



**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>David Howard #3</u>
County & State	<u>Weld County, CO</u>
SDI Job No.	<u>411213K95240</u>
Rig	<u>Ground Level</u>
Survey Date	<u>20-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 4977.98 feet is true and correct as determined from all available records.

Signature

3-Feb-2014

Date

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

KP Kauffman Co, Inc.

Weld County, CO

David Howard

David Howard #3

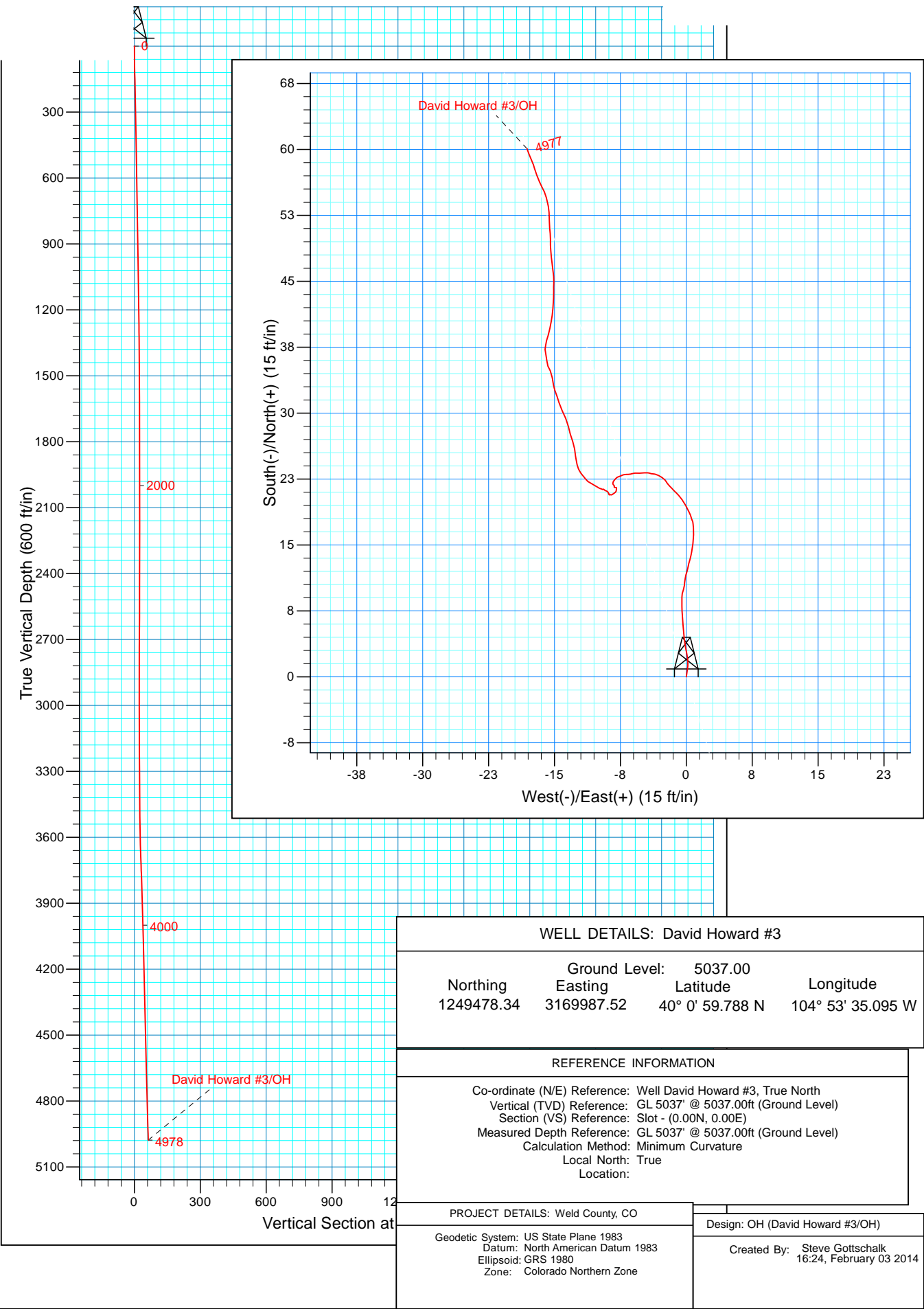
OH

Design: OH

Standard Survey Report

03 February, 2014





Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well David Howard #3
Project:	Weld County, CO	TVD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Site:	David Howard	MD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Well:	David Howard #3	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		David Howard						
Site Position: From:	Lat/Long	Northing:	1,249,478.35	usft	Latitude:	40° 0' 59.788 N		
		Easting:	3,169,987.52	usft	Longitude:	104° 53' 35.095 W		
		Position Uncertainty:	0.00	ft	Slot Radius:	13.200	in	Grid Convergence:

Well	David Howard #3, 2020' FNL, 1980' FWL, SEC32 T1N R67W					
Well Position	+N/-S	0.00 ft	Northing:	1,249,478.34 usft	Latitude:	40° 0' 59.788 N
	+E/-W	0.00 ft	Easting:	3,169,987.52 usft	Longitude:	104° 53' 35.095 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,037.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	12/20/2013	8.60	66.62	52,572

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	343.20	

Survey Program	Date	2/3/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.88	4,977.98	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
100.88	1.43	7.46	100.87	1.25	0.16	1.15	1.42	1.42	0.00
First SDI Gyro Survey									
126.25	1.24	351.37	126.23	1.83	0.16	1.71	1.65	-0.75	-63.42
151.21	1.11	351.86	151.19	2.34	0.09	2.21	0.52	-0.52	1.96
175.72	1.03	349.14	175.69	2.79	0.01	2.67	0.39	-0.33	-11.10
200.38	1.12	346.30	200.35	3.24	-0.09	3.13	0.42	0.36	-11.52
226.24	1.06	355.34	226.20	3.73	-0.16	3.62	0.70	-0.23	34.96
250.54	1.21	351.90	250.50	4.20	-0.22	4.09	0.68	0.62	-14.16
276.15	1.34	353.32	276.10	4.77	-0.29	4.65	0.52	0.51	5.54
300.11	1.19	356.88	300.06	5.30	-0.34	5.17	0.71	-0.63	14.86

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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)
325.51	1.29	352.99	325.45	5.84	-0.39	5.71	0.51	0.39	-15.31
350.89	1.35	359.05	350.82	6.43	-0.43	6.28	0.60	0.24	23.88
376.04	1.27	353.78	375.97	7.00	-0.46	6.83	0.57	-0.32	-20.95
400.73	1.22	356.64	400.65	7.53	-0.51	7.36	0.32	-0.20	11.58
425.21	1.26	359.93	425.13	8.06	-0.52	7.87	0.33	0.16	13.44
450.00	1.05	0.36	449.91	8.56	-0.52	8.35	0.85	-0.85	1.73
475.50	1.11	2.02	475.41	9.04	-0.51	8.81	0.27	0.24	6.51
500.02	0.99	8.65	499.92	9.49	-0.47	9.22	0.70	-0.49	27.04
525.87	1.08	23.11	525.77	9.94	-0.34	9.61	1.07	0.35	55.94
550.97	1.03	2.68	550.86	10.38	-0.24	10.00	1.50	-0.20	-81.39
575.57	0.85	7.82	575.46	10.78	-0.20	10.38	0.81	-0.73	20.89
600.57	1.04	7.76	600.46	11.19	-0.15	10.75	0.76	0.76	-0.24
625.68	1.04	17.58	625.56	11.63	-0.05	11.15	0.71	0.00	39.11
650.36	1.03	15.75	650.24	12.06	0.08	11.52	0.14	-0.04	-7.41
675.84	0.99	11.45	675.72	12.49	0.19	11.91	0.34	-0.16	-16.88
700.62	0.99	14.32	700.49	12.91	0.28	12.28	0.20	0.00	11.58
725.40	1.03	16.97	725.27	13.33	0.40	12.65	0.25	0.16	10.69
750.50	0.92	9.00	750.36	13.75	0.50	13.02	0.69	-0.44	-31.75
775.71	1.01	12.13	775.57	14.16	0.57	13.39	0.41	0.36	12.42
800.48	1.08	7.69	800.34	14.61	0.65	13.80	0.43	0.28	-17.92
825.40	1.04	13.73	825.25	15.06	0.74	14.21	0.48	-0.16	24.24
850.19	0.91	0.82	850.04	15.48	0.79	14.59	1.03	-0.52	-52.08
875.13	1.08	356.69	874.98	15.91	0.78	15.00	0.74	0.68	-16.56
901.07	1.03	7.18	900.91	16.38	0.80	15.45	0.77	-0.19	40.44
925.21	1.06	355.52	925.05	16.82	0.81	15.87	0.89	0.12	-48.30
950.13	0.92	1.77	949.96	17.25	0.80	16.29	0.71	-0.56	25.08
975.87	0.82	336.44	975.70	17.63	0.73	16.66	1.53	-0.39	-98.41
1,000.12	0.94	341.64	999.95	17.98	0.60	17.04	0.59	0.49	21.44
1,025.79	1.04	341.20	1,025.61	18.40	0.45	17.48	0.39	0.39	-1.71
1,050.09	0.92	331.84	1,049.91	18.78	0.29	17.89	0.82	-0.49	-38.52
1,075.46	0.82	334.02	1,075.28	19.12	0.12	18.27	0.42	-0.39	8.59
1,100.13	1.12	330.85	1,099.94	19.49	-0.08	18.68	1.23	1.22	-12.85
1,125.61	0.84	329.17	1,125.42	19.87	-0.30	19.10	1.10	-1.10	-6.59
1,150.65	0.73	317.38	1,150.46	20.14	-0.50	19.43	0.78	-0.44	-47.08
1,175.41	0.79	327.67	1,175.22	20.40	-0.70	19.73	0.60	0.24	41.56
1,200.86	0.74	315.54	1,200.66	20.67	-0.91	20.05	0.66	-0.20	-47.66
1,225.95	0.71	317.52	1,225.75	20.90	-1.12	20.33	0.16	-0.12	7.89
1,250.99	0.57	308.38	1,250.79	21.09	-1.33	20.57	0.69	-0.56	-36.50
1,275.35	0.68	325.11	1,275.15	21.28	-1.50	20.81	0.87	0.45	68.68
1,300.13	0.60	308.90	1,299.93	21.49	-1.69	21.06	0.80	-0.32	-65.42
1,325.68	0.66	321.94	1,325.47	21.69	-1.88	21.30	0.61	0.23	51.04
1,350.11	0.57	313.57	1,349.90	21.88	-2.06	21.54	0.52	-0.37	-34.26
1,375.76	0.50	327.20	1,375.55	22.06	-2.21	21.76	0.56	-0.27	53.14

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Well:	David Howard #3	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)	
1,400.93	0.56	328.72	1,400.72	22.26	-2.33	21.98	0.24	0.24	6.04	
1,425.51	0.65	314.37	1,425.30	22.46	-2.50	22.22	0.71	0.37	-58.38	
1,450.65	0.54	300.09	1,450.44	22.62	-2.70	22.43	0.73	-0.44	-56.80	
1,475.80	0.42	311.37	1,475.59	22.74	-2.87	22.60	0.61	-0.48	44.85	
1,500.33	0.49	297.65	1,500.12	22.85	-3.03	22.75	0.53	0.29	-55.93	
1,525.96	0.40	288.49	1,525.75	22.93	-3.22	22.88	0.45	-0.35	-35.74	
1,550.13	0.31	295.83	1,549.92	22.98	-3.35	22.97	0.42	-0.37	30.37	
1,575.42	0.32	290.03	1,575.21	23.04	-3.48	23.06	0.13	0.04	-22.93	
1,600.63	0.29	283.16	1,600.41	23.07	-3.61	23.13	0.19	-0.12	-27.25	
1,625.57	0.46	269.54	1,625.35	23.09	-3.77	23.19	0.77	0.68	-54.61	
1,650.94	0.64	284.41	1,650.72	23.12	-4.01	23.29	0.90	0.71	58.61	
1,675.53	0.50	286.58	1,675.31	23.19	-4.25	23.42	0.58	-0.57	8.82	
1,700.93	0.39	272.86	1,700.71	23.22	-4.44	23.51	0.60	-0.43	-54.02	
1,725.97	0.38	265.09	1,725.75	23.22	-4.61	23.56	0.21	-0.04	-31.03	
1,750.57	0.42	262.48	1,750.35	23.20	-4.78	23.59	0.18	0.16	-10.61	
1,775.45	0.34	273.25	1,775.23	23.19	-4.94	23.63	0.43	-0.32	43.29	
1,800.48	0.35	258.81	1,800.26	23.18	-5.09	23.66	0.35	0.04	-57.69	
1,825.91	0.32	274.78	1,825.69	23.17	-5.24	23.70	0.38	-0.12	62.80	
1,850.62	0.30	279.91	1,850.40	23.19	-5.37	23.75	0.14	-0.08	20.76	
1,875.25	0.41	261.04	1,875.03	23.19	-5.52	23.79	0.65	0.45	-76.61	
1,900.43	0.34	274.83	1,900.21	23.18	-5.68	23.83	0.45	-0.28	54.77	
1,925.56	0.35	266.65	1,925.34	23.18	-5.84	23.88	0.20	0.04	-32.55	
1,950.85	0.29	254.84	1,950.63	23.16	-5.97	23.90	0.35	-0.24	-46.70	
1,975.50	0.31	261.75	1,975.28	23.13	-6.10	23.91	0.17	0.08	28.03	
2,000.98	0.19	259.17	2,000.76	23.12	-6.21	23.93	0.47	-0.47	-10.13	
2,025.12	0.25	252.11	2,024.90	23.09	-6.30	23.93	0.27	0.25	-29.25	
2,050.09	0.25	249.96	2,049.87	23.06	-6.40	23.92	0.04	0.00	-8.61	
2,075.18	0.20	273.37	2,074.96	23.04	-6.50	23.94	0.41	-0.20	93.30	
2,100.31	0.33	268.45	2,100.09	23.04	-6.61	23.97	0.52	0.52	-19.58	
2,125.12	0.28	267.12	2,124.89	23.04	-6.75	24.00	0.20	-0.20	-5.36	
2,150.82	0.30	268.49	2,150.59	23.03	-6.88	24.04	0.08	0.08	5.33	
2,175.86	0.37	253.98	2,175.63	23.01	-7.02	24.06	0.44	0.28	-57.95	
2,200.96	0.30	261.39	2,200.73	22.98	-7.16	24.07	0.33	-0.28	29.52	
2,225.01	0.41	251.59	2,224.78	22.94	-7.31	24.07	0.52	0.46	-40.75	
2,250.76	0.52	241.69	2,250.53	22.85	-7.50	24.05	0.53	0.43	-38.45	
2,275.33	0.54	257.28	2,275.10	22.78	-7.71	24.03	0.59	0.08	63.45	
2,300.00	0.41	227.21	2,299.77	22.69	-7.89	24.00	1.12	-0.53	-121.89	
2,325.90	0.43	227.04	2,325.67	22.56	-8.02	23.92	0.08	0.08	-0.66	
2,350.59	0.38	222.15	2,350.36	22.44	-8.15	23.84	0.25	-0.20	-19.81	
2,375.19	0.44	215.71	2,374.96	22.30	-8.26	23.74	0.31	0.24	-26.18	
2,400.63	0.23	196.44	2,400.40	22.17	-8.33	23.63	0.93	-0.83	-75.75	
2,425.04	0.30	201.13	2,424.81	22.07	-8.37	23.54	0.30	0.29	19.21	
2,450.62	0.16	155.97	2,450.39	21.97	-8.38	23.45	0.86	-0.55	-176.54	

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2,475.01	0.13	164.09	2,474.78	21.91	-8.35	23.39	0.15	-0.12	33.29	
2,500.58	0.19	137.49	2,500.35	21.85	-8.32	23.33	0.37	0.23	-104.03	
2,525.39	0.18	120.03	2,525.16	21.80	-8.26	23.26	0.23	-0.04	-70.37	
2,551.13	0.16	155.24	2,550.90	21.75	-8.21	23.19	0.41	-0.08	136.79	
2,575.07	0.28	195.46	2,574.84	21.66	-8.21	23.11	0.79	0.50	168.00	
2,601.52	0.06	178.40	2,601.29	21.59	-8.22	23.04	0.84	-0.83	-64.50	
2,626.10	0.37	111.82	2,625.87	21.55	-8.15	22.98	1.43	1.26	-270.87	
2,650.68	0.23	67.22	2,650.45	21.54	-8.03	22.94	1.07	-0.57	-181.45	
2,675.25	0.08	129.62	2,675.02	21.54	-7.97	22.93	0.84	-0.61	253.97	
2,700.19	0.21	174.20	2,699.96	21.49	-7.95	22.87	0.65	0.52	178.75	
2,725.47	0.24	186.07	2,725.24	21.39	-7.96	22.77	0.22	0.12	46.95	
2,750.08	0.21	193.94	2,749.85	21.29	-7.97	22.69	0.17	-0.12	31.98	
2,775.87	0.25	188.62	2,775.64	21.19	-7.99	22.60	0.18	0.16	-20.63	
2,800.48	0.26	203.32	2,800.25	21.09	-8.02	22.51	0.27	0.04	59.73	
2,825.84	0.36	224.63	2,825.60	20.98	-8.10	22.42	0.60	0.39	84.03	
2,850.84	0.27	244.88	2,850.60	20.90	-8.21	22.38	0.57	-0.36	81.00	
2,875.46	0.19	236.15	2,875.22	20.85	-8.30	22.36	0.35	-0.32	-35.46	
2,900.08	0.38	238.46	2,899.84	20.78	-8.40	22.32	0.77	0.77	9.38	
2,925.79	0.16	228.76	2,925.55	20.72	-8.50	22.29	0.87	-0.86	-37.73	
2,950.45	0.20	292.61	2,950.21	20.71	-8.56	22.30	0.78	0.16	258.92	
2,975.16	0.15	271.57	2,974.92	20.73	-8.64	22.34	0.33	-0.20	-85.15	
3,001.02	0.33	249.82	3,000.78	20.70	-8.74	22.35	0.77	0.70	-84.11	
3,025.85	0.23	350.72	3,025.61	20.73	-8.81	22.39	1.76	-0.40	406.36	
3,050.64	0.21	22.07	3,050.40	20.82	-8.81	22.48	0.49	-0.08	126.46	
3,075.94	0.32	294.41	3,075.70	20.89	-8.85	22.56	1.48	0.43	-346.48	
3,101.19	0.28	357.65	3,100.95	20.98	-8.92	22.66	1.25	-0.16	250.46	
3,125.61	0.29	303.99	3,125.37	21.08	-8.97	22.77	1.05	0.04	-219.74	
3,150.47	0.29	295.59	3,150.23	21.14	-9.08	22.86	0.17	0.00	-33.79	
3,175.36	0.24	286.00	3,175.12	21.18	-9.19	22.93	0.27	-0.20	-38.53	
3,200.01	0.27	304.60	3,199.77	21.23	-9.29	23.00	0.36	0.12	75.46	
3,226.80	0.31	324.06	3,226.56	21.32	-9.38	23.12	0.39	0.15	72.64	
3,250.21	0.19	215.88	3,249.97	21.34	-9.44	23.16	1.76	-0.51	-462.11	
3,275.03	0.29	274.21	3,274.79	21.31	-9.53	23.16	1.01	0.40	235.01	
3,300.04	0.27	313.88	3,299.80	21.36	-9.63	23.23	0.76	-0.08	158.62	
3,326.01	0.28	276.45	3,325.77	21.41	-9.74	23.31	0.68	0.04	-144.13	
3,350.57	0.36	291.96	3,350.33	21.44	-9.87	23.38	0.48	0.33	63.15	
3,375.51	0.59	302.87	3,375.27	21.54	-10.05	23.53	0.99	0.92	43.74	
3,400.19	0.74	301.91	3,399.95	21.70	-10.29	23.74	0.61	0.61	-3.89	
3,425.63	0.77	299.52	3,425.39	21.87	-10.58	23.99	0.17	0.12	-9.39	
3,450.26	0.87	294.35	3,450.01	22.02	-10.90	24.23	0.50	0.41	-20.99	
3,475.92	0.83	312.42	3,475.67	22.23	-11.21	24.52	1.05	-0.16	70.42	
3,500.92	0.86	318.39	3,500.67	22.49	-11.47	24.85	0.37	0.12	23.88	
3,525.60	0.83	325.17	3,525.34	22.78	-11.69	25.19	0.42	-0.12	27.47	
3,550.26	1.01	318.81	3,550.00	23.09	-11.94	25.55	0.84	0.73	-25.79	

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well David Howard #3
Project:	Weld County, CO	TVD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Site:	David Howard	MD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Well:	David Howard #3	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)
3,575.09	1.36	333.78	3,574.83	23.52	-12.21	26.04	1.87	1.41	60.29
3,600.73	1.04	345.19	3,600.46	24.02	-12.41	26.58	1.55	-1.25	44.50
3,625.57	1.33	350.73	3,625.29	24.52	-12.51	27.09	1.25	1.17	22.30
3,650.27	1.64	350.44	3,649.99	25.15	-12.62	27.72	1.26	1.26	-1.17
3,675.79	1.90	353.79	3,675.49	25.93	-12.72	28.50	1.10	1.02	13.13
3,700.94	2.07	338.81	3,700.63	26.77	-12.93	29.36	2.16	0.68	-59.56
3,725.84	1.97	344.00	3,725.51	27.60	-13.21	30.24	0.84	-0.40	20.84
3,750.99	2.19	348.14	3,750.65	28.48	-13.43	31.15	1.06	0.87	16.46
3,775.84	2.31	337.03	3,775.48	29.41	-13.72	32.12	1.82	0.48	-44.71
3,800.34	2.34	332.58	3,799.96	30.31	-14.15	33.10	0.75	0.12	-18.16
3,825.94	1.99	345.64	3,825.54	31.20	-14.50	34.06	2.35	-1.37	51.02
3,850.11	1.77	339.85	3,849.70	31.96	-14.73	34.85	1.20	-0.91	-23.96
3,875.71	1.42	336.84	3,875.29	32.62	-14.99	35.56	1.41	-1.37	-11.76
3,900.60	1.54	354.03	3,900.17	33.24	-15.15	36.20	1.84	0.48	69.06
3,925.55	2.02	350.60	3,925.11	34.01	-15.25	36.96	1.97	1.92	-13.75
3,950.46	1.80	336.51	3,950.00	34.80	-15.48	37.79	2.07	-0.88	-56.56
3,975.08	1.14	328.80	3,974.61	35.36	-15.76	38.41	2.79	-2.68	-31.32
4,000.88	1.76	359.83	4,000.41	35.98	-15.90	39.04	3.79	2.40	120.27
4,025.77	1.69	344.17	4,025.29	36.71	-16.00	39.77	1.91	-0.28	-62.92
4,050.89	0.84	5.79	4,050.40	37.25	-16.08	40.31	3.82	-3.38	86.07
4,076.26	1.12	8.99	4,075.77	37.68	-16.02	40.71	1.12	1.10	12.61
4,100.90	1.43	13.07	4,100.40	38.22	-15.92	41.19	1.31	1.26	16.56
4,125.40	1.83	18.57	4,124.89	38.89	-15.72	41.77	1.75	1.63	22.45
4,150.81	1.72	10.36	4,150.29	39.65	-15.52	42.44	1.09	-0.43	-32.31
4,175.52	1.70	9.56	4,174.99	40.37	-15.40	43.10	0.13	-0.08	-3.24
4,201.15	1.73	8.67	4,200.61	41.13	-15.28	43.79	0.16	0.12	-3.47
4,225.86	1.53	3.38	4,225.31	41.83	-15.20	44.44	1.01	-0.81	-21.41
4,250.52	1.42	4.24	4,249.96	42.46	-15.16	45.03	0.45	-0.45	3.49
4,276.10	1.39	4.19	4,275.53	43.09	-15.11	45.62	0.12	-0.12	-0.20
4,300.34	1.41	356.59	4,299.76	43.68	-15.11	46.18	0.77	0.08	-31.35
4,325.77	1.41	3.50	4,325.18	44.30	-15.11	46.78	0.67	0.00	27.17
4,350.89	1.43	0.42	4,350.30	44.93	-15.09	47.37	0.31	0.08	-12.26
4,376.13	1.53	355.20	4,375.53	45.58	-15.11	48.00	0.66	0.40	-20.68
4,400.51	1.43	351.29	4,399.90	46.20	-15.19	48.62	0.58	-0.41	-16.04
4,425.74	1.30	354.98	4,425.12	46.80	-15.26	49.21	0.62	-0.52	14.63
4,450.13	1.25	351.88	4,449.51	47.34	-15.32	49.75	0.35	-0.21	-12.71
4,475.59	1.35	355.98	4,474.96	47.91	-15.38	50.31	0.54	0.39	16.10
4,501.14	1.35	353.64	4,500.50	48.51	-15.43	50.90	0.22	0.00	-9.16
4,525.82	1.47	0.07	4,525.18	49.12	-15.47	51.49	0.80	0.49	26.05
4,550.98	1.60	359.67	4,550.33	49.79	-15.47	52.14	0.52	0.52	-1.59
4,575.38	1.38	353.27	4,574.72	50.42	-15.50	52.75	1.13	-0.90	-26.23
4,601.50	1.39	355.16	4,600.83	51.05	-15.57	53.37	0.18	0.04	7.24
4,625.16	1.32	0.42	4,624.48	51.61	-15.59	53.91	0.60	-0.30	22.23

Scientific Drilling International

Survey Report

Company:	KP Kauffman Co, Inc.	Local Co-ordinate Reference:	Well David Howard #3
Project:	Weld County, CO	TVD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Site:	David Howard	MD Reference:	GL 5037' @ 5037.00ft (Ground Level)
Well:	David Howard #3	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)	
4,650.63	1.31	356.26	4,649.95	52.19	-15.61	54.48	0.38	-0.04	-16.33	
4,675.73	1.24	359.87	4,675.04	52.75	-15.63	55.02	0.42	-0.28	14.38	
4,700.47	1.31	350.09	4,699.78	53.30	-15.68	55.55	0.92	0.28	-39.53	
4,725.55	1.52	346.37	4,724.85	53.90	-15.80	56.17	0.91	0.84	-14.83	
4,750.00	1.57	346.66	4,749.29	54.54	-15.96	56.83	0.21	0.20	1.19	
4,775.15	1.52	334.66	4,774.43	55.18	-16.18	57.50	1.30	-0.20	-47.71	
4,800.10	1.58	334.18	4,799.37	55.79	-16.47	58.17	0.25	0.24	-1.92	
4,825.93	1.46	336.82	4,825.19	56.41	-16.76	58.85	0.54	-0.46	10.22	
4,850.44	1.38	335.21	4,849.69	56.97	-17.00	59.45	0.36	-0.33	-6.57	
4,876.01	1.58	348.23	4,875.26	57.59	-17.20	60.11	1.53	0.78	50.92	
4,900.41	1.65	337.89	4,899.65	58.25	-17.40	60.79	1.23	0.29	-42.38	
4,926.10	1.47	335.69	4,925.33	58.89	-17.68	61.49	0.74	-0.70	-8.56	
4,950.65	1.38	337.93	4,949.87	59.45	-17.92	62.09	0.43	-0.37	9.12	
4,975.06	1.35	343.81	4,974.27	60.00	-18.11	62.67	0.59	-0.12	24.09	
4,977.98	1.38	343.22	4,977.19	60.07	-18.13	62.74	1.13	1.03	-20.21	
Last SDI Gyro Survey										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
100.88	100.87	1.25	0.16	First SDI Gyro Survey	
4,977.98	4,977.19	60.07	-18.13	Last SDI Gyro Survey	

Checked By: _____ Approved By: _____ Date: _____