

K. P. Kauffman Company, Inc.

Camensch #16-32-37R

SESE Section 32-T4N-R67W

Weld Co., Colorado

Directional plot

# Well Plan

Well Name	Vertical Section Azimuth	Units
Camenisch #16-32-37	233.33	ft,°/100ft

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	Vert. Sec.*	Description	Reference Note
0.00	0.00	0.0	0.00	0.00	0.00		0.00	tie point RKB	
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00	vertical	
200.00	0.00	0.0	200.00	0.00	0.00	0.00	0.00	vertical	
300.00	0.00	0.0	300.00	0.00	0.00	0.00	0.00	vertical	
400.00	0.00	0.0	400.00	0.00	0.00	0.00	0.00	vertical	
500.00	0.00	0.0	500.00	0.00	0.00	0.00	0.00	vertical	
600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00	vertical	
700.00	0.00	0.0	700.00	0.00	0.00	0.00	0.00	vertical	
800.00	0.00	0.0	800.00	0.00	0.00	0.00	0.00	vertical	
900.00	0.00	0.0	900.00	0.00	0.00	0.00	0.00	vertical	
1000.00	0.00	0.0	1000.00	0.00	0.00	0.00	0.00	vertical	
1100.00	0.00	0.0	1100.00	0.00	0.00	0.00	0.00	vertical	
1200.00	0.00	0.0	1200.00	0.00	0.00	0.00	0.00	End vertical KOP	
1300.00	3.90	233.3	1299.92	-2.03	-2.73	3.90	3.40	build	
1400.00	7.80	233.3	1399.38	-8.12	-10.90	3.90	13.59	build	
1500.00	11.70	233.3	1497.92	-18.23	-24.48	3.90	30.52	build	
1600.00	15.60	233.3	1595.08	-32.32	-43.41	3.90	54.12	build	
1700.00	19.50	233.3	1690.40	-50.33	-67.59	3.90	84.27	build	
1800.00	23.40	233.3	1783.46	-72.16	-96.91	3.90	120.83	build	
1900.00	27.30	233.3	1873.81	-97.73	-131.25	3.90	163.63	build	
1958.97	29.60	233.3	1925.66	-114.50	-153.78	3.90	191.73	End build BUILD	
2000.00	28.91	233.3	1961.45	-126.48	-169.86	1.69	211.78	drop	
2100.00	27.22	233.3	2049.69	-154.57	-207.59	1.69	258.82	drop	
2200.00	25.53	233.3	2139.28	-181.11	-243.23	1.69	303.25	drop	
2300.00	23.85	233.3	2230.13	-206.05	-276.73	1.69	345.02	drop	
2400.00	22.16	233.3	2322.18	-229.39	-308.08	1.69	384.10	drop	
2500.00	20.47	233.3	2415.33	-251.10	-337.23	1.69	420.45	drop	
2600.00	18.79	233.3	2509.52	-271.17	-364.18	1.69	454.05	drop	
2700.00	17.10	233.3	2604.65	-289.57	-388.89	1.69	484.85	drop	
2800.00	15.41	233.3	2700.65	-306.28	-411.34	1.69	512.85	drop	
2900.00	13.73	233.3	2797.43	-321.31	-431.52	1.69	538.00	drop	

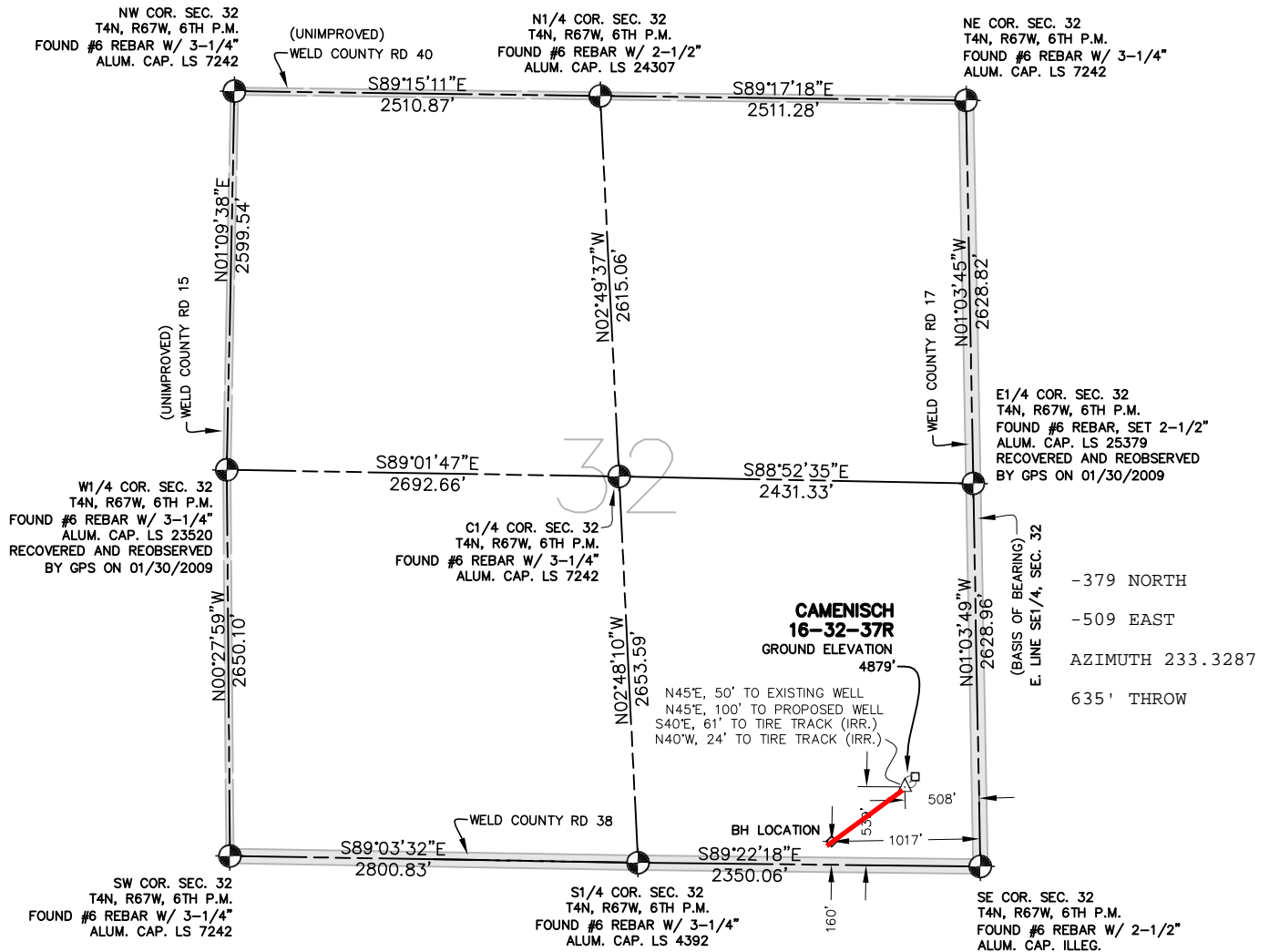
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	Vert. Sec.*	Description	Reference Note
3000.00	12.04	233.3	2894.90	-334.62	-449.40	1.69	560.30	drop	
3100.00	10.35	233.3	2993.00	-346.22	-464.98	1.69	579.72	drop	
3200.00	8.67	233.3	3091.62	-356.09	-478.23	1.69	596.24	drop	
3300.00	6.98	233.3	3190.69	-364.22	-489.15	1.69	609.85	drop	
3400.00	5.29	233.3	3290.11	-370.60	-497.72	1.69	620.54	drop	
3500.00	3.61	233.3	3389.80	-375.23	-503.94	1.69	628.30	drop	
3600.00	1.92	233.3	3489.68	-378.11	-507.81	1.69	633.12	drop	
3660.33	0.90	233.3	3550.00	-379.00	-509.00	1.69	634.60	End drop	TOP OF DROP
3700.00	0.74	233.3	3589.66	-379.34	-509.46	0.40	635.17	drop/invert	
3800.00	0.34	233.3	3689.66	-379.91	-510.22	0.40	636.12	drop/invert	
3900.00	0.06	53.3	3789.66	-380.05	-510.41	0.40	636.37	drop/invert	
4000.00	0.46	53.3	3889.65	-379.78	-510.05	0.40	635.92	drop/invert	
4100.00	0.86	53.3	3989.65	-379.10	-509.13	0.40	634.76	drop/invert	
4110.35	0.90	53.3	4000.00	-379.00	-509.00	0.40	634.60	End drop/invert	TOP OF SUSSEX
4200.00	0.62	53.3	4089.64	-378.29	-508.04	0.31	633.41	drop/invert	
4300.00	0.31	53.3	4189.63	-377.80	-507.39	0.31	632.59	drop/invert	
4400.00	0.00	53.3	4289.63	-377.64	-507.17	0.31	632.32	drop/invert	
4500.00	0.31	233.3	4389.63	-377.80	-507.39	0.31	632.59	drop/invert	
4600.00	0.62	233.3	4489.63	-378.28	-508.04	0.31	633.40	drop/invert	
4690.38	0.90	233.3	4580.00	-379.00	-509.00	0.31	634.60	End drop/invert	TOP OF SHANNON
4700.00	0.89	233.3	4589.62	-379.09	-509.12	0.08	634.75	drop/invert	
4800.00	0.82	233.3	4689.61	-379.98	-510.32	0.08	636.25	drop/invert	
4900.00	0.74	233.3	4789.60	-380.79	-511.41	0.08	637.61	drop/invert	
5000.00	0.66	233.3	4889.59	-381.52	-512.39	0.08	638.83	drop/invert	
5100.00	0.58	233.3	4989.59	-382.17	-513.26	0.08	639.91	drop/invert	
5200.00	0.51	233.3	5089.58	-382.74	-514.02	0.08	640.86	drop/invert	
5300.00	0.43	233.3	5189.58	-383.23	-514.67	0.08	641.68	drop/invert	
5400.00	0.35	233.3	5289.58	-383.63	-515.22	0.08	642.36	drop/invert	
5500.00	0.27	233.3	5389.58	-383.96	-515.66	0.08	642.90	drop/invert	
5600.00	0.19	233.3	5489.58	-384.20	-515.98	0.08	643.31	drop/invert	
5700.00	0.12	233.3	5589.57	-384.36	-516.20	0.08	643.58	drop/invert	
5800.00	0.04	233.3	5689.57	-384.44	-516.31	0.08	643.72	drop/invert	
5900.00	0.04	53.3	5789.57	-384.44	-516.31	0.08	643.72	drop/invert	

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	Vert. Sec.*	Description	Reference Note
6000.00	0.12	53.3	5889.57	-384.36	-516.20	0.08	643.58	drop/invert	
6100.00	0.19	53.3	5989.57	-384.20	-515.98	0.08	643.31	drop/invert	
6200.00	0.27	53.3	6089.57	-383.96	-515.66	0.08	642.91	drop/invert	
6300.00	0.35	53.3	6189.57	-383.63	-515.22	0.08	642.36	drop/invert	
6400.00	0.43	53.3	6289.57	-383.23	-514.68	0.08	641.69	drop/invert	
6500.00	0.51	53.3	6389.57	-382.74	-514.03	0.08	640.87	drop/invert	
6600.00	0.58	53.3	6489.56	-382.18	-513.27	0.08	639.92	drop/invert	
6700.00	0.66	53.3	6589.56	-381.53	-512.40	0.08	638.84	drop/invert	
6800.00	0.74	53.3	6689.55	-380.80	-511.42	0.08	637.62	drop/invert	
6900.00	0.82	53.3	6789.54	-379.99	-510.33	0.08	636.26	drop/invert	
7000.00	0.89	53.3	6889.53	-379.10	-509.13	0.08	634.77	drop/invert	
7010.47	0.90	53.3	6900.00	-379.00	-509.00	0.08	634.60	End drop/invert	TOP OF NIOBRARA
7100.00	0.31	53.3	6989.52	-378.43	-508.24	0.66	633.65	build/invert	
7200.00	0.34	233.3	7089.52	-378.45	-508.26	0.66	633.68	build/invert	
7285.48	0.90	233.3	7175.00	-379.00	-509.00	0.66	634.60	End build/invert	TOP OF FT HAYS
7300.00	0.84	53.3	7189.51	-379.00	-509.01	12.03	634.61	drop/invert	
7300.49	0.90	53.3	7190.00	-379.00	-509.00	12.03	634.60	End drop/invert	TOP OF CODELL
7400.00	0.50	53.3	7289.51	-378.27	-508.02	0.40	633.38	build/invert	
7500.00	0.10	53.3	7389.51	-377.96	-507.60	0.40	632.86	build/invert	
7600.00	0.30	233.3	7489.51	-378.06	-507.74	0.40	633.03	build/invert	
7700.00	0.70	233.3	7589.50	-378.58	-508.43	0.40	633.90	build/invert	
7750.50	0.90	233.3	7640.00	-379.00	-509.00	0.40	634.60	End build/invert	TOP OF J-SAND
7800.00	0.42	233.3	7689.49	-379.34	-509.46	0.98	635.17	drop/invert	
7900.00	0.56	53.3	7789.49	-379.27	-509.36	0.98	635.06	drop/invert	
7935.51	0.90	53.3	7825.00	-379.00	-509.00	0.98	634.60	End drop/invert	TD

# DIRECTIONAL PLAN PLAT

## WELL LOCATION CERTIFICATE

THIS MAP IS A GIS EXHIBIT AND DOES NOT REPRESENT A BOUNDARY SURVEY.



- 379 NORTH  
 - 509 EAST  
 AZIMUTH 233.3287  
 635' THROW

**CAMENISCH  
 16-32-37R**  
 GROUND ELEVATION  
 4879'

N45°E, 50' TO EXISTING WELL  
 N45°E, 100' TO PROPOSED WELL  
 S40°E, 61' TO TIRE TRACK (IRR.)  
 N40°W, 24' TO TIRE TRACK (IRR.)

BH LOCATION

### WELL LOCATION CERTIFICATE

IN ACCORDANCE WITH A REQUEST FROM SHERRY GLASS OF KP KAUFFMAN INC., CIVIL ARTS-DREXEL GROUP, INC. HAS DETERMINED THE LOCATION OF CAMENISCH 16-32-37R WELL SITE TO BE 508' FEL AND 539' FSL AS MEASURED AT NINETY (90) DEGREES FROM THE SECTION LINES OF SECTION 32, T4N, R67W, OF THE 6TH P.M., WELD COUNTY, CO.

### LEGEND

- ⊕ = FOUND SURVEY MONUMENT
- ▬ = ROAD
- (C) = CALCULATED DIMENSION
- △ = PROPOSED WELL LOCATION
- ◇ = BOTTOM OF HOLE LOCATION
- = OTHER PROPOSED WELL LOCATION
- = EXISTING WELL LOCATION



EXHIBIT MAP



### NOTES

1. BEARINGS SHOWN ON THIS MAP ARE BASED UPON GPS OBSERVATIONS MADE ON 01/25/2007 AND 01/30/2009 BY KIPPER GOLDSBERRY BETWEEN THE SOUTHEAST CORNER AND THE E1/4 CORNER OF SECTION 32, T4N, R67W, OF THE 6TH P.M., HAVING A BEARING OF N01°03'49"W, AS MONUMENTED AND SHOWN HEREON.
2. ELEVATIONS ARE BASED UPON NAVD 88 DATUM.
3. THE LOCATION FALLS IN AN AGRICULTURAL FIELD.

### PROPOSED SURFACE HOLE DATA

(NAD 83)  
 LATITUDE: 40.26381 N  
 LONGITUDE: 104.90671 W  
 PDOP: <6

### NOTICE

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVERED SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

Z:\597-0\\_Ldd-597-0\Dwg\597-0-0G\CAMENISCH 16-32-37R\CAMENISCH 16-32-37R.DWG

I HEREBY CERTIFY THAT THIS WELL LOCATION CERTIFICATE WAS PREPARED UNDER MY RESPONSIBLE CHARGE ON 03/06/2009 FOR AND ON BEHALF OF KP KAUFFMAN, INC. THAT IT IS NOT A LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT, AND THAT IT IS NOT TO BE RELIED UPON FOR ESTABLISHMENT OF FENCE, BUILDING, OR OTHER FUTURE IMPROVEMENT LINES.

SEE ORIGINAL SIGNED 03-10-09

PETER D. STEGER  
 COLORADO REGISTERED PROFESSIONAL  
 LAND SURVEYOR NO. 25379

DATE: \_\_\_\_\_



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