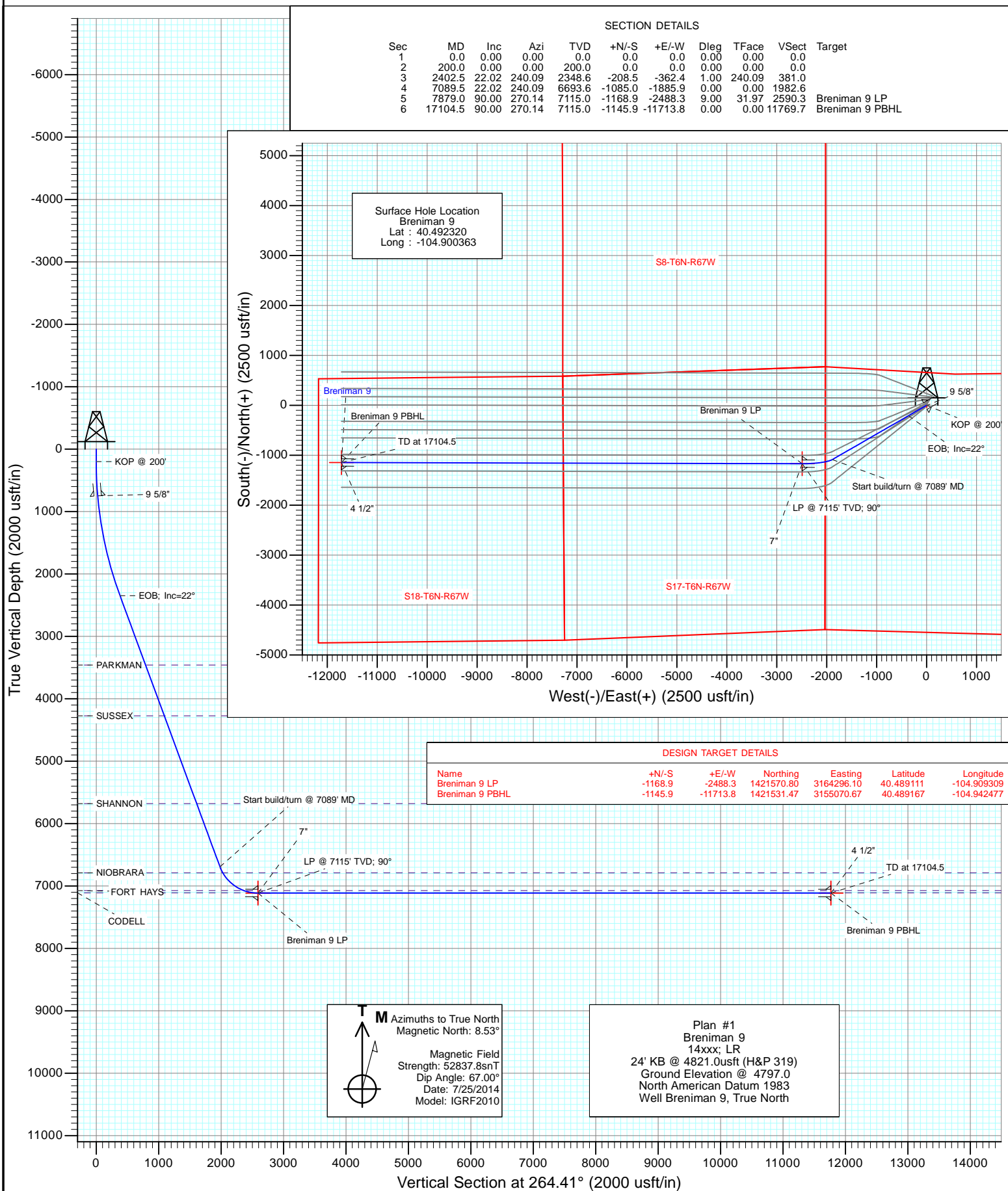




Project: WELD COUNTY, CO  
Site: S16-T6N-R67W  
Well: Breniman 9  
Wellbore: Hz  
Design: Plan #1



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

<b>Project</b>	WELD COUNTY, CO		
<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		S16-T6N-R67W			
Site Position:		Northing:	1,422,877.59 usft	Latitude:	40.492651
From:	Lat/Long	Easting:	3,166,847.63 usft	Longitude:	-104.900104
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	Breniman 9					
Well Position	+N/-S	0.0 usft	Northing:	1,422,756.52 usft	Latitude:	40.492320
	+E/-W	0.0 usft	Easting:	3,166,776.42 usft	Longitude:	-104.900363
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,797.0 usft

<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	7/25/2014	8.53	67.00	52,838

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	264.41

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,402.5	22.02	240.09	2,348.6	-208.5	-362.4	1.00	1.00	0.00	240.09	
7,089.5	22.02	240.09	6,693.6	-1,085.0	-1,885.9	0.00	0.00	0.00	0.00	
7,879.0	90.00	270.14	7,115.0	-1,168.9	-2,488.3	9.00	8.61	3.81	31.97	Breniman 9 LP
17,104.5	90.00	270.14	7,115.0	-1,145.9	-11,713.8	0.00	0.00	0.00	0.00	Breniman 9 PBHL

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	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	KOP @ 200'
300.0	1.00	240.09	300.0	-0.4	-0.8	0.8	1.00	1.00	
400.0	2.00	240.09	400.0	-1.7	-3.0	3.2	1.00	1.00	
500.0	3.00	240.09	499.9	-3.9	-6.8	7.2	1.00	1.00	
600.0	4.00	240.09	599.7	-7.0	-12.1	12.7	1.00	1.00	
700.0	5.00	240.09	699.4	-10.9	-18.9	19.9	1.00	1.00	
750.0	5.50	240.09	749.2	-13.2	-22.9	24.0	1.00	1.00	9 5/8"
800.0	6.00	240.09	798.9	-15.7	-27.2	28.6	1.00	1.00	
900.0	7.00	240.09	898.3	-21.3	-37.0	38.9	1.00	1.00	
1,000.0	8.00	240.09	997.4	-27.8	-48.3	50.8	1.00	1.00	
1,100.0	9.00	240.09	1,096.3	-35.2	-61.1	64.3	1.00	1.00	
1,200.0	10.00	240.09	1,194.9	-43.4	-75.4	79.3	1.00	1.00	
1,300.0	11.00	240.09	1,293.3	-52.5	-91.2	95.9	1.00	1.00	
1,400.0	12.00	240.09	1,391.2	-62.4	-108.5	114.1	1.00	1.00	
1,500.0	13.00	240.09	1,488.9	-73.2	-127.3	133.8	1.00	1.00	
1,600.0	14.00	240.09	1,586.1	-84.9	-147.5	155.1	1.00	1.00	
1,700.0	15.00	240.09	1,682.9	-97.4	-169.2	177.9	1.00	1.00	
1,800.0	16.00	240.09	1,779.3	-110.7	-192.4	202.2	1.00	1.00	
1,900.0	17.00	240.09	1,875.2	-124.8	-217.0	228.1	1.00	1.00	
2,000.0	18.00	240.09	1,970.5	-139.8	-243.1	255.5	1.00	1.00	
2,100.0	19.00	240.09	2,065.4	-155.7	-270.6	284.4	1.00	1.00	
2,200.0	20.00	240.09	2,159.6	-172.3	-299.5	314.9	1.00	1.00	
2,300.0	21.00	240.09	2,253.3	-189.8	-329.9	346.8	1.00	1.00	
2,400.0	22.00	240.09	2,346.3	-208.1	-361.6	380.2	1.00	1.00	
2,402.5	22.02	240.09	2,348.6	-208.5	-362.4	381.0	1.00	1.00	EOB; Inc=22°
2,500.0	22.02	240.09	2,439.0	-226.8	-394.1	414.3	0.00	0.00	
2,600.0	22.02	240.09	2,531.7	-245.5	-426.6	448.5	0.00	0.00	
2,700.0	22.02	240.09	2,624.4	-264.2	-459.1	482.7	0.00	0.00	
2,800.0	22.02	240.09	2,717.1	-282.9	-491.6	516.8	0.00	0.00	
2,900.0	22.02	240.09	2,809.8	-301.6	-524.1	551.0	0.00	0.00	
3,000.0	22.02	240.09	2,902.5	-320.3	-556.7	585.2	0.00	0.00	
3,100.0	22.02	240.09	2,995.2	-339.0	-589.2	619.4	0.00	0.00	
3,200.0	22.02	240.09	3,088.0	-357.7	-621.7	653.5	0.00	0.00	
3,300.0	22.02	240.09	3,180.7	-376.4	-654.2	687.7	0.00	0.00	
3,400.0	22.02	240.09	3,273.4	-395.1	-686.7	721.9	0.00	0.00	
3,500.0	22.02	240.09	3,366.1	-413.8	-719.2	756.0	0.00	0.00	
3,600.0	22.02	240.09	3,458.8	-432.5	-751.7	790.2	0.00	0.00	
3,601.3	22.02	240.09	3,460.0	-432.7	-752.1	790.7	0.00	0.00	PARKMAN
3,700.0	22.02	240.09	3,551.5	-451.2	-784.2	824.4	0.00	0.00	
3,800.0	22.02	240.09	3,644.2	-469.9	-816.7	858.6	0.00	0.00	
3,900.0	22.02	240.09	3,736.9	-488.6	-849.2	892.7	0.00	0.00	
4,000.0	22.02	240.09	3,829.6	-507.3	-881.7	926.9	0.00	0.00	
4,100.0	22.02	240.09	3,922.3	-526.0	-914.2	961.1	0.00	0.00	
4,200.0	22.02	240.09	4,015.0	-544.7	-946.7	995.2	0.00	0.00	
4,300.0	22.02	240.09	4,107.7	-563.4	-979.2	1,029.4	0.00	0.00	
4,400.0	22.02	240.09	4,200.4	-582.1	-1,011.7	1,063.6	0.00	0.00	
4,480.5	22.02	240.09	4,275.0	-597.1	-1,037.9	1,091.1	0.00	0.00	SUSSEX
4,500.0	22.02	240.09	4,293.1	-600.8	-1,044.2	1,097.7	0.00	0.00	
4,600.0	22.02	240.09	4,385.8	-619.5	-1,076.7	1,131.9	0.00	0.00	
4,700.0	22.02	240.09	4,478.5	-638.2	-1,109.2	1,166.1	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,800.0	22.02	240.09	4,571.2	-656.9	-1,141.7	1,200.3	0.00	0.00	
4,900.0	22.02	240.09	4,663.9	-675.6	-1,174.2	1,234.4	0.00	0.00	
5,000.0	22.02	240.09	4,756.6	-694.3	-1,206.7	1,268.6	0.00	0.00	
5,100.0	22.02	240.09	4,849.3	-713.0	-1,239.2	1,302.8	0.00	0.00	
5,200.0	22.02	240.09	4,942.0	-731.7	-1,271.7	1,336.9	0.00	0.00	
5,300.0	22.02	240.09	5,034.7	-750.4	-1,304.3	1,371.1	0.00	0.00	
5,400.0	22.02	240.09	5,127.4	-769.1	-1,336.8	1,405.3	0.00	0.00	
5,500.0	22.02	240.09	5,220.1	-787.8	-1,369.3	1,439.5	0.00	0.00	
5,600.0	22.02	240.09	5,312.8	-806.5	-1,401.8	1,473.6	0.00	0.00	
5,700.0	22.02	240.09	5,405.5	-825.2	-1,434.3	1,507.8	0.00	0.00	
5,800.0	22.02	240.09	5,498.2	-843.9	-1,466.8	1,542.0	0.00	0.00	
5,900.0	22.02	240.09	5,590.9	-862.6	-1,499.3	1,576.1	0.00	0.00	
5,996.1	22.02	240.09	5,680.0	-880.6	-1,530.5	1,609.0	0.00	0.00	SHANNON
6,000.0	22.02	240.09	5,683.6	-881.3	-1,531.8	1,610.3	0.00	0.00	
6,100.0	22.02	240.09	5,776.3	-900.0	-1,564.3	1,644.5	0.00	0.00	
6,200.0	22.02	240.09	5,869.0	-918.7	-1,596.8	1,678.7	0.00	0.00	
6,300.0	22.02	240.09	5,961.7	-937.4	-1,629.3	1,712.8	0.00	0.00	
6,400.0	22.02	240.09	6,054.4	-956.1	-1,661.8	1,747.0	0.00	0.00	
6,500.0	22.02	240.09	6,147.1	-974.8	-1,694.3	1,781.2	0.00	0.00	
6,600.0	22.02	240.09	6,239.8	-993.5	-1,726.8	1,815.3	0.00	0.00	
6,700.0	22.02	240.09	6,332.5	-1,012.2	-1,759.3	1,849.5	0.00	0.00	
6,800.0	22.02	240.09	6,425.2	-1,030.9	-1,791.8	1,883.7	0.00	0.00	
6,900.0	22.02	240.09	6,517.9	-1,049.6	-1,824.3	1,917.8	0.00	0.00	
7,000.0	22.02	240.09	6,610.6	-1,068.3	-1,856.8	1,952.0	0.00	0.00	
7,089.5	22.02	240.09	6,693.6	-1,085.0	-1,885.9	1,982.6	0.00	0.00	Start build/turn @ 7089' MD
7,100.0	22.83	241.38	6,703.3	-1,087.0	-1,889.4	1,986.3	9.00	7.68	
7,197.1	30.65	250.15	6,790.0	-1,104.5	-1,929.3	2,027.7	9.00	8.05	NIOBRARA
7,200.0	30.89	250.35	6,792.5	-1,105.0	-1,930.7	2,029.1	9.00	8.29	
7,300.0	39.33	255.83	6,874.2	-1,121.4	-1,985.7	2,085.5	9.00	8.44	
7,400.0	47.95	259.61	6,946.5	-1,135.9	-2,053.1	2,153.9	9.00	8.62	
7,500.0	56.66	262.48	7,007.6	-1,148.1	-2,131.2	2,232.8	9.00	8.71	
7,600.0	65.42	264.83	7,056.0	-1,157.6	-2,218.1	2,320.2	9.00	8.76	
7,649.8	69.80	265.87	7,075.0	-1,161.4	-2,264.0	2,366.3	9.00	8.79	FORT HAYS
7,700.0	74.22	266.86	7,090.5	-1,164.4	-2,311.6	2,414.0	9.00	8.80	
7,798.4	82.89	268.69	7,110.0	-1,168.1	-2,407.8	2,510.1	9.00	8.81	CODELL
7,800.0	83.03	268.72	7,110.2	-1,168.1	-2,409.4	2,511.7	9.00	8.82	
7,879.0	90.00	270.14	7,115.0	-1,168.9	-2,488.3	2,590.2	9.00	8.82	LP @ 7115' TVD; 90° - 7"
7,900.0	90.00	270.14	7,115.0	-1,168.9	-2,509.2	2,611.1	0.01	0.01	
8,000.0	90.00	270.14	7,115.0	-1,168.6	-2,609.2	2,710.6	0.00	0.00	
8,100.0	90.00	270.14	7,115.0	-1,168.4	-2,709.2	2,810.1	0.00	0.00	
8,200.0	90.00	270.14	7,115.0	-1,168.1	-2,809.2	2,909.6	0.00	0.00	
8,300.0	90.00	270.14	7,115.0	-1,167.9	-2,909.2	3,009.1	0.00	0.00	
8,400.0	90.00	270.14	7,115.0	-1,167.6	-3,009.2	3,108.6	0.00	0.00	
8,500.0	90.00	270.14	7,115.0	-1,167.4	-3,109.2	3,208.1	0.00	0.00	
8,600.0	90.00	270.14	7,115.0	-1,167.1	-3,209.2	3,307.6	0.00	0.00	
8,700.0	90.00	270.14	7,115.0	-1,166.9	-3,309.2	3,407.1	0.00	0.00	
8,800.0	90.00	270.14	7,115.0	-1,166.6	-3,409.2	3,506.6	0.00	0.00	
8,900.0	90.00	270.14	7,115.0	-1,166.4	-3,509.2	3,606.1	0.00	0.00	
9,000.0	90.00	270.14	7,115.0	-1,166.1	-3,609.2	3,705.6	0.00	0.00	
9,100.0	90.00	270.14	7,115.0	-1,165.9	-3,709.2	3,805.1	0.00	0.00	
9,200.0	90.00	270.14	7,115.0	-1,165.6	-3,809.2	3,904.6	0.00	0.00	
9,300.0	90.00	270.14	7,115.0	-1,165.4	-3,909.2	4,004.1	0.00	0.00	

# Planning Report

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<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,400.0	90.00	270.14	7,115.0	-1,165.1	-4,009.2	4,103.6	0.00	0.00	
9,500.0	90.00	270.14	7,115.0	-1,164.9	-4,109.2	4,203.1	0.00	0.00	
9,600.0	90.00	270.14	7,115.0	-1,164.6	-4,209.2	4,302.6	0.00	0.00	
9,700.0	90.00	270.14	7,115.0	-1,164.4	-4,309.2	4,402.1	0.00	0.00	
9,800.0	90.00	270.14	7,115.0	-1,164.1	-4,409.2	4,501.6	0.00	0.00	
9,900.0	90.00	270.14	7,115.0	-1,163.9	-4,509.2	4,601.1	0.00	0.00	
10,000.0	90.00	270.14	7,115.0	-1,163.6	-4,609.2	4,700.6	0.00	0.00	
10,100.0	90.00	270.14	7,115.0	-1,163.4	-4,709.2	4,800.1	0.00	0.00	
10,200.0	90.00	270.14	7,115.0	-1,163.1	-4,809.2	4,899.6	0.00	0.00	
10,300.0	90.00	270.14	7,115.0	-1,162.9	-4,909.2	4,999.1	0.00	0.00	
10,400.0	90.00	270.14	7,115.0	-1,162.6	-5,009.2	5,098.6	0.00	0.00	
10,500.0	90.00	270.14	7,115.0	-1,162.4	-5,109.2	5,198.1	0.00	0.00	
10,600.0	90.00	270.14	7,115.0	-1,162.1	-5,209.2	5,297.6	0.00	0.00	
10,700.0	90.00	270.14	7,115.0	-1,161.9	-5,309.2	5,397.1	0.00	0.00	
10,800.0	90.00	270.14	7,115.0	-1,161.6	-5,409.2	5,496.6	0.00	0.00	
10,900.0	90.00	270.14	7,115.0	-1,161.4	-5,509.2	5,596.1	0.00	0.00	
11,000.0	90.00	270.14	7,115.0	-1,161.1	-5,609.2	5,695.6	0.00	0.00	
11,100.0	90.00	270.14	7,115.0	-1,160.9	-5,709.2	5,795.1	0.00	0.00	
11,200.0	90.00	270.14	7,115.0	-1,160.6	-5,809.2	5,894.6	0.00	0.00	
11,300.0	90.00	270.14	7,115.0	-1,160.4	-5,909.2	5,994.1	0.00	0.00	
11,400.0	90.00	270.14	7,115.0	-1,160.1	-6,009.2	6,093.6	0.00	0.00	
11,500.0	90.00	270.14	7,115.0	-1,159.9	-6,109.2	6,193.1	0.00	0.00	
11,600.0	90.00	270.14	7,115.0	-1,159.6	-6,209.2	6,292.6	0.00	0.00	
11,700.0	90.00	270.14	7,115.0	-1,159.4	-6,309.2	6,392.1	0.00	0.00	
11,800.0	90.00	270.14	7,115.0	-1,159.1	-6,409.2	6,491.6	0.00	0.00	
11,900.0	90.00	270.14	7,115.0	-1,158.9	-6,509.2	6,591.1	0.00	0.00	
12,000.0	90.00	270.14	7,115.0	-1,158.6	-6,609.2	6,690.6	0.00	0.00	
12,100.0	90.00	270.14	7,115.0	-1,158.4	-6,709.2	6,790.1	0.00	0.00	
12,200.0	90.00	270.14	7,115.0	-1,158.1	-6,809.2	6,889.6	0.00	0.00	
12,300.0	90.00	270.14	7,115.0	-1,157.9	-6,909.2	6,989.1	0.00	0.00	
12,400.0	90.00	270.14	7,115.0	-1,157.6	-7,009.2	7,088.6	0.00	0.00	
12,500.0	90.00	270.14	7,115.0	-1,157.4	-7,109.2	7,188.1	0.00	0.00	
12,600.0	90.00	270.14	7,115.0	-1,157.1	-7,209.2	7,287.6	0.00	0.00	
12,700.0	90.00	270.14	7,115.0	-1,156.9	-7,309.2	7,387.1	0.00	0.00	
12,800.0	90.00	270.14	7,115.0	-1,156.6	-7,409.2	7,486.6	0.00	0.00	
12,900.0	90.00	270.14	7,115.0	-1,156.4	-7,509.2	7,586.1	0.00	0.00	
13,000.0	90.00	270.14	7,115.0	-1,156.1	-7,609.2	7,685.6	0.00	0.00	
13,100.0	90.00	270.14	7,115.0	-1,155.9	-7,709.2	7,785.1	0.00	0.00	
13,200.0	90.00	270.14	7,115.0	-1,155.6	-7,809.2	7,884.6	0.00	0.00	
13,300.0	90.00	270.14	7,115.0	-1,155.4	-7,909.2	7,984.1	0.00	0.00	
13,400.0	90.00	270.14	7,115.0	-1,155.1	-8,009.2	8,083.6	0.00	0.00	
13,500.0	90.00	270.14	7,115.0	-1,154.9	-8,109.2	8,183.1	0.00	0.00	
13,600.0	90.00	270.14	7,115.0	-1,154.6	-8,209.2	8,282.6	0.00	0.00	
13,700.0	90.00	270.14	7,115.0	-1,154.4	-8,309.2	8,382.1	0.00	0.00	
13,800.0	90.00	270.14	7,115.0	-1,154.1	-8,409.2	8,481.6	0.00	0.00	
13,900.0	90.00	270.14	7,115.0	-1,153.9	-8,509.2	8,581.1	0.00	0.00	
14,000.0	90.00	270.14	7,115.0	-1,153.6	-8,609.2	8,680.6	0.00	0.00	
14,100.0	90.00	270.14	7,115.0	-1,153.4	-8,709.2	8,780.1	0.00	0.00	
14,200.0	90.00	270.14	7,115.0	-1,153.1	-8,809.2	8,879.6	0.00	0.00	
14,300.0	90.00	270.14	7,115.0	-1,152.9	-8,909.2	8,979.1	0.00	0.00	
14,400.0	90.00	270.14	7,115.0	-1,152.6	-9,009.2	9,078.6	0.00	0.00	
14,500.0	90.00	270.14	7,115.0	-1,152.4	-9,109.2	9,178.1	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
14,600.0	90.00	270.14	7,115.0	-1,152.1	-9,209.2	9,277.6	0.00	0.00	
14,700.0	90.00	270.14	7,115.0	-1,151.9	-9,309.2	9,377.1	0.00	0.00	
14,800.0	90.00	270.14	7,115.0	-1,151.6	-9,409.2	9,476.6	0.00	0.00	
14,900.0	90.00	270.14	7,115.0	-1,151.4	-9,509.2	9,576.1	0.00	0.00	
15,000.0	90.00	270.14	7,115.0	-1,151.1	-9,609.2	9,675.6	0.00	0.00	
15,100.0	90.00	270.14	7,115.0	-1,150.9	-9,709.2	9,775.1	0.00	0.00	
15,200.0	90.00	270.14	7,115.0	-1,150.6	-9,809.2	9,874.6	0.00	0.00	
15,300.0	90.00	270.14	7,115.0	-1,150.4	-9,909.2	9,974.1	0.00	0.00	
15,400.0	90.00	270.14	7,115.0	-1,150.1	-10,009.2	10,073.6	0.00	0.00	
15,500.0	90.00	270.14	7,115.0	-1,149.9	-10,109.2	10,173.1	0.00	0.00	
15,600.0	90.00	270.14	7,115.0	-1,149.6	-10,209.2	10,272.6	0.00	0.00	
15,700.0	90.00	270.14	7,115.0	-1,149.4	-10,309.2	10,372.1	0.00	0.00	
15,800.0	90.00	270.14	7,115.0	-1,149.1	-10,409.2	10,471.6	0.00	0.00	
15,900.0	90.00	270.14	7,115.0	-1,148.9	-10,509.2	10,571.1	0.00	0.00	
16,000.0	90.00	270.14	7,115.0	-1,148.6	-10,609.2	10,670.6	0.00	0.00	
16,100.0	90.00	270.14	7,115.0	-1,148.4	-10,709.2	10,770.1	0.00	0.00	
16,200.0	90.00	270.14	7,115.0	-1,148.1	-10,809.2	10,869.6	0.00	0.00	
16,300.0	90.00	270.14	7,115.0	-1,147.9	-10,909.2	10,969.1	0.00	0.00	
16,400.0	90.00	270.14	7,115.0	-1,147.6	-11,009.2	11,068.6	0.00	0.00	
16,500.0	90.00	270.14	7,115.0	-1,147.4	-11,109.2	11,168.1	0.00	0.00	
16,600.0	90.00	270.14	7,115.0	-1,147.1	-11,209.2	11,267.6	0.00	0.00	
16,700.0	90.00	270.14	7,115.0	-1,146.9	-11,309.2	11,367.1	0.00	0.00	
16,800.0	90.00	270.14	7,115.0	-1,146.6	-11,409.2	11,466.6	0.00	0.00	
16,900.0	90.00	270.14	7,115.0	-1,146.4	-11,509.2	11,566.1	0.00	0.00	
17,000.0	90.00	270.14	7,115.0	-1,146.1	-11,609.2	11,665.6	0.00	0.00	
17,100.0	90.00	270.14	7,115.0	-1,145.9	-11,709.2	11,765.1	0.00	0.00	
17,104.5	90.00	270.14	7,115.0	-1,145.9	-11,713.7	11,769.6	0.00	0.00	TD at 17104.5 - 4 1/2"

## Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Breniman 9 PBHL	0.00	0.00	7,115.0	-1,145.9	-11,713.8	1,421,531.47	3,155,070.67	40.489167	-104.942477
- plan hits target center									
- Point									
Breniman 9 LP	0.00	0.00	7,115.0	-1,168.9	-2,488.3	1,421,570.80	3,164,296.10	40.489111	-104.909309
- plan hits target center									
- Point									

## Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
750.0	749.2	9 5/8"	0	0
7,879.0	7,115.0	7"	0	0
17,104.5	7,115.0	4 1/2"	0	0

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site:</b>	S16-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,601.3	3,460.0	PARKMAN				
4,480.5	4,275.0	SUSSEX				
5,996.1	5,680.0	SHANNON				
7,197.1	6,790.0	NIOBRARA				
7,649.8	7,075.0	FORT HAYS				
7,798.4	7,110.0	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.0	200.0	0.0	0.0	KOP @ 200'	
2,402.5	2,348.6	-208.5	-362.4	EOB; Inc=22°	
7,089.5	6,693.6	-1,085.0	-1,885.9	Start build/turn @ 7089' MD	
7,879.0	7,115.0	-1,168.9	-2,488.3	LP @ 7115' TVD; 90°	
17,104.5	7,115.0	-1,145.9	-11,713.8	TD at 17104.5	

# **Extraction Oil & Gas**

**WELD COUNTY, CO**

**S16-T6N-R67W**

**Breniman 9**

**Hz**

**Plan #1**

## **Anticollision Report**

**28 July, 2014**



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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>Reference</b>	Plan #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,215.7usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	7/28/2014		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	17,104.5	Plan #1 (Hz)	Geolink MWD	Geolink MWD

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S16-T6N-R67W						
Breniman 1 - Hz - Plan #1	200.0	200.0	224.0	223.4	364.676	CC, ES
Breniman 1 - Hz - Plan #1	4,600.0	4,472.3	1,191.1	1,160.2	38.538	SF
Breniman 10 - Hz - Plan #1	200.0	200.0	27.7	27.4	90.271	CC
Breniman 10 - Hz - Plan #1	700.0	697.8	28.2	27.0	23.452	ES
Breniman 10 - Hz - Plan #1	17,104.5	16,829.6	364.5	237.4	2.868	SF
Breniman 11 - Hz - Plan #1	200.0	200.0	55.8	55.5	181.554	CC
Breniman 11 - Hz - Plan #1	400.0	398.2	56.0	55.3	85.126	ES
Breniman 11 - Hz - Plan #1	17,104.5	16,900.9	592.2	362.2	2.574	SF
Breniman 2 - Hz - Plan #1	200.0	200.0	196.1	195.5	319.236	CC, ES
Breniman 2 - Hz - Plan #1	2,400.0	2,391.7	443.9	430.6	33.517	SF
Breniman 3 - Hz - Plan #1	200.0	200.0	168.1	167.5	273.565	CC
Breniman 3 - Hz - Plan #1	300.0	301.5	168.4	167.4	174.119	ES
Breniman 3 - Hz - Plan #1	2,100.0	2,103.7	322.4	311.8	30.365	SF
Breniman 4 - Hz - Plan #1	200.0	199.0	140.5	139.9	229.292	CC
Breniman 4 - Hz - Plan #1	300.0	300.5	140.7	139.7	145.780	ES
Breniman 4 - Hz - Plan #1	17,104.5	17,387.5	1,199.4	663.9	2.240	SF
Breniman 5 - Hz - Plan #1	200.0	200.0	112.3	111.6	182.732	CC
Breniman 5 - Hz - Plan #1	500.0	504.8	112.8	111.1	67.024	ES
Breniman 5 - Hz - Plan #1	17,104.5	17,400.0	886.5	369.1	1.713	SF
Breniman 6 - Hz - Plan #1	603.7	608.8	84.3	82.3	41.021	CC
Breniman 6 - Hz - Plan #1	1,300.0	1,313.7	84.4	79.5	17.036	ES
Breniman 6 - Hz - Plan #1	17,104.5	17,728.5	659.8	104.3	1.188	Level 2, SF
Breniman 7 - Hz - Plan #1	1,442.1	1,452.7	51.0	45.9	9.857	CC, ES
Breniman 7 - Hz - Plan #1	17,104.5	17,422.5	591.9	126.8	1.273	Level 3, SF
Breniman 8 - Hz - Plan #1	200.0	200.0	28.4	27.8	46.181	CC
Breniman 8 - Hz - Plan #1	1,000.0	1,003.3	30.0	26.4	8.212	ES
Breniman 8 - Hz - Plan #1	17,104.5	16,783.3	364.3	110.7	1.436	Level 3, SF

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 1 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	30.84	192.4	114.9	224.0					
100.0	100.0	100.0	100.0	0.1	0.1	30.84	192.4	114.9	224.0	223.8	0.27	844.511		
200.0	200.0	200.0	200.0	0.3	0.3	30.84	192.4	114.9	224.0	223.4	0.61	364.676 CC, ES		
300.0	300.0	300.6	300.6	0.5	0.5	150.64	192.7	114.0	224.7	223.7	0.97	232.639		
400.0	400.0	401.3	401.2	0.7	0.7	150.30	193.6	111.6	226.5	225.2	1.32	171.303		
500.0	499.9	501.8	501.7	0.9	0.9	149.74	195.2	107.5	229.6	227.9	1.69	135.958		
600.0	599.7	602.2	601.9	1.1	1.1	148.98	197.5	101.7	234.0	231.9	2.07	113.023		
700.0	699.4	702.5	701.9	1.3	1.3	148.04	200.3	94.3	239.7	237.2	2.47	96.977		
800.0	798.9	802.7	801.6	1.5	1.5	146.95	203.8	85.4	246.7	243.8	2.90	85.149		
900.0	898.3	902.6	900.8	1.8	1.8	145.75	208.0	74.8	255.1	251.7	3.35	76.095		
1,000.0	997.4	1,002.3	999.7	2.0	2.0	144.45	212.7	62.6	264.9	261.0	3.84	68.965		
1,100.0	1,096.3	1,101.7	1,098.0	2.3	2.3	143.09	218.1	48.9	276.1	271.7	4.37	63.224		
1,200.0	1,194.9	1,200.8	1,195.7	2.7	2.7	141.70	224.0	33.6	288.8	283.9	4.93	58.524		
1,300.0	1,293.3	1,299.6	1,292.9	3.0	3.0	140.29	230.5	16.9	303.0	297.4	5.55	54.622		
1,400.0	1,391.2	1,398.1	1,389.4	3.4	3.4	138.90	237.6	-1.3	318.6	312.4	6.20	51.405		
1,500.0	1,488.9	1,496.4	1,485.7	3.8	3.7	137.75	244.8	-19.9	335.7	328.9	6.87	48.843		
1,600.0	1,586.1	1,594.6	1,581.9	4.2	4.1	136.89	252.1	-38.4	354.2	346.6	7.57	46.795		
1,700.0	1,682.9	1,692.6	1,677.8	4.7	4.5	136.27	259.3	-56.8	373.9	365.7	8.28	45.148		
1,800.0	1,779.3	1,790.4	1,773.6	5.2	4.9	135.87	266.4	-75.3	394.9	385.9	9.01	43.822		
1,900.0	1,875.2	1,887.9	1,869.0	5.7	5.3	135.66	273.6	-93.6	417.1	407.4	9.76	42.756		
2,000.0	1,970.5	1,985.1	1,964.2	6.3	5.6	135.61	280.7	-112.0	440.6	430.1	10.51	41.905		
2,100.0	2,065.4	2,082.0	2,059.1	6.9	6.0	135.69	287.8	-130.2	465.2	453.9	11.28	41.236		
2,200.0	2,159.6	2,178.5	2,153.7	7.5	6.4	135.89	294.9	-148.4	491.1	479.0	12.06	40.721		
2,300.0	2,253.3	2,274.7	2,247.9	8.1	6.8	136.17	302.0	-166.5	518.2	505.4	12.85	40.340		
2,400.0	2,346.3	2,370.4	2,341.6	8.8	7.2	136.53	309.0	-184.6	546.6	532.9	13.64	40.076		
2,500.0	2,439.0	2,466.0	2,435.2	9.5	7.5	137.09	316.0	-202.6	575.6	561.2	14.43	39.879		
2,600.0	2,531.7	2,561.5	2,528.8	10.2	7.9	137.61	323.0	-220.6	604.7	589.5	15.23	39.708		
2,700.0	2,624.4	2,657.0	2,622.3	10.9	8.3	138.08	330.1	-238.6	633.8	617.8	16.02	39.561		
2,800.0	2,717.1	2,752.6	2,715.9	11.6	8.7	138.51	337.1	-256.6	663.0	646.2	16.81	39.433		
2,900.0	2,809.8	2,848.1	2,809.5	12.3	9.0	138.90	344.1	-274.6	692.2	674.6	17.60	39.322		
3,000.0	2,902.6	2,943.7	2,903.0	13.0	9.4	139.26	351.1	-292.6	721.4	703.0	18.39	39.224		
3,100.0	2,995.3	3,039.2	2,996.6	13.7	9.8	139.59	358.1	-310.6	750.7	731.5	19.18	39.137		
3,200.0	3,088.0	3,134.7	3,090.2	14.4	10.2	139.90	365.1	-328.6	779.9	760.0	19.97	39.061		
3,300.0	3,180.7	3,230.3	3,183.7	15.1	10.6	140.19	372.1	-346.6	809.2	788.5	20.75	38.993		
3,400.0	3,273.4	3,325.8	3,277.3	15.8	10.9	140.45	379.2	-364.6	838.5	817.0	21.54	38.933		
3,500.0	3,366.1	3,421.4	3,370.9	16.5	11.3	140.70	386.2	-382.6	867.9	845.5	22.32	38.879		
3,600.0	3,458.8	3,516.9	3,464.4	17.2	11.7	140.93	393.2	-400.6	897.2	874.1	23.11	38.830		
3,700.0	3,551.5	3,612.4	3,558.0	17.9	12.1	141.15	400.2	-418.6	926.6	902.7	23.89	38.787		
3,800.0	3,644.2	3,708.0	3,651.6	18.6	12.5	141.35	407.2	-436.6	955.9	931.2	24.67	38.748		
3,900.0	3,736.9	3,803.5	3,745.1	19.3	12.8	141.54	414.2	-454.6	985.3	959.8	25.45	38.712		
4,000.0	3,829.6	3,899.1	3,838.7	20.0	13.2	141.72	421.2	-472.6	1,014.7	988.4	26.23	38.680		
4,100.0	3,922.3	3,994.6	3,932.2	20.7	13.6	141.89	428.2	-490.6	1,044.1	1,017.0	27.01	38.651		
4,200.0	4,015.0	4,090.1	4,025.8	21.4	14.0	142.05	435.3	-508.6	1,073.5	1,045.7	27.79	38.624		
4,300.0	4,107.7	4,185.7	4,119.4	22.1	14.4	142.21	442.3	-526.6	1,102.9	1,074.3	28.57	38.600		
4,400.0	4,200.4	4,281.2	4,212.9	22.9	14.7	142.35	449.3	-544.6	1,132.3	1,102.9	29.35	38.577		
4,500.0	4,293.1	4,376.7	4,306.5	23.6	15.1	142.49	456.3	-562.6	1,161.7	1,131.6	30.13	38.557		
4,600.0	4,385.8	4,472.3	4,400.1	24.3	15.5	142.62	463.3	-580.6	1,191.1	1,160.2	30.91	38.538 SF		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 10 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-148.58	-23.7	-14.5	27.7					
100.0	100.0	100.0	100.0	0.1	0.0	-148.58	-23.7	-14.5	27.7	27.6	0.13	208.869		
200.0	200.0	200.0	200.0	0.3	0.0	-148.58	-23.7	-14.5	27.7	27.4	0.31	90.271 CC		
300.0	300.0	299.6	299.6	0.5	0.0	-28.76	-24.1	-15.2	27.8	27.3	0.48	57.590		
400.0	400.0	399.1	399.1	0.7	0.0	-29.01	-25.6	-17.4	27.8	27.2	0.66	42.285		
500.0	499.9	498.7	498.6	0.9	0.0	-29.44	-27.9	-21.0	27.9	27.1	0.84	33.396		
600.0	599.7	598.3	597.9	1.1	0.0	-30.03	-31.2	-26.1	28.0	27.0	1.02	27.574		
700.0	699.4	697.8	697.2	1.3	0.0	-30.77	-35.4	-32.6	28.2	27.0	1.20	23.452 ES		
800.0	798.9	797.4	796.3	1.5	0.0	-31.68	-40.6	-40.6	28.4	27.0	1.39	20.367		
900.0	898.3	897.0	895.2	1.8	0.0	-32.73	-46.7	-50.0	28.7	27.1	1.60	17.960		
1,000.0	997.4	996.5	994.0	2.0	0.0	-33.91	-53.7	-60.9	29.0	27.2	1.81	16.016		
1,100.0	1,096.3	1,096.1	1,092.4	2.3	0.0	-35.23	-61.6	-73.2	29.3	27.3	2.04	14.404		
1,200.0	1,194.9	1,195.7	1,190.7	2.7	0.0	-36.65	-70.5	-86.9	29.7	27.5	2.28	13.039		
1,300.0	1,293.3	1,295.2	1,288.6	3.0	0.0	-38.18	-80.3	-102.1	30.2	27.7	2.55	11.862		
1,400.0	1,391.2	1,394.8	1,386.1	3.4	0.0	-39.80	-91.0	-118.7	30.8	27.9	2.84	10.835		
1,500.0	1,488.9	1,494.4	1,483.4	3.8	0.0	-41.48	-102.7	-136.7	31.4	28.3	3.16	9.931		
1,600.0	1,586.1	1,593.9	1,580.2	4.2	0.0	-43.23	-115.2	-156.2	32.1	28.6	3.52	9.132		
1,700.0	1,682.9	1,693.5	1,676.6	4.7	0.0	-45.01	-128.7	-177.0	32.9	29.0	3.91	8.423		
1,800.0	1,779.3	1,793.1	1,772.6	5.2	0.0	-46.82	-143.1	-199.3	33.8	29.5	4.34	7.794		
1,900.0	1,875.2	1,892.6	1,868.1	5.7	0.0	-48.64	-158.4	-222.9	34.8	30.0	4.80	7.237		
2,000.0	1,970.5	1,992.2	1,963.1	6.3	0.0	-50.46	-174.6	-248.0	35.8	30.5	5.31	6.744		
2,100.0	2,065.4	2,091.8	2,057.6	6.9	0.0	-52.27	-191.6	-274.4	37.0	31.1	5.86	6.309		
2,200.0	2,159.6	2,191.3	2,151.5	7.5	0.0	-54.04	-209.6	-302.2	38.2	31.8	6.46	5.925		
2,300.0	2,253.3	2,290.9	2,244.8	8.1	0.0	-55.78	-228.4	-331.4	39.6	32.5	7.09	5.586		
2,400.0	2,346.3	2,390.5	2,337.5	8.8	0.0	-57.48	-248.2	-361.9	41.1	33.3	7.77	5.287		
2,500.0	2,439.0	2,490.0	2,429.5	9.5	0.0	-58.19	-268.7	-393.8	43.0	34.6	8.40	5.126		
2,600.0	2,531.7	2,589.5	2,520.9	10.2	0.0	-57.06	-290.2	-427.0	46.0	37.1	8.91	5.169		
2,700.0	2,624.4	2,689.3	2,611.8	10.9	0.0	-54.76	-312.4	-461.3	49.9	40.6	9.30	5.364		
2,800.0	2,717.1	2,789.2	2,702.9	11.6	0.0	-52.69	-334.7	-495.8	53.9	44.2	9.68	5.568		
2,900.0	2,809.8	2,889.1	2,794.0	12.3	0.0	-50.91	-357.0	-530.3	58.0	47.9	10.05	5.766		
3,000.0	2,902.6	2,989.0	2,885.0	13.0	0.0	-49.36	-379.2	-564.8	62.1	51.6	10.42	5.955		
3,100.0	2,995.3	3,088.9	2,976.1	13.7	0.0	-48.01	-401.5	-599.3	66.2	55.4	10.79	6.136		
3,200.0	3,088.0	3,188.8	3,067.2	14.4	0.0	-46.81	-423.8	-633.8	70.4	59.2	11.16	6.309		
3,300.0	3,180.7	3,288.7	3,158.2	15.1	0.0	-45.75	-446.1	-668.3	74.6	63.1	11.53	6.473		
3,400.0	3,273.4	3,388.6	3,249.3	15.8	0.0	-44.81	-468.4	-702.8	78.9	67.0	11.89	6.630		
3,500.0	3,366.1	3,488.5	3,340.4	16.5	0.0	-43.96	-490.7	-737.3	83.1	70.8	12.26	6.778		
3,600.0	3,458.8	3,588.4	3,431.4	17.2	0.0	-43.19	-513.0	-771.8	87.4	74.8	12.63	6.919		
3,700.0	3,551.5	3,688.3	3,522.5	17.9	0.0	-42.50	-535.3	-806.3	91.7	78.7	13.00	7.054		
3,800.0	3,644.2	3,788.2	3,613.6	18.6	0.0	-41.86	-557.6	-840.8	96.0	82.6	13.36	7.181		
3,900.0	3,736.9	3,888.1	3,704.6	19.3	0.0	-41.28	-579.9	-875.3	100.3	86.5	13.73	7.303		
4,000.0	3,829.6	3,988.0	3,795.7	20.0	0.0	-40.75	-602.2	-909.8	104.6	90.5	14.10	7.419		
4,100.0	3,922.3	4,087.9	3,886.8	20.7	0.0	-40.27	-624.4	-944.3	108.9	94.5	14.47	7.529		
4,200.0	4,015.0	4,187.8	3,977.8	21.4	0.0	-39.81	-646.7	-978.8	113.2	98.4	14.83	7.635		
4,300.0	4,107.7	4,287.7	4,068.9	22.1	0.0	-39.40	-669.0	-1,013.3	117.6	102.4	15.20	7.735		
4,400.0	4,200.4	4,387.6	4,160.0	22.9	0.0	-39.01	-691.3	-1,047.8	121.9	106.4	15.57	7.831		
4,500.0	4,293.1	4,487.5	4,251.0	23.6	0.0	-38.65	-713.6	-1,082.3	126.3	110.3	15.94	7.923		
4,600.0	4,385.8	4,587.4	4,342.1	24.3	0.0	-38.31	-735.9	-1,116.8	130.6	114.3	16.31	8.010		
4,700.0	4,478.5	4,687.3	4,433.2	25.0	0.0	-37.99	-758.2	-1,151.3	135.0	118.3	16.68	8.094		
4,800.0	4,571.2	4,787.2	4,524.2	25.7	0.0	-37.70	-780.5	-1,185.8	139.4	122.3	17.05	8.175		
4,900.0	4,663.9	4,887.1	4,615.3	26.4	0.0	-37.42	-802.8	-1,220.3	143.7	126.3	17.42	8.252		
5,000.0	4,756.6	4,987.0	4,706.4	27.1	0.0	-37.16	-825.1	-1,254.8	148.1	130.3	17.79	8.326		
5,100.0	4,849.3	5,086.9	4,797.4	27.8	0.0	-36.91	-847.3	-1,289.3	152.5	134.3	18.16	8.398		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 10 - Hz - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	4,942.0	5,186.8	4,888.5	28.5	0.0	-36.68	-869.6	-1,323.8	156.9	138.3	18.53	8.466	
5,300.0	5,034.7	5,286.7	4,979.6	29.2	0.0	-36.46	-891.9	-1,358.3	161.2	142.3	18.90	8.532	
5,400.0	5,127.4	5,386.6	5,070.6	29.9	0.0	-36.25	-914.2	-1,392.8	165.6	146.3	19.27	8.595	
5,500.0	5,220.1	5,486.5	5,161.7	30.6	0.0	-36.05	-936.5	-1,427.3	170.0	150.4	19.64	8.656	
5,600.0	5,312.8	5,586.4	5,252.8	31.3	0.0	-35.86	-958.8	-1,461.8	174.4	154.4	20.01	8.715	
5,700.0	5,405.5	5,686.3	5,343.8	32.1	0.0	-35.69	-981.1	-1,496.3	178.8	158.4	20.38	8.771	
5,800.0	5,498.2	5,786.2	5,434.9	32.8	0.0	-35.52	-1,003.4	-1,530.8	183.1	162.4	20.75	8.826	
5,900.0	5,590.9	5,886.1	5,526.0	33.5	0.0	-35.35	-1,025.7	-1,565.3	187.5	166.4	21.12	8.879	
6,000.0	5,683.6	5,986.0	5,617.0	34.2	0.0	-35.20	-1,048.0	-1,599.8	191.9	170.4	21.49	8.930	
6,100.0	5,776.3	6,085.9	5,708.1	34.9	0.0	-35.05	-1,070.2	-1,634.3	196.3	174.5	21.87	8.979	
6,200.0	5,869.0	6,185.8	5,799.2	35.6	0.0	-34.91	-1,092.5	-1,668.8	200.7	178.5	22.24	9.026	
6,300.0	5,961.7	6,285.7	5,890.3	36.3	0.0	-34.77	-1,114.8	-1,703.3	205.1	182.5	22.61	9.072	
6,400.0	6,054.4	6,385.6	5,981.3	37.0	0.0	-34.65	-1,137.1	-1,737.8	209.5	186.5	22.98	9.117	
6,500.0	6,147.1	6,485.5	6,072.4	37.7	0.0	-34.52	-1,159.4	-1,772.3	213.9	190.6	23.35	9.160	
6,600.0	6,239.8	6,585.4	6,163.5	38.4	0.0	-34.40	-1,181.7	-1,806.8	218.3	194.6	23.72	9.202	
6,700.0	6,332.5	6,685.4	6,254.5	39.1	0.0	-34.29	-1,204.0	-1,841.3	222.7	198.6	24.10	9.242	
6,800.0	6,425.2	6,785.3	6,345.6	39.8	0.0	-34.18	-1,226.3	-1,875.8	227.1	202.6	24.47	9.282	
6,900.0	6,517.9	6,878.0	6,429.4	40.6	0.0	-33.64	-1,246.8	-1,909.6	232.4	207.7	24.63	9.435	
7,000.0	6,610.6	6,963.0	6,502.0	41.3	0.0	-30.89	-1,264.5	-1,950.2	242.9	219.3	23.67	10.265	
7,100.0	6,703.3	7,043.1	6,564.9	42.0	0.0	-27.52	-1,279.9	-1,997.1	260.7	239.0	21.71	12.006	
7,200.0	6,792.5	7,119.2	6,619.1	42.9	0.0	-29.90	-1,293.0	-2,049.0	281.9	262.5	19.39	14.535	
7,300.0	6,874.2	7,193.6	6,665.7	44.0	0.0	-29.97	-1,304.4	-2,105.7	302.2	284.2	18.01	16.784	
7,400.0	6,946.6	7,266.4	6,705.0	45.4	0.0	-29.31	-1,313.9	-2,166.3	320.7	303.3	17.40	18.434	
7,500.0	7,007.6	7,338.2	6,736.8	47.0	0.0	-28.52	-1,321.5	-2,230.1	336.5	319.1	17.47	19.265	
7,600.0	7,056.0	7,409.1	6,761.2	48.8	0.0	-27.82	-1,327.3	-2,296.4	349.1	330.9	18.22	19.159	
7,700.0	7,090.5	7,479.4	6,778.1	50.7	0.0	-27.30	-1,331.3	-2,364.4	358.1	338.4	19.72	18.162	
7,800.0	7,110.2	7,550.0	6,787.8	52.7	0.0	-26.99	-1,333.5	-2,434.3	363.2	341.3	21.99	16.520	
7,900.0	7,115.0	7,625.4	6,790.0	54.8	0.0	-26.92	-1,333.9	-2,509.7	364.5	340.0	24.54	14.853	
8,000.0	7,115.0	7,725.4	6,790.0	56.8	0.0	-26.92	-1,333.6	-2,609.7	364.5	338.9	25.58	14.251	
8,100.0	7,115.0	7,825.4	6,790.0	58.9	0.0	-26.92	-1,333.4	-2,709.7	364.5	337.9	26.62	13.692	
8,200.0	7,115.0	7,925.4	6,790.0	61.1	0.0	-26.92	-1,333.1	-2,809.7	364.5	336.8	27.67	13.172	
8,300.0	7,115.0	8,025.4	6,790.0	63.2	0.0	-26.92	-1,332.9	-2,909.7	364.5	335.8	28.73	12.687	
8,400.0	7,115.0	8,125.4	6,790.0	65.4	0.0	-26.92	-1,332.6	-3,009.7	364.5	334.7	29.79	12.235	
8,500.0	7,115.0	8,225.4	6,790.0	67.6	0.0	-26.92	-1,332.4	-3,109.7	364.5	333.6	30.86	11.811	
8,600.0	7,115.0	8,325.4	6,790.0	69.8	0.0	-26.92	-1,332.1	-3,209.7	364.5	332.6	31.93	11.414	
8,700.0	7,115.0	8,425.4	6,790.0	72.1	0.0	-26.92	-1,331.9	-3,309.7	364.5	331.5	33.01	11.042	
8,800.0	7,115.0	8,525.4	6,790.0	74.3	0.0	-26.92	-1,331.6	-3,409.7	364.5	330.4	34.09	10.692	
8,900.0	7,115.0	8,625.4	6,790.0	76.6	0.0	-26.92	-1,331.4	-3,509.7	364.5	329.3	35.17	10.363	
9,000.0	7,115.0	8,725.4	6,790.0	78.9	0.0	-26.92	-1,331.1	-3,609.7	364.5	328.2	36.26	10.052	
9,100.0	7,115.0	8,825.4	6,790.0	81.2	0.0	-26.92	-1,330.9	-3,709.7	364.5	327.1	37.35	9.759	
9,200.0	7,115.0	8,925.4	6,790.0	83.5	0.0	-26.92	-1,330.6	-3,809.7	364.5	326.1	38.44	9.482	
9,300.0	7,115.0	9,025.4	6,790.0	85.8	0.0	-26.92	-1,330.4	-3,909.7	364.5	325.0	39.54	9.219	
9,400.0	7,115.0	9,125.4	6,790.0	88.1	0.0	-26.92	-1,330.1	-4,009.7	364.5	323.9	40.63	8.970	
9,500.0	7,115.0	9,225.4	6,790.0	90.4	0.0	-26.92	-1,329.9	-4,109.7	364.5	322.8	41.73	8.734	
9,600.0	7,115.0	9,325.4	6,790.0	92.8	0.0	-26.92	-1,329.6	-4,209.7	364.5	321.7	42.83	8.510	
9,700.0	7,115.0	9,425.4	6,790.0	95.1	0.0	-26.92	-1,329.4	-4,309.7	364.5	320.6	43.94	8.296	
9,800.0	7,115.0	9,525.4	6,790.0	97.5	0.0	-26.92	-1,329.1	-4,409.7	364.5	319.5	45.04	8.093	
9,900.0	7,115.0	9,625.4	6,790.0	99.8	0.0	-26.92	-1,328.9	-4,509.7	364.5	318.4	46.14	7.899	
10,000.0	7,115.0	9,725.4	6,790.0	102.2	0.0	-26.92	-1,328.6	-4,609.7	364.5	317.2	47.25	7.714	
10,100.0	7,115.0	9,825.4	6,790.0	104.5	0.0	-26.92	-1,328.4	-4,709.7	364.5	316.1	48.36	7.537	
10,200.0	7,115.0	9,925.4	6,790.0	106.9	0.0	-26.92	-1,328.1	-4,809.7	364.5	315.0	49.47	7.368	
10,300.0	7,115.0	10,025.4	6,790.0	109.3	0.0	-26.92	-1,327.9	-4,909.7	364.5	313.9	50.58	7.207	

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 10 - Hz - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,115.0	10,125.4	6,790.0	111.7	0.0	-26.92	-1,327.6	-5,009.7	364.5	312.8	51.69	7.052	
10,500.0	7,115.0	10,225.4	6,790.0	114.1	0.0	-26.92	-1,327.4	-5,109.7	364.5	311.7	52.80	6.903	
10,600.0	7,115.0	10,325.4	6,790.0	116.5	0.0	-26.92	-1,327.1	-5,209.7	364.5	310.6	53.91	6.761	
10,700.0	7,115.0	10,425.4	6,790.0	118.8	0.0	-26.92	-1,326.9	-5,309.7	364.5	309.5	55.03	6.624	
10,800.0	7,115.0	10,525.4	6,790.0	121.2	0.0	-26.92	-1,326.6	-5,409.7	364.5	308.4	56.14	6.492	
10,900.0	7,115.0	10,625.4	6,790.0	123.6	0.0	-26.92	-1,326.4	-5,509.7	364.5	307.2	57.26	6.366	
11,000.0	7,115.0	10,725.4	6,790.0	126.0	0.0	-26.92	-1,326.1	-5,609.7	364.5	306.1	58.37	6.244	
11,100.0	7,115.0	10,825.4	6,790.0	128.5	0.0	-26.92	-1,325.9	-5,709.7	364.5	305.0	59.49	6.127	
11,200.0	7,115.0	10,925.4	6,790.0	130.9	0.0	-26.92	-1,325.6	-5,809.7	364.5	303.9	60.61	6.014	
11,300.0	7,115.0	11,025.4	6,790.0	133.3	0.0	-26.92	-1,325.4	-5,909.7	364.5	302.8	61.73	5.905	
11,400.0	7,115.0	11,125.4	6,790.0	135.7	0.0	-26.92	-1,325.1	-6,009.7	364.5	301.7	62.85	5.800	
11,500.0	7,115.0	11,225.4	6,790.0	138.1	0.0	-26.92	-1,324.9	-6,109.7	364.5	300.5	63.96	5.698	
11,600.0	7,115.0	11,325.4	6,790.0	140.5	0.0	-26.92	-1,324.6	-6,209.7	364.5	299.4	65.08	5.600	
11,700.0	7,115.0	11,425.4	6,790.0	142.9	0.0	-26.92	-1,324.4	-6,309.7	364.5	298.3	66.20	5.506	
11,800.0	7,115.0	11,525.4	6,790.0	145.4	0.0	-26.92	-1,324.1	-6,409.7	364.5	297.2	67.32	5.414	
11,900.0	7,115.0	11,625.4	6,790.0	147.8	0.0	-26.92	-1,323.9	-6,509.7	364.5	296.1	68.45	5.325	
12,000.0	7,115.0	11,725.4	6,790.0	150.2	0.0	-26.92	-1,323.6	-6,609.7	364.5	294.9	69.57	5.240	
12,100.0	7,115.0	11,825.4	6,790.0	152.6	0.0	-26.92	-1,323.4	-6,709.7	364.5	293.8	70.69	5.156	
12,200.0	7,115.0	11,925.4	6,790.0	155.1	0.0	-26.92	-1,323.1	-6,809.7	364.5	292.7	71.81	5.076	
12,300.0	7,115.0	12,025.4	6,790.0	157.5	0.0	-26.92	-1,322.9	-6,909.7	364.5	291.6	72.93	4.998	
12,400.0	7,115.0	12,125.4	6,790.0	159.9	0.0	-26.92	-1,322.6	-7,009.7	364.5	290.4	74.06	4.922	
12,500.0	7,115.0	12,225.4	6,790.0	162.4	0.0	-26.92	-1,322.4	-7,109.7	364.5	289.3	75.18	4.848	
12,600.0	7,115.0	12,325.4	6,790.0	164.8	0.0	-26.92	-1,322.2	-7,209.7	364.5	288.2	76.30	4.777	
12,700.0	7,115.0	12,425.4	6,790.0	167.2	0.0	-26.92	-1,321.9	-7,309.7	364.5	287.1	77.43	4.708	
12,800.0	7,115.0	12,525.4	6,790.0	169.7	0.0	-26.92	-1,321.7	-7,409.7	364.5	285.9	78.55	4.640	
12,900.0	7,115.0	12,625.4	6,790.0	172.1	0.0	-26.92	-1,321.4	-7,509.7	364.5	284.8	79.67	4.575	
13,000.0	7,115.0	12,725.4	6,790.0	174.5	0.0	-26.92	-1,321.2	-7,609.7	364.5	283.7	80.80	4.511	
13,100.0	7,115.0	12,825.4	6,790.0	177.0	0.0	-26.92	-1,320.9	-7,709.7	364.5	282.6	81.92	4.449	
13,200.0	7,115.0	12,925.4	6,790.0	179.4	0.0	-26.92	-1,320.7	-7,809.7	364.5	281.4	83.05	4.389	
13,300.0	7,115.0	13,025.4	6,790.0	181.9	0.0	-26.92	-1,320.4	-7,909.7	364.5	280.3	84.17	4.330	
13,400.0	7,115.0	13,125.4	6,790.0	184.3	0.0	-26.92	-1,320.2	-8,009.7	364.5	279.2	85.30	4.273	
13,500.0	7,115.0	13,225.4	6,790.0	186.7	0.0	-26.92	-1,319.9	-8,109.7	364.5	278.1	86.43	4.217	
13,600.0	7,115.0	13,325.4	6,790.0	189.2	0.0	-26.92	-1,319.7	-8,209.7	364.5	276.9	87.55	4.163	
13,700.0	7,115.0	13,425.4	6,790.0	191.6	0.0	-26.92	-1,319.4	-8,309.7	364.5	275.8	88.68	4.110	
13,800.0	7,115.0	13,525.4	6,790.0	194.1	0.0	-26.92	-1,319.2	-8,409.7	364.5	274.7	89.80	4.059	
13,900.0	7,115.0	13,625.4	6,790.0	196.5	0.0	-26.92	-1,318.9	-8,509.7	364.5	273.6	90.93	4.009	
14,000.0	7,115.0	13,725.4	6,790.0	199.0	0.0	-26.92	-1,318.7	-8,609.7	364.5	272.4	92.06	3.959	
14,100.0	7,115.0	13,825.4	6,790.0	201.4	0.0	-26.92	-1,318.4	-8,709.7	364.5	271.3	93.18	3.912	
14,200.0	7,115.0	13,925.4	6,790.0	203.9	0.0	-26.92	-1,318.2	-8,809.7	364.5	270.2	94.31	3.865	
14,300.0	7,115.0	14,025.4	6,790.0	206.3	0.0	-26.92	-1,317.9	-8,909.7	364.5	269.1	95.44	3.819	
14,400.0	7,115.0	14,125.4	6,790.0	208.8	0.0	-26.92	-1,317.7	-9,009.7	364.5	267.9	96.57	3.775	
14,500.0	7,115.0	14,225.4	6,790.0	211.2	0.0	-26.92	-1,317.4	-9,109.7	364.5	266.8	97.69	3.731	
14,600.0	7,115.0	14,325.4	6,790.0	213.7	0.0	-26.92	-1,317.2	-9,209.7	364.5	265.7	98.82	3.688	
14,700.0	7,115.0	14,425.4	6,790.0	216.1	0.0	-26.92	-1,316.9	-9,309.7	364.5	264.5	99.95	3.647	
14,800.0	7,115.0	14,525.4	6,790.0	218.6	0.0	-26.92	-1,316.7	-9,409.7	364.5	263.4	101.08	3.606	
14,900.0	7,115.0	14,625.4	6,790.0	221.0	0.0	-26.92	-1,316.4	-9,509.7	364.5	262.3	102.21	3.566	
15,000.0	7,115.0	14,725.4	6,790.0	223.5	0.0	-26.92	-1,316.2	-9,609.7	364.5	261.2	103.33	3.527	
15,100.0	7,115.0	14,825.4	6,790.0	225.9	0.0	-26.92	-1,315.9	-9,709.7	364.5	260.0	104.46	3.489	
15,200.0	7,115.0	14,925.4	6,790.0	228.4	0.0	-26.92	-1,315.7	-9,809.7	364.5	258.9	105.59	3.452	
15,300.0	7,115.0	15,025.4	6,790.0	230.8	0.0	-26.92	-1,315.4	-9,909.7	364.5	257.8	106.72	3.416	
15,400.0	7,115.0	15,125.4	6,790.0	233.3	0.0	-26.92	-1,315.2	-10,009.7	364.5	256.7	107.85	3.380	
15,500.0	7,115.0	15,225.4	6,790.0	235.8	0.0	-26.92	-1,314.9	-10,109.7	364.5	255.5	108.98	3.345	

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 10 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
15,600.0	7,115.0	15,325.4	6,790.0	238.2	0.0	-26.92	-1,314.7	-10,209.7	364.5	254.4	110.11	3.310		
15,700.0	7,115.0	15,425.4	6,790.0	240.7	0.0	-26.92	-1,314.4	-10,309.7	364.5	253.3	111.23	3.277		
15,800.0	7,115.0	15,525.4	6,790.0	243.1	0.0	-26.92	-1,314.2	-10,409.7	364.5	252.1	112.36	3.244		
15,900.0	7,115.0	15,625.4	6,790.0	245.6	0.0	-26.92	-1,313.9	-10,509.7	364.5	251.0	113.49	3.212		
16,000.0	7,115.0	15,725.4	6,790.0	248.0	0.0	-26.92	-1,313.7	-10,609.6	364.5	249.9	114.62	3.180		
16,100.0	7,115.0	15,825.4	6,790.0	250.5	0.0	-26.92	-1,313.4	-10,709.6	364.5	248.7	115.75	3.149		
16,200.0	7,115.0	15,925.4	6,790.0	252.9	0.0	-26.92	-1,313.2	-10,809.6	364.5	247.6	116.88	3.119		
16,300.0	7,115.0	16,025.4	6,790.0	255.4	0.0	-26.92	-1,312.9	-10,909.6	364.5	246.5	118.01	3.089		
16,400.0	7,115.0	16,125.4	6,790.0	257.9	0.0	-26.92	-1,312.7	-11,009.6	364.5	245.4	119.14	3.059		
16,500.0	7,115.0	16,225.4	6,790.0	260.3	0.0	-26.92	-1,312.4	-11,109.6	364.5	244.2	120.27	3.031		
16,600.0	7,115.0	16,325.4	6,790.0	262.8	0.0	-26.92	-1,312.2	-11,209.6	364.5	243.1	121.40	3.002		
16,700.0	7,115.0	16,425.4	6,790.0	265.2	0.0	-26.92	-1,311.9	-11,309.6	364.5	242.0	122.53	2.975		
16,800.0	7,115.0	16,525.4	6,790.0	267.7	0.0	-26.92	-1,311.7	-11,409.6	364.5	240.8	123.66	2.948		
16,900.0	7,115.0	16,625.4	6,790.0	270.2	0.0	-26.92	-1,311.4	-11,509.6	364.5	239.7	124.79	2.921		
17,000.0	7,115.0	16,725.4	6,790.0	272.6	0.0	-26.92	-1,311.2	-11,609.6	364.5	238.6	125.92	2.895		
17,100.0	7,115.0	16,825.4	6,790.0	275.1	0.0	-26.92	-1,310.9	-11,709.6	364.5	237.5	127.05	2.869		
17,103.9	7,115.0	16,829.3	6,790.0	275.2	0.0	-26.92	-1,310.9	-11,713.6	364.5	237.4	127.09	2.868		
17,104.5	7,115.0	16,829.6	6,790.0	275.2	0.0	-26.92	-1,310.9	-11,713.8	364.5	237.4	127.10	2.868 SF		

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 11 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-148.78	-47.7	-28.9	55.8	55.7	0.13	420.080		
100.0	100.0	100.0	100.0	0.1	0.0	-148.78	-47.7	-28.9	55.8	55.5	0.31	181.554 CC		
200.0	200.0	200.0	200.0	0.3	0.0	-148.78	-47.7	-28.9	55.8	55.4	0.48	115.853		
300.0	300.0	299.1	299.1	0.5	0.0	-28.99	-48.3	-29.6	55.9	55.4	0.66	85.126 ES		
400.0	400.0	398.2	398.1	0.7	0.0	-29.37	-49.9	-31.6	56.0	55.3	0.84	67.308		
500.0	499.9	497.3	497.1	0.9	0.0	-30.00	-52.6	-34.9	56.3	55.4	1.02	55.660		
600.0	599.7	596.4	596.0	1.1	0.0	-30.87	-56.3	-39.6	56.6	55.6	1.20	47.428		
700.0	699.4	695.4	694.8	1.3	0.0	-31.97	-61.1	-45.6	57.1	55.9	1.40	41.275		
800.0	798.9	794.5	793.5	1.5	0.0	-33.29	-67.0	-53.0	57.7	56.3	1.60	36.475		
900.0	898.3	893.6	891.9	1.8	0.0	-34.81	-74.0	-61.6	58.5	56.9	1.82	32.601		
1,000.0	997.4	992.7	990.2	2.0	0.0	-36.51	-82.0	-71.6	59.4	57.6	2.06	29.388		
1,100.0	1,096.3	1,091.7	1,088.1	2.3	0.0	-38.38	-91.1	-82.9	60.5	58.5	2.32	26.666		
1,200.0	1,194.9	1,190.8	1,185.9	2.7	0.0	-40.37	-101.2	-95.6	61.9	59.6	2.61	24.327		
1,300.0	1,293.3	1,289.9	1,283.3	3.0	0.0	-42.48	-112.4	-109.5	63.4	60.8	2.93	22.296		
1,400.0	1,391.2	1,388.9	1,380.4	3.4	0.0	-44.66	-124.7	-124.8	65.2	62.3	3.28	20.524		
1,500.0	1,488.9	1,487.9	1,477.1	3.8	0.0	-46.89	-138.0	-141.3	67.3	64.0	3.67	18.976		
1,600.0	1,586.1	1,586.9	1,573.4	4.2	0.0	-49.15	-152.3	-159.2	69.6	65.9	4.10	17.625		
1,700.0	1,682.9	1,686.0	1,669.4	4.7	0.0	-51.40	-167.7	-178.3	72.2	68.1	4.57	16.447		
1,800.0	1,779.3	1,785.0	1,764.8	5.2	0.0	-53.62	-184.1	-198.8	75.1	70.5	5.07	15.424		
1,900.0	1,875.2	1,883.9	1,859.8	5.7	0.0	-55.81	-201.5	-220.5	78.3	73.2	5.63	14.536		
2,000.0	1,970.5	1,982.9	1,954.3	6.3	0.0	-57.92	-220.0	-243.5	81.8	76.1	6.22	13.768		
2,100.0	2,065.4	2,081.9	2,048.2	6.9	0.0	-59.97	-239.5	-267.8	85.6	79.4	6.84	13.102		
2,200.0	2,159.6	2,180.8	2,141.6	7.5	0.0	-61.92	-259.9	-293.3	89.7	82.8	7.51	12.527		
2,300.0	2,253.3	2,279.8	2,234.4	8.1	0.0	-63.79	-281.4	-320.1	94.1	86.6	8.22	12.027		
2,400.0	2,346.3	2,378.7	2,326.6	8.8	0.0	-65.56	-303.9	-348.1	98.8	90.6	8.91	11.687		
2,500.0	2,439.0	2,477.6	2,418.1	9.5	0.0	-66.85	-327.4	-377.3	104.2	95.3	9.57	11.536		
2,600.0	2,531.7	2,576.4	2,508.9	10.2	0.0	-67.26	-351.8	-407.8	110.4	100.9	10.19	11.536		
2,700.0	2,624.4	2,675.2	2,598.9	10.9	0.0	-66.90	-377.2	-439.4	117.6	107.4	10.77	11.666		
2,800.0	2,717.1	2,773.7	2,688.0	11.6	0.0	-65.93	-403.6	-472.2	125.7	114.9	11.31	11.897		
2,900.0	2,809.8	2,872.8	2,777.0	12.3	0.0	-64.55	-430.8	-506.1	134.6	123.2	11.84	12.129		
3,000.0	2,902.6	2,972.3	2,866.3	13.0	0.0	-63.29	-458.3	-540.4	143.6	131.8	12.37	12.556		
3,100.0	2,995.3	3,071.9	2,955.7	13.7	0.0	-62.17	-485.8	-574.6	152.7	140.4	13.42	12.752		
3,200.0	3,088.0	3,171.4	3,045.0	14.4	0.0	-61.19	-513.2	-608.8	161.9	149.0	13.94	12.937		
3,300.0	3,180.7	3,270.9	3,134.4	15.1	0.0	-60.30	-540.7	-643.0	171.1	157.7	14.46	13.111		
3,400.0	3,273.4	3,370.5	3,223.7	15.8	0.0	-59.51	-568.2	-677.3	180.4	166.4	14.98	13.276		
3,500.0	3,366.1	3,470.0	3,313.0	16.5	0.0	-58.80	-595.7	-711.5	189.6	175.2	15.51	13.432		
3,600.0	3,458.8	3,569.6	3,402.4	17.2	0.0	-58.15	-623.2	-745.7	198.9	183.9	16.03	13.579		
3,700.0	3,551.5	3,669.1	3,491.7	17.9	0.0	-57.56	-650.6	-780.0	208.3	192.8	16.55	13.718		
3,800.0	3,644.2	3,768.7	3,581.1	18.6	0.0	-57.02	-678.1	-814.2	217.6	201.6	17.07	13.850		
3,900.0	3,736.9	3,868.2	3,670.4	19.3	0.0	-56.52	-705.6	-848.4	227.0	210.4	17.58	13.975		
4,000.0	3,829.6	3,967.7	3,759.8	20.0	0.0	-56.07	-733.1	-882.7	236.4	219.3	18.10	14.093		
4,100.0	3,922.3	4,067.3	3,849.1	20.7	0.0	-55.65	-760.6	-916.9	245.7	228.2	18.62	14.206		
4,200.0	4,015.0	4,166.8	3,938.4	21.4	0.0	-55.26	-788.0	-951.1	255.1	237.0	19.14	14.314		
4,300.0	4,107.7	4,266.4	4,027.8	22.1	0.0	-54.90	-815.5	-985.4	264.6	245.9	19.66	14.416		
4,400.0	4,200.4	4,365.9	4,117.1	22.9	0.0	-54.56	-843.0	-1,019.6	274.0	254.8	20.18	14.513		
4,500.0	4,293.1	4,465.4	4,206.5	23.6	0.0	-54.24	-870.5	-1,053.8	283.4	263.8	20.70	14.606		
4,600.0	4,385.8	4,565.0	4,295.8	24.3	0.0	-53.95	-898.0	-1,088.1	292.9	272.7	21.22	14.695		
4,700.0	4,478.5	4,664.5	4,385.1	25.0	0.0	-53.67	-925.4	-1,122.3	302.3	281.6	21.74	14.779		
4,800.0	4,571.2	4,764.1	4,474.5	25.7	0.0	-53.41	-952.9	-1,156.5	311.8	290.6	22.25	14.860		
4,900.0	4,663.9	4,863.6	4,563.8	26.4	0.0	-53.17	-980.4	-1,190.7	321.2	299.5	22.77	14.938		
5,000.0	4,756.6	4,963.2	4,653.2	27.1	0.0	-52.94	-1,007.9	-1,225.0	330.7	308.5				
5,100.0	4,849.3	5,062.7	4,742.5	27.8	0.0	-52.72	-1,035.4	-1,259.2	340.2	317.4				

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



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 11 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor		
5,200.0	4,942.0	5,162.2	4,831.8	28.5	0.0	-52.52	-1,062.8	-1,293.4	349.7	326.4	23.29	15.012		
5,300.0	5,034.7	5,261.8	4,921.2	29.2	0.0	-52.32	-1,090.3	-1,327.7	359.1	335.3	23.81	15.084		
5,400.0	5,127.4	5,361.3	5,010.5	29.9	0.0	-52.14	-1,117.8	-1,361.9	368.6	344.3	24.33	15.152		
5,500.0	5,220.1	5,460.9	5,099.9	30.6	0.0	-51.96	-1,145.3	-1,396.1	378.1	353.3	24.85	15.218		
5,600.0	5,312.8	5,560.4	5,189.2	31.3	0.0	-51.79	-1,172.7	-1,430.4	387.6	362.2	25.36	15.281		
5,700.0	5,405.5	5,660.0	5,278.5	32.1	0.0	-51.64	-1,200.2	-1,464.6	397.1	371.2	25.88	15.342		
5,800.0	5,498.2	5,759.5	5,367.9	32.8	0.0	-51.48	-1,227.7	-1,498.8	406.6	380.2	26.40	15.401		
5,900.0	5,590.9	5,859.0	5,457.2	33.5	0.0	-51.34	-1,255.2	-1,533.1	416.1	389.2	26.92	15.457		
6,000.0	5,683.6	5,958.6	5,546.6	34.2	0.0	-51.20	-1,282.7	-1,567.3	425.6	398.2	27.44	15.511		
6,100.0	5,776.3	6,058.1	5,635.9	34.9	0.0	-51.07	-1,310.1	-1,601.5	435.1	407.2	27.96	15.564		
6,200.0	5,869.0	6,157.7	5,725.2	35.6	0.0	-50.94	-1,337.6	-1,635.8	444.6	416.1	28.48	15.614		
6,300.0	5,961.7	6,257.2	5,814.6	36.3	0.0	-50.82	-1,365.1	-1,670.0	454.1	425.1	28.99	15.663		
6,400.0	6,054.4	6,356.7	5,903.9	37.0	0.0	-50.71	-1,392.6	-1,704.2	463.6	434.1	29.51	15.710		
6,500.0	6,147.1	6,456.3	5,993.3	37.7	0.0	-50.59	-1,420.1	-1,738.4	473.2	443.1	30.03	15.756		
6,600.0	6,239.8	6,555.8	6,082.6	38.4	0.0	-50.49	-1,447.5	-1,772.7	482.7	452.1	30.55	15.800		
6,700.0	6,332.5	6,655.4	6,172.0	39.1	0.0	-50.38	-1,475.0	-1,806.9	492.2	461.1	31.07	15.843		
6,800.0	6,425.2	6,754.9	6,261.3	39.8	0.0	-50.28	-1,502.5	-1,841.1	501.7	470.1	31.59	15.884		
6,900.0	6,517.9	6,854.5	6,350.6	40.6	0.0	-50.19	-1,530.0	-1,875.4	511.2	479.1	32.10	15.924		
7,000.0	6,610.6	6,950.0	6,435.7	41.3	0.0	-49.88	-1,556.1	-1,910.1	521.0	488.5	32.53	16.015		
7,100.0	6,703.3	7,038.6	6,509.9	42.0	0.0	-49.46	-1,578.9	-1,952.7	532.4	499.9	32.41	16.427		
7,200.0	6,792.5	7,124.6	6,575.9	42.9	0.0	-54.63	-1,599.2	-2,003.9	544.5	512.6	31.95	17.044		
7,300.0	6,874.2	7,208.8	6,633.6	44.0	0.0	-56.63	-1,616.8	-2,062.6	556.1	524.2	31.94	17.409		
7,400.0	6,946.6	7,291.6	6,682.5	45.4	0.0	-57.27	-1,631.8	-2,127.5	566.7	534.2	32.46	17.459		
7,500.0	7,007.6	7,373.1	6,722.5	47.0	0.0	-57.31	-1,643.9	-2,197.4	575.8	542.3	33.52	17.180		
7,600.0	7,056.0	7,450.0	6,752.1	48.8	0.0	-57.15	-1,652.9	-2,267.8	583.2	548.0	35.14	16.598		
7,700.0	7,090.5	7,533.9	6,774.9	50.7	0.0	-56.91	-1,659.7	-2,348.1	588.4	551.2	37.25	15.797		
7,800.0	7,110.2	7,613.5	6,787.1	52.7	0.0	-56.76	-1,663.3	-2,426.7	591.5	551.6	39.84	14.848		
7,900.0	7,115.0	7,697.4	6,790.0	54.8	0.0	-56.72	-1,664.0	-2,510.5	592.2	549.7	42.55	13.920		
8,000.0	7,115.0	7,797.4	6,790.0	56.8	0.0	-56.72	-1,663.7	-2,610.5	592.2	547.8	44.44	13.327		
8,100.0	7,115.0	7,897.4	6,790.0	58.9	0.0	-56.72	-1,663.5	-2,710.5	592.2	545.9	46.35	12.778		
8,200.0	7,115.0	7,997.4	6,790.0	61.1	0.0	-56.72	-1,663.2	-2,810.5	592.2	544.0	48.27	12.269		
8,300.0	7,115.0	8,097.4	6,790.0	63.2	0.0	-56.72	-1,663.0	-2,910.5	592.2	542.0	50.21	11.796		
8,400.0	7,115.0	8,197.4	6,790.0	65.4	0.0	-56.72	-1,662.7	-3,010.5	592.2	540.1	52.15	11.356		
8,500.0	7,115.0	8,297.4	6,790.0	67.6	0.0	-56.72	-1,662.5	-3,110.5	592.2	538.1	54.11	10.946		
8,600.0	7,115.0	8,397.4	6,790.0	69.8	0.0	-56.72	-1,662.2	-3,210.5	592.2	536.2	56.07	10.563		
8,700.0	7,115.0	8,497.4	6,790.0	72.1	0.0	-56.72	-1,662.0	-3,310.5	592.2	534.2	58.04	10.204		
8,800.0	7,115.0	8,597.4	6,790.0	74.3	0.0	-56.72	-1,661.7	-3,410.5	592.2	532.2	60.02	9.868		
8,900.0	7,115.0	8,697.4	6,790.0	76.6	0.0	-56.72	-1,661.5	-3,510.5	592.2	530.2	62.00	9.552		
9,000.0	7,115.0	8,797.4	6,790.0	78.9	0.0	-56.72	-1,661.2	-3,610.5	592.2	528.2	63.99	9.255		
9,100.0	7,115.0	8,897.4	6,790.0	81.2	0.0	-56.72	-1,661.0	-3,710.5	592.2	526.2	65.98	8.976		
9,200.0	7,115.0	8,997.4	6,790.0	83.5	0.0	-56.72	-1,660.7	-3,810.5	592.2	524.3	67.98	8.712		
9,300.0	7,115.0	9,097.4	6,790.0	85.8	0.0	-56.72	-1,660.5	-3,910.5	592.2	522.2	69.98	8.462		
9,400.0	7,115.0	9,197.4	6,790.0	88.1	0.0	-56.72	-1,660.2	-4,010.5	592.2	520.2	71.99	8.227		
9,500.0	7,115.0	9,297.4	6,790.0	90.4	0.0	-56.72	-1,660.0	-4,110.5	592.2	518.2	74.00	8.003		
9,600.0	7,115.0	9,397.4	6,790.0	92.8	0.0	-56.72	-1,659.7	-4,210.5	592.2	516.2	76.01	7.791		
9,700.0	7,115.0	9,497.4	6,790.0	95.1	0.0	-56.72	-1,659.5	-4,310.5	592.2	514.2	78.03	7.590		
9,800.0	7,115.0	9,597.4	6,790.0	97.5	0.0	-56.72	-1,659.2	-4,410.5	592.2	512.2	80.05	7.398		
9,900.0	7,115.0	9,697.4	6,790.0	99.8	0.0	-56.72	-1,659.0	-4,510.5	592.2	510.2	82.07	7.216		
10,000.0	7,115.0	9,797.4	6,790.0	102.2	0.0	-56.72	-1,658.7	-4,610.5	592.2	508.1	84.10	7.042		
10,100.0	7,115.0	9,897.4	6,790.0	104.5	0.0	-56.72	-1,658.5	-4,710.5	592.2	506.1	86.12	6.877		
10,200.0	7,115.0	9,997.4	6,790.0	106.9	0.0	-56.72	-1,658.2	-4,810.5	592.2	504.1	88.15	6.718		
10,300.0	7,115.0	10,097.4	6,790.0	109.3	0.0	-56.72	-1,658.0	-4,910.5	592.2	502.0	90.18	6.567		

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



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 11 - Hz - Plan #1													Offset Site Error: 0.0 usft		
Survey Program: 0-														Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor			
10,400.0	7,115.0	10,197.4	6,790.0	111.7	0.0	-56.72	-1,657.7	-5,010.5	592.2	500.0	92.21	6.422			
10,500.0	7,115.0	10,297.4	6,790.0	114.1	0.0	-56.72	-1,657.5	-5,110.5	592.2	498.0	94.25	6.284			
10,600.0	7,115.0	10,397.4	6,790.0	116.5	0.0	-56.72	-1,657.2	-5,210.5	592.2	495.9	96.28	6.151			
10,700.0	7,115.0	10,497.4	6,790.0	118.8	0.0	-56.72	-1,657.0	-5,310.5	592.2	493.9	98.32	6.023			
10,800.0	7,115.0	10,597.4	6,790.0	121.2	0.0	-56.72	-1,656.7	-5,410.5	592.2	491.9	100.36	5.901			
10,900.0	7,115.0	10,697.4	6,790.0	123.6	0.0	-56.72	-1,656.5	-5,510.5	592.2	489.8	102.40	5.783			
11,000.0	7,115.0	10,797.4	6,790.0	126.0	0.0	-56.72	-1,656.2	-5,610.5	592.2	487.8	104.44	5.670			
11,100.0	7,115.0	10,897.4	6,790.0	128.5	0.0	-56.72	-1,656.0	-5,710.5	592.2	485.7	106.48	5.562			
11,200.0	7,115.0	10,997.4	6,790.0	130.9	0.0	-56.72	-1,655.7	-5,810.5	592.2	483.7	108.53	5.457			
11,300.0	7,115.0	11,097.4	6,790.0	133.3	0.0	-56.72	-1,655.5	-5,910.5	592.2	481.7	110.57	5.356			
11,400.0	7,115.0	11,197.4	6,790.0	135.7	0.0	-56.72	-1,655.2	-6,010.5	592.2	479.6	112.62	5.259			
11,500.0	7,115.0	11,297.4	6,790.0	138.1	0.0	-56.72	-1,655.0	-6,110.5	592.2	477.6	114.66	5.165			
11,600.0	7,115.0	11,397.4	6,790.0	140.5	0.0	-56.72	-1,654.7	-6,210.5	592.2	475.5	116.71	5.074			
11,700.0	7,115.0	11,497.4	6,790.0	142.9	0.0	-56.72	-1,654.5	-6,310.5	592.2	473.5	118.76	4.987			
11,800.0	7,115.0	11,597.4	6,790.0	145.4	0.0	-56.72	-1,654.2	-6,410.5	592.2	471.4	120.81	4.902			
11,900.0	7,115.0	11,697.4	6,790.0	147.8	0.0	-56.72	-1,654.0	-6,510.5	592.2	469.4	122.86	4.820			
12,000.0	7,115.0	11,797.4	6,790.0	150.2	0.0	-56.72	-1,653.7	-6,610.5	592.2	467.3	124.91	4.741			
12,100.0	7,115.0	11,897.4	6,790.0	152.6	0.0	-56.72	-1,653.5	-6,710.5	592.2	465.3	126.96	4.665			
12,200.0	7,115.0	11,997.4	6,790.0	155.1	0.0	-56.72	-1,653.2	-6,810.5	592.2	463.2	129.01	4.591			
12,300.0	7,115.0	12,097.4	6,790.0	157.5	0.0	-56.72	-1,653.0	-6,910.5	592.2	461.2	131.06	4.519			
12,400.0	7,115.0	12,197.4	6,790.0	159.9	0.0	-56.72	-1,652.7	-7,010.5	592.2	459.1	133.12	4.449			
12,500.0	7,115.0	12,297.4	6,790.0	162.4	0.0	-56.72	-1,652.5	-7,110.5	592.2	457.1	135.17	4.381			
12,600.0	7,115.0	12,397.4	6,790.0	164.8	0.0	-56.72	-1,652.2	-7,210.5	592.2	455.0	137.22	4.316			
12,700.0	7,115.0	12,497.4	6,790.0	167.2	0.0	-56.72	-1,652.0	-7,310.5	592.2	453.0	139.28	4.252			
12,800.0	7,115.0	12,597.4	6,790.0	169.7	0.0	-56.72	-1,651.7	-7,410.5	592.2	450.9	141.33	4.190			
12,900.0	7,115.0	12,697.4	6,790.0	172.1	0.0	-56.72	-1,651.5	-7,510.5	592.2	448.8	143.39	4.130			
13,000.0	7,115.0	12,797.4	6,790.0	174.5	0.0	-56.72	-1,651.2	-7,610.5	592.2	446.8	145.44	4.072			
13,100.0	7,115.0	12,897.4	6,790.0	177.0	0.0	-56.72	-1,651.0	-7,710.5	592.2	444.7	147.50	4.015			
13,200.0	7,115.0	12,997.4	6,790.0	179.4	0.0	-56.72	-1,650.7	-7,810.5	592.2	442.7	149.56	3.960			
13,300.0	7,115.0	13,097.4	6,790.0	181.9	0.0	-56.72	-1,650.5	-7,910.5	592.2	440.6	151.61	3.906			
13,400.0	7,115.0	13,197.4	6,790.0	184.3	0.0	-56.72	-1,650.2	-8,010.5	592.2	438.6	153.67	3.854			
13,500.0	7,115.0	13,297.4	6,790.0	186.7	0.0	-56.72	-1,650.0	-8,110.5	592.2	436.5	155.73	3.803			
13,600.0	7,115.0	13,397.4	6,790.0	189.2	0.0	-56.72	-1,649.7	-8,210.5	592.2	434.4	157.79	3.753			
13,700.0	7,115.0	13,497.4	6,790.0	191.6	0.0	-56.72	-1,649.5	-8,310.5	592.2	432.4	159.85	3.705			
13,800.0	7,115.0	13,597.4	6,790.0	194.1	0.0	-56.72	-1,649.2	-8,410.5	592.2	430.3	161.90	3.658			
13,900.0	7,115.0	13,697.4	6,790.0	196.5	0.0	-56.72	-1,649.0	-8,510.5	592.2	428.3	163.96	3.612			
14,000.0	7,115.0	13,797.4	6,790.0	199.0	0.0	-56.72	-1,648.7	-8,610.5	592.2	426.2	166.02	3.567			
14,100.0	7,115.0	13,897.4	6,790.0	201.4	0.0	-56.72	-1,648.5	-8,710.5	592.2	424.1	168.08	3.523			
14,200.0	7,115.0	13,997.4	6,790.0	203.9	0.0	-56.72	-1,648.2	-8,810.5	592.2	422.1	170.14	3.481			
14,300.0	7,115.0	14,097.4	6,790.0	206.3	0.0	-56.72	-1,648.0	-8,910.5	592.2	420.0	172.20	3.439			
14,400.0	7,115.0	14,197.4	6,790.0	208.8	0.0	-56.72	-1,647.7	-9,010.5	592.2	418.0	174.26	3.398			
14,500.0	7,115.0	14,297.4	6,790.0	211.2	0.0	-56.72	-1,647.5	-9,110.5	592.2	415.9	176.33	3.359			
14,600.0	7,115.0	14,397.4	6,790.0	213.7	0.0	-56.72	-1,647.2	-9,210.5	592.2	413.8	178.39	3.320			
14,700.0	7,115.0	14,497.4	6,790.0	216.1	0.0	-56.72	-1,647.0	-9,310.5	592.2	411.8	180.45	3.282			
14,800.0	7,115.0	14,597.4	6,790.0	218.6	0.0	-56.72	-1,646.7	-9,410.5	592.2	409.7	182.51	3.245			
14,900.0	7,115.0	14,697.4	6,790.0	221.0	0.0	-56.72	-1,646.5	-9,510.5	592.2	407.7	184.57	3.209			
15,000.0	7,115.0	14,797.4	6,790.0	223.5	0.0	-56.72	-1,646.2	-9,610.5	592.2	405.6	186.63	3.173			
15,100.0	7,115.0	14,897.4	6,790.0	225.9	0.0	-56.72	-1,646.0	-9,710.5	592.2	403.5	188.70	3.139			
15,200.0	7,115.0	14,997.4	6,790.0	228.4	0.0	-56.72	-1,645.7	-9,810.5	592.2	401.5	190.76	3.105			
15,300.0	7,115.0	15,097.4	6,790.0	230.8	0.0	-56.72	-1,645.5	-9,910.5	592.2	399.4	192.82	3.071			
15,400.0	7,115.0	15,197.4	6,790.0	233.3	0.0	-56.72	-1,645.2	-10,010.5	592.2	397.3	194.88	3.039			
15,500.0	7,115.0	15,297.4	6,790.0	235.8	0.0	-56.72	-1,645.0	-10,110.5	592.2	395.3	196.95	3.007			

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 11 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
15,600.0	7,115.0	15,397.4	6,790.0	238.2	0.0	-56.72	-1,644.7	-10,210.5	592.2	393.2	199.01	2.976		
15,700.0	7,115.0	15,497.4	6,790.0	240.7	0.0	-56.72	-1,644.5	-10,310.5	592.2	391.2	201.07	2.945		
15,800.0	7,115.0	15,597.4	6,790.0	243.1	0.0	-56.72	-1,644.2	-10,410.5	592.2	389.1	203.14	2.915		
15,900.0	7,115.0	15,697.4	6,790.0	245.6	0.0	-56.72	-1,644.0	-10,510.5	592.2	387.0	205.20	2.886		
16,000.0	7,115.0	15,797.4	6,790.0	248.0	0.0	-56.72	-1,643.7	-10,610.5	592.2	385.0	207.26	2.857		
16,100.0	7,115.0	15,897.4	6,790.0	250.5	0.0	-56.72	-1,643.5	-10,710.5	592.2	382.9	209.33	2.829		
16,200.0	7,115.0	15,997.4	6,790.0	252.9	0.0	-56.72	-1,643.2	-10,810.5	592.2	380.8	211.39	2.802		
16,300.0	7,115.0	16,097.4	6,790.0	255.4	0.0	-56.72	-1,643.0	-10,910.5	592.2	378.8	213.46	2.774		
16,400.0	7,115.0	16,197.4	6,790.0	257.9	0.0	-56.72	-1,642.7	-11,010.5	592.2	376.7	215.52	2.748		
16,500.0	7,115.0	16,297.4	6,790.0	260.3	0.0	-56.72	-1,642.5	-11,110.5	592.2	374.6	217.58	2.722		
16,600.0	7,115.0	16,397.4	6,790.0	262.8	0.0	-56.72	-1,642.2	-11,210.5	592.2	372.6	219.65	2.696		
16,700.0	7,115.0	16,497.4	6,790.0	265.2	0.0	-56.72	-1,642.0	-11,310.5	592.2	370.5	221.71	2.671		
16,800.0	7,115.0	16,597.4	6,790.0	267.7	0.0	-56.72	-1,641.7	-11,410.5	592.2	368.5	223.78	2.647		
16,900.0	7,115.0	16,697.4	6,790.0	270.2	0.0	-56.72	-1,641.5	-11,510.5	592.2	366.4	225.84	2.622		
17,000.0	7,115.0	16,797.4	6,790.0	272.6	0.0	-56.72	-1,641.2	-11,610.5	592.2	364.3	227.91	2.599		
17,100.0	7,115.0	16,897.4	6,790.0	275.1	0.0	-56.72	-1,641.0	-11,710.4	592.2	362.3	229.97	2.575		
17,103.1	7,115.0	16,900.5	6,790.0	275.2	0.0	-56.72	-1,641.0	-11,713.6	592.2	362.2	230.04	2.575		
17,104.5	7,115.0	16,900.9	6,790.0	275.2	0.0	-56.72	-1,641.0	-11,714.0	592.2	362.2	230.07	2.574 SF		

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 2 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	30.89	168.3	100.7	196.1					
100.0	100.0	100.0	100.0	0.1	0.1	30.89	168.3	100.7	196.1	195.9	0.27	739.283		
200.0	200.0	200.0	200.0	0.3	0.3	30.89	168.3	100.7	196.1	195.5	0.61	319.236 CC, ES		
300.0	300.0	301.4	301.4	0.5	0.5	150.69	168.4	99.8	196.5	195.6	0.97	203.262		
400.0	400.0	402.8	402.7	0.7	0.7	150.34	168.8	97.1	197.8	196.4	1.32	149.335		
500.0	499.9	504.1	504.0	0.9	0.9	149.78	169.3	92.7	199.8	198.1	1.69	118.170		
600.0	599.7	605.4	605.0	1.1	1.1	149.01	170.1	86.5	202.7	200.6	2.07	97.857		
700.0	699.4	706.6	705.9	1.3	1.3	148.05	171.1	78.5	206.5	204.0	2.47	83.557		
800.0	798.9	807.7	806.5	1.5	1.5	146.93	172.3	68.7	211.2	208.3	2.90	72.936		
900.0	898.3	908.6	906.8	1.8	1.8	145.66	173.8	57.3	216.9	213.5	3.35	64.731		
1,000.0	997.4	1,009.5	1,006.8	2.0	2.1	144.28	175.5	44.0	223.5	219.6	3.84	58.201		
1,100.0	1,096.3	1,110.2	1,106.4	2.3	2.4	142.82	177.4	29.1	231.1	226.8	4.37	52.886		
1,200.0	1,194.9	1,210.7	1,205.5	2.7	2.7	141.29	179.5	12.5	239.8	234.9	4.95	48.490		
1,300.0	1,293.3	1,310.7	1,303.8	3.0	3.0	139.76	181.8	-5.7	249.6	244.1	5.56	44.875		
1,400.0	1,391.2	1,409.9	1,401.3	3.4	3.4	138.51	184.1	-24.0	260.8	254.6	6.20	42.053		
1,500.0	1,488.9	1,509.1	1,498.7	3.8	3.7	137.60	186.4	-42.4	273.3	266.5	6.86	39.842		
1,600.0	1,586.1	1,608.1	1,595.9	4.2	4.1	136.99	188.7	-60.7	287.2	279.7	7.54	38.108		
1,700.0	1,682.9	1,706.9	1,693.0	4.7	4.5	136.65	191.0	-79.0	302.4	294.1	8.23	36.751		
1,800.0	1,779.3	1,805.6	1,790.0	5.2	4.8	136.54	193.3	-97.2	318.8	309.8	8.93	35.699		
1,900.0	1,875.2	1,904.0	1,886.7	5.7	5.2	136.63	195.6	-115.4	336.4	326.8	9.64	34.898		
2,000.0	1,970.5	2,002.2	1,983.1	6.3	5.5	136.88	197.9	-133.6	355.3	345.0	10.36	34.307		
2,100.0	2,065.4	2,100.0	2,079.3	6.9	5.9	137.27	200.2	-151.7	375.5	364.4	11.08	33.896		
2,200.0	2,159.6	2,197.6	2,175.1	7.5	6.3	137.78	202.5	-169.7	397.0	385.2	11.80	33.640		
2,300.0	2,253.3	2,294.8	2,270.7	8.1	6.6	138.36	204.8	-187.7	419.8	407.2	12.52	33.519		
2,400.0	2,346.3	2,391.7	2,365.8	8.8	7.0	139.02	207.1	-205.6	443.9	430.6	13.24	33.517 SF		
2,500.0	2,439.0	2,488.3	2,460.8	9.5	7.3	139.83	209.3	-223.5	468.8	454.8	13.96	33.585		
2,600.0	2,531.7	2,585.0	2,555.7	10.2	7.7	140.55	211.6	-241.3	493.7	479.1	14.67	33.660		
2,700.0	2,624.4	2,681.6	2,650.7	10.9	8.1	141.21	213.8	-259.2	518.8	503.4	15.38	33.741		
2,800.0	2,717.1	2,778.3	2,745.7	11.6	8.4	141.81	216.1	-277.1	543.9	527.8	16.08	33.825		
2,900.0	2,809.8	2,875.0	2,840.6	12.3	8.8	142.35	218.4	-295.0	569.0	552.2	16.78	33.910		
3,000.0	2,902.6	2,971.6	2,935.6	13.0	9.1	142.85	220.6	-312.8	594.2	576.7	17.48	33.996		
3,100.0	2,995.3	3,068.3	3,030.5	13.7	9.5	143.31	222.9	-330.7	619.4	601.3	18.18	34.081		
3,200.0	3,088.0	3,164.9	3,125.5	14.4	9.8	143.73	225.1	-348.6	644.7	625.8	18.87	34.166		
3,300.0	3,180.7	3,261.6	3,220.4	15.1	10.2	144.12	227.4	-366.5	670.0	650.4	19.56	34.250		
3,400.0	3,273.4	3,358.2	3,315.4	15.8	10.6	144.49	229.7	-384.3	695.3	675.1	20.25	34.331		
3,500.0	3,366.1	3,454.9	3,410.4	16.5	10.9	144.82	231.9	-402.2	720.7	699.7	20.94	34.411		
3,600.0	3,458.8	3,551.5	3,505.3	17.2	11.3	145.14	234.2	-420.1	746.0	724.4	21.63	34.490		
3,700.0	3,551.5	3,648.2	3,600.3	17.9	11.6	145.43	236.4	-438.0	771.4	749.1	22.32	34.566		
3,800.0	3,644.2	3,744.8	3,695.2	18.6	12.0	145.70	238.7	-455.8	796.8	773.8	23.00	34.640		
3,900.0	3,736.9	3,841.5	3,790.2	19.3	12.4	145.96	241.0	-473.7	822.2	798.5	23.69	34.711		
4,000.0	3,829.6	3,938.1	3,885.1	20.0	12.7	146.20	243.2	-491.6	847.7	823.3	24.37	34.781		
4,100.0	3,922.3	4,034.8	3,980.1	20.7	13.1	146.43	245.5	-509.5	873.1	848.1	25.05	34.849		
4,200.0	4,015.0	4,131.4	4,075.1	21.4	13.4	146.65	247.8	-527.3	898.6	872.8	25.74	34.914		
4,300.0	4,107.7	4,228.1	4,170.0	22.1	13.8	146.85	250.0	-545.2	924.0	897.6	26.42	34.978		
4,400.0	4,200.4	4,324.7	4,265.0	22.9	14.2	147.04	252.3	-563.1	949.5	922.4	27.10	35.040		
4,500.0	4,293.1	4,421.4	4,359.9	23.6	14.5	147.23	254.5	-581.0	975.0	947.2	27.78	35.100		
4,600.0	4,385.8	4,518.0	4,454.9	24.3	14.9	147.40	256.8	-598.8	1,000.5	972.1	28.46	35.157		
4,700.0	4,478.5	4,614.7	4,549.8	25.0	15.3	147.56	259.1	-616.7	1,026.0	996.9	29.14	35.214		
4,800.0	4,571.2	4,711.3	4,644.8	25.7	15.6	147.72	261.3	-634.6	1,051.5	1,021.7	29.82	35.268		
4,900.0	4,663.9	4,808.0	4,739.8	26.4	16.0	147.87	263.6	-652.5	1,077.1	1,046.6	30.49	35.321		
5,000.0	4,756.6	4,904.6	4,834.7	27.1	16.3	148.01	265.8	-670.3	1,102.6	1,071.4	31.17	35.372		
5,100.0	4,849.3	5,001.3	4,929.7	27.8	16.7	148.15	268.1	-688.2	1,128.1	1,096.3	31.85	35.422		

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

## Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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> S16-T6N-R67W - Breniman 2 - Hz - Plan #1													<b>Offset Site Error:</b> 0.0 usft
Survey Program: 0-Geolink MWD													<b>Offset Well Error:</b> 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
5,200.0	4,942.0	5,097.9	5,024.6	28.5	17.1	148.28	270.4	-706.1	1,153.7	1,121.1	32.52	35.470	
5,300.0	5,034.7	5,194.6	5,119.6	29.2	17.4	148.40	272.6	-724.0	1,179.2	1,146.0	33.20	35.517	
5,400.0	5,127.4	5,291.2	5,214.5	29.9	17.8	148.52	274.9	-741.8	1,204.8	1,170.9	33.88	35.562	

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 3 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	30.86	144.3	86.2	168.1					
100.0	100.0	100.0	100.0	0.1	0.1	30.86	144.3	86.2	168.1	167.8	0.27	633.518		
200.0	200.0	200.0	200.0	0.3	0.3	30.86	144.3	86.2	168.1	167.5	0.61	273.565 CC		
300.0	300.0	301.5	301.5	0.5	0.5	150.66	144.3	85.3	168.4	167.4	0.97	174.119 ES		
400.0	400.0	403.0	403.0	0.7	0.7	150.31	144.3	82.6	169.3	168.0	1.32	127.867		
500.0	499.9	504.5	504.4	0.9	0.9	149.74	144.3	78.1	170.9	169.2	1.69	101.125		
600.0	599.7	605.9	605.6	1.1	1.1	148.95	144.3	71.8	173.1	171.0	2.07	83.680		
700.0	699.4	707.3	706.7	1.3	1.3	147.97	144.3	63.8	176.0	173.5	2.47	71.382		
800.0	798.9	808.7	807.5	1.5	1.5	146.81	144.4	53.9	179.6	176.7	2.89	62.229		
900.0	898.3	909.9	908.1	1.8	1.8	145.51	144.4	42.3	184.0	180.6	3.34	55.137		
1,000.0	997.4	1,011.0	1,008.3	2.0	2.1	144.08	144.4	28.9	189.1	185.3	3.82	49.471		
1,100.0	1,096.3	1,112.1	1,108.3	2.3	2.4	142.55	144.5	13.8	195.0	190.7	4.35	44.843		
1,200.0	1,194.9	1,212.7	1,207.5	2.7	2.7	140.96	144.5	-3.0	201.8	196.9	4.92	41.044		
1,300.0	1,293.3	1,312.3	1,305.5	3.0	3.0	139.67	144.6	-20.1	209.9	204.4	5.51	38.116		
1,400.0	1,391.2	1,411.8	1,403.6	3.4	3.4	138.76	144.6	-37.1	219.4	213.2	6.12	35.872		
1,500.0	1,488.9	1,511.2	1,501.5	3.8	3.7	138.21	144.7	-54.2	230.2	223.4	6.74	34.154		
1,600.0	1,586.1	1,610.4	1,599.3	4.2	4.0	137.96	144.7	-71.2	242.3	234.9	7.38	32.852		
1,700.0	1,682.9	1,709.5	1,696.9	4.7	4.4	137.99	144.7	-88.2	255.7	247.7	8.02	31.885		
1,800.0	1,779.3	1,808.4	1,794.3	5.2	4.7	138.25	144.8	-105.1	270.4	261.7	8.67	31.192		
1,900.0	1,875.2	1,907.1	1,891.6	5.7	5.0	138.69	144.8	-122.0	286.4	277.1	9.32	30.729		
2,000.0	1,970.5	2,005.5	1,988.5	6.3	5.4	139.29	144.9	-138.9	303.7	293.7	9.97	30.462		
2,100.0	2,065.4	2,103.7	2,085.2	6.9	5.7	140.00	144.9	-155.7	322.4	311.8	10.62	30.365 SF		
2,200.0	2,159.6	2,201.5	2,181.6	7.5	6.1	140.81	145.0	-172.5	342.5	331.2	11.26	30.417		
2,300.0	2,253.3	2,298.9	2,277.6	8.1	6.4	141.67	145.0	-189.2	364.0	352.1	11.89	30.600		
2,400.0	2,346.3	2,396.0	2,373.3	8.8	6.7	142.58	145.1	-205.9	386.9	374.4	12.52	30.900		
2,500.0	2,439.0	2,492.9	2,468.7	9.5	7.1	143.59	145.1	-222.5	410.7	397.5	13.14	31.259		
2,600.0	2,531.7	2,589.8	2,564.2	10.2	7.4	144.49	145.2	-239.1	434.5	420.8	13.75	31.606		
2,700.0	2,624.4	2,686.7	2,659.6	10.9	7.7	145.30	145.2	-255.7	458.5	444.1	14.36	31.938		
2,800.0	2,717.1	2,783.6	2,755.1	11.6	8.1	146.03	145.3	-272.3	482.5	467.6	14.96	32.257		
2,900.0	2,809.8	2,880.5	2,850.6	12.3	8.4	146.69	145.3	-288.9	506.6	491.1	15.56	32.561		
3,000.0	2,902.6	2,977.4	2,946.0	13.0	8.8	147.28	145.3	-305.5	530.8	514.6	16.16	32.852		
3,100.0	2,995.3	3,074.3	3,041.5	13.7	9.1	147.83	145.4	-322.2	555.0	538.3	16.75	33.130		
3,200.0	3,088.0	3,171.2	3,136.9	14.4	9.4	148.33	145.4	-338.8	579.3	561.9	17.35	33.396		
3,300.0	3,180.7	3,268.1	3,232.4	15.1	9.8	148.79	145.5	-355.4	603.6	585.6	17.94	33.650		
3,400.0	3,273.4	3,365.0	3,327.9	15.8	10.1	149.22	145.5	-372.0	627.9	609.4	18.53	33.892		
3,500.0	3,366.1	3,461.9	3,423.3	16.5	10.4	149.61	145.6	-388.6	652.2	633.1	19.11	34.124		
3,600.0	3,458.8	3,558.8	3,518.8	17.2	10.8	149.98	145.6	-405.2	676.6	656.9	19.70	34.345		
3,700.0	3,551.5	3,655.7	3,614.2	17.9	11.1	150.32	145.7	-421.8	701.0	680.8	20.29	34.557		
3,800.0	3,644.2	3,752.6	3,709.7	18.6	11.5	150.64	145.7	-438.4	725.5	704.6	20.87	34.760		
3,900.0	3,736.9	3,849.5	3,805.2	19.3	11.8	150.93	145.8	-455.1	749.9	728.5	21.45	34.954		
4,000.0	3,829.6	3,946.3	3,900.6	20.0	12.1	151.21	145.8	-471.7	774.4	752.4	22.04	35.140		
4,100.0	3,922.3	4,043.2	3,996.1	20.7	12.5	151.47	145.9	-488.3	798.9	776.3	22.62	35.318		
4,200.0	4,015.0	4,140.1	4,091.5	21.4	12.8	151.72	145.9	-504.9	823.4	800.2	23.20	35.489		
4,300.0	4,107.7	4,237.0	4,187.0	22.1	13.1	151.95	145.9	-521.5	847.9	824.1	23.78	35.653		
4,400.0	4,200.4	4,333.9	4,282.5	22.9	13.5	152.17	146.0	-538.1	872.4	848.1	24.36	35.811		
4,500.0	4,293.1	4,430.8	4,377.9	23.6	13.8	152.37	146.0	-554.7	897.0	872.0	24.94	35.963		
4,600.0	4,385.8	4,527.7	4,473.4	24.3	14.2	152.57	146.1	-571.3	921.5	896.0	25.52	36.109		
4,700.0	4,478.5	4,624.6	4,568.8	25.0	14.5	152.75	146.1	-587.9	946.1	920.0	26.10	36.249		
4,800.0	4,571.2	4,721.5	4,664.3	25.7	14.8	152.93	146.2	-604.6	970.6	944.0	26.68	36.385		
4,900.0	4,663.9	4,818.4	4,759.7	26.4	15.2	153.10	146.2	-621.2	995.2	968.0	27.25	36.515		
5,000.0	4,756.6	4,915.3	4,855.2	27.1	15.5	153.26	146.3	-637.8	1,019.8	992.0	27.83	36.641		
5,100.0	4,849.3	5,012.2	4,950.7	27.8	15.9	153.41	146.3	-654.4	1,044.4	1,016.0	28.41	36.762		

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

## Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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> S16-T6N-R67W - Breniman 3 - Hz - Plan #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-Geolink MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	4,942.0	5,109.1	5,046.1	28.5	16.2	153.55	146.4	-671.0	1,069.0	1,040.0	28.99	36.879	
5,300.0	5,034.7	5,206.0	5,141.6	29.2	16.5	153.69	146.4	-687.6	1,093.6	1,064.0	29.56	36.992	
5,400.0	5,127.4	5,302.9	5,237.0	29.9	16.9	153.82	146.5	-704.2	1,118.2	1,088.0	30.14	37.102	
5,500.0	5,220.1	5,399.8	5,332.5	30.6	17.2	153.95	146.5	-720.8	1,142.8	1,112.1	30.71	37.207	
5,600.0	5,312.8	5,496.6	5,428.0	31.3	17.5	154.07	146.5	-737.5	1,167.4	1,136.1	31.29	37.310	
5,700.0	5,405.5	5,593.5	5,523.4	32.1	17.9	154.18	146.6	-754.1	1,192.0	1,160.2	31.87	37.409	

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 4 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	30.85	120.6	72.0	140.5					
100.0	100.0	99.0	99.0	0.1	0.1	30.85	120.6	72.0	140.5	140.2	0.26	532.143		
200.0	200.0	199.0	199.0	0.3	0.3	30.85	120.6	72.0	140.5	139.9	0.61	229.292 CC		
300.0	300.0	300.5	300.5	0.5	0.5	150.66	120.5	71.2	140.7	139.7	0.97	145.780 ES		
400.0	400.0	402.0	402.0	0.7	0.7	150.33	120.1	68.5	141.4	140.0	1.32	106.966		
500.0	499.9	503.5	503.4	0.9	0.9	149.77	119.6	64.1	142.5	140.8	1.69	84.524		
600.0	599.7	605.0	604.7	1.1	1.1	149.01	118.8	57.8	144.0	142.0	2.06	69.875		
700.0	699.4	706.5	705.8	1.3	1.3	148.06	117.8	49.8	146.1	143.6	2.45	59.536		
800.0	798.9	807.9	806.8	1.5	1.5	146.93	116.6	40.1	148.6	145.8	2.87	51.825		
900.0	898.3	909.3	907.5	1.8	1.8	145.64	115.2	28.5	151.7	148.4	3.31	45.833		
1,000.0	997.4	1,010.6	1,007.9	2.0	2.1	144.22	113.5	15.2	155.4	151.6	3.79	41.028		
1,100.0	1,096.3	1,111.8	1,108.0	2.3	2.4	142.68	111.6	0.2	159.6	155.3	4.30	37.081		
1,200.0	1,194.9	1,213.0	1,207.7	2.7	2.7	141.06	109.5	-16.6	164.4	159.6	4.87	33.790		
1,300.0	1,293.3	1,313.2	1,306.3	3.0	3.0	139.53	107.3	-34.5	170.1	164.7	5.46	31.135		
1,400.0	1,391.2	1,412.9	1,404.3	3.4	3.4	138.45	105.1	-52.4	177.2	171.1	6.08	29.136		
1,500.0	1,488.9	1,512.5	1,502.3	3.8	3.7	137.80	102.8	-70.3	185.6	178.9	6.71	27.643		
1,600.0	1,586.1	1,612.0	1,600.2	4.2	4.1	137.54	100.6	-88.2	195.3	188.0	7.36	26.548		
1,700.0	1,682.9	1,711.4	1,697.9	4.7	4.4	137.62	98.4	-106.0	206.3	198.3	8.00	25.774		
1,800.0	1,779.3	1,810.6	1,795.5	5.2	4.8	137.98	96.1	-123.8	218.6	209.9	8.65	25.262		
1,900.0	1,875.2	1,909.7	1,892.9	5.7	5.1	138.58	93.9	-141.6	232.2	222.9	9.30	24.972		
2,000.0	1,970.5	2,008.5	1,990.1	6.3	5.5	139.36	91.7	-159.3	247.1	237.2	9.93	24.872		
2,100.0	2,065.4	2,107.0	2,087.0	6.9	5.9	140.28	89.5	-177.0	263.4	252.8	10.56	24.937		
2,200.0	2,159.6	2,205.3	2,183.7	7.5	6.2	141.30	87.3	-194.7	281.1	269.9	11.18	25.148		
2,300.0	2,253.3	2,303.3	2,280.0	8.1	6.6	142.38	85.1	-212.3	300.3	288.5	11.78	25.489		
2,400.0	2,346.3	2,400.9	2,376.0	8.8	6.9	143.50	82.9	-229.8	320.9	308.5	12.37	25.946		
2,500.0	2,439.0	2,498.3	2,471.9	9.5	7.3	144.68	80.7	-247.3	342.4	329.5	12.94	26.459		
2,600.0	2,531.7	2,595.7	2,567.7	10.2	7.6	145.73	78.5	-264.8	364.1	350.6	13.51	26.947		
2,700.0	2,624.4	2,693.2	2,663.5	10.9	8.0	146.66	76.4	-282.3	385.8	371.7	14.08	27.411		
2,800.0	2,717.1	2,790.6	2,759.3	11.6	8.3	147.49	74.2	-299.8	407.6	393.0	14.64	27.851		
2,900.0	2,809.8	2,888.0	2,855.1	12.3	8.7	148.24	72.0	-317.2	429.5	414.3	15.19	28.269		
3,000.0	2,902.6	2,985.5	2,951.0	13.0	9.0	148.91	69.8	-334.7	451.5	435.7	15.75	28.665		
3,100.0	2,995.3	3,082.9	3,046.8	13.7	9.4	149.52	67.6	-352.2	473.5	457.2	16.30	29.042		
3,200.0	3,088.0	3,180.3	3,142.6	14.4	9.7	150.08	65.4	-369.7	495.6	478.7	16.86	29.400		
3,300.0	3,180.7	3,277.7	3,238.4	15.1	10.1	150.59	63.3	-387.2	517.7	500.3	17.41	29.740		
3,400.0	3,273.4	3,375.2	3,334.2	15.8	10.4	151.05	61.1	-404.7	539.8	521.9	17.96	30.063		
3,500.0	3,366.1	3,472.6	3,430.0	16.5	10.8	151.49	58.9	-422.2	562.0	543.5	18.50	30.371		
3,600.0	3,458.8	3,570.0	3,525.9	17.2	11.2	151.88	56.7	-439.7	584.2	565.1	19.05	30.664		
3,700.0	3,551.5	3,667.4	3,621.7	17.9	11.5	152.25	54.5	-457.2	606.4	586.8	19.60	30.944		
3,800.0	3,644.2	3,764.9	3,717.5	18.6	11.9	152.60	52.3	-474.7	628.7	608.5	20.14	31.210		
3,900.0	3,736.9	3,862.3	3,813.3	19.3	12.2	152.92	50.2	-492.2	650.9	630.2	20.69	31.465		
4,000.0	3,829.6	3,959.7	3,909.1	20.0	12.6	153.21	48.0	-509.6	673.2	652.0	21.23	31.708		
4,100.0	3,922.3	4,057.2	4,005.0	20.7	12.9	153.49	45.8	-527.1	695.5	673.7	21.78	31.941		
4,200.0	4,015.0	4,154.6	4,100.8	21.4	13.3	153.76	43.6	-544.6	717.8	695.5	22.32	32.164		
4,300.0	4,107.7	4,252.0	4,196.6	22.1	13.6	154.00	41.4	-562.1	740.2	717.3	22.86	32.377		
4,400.0	4,200.4	4,349.4	4,292.4	22.9	14.0	154.23	39.2	-579.6	762.5	739.1	23.40	32.582		
4,500.0	4,293.1	4,446.9	4,388.2	23.6	14.4	154.45	37.1	-597.1	784.9	760.9	23.94	32.778		
4,600.0	4,385.8	4,544.3	4,484.1	24.3	14.7	154.66	34.9	-614.6	807.2	782.7	24.49	32.967		
4,700.0	4,478.5	4,641.7	4,579.9	25.0	15.1	154.86	32.7	-632.1	829.6	804.6	25.03	33.148		
4,800.0	4,571.2	4,739.1	4,675.7	25.7	15.4	155.04	30.5	-649.6	852.0	826.4	25.57	33.323		
4,900.0	4,663.9	4,836.6	4,771.5	26.4	15.8	155.22	28.3	-667.1	874.4	848.3	26.11	33.490		
5,000.0	4,756.6	4,934.0	4,867.3	27.1	16.1	155.38	26.1	-684.6	896.8	870.1	26.65	33.652		
5,100.0	4,849.3	5,031.4	4,963.2	27.8	16.5	155.54	24.0	-702.1	919.2	892.0	27.19	33.807		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 4 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,200.0	4,942.0	5,128.9	5,059.0	28.5	16.8	155.69	21.8	-719.5	941.6	913.8	27.73	33.957		
5,300.0	5,034.7	5,226.3	5,154.8	29.2	17.2	155.84	19.6	-737.0	964.0	935.7	28.27	34.102		
5,400.0	5,127.4	5,323.7	5,250.6	29.9	17.5	155.98	17.4	-754.5	986.4	957.6	28.81	34.242		
5,500.0	5,220.1	5,421.1	5,346.4	30.6	17.9	156.11	15.2	-772.0	1,008.8	979.5	29.35	34.377		
5,600.0	5,312.8	5,518.6	5,442.3	31.3	18.3	156.23	13.0	-789.5	1,031.3	1,001.4	29.89	34.507		
5,700.0	5,405.5	5,616.0	5,538.1	32.1	18.6	156.35	10.9	-807.0	1,053.7	1,023.3	30.42	34.633		
5,800.0	5,498.2	5,713.4	5,633.9	32.8	19.0	156.47	8.7	-824.5	1,076.2	1,045.2	30.96	34.755		
5,900.0	5,590.9	5,810.8	5,729.7	33.5	19.3	156.58	6.5	-842.0	1,098.6	1,067.1	31.50	34.873		
6,000.0	5,683.6	5,908.3	5,825.5	34.2	19.7	156.69	4.3	-859.5	1,121.0	1,089.0	32.04	34.988		
6,100.0	5,776.3	6,005.7	5,921.3	34.9	20.0	156.79	2.1	-877.0	1,143.5	1,110.9	32.58	35.099		
6,200.0	5,869.0	6,103.1	6,017.2	35.6	20.4	156.89	-0.1	-894.5	1,165.9	1,132.8	33.12	35.206		
6,300.0	5,961.7	6,200.6	6,113.0	36.3	20.7	156.98	-2.2	-912.0	1,188.4	1,154.8	33.66	35.310		
6,400.0	6,054.4	6,293.0	6,206.0	37.0	21.1	157.07	-4.4	-929.5	1,210.8	1,177.2	34.20	35.414		
6,500.0	6,147.1	6,385.5	6,299.0	37.7	21.5	157.16	-6.6	-947.0	1,233.2	1,199.6	34.74	35.518		
6,600.0	6,239.8	6,478.0	6,392.0	38.4	21.9	157.25	-8.8	-964.5	1,255.6	1,222.0	35.28	35.622		
6,700.0	6,332.5	6,570.5	6,485.0	39.1	22.3	157.34	-11.0	-982.0	1,278.0	1,244.4	35.82	35.726		
6,800.0	6,425.2	6,663.0	6,578.0	39.8	22.7	157.43	-13.2	-1,000.0	1,300.4	1,266.8	36.36	35.830		
6,900.0	6,517.9	6,755.5	6,670.0	40.6	23.1	157.52	-15.4	-1,017.5	1,322.8	1,289.2	36.90	35.934		
6,965.9	6,579.0	6,816.6	6,731.1	41.0	23.5	157.61	-15.6	-1,035.0	1,345.2	1,311.6	37.44	36.038		
7,000.0	6,610.6	6,848.2	6,762.8	41.3	23.9	157.70	-15.6	-1,052.5	1,367.6	1,334.0	37.98	36.142		
7,100.0	6,703.3	6,940.9	6,855.5	42.0	24.3	157.79	-15.5	-1,070.0	1,390.0	1,356.4	38.52	36.246		
7,200.0	6,796.0	7,033.6	6,948.0	42.9	24.7	157.88	-15.4	-1,087.5	1,412.4	1,378.8	39.06	36.350		
7,300.0	6,888.7	7,126.3	7,040.0	44.0	25.1	157.97	-15.3	-1,105.0	1,434.8	1,401.2	39.60	36.454		
7,400.0	6,981.4	7,219.0	7,132.0	45.4	25.5	158.06	-15.1	-1,122.5	1,457.2	1,423.6	40.14	36.558		
7,500.0	7,074.1	7,311.7	7,224.0	47.0	25.9	158.15	-14.9	-1,140.0	1,479.6	1,446.0	40.68	36.662		
7,600.0	7,166.8	7,404.4	7,316.0	48.8	26.3	158.24	-14.7	-1,157.5	1,502.0	1,468.4	41.22	36.766		
7,700.0	7,259.5	7,497.1	7,408.0	50.7	26.7	158.33	-14.5	-1,175.0	1,524.4	1,490.8	41.76	36.870		
7,800.0	7,352.2	7,589.8	7,500.0	52.7	27.1	158.42	-14.2	-1,192.5	1,546.8	1,513.2	42.30	36.974		
7,900.0	7,444.9	7,682.5	7,592.0	54.8	27.5	158.51	-14.0	-1,210.0	1,569.2	1,535.6	42.84	37.078		
8,000.0	7,537.6	7,775.2	7,684.0	56.8	27.9	158.60	-13.7	-1,227.5	1,591.6	1,558.0	43.38	37.182		
8,100.0	7,630.3	7,867.9	7,776.0	58.9	28.3	158.69	-13.5	-1,245.0	1,614.0	1,580.4	43.92	37.286		
8,200.0	7,723.0	7,960.6	7,868.0	61.1	28.7	158.78	-13.2	-1,262.5	1,636.4	1,602.8	44.46	37.390		
8,300.0	7,815.7	8,053.3	7,960.0	63.2	29.1	158.87	-13.0	-1,280.0	1,658.8	1,625.2	45.00	37.494		
8,400.0	7,908.4	8,146.0	8,052.0	65.4	29.5	158.96	-12.7	-1,297.5	1,681.2	1,647.6	45.54	37.598		
8,500.0	8,001.1	8,238.7	8,144.0	67.6	29.9	159.05	-12.5	-1,315.0	1,703.6	1,670.0	46.08	37.702		
8,600.0	8,093.8	8,331.4	8,236.0	69.8	30.3	159.14	-12.2	-1,332.5	1,726.0	1,692.4	46.62	37.806		
8,700.0	8,186.5	8,424.1	8,328.0	72.1	30.7	159.23	-12.0	-1,350.0	1,748.4	1,714.8	47.16	37.910		
8,800.0	8,279.2	8,516.8	8,420.0	74.3	31.1	159.32	-11.7	-1,367.5	1,770.8	1,737.2	47.70	38.014		
8,900.0	8,371.9	8,609.5	8,512.0	76.6	31.5	159.41	-11.5	-1,385.0	1,793.2	1,759.6	48.24	38.118		
9,000.0	8,464.6	8,702.2	8,604.0	78.9	31.9	159.50	-11.2	-1,402.5	1,815.6	1,782.0	48.78	38.222		
9,100.0	8,557.3	8,794.9	8,696.0	81.2	32.3	159.59	-11.0	-1,420.0	1,838.0	1,804.4	49.32	38.326		
9,200.0	8,650.0	8,887.6	8,788.0	83.5	32.7	159.68	-10.7	-1,437.5	1,860.4	1,826.8	49.86	38.430		
9,300.0	8,742.7	8,980.3	8,880.0	85.8	33.1	159.77	-10.5	-1,455.0	1,882.8	1,849.2	50.40	38.534		
9,400.0	8,835.4	9,073.0	8,972.0	88.1	33.5	159.86	-10.2	-1,472.5	1,905.2	1,871.6	50.94	38.638		
9,500.0	8,928.1	9,165.7	9,064.0	90.4	33.9	159.95	-10.0	-1,490.0	1,927.6	1,894.0	51.48	38.742		
9,600.0	9,020.8	9,258.4	9,156.0	92.8	34.3	160.04	-9.8	-1,507.5	1,950.0	1,916.4	52.02	38.846		
9,700.0	9,113.5	9,351.1	9,248.0	95.1	34.7	160.13	-9.5	-1,525.0	1,972.4	1,938.8	52.56	38.950		
9,800.0	9,206.2	9,443.8	9,340.0	97.5	35.1	160.22	-9.3	-1,542.5	1,994.8	1,961.2	53.10	39.054		
9,900.0	9,298.9	9,536.5	9,432.0	99.8	35.5	160.31	-9.0	-1,560.0	2,017.2	1,983.6	53.64	39.158		
10,000.0	9,391.6	9,629.2	9,524.0	102.2	35.9	160.40	-8.8	-1,577.5	2,039.6	2,006.0	54.18	39.262		
10,100.0	9,484.3	9,721.9	9,616.0	104.5	36.3	160.49	-8.5	-1,595.0	2,062.0	2,028.4	54.72	39.366		
10,200.0	9,577.0	9,814.6	9,708.0	106.9	36.7	160.58	-8.3	-1,612.5	2,084.4	2,050.8	55.26	39.470		

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



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 4 - Hz - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,115.0	10,582.9	6,790.0	109.3	113.8	74.33	-8.0	-4,906.4	1,199.5	986.5	212.98	5.632	
10,400.0	7,115.0	10,682.9	6,790.0	111.7	116.3	74.33	-7.8	-5,006.4	1,199.5	981.8	217.68	5.510	
10,500.0	7,115.0	10,782.9	6,790.0	114.1	118.7	74.33	-7.5	-5,106.4	1,199.5	977.1	222.38	5.394	
10,600.0	7,115.0	10,882.9	6,790.0	116.5	121.2	74.33	-7.3	-5,206.4	1,199.5	972.4	227.09	5.282	
10,700.0	7,115.0	10,982.9	6,790.0	118.8	123.6	74.33	-7.0	-5,306.4	1,199.5	967.7	231.80	5.175	
10,800.0	7,115.0	11,082.9	6,790.0	121.2	126.1	74.33	-6.8	-5,406.4	1,199.5	962.9	236.51	5.071	
10,900.0	7,115.0	11,182.9	6,790.0	123.6	128.5	74.33	-6.5	-5,506.4	1,199.5	958.2	241.22	4.972	
11,000.0	7,115.0	11,282.9	6,790.0	126.0	131.0	74.33	-6.3	-5,606.4	1,199.5	953.5	245.94	4.877	
11,100.0	7,115.0	11,382.9	6,790.0	128.5	133.4	74.33	-6.0	-5,706.4	1,199.5	948.8	250.66	4.785	
11,200.0	7,115.0	11,482.9	6,790.0	130.9	135.9	74.33	-5.8	-5,806.4	1,199.5	944.1	255.38	4.697	
11,300.0	7,115.0	11,582.9	6,790.0	133.3	138.4	74.33	-5.5	-5,906.4	1,199.5	939.4	260.10	4.612	
11,400.0	7,115.0	11,682.9	6,790.0	135.7	140.8	74.33	-5.3	-6,006.4	1,199.5	934.6	264.82	4.529	
11,500.0	7,115.0	11,782.9	6,790.0	138.1	143.3	74.33	-5.0	-6,106.4	1,199.5	929.9	269.55	4.450	
11,600.0	7,115.0	11,882.9	6,790.0	140.5	145.7	74.33	-4.8	-6,206.4	1,199.5	925.2	274.27	4.373	
11,700.0	7,115.0	11,982.9	6,790.0	142.9	148.2	74.33	-4.5	-6,306.4	1,199.5	920.5	279.00	4.299	
11,800.0	7,115.0	12,082.9	6,790.0	145.4	150.6	74.33	-4.3	-6,406.4	1,199.5	915.7	283.73	4.227	
11,900.0	7,115.0	12,182.9	6,790.0	147.8	153.1	74.33	-4.0	-6,506.4	1,199.5	911.0	288.46	4.158	
12,000.0	7,115.0	12,282.9	6,790.0	150.2	155.6	74.33	-3.8	-6,606.4	1,199.5	906.3	293.19	4.091	
12,100.0	7,115.0	12,382.9	6,790.0	152.6	158.0	74.33	-3.5	-6,706.4	1,199.5	901.5	297.92	4.026	
12,200.0	7,115.0	12,482.9	6,790.0	155.1	160.5	74.33	-3.3	-6,806.4	1,199.5	896.8	302.65	3.963	
12,300.0	7,115.0	12,582.9	6,790.0	157.5	163.0	74.33	-3.0	-6,906.4	1,199.5	892.1	307.39	3.902	
12,400.0	7,115.0	12,682.9	6,790.0	159.9	165.4	74.33	-2.8	-7,006.4	1,199.4	887.3	312.12	3.843	
12,500.0	7,115.0	12,782.9	6,790.0	162.4	167.9	74.33	-2.5	-7,106.4	1,199.4	882.6	316.86	3.785	
12,600.0	7,115.0	12,882.9	6,790.0	164.8	170.3	74.33	-2.3	-7,206.4	1,199.4	877.9	321.59	3.730	
12,700.0	7,115.0	12,982.9	6,790.0	167.2	172.8	74.33	-2.0	-7,306.4	1,199.4	873.1	326.33	3.676	
12,800.0	7,115.0	13,082.9	6,790.0	169.7	175.3	74.33	-1.8	-7,406.4	1,199.4	868.4	331.07	3.623	
12,900.0	7,115.0	13,182.9	6,790.0	172.1	177.7	74.33	-1.5	-7,506.4	1,199.4	863.6	335.81	3.572	
13,000.0	7,115.0	13,282.9	6,790.0	174.5	180.2	74.33	-1.3	-7,606.4	1,199.4	858.9	340.55	3.522	
13,100.0	7,115.0	13,382.9	6,790.0	177.0	182.7	74.33	-1.0	-7,706.4	1,199.4	854.2	345.29	3.474	
13,200.0	7,115.0	13,482.9	6,790.0	179.4	185.1	74.33	-0.8	-7,806.4	1,199.4	849.4	350.03	3.427	
13,300.0	7,115.0	13,582.9	6,790.0	181.9	187.6	74.33	-0.5	-7,906.4	1,199.4	844.7	354.78	3.381	
13,400.0	7,115.0	13,682.9	6,790.0	184.3	190.1	74.33	-0.3	-8,006.4	1,199.4	839.9	359.52	3.336	
13,500.0	7,115.0	13,782.9	6,790.0	186.7	192.5	74.33	0.0	-8,106.4	1,199.4	835.2	364.26	3.293	
13,600.0	7,115.0	13,882.9	6,790.0	189.2	195.0	74.33	0.2	-8,206.4	1,199.4	830.4	369.01	3.250	
13,700.0	7,115.0	13,982.9	6,790.0	191.6	197.5	74.33	0.5	-8,306.4	1,199.4	825.7	373.75	3.209	
13,800.0	7,115.0	14,082.9	6,790.0	194.1	199.9	74.33	0.7	-8,406.4	1,199.4	820.9	378.50	3.169	
13,900.0	7,115.0	14,182.9	6,790.0	196.5	202.4	74.33	1.0	-8,506.4	1,199.4	816.2	383.24	3.130	
14,000.0	7,115.0	14,282.9	6,790.0	199.0	204.9	74.33	1.2	-8,606.4	1,199.4	811.5	387.99	3.091	
14,100.0	7,115.0	14,382.9	6,790.0	201.4	207.3	74.33	1.5	-8,706.4	1,199.4	806.7	392.73	3.054	
14,200.0	7,115.0	14,482.9	6,790.0	203.9	209.8	74.33	1.7	-8,806.4	1,199.4	802.0	397.48	3.018	
14,300.0	7,115.0	14,582.9	6,790.0	206.3	212.3	74.33	2.0	-8,906.4	1,199.4	797.2	402.23	2.982	
14,400.0	7,115.0	14,682.9	6,790.0	208.8	214.7	74.33	2.2	-9,006.4	1,199.4	792.5	406.98	2.947	
14,500.0	7,115.0	14,782.9	6,790.0	211.2	217.2	74.33	2.5	-9,106.4	1,199.4	787.7	411.72	2.913	
14,600.0	7,115.0	14,882.9	6,790.0	213.7	219.7	74.33	2.7	-9,206.4	1,199.4	783.0	416.47	2.880	
14,700.0	7,115.0	14,982.9	6,790.0	216.1	222.1	74.33	3.0	-9,306.4	1,199.4	778.2	421.22	2.848	
14,800.0	7,115.0	15,082.9	6,790.0	218.6	224.6	74.33	3.2	-9,406.4	1,199.4	773.5	425.97	2.816	
14,900.0	7,115.0	15,182.9	6,790.0	221.0	227.1	74.33	3.5	-9,506.4	1,199.4	768.7	430.72	2.785	
15,000.0	7,115.0	15,282.9	6,790.0	223.5	229.5	74.33	3.7	-9,606.4	1,199.4	764.0	435.47	2.754	
15,100.0	7,115.0	15,382.9	6,790.0	225.9	232.0	74.33	4.0	-9,706.4	1,199.4	759.2	440.22	2.725	
15,200.0	7,115.0	15,482.9	6,790.0	228.4	234.5	74.33	4.2	-9,806.4	1,199.4	754.5	444.97	2.696	
15,300.0	7,115.0	15,582.9	6,790.0	230.8	236.9	74.33	4.5	-9,906.4	1,199.4	749.7	449.73	2.667	
15,400.0	7,115.0	15,682.9	6,790.0	233.3	239.4	74.33	4.7	-10,006.4	1,199.4	745.0	454.48	2.639	

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 4 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
15,500.0	7,115.0	15,782.9	6,790.0	235.8	241.9	74.33	5.0	-10,106.4	1,199.4	740.2	459.23	2.612		
15,600.0	7,115.0	15,882.9	6,790.0	238.2	244.3	74.33	5.2	-10,206.4	1,199.4	735.5	463.98	2.585		
15,700.0	7,115.0	15,982.9	6,790.0	240.7	246.8	74.33	5.5	-10,306.4	1,199.4	730.7	468.73	2.559		
15,800.0	7,115.0	16,082.9	6,790.0	243.1	249.3	74.33	5.7	-10,406.4	1,199.4	726.0	473.49	2.533		
15,900.0	7,115.0	16,182.9	6,790.0	245.6	251.8	74.33	6.0	-10,506.4	1,199.4	721.2	478.24	2.508		
16,000.0	7,115.0	16,282.9	6,790.0	248.0	254.2	74.33	6.2	-10,606.4	1,199.4	716.4	482.99	2.483		
16,100.0	7,115.0	16,382.9	6,790.0	250.5	256.7	74.33	6.5	-10,706.4	1,199.4	711.7	487.75	2.459		
16,200.0	7,115.0	16,482.9	6,790.0	252.9	259.2	74.33	6.7	-10,806.4	1,199.4	706.9	492.50	2.435		
16,300.0	7,115.0	16,582.9	6,790.0	255.4	261.6	74.33	7.0	-10,906.4	1,199.4	702.2	497.25	2.412		
16,400.0	7,115.0	16,682.9	6,790.0	257.9	264.1	74.33	7.2	-11,006.4	1,199.4	697.4	502.01	2.389		
16,500.0	7,115.0	16,782.9	6,790.0	260.3	266.6	74.33	7.5	-11,106.4	1,199.4	692.7	506.76	2.367		
16,600.0	7,115.0	16,882.9	6,790.0	262.8	269.0	74.33	7.7	-11,206.4	1,199.4	687.9	511.52	2.345		
16,700.0	7,115.0	16,982.9	6,790.0	265.2	271.5	74.33	8.0	-11,306.4	1,199.4	683.2	516.27	2.323		
16,800.0	7,115.0	17,082.9	6,790.0	267.7	274.0	74.33	8.2	-11,406.4	1,199.4	678.4	521.03	2.302		
16,900.0	7,115.0	17,182.9	6,790.0	270.2	276.5	74.33	8.5	-11,506.4	1,199.4	673.7	525.78	2.281		
17,000.0	7,115.0	17,282.9	6,790.0	272.6	278.9	74.33	8.7	-11,606.4	1,199.4	668.9	530.54	2.261		
17,100.0	7,115.0	17,382.9	6,790.0	275.1	281.4	74.33	9.0	-11,706.3	1,199.4	664.1	535.29	2.241		
17,104.5	7,115.0	17,387.5	6,790.0	275.2	281.5	74.33	9.0	-11,710.9	1,199.4	663.9	535.51	2.240 SF		

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 5 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	30.69	96.5	57.3	112.3					
100.0	100.0	100.0	100.0	0.1	0.1	30.69	96.5	57.3	112.3	112.0	0.27	423.168		
200.0	200.0	200.0	200.0	0.3	0.3	30.69	96.5	57.3	112.3	111.6	0.61	182.732 CC		
300.0	300.0	301.6	301.6	0.5	0.5	150.55	96.2	56.5	112.3	111.3	0.97	116.178		
400.0	400.0	403.2	403.1	0.7	0.7	150.38	95.2	54.0	112.5	111.2	1.32	85.091		
500.0	499.9	504.8	504.6	0.9	0.9	150.10	93.5	49.8	112.8	111.1	1.68	67.024 ES		
600.0	599.7	606.3	606.0	1.1	1.1	149.72	91.1	44.0	113.1	111.1	2.05	55.168		
700.0	699.4	707.9	707.2	1.3	1.3	149.22	88.1	36.5	113.6	111.2	2.43	46.754		
800.0	798.9	809.5	808.3	1.5	1.5	148.63	84.3	27.3	114.3	111.4	2.83	40.443		
900.0	898.3	911.0	909.2	1.8	1.8	147.93	79.9	16.5	115.0	111.8	3.24	35.510		
1,000.0	997.4	1,012.6	1,009.9	2.0	2.1	147.14	74.9	4.0	115.9	112.2	3.68	31.527		
1,100.0	1,096.3	1,114.1	1,110.2	2.3	2.4	146.26	69.1	-10.1	116.9	112.8	4.14	28.230		
1,200.0	1,194.9	1,215.6	1,210.3	2.7	2.7	145.30	62.7	-25.9	118.1	113.5	4.64	25.445		
1,300.0	1,293.3	1,317.0	1,309.9	3.0	3.1	144.26	55.6	-43.2	119.5	114.3	5.18	23.066		
1,400.0	1,391.2	1,416.9	1,408.0	3.4	3.4	143.52	48.4	-61.0	121.8	116.1	5.73	21.240		
1,500.0	1,488.9	1,516.9	1,506.1	3.8	3.8	143.28	41.2	-78.7	125.5	119.2	6.29	19.944		
1,600.0	1,586.1	1,616.7	1,604.1	4.2	4.2	143.51	34.0	-96.4	130.6	123.8	6.85	19.073		
1,700.0	1,682.9	1,716.5	1,702.0	4.7	4.5	144.13	26.8	-114.2	137.1	129.8	7.39	18.553		
1,800.0	1,779.3	1,816.1	1,799.8	5.2	4.9	145.09	19.6	-131.8	145.1	137.2	7.92	18.329		
1,900.0	1,875.2	1,915.6	1,897.5	5.7	5.3	146.30	12.4	-149.5	154.6	146.1	8.42	18.358		
2,000.0	1,970.5	2,014.9	1,994.9	6.3	5.6	147.69	5.2	-167.1	165.5	156.6	8.90	18.608		
2,100.0	2,065.4	2,114.0	2,092.2	6.9	6.0	149.18	-1.9	-184.7	178.1	168.8	9.35	19.054		
2,200.0	2,159.6	2,212.9	2,189.2	7.5	6.4	150.71	-9.1	-202.3	192.3	182.5	9.77	19.676		
2,300.0	2,253.3	2,311.5	2,286.0	8.1	6.8	152.25	-16.2	-219.8	208.1	197.9	10.17	20.454		
2,400.0	2,346.3	2,409.8	2,382.4	8.8	7.1	153.75	-23.3	-237.2	225.6	215.1	10.56	21.374		
2,500.0	2,439.0	2,507.9	2,478.7	9.5	7.5	155.19	-30.4	-254.7	244.1	233.2	10.93	22.335		
2,600.0	2,531.7	2,606.0	2,575.0	10.2	7.9	156.43	-37.5	-272.1	262.7	251.4	11.30	23.242		
2,700.0	2,624.4	2,704.1	2,671.3	10.9	8.2	157.51	-44.6	-289.5	281.4	269.7	11.68	24.097		
2,800.0	2,717.1	2,802.2	2,767.6	11.6	8.6	158.45	-51.7	-306.9	300.2	288.2	12.05	24.904		
2,900.0	2,809.8	2,900.3	2,863.9	12.3	9.0	159.29	-58.7	-324.3	319.1	306.6	12.43	25.666		
3,000.0	2,902.6	2,998.4	2,960.2	13.0	9.4	160.03	-65.8	-341.7	338.0	325.2	12.81	26.386		
3,100.0	2,995.3	3,096.5	3,056.4	13.7	9.7	160.69	-72.9	-359.2	357.0	343.8	13.19	27.066		
3,200.0	3,088.0	3,194.6	3,152.7	14.4	10.1	161.28	-80.0	-376.6	376.0	362.4	13.57	27.710		
3,300.0	3,180.7	3,292.7	3,249.0	15.1	10.5	161.82	-87.1	-394.0	395.0	381.1	13.95	28.320		
3,400.0	3,273.4	3,390.8	3,345.3	15.8	10.9	162.31	-94.2	-411.4	414.1	399.8	14.33	28.898		
3,500.0	3,366.1	3,488.9	3,441.6	16.5	11.2	162.75	-101.3	-428.8	433.2	418.5	14.71	29.448		
3,600.0	3,458.8	3,587.0	3,537.9	17.2	11.6	163.16	-108.4	-446.2	452.3	437.2	15.09	29.969		
3,700.0	3,551.5	3,685.1	3,634.2	17.9	12.0	163.53	-115.4	-463.7	471.5	456.0	15.48	30.465		
3,800.0	3,644.2	3,783.2	3,730.4	18.6	12.3	163.88	-122.5	-481.1	490.6	474.8	15.86	30.938		
3,900.0	3,736.9	3,881.3	3,826.7	19.3	12.7	164.20	-129.6	-498.5	509.8	493.6	16.24	31.388		
4,000.0	3,829.6	3,979.4	3,923.0	20.0	13.1	164.49	-136.7	-515.9	529.0	512.4	16.63	31.818		
4,100.0	3,922.3	4,077.5	4,019.3	20.7	13.5	164.77	-143.8	-533.3	548.2	531.2	17.01	32.229		
4,200.0	4,015.0	4,175.7	4,115.6	21.4	13.8	165.03	-150.9	-550.7	567.4	550.0	17.39	32.621		
4,300.0	4,107.7	4,273.8	4,211.9	22.1	14.2	165.27	-158.0	-568.2	586.7	568.9	17.78	32.997		
4,400.0	4,200.4	4,371.9	4,308.2	22.9	14.6	165.49	-165.0	-585.6	605.9	587.7	18.16	33.356		
4,500.0	4,293.1	4,470.0	4,404.5	23.6	15.0	165.70	-172.1	-603.0	625.2	606.6	18.55	33.701		
4,600.0	4,385.8	4,568.1	4,500.7	24.3	15.3	165.90	-179.2	-620.4	644.4	625.5	18.94	34.031		
4,700.0	4,478.5	4,666.2	4,597.0	25.0	15.7	166.09	-186.3	-637.8	663.7	644.3	19.32	34.348		
4,800.0	4,571.2	4,764.3	4,693.3	25.7	16.1	166.26	-193.4	-655.3	682.9	663.2	19.71	34.653		
4,900.0	4,663.9	4,862.4	4,789.6	26.4	16.5	166.43	-200.5	-672.7	702.2	682.1	20.09	34.946		
5,000.0	4,756.6	4,960.5	4,885.9	27.1	16.8	166.59	-207.6	-690.1	721.5	701.0	20.48	35.228		
5,100.0	4,849.3	5,058.6	4,982.2	27.8	17.2	166.74	-214.7	-707.5	740.8	719.9	20.87	35.500		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 5 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,200.0	4,942.0	5,156.7	5,078.5	28.5	17.6	166.88	-221.7	-724.9	760.1	738.8	21.25	35.762		
5,300.0	5,034.7	5,254.8	5,174.7	29.2	18.0	167.01	-228.8	-742.3	779.3	757.7	21.64	36.014		
5,400.0	5,127.4	5,352.9	5,271.0	29.9	18.3	167.14	-235.9	-759.8	798.6	776.6	22.03	36.257		
5,500.0	5,220.1	5,451.0	5,367.3	30.6	18.7	167.26	-243.0	-777.2	817.9	795.5	22.41	36.492		
5,600.0	5,312.8	5,549.1	5,463.6	31.3	19.1	167.38	-250.1	-794.6	837.2	814.4	22.80	36.719		
5,700.0	5,405.5	5,647.2	5,559.9	32.1	19.4	167.49	-257.2	-812.0	856.6	833.4	23.19	36.938		
5,800.0	5,498.2	5,745.3	5,656.2	32.8	19.8	167.60	-264.3	-829.4	875.9	852.3	23.58	37.150		
5,900.0	5,590.9	5,843.4	5,752.5	33.5	20.2	167.70	-271.4	-846.8	895.2	871.2	23.96	37.355		
6,000.0	5,683.6	5,941.6	5,848.7	34.2	20.6	167.80	-278.4	-864.3	914.5	890.1	24.35	37.554		
6,100.0	5,776.3	6,039.7	5,945.0	34.9	20.9	167.89	-285.5	-881.7	933.8	909.1	24.74	37.746		
6,200.0	5,869.0	6,137.8	6,041.3	35.6	21.3	167.98	-292.6	-899.1	953.1	928.0	25.13	37.932		
6,300.0	5,961.7	6,235.9	6,137.6	36.3	21.7	168.07	-299.7	-916.5	972.4	946.9	25.51	38.113		
6,400.0	6,054.4	7,348.5	6,790.0	37.0	36.6	136.64	-346.2	-1,660.3	955.6	896.9	58.62	16.300		
6,500.0	6,147.1	7,381.0	6,790.0	37.7	37.3	134.41	-346.1	-1,692.7	899.2	837.9	61.32	14.664		
6,600.0	6,239.8	7,413.5	6,790.0	38.4	38.0	132.13	-346.0	-1,725.2	849.7	785.6	64.03	13.270		
6,700.0	6,332.5	7,445.9	6,790.0	39.1	38.8	129.83	-345.9	-1,757.7	808.2	741.5	66.73	12.112		
6,800.0	6,425.2	7,478.4	6,790.0	39.8	39.5	127.49	-345.8	-1,790.1	776.1	706.7	69.41	11.182		
6,900.0	6,517.9	7,510.8	6,790.0	40.6	40.2	125.14	-345.8	-1,822.6	754.6	682.6	72.05	10.474		
7,000.0	6,610.6	7,543.3	6,790.0	41.3	40.9	122.78	-345.7	-1,855.0	744.6	669.9	74.63	9.976		
7,034.2	6,642.3	7,554.5	6,790.0	41.5	41.2	121.55	-345.7	-1,866.2	743.9	668.4	75.50	9.852		
7,100.0	6,703.3	7,575.8	6,790.0	42.0	41.6	119.15	-345.6	-1,887.6	746.5	669.3	77.19	9.671		
7,200.0	6,792.5	7,617.1	6,790.0	42.9	42.6	107.07	-345.5	-1,928.8	759.5	678.7	80.79	9.401		
7,300.0	6,874.2	7,672.1	6,790.0	44.0	43.8	97.20	-345.4	-1,983.8	780.6	695.6	84.97	9.187		
7,400.0	6,946.6	7,739.4	6,790.0	45.4	45.3	88.57	-345.2	-2,051.1	806.0	717.2	88.81	9.076		
7,500.0	7,007.6	7,817.5	6,790.0	47.0	47.1	81.22	-345.0	-2,129.2	832.0	740.3	91.71	9.072		
7,600.0	7,056.0	7,904.3	6,790.0	48.8	49.1	75.42	-344.8	-2,216.1	855.3	761.7	93.64	9.133		
7,700.0	7,090.5	7,997.8	6,790.0	50.7	51.3	71.34	-344.5	-2,309.6	873.2	778.2	94.97	9.194		
7,800.0	7,110.2	8,095.7	6,790.0	52.7	53.5	69.05	-344.3	-2,407.4	883.9	787.7	96.22	9.186		
7,900.0	7,115.0	8,195.5	6,790.0	54.8	55.9	68.49	-344.1	-2,507.2	886.5	788.1	98.39	9.010		
8,000.0	7,115.0	8,295.5	6,790.0	56.8	58.2	68.49	-343.8	-2,607.2	886.5	783.8	102.72	8.631		
8,100.0	7,115.0	8,395.5	6,790.0	58.9	60.6	68.49	-343.6	-2,707.2	886.5	779.5	107.08	8.280		
8,200.0	7,115.0	8,495.5	6,790.0	61.1	63.0	68.49	-343.3	-2,807.2	886.5	775.1	111.45	7.954		
8,300.0	7,115.0	8,595.5	6,790.0	63.2	65.3	68.49	-343.1	-2,907.2	886.5	770.7	115.84	7.653		
8,400.0	7,115.0	8,695.5	6,790.0	65.4	67.7	68.49	-342.8	-3,007.2	886.5	766.3	120.25	7.372		
8,500.0	7,115.0	8,795.5	6,790.0	67.6	70.1	68.49	-342.6	-3,107.2	886.5	761.9	124.68	7.111		
8,600.0	7,115.0	8,895.5	6,790.0	69.8	72.5	68.49	-342.3	-3,207.2	886.5	757.4	129.12	6.866		
8,700.0	7,115.0	8,995.5	6,790.0	72.1	74.9	68.49	-342.1	-3,307.2	886.5	753.0	133.56	6.638		
8,800.0	7,115.0	9,095.5	6,790.0	74.3	77.3	68.49	-341.8	-3,407.2	886.5	748.5	138.02	6.423		
8,900.0	7,115.0	9,195.5	6,790.0	76.6	79.7	68.49	-341.6	-3,507.2	886.5	744.0	142.49	6.222		
9,000.0	7,115.0	9,295.5	6,790.0	78.9	82.1	68.49	-341.3	-3,607.2	886.5	739.6	146.97	6.032		
9,100.0	7,115.0	9,395.5	6,790.0	81.2	84.6	68.49	-341.1	-3,707.2	886.5	735.1	151.45	5.854		
9,200.0	7,115.0	9,495.5	6,790.0	83.5	87.0	68.49	-340.8	-3,807.2	886.5	730.6	155.95	5.685		
9,300.0	7,115.0	9,595.5	6,790.0	85.8	89.4	68.49	-340.6	-3,907.2	886.5	726.1	160.44	5.525		
9,400.0	7,115.0	9,695.5	6,790.0	88.1	91.8	68.49	-340.3	-4,007.2	886.5	721.6	164.95	5.375		
9,500.0	7,115.0	9,795.5	6,790.0	90.4	94.3	68.49	-340.1	-4,107.2	886.5	717.1	169.46	5.232		
9,600.0	7,115.0	9,895.5	6,790.0	92.8	96.7	68.49	-339.8	-4,207.2	886.5	712.6	173.97	5.096		
9,700.0	7,115.0	9,995.5	6,790.0	95.1	99.1	68.49	-339.6	-4,307.2	886.5	708.0	178.49	4.967		
9,800.0	7,115.0	10,095.5	6,790.0	97.5	101.6	68.49	-339.3	-4,407.2	886.5	703.5	183.02	4.844		
9,900.0	7,115.0	10,195.5	6,790.0	99.8	104.0	68.49	-339.1	-4,507.2	886.5	699.0	187.55	4.727		
10,000.0	7,115.0	10,295.5	6,790.0	102.2	106.4	68.49	-338.8	-4,607.2	886.5	694.5	192.08	4.615		
10,100.0	7,115.0	10,395.5	6,790.0	104.5	108.9	68.49	-338.6	-4,707.2	886.5	689.9	196.62	4.509		
10,200.0	7,115.0	10,495.5	6,790.0	106.9	111.3	68.49	-338.3	-4,807.2	886.5	685.4	201.15	4.407		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 5 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
10,300.0	7,115.0	10,595.5	6,790.0	109.3	113.8	68.49	-338.1	-4,907.2	886.5	680.8	205.70	4.310		
10,400.0	7,115.0	10,695.5	6,790.0	111.7	116.2	68.49	-337.8	-5,007.2	886.5	676.3	210.24	4.217		
10,500.0	7,115.0	10,795.5	6,790.0	114.1	118.7	68.49	-337.6	-5,107.2	886.5	671.7	214.79	4.127		
10,600.0	7,115.0	10,895.5	6,790.0	116.5	121.1	68.49	-337.3	-5,207.2	886.5	667.2	219.34	4.042		
10,700.0	7,115.0	10,995.5	6,790.0	118.8	123.6	68.49	-337.1	-5,307.2	886.5	662.6	223.89	3.960		
10,800.0	7,115.0	11,095.5	6,790.0	121.2	126.0	68.49	-336.8	-5,407.2	886.5	658.1	228.45	3.881		
10,900.0	7,115.0	11,195.5	6,790.0	123.6	128.5	68.49	-336.6	-5,507.2	886.5	653.5	233.00	3.805		
11,000.0	7,115.0	11,295.5	6,790.0	126.0	130.9	68.49	-336.3	-5,607.2	886.5	649.0	237.56	3.732		
11,100.0	7,115.0	11,395.5	6,790.0	128.5	133.4	68.49	-336.1	-5,707.2	886.5	644.4	242.12	3.662		
11,200.0	7,115.0	11,495.5	6,790.0	130.9	135.8	68.49	-335.8	-5,807.2	886.5	639.8	246.68	3.594		
11,300.0	7,115.0	11,595.5	6,790.0	133.3	138.3	68.49	-335.6	-5,907.2	886.5	635.3	251.25	3.529		
11,400.0	7,115.0	11,695.5	6,790.0	135.7	140.7	68.49	-335.3	-6,007.2	886.5	630.7	255.81	3.466		
11,500.0	7,115.0	11,795.5	6,790.0	138.1	143.2	68.49	-335.1	-6,107.2	886.5	626.1	260.38	3.405		
11,600.0	7,115.0	11,895.5	6,790.0	140.5	145.6	68.49	-334.8	-6,207.2	886.5	621.6	264.95	3.346		
11,700.0	7,115.0	11,995.5	6,790.0	142.9	148.1	68.49	-334.6	-6,307.2	886.5	617.0	269.52	3.289		
11,800.0	7,115.0	12,095.5	6,790.0	145.4	150.6	68.49	-334.3	-6,407.2	886.5	612.4	274.09	3.234		
11,900.0	7,115.0	12,195.5	6,790.0	147.8	153.0	68.49	-334.1	-6,507.2	886.5	607.9	278.66	3.181		
12,000.0	7,115.0	12,295.5	6,790.0	150.2	155.5	68.49	-333.8	-6,607.2	886.5	603.3	283.23	3.130		
12,100.0	7,115.0	12,395.5	6,790.0	152.6	157.9	68.49	-333.6	-6,707.2	886.5	598.7	287.80	3.080		
12,200.0	7,115.0	12,495.5	6,790.0	155.1	160.4	68.49	-333.3	-6,807.2	886.5	594.1	292.38	3.032		
12,300.0	7,115.0	12,595.5	6,790.0	157.5	162.9	68.49	-333.1	-6,907.2	886.5	589.6	296.96	2.985		
12,400.0	7,115.0	12,695.5	6,790.0	159.9	165.3	68.49	-332.8	-7,007.2	886.5	585.0	301.53	2.940		
12,500.0	7,115.0	12,795.5	6,790.0	162.4	167.8	68.49	-332.6	-7,107.2	886.5	580.4	306.11	2.896		
12,600.0	7,115.0	12,895.5	6,790.0	164.8	170.2	68.49	-332.3	-7,207.2	886.5	575.8	310.69	2.853		
12,700.0	7,115.0	12,995.5	6,790.0	167.2	172.7	68.49	-332.1	-7,307.2	886.5	571.3	315.27	2.812		
12,800.0	7,115.0	13,095.5	6,790.0	169.7	175.2	68.49	-331.8	-7,407.2	886.5	566.7	319.85	2.772		
12,900.0	7,115.0	13,195.5	6,790.0	172.1	177.6	68.49	-331.6	-7,507.2	886.5	562.1	324.43	2.733		
13,000.0	7,115.0	13,295.5	6,790.0	174.5	180.1	68.49	-331.3	-7,607.2	886.5	557.5	329.01	2.694		
13,100.0	7,115.0	13,395.5	6,790.0	177.0	182.5	68.49	-331.1	-7,707.2	886.5	552.9	333.59	2.657		
13,200.0	7,115.0	13,495.5	6,790.0	179.4	185.0	68.49	-330.8	-7,807.2	886.5	548.3	338.18	2.621		
13,300.0	7,115.0	13,595.5	6,790.0	181.9	187.5	68.49	-330.6	-7,907.2	886.5	543.8	342.76	2.586		
13,400.0	7,115.0	13,695.5	6,790.0	184.3	189.9	68.49	-330.3	-8,007.2	886.5	539.2	347.35	2.552		
13,500.0	7,115.0	13,795.5	6,790.0	186.7	192.4	68.49	-330.1	-8,107.2	886.5	534.6	351.93	2.519		
13,600.0	7,115.0	13,895.5	6,790.0	189.2	194.9	68.49	-329.8	-8,207.2	886.5	530.0	356.52	2.487		
13,700.0	7,115.0	13,995.5	6,790.0	191.6	197.3	68.49	-329.6	-8,307.2	886.5	525.4	361.10	2.455		
13,800.0	7,115.0	14,095.5	6,790.0	194.1	199.8	68.49	-329.3	-8,407.2	886.5	520.8	365.69	2.424		
13,900.0	7,115.0	14,195.5	6,790.0	196.5	202.3	68.49	-329.1	-8,507.2	886.5	516.2	370.28	2.394		
14,000.0	7,115.0	14,295.5	6,790.0	199.0	204.7	68.49	-328.8	-8,607.2	886.5	511.7	374.86	2.365		
14,100.0	7,115.0	14,395.5	6,790.0	201.4	207.2	68.49	-328.6	-8,707.2	886.5	507.1	379.45	2.336		
14,200.0	7,115.0	14,495.5	6,790.0	203.9	209.7	68.49	-328.3	-8,807.2	886.5	502.5	384.04	2.308		
14,300.0	7,115.0	14,595.5	6,790.0	206.3	212.1	68.49	-328.1	-8,907.2	886.5	497.9	388.63	2.281		
14,400.0	7,115.0	14,695.5	6,790.0	208.8	214.6	68.49	-327.8	-9,007.2	886.5	493.3	393.22	2.255		
14,500.0	7,115.0	14,795.5	6,790.0	211.2	217.1	68.49	-327.6	-9,107.2	886.5	488.7	397.81	2.229		
14,600.0	7,115.0	14,895.5	6,790.0	213.7	219.5	68.49	-327.3	-9,207.2	886.5	484.1	402.40	2.203		
14,700.0	7,115.0	14,995.5	6,790.0	216.1	222.0	68.49	-327.1	-9,307.2	886.5	479.5	406.99	2.178		
14,800.0	7,115.0	15,095.5	6,790.0	218.6	224.5	68.49	-326.8	-9,407.2	886.5	474.9	411.58	2.154		
14,900.0	7,115.0	15,195.5	6,790.0	221.0	226.9	68.49	-326.6	-9,507.2	886.5	470.3	416.17	2.130		
15,000.0	7,115.0	15,295.5	6,790.0	223.5	229.4	68.49	-326.3	-9,607.2	886.5	465.8	420.76	2.107		
15,100.0	7,115.0	15,395.5	6,790.0	225.9	231.9	68.49	-326.1	-9,707.2	886.5	461.2	425.35	2.084		
15,200.0	7,115.0	15,495.5	6,790.0	228.4	234.3	68.49	-325.8	-9,807.2	886.5	456.6	429.94	2.062		
15,300.0	7,115.0	15,595.5	6,790.0	230.8	236.8	68.49	-325.6	-9,907.2	886.5	452.0	434.54	2.040		
15,400.0	7,115.0	15,695.5	6,790.0	233.3	239.3	68.49	-325.3	-10,007.2	886.5	447.4	439.13	2.019		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 5 - Hz - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
15,500.0	7,115.0	15,795.5	6,790.0	235.8	241.7	68.49	-325.1	-10,107.2	886.5	442.8	443.72	1.998		
15,600.0	7,115.0	15,895.5	6,790.0	238.2	244.2	68.49	-324.8	-10,207.2	886.5	438.2	448.32	1.977		
15,700.0	7,115.0	15,995.5	6,790.0	240.7	246.7	68.49	-324.6	-10,307.2	886.5	433.6	452.91	1.957		
15,800.0	7,115.0	16,095.5	6,790.0	243.1	249.1	68.49	-324.3	-10,407.2	886.5	429.0	457.50	1.938		
15,900.0	7,115.0	16,195.5	6,790.0	245.6	251.6	68.49	-324.1	-10,507.2	886.5	424.4	462.10	1.918		
16,000.0	7,115.0	16,295.5	6,790.0	248.0	254.1	68.49	-323.8	-10,607.2	886.5	419.8	466.69	1.900		
16,100.0	7,115.0	16,395.5	6,790.0	250.5	256.5	68.49	-323.6	-10,707.2	886.5	415.2	471.29	1.881		
16,200.0	7,115.0	16,495.5	6,790.0	252.9	259.0	68.49	-323.3	-10,807.2	886.5	410.6	475.88	1.863		
16,300.0	7,115.0	16,595.5	6,790.0	255.4	261.5	68.49	-323.1	-10,907.2	886.5	406.0	480.48	1.845		
16,400.0	7,115.0	16,695.5	6,790.0	257.9	263.9	68.49	-322.8	-11,007.2	886.5	401.4	485.07	1.828		
16,500.0	7,115.0	16,795.5	6,790.0	260.3	266.4	68.49	-322.6	-11,107.2	886.5	396.8	489.67	1.810		
16,600.0	7,115.0	16,895.5	6,790.0	262.8	268.9	68.49	-322.3	-11,207.2	886.5	392.2	494.26	1.794		
16,700.0	7,115.0	16,995.5	6,790.0	265.2	271.4	68.49	-322.1	-11,307.2	886.5	387.6	498.86	1.777		
16,800.0	7,115.0	17,095.5	6,790.0	267.7	273.8	68.49	-321.8	-11,407.2	886.5	383.1	503.45	1.761		
16,900.0	7,115.0	17,195.5	6,790.0	270.2	276.3	68.49	-321.6	-11,507.2	886.5	378.5	508.05	1.745		
17,000.0	7,115.0	17,295.5	6,790.0	272.6	278.8	68.49	-321.3	-11,607.2	886.5	373.9	512.65	1.729		
17,100.0	7,115.0	17,395.4	6,790.0	275.1	281.2	68.49	-321.1	-11,707.1	886.5	369.3	517.24	1.714		
17,104.5	7,115.0	17,400.0	6,790.0	275.2	281.3	68.49	-321.1	-11,711.7	886.5	369.1	517.45	1.713 SF		

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 6 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.0	0.0	0.0	0.0	30.74	72.5	43.1	84.3					
100.0	100.0	100.0	100.0	0.1	0.1	30.74	72.5	43.1	84.3	84.1	0.27	317.939		
200.0	200.0	200.0	200.0	0.3	0.3	30.74	72.5	43.1	84.3	83.7	0.61	137.292		
300.0	300.0	301.3	301.3	0.5	0.5	150.64	72.1	42.3	84.3	83.4	0.97	87.304		
400.0	400.0	402.6	402.5	0.7	0.7	150.59	70.8	40.0	84.3	83.0	1.32	63.896		
500.0	499.9	503.8	503.7	0.9	0.9	150.51	68.6	36.0	84.3	82.7	1.68	50.261		
600.0	599.7	605.1	604.8	1.1	1.1	150.41	65.6	30.5	84.3	82.3	2.04	41.296		
603.7	603.3	608.8	608.5	1.1	1.1	150.40	65.5	30.3	84.3	82.3	2.06	41.021 CC		
700.0	699.4	706.4	705.7	1.3	1.3	150.27	61.8	23.5	84.3	81.9	2.42	34.923		
800.0	798.9	807.7	806.5	1.5	1.5	150.10	57.1	14.9	84.3	81.5	2.80	30.139		
900.0	898.3	909.0	907.2	1.8	1.8	149.90	51.5	4.7	84.3	81.2	3.19	26.401		
1,000.0	997.4	1,010.2	1,007.5	2.0	2.1	149.67	45.1	-7.1	84.4	80.7	3.61	23.388		
1,100.0	1,096.3	1,111.5	1,107.7	2.3	2.4	149.41	37.8	-20.4	84.4	80.3	4.04	20.899		
1,200.0	1,194.9	1,212.8	1,207.5	2.7	2.7	149.13	29.7	-35.2	84.4	79.9	4.49	18.804		
1,244.8	1,239.0	1,258.1	1,252.1	2.8	2.9	148.99	25.8	-42.4	84.4	79.7	4.70	17.961		
1,300.0	1,293.3	1,313.7	1,306.7	3.0	3.1	148.83	20.8	-51.5	84.4	79.5	4.96	17.036 ES		
1,400.0	1,391.2	1,413.6	1,404.9	3.4	3.4	148.99	11.8	-68.0	85.6	80.2	5.43	15.783		
1,500.0	1,488.9	1,513.6	1,503.0	3.8	3.8	149.72	2.7	-84.5	88.3	82.5	5.88	15.017		
1,600.0	1,586.1	1,613.5	1,601.2	4.2	4.1	150.92	-6.3	-101.0	92.6	86.3	6.32	14.653		
1,700.0	1,682.9	1,713.3	1,699.2	4.7	4.5	152.49	-15.3	-117.5	98.4	91.7	6.73	14.630		
1,800.0	1,779.3	1,813.0	1,797.1	5.2	4.9	154.29	-24.3	-133.9	105.8	98.7	7.11	14.897		
1,900.0	1,875.2	1,912.5	1,894.8	5.7	5.2	156.20	-33.2	-150.3	115.0	107.5	7.46	15.418		
2,000.0	1,970.5	2,011.8	1,992.3	6.3	5.6	158.12	-42.2	-166.7	125.8	118.1	7.79	16.159		
2,100.0	2,065.4	2,110.9	2,089.7	6.9	6.0	159.97	-51.1	-183.1	138.5	130.4	8.10	17.092		
2,200.0	2,159.6	2,209.7	2,186.8	7.5	6.3	161.71	-60.1	-199.4	152.8	144.4	8.40	18.194		
2,300.0	2,253.3	2,308.3	2,283.6	8.1	6.7	163.32	-69.0	-215.7	169.0	160.3	8.69	19.442		
2,400.0	2,346.3	2,406.6	2,380.1	8.8	7.1	164.78	-77.8	-231.9	186.9	177.9	8.98	20.818		
2,500.0	2,439.0	2,504.7	2,476.5	9.5	7.4	166.08	-86.7	-248.1	205.8	196.5	9.28	22.179		
2,600.0	2,531.7	2,602.8	2,572.8	10.2	7.8	167.17	-95.5	-264.3	224.8	215.2	9.59	23.445		
2,700.0	2,624.4	2,700.9	2,669.1	10.9	8.1	168.09	-104.4	-280.5	243.8	233.9	9.90	24.623		
2,800.0	2,717.1	2,799.0	2,765.5	11.6	8.5	168.87	-113.2	-296.7	262.9	252.7	10.22	25.722		
2,900.0	2,809.8	2,897.1	2,861.8	12.3	8.9	169.55	-122.1	-312.9	282.1	271.5	10.55	26.748		
3,000.0	2,902.6	2,995.2	2,958.2	13.0	9.2	170.14	-130.9	-329.1	301.2	290.4	10.87	27.708		
3,100.0	2,995.3	3,093.3	3,054.5	13.7	9.6	170.66	-139.8	-345.3	320.4	309.2	11.20	28.609		
3,200.0	3,088.0	3,191.4	3,150.9	14.4	10.0	171.12	-148.6	-361.5	339.7	328.1	11.53	29.454		
3,300.0	3,180.7	3,289.5	3,247.2	15.1	10.3	171.54	-157.5	-377.6	358.9	347.0	11.86	30.250		
3,400.0	3,273.4	3,387.6	3,343.6	15.8	10.7	171.91	-166.3	-393.8	378.2	366.0	12.20	30.999		
3,500.0	3,366.1	3,485.7	3,439.9	16.5	11.1	172.24	-175.2	-410.0	397.4	384.9	12.53	31.707		
3,600.0	3,458.8	3,583.8	3,536.3	17.2	11.4	172.55	-184.0	-426.2	416.7	403.8	12.87	32.375		
3,700.0	3,551.5	3,681.9	3,632.6	17.9	11.8	172.82	-192.9	-442.4	436.0	422.8	13.21	33.008		
3,800.0	3,644.2	3,780.0	3,729.0	18.6	12.2	173.08	-201.7	-458.6	455.3	441.8	13.55	33.608		
3,900.0	3,736.9	3,878.1	3,825.3	19.3	12.5	173.31	-210.6	-474.8	474.6	460.7	13.89	34.177		
4,000.0	3,829.6	3,976.2	3,921.7	20.0	12.9	173.52	-219.4	-491.0	493.9	479.7	14.23	34.718		
4,100.0	3,922.3	4,074.3	4,018.0	20.7	13.3	173.72	-228.3	-507.2	513.3	498.7	14.57	35.232		
4,200.0	4,015.0	4,172.4	4,114.4	21.4	13.6	173.91	-237.1	-523.4	532.6	517.7	14.91	35.722		
4,300.0	4,107.7	4,270.5	4,210.7	22.1	14.0	174.08	-246.0	-539.6	551.9	536.7	15.25	36.190		
4,400.0	4,200.4	4,368.6	4,307.1	22.9	14.4	174.24	-254.8	-555.8	571.3	555.7	15.59	36.636		
4,500.0	4,293.1	4,466.7	4,403.4	23.6	14.8	174.39	-263.7	-572.0	590.6	574.7	15.94	37.062		
4,600.0	4,385.8	4,564.8	4,499.8	24.3	15.1	174.53	-272.5	-588.2	610.0	593.7	16.28	37.470		
4,700.0	4,478.5	4,662.9	4,596.1	25.0	15.5	174.66	-281.4	-604.4	629.3	612.7	16.62	37.861		
4,800.0	4,571.2	4,761.0	4,692.5	25.7	15.9	174.78	-290.2	-620.5	648.7	631.7	16.97	38.235		
4,900.0	4,663.9	4,859.1	4,788.8	26.4	16.2	174.90	-299.1	-636.7	668.0	650.7	17.31	38.594		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 6 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning	
5,000.0	4,756.6	4,957.2	4,885.2	27.1	16.6	175.01	-307.9	-652.9	687.4	669.7	17.65	38.938		
5,100.0	4,849.3	5,055.3	4,981.5	27.8	17.0	175.11	-316.8	-669.1	706.7	688.7	18.00	39.269		
5,200.0	4,942.0	5,153.4	5,077.9	28.5	17.3	175.21	-325.6	-685.3	726.1	707.8	18.34	39.587		
5,300.0	5,034.7	5,251.5	5,174.2	29.2	17.7	175.30	-334.5	-701.5	745.5	726.8	18.69	39.893		
5,400.0	5,127.4	5,349.6	5,270.6	29.9	18.1	175.39	-343.3	-717.7	764.8	745.8	19.03	40.188		
5,500.0	5,220.1	5,447.7	5,366.9	30.6	18.4	175.47	-352.2	-733.9	784.2	764.8	19.38	40.472		
5,600.0	5,312.8	5,545.8	5,463.3	31.3	18.8	175.55	-361.0	-750.1	803.6	783.9	19.72	40.746		
5,700.0	5,405.5	5,643.9	5,559.6	32.1	19.2	175.63	-369.9	-766.3	823.0	802.9	20.07	41.010		
5,800.0	5,498.2	5,742.0	5,656.0	32.8	19.5	175.70	-378.7	-782.5	842.3	821.9	20.41	41.265		
5,900.0	5,590.9	5,840.1	5,752.3	33.5	19.9	175.77	-387.6	-798.7	861.7	840.9	20.76	41.511		
6,000.0	5,683.6	5,938.2	5,848.7	34.2	20.3	175.84	-396.4	-814.9	881.1	860.0	21.10	41.749		
6,100.0	5,776.3	6,036.3	5,945.0	34.9	20.6	175.90	-405.3	-831.1	900.5	879.0	21.45	41.980		
6,200.0	5,869.0	6,134.4	6,041.4	35.6	21.0	175.96	-414.1	-847.3	919.8	898.0	21.80	42.203		
6,300.0	5,961.7	6,232.5	6,137.7	36.3	21.4	176.02	-423.0	-863.4	939.2	917.1	22.14	42.418		
6,400.0	6,054.4	6,330.6	6,234.0	37.0	21.7	176.08	-431.8	-879.6	958.6	936.1	22.49	42.627		
6,500.0	6,147.1	6,428.7	6,330.4	37.7	22.1	176.13	-440.7	-895.8	978.0	955.1	22.83	42.829		
6,600.0	6,239.8	6,526.8	6,426.7	38.4	22.5	176.18	-449.5	-912.0	997.3	974.2	23.18	43.026		
6,700.0	6,332.5	6,624.4	6,526.0	39.1	39.2	140.49	-511.0	-1,758.1	929.3	870.7	58.57	15.865		
6,800.0	6,425.2	6,717.0	6,618.0	39.8	39.9	138.01	-510.9	-1,790.5	863.8	802.2	61.68	14.005		
6,900.0	6,517.9	6,809.3	6,711.0	40.6	40.6	135.47	-510.8	-1,823.0	804.2	739.4	64.83	12.406		
7,000.0	6,610.6	6,901.8	6,803.0	41.3	41.3	132.87	-510.7	-1,855.4	751.9	683.9	67.98	11.060		
7,100.0	6,703.3	6,994.3	6,895.0	42.0	42.0	129.42	-510.6	-1,888.0	708.3	637.5	70.84	9.999		
7,200.0	6,796.2	7,086.6	6,987.0	42.9	42.9	121.17	-510.5	-1,929.2	676.3	603.7	72.65	9.310		
7,300.0	6,874.2	7,177.5	7,078.0	44.0	44.1	114.47	-510.4	-1,984.2	656.7	580.2	76.52	8.583		
7,400.0	6,946.6	7,269.9	7,171.0	45.4	45.6	108.15	-510.2	-2,051.6	647.9	566.2	81.76	7.925		
7,463.2	6,986.6	7,311.6	7,213.0	46.4	46.7	104.31	-510.1	-2,099.8	646.7	561.3	85.40	7.572		
7,500.0	7,007.6	7,414.0	7,315.0	47.0	47.4	102.17	-510.0	-2,129.6	647.0	559.5	87.46	7.397		
7,600.0	7,056.0	7,462.8	7,363.0	48.8	49.4	96.95	-509.8	-2,216.5	650.5	557.7	92.84	7.007		
7,700.0	7,090.5	7,496.3	7,397.0	50.7	51.5	92.96	-509.6	-2,310.0	655.3	557.8	97.52	6.720		
7,800.0	7,110.2	7,516.2	7,417.0	52.7	53.7	90.59	-509.3	-2,407.8	658.8	557.3	101.56	6.487		
7,900.0	7,115.0	7,521.0	7,422.0	54.8	56.1	90.00	-509.1	-2,507.6	659.8	554.3	105.47	6.256		
8,000.0	7,115.0	7,526.0	7,427.0	56.8	58.4	90.00	-508.8	-2,607.6	659.8	549.7	110.11	5.992		
8,100.0	7,115.0	7,531.0	7,432.0	58.9	60.7	90.00	-508.6	-2,707.6	659.8	545.0	114.78	5.748		
8,200.0	7,115.0	7,536.0	7,437.0	61.1	63.1	90.00	-508.3	-2,807.6	659.8	540.3	119.47	5.523		
8,300.0	7,115.0	7,541.0	7,442.0	63.2	65.4	90.00	-508.1	-2,907.6	659.8	535.6	124.18	5.313		
8,400.0	7,115.0	7,546.0	7,447.0	65.4	67.8	90.00	-507.8	-3,007.6	659.8	530.9	128.91	5.118		
8,500.0	7,115.0	7,551.0	7,452.0	67.6	70.2	90.00	-507.6	-3,107.6	659.8	526.1	133.65	4.937		
8,600.0	7,115.0	7,556.0	7,457.0	69.8	72.6	90.00	-507.3	-3,207.6	659.8	521.4	138.41	4.767		
8,700.0	7,115.0	7,561.0	7,462.0	72.1	75.0	90.00	-507.1	-3,307.6	659.8	516.6	143.18	4.608		
8,800.0	7,115.0	7,566.0	7,467.0	74.3	77.3	90.00	-506.8	-3,407.6	659.8	511.8	147.96	4.459		
8,900.0	7,115.0	7,571.0	7,472.0	76.6	79.7	90.00	-506.6	-3,507.6	659.8	507.0	152.76	4.319		
9,000.0	7,115.0	7,576.0	7,477.0	78.9	82.1	90.00	-506.3	-3,607.6	659.8	502.2	157.56	4.187		
9,100.0	7,115.0	7,581.0	7,482.0	81.2	84.6	90.00	-506.1	-3,707.6	659.8	497.4	162.37	4.063		
9,200.0	7,115.0	7,586.0	7,487.0	83.5	87.0	90.00	-505.8	-3,807.6	659.8	492.6	167.19	3.946		
9,300.0	7,115.0	7,591.0	7,492.0	85.8	89.4	90.00	-505.6	-3,907.6	659.8	487.8	172.02	3.835		
9,400.0	7,115.0	7,596.0	7,497.0	88.1	91.8	90.00	-505.3	-4,007.6	659.8	482.9	176.86	3.731		
9,500.0	7,115.0	7,601.0	7,502.0	90.4	94.2	90.00	-505.1	-4,107.6	659.8	478.1	181.70	3.631		
9,600.0	7,115.0	7,606.0	7,507.0	92.8	96.7	90.00	-504.8	-4,207.6	659.8	473.2	186.54	3.537		
9,700.0	7,115.0	7,611.0	7,512.0	95.1	99.1	90.00	-504.6	-4,307.6	659.8	468.4	191.40	3.447		
9,800.0	7,115.0	7,616.0	7,517.0	97.5	101.5	90.00	-504.3	-4,407.6	659.8	463.5	196.25	3.362		
9,900.0	7,115.0	7,621.0	7,522.0	99.8	103.9	90.00	-504.1	-4,507.6	659.8	458.7	201.11	3.281		
10,000.0	7,115.0	7,626.0	7,527.0	102.2	106.4	90.00	-503.8	-4,607.6	659.8	453.8	205.98	3.203		

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



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 6 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,100.0	7,115.0	10,724.0	7,115.0	104.5	108.8	90.00	-503.6	-4,707.6	659.8	448.9	210.85	3.129		
10,200.0	7,115.0	10,824.0	7,115.0	106.9	111.2	90.00	-503.3	-4,807.6	659.8	444.1	215.72	3.058		
10,300.0	7,115.0	10,924.0	7,115.0	109.3	113.7	90.00	-503.1	-4,907.6	659.8	439.2	220.60	2.991		
10,400.0	7,115.0	11,024.0	7,115.0	111.7	116.1	90.00	-502.8	-5,007.6	659.8	434.3	225.48	2.926		
10,500.0	7,115.0	11,124.0	7,115.0	114.1	118.6	90.00	-502.6	-5,107.6	659.8	429.4	230.36	2.864		
10,600.0	7,115.0	11,224.0	7,115.0	116.5	121.0	90.00	-502.3	-5,207.6	659.8	424.5	235.25	2.805		
10,700.0	7,115.0	11,324.0	7,115.0	118.8	123.5	90.00	-502.1	-5,307.6	659.8	419.6	240.13	2.748		
10,800.0	7,115.0	11,424.0	7,115.0	121.2	125.9	90.00	-501.8	-5,407.6	659.8	414.8	245.02	2.693		
10,900.0	7,115.0	11,524.0	7,115.0	123.6	128.3	90.00	-501.6	-5,507.6	659.8	409.9	249.92	2.640		
11,000.0	7,115.0	11,624.0	7,115.0	126.0	130.8	90.00	-501.3	-5,607.6	659.8	405.0	254.81	2.589		
11,100.0	7,115.0	11,724.0	7,115.0	128.5	133.2	90.00	-501.1	-5,707.6	659.8	400.1	259.71	2.540		
11,200.0	7,115.0	11,824.0	7,115.0	130.9	135.7	90.00	-500.8	-5,807.6	659.8	395.2	264.61	2.493		
11,300.0	7,115.0	11,924.0	7,115.0	133.3	138.1	90.00	-500.6	-5,907.6	659.8	390.3	269.51	2.448		
11,400.0	7,115.0	12,024.0	7,115.0	135.7	140.6	90.00	-500.3	-6,007.6	659.8	385.4	274.41	2.404		
11,500.0	7,115.0	12,124.0	7,115.0	138.1	143.0	90.00	-500.1	-6,107.6	659.8	380.5	279.32	2.362		
11,600.0	7,115.0	12,224.0	7,115.0	140.5	145.5	90.00	-499.8	-6,207.6	659.8	375.6	284.22	2.321		
11,700.0	7,115.0	12,324.0	7,115.0	142.9	148.0	90.00	-499.6	-6,307.6	659.8	370.6	289.13	2.282		
11,800.0	7,115.0	12,424.0	7,115.0	145.4	150.4	90.00	-499.3	-6,407.6	659.8	365.7	294.04	2.244		
11,900.0	7,115.0	12,524.0	7,115.0	147.8	152.9	90.00	-499.1	-6,507.6	659.8	360.8	298.95	2.207		
12,000.0	7,115.0	12,624.0	7,115.0	150.2	155.3	90.00	-498.8	-6,607.6	659.8	355.9	303.86	2.171		
12,100.0	7,115.0	12,724.0	7,115.0	152.6	157.8	90.00	-498.6	-6,707.6	659.8	351.0	308.77	2.137		
12,200.0	7,115.0	12,824.0	7,115.0	155.1	160.2	90.00	-498.4	-6,807.6	659.8	346.1	313.68	2.103		
12,300.0	7,115.0	12,924.0	7,115.0	157.5	162.7	90.00	-498.1	-6,907.6	659.8	341.2	318.60	2.071		
12,400.0	7,115.0	13,024.0	7,115.0	159.9	165.2	90.00	-497.9	-7,007.6	659.8	336.3	323.51	2.039		
12,500.0	7,115.0	13,124.0	7,115.0	162.4	167.6	90.00	-497.6	-7,107.6	659.8	331.3	328.43	2.009		
12,600.0	7,115.0	13,224.0	7,115.0	164.8	170.1	90.00	-497.4	-7,207.6	659.8	326.4	333.35	1.979		
12,700.0	7,115.0	13,324.0	7,115.0	167.2	172.5	90.00	-497.1	-7,307.6	659.8	321.5	338.27	1.950		
12,800.0	7,115.0	13,424.0	7,115.0	169.7	175.0	90.00	-496.9	-7,407.6	659.8	316.6	343.19	1.922		
12,900.0	7,115.0	13,524.0	7,115.0	172.1	177.4	90.00	-496.6	-7,507.6	659.8	311.7	348.11	1.895		
13,000.0	7,115.0	13,624.0	7,115.0	174.5	179.9	90.00	-496.4	-7,607.6	659.8	306.7	353.03	1.869		
13,100.0	7,115.0	13,724.0	7,115.0	177.0	182.4	90.00	-496.1	-7,707.6	659.8	301.8	357.95	1.843		
13,200.0	7,115.0	13,824.0	7,115.0	179.4	184.8	90.00	-495.9	-7,807.6	659.8	296.9	362.87	1.818		
13,300.0	7,115.0	13,924.0	7,115.0	181.9	187.3	90.00	-495.6	-7,907.6	659.8	292.0	367.80	1.794		
13,400.0	7,115.0	14,024.0	7,115.0	184.3	189.8	90.00	-495.4	-8,007.6	659.8	287.0	372.72	1.770		
13,500.0	7,115.0	14,124.0	7,115.0	186.7	192.2	90.00	-495.1	-8,107.6	659.8	282.1	377.64	1.747		
13,600.0	7,115.0	14,224.0	7,115.0	189.2	194.7	90.00	-494.9	-8,207.6	659.8	277.2	382.57	1.725		
13,700.0	7,115.0	14,324.0	7,115.0	191.6	197.1	90.00	-494.6	-8,307.6	659.8	272.3	387.50	1.703		
13,800.0	7,115.0	14,424.0	7,115.0	194.1	199.6	90.00	-494.4	-8,407.6	659.8	267.3	392.42	1.681		
13,900.0	7,115.0	14,524.0	7,115.0	196.5	202.1	90.00	-494.1	-8,507.6	659.8	262.4	397.35	1.660		
14,000.0	7,115.0	14,624.0	7,115.0	199.0	204.5	90.00	-493.9	-8,607.6	659.8	257.5	402.28	1.640		
14,100.0	7,115.0	14,724.0	7,115.0	201.4	207.0	90.00	-493.6	-8,707.6	659.8	252.6	407.21	1.620		
14,200.0	7,115.0	14,824.0	7,115.0	203.9	209.5	90.00	-493.4	-8,807.6	659.8	247.6	412.13	1.601		
14,300.0	7,115.0	14,924.0	7,115.0	206.3	211.9	90.00	-493.1	-8,907.6	659.8	242.7	417.06	1.582		
14,400.0	7,115.0	15,024.0	7,115.0	208.8	214.4	90.00	-492.9	-9,007.6	659.8	237.8	421.99	1.563		
14,500.0	7,115.0	15,124.0	7,115.0	211.2	216.9	90.00	-492.6	-9,107.6	659.8	232.8	426.92	1.545		
14,600.0	7,115.0	15,224.0	7,115.0	213.7	219.3	90.00	-492.4	-9,207.6	659.8	227.9	431.85	1.528		
14,700.0	7,115.0	15,324.0	7,115.0	216.1	221.8	90.00	-492.1	-9,307.6	659.8	223.0	436.78	1.511		
14,800.0	7,115.0	15,424.0	7,115.0	218.6	224.3	90.00	-491.9	-9,407.6	659.8	218.0	441.71	1.494 Level 3		
14,900.0	7,115.0	15,524.0	7,115.0	221.0	226.7	90.00	-491.6	-9,507.6	659.8	213.1	446.65	1.477 Level 3		
15,000.0	7,115.0	15,624.0	7,115.0	223.5	229.2	90.00	-491.4	-9,607.6	659.8	208.2	451.58	1.461 Level 3		
15,100.0	7,115.0	15,724.0	7,115.0	225.9	231.7	90.00	-491.1	-9,707.6	659.8	203.3	456.51	1.445 Level 3		
15,200.0	7,115.0	15,824.0	7,115.0	228.4	234.1	90.00	-490.9	-9,807.6	659.8	198.3	461.44	1.430 Level 3		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 6 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)				Between Ellipses (usft)	
15,300.0	7,115.0	15,924.0	7,115.0	230.8	236.6	90.00	-490.6	-9,907.6	659.8	193.4	466.38	1.415 Level 3		
15,400.0	7,115.0	16,024.0	7,115.0	233.3	239.1	90.00	-490.4	-10,007.6	659.8	188.5	471.31	1.400 Level 3		
15,500.0	7,115.0	16,124.0	7,115.0	235.8	241.5	90.00	-490.1	-10,107.6	659.8	183.5	476.24	1.385 Level 3		
15,600.0	7,115.0	16,224.0	7,115.0	238.2	244.0	90.00	-489.9	-10,207.6	659.8	178.6	481.18	1.371 Level 3		
15,700.0	7,115.0	16,324.0	7,115.0	240.7	246.5	90.00	-489.6	-10,307.6	659.8	173.6	486.11	1.357 Level 3		
15,800.0	7,115.0	16,424.0	7,115.0	243.1	248.9	90.00	-489.4	-10,407.6	659.8	168.7	491.05	1.344 Level 3		
15,900.0	7,115.0	16,524.0	7,115.0	245.6	251.4	90.00	-489.1	-10,507.6	659.8	163.8	495.98	1.330 Level 3		
16,000.0	7,115.0	16,624.0	7,115.0	248.0	253.9	90.00	-488.9	-10,607.6	659.8	158.8	500.92	1.317 Level 3		
16,100.0	7,115.0	16,724.0	7,115.0	250.5	256.3	90.00	-488.6	-10,707.6	659.8	153.9	505.85	1.304 Level 3		
16,200.0	7,115.0	16,824.0	7,115.0	252.9	258.8	90.00	-488.4	-10,807.6	659.8	149.0	510.79	1.292 Level 3		
16,300.0	7,115.0	16,924.0	7,115.0	255.4	261.3	90.00	-488.1	-10,907.6	659.8	144.0	515.72	1.279 Level 3		
16,400.0	7,115.0	17,024.0	7,115.0	257.9	263.7	90.00	-487.9	-11,007.6	659.8	139.1	520.66	1.267 Level 3		
16,500.0	7,115.0	17,124.0	7,115.0	260.3	266.2	90.00	-487.6	-11,107.6	659.8	134.2	525.60	1.255 Level 3		
16,600.0	7,115.0	17,224.0	7,115.0	262.8	268.7	90.00	-487.4	-11,207.6	659.8	129.2	530.53	1.244 Level 2		
16,700.0	7,115.0	17,324.0	7,115.0	265.2	271.1	90.00	-487.1	-11,307.6	659.8	124.3	535.47	1.232 Level 2		
16,800.0	7,115.0	17,424.0	7,115.0	267.7	273.6	90.00	-486.9	-11,407.6	659.8	119.3	540.41	1.221 Level 2		
16,900.0	7,115.0	17,524.0	7,115.0	270.2	276.1	90.00	-486.6	-11,507.6	659.8	114.4	545.34	1.210 Level 2		
17,000.0	7,115.0	17,624.0	7,115.0	272.6	278.5	90.00	-486.4	-11,607.6	659.8	109.5	550.28	1.199 Level 2		
17,100.0	7,115.0	17,723.9	7,115.0	275.1	281.0	90.00	-486.1	-11,707.6	659.8	104.5	555.22	1.188 Level 2		
17,104.5	7,115.0	17,728.5	7,115.0	275.2	281.1	90.00	-486.1	-11,712.1	659.8	104.3	555.44	1.188 Level 2, SF		

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 7 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	30.78	48.1	28.6	56.0					
100.0	100.0	100.0	100.0	0.1	0.1	30.78	48.1	28.6	56.0	55.7	0.27	210.994		
200.0	200.0	200.0	200.0	0.3	0.3	30.78	48.1	28.6	56.0	55.4	0.61	91.111		
300.0	300.0	300.9	300.9	0.5	0.5	150.76	47.6	27.9	55.9	55.0	0.97	57.945		
400.0	400.0	401.8	401.7	0.7	0.7	150.93	46.1	25.7	55.8	54.5	1.32	42.353		
500.0	499.9	502.7	502.5	0.9	0.9	151.23	43.6	22.1	55.6	54.0	1.67	33.237		
600.0	599.7	603.6	603.2	1.1	1.1	151.66	40.1	16.9	55.4	53.3	2.03	27.223		
700.0	699.4	704.5	703.8	1.3	1.3	152.20	35.6	10.3	55.0	52.6	2.40	22.942		
800.0	798.9	805.3	804.2	1.5	1.5	152.88	30.0	2.3	54.6	51.9	2.77	19.730		
900.0	898.3	906.2	904.4	1.8	1.8	153.70	23.5	-7.2	54.2	51.0	3.15	17.229		
1,000.0	997.4	1,007.1	1,004.4	2.0	2.0	154.65	16.0	-18.2	53.7	50.1	3.52	15.230		
1,100.0	1,096.3	1,108.0	1,104.2	2.3	2.4	155.75	7.5	-30.6	53.1	49.2	3.90	13.600		
1,200.0	1,194.9	1,208.9	1,203.6	2.7	2.7	157.01	-1.9	-44.5	52.5	48.2	4.28	12.252		
1,300.0	1,293.3	1,309.7	1,302.8	3.0	3.0	158.44	-12.4	-59.8	51.9	47.2	4.66	11.127		
1,400.0	1,391.2	1,410.6	1,401.6	3.4	3.4	160.04	-23.9	-76.5	51.2	46.2	5.03	10.182		
1,442.1	1,432.4	1,452.7	1,442.8	3.6	3.6	160.80	-28.9	-83.8	51.0	45.9	5.18	9.857 CC, ES		
1,500.0	1,488.9	1,510.6	1,499.4	3.8	3.8	162.02	-35.7	-93.9	51.3	46.0	5.37	9.551		
1,600.0	1,586.1	1,610.5	1,597.1	4.2	4.2	164.51	-47.6	-111.2	53.2	47.5	5.69	9.344		
1,700.0	1,682.9	1,710.4	1,694.7	4.7	4.6	167.21	-59.4	-128.5	56.9	50.9	6.00	9.487		
1,800.0	1,779.3	1,810.2	1,792.3	5.2	5.0	169.88	-71.3	-145.8	62.4	56.1	6.29	9.917		
1,900.0	1,875.2	1,909.9	1,889.8	5.7	5.4	172.30	-83.1	-163.1	69.7	63.1	6.59	10.582		
2,000.0	1,970.5	2,009.5	1,987.1	6.3	5.8	174.38	-94.9	-180.4	78.9	72.0	6.90	11.439		
2,100.0	2,065.4	2,108.8	2,084.3	6.9	6.2	176.11	-106.7	-197.6	89.9	82.7	7.21	12.458		
2,200.0	2,159.6	2,208.0	2,181.2	7.5	6.6	177.50	-118.5	-214.8	102.7	95.1	7.54	13.613		
2,300.0	2,253.3	2,306.9	2,277.9	8.1	7.0	178.61	-130.2	-232.0	117.2	109.3	7.87	14.888		
2,400.0	2,346.3	2,405.5	2,374.3	8.8	7.4	179.47	-141.9	-249.1	133.5	125.3	8.21	16.267		
2,500.0	2,439.0	2,504.0	2,470.6	9.5	7.8	-179.84	-153.6	-266.1	150.8	142.2	8.57	17.598		
2,600.0	2,531.7	2,602.5	2,566.9	10.2	8.2	-179.30	-165.3	-283.2	168.0	159.1	8.93	18.818		
2,700.0	2,624.4	2,701.0	2,663.2	10.9	8.6	-178.86	-177.0	-300.3	185.3	176.0	9.29	19.941		
2,800.0	2,717.1	2,799.5	2,759.5	11.6	9.0	-178.50	-188.6	-317.4	202.6	192.9	9.66	20.978		
2,900.0	2,809.8	2,898.0	2,855.8	12.3	9.4	-178.19	-200.3	-334.5	219.9	209.8	10.02	21.939		
3,000.0	2,902.6	2,996.5	2,952.1	13.0	9.8	-177.92	-212.0	-351.6	237.1	226.8	10.39	22.831		
3,100.0	2,995.3	3,095.0	3,048.4	13.7	10.2	-177.70	-223.7	-368.6	254.4	243.7	10.75	23.662		
3,200.0	3,088.0	3,193.4	3,144.7	14.4	10.6	-177.50	-235.4	-385.7	271.7	260.6	11.12	24.437		
3,300.0	3,180.7	3,291.9	3,240.9	15.1	11.0	-177.32	-247.1	-402.8	289.0	277.5	11.49	25.163		
3,400.0	3,273.4	3,390.4	3,337.2	15.8	11.4	-177.17	-258.8	-419.9	306.3	294.5	11.85	25.843		
3,500.0	3,366.1	3,488.9	3,433.5	16.5	11.8	-177.03	-270.4	-437.0	323.6	311.4	12.22	26.482		
3,600.0	3,458.8	3,587.4	3,529.8	17.2	12.2	-176.91	-282.1	-454.0	340.9	328.4	12.59	27.083		
3,700.0	3,551.5	3,685.9	3,626.1	17.9	12.6	-176.79	-293.8	-471.1	358.2	345.3	12.96	27.649		
3,800.0	3,644.2	3,784.4	3,722.4	18.6	13.0	-176.69	-305.5	-488.2	375.6	362.2	13.32	28.184		
3,900.0	3,736.9	3,882.9	3,818.7	19.3	13.4	-176.60	-317.2	-505.3	392.9	379.2	13.69	28.691		
4,000.0	3,829.6	3,981.4	3,915.0	20.0	13.8	-176.51	-328.9	-522.4	410.2	396.1	14.06	29.170		
4,100.0	3,922.3	4,079.8	4,011.3	20.7	14.2	-176.44	-340.6	-539.4	427.5	413.1	14.43	29.625		
4,200.0	4,015.0	4,178.3	4,107.5	21.4	14.6	-176.36	-352.2	-556.5	444.8	430.0	14.80	30.056		
4,300.0	4,107.7	4,276.8	4,203.8	22.1	15.0	-176.30	-363.9	-573.6	462.1	446.9	15.17	30.467		
4,400.0	4,200.4	4,375.3	4,300.1	22.9	15.5	-176.23	-375.6	-590.7	479.4	463.9	15.54	30.858		
4,500.0	4,293.1	4,473.8	4,396.4	23.6	15.9	-176.18	-387.3	-607.8	496.7	480.8	15.91	31.231		
4,600.0	4,385.8	4,572.3	4,492.7	24.3	16.3	-176.12	-399.0	-624.8	514.0	497.8	16.27	31.587		
4,700.0	4,478.5	4,670.8	4,589.0	25.0	16.7	-176.07	-410.7	-641.9	531.4	514.7	16.64	31.926		
4,800.0	4,571.2	4,769.3	4,685.3	25.7	17.1	-176.03	-422.4	-659.0	548.7	531.7	17.01	32.251		
4,900.0	4,663.9	4,867.8	4,781.6	26.4	17.5	-175.98	-434.0	-676.1	566.0	548.6	17.38	32.562		
5,000.0	4,756.6	4,966.2	4,877.9	27.1	17.9	-175.94	-445.7	-693.2	583.3	565.6	17.75	32.860		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 7 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.0	4,849.3	5,064.7	4,974.2	27.8	18.3	-175.90	-457.4	-710.2	600.6	582.5	18.12	33.146		
5,200.0	4,942.0	5,163.2	5,070.4	28.5	18.7	-175.86	-469.1	-727.3	617.9	599.4	18.49	33.420		
5,300.0	5,034.7	5,261.7	5,166.7	29.2	19.1	-175.83	-480.8	-744.4	635.3	616.4	18.86	33.684		
5,400.0	5,127.4	5,360.2	5,263.0	29.9	19.5	-175.80	-492.5	-761.5	652.6	633.3	19.23	33.937		
5,500.0	5,220.1	5,458.7	5,359.3	30.6	19.9	-175.76	-504.2	-778.6	669.9	650.3	19.60	34.181		
5,600.0	5,312.8	5,557.2	5,455.6	31.3	20.3	-175.73	-515.8	-795.7	687.2	667.2	19.97	34.415		
5,700.0	5,405.5	5,655.7	5,551.9	32.1	20.7	-175.71	-527.5	-812.7	704.5	684.2	20.34	34.641		
5,800.0	5,498.2	5,754.1	5,648.2	32.8	21.1	-175.68	-539.2	-829.8	721.8	701.1	20.71	34.859		
5,900.0	5,590.9	5,852.6	5,744.5	33.5	21.5	-175.65	-550.9	-846.9	739.1	718.1	21.08	35.069		
6,000.0	5,683.6	5,951.1	5,840.8	34.2	21.9	-175.63	-562.6	-864.0	756.5	735.0	21.45	35.272		
6,100.0	5,776.3	6,049.6	5,937.1	34.9	22.3	-175.61	-574.3	-881.1	773.8	752.0	21.82	35.468		
6,200.0	5,869.0	6,148.1	6,033.3	35.6	22.7	-175.58	-586.0	-898.1	791.1	768.9	22.19	35.657		
6,300.0	5,961.7	6,246.6	6,129.6	36.3	23.1	-175.56	-597.6	-915.2	808.4	785.9	22.56	35.841		
6,400.0	6,054.4	7,371.1	6,790.0	37.0	37.5	149.16	-676.2	-1,661.1	787.0	740.0	46.98	16.751		
6,500.0	6,147.1	7,403.5	6,790.0	37.7	38.2	145.76	-676.1	-1,693.6	708.9	657.9	50.91	13.923		
6,600.0	6,239.8	7,436.0	6,790.0	38.4	38.9	142.16	-676.1	-1,726.0	635.2	580.1	55.04	11.541		
6,700.0	6,332.5	7,468.4	6,790.0	39.1	39.6	138.39	-676.0	-1,758.5	567.7	508.5	59.28	9.578		
6,800.0	6,425.2	7,500.9	6,790.0	39.8	40.3	134.47	-675.9	-1,790.9	509.0	445.4	63.56	8.009		
6,900.0	6,517.9	7,533.4	6,790.0	40.6	41.0	130.42	-675.8	-1,823.4	462.3	394.5	67.81	6.818		
7,000.0	6,610.6	7,565.8	6,790.0	41.3	41.6	126.29	-675.7	-1,855.9	431.6	359.7	71.93	6.000		
7,100.0	6,703.3	7,598.4	6,790.0	42.0	42.3	120.93	-675.7	-1,888.4	420.4	344.5	75.84	5.543		
7,103.5	6,706.5	7,599.6	6,790.0	42.0	42.4	120.40	-675.7	-1,889.6	420.4	344.4	75.99	5.532		
7,200.0	6,792.5	7,639.6	6,790.0	42.9	43.2	107.00	-675.6	-1,929.6	429.4	348.7	80.76	5.317		
7,300.0	6,874.2	7,694.6	6,790.0	44.0	44.4	94.22	-675.4	-1,984.6	453.9	367.8	86.10	5.271		
7,400.0	6,946.6	7,761.9	6,790.0	45.4	45.9	82.47	-675.2	-2,052.0	486.5	396.7	89.79	5.418		
7,500.0	7,007.6	7,840.0	6,790.0	47.0	47.7	72.57	-675.1	-2,130.0	520.7	429.7	90.98	5.723		
7,600.0	7,056.0	7,926.8	6,790.0	48.8	49.6	65.08	-674.8	-2,216.9	551.3	460.9	90.31	6.104		
7,700.0	7,090.5	8,020.3	6,790.0	50.7	51.7	60.07	-674.6	-2,310.4	574.6	485.7	88.90	6.464		
7,800.0	7,110.2	8,118.2	6,790.0	52.7	53.9	57.35	-674.4	-2,408.2	588.5	500.8	87.73	6.708		
7,900.0	7,115.0	8,218.0	6,790.0	54.8	56.2	56.70	-674.1	-2,508.0	592.0	503.7	88.28	6.706		
8,000.0	7,115.0	8,318.0	6,790.0	56.8	58.5	56.70	-673.9	-2,608.0	592.0	499.8	92.18	6.422		
8,100.0	7,115.0	8,418.0	6,790.0	58.9	60.9	56.70	-673.6	-2,708.0	592.0	495.9	96.10	6.160		
8,200.0	7,115.0	8,518.0	6,790.0	61.1	63.2	56.70	-673.4	-2,808.0	592.0	491.9	100.03	5.917		
8,300.0	7,115.0	8,618.0	6,790.0	63.2	65.6	56.70	-673.1	-2,908.0	592.0	488.0	103.99	5.692		
8,400.0	7,115.0	8,718.0	6,790.0	65.4	67.9	56.70	-672.9	-3,008.0	592.0	484.0	107.96	5.483		
8,500.0	7,115.0	8,818.0	6,790.0	67.6	70.3	56.70	-672.6	-3,108.0	592.0	480.0	111.94	5.288		
8,600.0	7,115.0	8,918.0	6,790.0	69.8	72.6	56.70	-672.4	-3,208.0	592.0	476.0	115.93	5.106		
8,700.0	7,115.0	9,018.0	6,790.0	72.1	75.0	56.70	-672.1	-3,308.0	592.0	472.0	119.94	4.936		
8,800.0	7,115.0	9,118.0	6,790.0	74.3	77.4	56.70	-671.9	-3,408.0	592.0	468.0	123.95	4.776		
8,900.0	7,115.0	9,218.0	6,790.0	76.6	79.8	56.70	-671.6	-3,508.0	592.0	464.0	127.97	4.626		
9,000.0	7,115.0	9,318.0	6,790.0	78.9	82.2	56.70	-671.4	-3,608.0	592.0	460.0	132.00	4.485		
9,100.0	7,115.0	9,418.0	6,790.0	81.2	84.6	56.70	-671.1	-3,708.0	592.0	455.9	136.03	4.352		
9,200.0	7,115.0	9,518.0	6,790.0	83.5	87.0	56.70	-670.9	-3,808.0	592.0	451.9	140.07	4.226		
9,300.0	7,115.0	9,618.0	6,790.0	85.8	89.4	56.70	-670.6	-3,908.0	592.0	447.8	144.12	4.107		
9,400.0	7,115.0	9,718.0	6,790.0	88.1	91.8	56.70	-670.4	-4,008.0	592.0	443.8	148.17	3.995		
9,500.0	7,115.0	9,818.0	6,790.0	90.4	94.2	56.70	-670.1	-4,108.0	592.0	439.7	152.23	3.889		
9,600.0	7,115.0	9,918.0	6,790.0	92.8	96.7	56.70	-669.9	-4,208.0	592.0	435.7	156.29	3.787		
9,700.0	7,115.0	10,018.0	6,790.0	95.1	99.1	56.70	-669.6	-4,308.0	592.0	431.6	160.36	3.691		
9,800.0	7,115.0	10,118.0	6,790.0	97.5	101.5	56.70	-669.4	-4,408.0	591.9	427.5	164.43	3.600		
9,900.0	7,115.0	10,218.0	6,790.0	99.8	103.9	56.70	-669.1	-4,508.0	591.9	423.4	168.50	3.513		
10,000.0	7,115.0	10,318.0	6,790.0	102.2	106.4	56.70	-668.9	-4,608.0	591.9	419.4	172.58	3.430		
10,100.0	7,115.0	10,418.0	6,790.0	104.5	108.8	56.70	-668.6	-4,708.0	591.9	415.3	176.66	3.351		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 7 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference  (usft)	Offset  (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,200.0	7,115.0	10,518.0	6,790.0	106.9	111.2	56.70	-668.4	-4,808.0	591.9	411.2	180.74	3.275		
10,300.0	7,115.0	10,618.0	6,790.0	109.3	113.7	56.70	-668.1	-4,908.0	591.9	407.1	184.82	3.203		
10,400.0	7,115.0	10,718.0	6,790.0	111.7	116.1	56.70	-667.9	-5,008.0	591.9	403.0	188.91	3.133		
10,500.0	7,115.0	10,818.0	6,790.0	114.1	118.5	56.70	-667.6	-5,108.0	591.9	398.9	193.00	3.067		
10,600.0	7,115.0	10,918.0	6,790.0	116.5	121.0	56.70	-667.4	-5,208.0	591.9	394.9	197.09	3.003		
10,700.0	7,115.0	11,018.0	6,790.0	118.8	123.4	56.70	-667.1	-5,308.0	591.9	390.8	201.19	2.942		
10,800.0	7,115.0	11,118.0	6,790.0	121.2	125.9	56.70	-666.9	-5,408.0	591.9	386.7	205.28	2.884		
10,900.0	7,115.0	11,218.0	6,790.0	123.6	128.3	56.70	-666.6	-5,508.0	591.9	382.6	209.38	2.827		
11,000.0	7,115.0	11,318.0	6,790.0	126.0	130.8	56.70	-666.4	-5,608.0	591.9	378.5	213.48	2.773		
11,100.0	7,115.0	11,418.0	6,790.0	128.5	133.2	56.70	-666.1	-5,708.0	591.9	374.4	217.58	2.721		
11,200.0	7,115.0	11,518.0	6,790.0	130.9	135.7	56.70	-665.9	-5,808.0	591.9	370.3	221.68	2.670		
11,300.0	7,115.0	11,618.0	6,790.0	133.3	138.1	56.70	-665.6	-5,908.0	591.9	366.2	225.79	2.622		
11,400.0	7,115.0	11,718.0	6,790.0	135.7	140.6	56.70	-665.4	-6,008.0	591.9	362.1	229.89	2.575		
11,500.0	7,115.0	11,818.0	6,790.0	138.1	143.0	56.70	-665.1	-6,108.0	591.9	357.9	234.00	2.530		
11,600.0	7,115.0	11,918.0	6,790.0	140.5	145.5	56.70	-664.9	-6,208.0	591.9	353.8	238.11	2.486		
11,700.0	7,115.0	12,018.0	6,790.0	142.9	147.9	56.70	-664.6	-6,308.0	591.9	349.7	242.22	2.444		
11,800.0	7,115.0	12,118.0	6,790.0	145.4	150.4	56.70	-664.4	-6,408.0	591.9	345.6	246.33	2.403		
11,900.0	7,115.0	12,218.0	6,790.0	147.8	152.8	56.70	-664.1	-6,508.0	591.9	341.5	250.44	2.364		
12,000.0	7,115.0	12,318.0	6,790.0	150.2	155.3	56.70	-663.9	-6,608.0	591.9	337.4	254.55	2.325		
12,100.0	7,115.0	12,418.0	6,790.0	152.6	157.7	56.70	-663.6	-6,708.0	591.9	333.3	258.66	2.288		
12,200.0	7,115.0	12,518.0	6,790.0	155.1	160.2	56.70	-663.4	-6,808.0	591.9	329.2	262.78	2.253		
12,300.0	7,115.0	12,618.0	6,790.0	157.5	162.6	56.70	-663.1	-6,908.0	591.9	325.0	266.89	2.218		
12,400.0	7,115.0	12,718.0	6,790.0	159.9	165.1	56.70	-662.9	-7,008.0	591.9	320.9	271.01	2.184		
12,500.0	7,115.0	12,818.0	6,790.0	162.4	167.5	56.70	-662.6	-7,108.0	591.9	316.8	275.13	2.152		
12,600.0	7,115.0	12,918.0	6,790.0	164.8	170.0	56.70	-662.4	-7,208.0	591.9	312.7	279.24	2.120		
12,700.0	7,115.0	13,018.0	6,790.0	167.2	172.5	56.70	-662.1	-7,308.0	591.9	308.6	283.36	2.089		
12,800.0	7,115.0	13,118.0	6,790.0	169.7	174.9	56.70	-661.9	-7,408.0	591.9	304.5	287.48	2.059		
12,900.0	7,115.0	13,218.0	6,790.0	172.1	177.4	56.70	-661.6	-7,508.0	591.9	300.3	291.60	2.030		
13,000.0	7,115.0	13,318.0	6,790.0	174.5	179.8	56.70	-661.4	-7,608.0	591.9	296.2	295.72	2.002		
13,100.0	7,115.0	13,418.0	6,790.0	177.0	182.3	56.70	-661.1	-7,708.0	591.9	292.1	299.84	1.974		
13,200.0	7,115.0	13,518.0	6,790.0	179.4	184.8	56.70	-660.9	-7,808.0	591.9	288.0	303.96	1.947		
13,300.0	7,115.0	13,618.0	6,790.0	181.9	187.2	56.70	-660.6	-7,908.0	591.9	283.9	308.08	1.921		
13,400.0	7,115.0	13,718.0	6,790.0	184.3	189.7	56.70	-660.4	-8,008.0	591.9	279.7	312.21	1.896		
13,500.0	7,115.0	13,818.0	6,790.0	186.7	192.1	56.70	-660.1	-8,108.0	591.9	275.6	316.33	1.871		
13,600.0	7,115.0	13,918.0	6,790.0	189.2	194.6	56.70	-659.9	-8,208.0	591.9	271.5	320.45	1.847		
13,700.0	7,115.0	14,018.0	6,790.0	191.6	197.1	56.70	-659.6	-8,308.0	591.9	267.4	324.57	1.824		
13,800.0	7,115.0	14,118.0	6,790.0	194.1	199.5	56.70	-659.4	-8,408.0	591.9	263.2	328.70	1.801		
13,900.0	7,115.0	14,218.0	6,790.0	196.5	202.0	56.70	-659.1	-8,508.0	591.9	259.1	332.82	1.779		
14,000.0	7,115.0	14,318.0	6,790.0	199.0	204.5	56.70	-658.9	-8,608.0	591.9	255.0	336.95	1.757		
14,100.0	7,115.0	14,418.0	6,790.0	201.4	206.9	56.70	-658.6	-8,708.0	591.9	250.9	341.07	1.736		
14,200.0	7,115.0	14,518.0	6,790.0	203.9	209.4	56.70	-658.4	-8,808.0	591.9	246.7	345.20	1.715		
14,300.0	7,115.0	14,618.0	6,790.0	206.3	211.8	56.70	-658.1	-8,908.0	591.9	242.6	349.33	1.695		
14,400.0	7,115.0	14,718.0	6,790.0	208.8	214.3	56.70	-657.9	-9,008.0	591.9	238.5	353.45	1.675		
14,500.0	7,115.0	14,818.0	6,790.0	211.2	216.8	56.70	-657.6	-9,108.0	591.9	234.4	357.58	1.655		
14,600.0	7,115.0	14,918.0	6,790.0	213.7	219.2	56.70	-657.4	-9,208.0	591.9	230.2	361.71	1.637		
14,700.0	7,115.0	15,018.0	6,790.0	216.1	221.7	56.70	-657.1	-9,308.0	591.9	226.1	365.83	1.618		
14,800.0	7,115.0	15,118.0	6,790.0	218.6	224.2	56.70	-656.9	-9,408.0	591.9	222.0	369.96	1.600		
14,900.0	7,115.0	15,218.0	6,790.0	221.0	226.6	56.70	-656.6	-9,508.0	591.9	217.8	374.09	1.582		
15,000.0	7,115.0	15,318.0	6,790.0	223.5	229.1	56.70	-656.4	-9,608.0	591.9	213.7	378.22	1.565		
15,100.0	7,115.0	15,418.0	6,790.0	225.9	231.6	56.70	-656.1	-9,708.0	591.9	209.6	382.35	1.548		
15,200.0	7,115.0	15,518.0	6,790.0	228.4	234.0	56.70	-655.9	-9,808.0	591.9	205.5	386.48	1.532		
15,300.0	7,115.0	15,618.0	6,790.0	230.8	236.5	56.70	-655.6	-9,908.0	591.9	201.3	390.61	1.515		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 7 - Hz - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
15,400.0	7,115.0	15,718.0	6,790.0	233.3	239.0	56.70	-655.4	-10,008.0	591.9	197.2	394.74	1.500	Level 3	
15,500.0	7,115.0	15,818.0	6,790.0	235.8	241.4	56.70	-655.1	-10,108.0	591.9	193.1	398.87	1.484	Level 3	
15,600.0	7,115.0	15,918.0	6,790.0	238.2	243.9	56.70	-654.9	-10,208.0	591.9	188.9	403.00	1.469	Level 3	
15,700.0	7,115.0	16,018.0	6,790.0	240.7	246.4	56.70	-654.6	-10,308.0	591.9	184.8	407.13	1.454	Level 3	
15,800.0	7,115.0	16,118.0	6,790.0	243.1	248.8	56.70	-654.4	-10,408.0	591.9	180.7	411.26	1.439	Level 3	
15,900.0	7,115.0	16,218.0	6,790.0	245.6	251.3	56.70	-654.1	-10,508.0	591.9	176.5	415.39	1.425	Level 3	
16,000.0	7,115.0	16,318.0	6,790.0	248.0	253.8	56.70	-653.9	-10,608.0	591.9	172.4	419.52	1.411	Level 3	
16,100.0	7,115.0	16,418.0	6,790.0	250.5	256.2	56.70	-653.6	-10,708.0	591.9	168.3	423.65	1.397	Level 3	
16,200.0	7,115.0	16,518.0	6,790.0	252.9	258.7	56.70	-653.4	-10,808.0	591.9	164.1	427.78	1.384	Level 3	
16,300.0	7,115.0	16,618.0	6,790.0	255.4	261.2	56.70	-653.1	-10,908.0	591.9	160.0	431.91	1.370	Level 3	
16,400.0	7,115.0	16,718.0	6,790.0	257.9	263.6	56.70	-652.9	-11,008.0	591.9	155.9	436.04	1.357	Level 3	
16,500.0	7,115.0	16,818.0	6,790.0	260.3	266.1	56.70	-652.6	-11,108.0	591.9	151.8	440.18	1.345	Level 3	
16,600.0	7,115.0	16,918.0	6,790.0	262.8	268.6	56.70	-652.4	-11,208.0	591.9	147.6	444.31	1.332	Level 3	
16,700.0	7,115.0	17,018.0	6,790.0	265.2	271.0	56.70	-652.1	-11,308.0	591.9	143.5	448.44	1.320	Level 3	
16,800.0	7,115.0	17,118.0	6,790.0	267.7	273.5	56.70	-651.9	-11,408.0	591.9	139.4	452.57	1.308	Level 3	
16,900.0	7,115.0	17,218.0	6,790.0	270.2	276.0	56.70	-651.7	-11,508.0	591.9	135.2	456.70	1.296	Level 3	
17,000.0	7,115.0	17,318.0	6,790.0	272.6	278.4	56.70	-651.4	-11,608.0	591.9	131.1	460.84	1.284	Level 3	
17,100.0	7,115.0	17,418.0	6,790.0	275.1	280.9	56.70	-651.2	-11,708.0	591.9	127.0	464.97	1.273	Level 3	
17,104.5	7,115.0	17,422.5	6,790.0	275.2	281.0	56.70	-651.1	-11,712.5	591.9	126.8	465.16	1.273	Level 3, SF	

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 8 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	30.65	24.4	14.5	28.4					
100.0	100.0	100.0	100.0	0.1	0.1	30.65	24.4	14.5	28.4	28.1	0.27	106.945		
200.0	200.0	200.0	200.0	0.3	0.3	30.65	24.4	14.5	28.4	27.8	0.61	46.181 CC		
300.0	300.0	300.4	300.4	0.5	0.5	150.47	24.0	13.7	28.4	27.4	0.96	29.436		
400.0	400.0	400.8	400.8	0.7	0.7	150.19	22.8	11.3	28.5	27.1	1.32	21.610		
500.0	499.9	501.3	501.1	0.9	0.9	149.73	20.9	7.4	28.6	26.9	1.67	17.071		
600.0	599.7	601.7	601.3	1.1	1.1	149.09	18.1	1.9	28.8	26.7	2.04	14.100		
700.0	699.4	702.1	701.4	1.3	1.3	148.28	14.6	-5.2	29.0	26.6	2.42	11.999		
800.0	798.9	802.5	801.4	1.5	1.5	147.31	10.3	-13.8	29.3	26.5	2.81	10.427		
900.0	898.3	902.9	901.1	1.8	1.8	146.19	5.2	-24.1	29.6	26.4	3.22	9.201		
1,000.0	997.4	1,003.3	1,000.7	2.0	2.0	144.92	-0.7	-35.8	30.0	26.4	3.66	8.212 ES		
1,100.0	1,096.3	1,103.7	1,100.0	2.3	2.3	143.54	-7.4	-49.2	30.5	26.4	4.13	7.392		
1,200.0	1,194.9	1,204.1	1,199.0	2.7	2.7	142.04	-14.8	-64.0	31.1	26.4	4.64	6.699		
1,300.0	1,293.3	1,304.5	1,297.7	3.0	3.0	140.44	-23.0	-80.5	31.7	26.5	5.19	6.104		
1,400.0	1,391.2	1,404.9	1,396.1	3.4	3.4	138.77	-32.0	-98.5	32.4	26.6	5.80	5.586		
1,500.0	1,488.9	1,505.3	1,494.1	3.8	3.8	137.05	-41.8	-118.0	33.2	26.8	6.48	5.132		
1,600.0	1,586.1	1,605.7	1,591.7	4.2	4.3	135.28	-52.3	-139.0	34.1	26.9	7.22	4.732		
1,700.0	1,682.9	1,706.1	1,688.8	4.7	4.7	133.48	-63.5	-161.6	35.2	27.1	8.03	4.380		
1,800.0	1,779.3	1,806.5	1,785.5	5.2	5.2	131.68	-75.6	-185.7	36.3	27.4	8.91	4.070		
1,900.0	1,875.2	1,906.9	1,881.7	5.7	5.8	129.88	-88.4	-211.3	37.5	27.6	9.88	3.796		
2,000.0	1,970.5	2,007.2	1,977.4	6.3	6.3	128.10	-101.9	-238.4	38.8	27.9	10.92	3.555		
2,100.0	2,065.4	2,107.6	2,072.6	6.9	6.9	126.35	-116.2	-267.0	40.3	28.2	12.05	3.342		
2,200.0	2,159.6	2,208.0	2,167.1	7.5	7.6	124.65	-131.2	-297.1	41.8	28.6	13.26	3.155		
2,300.0	2,253.3	2,308.3	2,261.1	8.1	8.2	122.99	-147.0	-328.7	43.5	29.0	14.55	2.991		
2,400.0	2,346.3	2,408.7	2,354.4	8.8	8.9	121.38	-163.5	-361.7	45.3	29.4	15.91	2.846		
2,500.0	2,439.0	2,509.0	2,447.0	9.5	9.6	118.97	-180.7	-396.1	46.8	29.3	17.44	2.682		
2,600.0	2,531.7	2,609.0	2,539.0	10.2	10.3	115.92	-198.2	-431.1	48.0	29.0	19.08	2.519		
2,700.0	2,624.4	2,708.9	2,631.0	10.9	11.1	113.02	-215.6	-466.1	49.5	28.7	20.72	2.386		
2,800.0	2,717.1	2,808.9	2,723.0	11.6	11.8	110.30	-233.1	-501.0	51.0	28.6	22.36	2.279		
2,900.0	2,809.8	2,908.8	2,815.0	12.3	12.5	107.74	-250.6	-536.0	52.6	28.6	23.99	2.193		
3,000.0	2,902.6	3,008.8	2,907.0	13.0	13.3	105.33	-268.0	-570.9	54.3	28.7	25.61	2.122		
3,100.0	2,995.3	3,108.8	2,999.1	13.7	14.0	103.08	-285.5	-605.9	56.2	29.0	27.20	2.065		
3,200.0	3,088.0	3,208.7	3,091.1	14.4	14.7	100.98	-302.9	-640.8	58.1	29.3	28.77	2.018		
3,300.0	3,180.7	3,308.7	3,183.1	15.1	15.5	99.01	-320.4	-675.8	60.0	29.7	30.32	1.980		
3,400.0	3,273.4	3,408.6	3,275.1	15.8	16.2	97.16	-337.9	-710.7	62.1	30.2	31.85	1.949		
3,500.0	3,366.1	3,508.6	3,367.1	16.5	16.9	95.44	-355.3	-745.7	64.2	30.8	33.35	1.925		
3,600.0	3,458.8	3,608.6	3,459.1	17.2	17.7	93.82	-372.8	-780.7	66.3	31.5	34.83	1.905		
3,700.0	3,551.5	3,708.5	3,551.1	17.9	18.4	92.31	-390.3	-815.6	68.5	32.3	36.29	1.889		
3,800.0	3,644.2	3,808.5	3,643.1	18.6	19.1	90.90	-407.7	-850.6	70.8	33.1	37.73	1.876		
3,900.0	3,736.9	3,908.4	3,735.1	19.3	19.9	89.57	-425.2	-885.5	73.1	33.9	39.16	1.866		
4,000.0	3,829.6	4,008.4	3,827.1	20.0	20.6	88.32	-442.6	-920.5	75.4	34.8	40.56	1.859		
4,100.0	3,922.3	4,108.4	3,919.1	20.7	21.4	87.15	-460.1	-955.4	77.8	35.8	41.95	1.854		
4,200.0	4,015.0	4,208.3	4,011.1	21.4	22.1	86.05	-477.6	-990.4	80.2	36.8	43.33	1.850		
4,300.0	4,107.7	4,308.3	4,103.1	22.1	22.8	85.01	-495.0	-1,025.3	82.6	37.9	44.69	1.848		
4,400.0	4,200.4	4,408.2	4,195.1	22.9	23.6	84.03	-512.5	-1,060.3	85.0	39.0	46.04	1.847		
4,500.0	4,293.1	4,508.2	4,287.1	23.6	24.3	83.11	-530.0	-1,095.3	87.5	40.1	47.38	1.847		
4,600.0	4,385.8	4,608.2	4,379.1	24.3	25.0	82.24	-547.4	-1,130.2	90.0	41.3	48.71	1.848		
4,700.0	4,478.5	4,708.1	4,471.2	25.0	25.8	81.41	-564.9	-1,165.2	92.5	42.5	50.02	1.849		
4,800.0	4,571.2	4,808.1	4,563.2	25.7	26.5	80.63	-582.3	-1,200.1	95.0	43.7	51.33	1.851		
4,900.0	4,663.9	4,908.0	4,655.2	26.4	27.3	79.89	-599.8	-1,235.1	97.6	44.9	52.63	1.854		
5,000.0	4,756.6	5,008.0	4,747.2	27.1	28.0	79.19	-617.3	-1,270.0	100.1	46.2	53.92	1.857		
5,100.0	4,849.3	5,108.0	4,839.2	27.8	28.7	78.52	-634.7	-1,305.0	102.7	47.5	55.21	1.860		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 8 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,200.0	4,942.0	5,207.9	4,931.2	28.5	29.5	77.88	-652.2	-1,339.9	105.3	48.8	56.49	1.864		
5,300.0	5,034.7	5,307.9	5,023.2	29.2	30.2	77.28	-669.7	-1,374.9	107.9	50.1	57.76	1.868		
5,400.0	5,127.4	5,407.8	5,115.2	29.9	31.0	76.70	-687.1	-1,409.9	110.5	51.5	59.03	1.872		
5,500.0	5,220.1	5,507.8	5,207.2	30.6	31.7	76.15	-704.6	-1,444.8	113.1	52.8	60.29	1.876		
5,600.0	5,312.8	5,607.8	5,299.2	31.3	32.5	75.63	-722.0	-1,479.8	115.8	54.2	61.55	1.881		
5,700.0	5,405.5	5,707.7	5,391.2	32.1	33.2	75.13	-739.5	-1,514.7	118.4	55.6	62.80	1.885		
5,800.0	5,498.2	5,807.7	5,483.2	32.8	33.9	74.65	-757.0	-1,549.7	121.1	57.0	64.05	1.890		
5,900.0	5,590.9	5,907.6	5,575.2	33.5	34.7	74.19	-774.4	-1,584.6	123.7	58.4	65.29	1.895		
6,000.0	5,683.6	6,007.6	5,667.2	34.2	35.4	73.75	-791.9	-1,619.6	126.4	59.8	66.53	1.900		
6,100.0	5,776.3	6,107.6	5,759.2	34.9	36.2	73.33	-809.3	-1,654.5	129.0	61.3	67.77	1.904		
6,200.0	5,869.0	6,207.5	5,851.2	35.6	36.9	72.92	-826.8	-1,689.5	131.7	62.7	69.00	1.909		
6,300.0	5,961.7	6,307.5	5,943.3	36.3	37.6	72.54	-844.3	-1,724.5	134.4	64.2	70.23	1.914		
6,400.0	6,054.4	6,407.4	6,035.3	37.0	38.4	72.16	-861.7	-1,759.4	137.1	65.6	71.46	1.919		
6,500.0	6,147.1	6,507.4	6,127.3	37.7	39.1	71.80	-879.2	-1,794.4	139.8	67.1	72.69	1.923		
6,600.0	6,239.8	6,607.4	6,219.3	38.4	39.9	71.46	-896.7	-1,829.3	142.5	68.6	73.91	1.928		
6,700.0	6,332.5	6,707.3	6,311.3	39.1	40.6	71.13	-914.1	-1,864.3	145.2	70.1	75.13	1.933		
6,800.0	6,425.2	6,803.9	6,400.1	39.8	41.3	70.75	-931.0	-1,898.3	148.2	71.9	76.31	1.942		
6,900.0	6,517.9	6,887.4	6,473.8	40.6	42.1	68.69	-944.9	-1,934.7	158.4	81.7	76.68	2.066		
7,000.0	6,610.6	6,966.9	6,539.1	41.3	43.1	65.01	-957.3	-1,978.3	179.4	103.4	76.04	2.359		
7,100.0	6,703.3	7,040.6	6,594.4	42.0	44.1	59.56	-967.7	-2,025.7	211.3	136.7	74.66	2.831		
7,200.0	6,792.5	7,110.4	6,641.6	42.9	45.1	47.04	-976.6	-2,076.4	245.9	173.7	72.23	3.405		
7,300.0	6,874.2	7,178.7	6,682.1	44.0	46.2	39.49	-984.2	-2,130.8	277.1	207.4	69.65	3.978		
7,400.0	6,946.6	7,250.0	6,718.2	45.4	47.5	34.54	-990.9	-2,192.0	304.1	237.4	66.69	4.560		
7,500.0	7,007.6	7,311.9	6,743.8	47.0	48.7	31.35	-995.7	-2,248.0	326.3	263.0	63.34	5.152		
7,600.0	7,056.0	7,377.3	6,764.9	48.8	50.0	29.18	-999.5	-2,309.8	343.7	284.2	59.55	5.772		
7,700.0	7,090.5	7,450.0	6,781.0	50.7	51.5	27.78	-1,002.4	-2,380.6	356.1	300.6	55.44	6.423		
7,800.0	7,110.2	7,500.0	6,787.4	52.7	52.5	27.10	-1,003.5	-2,430.2	362.9	312.0	50.97	7.121		
7,900.0	7,115.0	7,578.8	6,790.0	54.8	54.2	26.92	-1,003.8	-2,508.9	364.5	316.5	47.99	7.596		
8,000.0	7,115.0	7,678.8	6,790.0	56.8	56.3	26.92	-1,003.6	-2,608.9	364.5	314.4	50.11	7.274		
8,100.0	7,115.0	7,778.8	6,790.0	58.9	58.5	26.92	-1,003.3	-2,708.9	364.5	312.3	52.24	6.977		
8,200.0	7,115.0	7,878.8	6,790.0	61.1	60.7	26.92	-1,003.1	-2,808.9	364.5	310.1	54.39	6.701		
8,300.0	7,115.0	7,978.8	6,790.0	63.2	62.9	26.92	-1,002.9	-2,908.9	364.5	307.9	56.54	6.446		
8,400.0	7,115.0	8,078.8	6,790.0	65.4	65.1	26.92	-1,002.6	-3,008.9	364.5	305.8	58.71	6.209		
8,500.0	7,115.0	8,178.8	6,790.0	67.6	67.3	26.92	-1,002.4	-3,108.9	364.5	303.6	60.88	5.987		
8,600.0	7,115.0	8,278.8	6,790.0	69.8	69.6	26.92	-1,002.1	-3,208.9	364.5	301.4	63.05	5.781		
8,700.0	7,115.0	8,378.8	6,790.0	72.1	71.9	26.92	-1,001.9	-3,308.9	364.5	299.2	65.24	5.587		
8,800.0	7,115.0	8,478.8	6,790.0	74.3	74.1	26.92	-1,001.6	-3,408.9	364.5	297.1	67.43	5.406		
8,900.0	7,115.0	8,578.8	6,790.0	76.6	76.4	26.92	-1,001.4	-3,508.9	364.5	294.9	69.62	5.235		
9,000.0	7,115.0	8,678.8	6,790.0	78.9	78.8	26.91	-1,001.1	-3,608.9	364.5	292.7	71.82	5.075		
9,100.0	7,115.0	8,778.8	6,790.0	81.2	81.1	26.91	-1,000.9	-3,708.9	364.5	290.5	74.02	4.924		
9,200.0	7,115.0	8,878.8	6,790.0	83.5	83.4	26.91	-1,000.6	-3,808.9	364.5	288.3	76.22	4.782		
9,300.0	7,115.0	8,978.8	6,790.0	85.8	85.7	26.91	-1,000.4	-3,908.9	364.5	286.0	78.43	4.647		
9,400.0	7,115.0	9,078.8	6,790.0	88.1	88.1	26.91	-1,000.1	-4,008.9	364.5	283.8	80.64	4.519		
9,500.0	7,115.0	9,178.8	6,790.0	90.4	90.4	26.91	-999.9	-4,108.9	364.5	281.6	82.86	4.399		
9,600.0	7,115.0	9,278.8	6,790.0	92.8	92.8	26.91	-999.7	-4,208.9	364.5	279.4	85.08	4.284		
9,700.0	7,115.0	9,378.8	6,790.0	95.1	95.1	26.91	-999.4	-4,308.9	364.5	277.2	87.30	4.175		
9,800.0	7,115.0	9,478.8	6,790.0	97.5	97.5	26.91	-999.2	-4,408.9	364.5	274.9	89.52	4.071		
9,900.0	7,115.0	9,578.8	6,790.0	99.8	99.9	26.91	-998.9	-4,508.9	364.5	272.7	91.74	3.973		
10,000.0	7,115.0	9,678.8	6,790.0	102.2	102.3	26.91	-998.7	-4,608.9	364.5	270.5	93.97	3.879		
10,100.0	7,115.0	9,778.8	6,790.0	104.5	104.6	26.91	-998.4	-4,708.9	364.5	268.3	96.19	3.789		
10,200.0	7,115.0	9,878.8	6,790.0	106.9	107.0	26.91	-998.2	-4,808.8	364.5	266.0	98.42	3.703		
10,300.0	7,115.0	9,978.8	6,790.0	109.3	109.4	26.91	-997.9	-4,908.8	364.5	263.8	100.65	3.621		

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



# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 8 - Hz - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
10,400.0	7,115.0	10,078.8	6,790.0	111.7	111.8	26.91	-997.7	-5,008.8	364.5	261.6	102.89	3.542		
10,500.0	7,115.0	10,178.8	6,790.0	114.1	114.2	26.91	-997.4	-5,108.8	364.5	259.3	105.12	3.467		
10,600.0	7,115.0	10,278.8	6,790.0	116.5	116.6	26.91	-997.2	-5,208.8	364.5	257.1	107.35	3.395		
10,700.0	7,115.0	10,378.8	6,790.0	118.8	119.0	26.91	-997.0	-5,308.8	364.4	254.9	109.59	3.326		
10,800.0	7,115.0	10,478.8	6,790.0	121.2	121.4	26.90	-996.7	-5,408.8	364.4	252.6	111.83	3.259		
10,900.0	7,115.0	10,578.8	6,790.0	123.6	123.8	26.90	-996.5	-5,508.8	364.4	250.4	114.07	3.195		
11,000.0	7,115.0	10,678.8	6,790.0	126.0	126.3	26.90	-996.2	-5,608.8	364.4	248.1	116.30	3.134		
11,100.0	7,115.0	10,778.8	6,790.0	128.5	128.7	26.90	-996.0	-5,708.8	364.4	245.9	118.54	3.074		
11,200.0	7,115.0	10,878.8	6,790.0	130.9	131.1	26.90	-995.7	-5,808.8	364.4	243.7	120.78	3.017		
11,300.0	7,115.0	10,978.8	6,790.0	133.3	133.5	26.90	-995.5	-5,908.8	364.4	241.4	123.03	2.962		
11,400.0	7,115.0	11,078.8	6,790.0	135.7	135.9	26.90	-995.2	-6,008.8	364.4	239.2	125.27	2.909		
11,500.0	7,115.0	11,178.8	6,790.0	138.1	138.4	26.90	-995.0	-6,108.8	364.4	236.9	127.51	2.858		
11,600.0	7,115.0	11,278.8	6,790.0	140.5	140.8	26.90	-994.7	-6,208.8	364.4	234.7	129.75	2.809		
11,700.0	7,115.0	11,378.8	6,790.0	142.9	143.2	26.90	-994.5	-6,308.8	364.4	232.4	132.00	2.761		
11,800.0	7,115.0	11,478.8	6,790.0	145.4	145.6	26.90	-994.2	-6,408.8	364.4	230.2	134.24	2.715		
11,900.0	7,115.0	11,578.8	6,790.0	147.8	148.1	26.90	-994.0	-6,508.8	364.4	227.9	136.49	2.670		
12,000.0	7,115.0	11,678.8	6,790.0	150.2	150.5	26.90	-993.8	-6,608.8	364.4	225.7	138.73	2.627		
12,100.0	7,115.0	11,778.8	6,790.0	152.6	152.9	26.90	-993.5	-6,708.8	364.4	223.4	140.98	2.585		
12,200.0	7,115.0	11,878.8	6,790.0	155.1	155.4	26.90	-993.3	-6,808.8	364.4	221.2	143.23	2.544		
12,300.0	7,115.0	11,978.8	6,790.0	157.5	157.8	26.90	-993.0	-6,908.8	364.4	218.9	145.47	2.505		
12,400.0	7,115.0	12,078.8	6,790.0	159.9	160.3	26.90	-992.8	-7,008.8	364.4	216.7	147.72	2.467		
12,500.0	7,115.0	12,178.8	6,790.0	162.4	162.7	26.90	-992.5	-7,108.8	364.4	214.4	149.97	2.430		
12,600.0	7,115.0	12,278.8	6,790.0	164.8	165.1	26.89	-992.3	-7,208.8	364.4	212.2	152.22	2.394		
12,700.0	7,115.0	12,378.8	6,790.0	167.2	167.6	26.89	-992.0	-7,308.8	364.4	209.9	154.46	2.359		
12,800.0	7,115.0	12,478.8	6,790.0	169.7	170.0	26.89	-991.8	-7,408.8	364.4	207.7	156.71	2.325		
12,900.0	7,115.0	12,578.8	6,790.0	172.1	172.5	26.89	-991.5	-7,508.8	364.4	205.4	158.96	2.292		
13,000.0	7,115.0	12,678.8	6,790.0	174.5	174.9	26.89	-991.3	-7,608.8	364.4	203.2	161.21	2.260		
13,100.0	7,115.0	12,778.8	6,790.0	177.0	177.3	26.89	-991.0	-7,708.8	364.4	200.9	163.46	2.229		
13,200.0	7,115.0	12,878.8	6,790.0	179.4	179.8	26.89	-990.8	-7,808.8	364.4	198.7	165.71	2.199		
13,300.0	7,115.0	12,978.8	6,790.0	181.9	182.2	26.89	-990.6	-7,908.8	364.4	196.4	167.96	2.170		
13,400.0	7,115.0	13,078.8	6,790.0	184.3	184.7	26.89	-990.3	-8,008.8	364.4	194.2	170.21	2.141		
13,500.0	7,115.0	13,178.8	6,790.0	186.7	187.1	26.89	-990.1	-8,108.8	364.4	191.9	172.46	2.113		
13,600.0	7,115.0	13,278.8	6,790.0	189.2	189.6	26.89	-989.8	-8,208.8	364.4	189.7	174.71	2.086		
13,700.0	7,115.0	13,378.8	6,790.0	191.6	192.0	26.89	-989.6	-8,308.8	364.4	187.4	176.96	2.059		
13,800.0	7,115.0	13,478.8	6,790.0	194.1	194.5	26.89	-989.3	-8,408.8	364.4	185.2	179.22	2.033		
13,900.0	7,115.0	13,578.8	6,790.0	196.5	196.9	26.89	-989.1	-8,508.8	364.4	182.9	181.47	2.008		
14,000.0	7,115.0	13,678.8	6,790.0	199.0	199.4	26.89	-988.8	-8,608.8	364.4	180.7	183.72	1.983		
14,100.0	7,115.0	13,778.8	6,790.0	201.4	201.8	26.89	-988.6	-8,708.8	364.4	178.4	185.97	1.959		
14,200.0	7,115.0	13,878.8	6,790.0	203.9	204.3	26.89	-988.3	-8,808.8	364.4	176.2	188.22	1.936		
14,300.0	7,115.0	13,978.8	6,790.0	206.3	206.7	26.89	-988.1	-8,908.8	364.4	173.9	190.47	1.913		
14,400.0	7,115.0	14,078.8	6,790.0	208.8	209.2	26.88	-987.9	-9,008.8	364.4	171.7	192.73	1.891		
14,500.0	7,115.0	14,178.8	6,790.0	211.2	211.6	26.88	-987.6	-9,108.8	364.4	169.4	194.98	1.869		
14,600.0	7,115.0	14,278.8	6,790.0	213.7	214.1	26.88	-987.4	-9,208.8	364.4	167.1	197.23	1.847		
14,700.0	7,115.0	14,378.8	6,790.0	216.1	216.5	26.88	-987.1	-9,308.8	364.4	164.9	199.48	1.827		
14,800.0	7,115.0	14,478.8	6,790.0	218.6	219.0	26.88	-986.9	-9,408.8	364.4	162.6	201.74	1.806		
14,900.0	7,115.0	14,578.8	6,790.0	221.0	221.5	26.88	-986.6	-9,508.8	364.4	160.4	203.99	1.786		
15,000.0	7,115.0	14,678.8	6,790.0	223.5	223.9	26.88	-986.4	-9,608.8	364.4	158.1	206.24	1.767		
15,100.0	7,115.0	14,778.8	6,790.0	225.9	226.4	26.88	-986.1	-9,708.8	364.4	155.9	208.50	1.748		
15,200.0	7,115.0	14,878.8	6,790.0	228.4	228.8	26.88	-985.9	-9,808.8	364.4	153.6	210.75	1.729		
15,300.0	7,115.0	14,978.8	6,790.0	230.8	231.3	26.88	-985.6	-9,908.8	364.4	151.4	213.00	1.711		
15,400.0	7,115.0	15,078.8	6,790.0	233.3	233.7	26.88	-985.4	-10,008.8	364.4	149.1	215.25	1.693		
15,500.0	7,115.0	15,178.8	6,790.0	235.8	236.2	26.88	-985.1	-10,108.8	364.4	146.9	217.51	1.675		

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

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 S16-T6N-R67W - Breniman 8 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
15,600.0	7,115.0	15,278.8	6,790.0	238.2	238.7	26.88	-984.9	-10,208.8	364.4	144.6	219.76	1.658		
15,700.0	7,115.0	15,378.8	6,790.0	240.7	241.1	26.88	-984.7	-10,308.8	364.4	142.3	222.01	1.641		
15,800.0	7,115.0	15,478.8	6,790.0	243.1	243.6	26.88	-984.4	-10,408.8	364.4	140.1	224.27	1.625		
15,900.0	7,115.0	15,578.8	6,790.0	245.6	246.0	26.88	-984.2	-10,508.8	364.4	137.8	226.52	1.608		
16,000.0	7,115.0	15,678.8	6,790.0	248.0	248.5	26.88	-983.9	-10,608.8	364.4	135.6	228.78	1.593		
16,100.0	7,115.0	15,778.8	6,790.0	250.5	251.0	26.88	-983.7	-10,708.8	364.4	133.3	231.03	1.577		
16,200.0	7,115.0	15,878.8	6,790.0	252.9	253.4	26.87	-983.4	-10,808.8	364.4	131.1	233.28	1.562		
16,300.0	7,115.0	15,978.8	6,790.0	255.4	255.9	26.87	-983.2	-10,908.8	364.3	128.8	235.54	1.547		
16,400.0	7,115.0	16,078.8	6,790.0	257.9	258.3	26.87	-982.9	-11,008.8	364.3	126.6	237.79	1.532		
16,500.0	7,115.0	16,178.8	6,790.0	260.3	260.8	26.87	-982.7	-11,108.8	364.3	124.3	240.04	1.518		
16,600.0	7,115.0	16,278.8	6,790.0	262.8	263.3	26.87	-982.4	-11,208.8	364.3	122.0	242.30	1.504		
16,700.0	7,115.0	16,378.8	6,790.0	265.2	265.7	26.87	-982.2	-11,308.8	364.3	119.8	244.55	1.490 Level 3		
16,800.0	7,115.0	16,478.8	6,790.0	267.7	268.2	26.87	-981.9	-11,408.8	364.3	117.5	246.80	1.476 Level 3		
16,900.0	7,115.0	16,578.8	6,790.0	270.2	270.6	26.87	-981.7	-11,508.8	364.3	115.3	249.06	1.463 Level 3		
17,000.0	7,115.0	16,678.8	6,790.0	272.6	273.1	26.87	-981.5	-11,608.8	364.3	113.0	251.31	1.450 Level 3		
17,100.0	7,115.0	16,778.7	6,790.0	275.1	275.6	26.87	-981.2	-11,708.8	364.3	110.8	253.57	1.437 Level 3		
17,104.5	7,115.0	16,783.3	6,790.0	275.2	275.7	26.87	-981.2	-11,713.4	364.3	110.7	253.67	1.436 Level 3, SF		

## Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Breniman 9
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Reference Site:</b>	S16-T6N-R67W	<b>MD Reference:</b>	24' KB @ 4821.0usft (H&P 319)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Breniman 9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<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 24' KB @ 4821.0usft (H&P 319)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Breniman 9

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.39°

