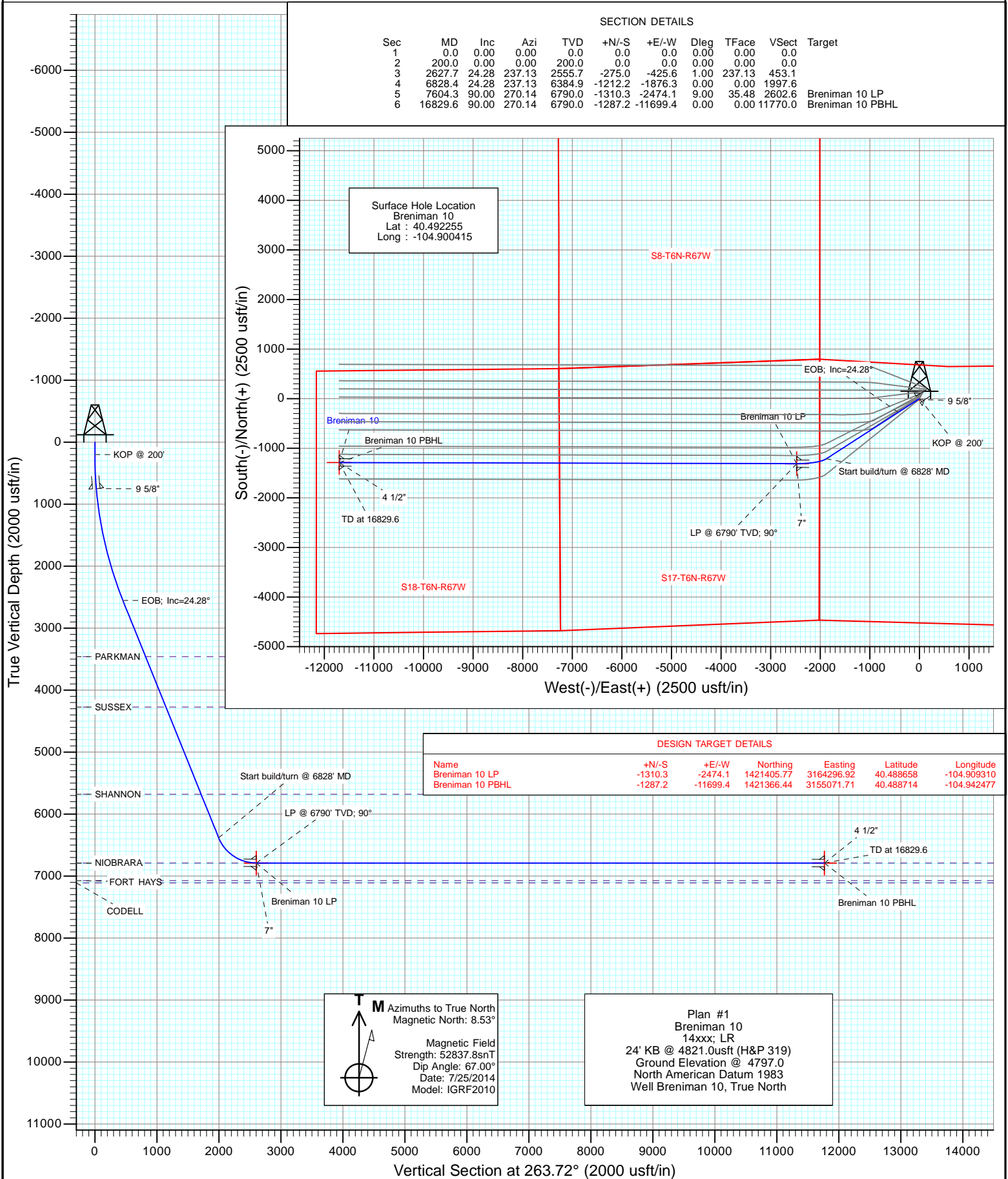




Project: WELD COUNTY, CO
Site: S16-T6N-R67W
Well: Breniman 10
Wellbore: Hz
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Breniman 10
Company:	Extraction Oil & Gas	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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

Site		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 10					
Well Position	+N/-S	0.0 usft	Northing:	1,422,732.74 usft	Latitude:	40.492255
	+E/-W	0.0 usft	Easting:	3,166,762.11 usft	Longitude:	-104.900415
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,797.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/25/2014	8.53	67.00	52,838

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	263.72

Plan Sections										
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	
2,627.7	24.28	237.13	2,555.7	-275.0	-425.6	1.00	1.00	0.00	237.13	
6,828.4	24.28	237.13	6,384.9	-1,212.2	-1,876.3	0.00	0.00	0.00	0.00	
7,604.3	90.00	270.14	6,790.0	-1,310.3	-2,474.1	9.00	8.47	4.25	35.48	Breniman 10 LP
16,829.6	90.00	270.14	6,790.0	-1,287.2	-11,699.4	0.00	0.00	0.00	0.00	Breniman 10 PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Breniman 10
Company:	Extraction Oil & Gas	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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	237.13	300.0	-0.5	-0.7	0.8	1.00	1.00	
400.0	2.00	237.13	400.0	-1.9	-2.9	3.1	1.00	1.00	
500.0	3.00	237.13	499.9	-4.3	-6.6	7.0	1.00	1.00	
600.0	4.00	237.13	599.7	-7.6	-11.7	12.5	1.00	1.00	
700.0	5.00	237.13	699.4	-11.8	-18.3	19.5	1.00	1.00	
750.0	5.50	237.13	749.2	-14.3	-22.2	23.6	1.00	1.00	9 5/8"
800.0	6.00	237.13	798.9	-17.0	-26.4	28.1	1.00	1.00	
900.0	7.00	237.13	898.3	-23.2	-35.9	38.2	1.00	1.00	
1,000.0	8.00	237.13	997.4	-30.3	-46.8	49.9	1.00	1.00	
1,100.0	9.00	237.13	1,096.3	-38.3	-59.2	63.1	1.00	1.00	
1,200.0	10.00	237.13	1,194.9	-47.2	-73.1	77.8	1.00	1.00	
1,300.0	11.00	237.13	1,293.3	-57.1	-88.4	94.1	1.00	1.00	
1,400.0	12.00	237.13	1,391.2	-67.9	-105.2	112.0	1.00	1.00	
1,500.0	13.00	237.13	1,488.9	-79.7	-123.3	131.3	1.00	1.00	
1,600.0	14.00	237.13	1,586.1	-92.4	-143.0	152.2	1.00	1.00	
1,700.0	15.00	237.13	1,682.9	-105.9	-164.0	174.6	1.00	1.00	
1,800.0	16.00	237.13	1,779.3	-120.4	-186.4	198.5	1.00	1.00	
1,900.0	17.00	237.13	1,875.2	-135.9	-210.3	223.9	1.00	1.00	
2,000.0	18.00	237.13	1,970.5	-152.2	-235.5	250.8	1.00	1.00	
2,100.0	19.00	237.13	2,065.4	-169.4	-262.2	279.1	1.00	1.00	
2,200.0	20.00	237.13	2,159.6	-187.5	-290.2	309.0	1.00	1.00	
2,300.0	21.00	237.13	2,253.3	-206.5	-319.6	340.3	1.00	1.00	
2,400.0	22.00	237.13	2,346.3	-226.4	-350.4	373.1	1.00	1.00	
2,500.0	23.00	237.13	2,438.7	-247.2	-382.6	407.3	1.00	1.00	
2,600.0	24.00	237.13	2,530.4	-268.8	-416.1	443.0	1.00	1.00	
2,627.7	24.28	237.13	2,555.7	-275.0	-425.6	453.1	1.00	1.00	EOB; Inc=24.28°
2,700.0	24.28	237.13	2,621.6	-291.1	-450.5	479.7	0.00	0.00	
2,800.0	24.28	237.13	2,712.8	-313.4	-485.1	516.4	0.00	0.00	
2,900.0	24.28	237.13	2,803.9	-335.7	-519.6	553.2	0.00	0.00	
3,000.0	24.28	237.13	2,895.1	-358.0	-554.1	590.0	0.00	0.00	
3,100.0	24.28	237.13	2,986.2	-380.3	-588.7	626.7	0.00	0.00	
3,200.0	24.28	237.13	3,077.4	-402.7	-623.2	663.5	0.00	0.00	
3,300.0	24.28	237.13	3,168.5	-425.0	-657.8	700.3	0.00	0.00	
3,400.0	24.28	237.13	3,259.7	-447.3	-692.3	737.1	0.00	0.00	
3,500.0	24.28	237.13	3,350.9	-469.6	-726.8	773.8	0.00	0.00	
3,600.0	24.28	237.13	3,442.0	-491.9	-761.4	810.6	0.00	0.00	
3,619.7	24.28	237.13	3,460.0	-496.3	-768.2	817.8	0.00	0.00	PARKMAN
3,700.0	24.28	237.13	3,533.2	-514.2	-795.9	847.4	0.00	0.00	
3,800.0	24.28	237.13	3,624.3	-536.5	-830.4	884.1	0.00	0.00	
3,900.0	24.28	237.13	3,715.5	-558.8	-865.0	920.9	0.00	0.00	
4,000.0	24.28	237.13	3,806.6	-581.1	-899.5	957.7	0.00	0.00	
4,100.0	24.28	237.13	3,897.8	-603.5	-934.0	994.4	0.00	0.00	
4,200.0	24.28	237.13	3,989.0	-625.8	-968.6	1,031.2	0.00	0.00	
4,300.0	24.28	237.13	4,080.1	-648.1	-1,003.1	1,068.0	0.00	0.00	
4,400.0	24.28	237.13	4,171.3	-670.4	-1,037.6	1,104.7	0.00	0.00	
4,500.0	24.28	237.13	4,262.4	-692.7	-1,072.2	1,141.5	0.00	0.00	
4,513.8	24.28	237.13	4,275.0	-695.8	-1,076.9	1,146.6	0.00	0.00	SUSSEX
4,600.0	24.28	237.13	4,353.6	-715.0	-1,106.7	1,178.3	0.00	0.00	
4,700.0	24.28	237.13	4,444.7	-737.3	-1,141.2	1,215.0	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Breniman 10
Company:	Extraction Oil & Gas	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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	24.28	237.13	4,535.9	-759.6	-1,175.8	1,251.8	0.00	0.00	
4,900.0	24.28	237.13	4,627.0	-782.0	-1,210.3	1,288.6	0.00	0.00	
5,000.0	24.28	237.13	4,718.2	-804.3	-1,244.8	1,325.3	0.00	0.00	
5,100.0	24.28	237.13	4,809.4	-826.6	-1,279.4	1,362.1	0.00	0.00	
5,200.0	24.28	237.13	4,900.5	-848.9	-1,313.9	1,398.9	0.00	0.00	
5,300.0	24.28	237.13	4,991.7	-871.2	-1,348.4	1,435.6	0.00	0.00	
5,400.0	24.28	237.13	5,082.8	-893.5	-1,383.0	1,472.4	0.00	0.00	
5,500.0	24.28	237.13	5,174.0	-915.8	-1,417.5	1,509.2	0.00	0.00	
5,600.0	24.28	237.13	5,265.1	-938.1	-1,452.0	1,545.9	0.00	0.00	
5,700.0	24.28	237.13	5,356.3	-960.5	-1,486.6	1,582.7	0.00	0.00	
5,800.0	24.28	237.13	5,447.5	-982.8	-1,521.1	1,619.5	0.00	0.00	
5,900.0	24.28	237.13	5,538.6	-1,005.1	-1,555.7	1,656.2	0.00	0.00	
6,000.0	24.28	237.13	5,629.8	-1,027.4	-1,590.2	1,693.0	0.00	0.00	
6,055.1	24.28	237.13	5,680.0	-1,039.7	-1,609.2	1,713.3	0.00	0.00	SHANNON
6,100.0	24.28	237.13	5,720.9	-1,049.7	-1,624.7	1,729.8	0.00	0.00	
6,200.0	24.28	237.13	5,812.1	-1,072.0	-1,659.3	1,766.5	0.00	0.00	
6,300.0	24.28	237.13	5,903.2	-1,094.3	-1,693.8	1,803.3	0.00	0.00	
6,400.0	24.28	237.13	5,994.4	-1,116.6	-1,728.3	1,840.1	0.00	0.00	
6,500.0	24.28	237.13	6,085.6	-1,139.0	-1,762.9	1,876.8	0.00	0.00	
6,600.0	24.28	237.13	6,176.7	-1,161.3	-1,797.4	1,913.6	0.00	0.00	
6,700.0	24.28	237.13	6,267.9	-1,183.6	-1,831.9	1,950.4	0.00	0.00	
6,800.0	24.28	237.13	6,359.0	-1,205.9	-1,866.5	1,987.2	0.00	0.00	
6,828.4	24.28	237.13	6,384.9	-1,212.2	-1,876.3	1,997.6	0.00	0.00	Start build/turn @ 6828' MD
6,900.0	29.74	244.68	6,448.7	-1,227.8	-1,904.7	2,027.6	9.00	7.64	
7,000.0	37.86	251.72	6,531.8	-1,248.1	-1,956.4	2,081.2	9.00	8.12	
7,100.0	46.26	256.55	6,605.9	-1,266.2	-2,020.8	2,147.1	9.00	8.40	
7,200.0	54.82	260.17	6,669.4	-1,281.6	-2,096.4	2,223.9	9.00	8.56	
7,300.0	63.47	263.10	6,720.7	-1,294.0	-2,181.2	2,309.6	9.00	8.64	
7,400.0	72.16	265.61	6,758.4	-1,303.0	-2,273.3	2,402.1	9.00	8.70	
7,500.0	80.88	267.88	6,781.7	-1,308.5	-2,370.2	2,499.1	9.00	8.72	
7,600.0	89.62	270.05	6,790.0	-1,310.3	-2,469.8	2,598.3	9.00	8.74	
7,604.3	90.00	270.14	6,790.0	-1,310.3	-2,474.1	2,602.6	9.00	8.74	LP @ 6790' TVD; 90° - NIOBRARA - 7"
7,700.0	90.00	270.14	6,790.0	-1,310.0	-2,569.8	2,697.6	0.00	0.00	
7,800.0	90.00	270.14	6,790.0	-1,309.8	-2,669.8	2,797.0	0.00	0.00	
7,900.0	90.00	270.14	6,790.0	-1,309.5	-2,769.8	2,896.4	0.00	0.00	
8,000.0	90.00	270.14	6,790.0	-1,309.3	-2,869.8	2,995.8	0.00	0.00	
8,100.0	90.00	270.14	6,790.0	-1,309.0	-2,969.8	3,095.1	0.00	0.00	
8,200.0	90.00	270.14	6,790.0	-1,308.8	-3,069.8	3,194.5	0.00	0.00	
8,300.0	90.00	270.14	6,790.0	-1,308.5	-3,169.8	3,293.9	0.00	0.00	
8,400.0	90.00	270.14	6,790.0	-1,308.3	-3,269.8	3,393.2	0.00	0.00	
8,500.0	90.00	270.14	6,790.0	-1,308.0	-3,369.8	3,492.6	0.00	0.00	
8,600.0	90.00	270.14	6,790.0	-1,307.8	-3,469.8	3,592.0	0.00	0.00	
8,700.0	90.00	270.14	6,790.0	-1,307.5	-3,569.8	3,691.4	0.00	0.00	
8,800.0	90.00	270.14	6,790.0	-1,307.3	-3,669.8	3,790.7	0.00	0.00	
8,900.0	90.00	270.14	6,790.0	-1,307.0	-3,769.8	3,890.1	0.00	0.00	
9,000.0	90.00	270.14	6,790.0	-1,306.8	-3,869.8	3,989.5	0.00	0.00	
9,100.0	90.00	270.14	6,790.0	-1,306.5	-3,969.8	4,088.9	0.00	0.00	
9,200.0	90.00	270.14	6,790.0	-1,306.3	-4,069.8	4,188.2	0.00	0.00	
9,300.0	90.00	270.14	6,790.0	-1,306.0	-4,169.8	4,287.6	0.00	0.00	
9,400.0	90.00	270.14	6,790.0	-1,305.8	-4,269.8	4,387.0	0.00	0.00	
9,500.0	90.00	270.14	6,790.0	-1,305.5	-4,369.8	4,486.3	0.00	0.00	
9,600.0	90.00	270.14	6,790.0	-1,305.3	-4,469.8	4,585.7	0.00	0.00	

Planning Report

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Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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
9,700.0	90.00	270.14	6,790.0	-1,305.0	-4,569.8	4,685.1	0.00	0.00	
9,800.0	90.00	270.14	6,790.0	-1,304.8	-4,669.8	4,784.5	0.00	0.00	
9,900.0	90.00	270.14	6,790.0	-1,304.5	-4,769.8	4,883.8	0.00	0.00	
10,000.0	90.00	270.14	6,790.0	-1,304.3	-4,869.8	4,983.2	0.00	0.00	
10,100.0	90.00	270.14	6,790.0	-1,304.0	-4,969.8	5,082.6	0.00	0.00	
10,200.0	90.00	270.14	6,790.0	-1,303.8	-5,069.8	5,181.9	0.00	0.00	
10,300.0	90.00	270.14	6,790.0	-1,303.5	-5,169.8	5,281.3	0.00	0.00	
10,400.0	90.00	270.14	6,790.0	-1,303.3	-5,269.8	5,380.7	0.00	0.00	
10,500.0	90.00	270.14	6,790.0	-1,303.0	-5,369.8	5,480.1	0.00	0.00	
10,600.0	90.00	270.14	6,790.0	-1,302.8	-5,469.8	5,579.4	0.00	0.00	
10,700.0	90.00	270.14	6,790.0	-1,302.5	-5,569.8	5,678.8	0.00	0.00	
10,800.0	90.00	270.14	6,790.0	-1,302.3	-5,669.8	5,778.2	0.00	0.00	
10,900.0	90.00	270.14	6,790.0	-1,302.0	-5,769.8	5,877.6	0.00	0.00	
11,000.0	90.00	270.14	6,790.0	-1,301.8	-5,869.8	5,976.9	0.00	0.00	
11,100.0	90.00	270.14	6,790.0	-1,301.5	-5,969.8	6,076.3	0.00	0.00	
11,200.0	90.00	270.14	6,790.0	-1,301.3	-6,069.8	6,175.7	0.00	0.00	
11,300.0	90.00	270.14	6,790.0	-1,301.0	-6,169.8	6,275.0	0.00	0.00	
11,400.0	90.00	270.14	6,790.0	-1,300.8	-6,269.8	6,374.4	0.00	0.00	
11,500.0	90.00	270.14	6,790.0	-1,300.5	-6,369.8	6,473.8	0.00	0.00	
11,600.0	90.00	270.14	6,790.0	-1,300.3	-6,469.8	6,573.2	0.00	0.00	
11,700.0	90.00	270.14	6,790.0	-1,300.0	-6,569.8	6,672.5	0.00	0.00	
11,800.0	90.00	270.14	6,790.0	-1,299.8	-6,669.8	6,771.9	0.00	0.00	
11,900.0	90.00	270.14	6,790.0	-1,299.5	-6,769.8	6,871.3	0.00	0.00	
12,000.0	90.00	270.14	6,790.0	-1,299.3	-6,869.8	6,970.7	0.00	0.00	
12,100.0	90.00	270.14	6,790.0	-1,299.0	-6,969.8	7,070.0	0.00	0.00	
12,200.0	90.00	270.14	6,790.0	-1,298.8	-7,069.8	7,169.4	0.00	0.00	
12,300.0	90.00	270.14	6,790.0	-1,298.5	-7,169.8	7,268.8	0.00	0.00	
12,400.0	90.00	270.14	6,790.0	-1,298.3	-7,269.8	7,368.1	0.00	0.00	
12,500.0	90.00	270.14	6,790.0	-1,298.0	-7,369.8	7,467.5	0.00	0.00	
12,600.0	90.00	270.14	6,790.0	-1,297.8	-7,469.8	7,566.9	0.00	0.00	
12,700.0	90.00	270.14	6,790.0	-1,297.5	-7,569.8	7,666.3	0.00	0.00	
12,800.0	90.00	270.14	6,790.0	-1,297.3	-7,669.8	7,765.6	0.00	0.00	
12,900.0	90.00	270.14	6,790.0	-1,297.0	-7,769.8	7,865.0	0.00	0.00	
13,000.0	90.00	270.14	6,790.0	-1,296.8	-7,869.8	7,964.4	0.00	0.00	
13,100.0	90.00	270.14	6,790.0	-1,296.5	-7,969.8	8,063.7	0.00	0.00	
13,200.0	90.00	270.14	6,790.0	-1,296.3	-8,069.8	8,163.1	0.00	0.00	
13,300.0	90.00	270.14	6,790.0	-1,296.0	-8,169.8	8,262.5	0.00	0.00	
13,400.0	90.00	270.14	6,790.0	-1,295.8	-8,269.8	8,361.9	0.00	0.00	
13,500.0	90.00	270.14	6,790.0	-1,295.5	-8,369.8	8,461.2	0.00	0.00	
13,600.0	90.00	270.14	6,790.0	-1,295.3	-8,469.8	8,560.6	0.00	0.00	
13,700.0	90.00	270.14	6,790.0	-1,295.0	-8,569.8	8,660.0	0.00	0.00	
13,800.0	90.00	270.14	6,790.0	-1,294.8	-8,669.8	8,759.4	0.00	0.00	
13,900.0	90.00	270.14	6,790.0	-1,294.5	-8,769.8	8,858.7	0.00	0.00	
14,000.0	90.00	270.14	6,790.0	-1,294.3	-8,869.8	8,958.1	0.00	0.00	
14,100.0	90.00	270.14	6,790.0	-1,294.0	-8,969.8	9,057.5	0.00	0.00	
14,200.0	90.00	270.14	6,790.0	-1,293.8	-9,069.8	9,156.8	0.00	0.00	
14,300.0	90.00	270.14	6,790.0	-1,293.5	-9,169.8	9,256.2	0.00	0.00	
14,400.0	90.00	270.14	6,790.0	-1,293.3	-9,269.8	9,355.6	0.00	0.00	
14,500.0	90.00	270.14	6,790.0	-1,293.0	-9,369.7	9,455.0	0.00	0.00	
14,600.0	90.00	270.14	6,790.0	-1,292.8	-9,469.7	9,554.3	0.00	0.00	
14,700.0	90.00	270.14	6,790.0	-1,292.5	-9,569.7	9,653.7	0.00	0.00	
14,800.0	90.00	270.14	6,790.0	-1,292.3	-9,669.7	9,753.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Breniman 10
Company:	Extraction Oil & Gas	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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
14,900.0	90.00	270.14	6,790.0	-1,292.0	-9,769.7	9,852.4	0.00	0.00	
15,000.0	90.00	270.14	6,790.0	-1,291.8	-9,869.7	9,951.8	0.00	0.00	
15,100.0	90.00	270.14	6,790.0	-1,291.5	-9,969.7	10,051.2	0.00	0.00	
15,200.0	90.00	270.14	6,790.0	-1,291.3	-10,069.7	10,150.6	0.00	0.00	
15,300.0	90.00	270.14	6,790.0	-1,291.0	-10,169.7	10,249.9	0.00	0.00	
15,400.0	90.00	270.14	6,790.0	-1,290.8	-10,269.7	10,349.3	0.00	0.00	
15,500.0	90.00	270.14	6,790.0	-1,290.5	-10,369.7	10,448.7	0.00	0.00	
15,600.0	90.00	270.14	6,790.0	-1,290.3	-10,469.7	10,548.1	0.00	0.00	
15,700.0	90.00	270.14	6,790.0	-1,290.0	-10,569.7	10,647.4	0.00	0.00	
15,800.0	90.00	270.14	6,790.0	-1,289.8	-10,669.7	10,746.8	0.00	0.00	
15,900.0	90.00	270.14	6,790.0	-1,289.5	-10,769.7	10,846.2	0.00	0.00	
16,000.0	90.00	270.14	6,790.0	-1,289.3	-10,869.7	10,945.5	0.00	0.00	
16,100.0	90.00	270.14	6,790.0	-1,289.0	-10,969.7	11,044.9	0.00	0.00	
16,200.0	90.00	270.14	6,790.0	-1,288.8	-11,069.7	11,144.3	0.00	0.00	
16,300.0	90.00	270.14	6,790.0	-1,288.5	-11,169.7	11,243.7	0.00	0.00	
16,400.0	90.00	270.14	6,790.0	-1,288.3	-11,269.7	11,343.0	0.00	0.00	
16,500.0	90.00	270.14	6,790.0	-1,288.0	-11,369.7	11,442.4	0.00	0.00	
16,600.0	90.00	270.14	6,790.0	-1,287.8	-11,469.7	11,541.8	0.00	0.00	
16,700.0	90.00	270.14	6,790.0	-1,287.5	-11,569.7	11,641.2	0.00	0.00	
16,800.0	90.00	270.14	6,790.0	-1,287.3	-11,669.7	11,740.5	0.00	0.00	
16,829.6	90.00	270.14	6,790.0	-1,287.2	-11,699.4	11,770.0	0.00	0.00	TD at 16829.6 - 4 1/2"

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Breniman 10 LP - hit/miss target - Shape - Point	0.00	0.00	6,790.0	-1,310.3	-2,474.1	1,421,405.77	3,164,296.92	40.488658	-104.909310
Breniman 10 PBHL - plan hits target center - Point	0.00	0.00	6,790.0	-1,287.2	-11,699.4	1,421,366.44	3,155,071.71	40.488714	-104.942477

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
750.0	749.2	9 5/8"	0	0	
7,604.3	6,790.0	7"	0	0	
16,829.6	6,790.0	4 1/2"	0	0	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Breniman 10
Company:	Extraction Oil & Gas	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Project:	WELD COUNTY, CO	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site:	S16-T6N-R67W	North Reference:	True
Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,619.7	3,460.0	PARKMAN				
4,513.8	4,275.0	SUSSEX				
6,055.1	5,680.0	SHANNON				
7,604.3	6,790.0	NIOBRARA				

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'	
2,627.7	2,555.7	-275.0	-425.6	EOB; Inc=24.28°	
6,828.4	6,384.9	-1,212.2	-1,876.3	Start build/turn @ 6828' MD	
7,604.3	6,790.0	-1,310.3	-2,474.1	LP @ 6790' TVD; 90°	
16,829.6	6,790.0	-1,287.2	-11,699.4	TD at 16829.6	

Extraction Oil & Gas

WELD COUNTY, CO

S16-T6N-R67W

Breniman 10

Hz

Plan #1

Anticollision Report

28 July, 2014

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,215.7usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/28/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,829.6	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
Offset Well - Wellbore - Design						
S16-T6N-R67W						
Breniman 1 - Hz - Plan #1	200.0	200.0	251.8	251.2	409.838	CC, ES
Breniman 1 - Hz - Plan #1	3,700.0	3,593.1	1,016.7	993.0	42.956	SF
Breniman 11 - Hz - Plan #1	200.0	200.0	28.1	27.8	91.284	CC
Breniman 11 - Hz - Plan #1	500.0	498.6	28.4	27.5	33.955	ES
Breniman 11 - Hz - Plan #1	16,829.6	16,900.9	330.1	55.6	1.202	Level 2, SF
Breniman 2 - Hz - Plan #1	200.0	200.0	223.9	223.3	364.399	CC, ES
Breniman 2 - Hz - Plan #1	2,500.0	2,487.5	511.0	497.2	36.930	SF
Breniman 3 - Hz - Plan #1	200.0	200.0	195.8	195.2	318.728	CC
Breniman 3 - Hz - Plan #1	300.0	301.8	196.1	195.2	202.744	ES
Breniman 3 - Hz - Plan #1	2,200.0	2,202.3	380.5	369.4	34.018	SF
Breniman 4 - Hz - Plan #1	200.0	199.0	168.2	167.6	274.583	CC
Breniman 4 - Hz - Plan #1	300.0	300.8	168.5	167.5	174.458	ES
Breniman 4 - Hz - Plan #1	2,100.0	2,109.0	300.5	290.0	28.563	SF
Breniman 5 - Hz - Plan #1	200.0	200.0	140.0	139.4	227.893	CC
Breniman 5 - Hz - Plan #1	400.0	404.0	140.3	139.0	106.043	ES
Breniman 5 - Hz - Plan #1	16,829.6	17,399.7	989.8	434.1	1.781	SF
Breniman 6 - Hz - Plan #1	200.0	200.0	112.1	111.5	182.454	CC
Breniman 6 - Hz - Plan #1	1,200.0	1,217.0	114.0	109.5	25.344	ES
Breniman 6 - Hz - Plan #1	16,829.6	17,728.1	886.5	369.2	1.714	SF
Breniman 7 - Hz - Plan #1	1,427.0	1,443.0	80.7	75.4	15.206	CC, ES
Breniman 7 - Hz - Plan #1	16,829.6	17,422.2	659.8	104.5	1.188	Level 2, SF
Breniman 8 - Hz - Plan #1	200.0	200.0	56.1	55.5	91.344	CC
Breniman 8 - Hz - Plan #1	16,829.6	16,783.0	329.7	-219.9	0.600	Level 1, ES, SF
Breniman 9 - Hz - Plan #1	200.0	200.0	27.7	27.1	45.165	CC
Breniman 9 - Hz - Plan #1	1,400.0	1,405.0	30.8	25.2	5.456	ES
Breniman 9 - Hz - Plan #1	16,829.6	17,104.2	364.5	110.3	1.434	Level 3, SF

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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			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	30.91	216.0	129.3	251.8					
100.0	100.0	100.0	100.0	0.1	0.1	30.91	216.0	129.3	251.8	251.5	0.27	949.098		
200.0	200.0	200.0	200.0	0.3	0.3	30.91	216.0	129.3	251.8	251.2	0.61	409.838	CC, ES	
300.0	300.0	300.7	300.7	0.5	0.5	153.66	216.4	128.5	252.4	251.5	0.97	261.363		
400.0	400.0	401.4	401.4	0.7	0.7	153.33	217.3	126.0	254.3	253.0	1.32	192.346		
500.0	499.9	502.0	501.9	0.9	0.9	152.78	218.9	121.9	257.5	255.9	1.69	152.539		
600.0	599.7	602.5	602.2	1.1	1.1	152.03	221.2	116.2	262.1	260.0	2.07	126.682		
700.0	699.4	702.9	702.3	1.3	1.3	151.12	224.0	108.8	267.9	265.5	2.47	108.570		
800.0	798.9	803.1	801.9	1.5	1.5	150.05	227.5	99.8	275.2	272.3	2.89	95.206		
900.0	898.3	903.0	901.2	1.8	1.8	148.85	231.7	89.2	283.9	280.6	3.34	84.966		
1,000.0	997.4	1,002.7	1,000.0	2.0	2.0	147.57	236.4	77.0	294.0	290.2	3.82	76.892		
1,100.0	1,096.3	1,102.0	1,098.3	2.3	2.3	146.21	241.8	63.3	305.7	301.3	4.34	70.387		
1,200.0	1,194.9	1,201.0	1,196.0	2.7	2.7	144.81	247.7	48.1	318.9	314.0	4.90	65.054		
1,300.0	1,293.3	1,299.7	1,293.0	3.0	3.0	143.38	254.2	31.3	333.6	328.1	5.50	60.623		
1,400.0	1,391.2	1,398.0	1,389.3	3.4	3.4	141.97	261.3	13.1	349.9	343.7	6.14	56.963		
1,500.0	1,488.9	1,496.2	1,485.5	3.8	3.7	140.78	268.5	-5.4	367.7	360.9	6.80	54.039		
1,600.0	1,586.1	1,594.2	1,581.4	4.2	4.1	139.84	275.7	-23.8	386.9	379.4	7.48	51.691		
1,700.0	1,682.9	1,692.0	1,677.2	4.7	4.5	139.13	282.9	-42.3	407.5	399.3	8.18	49.793		
1,800.0	1,779.3	1,789.5	1,772.7	5.2	4.9	138.62	290.0	-60.6	429.4	420.5	8.90	48.254		
1,900.0	1,875.2	1,886.8	1,868.0	5.7	5.3	138.29	297.2	-79.0	452.6	442.9	9.63	47.006		
2,000.0	1,970.5	1,983.7	1,962.9	6.3	5.6	138.10	304.3	-97.2	477.0	466.7	10.37	45.999		
2,100.0	2,065.4	2,080.4	2,057.6	6.9	6.0	138.05	311.4	-115.5	502.8	491.6	11.12	45.192		
2,200.0	2,159.6	2,176.6	2,151.8	7.5	6.4	138.10	318.5	-133.6	529.7	517.8	11.89	44.557		
2,300.0	2,253.3	2,272.5	2,245.7	8.1	6.8	138.25	325.5	-151.7	558.0	545.3	12.66	44.068		
2,400.0	2,346.3	2,368.0	2,339.2	8.8	7.1	138.47	332.5	-169.6	587.5	574.0	13.44	43.707		
2,500.0	2,438.7	2,463.0	2,432.3	9.5	7.5	138.76	339.5	-187.6	618.3	604.0	14.23	43.458		
2,600.0	2,530.4	2,557.5	2,524.9	10.3	7.9	139.09	346.4	-205.4	650.3	635.3	15.02	43.308		
2,700.0	2,621.6	2,651.7	2,617.1	11.0	8.3	139.60	353.3	-223.1	683.4	667.6	15.81	43.227		
2,800.0	2,712.8	2,745.8	2,709.3	11.8	8.6	140.13	360.2	-240.8	716.6	700.0	16.60	43.158		
2,900.0	2,803.9	2,840.0	2,801.5	12.6	9.0	140.61	367.2	-258.6	749.8	732.4	17.40	43.103		
3,000.0	2,895.1	2,934.1	2,893.7	13.3	9.4	141.05	374.1	-276.3	783.0	764.9	18.18	43.060		
3,100.0	2,986.2	3,028.2	2,985.9	14.1	9.8	141.46	381.0	-294.1	816.3	797.4	18.97	43.027		
3,200.0	3,077.4	3,122.4	3,078.1	14.9	10.1	141.83	387.9	-311.8	849.7	829.9	19.76	43.002		
3,300.0	3,168.6	3,216.5	3,170.3	15.6	10.5	142.18	394.8	-329.5	883.0	862.5	20.54	42.984		
3,400.0	3,259.7	3,310.7	3,262.4	16.4	10.9	142.50	401.7	-347.3	916.4	895.1	21.33	42.971		
3,500.0	3,350.9	3,404.8	3,354.6	17.2	11.2	142.79	408.6	-365.0	949.8	927.7	22.11	42.962		
3,600.0	3,442.0	3,498.9	3,446.8	17.9	11.6	143.07	415.5	-382.8	983.3	960.4	22.89	42.958		
3,700.0	3,533.2	3,593.1	3,539.0	18.7	12.0	143.33	422.5	-400.5	1,016.7	993.0	23.67	42.956	SF	
3,800.0	3,624.3	3,687.2	3,631.2	19.5	12.4	143.57	429.4	-418.2	1,050.2	1,025.7	24.45	42.957		
3,900.0	3,715.5	3,781.4	3,723.4	20.3	12.7	143.80	436.3	-436.0	1,083.7	1,058.4	25.22	42.961		
4,000.0	3,806.6	3,875.5	3,815.6	21.0	13.1	144.01	443.2	-453.7	1,117.2	1,091.2	26.00	42.966		
4,100.0	3,897.8	3,969.7	3,907.8	21.8	13.5	144.22	450.1	-471.5	1,150.7	1,123.9	26.78	42.972		
4,200.0	3,989.0	4,063.8	4,000.0	22.6	13.9	144.41	457.0	-489.2	1,184.2	1,156.6	27.55	42.980		

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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)						
0.0	0.0	0.0	0.0	0.0	0.0	-148.97	-24.0	-14.5	28.1					
100.0	100.0	100.0	100.0	0.1	0.0	-148.97	-24.0	-14.5	28.1	27.9	0.13	211.214		
200.0	200.0	200.0	200.0	0.3	0.0	-148.97	-24.0	-14.5	28.1	27.8	0.31	91.284 CC		
300.0	300.0	299.5	299.5	0.5	0.0	-26.28	-24.6	-15.1	28.1	27.6	0.48	58.270		
400.0	400.0	399.1	399.0	0.7	0.0	-26.78	-26.2	-17.2	28.2	27.5	0.66	42.862		
500.0	499.9	498.6	498.5	0.9	0.0	-27.62	-28.9	-20.5	28.4	27.5	0.84	33.955 ES		
600.0	599.7	598.2	597.8	1.1	0.0	-28.78	-32.7	-25.2	28.6	27.6	1.02	28.154		
700.0	699.4	697.7	697.1	1.3	0.0	-30.24	-37.6	-31.3	28.9	27.7	1.20	24.072		
800.0	798.9	797.2	796.2	1.5	0.0	-31.97	-43.5	-38.7	29.3	28.0	1.40	21.034		
900.0	898.3	896.8	895.1	1.8	0.0	-33.95	-50.5	-47.5	29.9	28.3	1.60	18.675		
1,000.0	897.4	896.3	893.8	2.0	0.0	-36.15	-58.6	-57.5	30.5	28.7	1.82	16.776		
1,100.0	1,096.3	1,095.8	1,092.2	2.3	0.0	-38.52	-67.8	-69.0	31.3	29.3	2.06	15.206		
1,200.0	1,194.9	1,195.4	1,190.4	2.7	0.0	-41.02	-78.0	-81.7	32.3	30.0	2.33	13.879		
1,300.0	1,293.3	1,294.9	1,288.2	3.0	0.0	-43.61	-89.3	-95.8	33.4	30.8	2.62	12.743		
1,400.0	1,391.2	1,394.4	1,385.8	3.4	0.0	-46.25	-101.7	-111.2	34.7	31.8	2.95	11.762		
1,500.0	1,488.9	1,493.9	1,483.0	3.8	0.0	-48.89	-115.1	-127.9	36.2	32.9	3.32	10.913		
1,600.0	1,586.1	1,593.4	1,579.7	4.2	0.0	-51.50	-129.6	-145.9	37.9	34.2	3.72	10.178		
1,700.0	1,682.9	1,693.0	1,676.1	4.7	0.0	-54.04	-145.1	-165.3	39.8	35.6	4.17	9.545		
1,800.0	1,779.3	1,792.5	1,772.0	5.2	0.0	-56.50	-161.7	-185.9	41.9	37.2	4.65	9.001		
1,900.0	1,875.2	1,892.0	1,867.5	5.7	0.0	-58.85	-179.3	-207.9	44.2	39.0	5.18	8.535		
2,000.0	1,970.5	1,991.4	1,962.4	6.3	0.0	-61.08	-197.9	-231.1	46.7	41.0	5.74	8.136		
2,100.0	2,065.4	2,090.9	2,056.8	6.9	0.0	-63.18	-217.6	-255.6	49.4	43.1	6.34	7.795		
2,200.0	2,159.6	2,190.4	2,150.6	7.5	0.0	-65.15	-238.3	-281.4	52.3	45.4	6.97	7.504		
2,300.0	2,253.3	2,289.9	2,243.9	8.1	0.0	-66.99	-260.0	-308.4	55.5	47.8	7.65	7.255		
2,400.0	2,346.3	2,389.4	2,336.5	8.8	0.0	-68.70	-282.7	-336.7	58.8	50.5	8.35	7.041		
2,500.0	2,438.7	2,488.8	2,428.4	9.5	0.0	-70.29	-306.4	-366.3	62.3	53.2	9.09	6.857		
2,600.0	2,530.4	2,588.3	2,519.7	10.3	0.0	-71.76	-331.2	-397.0	66.1	56.2	9.86	6.699		
2,700.0	2,621.6	2,687.7	2,610.3	11.0	0.0	-72.79	-356.9	-429.0	70.1	59.5	10.63	6.595		
2,800.0	2,712.8	2,787.1	2,700.1	11.8	0.0	-72.54	-383.5	-462.3	74.8	63.5	11.34	6.595		
2,900.0	2,803.9	2,886.8	2,789.6	12.6	0.0	-71.46	-411.0	-496.5	80.0	68.0	12.01	6.664		
3,000.0	2,895.1	2,986.7	2,879.2	13.3	0.0	-70.46	-438.6	-530.8	85.3	72.7	12.67	6.733		
3,100.0	2,986.2	3,086.5	2,968.9	14.1	0.0	-69.58	-466.1	-565.2	90.6	77.3	13.33	6.797		
3,200.0	3,077.4	3,186.4	3,058.5	14.9	0.0	-68.80	-493.7	-599.5	96.0	82.0	13.99	6.858		
3,300.0	3,168.6	3,286.2	3,148.1	15.6	0.0	-68.10	-521.3	-633.8	101.3	86.7	14.65	6.914		
3,400.0	3,259.7	3,386.1	3,237.7	16.4	0.0	-67.47	-548.8	-668.2	106.7	91.4	15.31	6.967		
3,500.0	3,350.9	3,485.9	3,327.3	17.2	0.0	-66.90	-576.4	-702.5	112.0	96.1	15.97	7.017		
3,600.0	3,442.0	3,585.8	3,416.9	17.9	0.0	-66.38	-604.0	-736.9	117.4	100.8	16.62	7.064		
3,700.0	3,533.2	3,685.6	3,506.6	18.7	0.0	-65.91	-631.5	-771.2	122.8	105.5	17.28	7.108		
3,800.0	3,624.3	3,785.5	3,596.2	19.5	0.0	-65.47	-659.1	-805.5	128.2	110.3	17.93	7.149		
3,900.0	3,715.5	3,885.3	3,685.8	20.3	0.0	-65.07	-686.6	-839.9	133.6	115.0	18.59	7.188		
4,000.0	3,806.6	3,985.2	3,775.4	21.0	0.0	-64.71	-714.2	-874.2	139.0	119.8	19.24	7.224		
4,100.0	3,897.8	4,085.0	3,865.0	21.8	0.0	-64.37	-741.8	-908.5	144.4	124.5	19.89	7.259		
4,200.0	3,989.0	4,184.9	3,954.6	22.6	0.0	-64.05	-769.3	-942.9	149.8	129.3	20.55	7.292		
4,300.0	4,080.1	4,284.7	4,044.3	23.3	0.0	-63.76	-796.9	-977.2	155.3	134.0	21.20	7.323		
4,400.0	4,171.3	4,384.6	4,133.9	24.1	0.0	-63.49	-824.5	-1,011.6	160.7	138.8	21.86	7.352		
4,500.0	4,262.4	4,484.4	4,223.5	24.9	0.0	-63.23	-852.0	-1,045.9	166.1	143.6	22.51	7.380		
4,600.0	4,353.6	4,584.3	4,313.1	25.7	0.0	-62.99	-879.6	-1,080.2	171.5	148.4	23.16	7.406		
4,700.0	4,444.7	4,684.1	4,402.7	26.4	0.0	-62.77	-907.2	-1,114.6	177.0	153.2	23.81	7.431		
4,800.0	4,535.9	4,784.0	4,492.3	27.2	0.0	-62.56	-934.7	-1,148.9	182.4	157.9	24.47	7.455		
4,900.0	4,627.1	4,883.8	4,582.0	28.0	0.0	-62.36	-962.3	-1,183.2	187.8	162.7	25.12	7.478		
5,000.0	4,718.2	4,983.7	4,671.6	28.8	0.0	-62.17	-989.9	-1,217.6	193.3	167.5	25.77	7.500		
5,100.0	4,809.4	5,083.5	4,761.2	29.6	0.0	-61.99	-1,017.4	-1,251.9	198.7	172.3	26.42	7.521		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		
5,200.0	4,900.5	5,183.4	4,850.8	30.3	0.0	-61.83	-1,045.0	-1,286.2	204.2	177.1	27.08	7.541		
5,300.0	4,991.7	5,283.2	4,940.4	31.1	0.0	-61.67	-1,072.6	-1,320.6	209.6	181.9	27.73	7.560		
5,400.0	5,082.8	5,383.1	5,030.0	31.9	0.0	-61.52	-1,100.1	-1,354.9	215.1	186.7	28.38	7.578		
5,500.0	5,174.0	5,482.9	5,119.7	32.7	0.0	-61.37	-1,127.7	-1,389.3	220.5	191.5	29.03	7.595		
5,600.0	5,265.2	5,582.8	5,209.3	33.4	0.0	-61.24	-1,155.2	-1,423.6	226.0	196.3	29.69	7.612		
5,700.0	5,356.3	5,682.6	5,298.9	34.2	0.0	-61.11	-1,182.8	-1,457.9	231.4	201.1	30.34	7.628		
5,800.0	5,447.5	5,782.5	5,388.5	35.0	0.0	-60.98	-1,210.4	-1,492.3	236.9	205.9	30.99	7.644		
5,900.0	5,538.6	5,882.3	5,478.1	35.8	0.0	-60.86	-1,237.9	-1,526.6	242.3	210.7	31.64	7.658		
6,000.0	5,629.8	5,982.2	5,567.8	36.5	0.0	-60.75	-1,265.5	-1,560.9	247.8	215.5	32.29	7.673		
6,100.0	5,720.9	6,082.0	5,657.4	37.3	0.0	-60.64	-1,293.1	-1,595.3	253.2	220.3	32.95	7.686		
6,200.0	5,812.1	6,181.9	5,747.0	38.1	0.0	-60.54	-1,320.6	-1,629.6	258.7	225.1	33.60	7.700		
6,300.0	5,903.2	6,281.7	5,836.6	38.9	0.0	-60.44	-1,348.2	-1,664.0	264.2	229.9	34.25	7.713		
6,400.0	5,994.4	6,381.6	5,926.2	39.7	0.0	-60.34	-1,375.8	-1,698.3	269.6	234.7	34.90	7.725		
6,500.0	6,085.6	6,481.4	6,015.8	40.4	0.0	-60.25	-1,403.3	-1,732.6	275.1	239.5	35.55	7.737		
6,600.0	6,176.7	6,581.3	6,105.5	41.2	0.0	-60.16	-1,430.9	-1,767.0	280.5	244.3	36.21	7.748		
6,700.0	6,267.9	6,681.1	6,195.1	42.0	0.0	-60.08	-1,458.5	-1,801.3	286.0	249.1	36.86	7.759		
6,800.0	6,359.0	6,781.0	6,284.7	42.8	0.0	-60.00	-1,486.0	-1,835.6	291.5	253.9	37.51	7.770		
6,900.0	6,448.7	6,880.7	6,374.2	43.6	0.0	-67.03	-1,513.5	-1,869.9	297.3	258.9	38.39	7.744		
7,000.0	6,531.8	6,985.9	6,466.4	44.8	0.0	-74.86	-1,541.9	-1,911.6	304.3	264.2	40.05	7.598		
7,100.0	6,606.0	7,094.9	6,553.8	46.1	0.0	-80.24	-1,568.7	-1,970.7	311.1	269.3	41.76	7.449		
7,200.0	6,669.5	7,206.5	6,632.1	47.6	0.0	-84.06	-1,592.7	-2,046.4	317.3	273.8	43.46	7.301		
7,300.0	6,720.7	7,320.4	6,697.6	49.4	0.0	-86.76	-1,612.7	-2,137.1	322.6	277.5	45.09	7.153		
7,400.0	6,758.4	7,436.2	6,747.4	51.2	0.0	-88.58	-1,627.8	-2,240.4	326.6	279.9	46.66	7.000		
7,500.0	6,781.7	7,553.4	6,778.8	53.2	0.0	-89.64	-1,637.2	-2,352.8	329.2	281.0	48.14	6.837		
7,600.0	6,790.0	7,671.3	6,790.0	55.2	0.0	-90.00	-1,640.3	-2,469.9	330.1	280.5	49.56	6.660		
7,700.0	6,790.0	7,772.0	6,790.0	57.2	0.0	-90.00	-1,640.1	-2,570.6	330.1	278.3	51.80	6.372		
7,800.0	6,790.0	7,872.0	6,790.0	59.3	0.0	-90.00	-1,639.8	-2,670.6	330.1	276.0	54.10	6.101		
7,900.0	6,790.0	7,972.0	6,790.0	61.4	0.0	-90.00	-1,639.6	-2,770.6	330.1	273.7	56.41	5.851		
8,000.0	6,790.0	8,072.0	6,790.0	63.5	0.0	-90.00	-1,639.3	-2,870.6	330.1	271.3	58.73	5.620		
8,100.0	6,790.0	8,172.0	6,790.0	65.7	0.0	-90.00	-1,639.1	-2,970.6	330.1	269.0	61.07	5.405		
8,200.0	6,790.0	8,272.0	6,790.0	67.9	0.0	-90.00	-1,638.8	-3,070.6	330.1	266.6	63.41	5.205		
8,300.0	6,790.0	8,372.0	6,790.0	70.0	0.0	-90.00	-1,638.6	-3,170.6	330.1	264.3	65.77	5.019		
8,400.0	6,790.0	8,472.0	6,790.0	72.3	0.0	-90.00	-1,638.3	-3,270.6	330.1	261.9	68.13	4.844		
8,500.0	6,790.0	8,572.0	6,790.0	74.5	0.0	-90.00	-1,638.1	-3,370.6	330.1	259.6	70.50	4.681		
8,600.0	6,790.0	8,672.0	6,790.0	76.7	0.0	-90.00	-1,637.8	-3,470.6	330.1	257.2	72.88	4.529		
8,700.0	6,790.0	8,772.0	6,790.0	79.0	0.0	-90.00	-1,637.6	-3,570.6	330.1	254.8	75.27	4.385		
8,800.0	6,790.0	8,872.0	6,790.0	81.3	0.0	-90.00	-1,637.3	-3,670.6	330.1	252.4	77.66	4.250		
8,900.0	6,790.0	8,972.0	6,790.0	83.5	0.0	-90.00	-1,637.1	-3,770.6	330.1	250.0	80.05	4.123		
9,000.0	6,790.0	9,072.0	6,790.0	85.8	0.0	-90.00	-1,636.8	-3,870.6	330.1	247.6	82.45	4.003		
9,100.0	6,790.0	9,172.0	6,790.0	88.1	0.0	-90.00	-1,636.6	-3,970.6	330.1	245.2	84.86	3.890		
9,200.0	6,790.0	9,272.0	6,790.0	90.4	0.0	-90.00	-1,636.3	-4,070.6	330.1	242.8	87.26	3.782		
9,300.0	6,790.0	9,372.0	6,790.0	92.8	0.0	-90.00	-1,636.1	-4,170.6	330.1	240.4	89.68	3.681		
9,400.0	6,790.0	9,472.0	6,790.0	95.1	0.0	-90.00	-1,635.8	-4,270.6	330.1	238.0	92.09	3.584		
9,500.0	6,790.0	9,572.0	6,790.0	97.4	0.0	-90.00	-1,635.6	-4,370.6	330.1	235.5	94.51	3.492		
9,600.0	6,790.0	9,672.0	6,790.0	99.8	0.0	-90.00	-1,635.3	-4,470.6	330.1	233.1	96.93	3.405		
9,700.0	6,790.0	9,772.0	6,790.0	102.1	0.0	-90.00	-1,635.1	-4,570.6	330.1	230.7	99.35	3.322		
9,800.0	6,790.0	9,872.0	6,790.0	104.5	0.0	-90.00	-1,634.8	-4,670.6	330.1	228.3	101.78	3.243		
9,900.0	6,790.0	9,972.0	6,790.0	106.8	0.0	-90.00	-1,634.6	-4,770.6	330.1	225.9	104.21	3.167		
10,000.0	6,790.0	10,072.0	6,790.0	109.2	0.0	-90.00	-1,634.3	-4,870.6	330.1	223.4	106.64	3.095		
10,100.0	6,790.0	10,172.0	6,790.0	111.6	0.0	-90.00	-1,634.1	-4,970.6	330.1	221.0	109.07	3.026		
10,200.0	6,790.0	10,272.0	6,790.0	113.9	0.0	-90.00	-1,633.8	-5,070.6	330.1	218.6	111.51	2.960		
10,300.0	6,790.0	10,372.0	6,790.0	116.3	0.0	-90.00	-1,633.6	-5,170.6	330.1	216.1	113.94	2.897		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 11 - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Reference													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	6,790.0	10,472.0	6,790.0	118.7	0.0	-90.00	-1,633.3	-5,270.6	330.1	213.7	116.38	2.836		
10,500.0	6,790.0	10,572.0	6,790.0	121.1	0.0	-90.00	-1,633.1	-5,370.6	330.1	211.2	118.82	2.778		
10,600.0	6,790.0	10,672.0	6,790.0	123.5	0.0	-90.00	-1,632.8	-5,470.6	330.1	208.8	121.26	2.722		
10,700.0	6,790.0	10,772.0	6,790.0	125.9	0.0	-90.00	-1,632.6	-5,570.6	330.1	206.4	123.70	2.668		
10,800.0	6,790.0	10,872.0	6,790.0	128.3	0.0	-90.00	-1,632.3	-5,670.6	330.1	203.9	126.15	2.617		
10,900.0	6,790.0	10,972.0	6,790.0	130.7	0.0	-90.00	-1,632.1	-5,770.6	330.1	201.5	128.59	2.567		
11,000.0	6,790.0	11,072.0	6,790.0	133.1	0.0	-90.00	-1,631.8	-5,870.6	330.1	199.0	131.03	2.519		
11,100.0	6,790.0	11,172.0	6,790.0	135.5	0.0	-90.00	-1,631.6	-5,970.6	330.1	196.6	133.48	2.473		
11,200.0	6,790.0	11,272.0	6,790.0	137.9	0.0	-90.00	-1,631.3	-6,070.6	330.1	194.1	135.93	2.428		
11,300.0	6,790.0	11,372.0	6,790.0	140.3	0.0	-90.00	-1,631.1	-6,170.6	330.1	191.7	138.38	2.385		
11,400.0	6,790.0	11,472.0	6,790.0	142.7	0.0	-90.00	-1,630.8	-6,270.6	330.1	189.2	140.83	2.344		
11,500.0	6,790.0	11,572.0	6,790.0	145.1	0.0	-90.00	-1,630.6	-6,370.6	330.1	186.8	143.28	2.304		
11,600.0	6,790.0	11,672.0	6,790.0	147.6	0.0	-90.00	-1,630.3	-6,470.6	330.1	184.3	145.73	2.265		
11,700.0	6,790.0	11,772.0	6,790.0	150.0	0.0	-90.00	-1,630.1	-6,570.6	330.1	181.9	148.18	2.227		
11,800.0	6,790.0	11,872.0	6,790.0	152.4	0.0	-90.00	-1,629.8	-6,670.6	330.1	179.4	150.63	2.191		
11,900.0	6,790.0	11,972.0	6,790.0	154.8	0.0	-90.00	-1,629.6	-6,770.6	330.1	177.0	153.09	2.156		
12,000.0	6,790.0	12,072.0	6,790.0	157.2	0.0	-90.00	-1,629.3	-6,870.6	330.1	174.5	155.54	2.122		
12,100.0	6,790.0	12,172.0	6,790.0	159.7	0.0	-90.00	-1,629.1	-6,970.6	330.1	172.1	158.00	2.089		
12,200.0	6,790.0	12,272.0	6,790.0	162.1	0.0	-90.00	-1,628.8	-7,070.6	330.1	169.6	160.45	2.057		
12,300.0	6,790.0	12,372.0	6,790.0	164.5	0.0	-90.00	-1,628.6	-7,170.6	330.1	167.2	162.91	2.026		
12,400.0	6,790.0	12,472.0	6,790.0	167.0	0.0	-90.00	-1,628.3	-7,270.6	330.1	164.7	165.36	1.996		
12,500.0	6,790.0	12,572.0	6,790.0	169.4	0.0	-90.00	-1,628.1	-7,370.6	330.1	162.2	167.82	1.967		
12,600.0	6,790.0	12,672.0	6,790.0	171.8	0.0	-90.00	-1,627.8	-7,470.6	330.1	159.8	170.28	1.938		
12,700.0	6,790.0	12,772.0	6,790.0	174.3	0.0	-90.00	-1,627.6	-7,570.6	330.1	157.3	172.74	1.911		
12,800.0	6,790.0	12,872.0	6,790.0	176.7	0.0	-90.00	-1,627.3	-7,670.6	330.1	154.9	175.19	1.884		
12,900.0	6,790.0	12,972.0	6,790.0	179.1	0.0	-90.00	-1,627.1	-7,770.6	330.1	152.4	177.65	1.858		
13,000.0	6,790.0	13,072.0	6,790.0	181.6	0.0	-90.00	-1,626.8	-7,870.6	330.1	149.9	180.11	1.833		
13,100.0	6,790.0	13,172.0	6,790.0	184.0	0.0	-90.00	-1,626.6	-7,970.6	330.1	147.5	182.57	1.808		
13,200.0	6,790.0	13,272.0	6,790.0	186.4	0.0	-90.00	-1,626.3	-8,070.6	330.1	145.0	185.03	1.784		
13,300.0	6,790.0	13,372.0	6,790.0	188.9	0.0	-90.00	-1,626.1	-8,170.6	330.1	142.6	187.49	1.760		
13,400.0	6,790.0	13,472.0	6,790.0	191.3	0.0	-90.00	-1,625.8	-8,270.6	330.1	140.1	189.95	1.738		
13,500.0	6,790.0	13,572.0	6,790.0	193.8	0.0	-90.00	-1,625.6	-8,370.6	330.1	137.6	192.41	1.715		
13,600.0	6,790.0	13,672.0	6,790.0	196.2	0.0	-90.00	-1,625.3	-8,470.6	330.1	135.2	194.88	1.694		
13,700.0	6,790.0	13,772.0	6,790.0	198.7	0.0	-90.00	-1,625.1	-8,570.6	330.1	132.7	197.34	1.673		
13,800.0	6,790.0	13,872.0	6,790.0	201.1	0.0	-90.00	-1,624.8	-8,670.6	330.1	130.3	199.80	1.652		
13,900.0	6,790.0	13,972.0	6,790.0	203.6	0.0	-90.00	-1,624.6	-8,770.6	330.1	127.8	202.26	1.632		
14,000.0	6,790.0	14,072.0	6,790.0	206.0	0.0	-90.00	-1,624.3	-8,870.6	330.1	125.3	204.72	1.612		
14,100.0	6,790.0	14,172.0	6,790.0	208.4	0.0	-90.00	-1,624.1	-8,970.6	330.1	122.9	207.19	1.593		
14,200.0	6,790.0	14,272.0	6,790.0	210.9	0.0	-90.00	-1,623.8	-9,070.6	330.1	120.4	209.65	1.574		
14,300.0	6,790.0	14,372.0	6,790.0	213.3	0.0	-90.00	-1,623.6	-9,170.6	330.1	117.9	212.11	1.556		
14,400.0	6,790.0	14,472.0	6,790.0	215.8	0.0	-90.00	-1,623.3	-9,270.6	330.1	115.5	214.58	1.538		
14,500.0	6,790.0	14,572.0	6,790.0	218.2	0.0	-90.00	-1,623.1	-9,370.6	330.1	113.0	217.04	1.521		
14,600.0	6,790.0	14,672.0	6,790.0	220.7	0.0	-90.00	-1,622.8	-9,470.6	330.1	110.6	219.51	1.504		
14,700.0	6,790.0	14,772.0	6,790.0	223.1	0.0	-90.00	-1,622.6	-9,570.6	330.1	108.1	221.97	1.487 Level 3		
14,800.0	6,790.0	14,872.0	6,790.0	225.6	0.0	-90.00	-1,622.3	-9,670.6	330.1	105.6	224.44	1.471 Level 3		
14,900.0	6,790.0	14,972.0	6,790.0	228.0	0.0	-90.00	-1,622.1	-9,770.6	330.1	103.2	226.90	1.455 Level 3		
15,000.0	6,790.0	15,072.0	6,790.0	230.5	0.0	-90.00	-1,621.8	-9,870.6	330.1	100.7	229.37	1.439 Level 3		
15,100.0	6,790.0	15,172.0	6,790.0	232.9	0.0	-90.00	-1,621.6	-9,970.6	330.1	98.2	231.83	1.424 Level 3		
15,200.0	6,790.0	15,272.0	6,790.0	235.4	0.0	-90.00	-1,621.3	-10,070.6	330.1	95.8	234.30	1.409 Level 3		
15,300.0	6,790.0	15,372.0	6,790.0	237.9	0.0	-90.00	-1,621.1	-10,170.6	330.1	93.3	236.76	1.394 Level 3		
15,400.0	6,790.0	15,472.0	6,790.0	240.3	0.0	-90.00	-1,620.8	-10,270.6	330.1	90.8	239.23	1.380 Level 3		
15,500.0	6,790.0	15,572.0	6,790.0	242.8	0.0	-90.00	-1,620.6	-10,370.6	330.1	88.4	241.69	1.366 Level 3		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		
15,600.0	6,790.0	15,672.0	6,790.0	245.2	0.0	-90.00	-1,620.4	-10,470.6	330.1	85.9	244.16	1.352	Level 3	
15,700.0	6,790.0	15,772.0	6,790.0	247.7	0.0	-90.00	-1,620.1	-10,570.6	330.1	83.4	246.63	1.338	Level 3	
15,800.0	6,790.0	15,872.0	6,790.0	250.1	0.0	-90.00	-1,619.9	-10,670.6	330.1	81.0	249.09	1.325	Level 3	
15,900.0	6,790.0	15,972.0	6,790.0	252.6	0.0	-90.00	-1,619.6	-10,770.6	330.1	78.5	251.56	1.312	Level 3	
16,000.0	6,790.0	16,072.0	6,790.0	255.0	0.0	-90.00	-1,619.4	-10,870.6	330.1	76.0	254.03	1.299	Level 3	
16,100.0	6,790.0	16,172.0	6,790.0	257.5	0.0	-90.00	-1,619.1	-10,970.6	330.1	73.6	256.49	1.287	Level 3	
16,200.0	6,790.0	16,272.0	6,790.0	260.0	0.0	-90.00	-1,618.9	-11,070.6	330.1	71.1	258.96	1.275	Level 3	
16,300.0	6,790.0	16,372.0	6,790.0	262.4	0.0	-90.00	-1,618.6	-11,170.6	330.1	68.6	261.43	1.263	Level 3	
16,400.0	6,790.0	16,472.0	6,790.0	264.9	0.0	-90.00	-1,618.4	-11,270.6	330.1	66.2	263.90	1.251	Level 3	
16,500.0	6,790.0	16,572.0	6,790.0	267.3	0.0	-90.00	-1,618.1	-11,370.6	330.1	63.7	266.36	1.239	Level 2	
16,600.0	6,790.0	16,672.0	6,790.0	269.8	0.0	-90.00	-1,617.9	-11,470.6	330.1	61.2	268.83	1.228	Level 2	
16,700.0	6,790.0	16,772.0	6,790.0	272.2	0.0	-90.00	-1,617.6	-11,570.6	330.1	58.8	271.30	1.217	Level 2	
16,800.0	6,790.0	16,872.0	6,790.0	274.7	0.0	-90.00	-1,617.4	-11,670.6	330.1	56.3	273.77	1.206	Level 2	
16,824.6	6,790.0	16,896.6	6,790.0	275.3	0.0	-90.00	-1,617.3	-11,695.2	330.1	55.7	274.37	1.203	Level 2	
16,829.6	6,790.0	16,900.9	6,790.0	275.4	0.0	-90.00	-1,617.3	-11,699.5	330.1	55.6	274.50	1.202	Level 2, SF	

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 2 - 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		Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	30.95	192.0	115.1	223.9					
100.0	100.0	100.0	100.0	0.1	0.1	30.95	192.0	115.1	223.9	223.6	0.27	843.871		
200.0	200.0	200.0	200.0	0.3	0.3	30.95	192.0	115.1	223.9	223.3	0.61	364.399	CC, ES	
300.0	300.0	301.6	301.6	0.5	0.5	153.71	192.1	114.3	224.3	223.3	0.97	231.903		
400.0	400.0	403.2	403.1	0.7	0.7	153.37	192.4	111.6	225.6	224.3	1.32	170.290		
500.0	499.9	504.7	504.5	0.9	0.9	152.82	193.0	107.1	227.7	226.0	1.69	134.669		
600.0	599.7	606.2	605.8	1.1	1.1	152.07	193.8	100.9	230.8	228.7	2.07	111.439		
700.0	699.4	707.5	706.9	1.3	1.3	151.13	194.8	92.9	234.8	232.3	2.47	95.078		
800.0	798.9	808.8	807.6	1.5	1.5	150.03	196.0	83.1	239.7	236.8	2.89	82.918		
900.0	898.3	909.9	908.1	1.8	1.8	148.78	197.5	71.6	245.6	242.3	3.34	73.520		
1,000.0	997.4	1,010.9	1,008.2	2.0	2.1	147.42	199.2	58.3	252.6	248.8	3.83	66.036		
1,100.0	1,096.3	1,111.7	1,107.8	2.3	2.4	145.96	201.1	43.3	260.7	256.3	4.35	59.940		
1,200.0	1,194.9	1,212.3	1,207.0	2.7	2.7	144.44	203.2	26.7	269.8	264.9	4.92	54.895		
1,300.0	1,293.3	1,312.2	1,305.2	3.0	3.0	142.90	205.5	8.5	280.2	274.7	5.52	50.745		
1,400.0	1,391.2	1,411.3	1,402.6	3.4	3.4	141.62	207.8	-9.8	292.0	285.8	6.15	47.489		
1,500.0	1,488.9	1,510.3	1,499.9	3.8	3.8	140.62	210.1	-28.1	305.2	298.4	6.80	44.919		
1,600.0	1,586.1	1,609.2	1,597.0	4.2	4.1	139.90	212.4	-46.4	319.9	312.4	7.46	42.883		
1,700.0	1,682.9	1,707.9	1,694.0	4.7	4.5	139.42	214.7	-64.7	335.9	327.8	8.14	41.269		
1,800.0	1,779.3	1,806.4	1,790.7	5.2	4.8	139.15	217.0	-82.9	353.2	344.4	8.83	39.997		
1,900.0	1,875.2	1,904.6	1,887.3	5.7	5.2	139.06	219.3	-101.1	371.8	362.3	9.53	39.005		
2,000.0	1,970.5	2,002.6	1,983.5	6.3	5.5	139.13	221.6	-119.2	391.7	381.5	10.24	38.247		
2,100.0	2,065.4	2,100.3	2,079.5	6.9	5.9	139.34	223.9	-137.2	412.9	402.0	10.96	37.685		
2,200.0	2,159.6	2,197.7	2,175.2	7.5	6.3	139.65	226.2	-155.2	435.4	423.8	11.68	37.293		
2,300.0	2,253.3	2,294.7	2,270.5	8.1	6.6	140.06	228.5	-173.2	459.3	446.9	12.40	37.048		
2,400.0	2,346.3	2,391.3	2,365.5	8.8	7.0	140.53	230.7	-191.1	484.5	471.4	13.12	36.932		
2,500.0	2,438.7	2,487.5	2,460.0	9.5	7.3	141.06	233.0	-208.9	511.0	497.2	13.84	36.930	SF	
2,600.0	2,530.4	2,583.3	2,554.1	10.3	7.7	141.63	235.2	-226.6	539.0	524.4	14.56	37.030		
2,700.0	2,621.6	2,678.8	2,647.9	11.0	8.0	142.34	237.4	-244.2	568.0	552.7	15.27	37.204		
2,800.0	2,712.8	2,774.2	2,741.6	11.8	8.4	143.04	239.7	-261.9	597.1	581.1	15.98	37.378		
2,900.0	2,803.9	2,869.6	2,835.4	12.6	8.8	143.67	241.9	-279.5	626.3	609.7	16.68	37.550		
3,000.0	2,895.1	2,965.0	2,929.1	13.3	9.1	144.24	244.1	-297.2	655.6	638.2	17.38	37.718		
3,100.0	2,986.2	3,060.5	3,022.9	14.1	9.5	144.76	246.4	-314.8	684.9	666.8	18.08	37.883		
3,200.0	3,077.4	3,155.9	3,116.6	14.9	9.8	145.24	248.6	-332.5	714.3	695.5	18.78	38.043		
3,300.0	3,168.6	3,251.3	3,210.4	15.6	10.2	145.68	250.8	-350.1	743.7	724.2	19.47	38.198		
3,400.0	3,259.7	3,346.7	3,304.1	16.4	10.5	146.09	253.1	-367.8	773.2	753.0	20.16	38.349		
3,500.0	3,350.9	3,442.2	3,397.9	17.2	10.9	146.47	255.3	-385.4	802.7	781.8	20.85	38.494		
3,600.0	3,442.0	3,537.6	3,491.6	17.9	11.2	146.83	257.5	-403.1	832.2	810.6	21.54	38.635		
3,700.0	3,533.2	3,633.0	3,585.4	18.7	11.6	147.15	259.8	-420.7	861.7	839.5	22.23	38.771		
3,800.0	3,624.3	3,728.4	3,679.1	19.5	11.9	147.46	262.0	-438.3	891.3	868.4	22.91	38.903		
3,900.0	3,715.5	3,823.9	3,772.9	20.3	12.3	147.75	264.2	-456.0	920.9	897.3	23.59	39.029		
4,000.0	3,806.6	3,919.3	3,866.6	21.0	12.7	148.02	266.5	-473.6	950.5	926.2	24.28	39.152		
4,100.0	3,897.8	4,014.7	3,960.4	21.8	13.0	148.27	268.7	-491.3	980.1	955.1	24.96	39.269		
4,200.0	3,989.0	4,110.1	4,054.1	22.6	13.4	148.51	270.9	-508.9	1,009.8	984.1	25.64	39.383		
4,300.0	4,080.1	4,205.5	4,147.9	23.3	13.7	148.73	273.2	-526.6	1,039.4	1,013.1	26.32	39.493		
4,400.0	4,171.3	4,301.0	4,241.6	24.1	14.1	148.94	275.4	-544.2	1,069.1	1,042.1	27.00	39.599		
4,500.0	4,262.4	4,396.4	4,335.4	24.9	14.4	149.14	277.6	-561.9	1,098.8	1,071.1	27.68	39.702		
4,600.0	4,353.6	4,491.8	4,429.1	25.7	14.8	149.33	279.9	-579.5	1,128.5	1,100.1	28.35	39.800		
4,700.0	4,444.7	4,587.2	4,522.9	26.4	15.1	149.51	282.1	-597.2	1,158.2	1,129.1	29.03	39.896		
4,800.0	4,535.9	4,682.7	4,616.6	27.2	15.5	149.69	284.3	-614.8	1,187.9	1,158.2	29.71	39.988		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 3 - 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	30.94	167.9	100.7	195.8					
100.0	100.0	100.0	100.0	0.1	0.1	30.94	167.9	100.7	195.8	195.5	0.27	738.106		
200.0	200.0	200.0	200.0	0.3	0.3	30.94	167.9	100.7	195.8	195.2	0.61	318.728 CC		
300.0	300.0	301.8	301.8	0.5	0.5	153.69	167.9	99.8	196.1	195.2	0.97	202.744 ES		
400.0	400.0	403.5	403.5	0.7	0.7	153.36	168.0	97.1	197.1	195.8	1.32	148.808		
500.0	499.9	505.3	505.1	0.9	0.9	152.80	168.0	92.6	198.8	197.1	1.69	117.614		
600.0	599.7	607.0	606.6	1.1	1.1	152.03	168.0	86.2	201.2	199.1	2.07	97.256		
700.0	699.4	708.6	707.9	1.3	1.3	151.08	168.0	78.1	204.2	201.8	2.46	82.899		
800.0	798.9	810.1	809.0	1.5	1.5	149.95	168.0	68.2	208.1	205.2	2.88	72.207		
900.0	898.3	911.6	909.7	1.8	1.8	148.67	168.1	56.6	212.7	209.4	3.33	63.918		
1,000.0	997.4	1,012.9	1,010.2	2.0	2.1	147.26	168.1	43.1	218.2	214.4	3.81	57.294		
1,100.0	1,096.3	1,114.1	1,110.2	2.3	2.4	145.74	168.1	27.9	224.5	220.2	4.33	51.879		
1,200.0	1,194.9	1,214.8	1,209.5	2.7	2.7	144.17	168.2	11.1	231.8	226.9	4.89	47.435		
1,300.0	1,293.3	1,314.3	1,307.5	3.0	3.0	142.85	168.2	-5.9	240.4	234.9	5.46	43.991		
1,400.0	1,391.2	1,413.7	1,405.4	3.4	3.4	141.86	168.3	-23.0	250.5	244.5	6.06	41.319		
1,500.0	1,488.9	1,513.0	1,503.3	3.8	3.7	141.16	168.3	-40.0	262.0	255.4	6.68	39.244		
1,600.0	1,586.1	1,612.1	1,600.9	4.2	4.0	140.75	168.4	-57.0	274.9	267.6	7.30	37.638		
1,700.0	1,682.9	1,711.1	1,698.5	4.7	4.4	140.57	168.4	-74.0	289.2	281.2	7.94	36.411		
1,800.0	1,779.3	1,809.9	1,795.8	5.2	4.7	140.61	168.5	-90.9	304.8	296.2	8.59	35.491		
1,900.0	1,875.2	1,908.4	1,892.9	5.7	5.0	140.82	168.5	-107.8	321.7	312.4	9.24	34.827		
2,000.0	1,970.5	2,006.7	1,989.7	6.3	5.4	141.18	168.6	-124.7	339.9	330.0	9.89	34.380		
2,100.0	2,065.4	2,104.7	2,086.2	6.9	5.7	141.66	168.6	-141.5	359.5	349.0	10.54	34.118		
2,200.0	2,159.6	2,202.3	2,182.4	7.5	6.1	142.23	168.7	-158.2	380.5	369.4	11.19	34.018 SF		
2,300.0	2,253.3	2,299.7	2,278.3	8.1	6.4	142.88	168.7	-174.9	403.0	391.1	11.83	34.059		
2,400.0	2,346.3	2,396.6	2,373.8	8.8	6.7	143.57	168.8	-191.5	426.8	414.3	12.47	34.224		
2,500.0	2,438.7	2,493.1	2,468.9	9.5	7.1	144.31	168.8	-208.0	452.1	439.0	13.10	34.502		
2,600.0	2,530.4	2,589.2	2,563.6	10.3	7.4	145.06	168.8	-224.5	478.9	465.2	13.73	34.880		
2,700.0	2,621.6	2,684.9	2,657.9	11.0	7.7	145.92	168.9	-240.9	506.8	492.4	14.35	35.327		
2,800.0	2,712.8	2,780.6	2,752.2	11.8	8.1	146.73	168.9	-257.3	534.9	519.9	14.96	35.758		
2,900.0	2,803.9	2,876.4	2,846.5	12.6	8.4	147.47	169.0	-273.8	563.0	547.4	15.57	36.169		
3,000.0	2,895.1	2,972.1	2,940.8	13.3	8.7	148.13	169.0	-290.2	591.2	575.1	16.17	36.562		
3,100.0	2,986.2	3,067.8	3,035.1	14.1	9.1	148.73	169.1	-306.6	619.5	602.8	16.77	36.938		
3,200.0	3,077.4	3,163.5	3,129.4	14.9	9.4	149.28	169.1	-323.0	647.9	630.5	17.37	37.296		
3,300.0	3,168.6	3,259.2	3,223.7	15.6	9.7	149.79	169.2	-339.4	676.3	658.3	17.97	37.637		
3,400.0	3,259.7	3,354.9	3,318.0	16.4	10.1	150.25	169.2	-355.8	704.7	686.2	18.56	37.964		
3,500.0	3,350.9	3,450.7	3,412.3	17.2	10.4	150.68	169.3	-372.2	733.2	714.1	19.16	38.275		
3,600.0	3,442.0	3,546.4	3,506.6	17.9	10.7	151.08	169.3	-388.6	761.8	742.0	19.75	38.573		
3,700.0	3,533.2	3,642.1	3,600.9	18.7	11.1	151.44	169.3	-405.0	790.3	770.0	20.34	38.858		
3,800.0	3,624.3	3,737.8	3,695.2	19.5	11.4	151.79	169.4	-421.4	818.9	798.0	20.93	39.130		
3,900.0	3,715.5	3,833.5	3,789.5	20.3	11.7	152.10	169.4	-437.9	847.5	826.0	21.52	39.391		
4,000.0	3,806.6	3,929.2	3,883.8	21.0	12.1	152.40	169.5	-454.3	876.1	854.0	22.10	39.641		
4,100.0	3,897.8	4,025.0	3,978.1	21.8	12.4	152.68	169.5	-470.7	904.8	882.1	22.69	39.880		
4,200.0	3,989.0	4,120.7	4,072.4	22.6	12.7	152.94	169.6	-487.1	933.5	910.2	23.27	40.109		
4,300.0	4,080.1	4,216.4	4,166.7	23.3	13.1	153.19	169.6	-503.5	962.2	938.3	23.86	40.329		
4,400.0	4,171.3	4,312.1	4,261.0	24.1	13.4	153.42	169.7	-519.9	990.9	966.4	24.44	40.541		
4,500.0	4,262.4	4,407.8	4,355.3	24.9	13.7	153.64	169.7	-536.3	1,019.6	994.5	25.02	40.744		
4,600.0	4,353.6	4,503.5	4,449.6	25.7	14.1	153.85	169.8	-552.7	1,048.3	1,022.7	25.61	40.940		
4,700.0	4,444.7	4,599.3	4,543.9	26.4	14.4	154.05	169.8	-569.1	1,077.0	1,050.9	26.19	41.128		
4,800.0	4,535.9	4,695.0	4,638.2	27.2	14.7	154.23	169.8	-585.6	1,105.8	1,079.0	26.77	41.309		
4,900.0	4,627.1	4,790.7	4,732.5	28.0	15.1	154.41	169.9	-602.0	1,134.6	1,107.2	27.35	41.483		
5,000.0	4,718.2	4,886.4	4,826.8	28.8	15.4	154.58	169.9	-618.4	1,163.3	1,135.4	27.93	41.651		
5,100.0	4,809.4	4,982.1	4,921.1	29.6	15.8	154.74	170.0	-634.8	1,192.1	1,163.6	28.51	41.813		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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				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	30.95	144.3	86.5	168.2					
100.0	100.0	99.0	99.0	0.1	0.1	30.95	144.3	86.5	168.2	167.9	0.26	637.256		
200.0	200.0	199.0	199.0	0.3	0.3	30.95	144.3	86.5	168.2	167.6	0.61	274.583	CC	
300.0	300.0	300.8	300.8	0.5	0.5	153.71	144.2	85.6	168.5	167.5	0.97	174.458	ES	
400.0	400.0	402.7	402.6	0.7	0.7	153.38	143.8	82.9	169.2	167.9	1.32	127.940		
500.0	499.9	504.5	504.3	0.9	0.9	152.85	143.3	78.5	170.4	168.7	1.69	101.041		
600.0	599.7	606.3	605.9	1.1	1.1	152.11	142.5	72.2	172.1	170.0	2.06	83.479		
700.0	699.4	708.0	707.3	1.3	1.3	151.18	141.5	64.2	174.3	171.9	2.45	71.081		
800.0	798.9	809.7	808.5	1.5	1.5	150.07	140.3	54.3	177.1	174.2	2.86	61.832		
900.0	898.3	911.3	909.5	1.8	1.8	148.81	138.8	42.7	180.5	177.2	3.30	54.642		
1,000.0	997.4	1,012.9	1,010.2	2.0	2.1	147.41	137.1	29.4	184.4	180.7	3.77	48.875		
1,100.0	1,096.3	1,114.4	1,110.5	2.3	2.4	145.90	135.3	14.3	189.1	184.8	4.28	44.135		
1,200.0	1,194.9	1,215.8	1,210.5	2.7	2.7	144.30	133.1	-2.6	194.4	189.5	4.84	40.181		
1,300.0	1,293.3	1,315.9	1,308.9	3.0	3.1	142.76	130.9	-20.5	200.6	195.2	5.42	36.987		
1,400.0	1,391.2	1,415.5	1,406.9	3.4	3.4	141.60	128.7	-38.4	208.3	202.3	6.03	34.544		
1,500.0	1,488.9	1,515.1	1,504.8	3.8	3.7	140.80	126.4	-56.3	217.4	210.8	6.65	32.678		
1,600.0	1,586.1	1,614.5	1,602.6	4.2	4.1	140.34	124.2	-74.1	227.9	220.6	7.29	31.267		
1,700.0	1,682.9	1,713.8	1,700.3	4.7	4.4	140.17	122.0	-92.0	239.7	231.8	7.93	30.220		
1,800.0	1,779.3	1,812.9	1,797.8	5.2	4.8	140.25	119.8	-109.8	252.9	244.3	8.58	29.470		
1,900.0	1,875.2	1,911.8	1,895.0	5.7	5.2	140.55	117.6	-127.5	267.4	258.2	9.23	28.968		
2,000.0	1,970.5	2,010.5	1,992.1	6.3	5.5	141.03	115.3	-145.2	283.3	273.4	9.88	28.675		
2,100.0	2,065.4	2,109.0	2,088.9	6.9	5.9	141.64	113.1	-162.9	300.5	290.0	10.52	28.563	SF	
2,200.0	2,159.6	2,207.1	2,185.5	7.5	6.2	142.37	110.9	-180.5	319.1	307.9	11.15	28.607		
2,300.0	2,253.3	2,304.9	2,281.7	8.1	6.6	143.18	108.7	-198.1	339.2	327.4	11.78	28.790		
2,400.0	2,346.3	2,402.4	2,377.5	8.8	6.9	144.04	106.6	-215.6	360.7	348.3	12.40	29.097		
2,500.0	2,438.7	2,499.5	2,473.0	9.5	7.3	144.93	104.4	-233.0	383.7	370.7	13.00	29.514		
2,600.0	2,530.4	2,596.2	2,568.1	10.3	7.6	145.84	102.2	-250.4	408.2	394.6	13.59	30.032		
2,700.0	2,621.6	2,692.6	2,662.9	11.0	8.0	146.83	100.1	-267.7	433.8	419.7	14.17	30.618		
2,800.0	2,712.8	2,788.9	2,757.7	11.8	8.3	147.76	97.9	-285.0	459.7	444.9	14.74	31.179		
2,900.0	2,803.9	2,885.3	2,852.4	12.6	8.7	148.58	95.7	-302.3	485.6	470.3	15.31	31.711		
3,000.0	2,895.1	2,981.6	2,947.2	13.3	9.0	149.32	93.6	-319.6	511.7	495.8	15.88	32.217		
3,100.0	2,986.2	3,078.0	3,042.0	14.1	9.4	149.99	91.4	-336.9	537.8	521.3	16.45	32.698		
3,200.0	3,077.4	3,174.3	3,136.7	14.9	9.7	150.60	89.3	-354.2	563.9	546.9	17.01	33.154		
3,300.0	3,168.6	3,270.7	3,231.5	15.6	10.1	151.15	87.1	-371.5	590.1	572.6	17.57	33.588		
3,400.0	3,259.7	3,367.0	3,326.2	16.4	10.4	151.66	84.9	-388.8	616.4	598.3	18.13	34.001		
3,500.0	3,350.9	3,463.4	3,421.0	17.2	10.8	152.12	82.8	-406.1	642.7	624.0	18.69	34.394		
3,600.0	3,442.0	3,559.8	3,515.8	17.9	11.1	152.55	80.6	-423.4	669.0	649.8	19.24	34.768		
3,700.0	3,533.2	3,656.1	3,610.5	18.7	11.5	152.95	78.5	-440.7	695.4	675.6	19.80	35.125		
3,800.0	3,624.3	3,752.5	3,705.3	19.5	11.8	153.32	76.3	-458.0	721.8	701.5	20.35	35.466		
3,900.0	3,715.5	3,848.8	3,800.1	20.3	12.2	153.66	74.1	-475.3	748.2	727.3	20.91	35.791		
4,000.0	3,806.6	3,945.2	3,894.8	21.0	12.5	153.98	72.0	-492.6	774.7	753.2	21.46	36.102		
4,100.0	3,897.8	4,041.5	3,989.6	21.8	12.9	154.27	69.8	-509.9	801.2	779.1	22.01	36.399		
4,200.0	3,989.0	4,137.9	4,084.3	22.6	13.2	154.55	67.7	-527.2	827.6	805.1	22.56	36.683		
4,300.0	4,080.1	4,234.2	4,179.1	23.3	13.6	154.81	65.5	-544.5	854.1	831.0	23.11	36.956		
4,400.0	4,171.3	4,330.6	4,273.9	24.1	13.9	155.06	63.3	-561.8	880.7	857.0	23.66	37.217		
4,500.0	4,262.4	4,426.9	4,368.6	24.9	14.3	155.29	61.2	-579.1	907.2	883.0	24.21	37.468		
4,600.0	4,353.6	4,523.3	4,463.4	25.7	14.6	155.51	59.0	-596.4	933.8	909.0	24.76	37.709		
4,700.0	4,444.7	4,619.6	4,558.1	26.4	15.0	155.71	56.9	-613.7	960.3	935.0	25.31	37.940		
4,800.0	4,535.9	4,716.0	4,652.9	27.2	15.3	155.91	54.7	-631.0	986.9	961.0	25.86	38.162		
4,900.0	4,627.1	4,812.3	4,747.7	28.0	15.7	156.09	52.6	-648.3	1,013.5	987.1	26.41	38.376		
5,000.0	4,718.2	4,908.7	4,842.4	28.8	16.0	156.27	50.4	-665.6	1,040.1	1,013.1	26.96	38.582		
5,100.0	4,809.4	5,005.0	4,937.2	29.6	16.4	156.43	48.2	-682.9	1,066.7	1,039.2	27.50	38.781		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor					
5,200.0	4,900.5	5,101.4	5,032.0	30.3	16.7	156.59	46.1	-700.2	1,093.3	1,065.2	28.05	38.972					
5,300.0	4,991.7	5,197.7	5,126.7	31.1	17.1	156.74	43.9	-717.4	1,119.9	1,091.3	28.60	39.157					
5,400.0	5,082.8	5,294.1	5,221.5	31.9	17.4	156.89	41.8	-734.7	1,146.5	1,117.4	29.15	39.335					
5,500.0	5,174.0	5,390.4	5,316.2	32.7	17.8	157.02	39.6	-752.0	1,173.1	1,143.4	29.69	39.507					
5,600.0	5,265.2	5,486.8	5,411.0	33.4	18.1	157.16	37.4	-769.3	1,199.8	1,169.5	30.24	39.674					

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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)				
0.0	0.0	0.0	0.0	0.0	0.0	30.83	120.2	71.8	140.0					
100.0	100.0	100.0	100.0	0.1	0.1	30.83	120.2	71.8	140.0	139.7	0.27	527.753		
200.0	200.0	200.0	200.0	0.3	0.3	30.83	120.2	71.8	140.0	139.4	0.61	227.893 CC		
300.0	300.0	302.0	302.0	0.5	0.5	153.64	119.9	70.9	140.1	139.1	0.97	144.796		
400.0	400.0	404.0	403.9	0.7	0.7	153.45	118.9	68.4	140.3	139.0	1.32	106.043 ES		
500.0	499.9	506.0	505.8	0.9	0.9	153.14	117.1	64.2	140.7	139.0	1.68	83.551		
600.0	599.7	607.9	607.6	1.1	1.1	152.70	114.7	58.3	141.2	139.1	2.05	68.809		
700.0	699.4	709.9	709.2	1.3	1.3	152.15	111.7	50.8	141.9	139.4	2.43	58.359		
800.0	798.9	811.9	810.7	1.5	1.5	151.49	107.9	41.5	142.7	139.9	2.82	50.529		
900.0	898.3	913.8	912.0	1.8	1.8	150.71	103.5	30.6	143.7	140.5	3.24	44.413		
1,000.0	997.4	1,015.7	1,013.0	2.0	2.1	149.83	98.4	18.1	144.9	141.2	3.67	39.478		
1,100.0	1,096.3	1,117.6	1,113.7	2.3	2.4	148.85	92.6	3.8	146.3	142.2	4.13	35.392		
1,200.0	1,194.9	1,219.5	1,214.1	2.7	2.7	147.78	86.1	-12.0	147.9	143.3	4.63	31.938		
1,300.0	1,293.3	1,321.1	1,313.9	3.0	3.1	146.63	79.0	-29.5	149.8	144.6	5.17	28.994		
1,400.0	1,391.2	1,421.0	1,412.0	3.4	3.4	145.72	71.8	-47.2	152.7	147.0	5.72	26.705		
1,500.0	1,488.9	1,520.9	1,510.1	3.8	3.8	145.21	64.6	-65.0	157.1	150.8	6.28	25.009		
1,600.0	1,586.1	1,620.7	1,608.0	4.2	4.2	145.07	57.4	-82.7	162.9	156.0	6.85	23.788		
1,700.0	1,682.9	1,720.5	1,705.9	4.7	4.5	145.27	50.2	-100.4	170.1	162.7	7.41	22.954		
1,800.0	1,779.3	1,820.1	1,803.7	5.2	4.9	145.76	43.0	-118.1	178.8	170.8	7.97	22.444		
1,900.0	1,875.2	1,919.5	1,901.3	5.7	5.3	146.48	35.8	-135.7	189.0	180.4	8.51	22.206		
2,000.0	1,970.5	2,018.8	1,998.7	6.3	5.7	147.39	28.6	-153.4	200.6	191.6	9.03	22.203		
2,100.0	2,065.4	2,117.8	2,095.9	6.9	6.0	148.44	21.5	-170.9	213.8	204.2	9.54	22.404		
2,200.0	2,159.6	2,216.6	2,192.9	7.5	6.4	149.57	14.3	-188.5	228.5	218.4	10.03	22.787		
2,300.0	2,253.3	2,315.2	2,289.6	8.1	6.8	150.75	7.2	-206.0	244.8	234.3	10.49	23.330		
2,400.0	2,346.3	2,413.4	2,386.0	8.8	7.1	151.95	0.1	-223.4	262.7	251.8	10.94	24.018		
2,500.0	2,438.7	2,511.3	2,482.1	9.5	7.5	153.15	-7.0	-240.8	282.3	270.9	11.37	24.837		
2,600.0	2,530.4	2,608.8	2,577.8	10.3	7.9	154.32	-14.0	-258.1	303.5	291.7	11.78	25.774		
2,700.0	2,621.6	2,706.0	2,673.2	11.0	8.3	155.48	-21.0	-275.4	326.0	313.8	12.18	26.777		
2,800.0	2,712.8	2,803.2	2,768.6	11.8	8.6	156.53	-28.0	-292.6	348.7	336.1	12.58	27.728		
2,900.0	2,803.9	2,900.4	2,864.0	12.6	9.0	157.45	-35.1	-309.9	371.5	358.5	12.98	28.628		
3,000.0	2,895.1	2,997.6	2,959.4	13.3	9.4	158.26	-42.1	-327.1	394.3	380.9	13.38	29.478		
3,100.0	2,986.2	3,094.8	3,054.8	14.1	9.7	158.98	-49.1	-344.4	417.2	403.5	13.78	30.283		
3,200.0	3,077.4	3,192.0	3,150.2	14.9	10.1	159.63	-56.1	-361.7	440.2	426.0	14.18	31.045		
3,300.0	3,168.6	3,289.3	3,245.6	15.6	10.5	160.22	-63.2	-378.9	463.2	448.7	14.58	31.768		
3,400.0	3,259.7	3,386.5	3,341.0	16.4	10.8	160.74	-70.2	-396.2	486.3	471.3	14.98	32.454		
3,500.0	3,350.9	3,483.7	3,436.4	17.2	11.2	161.23	-77.2	-413.4	509.4	494.0	15.39	33.105		
3,600.0	3,442.0	3,580.9	3,531.8	17.9	11.6	161.66	-84.2	-430.7	532.5	516.8	15.79	33.724		
3,700.0	3,533.2	3,678.1	3,627.3	18.7	11.9	162.07	-91.2	-447.9	555.7	539.5	16.20	34.314		
3,800.0	3,624.3	3,775.3	3,722.7	19.5	12.3	162.44	-98.3	-465.2	578.9	562.3	16.60	34.875		
3,900.0	3,715.5	3,872.5	3,818.1	20.3	12.7	162.78	-105.3	-482.5	602.1	585.1	17.00	35.410		
4,000.0	3,806.6	3,969.7	3,913.5	21.0	13.1	163.10	-112.3	-499.7	625.3	607.9	17.41	35.921		
4,100.0	3,897.8	4,066.9	4,008.9	21.8	13.4	163.39	-119.3	-517.0	648.6	630.8	17.81	36.409		
4,200.0	3,989.0	4,164.1	4,104.3	22.6	13.8	163.66	-126.4	-534.2	671.8	653.6	18.22	36.876		
4,300.0	4,080.1	4,261.3	4,199.7	23.3	14.2	163.92	-133.4	-551.5	695.1	676.5	18.62	37.323		
4,400.0	4,171.3	4,358.6	4,295.1	24.1	14.5	164.16	-140.4	-568.8	718.4	699.4	19.03	37.751		
4,500.0	4,262.4	4,455.8	4,390.5	24.9	14.9	164.38	-147.4	-586.0	741.7	722.2	19.44	38.161		
4,600.0	4,353.6	4,553.0	4,485.9	25.7	15.3	164.59	-154.5	-603.3	765.0	745.1	19.84	38.555		
4,700.0	4,444.7	4,650.2	4,581.3	26.4	15.6	164.79	-161.5	-620.5	788.3	768.0	20.25	38.933		
4,800.0	4,535.9	4,747.4	4,676.7	27.2	16.0	164.98	-168.5	-637.8	811.6	791.0	20.65	39.296		
4,900.0	4,627.1	4,844.6	4,772.1	28.0	16.4	165.15	-175.5	-655.1	834.9	813.9	21.06	39.646		
5,000.0	4,718.2	4,941.8	4,867.5	28.8	16.8	165.32	-182.5	-672.3	858.3	836.8	21.47	39.982		
5,100.0	4,809.4	5,039.0	4,963.0	29.6	17.1	165.48	-189.6	-689.6	881.6	859.8	21.87	40.306		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		
5,200.0	4,900.5	5,136.2	5,058.4	30.3	17.5	165.63	-196.6	-706.8	905.0	882.7	22.28	40.618		
5,300.0	4,991.7	5,233.4	5,153.8	31.1	17.9	165.77	-203.6	-724.1	928.3	905.6	22.69	40.918		
5,400.0	5,082.8	5,330.7	5,249.2	31.9	18.2	165.90	-210.6	-741.3	951.7	928.6	23.09	41.209		
5,500.0	5,174.0	5,427.9	5,344.6	32.7	18.6	166.03	-217.7	-758.6	975.1	951.6	23.50	41.489		
5,600.0	5,265.2	5,525.1	5,440.0	33.4	19.0	166.15	-224.7	-775.9	998.4	974.5	23.91	41.760		
5,700.0	5,356.3	5,622.3	5,535.4	34.2	19.4	166.27	-231.7	-793.1	1,021.8	997.5	24.32	42.021		
5,800.0	5,447.5	5,719.5	5,630.8	35.0	19.7	166.38	-238.7	-810.4	1,045.2	1,020.4	24.72	42.274		
5,900.0	5,538.6	5,816.7	5,726.2	35.8	20.1	166.49	-245.7	-827.6	1,068.6	1,043.4	25.13	42.519		
6,000.0	5,629.8	5,913.9	5,821.6	36.5	20.5	166.59	-252.8	-844.9	1,091.9	1,066.4	25.54	42.756		
6,100.0	5,720.9	6,011.1	5,917.0	37.3	20.8	166.69	-259.8	-862.2	1,115.3	1,089.4	25.95	42.986		
6,200.0	5,812.1	6,108.3	6,012.4	38.1	21.2	166.78	-266.8	-879.4	1,138.7	1,112.4	26.35	43.209		
6,300.0	5,903.2	6,205.5	6,107.8	38.9	21.6	166.87	-273.8	-896.7	1,162.1	1,135.3	26.76	43.424		
6,400.0	5,994.4	7,429.1	6,790.0	39.7	38.4	137.29	-322.3	-1,726.3	1,124.3	1,062.2	62.11	18.100		
6,500.0	6,085.6	7,463.5	6,790.0	40.4	39.1	135.43	-322.2	-1,760.8	1,078.6	1,013.9	64.72	16.666		
6,600.0	6,176.7	7,498.0	6,790.0	41.2	39.9	133.55	-322.1	-1,795.3	1,039.4	972.0	67.33	15.437		
6,700.0	6,267.9	7,532.5	6,790.0	42.0	40.7	131.65	-322.0	-1,829.8	1,007.4	937.5	69.95	14.402		
6,800.0	6,359.0	7,567.0	6,790.0	42.8	41.4	129.73	-321.9	-1,864.3	983.4	910.9	72.56	13.553		
6,900.0	6,448.7	7,605.2	6,790.0	43.6	42.3	121.82	-321.8	-1,902.5	968.1	893.3	74.85	12.934		
7,000.0	6,531.8	7,656.8	6,790.0	44.8	43.5	113.91	-321.7	-1,954.1	961.7	883.4	78.30	12.282		
7,037.4	6,560.6	7,679.4	6,790.0	45.3	44.0	111.34	-321.7	-1,976.7	961.3	881.3	79.92	12.028		
7,100.0	6,606.0	7,721.2	6,790.0	46.1	44.9	107.33	-321.6	-2,018.4	962.4	879.6	82.79	11.624		
7,200.0	6,669.5	7,796.7	6,790.0	47.6	46.6	101.61	-321.4	-2,094.0	967.8	880.1	87.70	11.035		
7,300.0	6,720.7	7,881.5	6,790.0	49.4	48.6	96.81	-321.2	-2,178.8	975.3	882.8	92.49	10.544		
7,400.0	6,758.4	7,973.5	6,790.0	51.2	50.7	93.15	-320.9	-2,270.8	982.6	885.7	96.86	10.145		
7,500.0	6,781.7	8,070.5	6,790.0	53.2	53.0	90.83	-320.7	-2,367.8	987.8	887.1	100.76	9.804		
7,600.0	6,790.0	8,170.0	6,790.0	55.2	55.3	90.00	-320.4	-2,467.3	989.8	885.5	104.34	9.487		
7,700.0	6,790.0	8,270.1	6,790.0	57.2	57.6	90.00	-320.2	-2,567.3	989.8	880.9	108.94	9.086		
7,800.0	6,790.0	8,370.1	6,790.0	59.3	60.0	90.00	-319.9	-2,667.3	989.8	876.2	113.61	8.712		
7,900.0	6,790.0	8,470.1	6,790.0	61.4	62.4	90.00	-319.7	-2,767.3	989.8	871.5	118.31	8.366		
8,000.0	6,790.0	8,570.1	6,790.0	63.5	64.7	90.00	-319.4	-2,867.3	989.8	866.8	123.03	8.045		
8,100.0	6,790.0	8,670.1	6,790.0	65.7	67.1	90.00	-319.2	-2,967.3	989.8	862.1	127.77	7.747		
8,200.0	6,790.0	8,770.1	6,790.0	67.9	69.5	90.00	-318.9	-3,067.3	989.8	857.3	132.52	7.469		
8,300.0	6,790.0	8,870.1	6,790.0	70.0	71.9	90.00	-318.7	-3,167.3	989.8	852.6	137.29	7.210		
8,400.0	6,790.0	8,970.1	6,790.0	72.3	74.3	90.00	-318.4	-3,267.3	989.8	847.8	142.07	6.967		
8,500.0	6,790.0	9,070.1	6,790.0	74.5	76.7	90.00	-318.2	-3,367.3	989.8	843.0	146.86	6.740		
8,600.0	6,790.0	9,170.1	6,790.0	76.7	79.1	90.00	-317.9	-3,467.3	989.8	838.2	151.66	6.527		
8,700.0	6,790.0	9,270.1	6,790.0	79.0	81.5	90.00	-317.7	-3,567.3	989.8	833.4	156.47	6.326		
8,800.0	6,790.0	9,370.1	6,790.0	81.3	83.9	90.00	-317.4	-3,667.3	989.8	828.6	161.29	6.137		
8,900.0	6,790.0	9,470.1	6,790.0	83.5	86.4	90.00	-317.2	-3,767.3	989.8	823.7	166.11	5.959		
9,000.0	6,790.0	9,570.1	6,790.0	85.8	88.8	90.00	-316.9	-3,867.3	989.8	818.9	170.95	5.790		
9,100.0	6,790.0	9,670.1	6,790.0	88.1	91.2	90.00	-316.7	-3,967.3	989.8	814.1	175.79	5.631		
9,200.0	6,790.0	9,770.1	6,790.0	90.4	93.6	90.00	-316.4	-4,067.3	989.8	809.2	180.63	5.480		
9,300.0	6,790.0	9,870.1	6,790.0	92.8	96.1	90.00	-316.2	-4,167.3	989.8	804.4	185.48	5.337		
9,400.0	6,790.0	9,970.1	6,790.0	95.1	98.5	90.00	-315.9	-4,267.3	989.8	799.5	190.34	5.200		
9,500.0	6,790.0	10,070.1	6,790.0	97.4	100.9	90.00	-315.7	-4,367.3	989.8	794.6	195.20	5.071		
9,600.0	6,790.0	10,170.1	6,790.0	99.8	103.4	90.00	-315.4	-4,467.3	989.8	789.8	200.07	4.948		
9,700.0	6,790.0	10,270.1	6,790.0	102.1	105.8	90.00	-315.2	-4,567.3	989.8	784.9	204.94	4.830		
9,800.0	6,790.0	10,370.1	6,790.0	104.5	108.3	90.00	-314.9	-4,667.3	989.8	780.0	209.81	4.718		
9,900.0	6,790.0	10,470.1	6,790.0	106.8	110.7	90.00	-314.7	-4,767.3	989.8	775.2	214.69	4.611		
10,000.0	6,790.0	10,570.1	6,790.0	109.2	113.2	90.00	-314.4	-4,867.3	989.8	770.3	219.57	4.508		
10,100.0	6,790.0	10,670.1	6,790.0	111.6	115.6	90.00	-314.2	-4,967.3	989.8	765.4	224.45	4.410		
10,200.0	6,790.0	10,770.1	6,790.0	113.9	118.0	90.00	-313.9	-5,067.3	989.8	760.5	229.34	4.316		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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							
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	6,790.0	10,870.1	6,790.0	116.3	120.5	90.00	-313.7	-5,167.3	989.8	755.6	234.22	4.226	
10,400.0	6,790.0	10,970.1	6,790.0	118.7	122.9	90.00	-313.5	-5,267.3	989.8	750.7	239.12	4.140	
10,500.0	6,790.0	11,070.1	6,790.0	121.1	125.4	90.00	-313.2	-5,367.3	989.8	745.8	244.01	4.057	
10,600.0	6,790.0	11,170.1	6,790.0	123.5	127.8	90.00	-313.0	-5,467.3	989.8	740.9	248.90	3.977	
10,700.0	6,790.0	11,270.1	6,790.0	125.9	130.3	90.00	-312.7	-5,567.3	989.8	736.0	253.80	3.900	
10,800.0	6,790.0	11,370.1	6,790.0	128.3	132.7	90.00	-312.5	-5,667.3	989.8	731.1	258.70	3.826	
10,900.0	6,790.0	11,470.1	6,790.0	130.7	135.2	90.00	-312.2	-5,767.3	989.8	726.2	263.60	3.755	
11,000.0	6,790.0	11,570.1	6,790.0	133.1	137.7	90.00	-312.0	-5,867.3	989.8	721.3	268.51	3.686	
11,100.0	6,790.0	11,670.1	6,790.0	135.5	140.1	90.00	-311.7	-5,967.3	989.8	716.4	273.41	3.620	
11,200.0	6,790.0	11,770.1	6,790.0	137.9	142.6	90.00	-311.5	-6,067.3	989.8	711.5	278.32	3.556	
11,300.0	6,790.0	11,870.1	6,790.0	140.3	145.0	90.00	-311.2	-6,167.3	989.8	706.6	283.23	3.495	
11,400.0	6,790.0	11,970.1	6,790.0	142.7	147.5	90.00	-311.0	-6,267.3	989.8	701.7	288.13	3.435	
11,500.0	6,790.0	12,070.1	6,790.0	145.1	149.9	90.00	-310.7	-6,367.3	989.8	696.8	293.05	3.378	
11,600.0	6,790.0	12,170.1	6,790.0	147.6	152.4	90.00	-310.5	-6,467.3	989.8	691.9	297.96	3.322	
11,700.0	6,790.0	12,270.1	6,790.0	150.0	154.9	90.00	-310.2	-6,567.3	989.8	687.0	302.87	3.268	
11,800.0	6,790.0	12,370.1	6,790.0	152.4	157.3	90.00	-310.0	-6,667.3	989.8	682.0	307.79	3.216	
11,900.0	6,790.0	12,470.1	6,790.0	154.8	159.8	90.00	-309.7	-6,767.3	989.8	677.1	312.70	3.165	
12,000.0	6,790.0	12,570.1	6,790.0	157.2	162.2	90.00	-309.5	-6,867.3	989.8	672.2	317.62	3.116	
12,100.0	6,790.0	12,670.1	6,790.0	159.7	164.7	90.00	-309.2	-6,967.3	989.8	667.3	322.53	3.069	
12,200.0	6,790.0	12,770.1	6,790.0	162.1	167.1	90.00	-309.0	-7,067.3	989.8	662.4	327.45	3.023	
12,300.0	6,790.0	12,870.1	6,790.0	164.5	169.6	90.00	-308.7	-7,167.3	989.8	657.5	332.37	2.978	
12,400.0	6,790.0	12,970.1	6,790.0	167.0	172.1	90.00	-308.5	-7,267.3	989.8	652.5	337.29	2.935	
12,500.0	6,790.0	13,070.1	6,790.0	169.4	174.5	90.00	-308.2	-7,367.3	989.8	647.6	342.21	2.892	
12,600.0	6,790.0	13,170.1	6,790.0	171.8	177.0	90.00	-308.0	-7,467.3	989.8	642.7	347.14	2.851	
12,700.0	6,790.0	13,270.1	6,790.0	174.3	179.5	90.00	-307.7	-7,567.3	989.8	637.8	352.06	2.812	
12,800.0	6,790.0	13,370.1	6,790.0	176.7	181.9	90.00	-307.5	-7,667.3	989.8	632.8	356.98	2.773	
12,900.0	6,790.0	13,470.1	6,790.0	179.1	184.4	90.00	-307.2	-7,767.3	989.8	627.9	361.90	2.735	
13,000.0	6,790.0	13,570.1	6,790.0	181.6	186.8	90.00	-307.0	-7,867.3	989.8	623.0	366.83	2.698	
13,100.0	6,790.0	13,670.1	6,790.0	184.0	189.3	90.00	-306.7	-7,967.3	989.8	618.1	371.75	2.663	
13,200.0	6,790.0	13,770.1	6,790.0	186.4	191.8	90.00	-306.5	-8,067.3	989.8	613.1	376.68	2.628	
13,300.0	6,790.0	13,870.1	6,790.0	188.9	194.2	90.00	-306.2	-8,167.3	989.8	608.2	381.61	2.594	
13,400.0	6,790.0	13,970.1	6,790.0	191.3	196.7	90.00	-306.0	-8,267.3	989.8	603.3	386.53	2.561	
13,500.0	6,790.0	14,070.1	6,790.0	193.8	199.2	90.00	-305.7	-8,367.3	989.8	598.4	391.46	2.529	
13,600.0	6,790.0	14,170.1	6,790.0	196.2	201.6	90.00	-305.5	-8,467.3	989.8	593.4	396.39	2.497	
13,700.0	6,790.0	14,270.1	6,790.0	198.7	204.1	90.00	-305.2	-8,567.3	989.8	588.5	401.32	2.466	
13,800.0	6,790.0	14,370.1	6,790.0	201.1	206.6	90.00	-305.0	-8,667.3	989.8	583.6	406.25	2.437	
13,900.0	6,790.0	14,470.1	6,790.0	203.6	209.0	90.00	-304.7	-8,767.3	989.8	578.6	411.18	2.407	
14,000.0	6,790.0	14,570.1	6,790.0	206.0	211.5	90.00	-304.5	-8,867.3	989.8	573.7	416.11	2.379	
14,100.0	6,790.0	14,670.1	6,790.0	208.4	214.0	90.00	-304.2	-8,967.3	989.8	568.8	421.04	2.351	
14,200.0	6,790.0	14,770.1	6,790.0	210.9	216.4	90.00	-304.0	-9,067.3	989.8	563.9	425.97	2.324	
14,300.0	6,790.0	14,870.1	6,790.0	213.3	218.9	90.00	-303.7	-9,167.3	989.8	558.9	430.90	2.297	
14,400.0	6,790.0	14,970.1	6,790.0	215.8	221.4	90.00	-303.5	-9,267.3	989.8	554.0	435.83	2.271	
14,500.0	6,790.0	15,070.1	6,790.0	218.2	223.8	90.00	-303.2	-9,367.3	989.8	549.1	440.76	2.246	
14,600.0	6,790.0	15,170.1	6,790.0	220.7	226.3	90.00	-303.0	-9,467.3	989.8	544.1	445.70	2.221	
14,700.0	6,790.0	15,270.1	6,790.0	223.1	228.8	90.00	-302.7	-9,567.3	989.8	539.2	450.63	2.197	
14,800.0	6,790.0	15,370.1	6,790.0	225.6	231.2	90.00	-302.5	-9,667.3	989.8	534.3	455.56	2.173	
14,900.0	6,790.0	15,470.1	6,790.0	228.0	233.7	90.00	-302.2	-9,767.3	989.8	529.3	460.50	2.149	
15,000.0	6,790.0	15,570.1	6,790.0	230.5	236.2	90.00	-302.0	-9,867.3	989.8	524.4	465.43	2.127	
15,100.0	6,790.0	15,670.1	6,790.0	232.9	238.6	90.00	-301.7	-9,967.3	989.8	519.5	470.37	2.104	
15,200.0	6,790.0	15,770.1	6,790.0	235.4	241.1	90.00	-301.5	-10,067.3	989.8	514.5	475.30	2.083	
15,300.0	6,790.0	15,870.1	6,790.0	237.9	243.6	90.00	-301.2	-10,167.3	989.8	509.6	480.23	2.061	
15,400.0	6,790.0	15,970.1	6,790.0	240.3	246.0	90.00	-301.0	-10,267.3	989.8	504.6	485.17	2.040	

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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			
15,500.0	6,790.0	16,070.1	6,790.0	242.8	248.5	90.00	-300.7	-10,367.3	989.8	499.7	490.11	2.020		
15,600.0	6,790.0	16,170.1	6,790.0	245.2	251.0	90.00	-300.5	-10,467.3	989.8	494.8	495.04	1.999		
15,700.0	6,790.0	16,270.1	6,790.0	247.7	253.4	90.00	-300.2	-10,567.3	989.8	489.8	499.98	1.980		
15,800.0	6,790.0	16,370.1	6,790.0	250.1	255.9	90.00	-300.0	-10,667.3	989.8	484.9	504.91	1.960		
15,900.0	6,790.0	16,470.1	6,790.0	252.6	258.4	90.00	-299.7	-10,767.3	989.8	480.0	509.85	1.941		
16,000.0	6,790.0	16,570.1	6,790.0	255.0	260.9	90.00	-299.5	-10,867.3	989.8	475.0	514.79	1.923		
16,100.0	6,790.0	16,670.1	6,790.0	257.5	263.3	90.00	-299.2	-10,967.3	989.8	470.1	519.72	1.905		
16,200.0	6,790.0	16,770.1	6,790.0	260.0	265.8	90.00	-299.0	-11,067.3	989.8	465.2	524.66	1.887		
16,300.0	6,790.0	16,870.1	6,790.0	262.4	268.3	90.00	-298.7	-11,167.3	989.8	460.2	529.60	1.869		
16,400.0	6,790.0	16,970.1	6,790.0	264.9	270.7	90.00	-298.5	-11,267.3	989.8	455.3	534.54	1.852		
16,500.0	6,790.0	17,070.1	6,790.0	267.3	273.2	90.00	-298.2	-11,367.3	989.8	450.3	539.47	1.835		
16,600.0	6,790.0	17,170.1	6,790.0	269.8	275.7	90.00	-298.0	-11,467.3	989.8	445.4	544.41	1.818		
16,700.0	6,790.0	17,270.1	6,790.0	272.2	278.1	90.00	-297.7	-11,567.3	989.8	440.5	549.35	1.802		
16,800.0	6,790.0	17,370.1	6,790.0	274.7	280.6	90.00	-297.5	-11,667.3	989.8	435.5	554.29	1.786		
16,829.6	6,790.0	17,399.7	6,790.0	275.4	281.3	90.00	-297.4	-11,696.9	989.8	434.1	555.75	1.781 SF		

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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						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	30.91	96.2	57.6	112.1					
100.0	100.0	100.0	100.0	0.1	0.1	30.91	96.2	57.6	112.1	111.8	0.27	422.525		
200.0	200.0	200.0	200.0	0.3	0.3	30.91	96.2	57.6	112.1	111.5	0.61	182.454	CC	
300.0	300.0	301.7	301.7	0.5	0.5	153.74	95.7	56.8	112.1	111.1	0.97	115.956		
400.0	400.0	403.4	403.4	0.7	0.7	153.64	94.4	54.4	112.2	110.8	1.32	84.889		
500.0	499.9	505.1	505.0	0.9	0.9	153.47	92.3	50.4	112.3	110.6	1.68	66.832		
600.0	599.7	606.9	606.5	1.1	1.1	153.24	89.3	44.9	112.4	110.3	2.04	54.983		
700.0	699.4	708.6	707.9	1.3	1.3	152.94	85.4	37.8	112.5	110.1	2.42	46.577		
800.0	798.9	810.3	809.1	1.5	1.5	152.58	80.6	29.1	112.7	109.9	2.80	40.277		
900.0	898.3	912.0	910.1	1.8	1.8	152.15	75.0	18.8	113.0	109.8	3.20	35.357		
1,000.0	997.4	1,013.7	1,010.9	2.0	2.1	151.66	68.5	7.0	113.3	109.7	3.61	31.391		
1,100.0	1,096.3	1,115.3	1,111.5	2.3	2.4	151.11	61.2	-6.4	113.6	109.6	4.04	28.112		
1,200.0	1,194.9	1,217.0	1,211.7	2.7	2.7	150.50	53.0	-21.4	114.0	109.5	4.50	25.344	ES	
1,300.0	1,293.3	1,318.1	1,311.1	3.0	3.1	149.86	44.1	-37.8	114.6	109.6	4.98	23.007		
1,400.0	1,391.2	1,418.1	1,409.3	3.4	3.4	149.56	35.0	-54.3	116.3	110.8	5.47	21.276		
1,500.0	1,488.9	1,518.1	1,507.4	3.8	3.8	149.69	26.0	-70.8	119.5	113.6	5.95	20.084		
1,600.0	1,586.1	1,617.9	1,605.5	4.2	4.1	150.21	17.0	-87.3	124.3	117.8	6.43	19.334		
1,700.0	1,682.9	1,717.7	1,703.5	4.7	4.5	151.05	8.0	-103.7	130.5	123.7	6.89	18.951		
1,800.0	1,779.3	1,817.4	1,801.4	5.2	4.9	152.15	-1.0	-120.2	138.4	131.1	7.33	18.880		
1,900.0	1,875.2	1,916.9	1,899.1	5.7	5.2	153.43	-10.0	-136.6	147.8	140.1	7.75	19.076		
2,000.0	1,970.5	2,016.2	1,996.7	6.3	5.6	154.82	-18.9	-153.0	158.9	150.8	8.15	19.506		
2,100.0	2,065.4	2,115.3	2,094.0	6.9	6.0	156.25	-27.9	-169.4	171.7	163.1	8.52	20.141		
2,200.0	2,159.6	2,214.1	2,191.1	7.5	6.3	157.67	-36.8	-185.7	186.1	177.2	8.88	20.956		
2,300.0	2,253.3	2,312.7	2,287.9	8.1	6.7	159.06	-45.7	-201.9	202.3	193.1	9.22	21.932		
2,400.0	2,346.3	2,410.9	2,384.4	8.8	7.1	160.39	-54.5	-218.2	220.2	210.6	9.55	23.050		
2,500.0	2,438.7	2,508.8	2,480.5	9.5	7.4	161.64	-63.4	-234.3	239.8	229.9	9.87	24.297		
2,600.0	2,530.4	2,606.4	2,576.3	10.3	7.8	162.80	-72.2	-250.4	261.2	251.0	10.18	25.657		
2,700.0	2,621.6	2,703.7	2,671.9	11.0	8.2	163.90	-80.9	-266.5	283.8	273.4	10.49	27.049		
2,800.0	2,712.8	2,800.9	2,767.4	11.8	8.5	164.86	-89.7	-282.5	306.7	295.8	10.82	28.353		
2,900.0	2,803.9	2,898.1	2,862.9	12.6	8.9	165.69	-98.5	-298.6	329.6	318.4	11.14	29.575		
3,000.0	2,895.1	2,995.4	2,958.4	13.3	9.2	166.40	-107.3	-314.6	352.5	341.0	11.47	30.724		
3,100.0	2,986.2	3,092.6	3,053.9	14.1	9.6	167.03	-116.0	-330.7	375.5	363.7	11.81	31.803		
3,200.0	3,077.4	3,189.9	3,149.4	14.9	10.0	167.59	-124.8	-346.7	398.5	386.4	12.14	32.821		
3,300.0	3,168.6	3,287.1	3,244.9	15.6	10.3	168.09	-133.6	-362.8	421.6	409.1	12.48	33.780		
3,400.0	3,259.7	3,384.4	3,340.4	16.4	10.7	168.53	-142.4	-378.8	444.7	431.9	12.82	34.686		
3,500.0	3,350.9	3,481.6	3,435.9	17.2	11.1	168.93	-151.1	-394.9	467.8	454.6	13.16	35.543		
3,600.0	3,442.0	3,578.8	3,531.4	17.9	11.4	169.30	-159.9	-410.9	490.9	477.4	13.50	36.354		
3,700.0	3,533.2	3,676.1	3,626.9	18.7	11.8	169.63	-168.7	-427.0	514.1	500.2	13.85	37.123		
3,800.0	3,624.3	3,773.3	3,722.4	19.5	12.2	169.93	-177.4	-443.1	537.2	523.0	14.19	37.854		
3,900.0	3,715.5	3,870.6	3,817.9	20.3	12.5	170.21	-186.2	-459.1	560.4	545.9	14.54	38.549		
4,000.0	3,806.6	3,967.8	3,913.4	21.0	12.9	170.46	-195.0	-475.2	583.6	568.7	14.88	39.209		
4,100.0	3,897.8	4,065.1	4,008.9	21.8	13.2	170.70	-203.8	-491.2	606.8	591.6	15.23	39.839		
4,200.0	3,989.0	4,162.3	4,104.5	22.6	13.6	170.92	-212.5	-507.3	630.0	614.4	15.58	40.440		
4,300.0	4,080.1	4,259.5	4,200.0	23.3	14.0	171.12	-221.3	-523.3	653.2	637.3	15.93	41.013		
4,400.0	4,171.3	4,356.8	4,295.5	24.1	14.3	171.31	-230.1	-539.4	676.4	660.2	16.28	41.561		
4,500.0	4,262.4	4,454.0	4,391.0	24.9	14.7	171.48	-238.9	-555.4	699.7	683.0	16.62	42.086		
4,600.0	4,353.6	4,551.3	4,486.5	25.7	15.1	171.65	-247.6	-571.5	722.9	705.9	16.97	42.588		
4,700.0	4,444.7	4,648.5	4,582.0	26.4	15.4	171.80	-256.4	-587.5	746.1	728.8	17.32	43.069		
4,800.0	4,535.9	4,745.8	4,677.5	27.2	15.8	171.95	-265.2	-603.6	769.4	751.7	17.67	43.531		
4,900.0	4,627.1	4,843.0	4,773.0	28.0	16.2	172.09	-274.0	-619.6	792.6	774.6	18.03	43.974		
5,000.0	4,718.2	4,940.2	4,868.5	28.8	16.5	172.22	-282.7	-635.7	815.9	797.5	18.38	44.399		
5,100.0	4,809.4	5,037.5	4,964.0	29.6	16.9	172.34	-291.5	-651.7	839.2	820.4	18.73	44.809		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 6 - 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	4,900.5	5,134.7	5,059.5	30.3	17.3	172.45	-300.3	-667.8	862.4	843.3	19.08	45.203		
5,300.0	4,991.7	5,232.0	5,155.0	31.1	17.6	172.56	-309.0	-683.8	885.7	866.2	19.43	45.582		
5,400.0	5,082.8	5,329.2	5,250.5	31.9	18.0	172.67	-317.8	-699.9	908.9	889.2	19.78	45.947		
5,500.0	5,174.0	5,426.5	5,346.0	32.7	18.3	172.76	-326.6	-715.9	932.2	912.1	20.13	46.300		
5,600.0	5,265.2	5,523.7	5,441.5	33.4	18.7	172.86	-335.4	-732.0	955.5	935.0	20.49	46.640		
5,700.0	5,356.3	5,620.9	5,537.1	34.2	19.1	172.95	-344.1	-748.0	978.8	957.9	20.84	46.968		
5,800.0	5,447.5	5,718.2	5,632.6	35.0	19.4	173.03	-352.9	-764.1	1,002.0	980.8	21.19	47.285		
5,900.0	5,538.6	5,815.4	5,728.1	35.8	19.8	173.11	-361.7	-780.1	1,025.3	1,003.8	21.54	47.591		
6,000.0	5,629.8	5,912.7	5,823.6	36.5	20.2	173.19	-370.5	-796.2	1,048.6	1,026.7	21.90	47.888		
6,100.0	5,720.9	6,009.9	5,919.1	37.3	20.5	173.27	-379.2	-812.2	1,071.9	1,049.6	22.25	48.175		
6,200.0	5,812.1	6,107.2	6,014.6	38.1	20.9	173.34	-388.0	-828.3	1,095.2	1,072.6	22.60	48.452		
6,300.0	5,903.2	6,204.4	6,110.1	38.9	21.3	173.40	-396.8	-844.3	1,118.4	1,095.5	22.96	48.721		
6,400.0	5,994.4	6,301.6	6,205.6	39.7	21.6	173.47	-405.6	-860.4	1,141.7	1,118.4	23.31	48.982		
6,500.0	6,085.6	6,398.9	6,301.1	40.4	22.0	173.53	-414.3	-876.5	1,165.0	1,141.4	23.66	49.234		
6,600.0	6,176.7	7,826.5	7,115.0	41.2	40.3	141.88	-487.1	-1,795.7	1,155.3	1,094.9	60.43	19.119		
6,700.0	6,267.9	7,861.0	7,115.0	42.0	41.1	139.92	-487.1	-1,830.2	1,096.7	1,033.4	63.29	17.330		
6,800.0	6,359.0	7,895.5	7,115.0	42.8	41.8	137.93	-487.0	-1,864.7	1,043.2	977.1	66.17	15.766		
6,900.0	6,448.7	7,933.7	7,115.0	43.6	42.7	132.23	-486.9	-1,902.9	996.5	929.8	66.66	14.950		
7,000.0	6,531.8	7,985.3	7,115.0	44.8	43.8	127.18	-486.7	-1,954.5	959.1	891.2	67.93	14.119		
7,100.0	6,606.0	8,049.7	7,115.0	46.1	45.2	123.13	-486.6	-2,018.9	931.1	860.0	71.03	13.108		
7,200.0	6,669.5	8,125.2	7,115.0	47.6	46.9	119.52	-486.4	-2,094.4	911.5	836.0	75.53	12.068		
7,300.0	6,720.7	8,210.0	7,115.0	49.4	48.8	116.35	-486.2	-2,179.2	898.9	818.0	80.88	11.114		
7,400.0	6,758.4	8,302.0	7,115.0	51.2	50.9	113.80	-486.0	-2,271.2	891.5	804.9	86.55	10.301		
7,500.0	6,781.7	8,399.0	7,115.0	53.2	53.2	112.12	-485.7	-2,368.2	887.7	795.6	92.10	9.639		
7,600.0	6,790.0	8,498.5	7,115.0	55.2	55.5	111.51	-485.5	-2,467.7	886.5	789.2	97.31	9.111		
7,640.1	6,790.2	8,538.6	7,115.0	56.0	56.4	111.49	-485.4	-2,507.8	886.5	787.5	99.06	8.949		
7,700.0	6,790.0	8,598.5	7,115.0	57.2	57.8	111.51	-485.2	-2,567.7	886.5	784.9	101.66	8.721		
7,800.0	6,790.0	8,698.5	7,115.0	59.3	60.1	111.51	-485.0	-2,667.7	886.5	780.5	106.00	8.364		
7,900.0	6,790.0	8,798.5	7,115.0	61.4	62.5	111.51	-484.7	-2,767.7	886.5	776.2	110.36	8.033		
8,000.0	6,790.0	8,898.5	7,115.0	63.5	64.8	111.51	-484.5	-2,867.7	886.5	771.8	114.74	7.726		
8,100.0	6,790.0	8,998.5	7,115.0	65.7	67.2	111.51	-484.2	-2,967.7	886.5	767.4	119.14	7.441		
8,200.0	6,790.0	9,098.5	7,115.0	67.9	69.6	111.51	-484.0	-3,067.7	886.5	763.0	123.56	7.175		
8,300.0	6,790.0	9,198.5	7,115.0	70.0	72.0	111.51	-483.7	-3,167.7	886.5	758.6	127.98	6.927		
8,400.0	6,790.0	9,298.5	7,115.0	72.3	74.3	111.51	-483.5	-3,267.7	886.5	754.1	132.42	6.695		
8,500.0	6,790.0	9,398.5	7,115.0	74.5	76.7	111.51	-483.2	-3,367.7	886.5	749.7	136.88	6.477		
8,600.0	6,790.0	9,498.5	7,115.0	76.7	79.1	111.51	-483.0	-3,467.7	886.5	745.2	141.34	6.273		
8,700.0	6,790.0	9,598.5	7,115.0	79.0	81.5	111.51	-482.7	-3,567.7	886.5	740.7	145.81	6.080		
8,800.0	6,790.0	9,698.5	7,115.0	81.3	83.9	111.51	-482.5	-3,667.7	886.5	736.2	150.29	5.899		
8,900.0	6,790.0	9,798.5	7,115.0	83.5	86.4	111.51	-482.2	-3,767.7	886.5	731.8	154.77	5.728		
9,000.0	6,790.0	9,898.5	7,115.0	85.8	88.8	111.51	-482.0	-3,867.7	886.5	727.3	159.27	5.566		
9,100.0	6,790.0	9,998.5	7,115.0	88.1	91.2	111.51	-481.7	-3,967.7	886.5	722.8	163.77	5.413		
9,200.0	6,790.0	10,098.5	7,115.0	90.4	93.6	111.51	-481.5	-4,067.7	886.5	718.3	168.27	5.268		
9,300.0	6,790.0	10,198.5	7,115.0	92.8	96.0	111.51	-481.2	-4,167.7	886.5	713.8	172.78	5.131		
9,400.0	6,790.0	10,298.5	7,115.0	95.1	98.5	111.51	-481.0	-4,267.7	886.5	709.2	177.30	5.000		
9,500.0	6,790.0	10,398.5	7,115.0	97.4	100.9	111.51	-480.7	-4,367.7	886.5	704.7	181.82	4.876		
9,600.0	6,790.0	10,498.5	7,115.0	99.8	103.3	111.51	-480.5	-4,467.7	886.5	700.2	186.34	4.758		
9,700.0	6,790.0	10,598.5	7,115.0	102.1	105.8	111.51	-480.2	-4,567.7	886.5	695.7	190.87	4.645		
9,800.0	6,790.0	10,698.5	7,115.0	104.5	108.2	111.51	-480.0	-4,667.7	886.5	691.1	195.40	4.537		
9,900.0	6,790.0	10,798.5	7,115.0	106.8	110.6	111.51	-479.7	-4,767.7	886.5	686.6	199.94	4.434		
10,000.0	6,790.0	10,898.5	7,115.0	109.2	113.1	111.51	-479.5	-4,867.7	886.5	682.1	204.48	4.336		
10,100.0	6,790.0	10,998.5	7,115.0	111.6	115.5	111.51	-479.2	-4,967.7	886.5	677.5	209.02	4.241		
10,200.0	6,790.0	11,098.5	7,115.0	113.9	117.9	111.51	-479.0	-5,067.7	886.5	673.0	213.57	4.151		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		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	Separation Factor		
10,300.0	6,790.0	11,198.5	7,115.0	116.3	120.4	111.51	-478.7	-5,167.7	886.5	668.4	218.11	4.065		
10,400.0	6,790.0	11,298.5	7,115.0	118.7	122.8	111.51	-478.5	-5,267.7	886.5	663.9	222.66	3.981		
10,500.0	6,790.0	11,398.5	7,115.0	121.1	125.3	111.51	-478.2	-5,367.7	886.5	659.3	227.22	3.902		
10,600.0	6,790.0	11,498.5	7,115.0	123.5	127.7	111.51	-478.0	-5,467.7	886.5	654.8	231.77	3.825		
10,700.0	6,790.0	11,598.5	7,115.0	125.9	130.2	111.51	-477.7	-5,567.7	886.5	650.2	236.33	3.751		
10,800.0	6,790.0	11,698.5	7,115.0	128.3	132.6	111.51	-477.5	-5,667.7	886.5	645.6	240.88	3.680		
10,900.0	6,790.0	11,798.5	7,115.0	130.7	135.1	111.51	-477.2	-5,767.7	886.5	641.1	245.44	3.612		
11,000.0	6,790.0	11,898.5	7,115.0	133.1	137.5	111.51	-477.0	-5,867.7	886.5	636.5	250.01	3.546		
11,100.0	6,790.0	11,998.5	7,115.0	135.5	140.0	111.51	-476.7	-5,967.7	886.5	632.0	254.57	3.482		
11,200.0	6,790.0	12,098.5	7,115.0	137.9	142.4	111.51	-476.5	-6,067.7	886.5	627.4	259.13	3.421		
11,300.0	6,790.0	12,198.5	7,115.0	140.3	144.9	111.51	-476.2	-6,167.7	886.5	622.8	263.70	3.362		
11,400.0	6,790.0	12,298.5	7,115.0	142.7	147.3	111.51	-476.0	-6,267.7	886.5	618.3	268.27	3.305		
11,500.0	6,790.0	12,398.5	7,115.0	145.1	149.8	111.51	-475.7	-6,367.7	886.5	613.7	272.84	3.249		
11,600.0	6,790.0	12,498.5	7,115.0	147.6	152.2	111.51	-475.5	-6,467.7	886.5	609.1	277.41	3.196		
11,700.0	6,790.0	12,598.5	7,115.0	150.0	154.7	111.51	-475.2	-6,567.7	886.5	604.5	281.98	3.144		
11,800.0	6,790.0	12,698.5	7,115.0	152.4	157.2	111.51	-475.0	-6,667.7	886.5	600.0	286.55	3.094		
11,900.0	6,790.0	12,798.5	7,115.0	154.8	159.6	111.51	-474.7	-6,767.7	886.5	595.4	291.12	3.045		
12,000.0	6,790.0	12,898.5	7,115.0	157.2	162.1	111.51	-474.5	-6,867.7	886.5	590.8	295.70	2.998		
12,100.0	6,790.0	12,998.5	7,115.0	159.7	164.5	111.51	-474.2	-6,967.7	886.5	586.2	300.28	2.952		
12,200.0	6,790.0	13,098.5	7,115.0	162.1	167.0	111.51	-474.0	-7,067.7	886.5	581.7	304.85	2.908		
12,300.0	6,790.0	13,198.5	7,115.0	164.5	169.4	111.51	-473.7	-7,167.7	886.5	577.1	309.43	2.865		
12,400.0	6,790.0	13,298.5	7,115.0	167.0	171.9	111.51	-473.5	-7,267.7	886.5	572.5	314.01	2.823		
12,500.0	6,790.0	13,398.5	7,115.0	169.4	174.4	111.51	-473.2	-7,367.7	886.5	567.9	318.59	2.783		
12,600.0	6,790.0	13,498.5	7,115.0	171.8	176.8	111.51	-473.0	-7,467.7	886.5	563.4	323.17	2.743		
12,700.0	6,790.0	13,598.5	7,115.0	174.3	179.3	111.51	-472.7	-7,567.7	886.5	558.8	327.75	2.705		
12,800.0	6,790.0	13,698.5	7,115.0	176.7	181.7	111.51	-472.5	-7,667.7	886.5	554.2	332.33	2.668		
12,900.0	6,790.0	13,798.5	7,115.0	179.1	184.2	111.51	-472.2	-7,767.7	886.5	549.6	336.91	2.631		
13,000.0	6,790.0	13,898.5	7,115.0	181.6	186.7	111.51	-472.0	-7,867.7	886.5	545.0	341.49	2.596		
13,100.0	6,790.0	13,998.5	7,115.0	184.0	189.1	111.51	-471.7	-7,967.7	886.5	540.4	346.08	2.562		
13,200.0	6,790.0	14,098.5	7,115.0	186.4	191.6	111.51	-471.5	-8,067.7	886.5	535.9	350.66	2.528		
13,300.0	6,790.0	14,198.5	7,115.0	188.9	194.1	111.51	-471.2	-8,167.7	886.5	531.3	355.25	2.496		
13,400.0	6,790.0	14,298.5	7,115.0	191.3	196.5	111.51	-471.0	-8,267.7	886.5	526.7	359.83	2.464		
13,500.0	6,790.0	14,398.5	7,115.0	193.8	199.0	111.51	-470.7	-8,367.7	886.5	522.1	364.42	2.433		
13,600.0	6,790.0	14,498.5	7,115.0	196.2	201.4	111.51	-470.5	-8,467.7	886.5	517.5	369.00	2.402		
13,700.0	6,790.0	14,598.5	7,115.0	198.7	203.9	111.51	-470.2	-8,567.7	886.5	512.9	373.59	2.373		
13,800.0	6,790.0	14,698.5	7,115.0	201.1	206.4	111.51	-470.0	-8,667.7	886.5	508.3	378.18	2.344		
13,900.0	6,790.0	14,798.5	7,115.0	203.6	208.8	111.51	-469.7	-8,767.7	886.5	503.8	382.76	2.316		
14,000.0	6,790.0	14,898.5	7,115.0	206.0	211.3	111.51	-469.5	-8,867.7	886.5	499.2	387.35	2.289		
14,100.0	6,790.0	14,998.5	7,115.0	208.4	213.8	111.51	-469.2	-8,967.7	886.5	494.6	391.94	2.262		
14,200.0	6,790.0	15,098.5	7,115.0	210.9	216.2	111.51	-469.0	-9,067.7	886.5	490.0	396.53	2.236		
14,300.0	6,790.0	15,198.5	7,115.0	213.3	218.7	111.51	-468.8	-9,167.7	886.5	485.4	401.12	2.210		
14,400.0	6,790.0	15,298.5	7,115.0	215.8	221.2	111.51	-468.5	-9,267.7	886.5	480.8	405.71	2.185		
14,500.0	6,790.0	15,398.5	7,115.0	218.2	223.6	111.51	-468.3	-9,367.7	886.5	476.2	410.30	2.161		
14,600.0	6,790.0	15,498.5	7,115.0	220.7	226.1	111.51	-468.0	-9,467.7	886.5	471.6	414.89	2.137		
14,700.0	6,790.0	15,598.5	7,115.0	223.1	228.6	111.51	-467.8	-9,567.7	886.5	467.0	419.48	2.113		
14,800.0	6,790.0	15,698.5	7,115.0	225.6	231.0	111.51	-467.5	-9,667.7	886.5	462.4	424.07	2.090		
14,900.0	6,790.0	15,798.5	7,115.0	228.0	233.5	111.51	-467.3	-9,767.7	886.5	457.8	428.66	2.068		
15,000.0	6,790.0	15,898.5	7,115.0	230.5	236.0	111.51	-467.0	-9,867.7	886.5	453.3	433.25	2.046		
15,100.0	6,790.0	15,998.5	7,115.0	232.9	238.4	111.51	-466.8	-9,967.7	886.5	448.7	437.85	2.025		
15,200.0	6,790.0	16,098.5	7,115.0	235.4	240.9	111.51	-466.5	-10,067.7	886.5	444.1	442.44	2.004		
15,300.0	6,790.0	16,198.5	7,115.0	237.9	243.4	111.51	-466.3	-10,167.7	886.5	439.5	447.03	1.983		
15,400.0	6,790.0	16,298.5	7,115.0	240.3	245.8	111.51	-466.0	-10,267.7	886.5	434.9	451.62	1.963		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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					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	6,790.0	16,398.5	7,115.0	242.8	248.3	111.51	-465.8	-10,367.7	886.5	430.3	456.22	1.943	
15,600.0	6,790.0	16,498.5	7,115.0	245.2	250.8	111.51	-465.5	-10,467.7	886.5	425.7	460.81	1.924	
15,700.0	6,790.0	16,598.5	7,115.0	247.7	253.2	111.51	-465.3	-10,567.7	886.5	421.1	465.41	1.905	
15,800.0	6,790.0	16,698.5	7,115.0	250.1	255.7	111.51	-465.0	-10,667.7	886.5	416.5	470.00	1.886	
15,900.0	6,790.0	16,798.5	7,115.0	252.6	258.2	111.51	-464.8	-10,767.7	886.5	411.9	474.59	1.868	
16,000.0	6,790.0	16,898.5	7,115.0	255.0	260.6	111.51	-464.5	-10,867.7	886.5	407.3	479.19	1.850	
16,100.0	6,790.0	16,998.5	7,115.0	257.5	263.1	111.51	-464.3	-10,967.7	886.5	402.7	483.78	1.832	
16,200.0	6,790.0	17,098.5	7,115.0	260.0	265.6	111.51	-464.0	-11,067.7	886.5	398.1	488.38	1.815	
16,300.0	6,790.0	17,198.5	7,115.0	262.4	268.0	111.51	-463.8	-11,167.7	886.5	393.5	492.97	1.798	
16,400.0	6,790.0	17,298.5	7,115.0	264.9	270.5	111.51	-463.5	-11,267.7	886.5	388.9	497.57	1.782	
16,500.0	6,790.0	17,398.5	7,115.0	267.3	273.0	111.51	-463.3	-11,367.7	886.5	384.3	502.16	1.765	
16,600.0	6,790.0	17,498.5	7,115.0	269.8	275.4	111.51	-463.0	-11,467.7	886.5	379.7	506.76	1.749	
16,700.0	6,790.0	17,598.5	7,115.0	272.2	277.9	111.51	-462.8	-11,567.7	886.5	375.2	511.36	1.734	
16,800.0	6,790.0	17,698.5	7,115.0	274.7	280.4	111.51	-462.5	-11,667.7	886.5	370.6	515.95	1.718	
16,829.6	6,790.0	17,728.1	7,115.0	275.4	281.1	111.51	-462.4	-11,697.3	886.5	369.2	517.31	1.714 SF	

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	30.99	71.8	43.1	83.7					
100.0	100.0	100.0	100.0	0.1	0.1	30.99	71.8	43.1	83.7	83.5	0.27	315.581		
200.0	200.0	200.0	200.0	0.3	0.3	30.99	71.8	43.1	83.7	83.1	0.61	136.274		
300.0	300.0	301.3	301.3	0.5	0.5	153.87	71.3	42.4	83.7	82.7	0.97	86.638		
400.0	400.0	402.7	402.6	0.7	0.7	153.90	69.7	40.2	83.6	82.3	1.32	63.393		
500.0	499.9	504.0	503.9	0.9	0.9	153.96	67.2	36.5	83.5	81.9	1.68	49.855		
600.0	599.7	605.4	605.0	1.1	1.1	154.04	63.7	31.3	83.4	81.4	2.04	40.957		
700.0	699.4	706.7	706.1	1.3	1.3	154.14	59.1	24.6	83.2	80.8	2.40	34.638		
800.0	798.9	808.1	806.9	1.5	1.5	154.26	53.6	16.5	83.0	80.2	2.78	29.904		
900.0	898.3	909.4	907.6	1.8	1.8	154.41	47.0	6.9	82.7	79.6	3.16	26.214		
1,000.0	997.4	1,010.7	1,008.0	2.0	2.1	154.58	39.4	-4.2	82.4	78.9	3.54	23.251		
1,100.0	1,096.3	1,112.1	1,108.2	2.3	2.4	154.78	30.9	-16.7	82.1	78.1	3.94	20.816		
1,200.0	1,194.9	1,213.4	1,208.1	2.7	2.7	155.00	21.3	-30.7	81.7	77.3	4.35	18.777		
1,300.0	1,293.3	1,314.7	1,307.7	3.0	3.1	155.24	10.7	-46.1	81.3	76.5	4.77	17.044		
1,400.0	1,391.2	1,416.0	1,406.9	3.4	3.4	155.51	-0.8	-63.0	80.8	75.6	5.19	15.558		
1,427.0	1,417.6	1,443.0	1,433.3	3.5	3.6	155.61	-4.0	-67.7	80.7	75.4	5.31	15.206 CC, ES		
1,500.0	1,488.9	1,516.0	1,504.6	3.8	3.8	156.06	-12.7	-80.3	81.2	75.6	5.61	14.459		
1,600.0	1,586.1	1,615.9	1,602.4	4.2	4.2	157.07	-24.5	-97.7	83.2	77.1	6.01	13.825		
1,700.0	1,682.9	1,715.9	1,700.1	4.7	4.6	158.46	-36.4	-115.0	86.8	80.4	6.39	13.578		
1,800.0	1,779.3	1,815.7	1,797.6	5.2	5.0	160.10	-48.2	-132.3	92.1	85.3	6.74	13.660		
1,900.0	1,875.2	1,915.4	1,895.1	5.7	5.4	161.88	-60.1	-149.6	99.1	92.1	7.07	14.024		
2,000.0	1,970.5	2,014.9	1,992.5	6.3	5.8	163.68	-71.9	-166.9	107.9	100.5	7.38	14.629		
2,100.0	2,065.4	2,114.3	2,089.6	6.9	6.2	165.42	-83.7	-184.1	118.5	110.8	7.67	15.441		
2,200.0	2,159.6	2,213.5	2,186.6	7.5	6.6	167.04	-95.4	-201.3	130.8	122.9	7.96	16.431		
2,300.0	2,253.3	2,312.4	2,283.3	8.1	7.0	168.52	-107.2	-218.5	144.9	136.7	8.25	17.575		
2,400.0	2,346.3	2,411.1	2,379.8	8.8	7.4	169.84	-118.9	-235.6	160.8	152.3	8.53	18.851		
2,500.0	2,438.7	2,509.4	2,475.9	9.5	7.8	171.00	-130.6	-252.6	178.5	169.7	8.82	20.243		
2,600.0	2,530.4	2,607.5	2,571.8	10.3	8.2	172.03	-142.2	-269.6	198.0	188.8	9.11	21.736		
2,700.0	2,621.6	2,705.3	2,667.4	11.0	8.6	172.92	-153.8	-286.6	218.7	209.3	9.41	23.229		
2,800.0	2,712.8	2,803.0	2,762.9	11.8	9.0	173.68	-165.4	-303.5	239.5	229.8	9.74	24.606		
2,900.0	2,803.9	2,900.8	2,858.5	12.6	9.4	174.31	-177.0	-320.5	260.4	250.4	10.06	25.887		
3,000.0	2,895.1	2,998.5	2,954.1	13.3	9.8	174.84	-188.6	-337.4	281.3	271.0	10.39	27.080		
3,100.0	2,986.2	3,096.3	3,049.7	14.1	10.2	175.31	-200.2	-354.4	302.3	291.6	10.72	28.193		
3,200.0	3,077.4	3,194.0	3,145.2	14.9	10.6	175.71	-211.8	-371.4	323.2	312.2	11.06	29.236		
3,300.0	3,168.6	3,291.8	3,240.8	15.6	11.0	176.06	-223.4	-388.3	344.2	332.8	11.39	30.213		
3,400.0	3,259.7	3,389.6	3,336.4	16.4	11.4	176.38	-235.0	-405.3	365.1	353.4	11.73	31.132		
3,500.0	3,350.9	3,487.3	3,432.0	17.2	11.8	176.66	-246.6	-422.2	386.1	374.1	12.07	31.996		
3,600.0	3,442.0	3,585.1	3,527.5	17.9	12.2	176.91	-258.2	-439.2	407.1	394.7	12.41	32.811		
3,700.0	3,533.2	3,682.8	3,623.1	18.7	12.6	177.13	-269.8	-456.1	428.1	415.4	12.75	33.581		
3,800.0	3,624.3	3,780.6	3,718.7	19.5	13.0	177.34	-281.4	-473.1	449.1	436.0	13.09	34.309		
3,900.0	3,715.5	3,878.4	3,814.3	20.3	13.4	177.53	-293.0	-490.0	470.1	456.7	13.43	34.999		
4,000.0	3,806.6	3,976.1	3,909.8	21.0	13.8	177.70	-304.6	-507.0	491.1	477.4	13.78	35.653		
4,100.0	3,897.8	4,073.9	4,005.4	21.8	14.2	177.85	-316.2	-523.9	512.1	498.0	14.12	36.274		
4,200.0	3,989.0	4,171.6	4,101.0	22.6	14.6	178.00	-327.8	-540.9	533.2	518.7	14.46	36.865		
4,300.0	4,080.1	4,269.4	4,196.6	23.3	15.0	178.13	-339.4	-557.8	554.2	539.4	14.81	37.428		
4,400.0	4,171.3	4,367.1	4,292.1	24.1	15.4	178.25	-351.0	-574.8	575.2	560.1	15.15	37.965		
4,500.0	4,262.4	4,464.9	4,387.7	24.9	15.8	178.37	-362.6	-591.8	596.2	580.7	15.50	38.477		
4,600.0	4,353.6	4,562.7	4,483.3	25.7	16.2	178.48	-374.2	-608.7	617.3	601.4	15.84	38.966		
4,700.0	4,444.7	4,660.4	4,578.9	26.4	16.6	178.58	-385.8	-625.7	638.3	622.1	16.19	39.433		
4,800.0	4,535.9	4,758.2	4,674.4	27.2	17.0	178.67	-397.4	-642.6	659.3	642.8	16.53	39.881		
4,900.0	4,627.1	4,855.9	4,770.0	28.0	17.4	178.76	-409.0	-659.6	680.3	663.5	16.88	40.310		
5,000.0	4,718.2	4,953.7	4,865.6	28.8	17.8	178.84	-420.6	-676.5	701.4	684.2	17.22	40.722		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	4,809.4	5,051.4	4,961.2	29.6	18.2	178.92	-432.2	-693.5	722.4	704.8	17.57	41.117		
5,200.0	4,900.5	5,149.2	5,056.7	30.3	18.6	178.99	-443.8	-710.4	743.5	725.5	17.92	41.496		
5,300.0	4,991.7	5,247.0	5,152.3	31.1	19.0	179.06	-455.4	-727.4	764.5	746.2	18.26	41.861		
5,400.0	5,082.8	5,344.7	5,247.9	31.9	19.4	179.13	-467.0	-744.3	785.5	766.9	18.61	42.211		
5,500.0	5,174.0	5,442.5	5,343.5	32.7	19.8	179.19	-478.6	-761.3	806.6	787.6	18.96	42.549		
5,600.0	5,265.2	5,540.2	5,439.0	33.4	20.2	179.25	-490.2	-778.3	827.6	808.3	19.30	42.874		
5,700.0	5,356.3	5,638.0	5,534.6	34.2	20.6	179.30	-501.8	-795.2	848.7	829.0	19.65	43.188		
5,800.0	5,447.5	5,735.8	5,630.2	35.0	21.0	179.36	-513.4	-812.2	869.7	849.7	20.00	43.491		
5,900.0	5,538.6	5,833.5	5,725.8	35.8	21.4	179.41	-525.0	-829.1	890.7	870.4	20.34	43.783		
6,000.0	5,629.8	5,931.3	5,821.3	36.5	21.8	179.46	-536.6	-846.1	911.8	891.1	20.69	44.065		
6,100.0	5,720.9	6,029.0	5,916.9	37.3	22.2	179.50	-548.2	-863.0	932.8	911.8	21.04	44.338		
6,200.0	5,812.1	6,126.8	6,012.5	38.1	22.6	179.55	-559.8	-880.0	953.9	932.5	21.39	44.602		
6,300.0	5,903.2	6,224.5	6,108.1	38.9	23.0	179.59	-571.4	-896.9	974.9	953.2	21.73	44.857		
6,400.0	5,994.4	7,451.6	6,790.0	39.7	39.2	145.08	-652.3	-1,727.2	921.2	866.8	54.34	16.952		
6,500.0	6,085.6	7,486.1	6,790.0	40.4	39.9	142.47	-652.3	-1,761.7	856.2	798.4	57.78	14.818		
6,600.0	6,176.7	7,520.6	6,790.0	41.2	40.7	139.79	-652.2	-1,796.1	797.1	735.8	61.30	13.003		
6,700.0	6,267.9	7,555.0	6,790.0	42.0	41.4	137.04	-652.1	-1,830.6	745.1	680.2	64.85	11.489		
6,800.0	6,359.0	7,589.5	6,790.0	42.8	42.2	134.24	-652.0	-1,865.1	701.8	633.4	68.41	10.259		
6,900.0	6,448.7	7,627.7	6,790.0	43.6	43.0	126.47	-651.9	-1,903.3	669.5	598.8	70.70	9.469		
7,000.0	6,531.8	7,679.3	6,790.0	44.8	44.1	118.51	-651.8	-1,954.9	649.9	575.4	74.48	8.725		
7,100.0	6,606.0	7,743.7	6,790.0	46.1	45.5	111.30	-651.6	-2,019.3	641.5	561.6	79.89	8.030		
7,146.8	6,637.1	7,777.8	6,790.0	46.8	46.3	108.08	-651.5	-2,053.3	640.7	558.0	82.73	7.745		
7,200.0	6,669.5	7,819.2	6,790.0	47.6	47.2	104.58	-651.4	-2,094.8	641.6	555.7	85.92	7.467		
7,300.0	6,720.7	7,904.0	6,790.0	49.4	49.1	98.67	-651.2	-2,179.6	646.5	554.9	91.62	7.057		
7,400.0	6,758.4	7,996.1	6,790.0	51.2	51.2	94.03	-651.0	-2,271.6	652.8	556.3	96.45	6.768		
7,500.0	6,781.7	8,093.0	6,790.0	53.2	53.4	91.07	-650.7	-2,368.6	657.8	557.4	100.42	6.551		
7,600.0	6,790.0	8,192.6	6,790.0	55.2	55.6	90.00	-650.5	-2,468.1	659.8	555.9	103.86	6.353		
7,700.0	6,790.0	8,292.6	6,790.0	57.2	58.0	90.00	-650.2	-2,568.2	659.8	551.3	108.46	6.083		
7,800.0	6,790.0	8,392.6	6,790.0	59.3	60.3	90.00	-650.0	-2,668.2	659.8	546.7	113.13	5.832		
7,900.0	6,790.0	8,492.6	6,790.0	61.4	62.6	90.00	-649.7	-2,768.2	659.8	542.0	117.83	5.599		
8,000.0	6,790.0	8,592.6	6,790.0	63.5	65.0	90.00	-649.5	-2,868.2	659.8	537.2	122.55	5.384		
8,100.0	6,790.0	8,692.6	6,790.0	65.7	67.3	90.00	-649.2	-2,968.2	659.8	532.5	127.29	5.183		
8,200.0	6,790.0	8,792.6	6,790.0	67.9	69.7	90.00	-649.0	-3,068.2	659.8	527.7	132.04	4.997		
8,300.0	6,790.0	8,892.6	6,790.0	70.0	72.0	90.00	-648.7	-3,168.2	659.8	523.0	136.81	4.823		
8,400.0	6,790.0	8,992.6	6,790.0	72.3	74.4	90.00	-648.5	-3,268.2	659.8	518.2	141.59	4.660		
8,500.0	6,790.0	9,092.6	6,790.0	74.5	76.8	90.00	-648.2	-3,368.2	659.8	513.4	146.38	4.507		
8,600.0	6,790.0	9,192.6	6,790.0	76.7	79.2	90.00	-648.0	-3,468.2	659.8	508.6	151.18	4.364		
8,700.0	6,790.0	9,292.6	6,790.0	79.0	81.6	90.00	-647.8	-3,568.2	659.8	503.8	155.99	4.230		
8,800.0	6,790.0	9,392.6	6,790.0	81.3	84.0	90.00	-647.5	-3,668.2	659.8	499.0	160.81	4.103		
8,900.0	6,790.0	9,492.6	6,790.0	83.5	86.4	90.00	-647.3	-3,768.1	659.8	494.1	165.64	3.983		
9,000.0	6,790.0	9,592.6	6,790.0	85.8	88.8	90.00	-647.0	-3,868.1	659.8	489.3	170.47	3.870		
9,100.0	6,790.0	9,692.6	6,790.0	88.1	91.2	90.00	-646.8	-3,968.1	659.8	484.5	175.31	3.764		
9,200.0	6,790.0	9,792.6	6,790.0	90.4	93.6	90.00	-646.5	-4,068.1	659.8	479.6	180.16	3.662		
9,300.0	6,790.0	9,892.6	6,790.0	92.8	96.1	90.00	-646.3	-4,168.1	659.8	474.8	185.01	3.566		
9,400.0	6,790.0	9,992.6	6,790.0	95.1	98.5	90.00	-646.0	-4,268.1	659.8	469.9	189.86	3.475		
9,500.0	6,790.0	10,092.6	6,790.0	97.4	100.9	90.00	-645.8	-4,368.1	659.8	465.1	194.73	3.388		
9,600.0	6,790.0	10,192.6	6,790.0	99.8	103.3	90.00	-645.5	-4,468.1	659.8	460.2	199.59	3.306		
9,700.0	6,790.0	10,292.6	6,790.0	102.1	105.8	90.00	-645.3	-4,568.1	659.8	455.3	204.46	3.227		
9,800.0	6,790.0	10,392.6	6,790.0	104.5	108.2	90.00	-645.0	-4,668.1	659.8	450.4	209.34	3.152		
9,900.0	6,790.0	10,492.6	6,790.0	106.8	110.6	90.00	-644.8	-4,768.1	659.8	445.6	214.21	3.080		
10,000.0	6,790.0	10,592.6	6,790.0	109.2	113.1	90.00	-644.5	-4,868.1	659.8	440.7	219.09	3.011		
10,100.0	6,790.0	10,692.6	6,790.0	111.6	115.5	90.00	-644.3	-4,968.1	659.8	435.8	223.98	2.946		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		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			
10,200.0	6,790.0	10,792.6	6,790.0	113.9	117.9	90.00	-644.0	-5,068.1	659.8	430.9	228.86	2.883		
10,300.0	6,790.0	10,892.6	6,790.0	116.3	120.4	90.00	-643.8	-5,168.1	659.8	426.0	233.75	2.823		
10,400.0	6,790.0	10,992.6	6,790.0	118.7	122.8	90.00	-643.5	-5,268.1	659.8	421.1	238.64	2.765		
10,500.0	6,790.0	11,092.6	6,790.0	121.1	125.2	90.00	-643.3	-5,368.1	659.8	416.2	243.54	2.709		
10,600.0	6,790.0	11,192.6	6,790.0	123.5	127.7	90.00	-643.0	-5,468.1	659.8	411.3	248.43	2.656		
10,700.0	6,790.0	11,292.6	6,790.0	125.9	130.1	90.00	-642.8	-5,568.1	659.8	406.4	253.33	2.604		
10,800.0	6,790.0	11,392.6	6,790.0	128.3	132.6	90.00	-642.5	-5,668.1	659.8	401.5	258.23	2.555		
10,900.0	6,790.0	11,492.6	6,790.0	130.7	135.0	90.00	-642.3	-5,768.1	659.8	396.6	263.13	2.507		
11,000.0	6,790.0	11,592.6	6,790.0	133.1	137.5	90.00	-642.0	-5,868.1	659.8	391.7	268.03	2.462		
11,100.0	6,790.0	11,692.6	6,790.0	135.5	139.9	90.00	-641.8	-5,968.1	659.8	386.8	272.94	2.417		
11,200.0	6,790.0	11,792.6	6,790.0	137.9	142.4	90.00	-641.5	-6,068.1	659.8	381.9	277.85	2.375		
11,300.0	6,790.0	11,892.6	6,790.0	140.3	144.8	90.00	-641.3	-6,168.1	659.8	377.0	282.75	2.333		
11,400.0	6,790.0	11,992.6	6,790.0	142.7	147.3	90.00	-641.0	-6,268.1	659.8	372.1	287.66	2.294		
11,500.0	6,790.0	12,092.6	6,790.0	145.1	149.7	90.00	-640.8	-6,368.1	659.8	367.2	292.57	2.255		
11,600.0	6,790.0	12,192.6	6,790.0	147.6	152.2	90.00	-640.5	-6,468.1	659.8	362.3	297.49	2.218		
11,700.0	6,790.0	12,292.6	6,790.0	150.0	154.6	90.00	-640.3	-6,568.1	659.8	357.4	302.40	2.182		
11,800.0	6,790.0	12,392.6	6,790.0	152.4	157.1	90.00	-640.0	-6,668.1	659.8	352.5	307.31	2.147		
11,900.0	6,790.0	12,492.6	6,790.0	154.8	159.6	90.00	-639.8	-6,768.1	659.8	347.5	312.23	2.113		
12,000.0	6,790.0	12,592.6	6,790.0	157.2	162.0	90.00	-639.5	-6,868.1	659.8	342.6	317.15	2.080		
12,100.0	6,790.0	12,692.6	6,790.0	159.7	164.5	90.00	-639.3	-6,968.1	659.8	337.7	322.06	2.049		
12,200.0	6,790.0	12,792.6	6,790.0	162.1	166.9	90.00	-639.0	-7,068.1	659.8	332.8	326.98	2.018		
12,300.0	6,790.0	12,892.6	6,790.0	164.5	169.4	90.00	-638.8	-7,168.1	659.8	327.9	331.90	1.988		
12,400.0	6,790.0	12,992.6	6,790.0	167.0	171.8	90.00	-638.5	-7,268.1	659.8	322.9	336.82	1.959		
12,500.0	6,790.0	13,092.6	6,790.0	169.4	174.3	90.00	-638.3	-7,368.1	659.8	318.0	341.74	1.931		
12,600.0	6,790.0	13,192.6	6,790.0	171.8	176.8	90.00	-638.0	-7,468.1	659.8	313.1	346.67	1.903		
12,700.0	6,790.0	13,292.6	6,790.0	174.3	179.2	90.00	-637.8	-7,568.1	659.8	308.2	351.59	1.877		
12,800.0	6,790.0	13,392.6	6,790.0	176.7	181.7	90.00	-637.5	-7,668.1	659.8	303.3	356.51	1.851		
12,900.0	6,790.0	13,492.6	6,790.0	179.1	184.1	90.00	-637.3	-7,768.1	659.8	298.3	361.44	1.825		
13,000.0	6,790.0	13,592.6	6,790.0	181.6	186.6	90.00	-637.0	-7,868.1	659.8	293.4	366.36	1.801		
13,100.0	6,790.0	13,692.6	6,790.0	184.0	189.1	90.00	-636.8	-7,968.1	659.8	288.5	371.29	1.777		
13,200.0	6,790.0	13,792.6	6,790.0	186.4	191.5	90.00	-636.5	-8,068.1	659.8	283.6	376.21	1.754		
13,300.0	6,790.0	13,892.6	6,790.0	188.9	194.0	90.00	-636.3	-8,168.1	659.8	278.6	381.14	1.731		
13,400.0	6,790.0	13,992.6	6,790.0	191.3	196.4	90.00	-636.0	-8,268.1	659.8	273.7	386.07	1.709		
13,500.0	6,790.0	14,092.6	6,790.0	193.8	198.9	90.00	-635.8	-8,368.1	659.8	268.8	390.99	1.687		
13,600.0	6,790.0	14,192.6	6,790.0	196.2	201.4	90.00	-635.5	-8,468.1	659.8	263.8	395.92	1.666		
13,700.0	6,790.0	14,292.6	6,790.0	198.7	203.8	90.00	-635.3	-8,568.1	659.8	258.9	400.85	1.646		
13,800.0	6,790.0	14,392.6	6,790.0	201.1	206.3	90.00	-635.0	-8,668.1	659.8	254.0	405.78	1.626		
13,900.0	6,790.0	14,492.6	6,790.0	203.6	208.8	90.00	-634.8	-8,768.1	659.8	249.1	410.71	1.606		
14,000.0	6,790.0	14,592.6	6,790.0	206.0	211.2	90.00	-634.5	-8,868.1	659.8	244.1	415.64	1.587		
14,100.0	6,790.0	14,692.6	6,790.0	208.4	213.7	90.00	-634.3	-8,968.1	659.8	239.2	420.57	1.569		
14,200.0	6,790.0	14,792.6	6,790.0	210.9	216.1	90.00	-634.0	-9,068.1	659.8	234.3	425.50	1.551		
14,300.0	6,790.0	14,892.6	6,790.0	213.3	218.6	90.00	-633.8	-9,168.1	659.8	229.3	430.43	1.533		
14,400.0	6,790.0	14,992.6	6,790.0	215.8	221.1	90.00	-633.5	-9,268.1	659.8	224.4	435.37	1.515		
14,500.0	6,790.0	15,092.6	6,790.0	218.2	223.5	90.00	-633.3	-9,368.1	659.8	219.5	440.30	1.498 Level 3		
14,600.0	6,790.0	15,192.6	6,790.0	220.7	226.0	90.00	-633.0	-9,468.1	659.8	214.5	445.23	1.482 Level 3		
14,700.0	6,790.0	15,292.6	6,790.0	223.1	228.5	90.00	-632.8	-9,568.1	659.8	209.6	450.16	1.466 Level 3		
14,800.0	6,790.0	15,392.6	6,790.0	225.6	230.9	90.00	-632.5	-9,668.1	659.8	204.7	455.10	1.450 Level 3		
14,900.0	6,790.0	15,492.6	6,790.0	228.0	233.4	90.00	-632.3	-9,768.1	659.8	199.7	460.03	1.434 Level 3		
15,000.0	6,790.0	15,592.6	6,790.0	230.5	235.9	90.00	-632.0	-9,868.1	659.8	194.8	464.96	1.419 Level 3		
15,100.0	6,790.0	15,692.6	6,790.0	232.9	238.3	90.00	-631.8	-9,968.1	659.8	189.9	469.90	1.404 Level 3		
15,200.0	6,790.0	15,792.6	6,790.0	235.4	240.8	90.00	-631.5	-10,068.1	659.8	184.9	474.83	1.389 Level 3		
15,300.0	6,790.0	15,892.6	6,790.0	237.9	243.3	90.00	-631.3	-10,168.1	659.8	180.0	479.77	1.375 Level 3		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		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		
15,400.0	6,790.0	15,992.6	6,790.0	240.3	245.7	90.00	-631.0	-10,268.1	659.8	175.1	484.70	1.361	Level 3	
15,500.0	6,790.0	16,092.6	6,790.0	242.8	248.2	90.00	-630.8	-10,368.1	659.8	170.1	489.64	1.347	Level 3	
15,600.0	6,790.0	16,192.6	6,790.0	245.2	250.7	90.00	-630.5	-10,468.1	659.8	165.2	494.57	1.334	Level 3	
15,700.0	6,790.0	16,292.6	6,790.0	247.7	253.1	90.00	-630.3	-10,568.1	659.8	160.2	499.51	1.321	Level 3	
15,800.0	6,790.0	16,392.6	6,790.0	250.1	255.6	90.00	-630.0	-10,668.1	659.8	155.3	504.45	1.308	Level 3	
15,900.0	6,790.0	16,492.6	6,790.0	252.6	258.1	90.00	-629.8	-10,768.1	659.8	150.4	509.38	1.295	Level 3	
16,000.0	6,790.0	16,592.6	6,790.0	255.0	260.5	90.00	-629.5	-10,868.1	659.8	145.4	514.32	1.283	Level 3	
16,100.0	6,790.0	16,692.6	6,790.0	257.5	263.0	90.00	-629.3	-10,968.1	659.8	140.5	519.26	1.271	Level 3	
16,200.0	6,790.0	16,792.6	6,790.0	260.0	265.5	90.00	-629.0	-11,068.1	659.8	135.6	524.19	1.259	Level 3	
16,300.0	6,790.0	16,892.6	6,790.0	262.4	267.9	90.00	-628.8	-11,168.1	659.8	130.6	529.13	1.247	Level 2	
16,400.0	6,790.0	16,992.6	6,790.0	264.9	270.4	90.00	-628.5	-11,268.1	659.8	125.7	534.07	1.235	Level 2	
16,500.0	6,790.0	17,092.6	6,790.0	267.3	272.9	90.00	-628.3	-11,368.1	659.8	120.7	539.01	1.224	Level 2	
16,600.0	6,790.0	17,192.6	6,790.0	269.8	275.3	90.00	-628.0	-11,468.1	659.8	115.8	543.95	1.213	Level 2	
16,700.0	6,790.0	17,292.6	6,790.0	272.2	277.8	90.00	-627.8	-11,568.1	659.8	110.9	548.88	1.202	Level 2	
16,800.0	6,790.0	17,392.6	6,790.0	274.7	280.3	90.00	-627.5	-11,668.1	659.8	105.9	553.82	1.191	Level 2	
16,829.6	6,790.0	17,422.2	6,790.0	275.4	281.0	90.00	-627.5	-11,697.7	659.8	104.5	555.28	1.188	Level 2, SF	

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	31.03	48.1	28.9	56.1						
100.0	100.0	100.0	100.0	0.1	0.1	31.03	48.1	28.9	56.1	55.9	0.27	211.532			
200.0	200.0	200.0	200.0	0.3	0.3	31.03	48.1	28.9	56.1	55.5	0.61	91.344	CC		
300.0	300.0	300.8	300.8	0.5	0.5	153.80	47.7	28.1	56.2	55.2	0.97	58.177			
400.0	400.0	401.7	401.6	0.7	0.7	153.53	46.5	25.8	56.3	55.0	1.32	42.691			
500.0	499.9	502.5	502.4	0.9	0.9	153.08	44.5	21.8	56.5	54.8	1.68	33.712			
600.0	599.7	603.3	603.0	1.1	1.1	152.46	41.7	16.2	56.8	54.7	2.04	27.840			
700.0	699.4	704.2	703.5	1.3	1.3	151.67	38.2	9.1	57.2	54.8	2.41	23.687			
800.0	798.9	805.0	803.8	1.5	1.5	150.72	33.8	0.4	57.7	54.9	2.80	20.582			
900.0	898.3	905.8	904.0	1.8	1.8	149.62	28.7	-9.9	58.3	55.1	3.21	18.160			
1,000.0	997.4	1,006.6	1,003.9	2.0	2.0	148.38	22.8	-21.8	59.0	55.4	3.64	16.207			
1,100.0	1,096.3	1,107.4	1,103.6	2.3	2.4	147.01	16.0	-35.2	59.9	55.7	4.10	14.588			
1,200.0	1,194.9	1,208.2	1,203.0	2.7	2.7	145.52	8.5	-50.2	60.8	56.2	4.60	13.218			
1,300.0	1,293.3	1,309.0	1,302.1	3.0	3.0	143.94	0.3	-66.8	62.0	56.8	5.15	12.039			
1,400.0	1,391.2	1,409.8	1,400.8	3.4	3.4	142.28	-8.8	-84.9	63.3	57.5	5.75	11.012			
1,500.0	1,488.9	1,510.5	1,499.1	3.8	3.8	140.55	-18.6	-104.6	64.7	58.3	6.40	10.109			
1,600.0	1,586.1	1,611.3	1,597.1	4.2	4.3	138.77	-29.2	-125.8	66.4	59.2	7.13	9.312			
1,700.0	1,682.9	1,712.0	1,694.6	4.7	4.8	136.96	-40.6	-148.5	68.2	60.3	7.92	8.608			
1,800.0	1,779.3	1,812.8	1,791.6	5.2	5.3	135.13	-52.7	-172.8	70.2	61.4	8.79	7.984			
1,900.0	1,875.2	1,913.5	1,888.1	5.7	5.8	133.30	-65.6	-198.6	72.4	62.7	9.74	7.432			
2,000.0	1,970.5	2,014.2	1,984.1	6.3	6.4	131.48	-79.2	-225.9	74.8	64.1	10.78	6.945			
2,100.0	2,065.4	2,114.9	2,079.5	6.9	7.0	129.68	-93.6	-254.7	77.5	65.6	11.89	6.515			
2,200.0	2,159.6	2,215.6	2,174.3	7.5	7.6	127.92	-108.7	-285.0	80.3	67.2	13.09	6.136			
2,300.0	2,253.3	2,316.3	2,268.5	8.1	8.3	126.20	-124.6	-316.7	83.4	69.0	14.37	5.803			
2,400.0	2,346.3	2,416.9	2,362.0	8.8	9.0	124.53	-141.2	-350.0	86.6	70.9	15.73	5.509			
2,500.0	2,438.7	2,517.4	2,454.8	9.5	9.7	122.94	-158.5	-384.6	90.1	73.0	17.16	5.252			
2,600.0	2,530.4	2,617.3	2,546.7	10.3	10.4	122.03	-176.0	-419.6	94.3	75.8	18.55	5.084			
2,700.0	2,621.6	2,717.2	2,638.7	11.0	11.1	121.85	-193.4	-454.5	99.2	79.4	19.87	4.993			
2,800.0	2,712.8	2,817.1	2,730.6	11.8	11.9	121.74	-210.9	-489.4	104.2	83.0	21.20	4.915			
2,900.0	2,803.9	2,917.0	2,822.5	12.6	12.6	121.63	-228.3	-524.3	109.1	86.6	22.52	4.844			
3,000.0	2,895.1	3,016.8	2,914.4	13.3	13.3	121.54	-245.7	-559.3	114.1	90.2	23.86	4.781			
3,100.0	2,986.2	3,116.7	3,006.4	14.1	14.0	121.45	-263.2	-594.2	119.0	93.8	25.19	4.723			
3,200.0	3,077.4	3,216.6	3,098.3	14.9	14.8	121.37	-280.6	-629.1	123.9	97.4	26.53	4.671			
3,300.0	3,168.6	3,316.5	3,190.2	15.6	15.5	121.29	-298.1	-664.1	128.9	101.0	27.87	4.624			
3,400.0	3,259.7	3,416.4	3,282.2	16.4	16.2	121.23	-315.5	-699.0	133.8	104.6	29.21	4.580			
3,500.0	3,350.9	3,516.2	3,374.1	17.2	17.0	121.16	-333.0	-733.9	138.7	108.2	30.56	4.540			
3,600.0	3,442.0	3,616.1	3,466.0	17.9	17.7	121.10	-350.4	-768.8	143.7	111.8	31.91	4.503			
3,700.0	3,533.2	3,716.0	3,558.0	18.7	18.5	121.05	-367.9	-803.8	148.6	115.4	33.26	4.469			
3,800.0	3,624.3	3,815.9	3,649.9	19.5	19.2	120.99	-385.3	-838.7	153.6	119.0	34.61	4.437			
3,900.0	3,715.5	3,915.7	3,741.8	20.3	19.9	120.94	-402.8	-873.6	158.5	122.5	35.96	4.408			
4,000.0	3,806.6	4,015.6	3,833.8	21.0	20.7	120.90	-420.2	-908.5	163.4	126.1	37.31	4.381			
4,100.0	3,897.8	4,115.5	3,925.7	21.8	21.4	120.86	-437.7	-943.5	168.4	129.7	38.66	4.355			
4,200.0	3,989.0	4,215.4	4,017.6	22.6	22.1	120.81	-455.1	-978.4	173.3	133.3	40.02	4.331			
4,300.0	4,080.1	4,315.3	4,109.5	23.3	22.9	120.78	-472.6	-1,013.3	178.3	136.9	41.37	4.309			
4,400.0	4,171.3	4,415.1	4,201.5	24.1	23.6	120.74	-490.0	-1,048.2	183.2	140.5	42.73	4.287			
4,500.0	4,262.4	4,515.0	4,293.4	24.9	24.4	120.71	-507.5	-1,083.2	188.1	144.1	44.09	4.268			
4,600.0	4,353.6	4,614.9	4,385.3	25.7	25.1	120.67	-524.9	-1,118.1	193.1	147.6	45.44	4.249			
4,700.0	4,444.7	4,714.8	4,477.3	26.4	25.8	120.64	-542.4	-1,153.0	198.0	151.2	46.80	4.231			
4,800.0	4,535.9	4,814.6	4,569.2	27.2	26.6	120.61	-559.8	-1,188.0	203.0	154.8	48.16	4.214			
4,900.0	4,627.1	4,914.5	4,661.1	28.0	27.3	120.58	-577.3	-1,222.9	207.9	158.4	49.52	4.198			
5,000.0	4,718.2	5,014.4	4,753.1	28.8	28.1	120.56	-594.7	-1,257.8	212.8	162.0	50.88	4.183			
5,100.0	4,809.4	5,114.3	4,845.0	29.6	28.8	120.53	-612.2	-1,292.7	217.8	165.5	52.24	4.169			

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		
5,200.0	4,900.5	5,214.2	4,936.9	30.3	29.5	120.51	-629.6	-1,327.7	222.7	169.1	53.60	4.155		
5,300.0	4,991.7	5,314.0	5,028.9	31.1	30.3	120.48	-647.0	-1,362.6	227.7	172.7	54.96	4.142		
5,400.0	5,082.8	5,413.9	5,120.8	31.9	31.0	120.46	-664.5	-1,397.5	232.6	176.3	56.32	4.130		
5,500.0	5,174.0	5,513.8	5,212.7	32.7	31.8	120.44	-681.9	-1,432.4	237.5	179.9	57.68	4.118		
5,600.0	5,265.2	5,613.7	5,304.6	33.4	32.5	120.42	-699.4	-1,467.4	242.5	183.4	59.04	4.107		
5,700.0	5,356.3	5,713.5	5,396.6	34.2	33.2	120.40	-716.8	-1,502.3	247.4	187.0	60.40	4.096		
5,800.0	5,447.5	5,813.4	5,488.5	35.0	34.0	120.38	-734.3	-1,537.2	252.4	190.6	61.76	4.086		
5,900.0	5,538.6	5,913.3	5,580.4	35.8	34.7	120.36	-751.7	-1,572.1	257.3	194.2	63.13	4.076		
6,000.0	5,629.8	6,013.2	5,672.4	36.5	35.5	120.34	-769.2	-1,607.1	262.2	197.8	64.49	4.067		
6,100.0	5,720.9	6,113.1	5,764.3	37.3	36.2	120.33	-786.6	-1,642.0	267.2	201.3	65.85	4.057		
6,200.0	5,812.1	6,212.9	5,856.2	38.1	36.9	120.31	-804.1	-1,676.9	272.1	204.9	67.21	4.049		
6,300.0	5,903.2	6,312.8	5,948.2	38.9	37.7	120.29	-821.5	-1,711.9	277.1	208.5	68.58	4.040		
6,400.0	5,994.4	6,412.7	6,040.1	39.7	38.4	120.28	-839.0	-1,746.8	282.0	212.1	69.94	4.032		
6,500.0	6,085.6	6,512.6	6,132.0	40.4	39.2	120.26	-856.4	-1,781.7	287.0	215.6	71.30	4.024		
6,600.0	6,176.7	6,612.4	6,224.0	41.2	39.9	120.25	-873.9	-1,816.6	291.9	219.2	72.67	4.017		
6,700.0	6,267.9	6,712.3	6,315.9	42.0	40.6	120.24	-891.3	-1,851.6	296.8	222.8	74.03	4.010		
6,800.0	6,359.0	6,811.3	6,406.8	42.8	41.4	120.12	-908.6	-1,886.7	301.8	226.3	75.48	3.999		
6,900.0	6,448.7	6,906.9	6,490.3	43.6	42.4	111.68	-924.4	-1,930.2	307.3	229.1	78.21	3.930		
7,000.0	6,531.8	7,000.0	6,564.6	44.8	43.5	104.08	-938.4	-1,984.3	312.7	231.4	81.30	3.846		
7,100.0	6,606.0	7,094.8	6,631.6	46.1	44.9	98.96	-951.0	-2,050.2	317.6	233.0	84.53	3.757		
7,200.0	6,669.5	7,187.6	6,687.0	47.6	46.4	95.41	-961.4	-2,123.7	321.8	234.1	87.73	3.668		
7,300.0	6,720.7	7,279.7	6,731.1	49.4	48.1	92.92	-969.6	-2,204.1	325.3	234.4	90.88	3.579		
7,400.0	6,758.4	7,371.3	6,763.2	51.2	49.9	91.27	-975.6	-2,289.6	327.9	234.0	93.93	3.491		
7,500.0	6,781.7	7,462.6	6,783.0	53.2	51.7	90.32	-979.1	-2,378.6	329.5	232.6	96.87	3.401		
7,600.0	6,790.0	7,553.8	6,790.0	55.2	53.7	90.00	-980.2	-2,469.4	330.1	230.4	99.69	3.311		
7,700.0	6,790.0	7,653.4	6,790.0	57.2	55.8	90.00	-980.0	-2,569.0	330.1	225.9	104.18	3.168		
7,800.0	6,790.0	7,753.4	6,790.0	59.3	57.9	90.00	-979.7	-2,669.0	330.1	221.3	108.77	3.034		
7,900.0	6,790.0	7,853.4	6,790.0	61.4	60.1	90.00	-979.5	-2,769.0	330.0	216.7	113.39	2.911		
8,000.0	6,790.0	7,953.4	6,790.0	63.5	62.3	90.00	-979.2	-2,869.0	330.0	212.0	118.04	2.796		
8,100.0	6,790.0	8,053.4	6,790.0	65.7	64.5	90.00	-979.0	-2,969.0	330.0	207.3	122.72	2.689		
8,200.0	6,790.0	8,153.4	6,790.0	67.9	66.8	90.00	-978.7	-3,069.0	330.0	202.6	127.41	2.590		
8,300.0	6,790.0	8,253.4	6,790.0	70.0	69.0	90.00	-978.5	-3,169.0	330.0	197.9	132.12	2.498		
8,400.0	6,790.0	8,353.4	6,790.0	72.3	71.3	90.00	-978.3	-3,269.0	330.0	193.2	136.85	2.412		
8,500.0	6,790.0	8,453.4	6,790.0	74.5	73.6	90.00	-978.0	-3,369.0	330.0	188.4	141.59	2.331		
8,600.0	6,790.0	8,553.4	6,790.0	76.7	75.9	90.00	-977.8	-3,469.0	330.0	183.7	146.35	2.255		
8,700.0	6,790.0	8,653.4	6,790.0	79.0	78.2	90.00	-977.5	-3,569.0	330.0	178.9	151.12	2.184		
8,800.0	6,790.0	8,753.4	6,790.0	81.3	80.5	90.00	-977.3	-3,669.0	330.0	174.1	155.90	2.117		
8,900.0	6,790.0	8,853.4	6,790.0	83.5	82.8	90.00	-977.0	-3,769.0	330.0	169.3	160.69	2.054		
9,000.0	6,790.0	8,953.4	6,790.0	85.8	85.1	90.00	-976.8	-3,869.0	330.0	164.5	165.50	1.994		
9,100.0	6,790.0	9,053.4	6,790.0	88.1	87.5	90.00	-976.5	-3,969.0	330.0	159.7	170.30	1.938		
9,200.0	6,790.0	9,153.4	6,790.0	90.4	89.8	90.00	-976.3	-4,069.0	330.0	154.9	175.12	1.884		
9,300.0	6,790.0	9,253.4	6,790.0	92.8	92.2	90.00	-976.0	-4,169.0	330.0	150.0	179.94	1.834		
9,400.0	6,790.0	9,353.4	6,790.0	95.1	94.5	90.00	-975.8	-4,269.0	330.0	145.2	184.78	1.786		
9,500.0	6,790.0	9,453.4	6,790.0	97.4	96.9	90.00	-975.6	-4,369.0	330.0	140.4	189.61	1.740		
9,600.0	6,790.0	9,553.4	6,790.0	99.8	99.3	90.00	-975.3	-4,469.0	330.0	135.5	194.45	1.697		
9,700.0	6,790.0	9,653.4	6,790.0	102.1	101.7	90.00	-975.1	-4,569.0	330.0	130.7	199.30	1.656		
9,800.0	6,790.0	9,753.4	6,790.0	104.5	104.0	90.00	-974.8	-4,669.0	330.0	125.8	204.15	1.616		
9,900.0	6,790.0	9,853.4	6,790.0	106.8	106.4	90.00	-974.6	-4,769.0	330.0	121.0	209.01	1.579		
10,000.0	6,790.0	9,953.4	6,790.0	109.2	108.8	90.00	-974.3	-4,869.0	330.0	116.1	213.87	1.543		
10,100.0	6,790.0	10,053.4	6,790.0	111.6	111.2	90.00	-974.1	-4,969.0	330.0	111.2	218.74	1.508		
10,200.0	6,790.0	10,153.4	6,790.0	113.9	113.6	90.00	-973.8	-5,069.0	330.0	106.4	223.61	1.476	Level 3	
10,300.0	6,790.0	10,253.4	6,790.0	116.3	116.0	90.00	-973.6	-5,169.0	330.0	101.5	228.48	1.444	Level 3	

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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			
10,400.0	6,790.0	10,353.4	6,790.0	118.7	118.4	90.00	-973.3	-5,269.0	329.9	96.6	233.35	1.414 Level 3		
10,500.0	6,790.0	10,453.4	6,790.0	121.1	120.8	90.00	-973.1	-5,369.0	329.9	91.7	238.23	1.385 Level 3		
10,600.0	6,790.0	10,553.4	6,790.0	123.5	123.2	90.00	-972.8	-5,469.0	329.9	86.8	243.11	1.357 Level 3		
10,700.0	6,790.0	10,653.4	6,790.0	125.9	125.6	90.00	-972.6	-5,569.0	329.9	81.9	248.00	1.330 Level 3		
10,800.0	6,790.0	10,753.4	6,790.0	128.3	128.1	90.00	-972.4	-5,669.0	329.9	77.0	252.88	1.305 Level 3		
10,900.0	6,790.0	10,853.4	6,790.0	130.7	130.5	90.00	-972.1	-5,769.0	329.9	72.2	257.77	1.280 Level 3		
11,000.0	6,790.0	10,953.4	6,790.0	133.1	132.9	90.00	-971.9	-5,869.0	329.9	67.3	262.66	1.256 Level 3		
11,100.0	6,790.0	11,053.4	6,790.0	135.5	135.3	90.00	-971.6	-5,969.0	329.9	62.4	267.56	1.233 Level 2		
11,200.0	6,790.0	11,153.4	6,790.0	137.9	137.7	90.00	-971.4	-6,069.0	329.9	57.5	272.45	1.211 Level 2		
11,300.0	6,790.0	11,253.4	6,790.0	140.3	140.2	90.00	-971.1	-6,169.0	329.9	52.6	277.35	1.190 Level 2		
11,400.0	6,790.0	11,353.4	6,790.0	142.7	142.6	90.00	-970.9	-6,269.0	329.9	47.7	282.25	1.169 Level 2		
11,500.0	6,790.0	11,453.4	6,790.0	145.1	145.0	90.00	-970.6	-6,369.0	329.9	42.8	287.15	1.149 Level 2		
11,600.0	6,790.0	11,553.4	6,790.0	147.6	147.5	90.00	-970.4	-6,469.0	329.9	37.8	292.05	1.130 Level 2		
11,700.0	6,790.0	11,653.4	6,790.0	150.0	149.9	90.00	-970.1	-6,569.0	329.9	32.9	296.96	1.111 Level 2		
11,800.0	6,790.0	11,753.4	6,790.0	152.4	152.3	90.00	-969.9	-6,669.0	329.9	28.0	301.86	1.093 Level 2		
11,900.0	6,790.0	11,853.4	6,790.0	154.8	154.8	90.00	-969.6	-6,769.0	329.9	23.1	306.77	1.075 Level 2		
12,000.0	6,790.0	11,953.4	6,790.0	157.2	157.2	90.00	-969.4	-6,869.0	329.9	18.2	311.68	1.058 Level 2		
12,100.0	6,790.0	12,053.4	6,790.0	159.7	159.6	90.00	-969.2	-6,969.0	329.9	13.3	316.59	1.042 Level 2		
12,200.0	6,790.0	12,153.4	6,790.0	162.1	162.1	90.00	-968.9	-7,069.0	329.9	8.4	321.50	1.026 Level 2		
12,300.0	6,790.0	12,253.4	6,790.0	164.5	164.5	90.00	-968.7	-7,169.0	329.9	3.5	326.41	1.011 Level 2		
12,400.0	6,790.0	12,353.4	6,790.0	167.0	166.9	90.00	-968.4	-7,269.0	329.9	-1.5	331.32	0.996 Level 1		
12,500.0	6,790.0	12,453.4	6,790.0	169.4	169.4	90.00	-968.2	-7,369.0	329.9	-6.4	336.23	0.981 Level 1		
12,600.0	6,790.0	12,553.4	6,790.0	171.8	171.8	90.00	-967.9	-7,469.0	329.9	-11.3	341.15	0.967 Level 1		
12,700.0	6,790.0	12,653.4	6,790.0	174.3	174.3	90.00	-967.7	-7,569.0	329.9	-16.2	346.07	0.953 Level 1		
12,800.0	6,790.0	12,753.4	6,790.0	176.7	176.7	90.00	-967.4	-7,669.0	329.9	-21.1	350.98	0.940 Level 1		
12,900.0	6,790.0	12,853.4	6,790.0	179.1	179.2	90.00	-967.2	-7,769.0	329.9	-26.0	355.90	0.927 Level 1		
13,000.0	6,790.0	12,953.4	6,790.0	181.6	181.6	90.00	-966.9	-7,869.0	329.8	-31.0	360.82	0.914 Level 1		
13,100.0	6,790.0	13,053.4	6,790.0	184.0	184.1	90.00	-966.7	-7,969.0	329.8	-35.9	365.74	0.902 Level 1		
13,200.0	6,790.0	13,153.4	6,790.0	186.4	186.5	90.00	-966.5	-8,069.0	329.8	-40.8	370.66	0.890 Level 1		
13,300.0	6,790.0	13,253.4	6,790.0	188.9	189.0	90.00	-966.2	-8,169.0	329.8	-45.7	375.58	0.878 Level 1		
13,400.0	6,790.0	13,353.4	6,790.0	191.3	191.4	90.00	-966.0	-8,269.0	329.8	-50.7	380.50	0.867 Level 1		
13,500.0	6,790.0	13,453.4	6,790.0	193.8	193.9	90.00	-965.7	-8,369.0	329.8	-55.6	385.42	0.856 Level 1		
13,600.0	6,790.0	13,553.4	6,790.0	196.2	196.3	90.00	-965.5	-8,469.0	329.8	-60.5	390.35	0.845 Level 1		
13,700.0	6,790.0	13,653.4	6,790.0	198.7	198.8	90.00	-965.2	-8,569.0	329.8	-65.5	395.27	0.834 Level 1		
13,800.0	6,790.0	13,753.4	6,790.0	201.1	201.2	90.00	-965.0	-8,669.0	329.8	-70.4	400.19	0.824 Level 1		
13,900.0	6,790.0	13,853.4	6,790.0	203.6	203.7	90.00	-964.7	-8,769.0	329.8	-75.3	405.12	0.814 Level 1		
14,000.0	6,790.0	13,953.4	6,790.0	206.0	206.1	90.00	-964.5	-8,869.0	329.8	-80.2	410.04	0.804 Level 1		
14,100.0	6,790.0	14,053.4	6,790.0	208.4	208.6	90.00	-964.2	-8,969.0	329.8	-85.2	414.97	0.795 Level 1		
14,200.0	6,790.0	14,153.4	6,790.0	210.9	211.0	90.00	-964.0	-9,069.0	329.8	-90.1	419.90	0.785 Level 1		
14,300.0	6,790.0	14,253.4	6,790.0	213.3	213.5	90.00	-963.7	-9,169.0	329.8	-95.0	424.82	0.776 Level 1		
14,400.0	6,790.0	14,353.4	6,790.0	215.8	215.9	90.00	-963.5	-9,269.0	329.8	-100.0	429.75	0.767 Level 1		
14,500.0	6,790.0	14,453.4	6,790.0	218.2	218.4	90.00	-963.3	-9,369.0	329.8	-104.9	434.68	0.759 Level 1		
14,600.0	6,790.0	14,553.4	6,790.0	220.7	220.8	90.00	-963.0	-9,469.0	329.8	-109.8	439.61	0.750 Level 1		
14,700.0	6,790.0	14,653.4	6,790.0	223.1	223.3	90.00	-962.8	-9,569.0	329.8	-114.8	444.54	0.742 Level 1		
14,800.0	6,790.0	14,753.4	6,790.0	225.6	225.7	90.00	-962.5	-9,669.0	329.8	-119.7	449.47	0.734 Level 1		
14,900.0	6,790.0	14,853.4	6,790.0	228.0	228.2	90.00	-962.3	-9,769.0	329.8	-124.6	454.40	0.726 Level 1		
15,000.0	6,790.0	14,953.4	6,790.0	230.5	230.7	90.00	-962.0	-9,869.0	329.8	-129.6	459.33	0.718 Level 1		
15,100.0	6,790.0	15,053.4	6,790.0	232.9	233.1	90.00	-961.8	-9,969.0	329.8	-134.5	464.26	0.710 Level 1		
15,200.0	6,790.0	15,153.4	6,790.0	235.4	235.6	90.00	-961.5	-10,069.0	329.8	-139.4	469.19	0.703 Level 1		
15,300.0	6,790.0	15,253.4	6,790.0	237.9	238.0	90.00	-961.3	-10,169.0	329.8	-144.4	474.12	0.696 Level 1		
15,400.0	6,790.0	15,353.4	6,790.0	240.3	240.5	90.00	-961.0	-10,269.0	329.8	-149.3	479.05	0.688 Level 1		
15,500.0	6,790.0	15,453.4	6,790.0	242.8	243.0	90.00	-960.8	-10,369.0	329.7	-154.2	483.98	0.681 Level 1		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	Factor		
15,600.0	6,790.0	15,553.4	6,790.0	245.2	245.4	90.00	-960.5	-10,469.0	329.7	-159.2	488.91	0.674	Level 1	
15,700.0	6,790.0	15,653.4	6,790.0	247.7	247.9	90.00	-960.3	-10,569.0	329.7	-164.1	493.85	0.668	Level 1	
15,800.0	6,790.0	15,753.4	6,790.0	250.1	250.3	90.00	-960.1	-10,669.0	329.7	-169.0	498.78	0.661	Level 1	
15,900.0	6,790.0	15,853.4	6,790.0	252.6	252.8	90.00	-959.8	-10,769.0	329.7	-174.0	503.71	0.655	Level 1	
16,000.0	6,790.0	15,953.4	6,790.0	255.0	255.3	90.00	-959.6	-10,869.0	329.7	-178.9	508.65	0.648	Level 1	
16,100.0	6,790.0	16,053.4	6,790.0	257.5	257.7	90.00	-959.3	-10,969.0	329.7	-183.9	513.58	0.642	Level 1	
16,200.0	6,790.0	16,153.4	6,790.0	260.0	260.2	90.00	-959.1	-11,069.0	329.7	-188.8	518.52	0.636	Level 1	
16,300.0	6,790.0	16,253.4	6,790.0	262.4	262.6	90.00	-958.8	-11,169.0	329.7	-193.7	523.45	0.630	Level 1	
16,400.0	6,790.0	16,353.4	6,790.0	264.9	265.1	90.00	-958.6	-11,269.0	329.7	-198.7	528.39	0.624	Level 1	
16,500.0	6,790.0	16,453.4	6,790.0	267.3	267.6	90.00	-958.3	-11,369.0	329.7	-203.6	533.32	0.618	Level 1	
16,600.0	6,790.0	16,553.4	6,790.0	269.8	270.0	90.00	-958.1	-11,469.0	329.7	-208.6	538.26	0.613	Level 1	
16,700.0	6,790.0	16,653.4	6,790.0	272.2	272.5	90.00	-957.8	-11,569.0	329.7	-213.5	543.19	0.607	Level 1	
16,800.0	6,790.0	16,753.4	6,790.0	274.7	274.9	90.00	-957.6	-11,669.0	329.7	-218.4	548.13	0.601	Level 1	
16,829.6	6,790.0	16,783.0	6,790.0	275.4	275.7	90.00	-957.5	-11,698.6	329.7	-219.9	549.59	0.600	Level 1, ES, SF	

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 9 - 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	31.42	23.7	14.5	27.7					
100.0	100.0	100.0	100.0	0.1	0.1	31.42	23.7	14.5	27.7	27.5	0.27	104.592		
200.0	200.0	200.0	200.0	0.3	0.3	31.42	23.7	14.5	27.7	27.1	0.61	45.165 CC		
300.0	300.0	300.4	300.4	0.5	0.5	154.19	23.2	13.7	27.8	26.8	0.96	28.786		
400.0	400.0	400.9	400.8	0.7	0.7	153.94	21.9	11.4	27.8	26.5	1.32	21.130		
500.0	499.9	501.3	501.1	0.9	0.9	153.51	19.7	7.6	27.9	26.2	1.67	16.688		
600.0	599.7	601.7	601.4	1.1	1.1	152.91	16.7	2.3	28.0	26.0	2.03	13.783		
700.0	699.4	702.1	701.5	1.3	1.3	152.15	12.7	-4.6	28.2	25.8	2.40	11.729		
800.0	798.9	802.6	801.4	1.5	1.5	151.23	7.9	-13.0	28.4	25.6	2.79	10.193		
900.0	898.3	903.0	901.2	1.8	1.8	150.17	2.2	-22.9	28.7	25.5	3.19	8.996		
1,000.0	997.4	1,003.4	1,000.8	2.0	2.0	148.97	-4.4	-34.3	29.0	25.4	3.61	8.030		
1,100.0	1,096.3	1,103.8	1,100.1	2.3	2.3	147.64	-11.8	-47.2	29.3	25.3	4.06	7.230		
1,200.0	1,194.9	1,204.2	1,199.1	2.7	2.7	146.19	-20.1	-61.6	29.8	25.2	4.54	6.551		
1,300.0	1,293.3	1,304.6	1,297.8	3.0	3.0	144.64	-29.3	-77.6	30.3	25.2	5.07	5.966		
1,400.0	1,391.2	1,405.0	1,396.2	3.4	3.4	143.01	-39.3	-95.0	30.8	25.2	5.65	5.456 ES		
1,500.0	1,488.9	1,505.5	1,494.2	3.8	3.8	141.30	-50.2	-113.9	31.5	25.2	6.28	5.005		
1,600.0	1,586.1	1,605.9	1,591.8	4.2	4.3	139.53	-61.9	-134.3	32.2	25.2	6.98	4.606		
1,700.0	1,682.9	1,706.3	1,689.0	4.7	4.7	137.72	-74.5	-156.2	33.0	25.2	7.76	4.251		
1,800.0	1,779.3	1,806.7	1,785.7	5.2	5.2	135.89	-87.9	-179.5	33.9	25.3	8.60	3.936		
1,900.0	1,875.2	1,907.0	1,881.9	5.7	5.8	134.05	-102.2	-204.3	34.8	25.3	9.53	3.656		
2,000.0	1,970.5	2,007.4	1,977.6	6.3	6.3	132.21	-117.3	-230.6	35.9	25.4	10.54	3.408		
2,100.0	2,065.4	2,107.8	2,072.8	6.9	6.9	130.38	-133.3	-258.3	37.1	25.5	11.63	3.189		
2,200.0	2,159.6	2,208.2	2,167.3	7.5	7.5	128.58	-150.0	-287.5	38.4	25.5	12.81	2.995		
2,300.0	2,253.3	2,308.6	2,261.3	8.1	8.2	126.82	-167.6	-318.1	39.7	25.7	14.07	2.823		
2,400.0	2,346.3	2,408.9	2,354.6	8.8	8.9	125.11	-186.0	-350.1	41.2	25.8	15.41	2.673		
2,500.0	2,438.7	2,508.9	2,447.3	9.5	9.6	124.57	-204.7	-382.6	43.3	26.6	16.66	2.598		
2,600.0	2,530.4	2,608.8	2,539.9	10.3	10.3	125.86	-223.4	-415.0	46.4	28.7	17.66	2.626		
2,700.0	2,621.6	2,708.7	2,632.6	11.0	11.0	128.17	-242.1	-447.5	50.3	31.8	18.45	2.724		
2,800.0	2,712.8	2,808.7	2,725.2	11.8	11.7	130.21	-260.8	-480.0	54.3	35.1	19.22	2.824		
2,900.0	2,803.9	2,908.6	2,817.8	12.6	12.4	131.97	-279.5	-512.5	58.4	38.4	19.98	2.920		
3,000.0	2,895.1	3,008.5	2,910.4	13.3	13.1	133.49	-298.2	-544.9	62.5	41.7	20.73	3.013		
3,100.0	2,986.2	3,108.4	3,003.0	14.1	13.8	134.83	-316.8	-577.4	66.6	45.1	21.48	3.101		
3,200.0	3,077.4	3,208.3	3,095.6	14.9	14.5	136.01	-335.5	-609.9	70.8	48.6	22.23	3.186		
3,300.0	3,168.6	3,308.2	3,188.2	15.6	15.2	137.06	-354.2	-642.4	75.0	52.1	22.97	3.266		
3,400.0	3,259.7	3,408.1	3,280.8	16.4	15.9	137.99	-372.9	-674.8	79.3	55.6	23.71	3.343		
3,500.0	3,350.9	3,508.0	3,373.4	17.2	16.6	138.84	-391.6	-707.3	83.5	59.1	24.45	3.416		
3,600.0	3,442.0	3,607.9	3,466.1	17.9	17.3	139.59	-410.3	-739.8	87.8	62.6	25.20	3.485		
3,700.0	3,533.2	3,707.8	3,558.7	18.7	18.0	140.28	-428.9	-772.2	92.1	66.1	25.94	3.550		
3,800.0	3,624.3	3,807.7	3,651.3	19.5	18.7	140.91	-447.6	-804.7	96.4	69.7	26.68	3.613		
3,900.0	3,715.5	3,907.6	3,743.9	20.3	19.4	141.48	-466.3	-837.2	100.7	73.3	27.42	3.673		
4,000.0	3,806.6	4,007.5	3,836.5	21.0	20.1	142.01	-485.0	-869.7	105.0	76.9	28.16	3.729		
4,100.0	3,897.8	4,107.4	3,929.1	21.8	20.8	142.50	-503.7	-902.1	109.3	80.4	28.90	3.784		
4,200.0	3,989.0	4,207.3	4,021.7	22.6	21.5	142.94	-522.4	-934.6	113.7	84.0	29.64	3.835		
4,300.0	4,080.1	4,307.2	4,114.3	23.3	22.2	143.36	-541.0	-967.1	118.0	87.6	30.38	3.884		
4,400.0	4,171.3	4,407.1	4,207.0	24.1	22.9	143.74	-559.7	-999.6	122.4	91.2	31.12	3.932		
4,500.0	4,262.4	4,507.0	4,299.6	24.9	23.6	144.10	-578.4	-1,032.0	126.7	94.8	31.86	3.977		
4,600.0	4,353.6	4,606.9	4,392.2	25.7	24.3	144.44	-597.1	-1,064.5	131.1	98.5	32.61	4.020		
4,700.0	4,444.7	4,706.8	4,484.8	26.4	25.0	144.75	-615.8	-1,097.0	135.4	102.1	33.35	4.061		
4,800.0	4,535.9	4,806.7	4,577.4	27.2	25.7	145.05	-634.5	-1,129.4	139.8	105.7	34.09	4.101		
4,900.0	4,627.1	4,906.6	4,670.0	28.0	26.4	145.32	-653.1	-1,161.9	144.2	109.3	34.83	4.138		
5,000.0	4,718.2	5,006.5	4,762.6	28.8	27.1	145.58	-671.8	-1,194.4	148.5	113.0	35.58	4.175		
5,100.0	4,809.4	5,106.4	4,855.2	29.6	27.8	145.83	-690.5	-1,226.9	152.9	116.6	36.32	4.210		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 9 - 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	4,900.5	5,206.3	4,947.8	30.3	28.6	146.06	-709.2	-1,259.3	157.3	120.2	37.06	4.243		
5,300.0	4,991.7	5,306.2	5,040.5	31.1	29.3	146.28	-727.9	-1,291.8	161.7	123.8	37.81	4.276		
5,400.0	5,082.8	5,406.1	5,133.1	31.9	30.0	146.48	-746.6	-1,324.3	166.0	127.5	38.55	4.307		
5,500.0	5,174.0	5,506.0	5,225.7	32.7	30.7	146.68	-765.2	-1,356.8	170.4	131.1	39.30	4.337		
5,600.0	5,265.2	5,605.9	5,318.3	33.4	31.4	146.87	-783.9	-1,389.2	174.8	134.8	40.04	4.366		
5,700.0	5,356.3	5,705.8	5,410.9	34.2	32.1	147.05	-802.6	-1,421.7	179.2	138.4	40.78	4.394		
5,800.0	5,447.5	5,805.7	5,503.5	35.0	32.8	147.22	-821.3	-1,454.2	183.6	142.0	41.53	4.420		
5,900.0	5,538.6	5,905.6	5,596.1	35.8	33.5	147.38	-840.0	-1,486.6	188.0	145.7	42.27	4.446		
6,000.0	5,629.8	6,005.5	5,688.7	36.5	34.2	147.53	-858.7	-1,519.1	192.4	149.3	43.02	4.471		
6,100.0	5,720.9	6,105.4	5,781.4	37.3	34.9	147.68	-877.3	-1,551.6	196.8	153.0	43.76	4.496		
6,200.0	5,812.1	6,205.3	5,874.0	38.1	35.6	147.82	-896.0	-1,584.1	201.1	156.6	44.51	4.519		
6,300.0	5,903.2	6,305.2	5,966.6	38.9	36.3	147.95	-914.7	-1,616.5	205.5	160.3	45.26	4.542		
6,400.0	5,994.4	6,405.1	6,059.2	39.7	37.0	148.08	-933.4	-1,649.0	209.9	163.9	46.00	4.564		
6,500.0	6,085.6	6,505.0	6,151.8	40.4	37.8	148.21	-952.1	-1,681.5	214.3	167.6	46.75	4.585		
6,600.0	6,176.7	6,604.9	6,244.4	41.2	38.5	148.32	-970.8	-1,714.0	218.7	171.2	47.49	4.606		
6,700.0	6,267.9	6,704.8	6,337.0	42.0	39.2	148.44	-989.4	-1,746.4	223.1	174.9	48.24	4.625		
6,800.0	6,359.0	6,804.7	6,429.6	42.8	39.9	148.55	-1,008.1	-1,778.9	227.5	178.5	48.99	4.645		
6,900.0	6,448.7	6,904.4	6,522.0	43.6	40.6	142.44	-1,026.8	-1,811.3	233.5	184.2	49.32	4.735		
7,000.0	6,531.8	7,002.0	6,612.5	44.8	41.3	139.60	-1,045.0	-1,843.0	246.2	198.6	47.62	5.171		
7,100.0	6,606.0	7,096.9	6,700.5	46.1	42.0	140.67	-1,062.8	-1,873.9	268.1	223.5	44.62	6.008		
7,200.0	6,669.5	7,223.3	6,812.2	47.6	43.1	144.59	-1,085.3	-1,927.9	295.5	254.8	40.66	7.268		
7,300.0	6,720.7	7,364.1	6,921.8	49.4	44.9	148.02	-1,107.2	-2,013.1	321.8	282.9	38.85	8.283		
7,400.0	6,758.4	7,520.6	7,018.7	51.2	47.4	150.70	-1,126.6	-2,134.0	343.9	304.6	39.31	8.749		
7,500.0	6,781.7	7,691.3	7,088.1	53.2	50.5	152.44	-1,140.2	-2,288.8	358.9	316.6	42.33	8.479		
7,600.0	6,790.0	7,871.0	7,114.9	55.2	54.2	153.08	-1,145.3	-2,465.8	364.5	316.3	48.21	7.561		
7,700.0	6,790.0	7,974.6	7,115.0	57.2	56.3	153.08	-1,145.0	-2,569.4	364.5	314.0	50.51	7.216		
7,800.0	6,790.0	8,074.6	7,115.0	59.3	58.4	153.08	-1,144.8	-2,669.4	364.5	311.9	52.60	6.929		
7,900.0	6,790.0	8,174.6	7,115.0	61.4	60.5	153.08	-1,144.5	-2,769.4	364.5	309.8	54.71	6.663		
8,000.0	6,790.0	8,274.6	7,115.0	63.5	62.7	153.08	-1,144.3	-2,869.4	364.5	307.7	56.82	6.415		
8,100.0	6,790.0	8,374.6	7,115.0	65.7	64.9	153.08	-1,144.0	-2,969.4	364.5	305.6	58.95	6.183		
8,200.0	6,790.0	8,474.6	7,115.0	67.9	67.1	153.08	-1,143.8	-3,069.4	364.5	303.4	61.08	5.967		
8,300.0	6,790.0	8,574.6	7,115.0	70.0	69.3	153.08	-1,143.5	-3,169.4	364.5	301.3	63.23	5.765		
8,400.0	6,790.0	8,674.6	7,115.0	72.3	71.5	153.08	-1,143.3	-3,269.4	364.5	299.1	65.38	5.575		
8,500.0	6,790.0	8,774.6	7,115.0	74.5	73.8	153.08	-1,143.0	-3,369.4	364.5	297.0	67.55	5.396		
8,600.0	6,790.0	8,874.6	7,115.0	76.7	76.0	153.08	-1,142.8	-3,469.4	364.5	294.8	69.71	5.228		
8,700.0	6,790.0	8,974.6	7,115.0	79.0	78.3	153.08	-1,142.5	-3,569.4	364.5	292.6	71.89	5.070		
8,800.0	6,790.0	9,074.6	7,115.0	81.3	80.6	153.08	-1,142.3	-3,669.4	364.5	290.4	74.07	4.921		
8,900.0	6,790.0	9,174.6	7,115.0	83.5	82.9	153.08	-1,142.0	-3,769.4	364.5	288.2	76.25	4.780		
9,000.0	6,790.0	9,274.6	7,115.0	85.8	85.2	153.08	-1,141.8	-3,869.4	364.5	286.1	78.44	4.647		
9,100.0	6,790.0	9,374.6	7,115.0	88.1	87.5	153.08	-1,141.5	-3,969.4	364.5	283.9	80.64	4.520		
9,200.0	6,790.0	9,474.6	7,115.0	90.4	89.8	153.08	-1,141.3	-4,069.4	364.5	281.7	82.84	4.400		
9,300.0	6,790.0	9,574.6	7,115.0	92.8	92.2	153.08	-1,141.0	-4,169.4	364.5	279.5	85.04	4.286		
9,400.0	6,790.0	9,674.6	7,115.0	95.1	94.5	153.08	-1,140.8	-4,269.4	364.5	277.3	87.24	4.178		
9,500.0	6,790.0	9,774.6	7,115.0	97.4	96.9	153.08	-1,140.5	-4,369.4	364.5	275.0	89.45	4.075		
9,600.0	6,790.0	9,874.6	7,115.0	99.8	99.2	153.08	-1,140.3	-4,469.4	364.5	272.8	91.66	3.977		
9,700.0	6,790.0	9,974.6	7,115.0	102.1	101.6	153.08	-1,140.0	-4,569.4	364.5	270.6	93.88	3.883		
9,800.0	6,790.0	10,074.6	7,115.0	104.5	103.9	153.08	-1,139.8	-4,669.4	364.5	268.4	96.09	3.793		
9,900.0	6,790.0	10,174.6	7,115.0	106.8	106.3	153.08	-1,139.5	-4,769.4	364.5	266.2	98.31	3.708		
10,000.0	6,790.0	10,274.6	7,115.0	109.2	108.7	153.08	-1,139.3	-4,869.4	364.5	264.0	100.53	3.626		
10,100.0	6,790.0	10,374.6	7,115.0	111.6	111.1	153.08	-1,139.0	-4,969.4	364.5	261.7	102.75	3.547		
10,200.0	6,790.0	10,474.6	7,115.0	113.9	113.5	153.08	-1,138.8	-5,069.4	364.5	259.5	104.98	3.472		
10,300.0	6,790.0	10,574.6	7,115.0	116.3	115.8	153.08	-1,138.5	-5,169.4	364.5	257.3	107.20	3.400		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 9 - 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	6,790.0	10,674.6	7,115.0	118.7	118.2	153.08	-1,138.3	-5,269.4	364.5	255.1	109.43	3.331		
10,500.0	6,790.0	10,774.6	7,115.0	121.1	120.6	153.08	-1,138.0	-5,369.4	364.5	252.8	111.66	3.264		
10,600.0	6,790.0	10,874.6	7,115.0	123.5	123.0	153.08	-1,137.8	-5,469.4	364.5	250.6	113.89	3.200		
10,700.0	6,790.0	10,974.6	7,115.0	125.9	125.4	153.08	-1,137.5	-5,569.4	364.5	248.4	116.13	3.139		
10,800.0	6,790.0	11,074.6	7,115.0	128.3	127.8	153.08	-1,137.3	-5,669.4	364.5	246.1	118.36	3.080		
10,900.0	6,790.0	11,174.6	7,115.0	130.7	130.2	153.08	-1,137.0	-5,769.4	364.5	243.9	120.60	3.022		
11,000.0	6,790.0	11,274.6	7,115.0	133.1	132.7	153.08	-1,136.8	-5,869.4	364.5	241.7	122.83	2.967		
11,100.0	6,790.0	11,374.6	7,115.0	135.5	135.1	153.08	-1,136.5	-5,969.4	364.5	239.4	125.07	2.914		
11,200.0	6,790.0	11,474.6	7,115.0	137.9	137.5	153.08	-1,136.3	-6,069.4	364.5	237.2	127.31	2.863		
11,300.0	6,790.0	11,574.6	7,115.0	140.3	139.9	153.08	-1,136.0	-6,169.4	364.5	235.0	129.55	2.814		
11,400.0	6,790.0	11,674.6	7,115.0	142.7	142.3	153.08	-1,135.8	-6,269.4	364.5	232.7	131.79	2.766		
11,500.0	6,790.0	11,774.6	7,115.0	145.1	144.7	153.08	-1,135.5	-6,369.4	364.5	230.5	134.03	2.720		
11,600.0	6,790.0	11,874.6	7,115.0	147.6	147.2	153.08	-1,135.3	-6,469.4	364.5	228.2	136.27	2.675		
11,700.0	6,790.0	11,974.6	7,115.0	150.0	149.6	153.08	-1,135.0	-6,569.4	364.5	226.0	138.52	2.631		
11,800.0	6,790.0	12,074.6	7,115.0	152.4	152.0	153.08	-1,134.8	-6,669.4	364.5	223.7	140.76	2.590		
11,900.0	6,790.0	12,174.6	7,115.0	154.8	154.4	153.08	-1,134.5	-6,769.4	364.5	221.5	143.00	2.549		
12,000.0	6,790.0	12,274.6	7,115.0	157.2	156.9	153.08	-1,134.3	-6,869.4	364.5	219.2	145.25	2.509		
12,100.0	6,790.0	12,374.6	7,115.0	159.7	159.3	153.08	-1,134.0	-6,969.4	364.5	217.0	147.50	2.471		
12,200.0	6,790.0	12,474.6	7,115.0	162.1	161.7	153.08	-1,133.8	-7,069.4	364.5	214.8	149.74	2.434		
12,300.0	6,790.0	12,574.6	7,115.0	164.5	164.2	153.08	-1,133.5	-7,169.4	364.5	212.5	151.99	2.398		
12,400.0	6,790.0	12,674.6	7,115.0	167.0	166.6	153.08	-1,133.3	-7,269.4	364.5	210.3	154.24	2.363		
12,500.0	6,790.0	12,774.6	7,115.0	169.4	169.0	153.08	-1,133.0	-7,369.4	364.5	208.0	156.49	2.329		
12,600.0	6,790.0	12,874.6	7,115.0	171.8	171.5	153.08	-1,132.8	-7,469.4	364.5	205.8	158.74	2.296		
12,700.0	6,790.0	12,974.6	7,115.0	174.3	173.9	153.08	-1,132.5	-7,569.4	364.5	203.5	160.98	2.264		
12,800.0	6,790.0	13,074.6	7,115.0	176.7	176.4	153.08	-1,132.3	-7,669.4	364.5	201.3	163.23	2.233		
12,900.0	6,790.0	13,174.6	7,115.0	179.1	178.8	153.08	-1,132.0	-7,769.4	364.5	199.0	165.49	2.203		
13,000.0	6,790.0	13,274.6	7,115.0	181.6	181.2	153.08	-1,131.8	-7,869.4	364.5	196.8	167.74	2.173		
13,100.0	6,790.0	13,374.6	7,115.0	184.0	183.7	153.08	-1,131.5	-7,969.4	364.5	194.5	169.99	2.144		
13,200.0	6,790.0	13,474.6	7,115.0	186.4	186.1	153.08	-1,131.3	-8,069.4	364.5	192.3	172.24	2.116		
13,300.0	6,790.0	13,574.6	7,115.0	188.9	188.6	153.08	-1,131.0	-8,169.4	364.5	190.0	174.49	2.089		
13,400.0	6,790.0	13,674.6	7,115.0	191.3	191.0	153.08	-1,130.8	-8,269.4	364.5	187.8	176.74	2.062		
13,500.0	6,790.0	13,774.6	7,115.0	193.8	193.5	153.08	-1,130.5	-8,369.4	364.5	185.5	179.00	2.036		
13,600.0	6,790.0	13,874.6	7,115.0	196.2	195.9	153.08	-1,130.3	-8,469.4	364.5	183.2	181.25	2.011		
13,700.0	6,790.0	13,974.6	7,115.0	198.7	198.4	153.08	-1,130.0	-8,569.4	364.5	181.0	183.50	1.986		
13,800.0	6,790.0	14,074.6	7,115.0	201.1	200.8	153.08	-1,129.8	-8,669.4	364.5	178.7	185.76	1.962		
13,900.0	6,790.0	14,174.6	7,115.0	203.6	203.2	153.08	-1,129.5	-8,769.4	364.5	176.5	188.01	1.939		
14,000.0	6,790.0	14,274.6	7,115.0	206.0	205.7	153.08	-1,129.3	-8,869.4	364.5	174.2	190.27	1.916		
14,100.0	6,790.0	14,374.6	7,115.0	208.4	208.1	153.08	-1,129.0	-8,969.4	364.5	172.0	192.52	1.893		
14,200.0	6,790.0	14,474.6	7,115.0	210.9	210.6	153.08	-1,128.8	-9,069.4	364.5	169.7	194.78	1.871		
14,300.0	6,790.0	14,574.6	7,115.0	213.3	213.0	153.08	-1,128.5	-9,169.4	364.5	167.5	197.03	1.850		
14,400.0	6,790.0	14,674.6	7,115.0	215.8	215.5	153.08	-1,128.3	-9,269.4	364.5	165.2	199.29	1.829		
14,500.0	6,790.0	14,774.6	7,115.0	218.2	218.0	153.08	-1,128.0	-9,369.4	364.5	163.0	201.55	1.809		
14,600.0	6,790.0	14,874.6	7,115.0	220.7	220.4	153.08	-1,127.8	-9,469.4	364.5	160.7	203.80	1.789		
14,700.0	6,790.0	14,974.6	7,115.0	223.1	222.9	153.08	-1,127.5	-9,569.4	364.5	158.4	206.06	1.769		
14,800.0	6,790.0	15,074.6	7,115.0	225.6	225.3	153.08	-1,127.3	-9,669.4	364.5	156.2	208.32	1.750		
14,900.0	6,790.0	15,174.6	7,115.0	228.0	227.8	153.08	-1,127.0	-9,769.4	364.5	153.9	210.57	1.731		
15,000.0	6,790.0	15,274.6	7,115.0	230.5	230.2	153.08	-1,126.8	-9,869.4	364.5	151.7	212.83	1.713		
15,100.0	6,790.0	15,374.6	7,115.0	232.9	232.7	153.08	-1,126.5	-9,969.4	364.5	149.4	215.09	1.695		
15,200.0	6,790.0	15,474.6	7,115.0	235.4	235.1	153.08	-1,126.3	-10,069.4	364.5	147.2	217.34	1.677		
15,300.0	6,790.0	15,574.6	7,115.0	237.9	237.6	153.08	-1,126.0	-10,169.4	364.5	144.9	219.60	1.660		
15,400.0	6,790.0	15,674.6	7,115.0	240.3	240.0	153.08	-1,125.8	-10,269.4	364.5	142.6	221.86	1.643		
15,500.0	6,790.0	15,774.6	7,115.0	242.8	242.5	153.08	-1,125.5	-10,369.4	364.5	140.4	224.12	1.626		

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

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S16-T6N-R67W - Breniman 9 - 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	
15,600.0	6,790.0	15,874.6	7,115.0	245.2	245.0	153.08	-1,125.3	-10,469.4	364.5	138.1	226.38	1.610	
15,700.0	6,790.0	15,974.6	7,115.0	247.7	247.4	153.08	-1,125.0	-10,569.4	364.5	135.9	228.64	1.594	
15,800.0	6,790.0	16,074.6	7,115.0	250.1	249.9	153.08	-1,124.8	-10,669.4	364.5	133.6	230.89	1.579	
15,900.0	6,790.0	16,174.6	7,115.0	252.6	252.3	153.08	-1,124.5	-10,769.4	364.5	131.3	233.15	1.563	
16,000.0	6,790.0	16,274.6	7,115.0	255.0	254.8	153.08	-1,124.3	-10,869.4	364.5	129.1	235.41	1.548	
16,100.0	6,790.0	16,374.6	7,115.0	257.5	257.2	153.08	-1,124.0	-10,969.4	364.5	128.8	237.67	1.534	
16,200.0	6,790.0	16,474.6	7,115.0	260.0	259.7	153.08	-1,123.8	-11,069.4	364.5	124.6	239.93	1.519	
16,300.0	6,790.0	16,574.6	7,115.0	262.4	262.2	153.08	-1,123.5	-11,169.4	364.5	122.3	242.19	1.505	
16,400.0	6,790.0	16,674.6	7,115.0	264.9	264.6	153.08	-1,123.3	-11,269.4	364.5	120.0	244.45	1.491	Level 3
16,500.0	6,790.0	16,774.6	7,115.0	267.3	267.1	153.08	-1,123.0	-11,369.4	364.5	117.8	246.71	1.477	Level 3
16,600.0	6,790.0	16,874.6	7,115.0	269.8	269.5	153.08	-1,122.8	-11,469.4	364.5	115.5	248.97	1.464	Level 3
16,700.0	6,790.0	16,974.6	7,115.0	272.2	272.0	153.08	-1,122.5	-11,569.4	364.5	113.3	251.23	1.451	Level 3
16,800.0	6,790.0	17,074.6	7,115.0	274.7	274.5	153.08	-1,122.3	-11,669.4	364.5	111.0	253.49	1.438	Level 3
16,829.6	6,790.0	17,104.2	7,115.0	275.4	275.2	153.08	-1,122.2	-11,699.0	364.5	110.3	254.16	1.434	Level 3, SF

Anticollision Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Breniman 10
Project:	WELD COUNTY, CO	TVD Reference:	24' KB @ 4821.0usft (H&P 319)
Reference Site:	S16-T6N-R67W	MD Reference:	24' KB @ 4821.0usft (H&P 319)
Site Error:	0.0usft	North Reference:	True
Reference Well:	Breniman 10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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 10

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.39°

