-0.29	-44.35	
3,525.91	0.99	310.14	3,525.77	-12.56	-5.87	8.38	0.65	0.31	-34.44	
3,550.76	1.07	310.89	3,550.62	-12.27	-6.20	8.65	0.33	0.32	3.02	

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel 21-8
Project:	Weld County, CO	TVD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Well:	Rocky Mountain Fuel 21-8	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)
3,575.25	1.07	304.89	3,575.11	-11.99	-6.57	8.95	0.46	0.00	-24.50
3,600.48	1.19	293.46	3,600.33	-11.75	-7.00	9.32	1.01	0.48	-45.30
3,626.10	1.29	290.87	3,625.94	-11.54	-7.51	9.78	0.45	0.39	-10.11
3,650.29	1.34	287.95	3,650.13	-11.35	-8.04	10.25	0.35	0.21	-12.07
3,676.29	1.32	286.59	3,676.12	-11.18	-8.61	10.78	0.14	-0.08	-5.23
3,701.28	1.38	286.54	3,701.10	-11.01	-9.18	11.29	0.24	0.24	-0.20
3,725.04	1.31	288.00	3,724.86	-10.84	-9.71	11.78	0.33	-0.29	6.14
3,750.81	1.45	280.61	3,750.62	-10.69	-10.31	12.33	0.88	0.54	-28.68
3,775.08	1.47	277.15	3,774.88	-10.60	-10.92	12.91	0.37	0.08	-14.26
3,800.79	1.75	273.10	3,800.58	-10.53	-11.64	13.60	1.17	1.09	-15.75
3,825.38	1.68	268.59	3,825.16	-10.52	-12.37	14.32	0.62	-0.28	-18.34
3,850.74	1.68	264.81	3,850.51	-10.56	-13.12	15.05	0.44	0.00	-14.91
3,875.42	1.83	258.97	3,875.18	-10.67	-13.86	15.80	0.95	0.61	-23.66
3,900.47	1.90	257.81	3,900.22	-10.84	-14.66	16.62	0.32	0.28	-4.63
3,925.08	2.06	253.92	3,924.81	-11.05	-15.49	17.47	0.85	0.65	-15.81
3,950.73	2.08	255.50	3,950.44	-11.29	-16.38	18.39	0.24	0.08	6.16
3,976.53	2.04	250.57	3,976.23	-11.56	-17.27	19.32	0.70	-0.16	-19.11
4,000.40	1.95	256.15	4,000.08	-11.80	-18.06	20.14	0.90	-0.38	23.38
4,025.90	2.00	259.01	4,025.57	-11.99	-18.92	21.02	0.43	0.20	11.22
4,050.11	2.08	258.51	4,049.76	-12.16	-19.76	21.88	0.34	0.33	-2.07
4,075.88	1.94	256.77	4,075.52	-12.35	-20.65	22.79	0.59	-0.54	-6.75
4,100.53	1.88	258.53	4,100.15	-12.52	-21.45	23.61	0.34	-0.24	7.14
4,125.63	2.00	258.96	4,125.24	-12.69	-22.28	24.46	0.48	0.48	1.71
4,151.06	1.97	260.44	4,150.65	-12.85	-23.15	25.34	0.23	-0.12	5.82
4,175.35	1.87	267.30	4,174.93	-12.94	-23.96	26.15	1.03	-0.41	28.24
4,200.84	1.79	265.84	4,200.41	-12.98	-24.77	26.95	0.36	-0.31	-5.73
4,225.16	1.89	269.93	4,224.71	-13.01	-25.55	27.72	0.68	0.41	16.82
4,250.64	1.65	268.94	4,250.18	-13.02	-26.34	28.49	0.95	-0.94	-3.89
4,276.08	1.78	269.37	4,275.61	-13.03	-27.10	29.24	0.51	0.51	1.69
4,300.38	1.87	269.86	4,299.90	-13.04	-27.87	29.99	0.38	0.37	2.02
4,325.81	1.82	269.05	4,325.31	-13.04	-28.69	30.80	0.22	-0.20	-3.19
4,350.13	1.77	271.01	4,349.62	-13.04	-29.45	31.54	0.33	-0.21	8.06
4,375.27	1.88	268.17	4,374.75	-13.05	-30.25	32.32	0.57	0.44	-11.30
4,400.35	2.17	274.36	4,399.81	-13.03	-31.14	33.18	1.45	1.16	24.68
4,425.81	2.20	272.94	4,425.26	-12.96	-32.11	34.12	0.24	0.12	-5.58
4,450.52	2.33	274.92	4,449.95	-12.90	-33.08	35.06	0.61	0.53	8.01
4,475.63	2.36	278.81	4,475.04	-12.77	-34.10	36.03	0.64	0.12	15.49
4,500.51	2.47	276.04	4,499.89	-12.64	-35.14	37.01	0.64	0.44	-11.13
4,525.42	2.18	281.16	4,524.78	-12.49	-36.14	37.96	1.43	-1.16	20.55
4,550.70	1.96	289.97	4,550.05	-12.25	-37.02	38.77	1.53	-0.87	34.85
4,575.17	1.76	295.09	4,574.50	-11.95	-37.75	39.42	1.06	-0.82	20.92
4,600.90	1.68	295.92	4,600.22	-11.62	-38.45	40.03	0.33	-0.31	3.23
4,625.10	1.35	299.10	4,624.41	-11.32	-39.01	40.52	1.41	-1.36	13.14

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well Rocky Mountain Fuel 21-8
Project:	Weld County, CO	TVD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Site:	Rocky Mountain Fuel	MD Reference:	GL 5034' @ 5034.00ft (FMC 134)
Well:	Rocky Mountain Fuel 21-8	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)	
4,651.08	1.22	305.99	4,650.39	-11.01	-39.51	40.94	0.78	-0.50	26.52	
4,675.93	1.17	304.79	4,675.23	-10.71	-39.93	41.29	0.22	-0.20	-4.83	
4,700.49	1.22	302.00	4,699.79	-10.43	-40.36	41.65	0.31	0.20	-11.36	
4,725.16	1.10	308.27	4,724.45	-10.14	-40.76	41.99	0.71	-0.49	25.42	
4,750.15	1.05	301.15	4,749.44	-9.88	-41.15	42.31	0.57	-0.20	-28.49	
4,775.04	1.06	291.86	4,774.32	-9.67	-41.56	42.66	0.69	0.04	-37.32	
4,800.90	1.10	293.89	4,800.18	-9.48	-42.01	43.06	0.21	0.15	7.85	
4,825.73	1.18	293.50	4,825.00	-9.28	-42.46	43.46	0.32	0.32	-1.57	
4,836.98	1.12	296.57	4,836.25	-9.19	-42.66	43.64	0.76	-0.53	27.29	
Last SDI Gyro Survey										

Checked By: _____ Approved By: _____ Date: _____