

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

NE NW SEC. 22 T12N R64W 6th P.M.

COX 1

ORIGINAL WELLBORE

01 July, 2015

Plan: PROPOSAL #4





Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE NW SEC. 22 T12N R64W 6th P.M.
Well: COX 1
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #4

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
100.0	100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
892.6	903.1	16.06	308.35	69.4	-87.7	-54.4	111.8	EOB TO 16.06° INC	
1600.0	1639.2	16.06	308.35	195.8	-247.4	-153.5	315.5	9 5/8" SURFACE CSG	
6544.4	6784.4	16.06	308.35	1079.0	-1363.7	-845.8	1739.0	END OF TANGENT	
7336.9	7587.4	0.00	308.35	1148.4	-1451.4	-900.2	1850.8	EOD TO VERTICAL	
7366.9	7617.4	0.00	0.00	1148.4	-1451.4	-900.2	1850.8	KOP (10°/100ft BUR)	
7940.0	8517.6	90.00	180.14	575.3	-1452.8	-334.4	2423.8	LANDING PNT (P4) - COX 1	
7940.0	18163.4	90.00	180.15	-9070.4	-1476.8	9189.8	12069.6	BHL (P4) - COX 1	

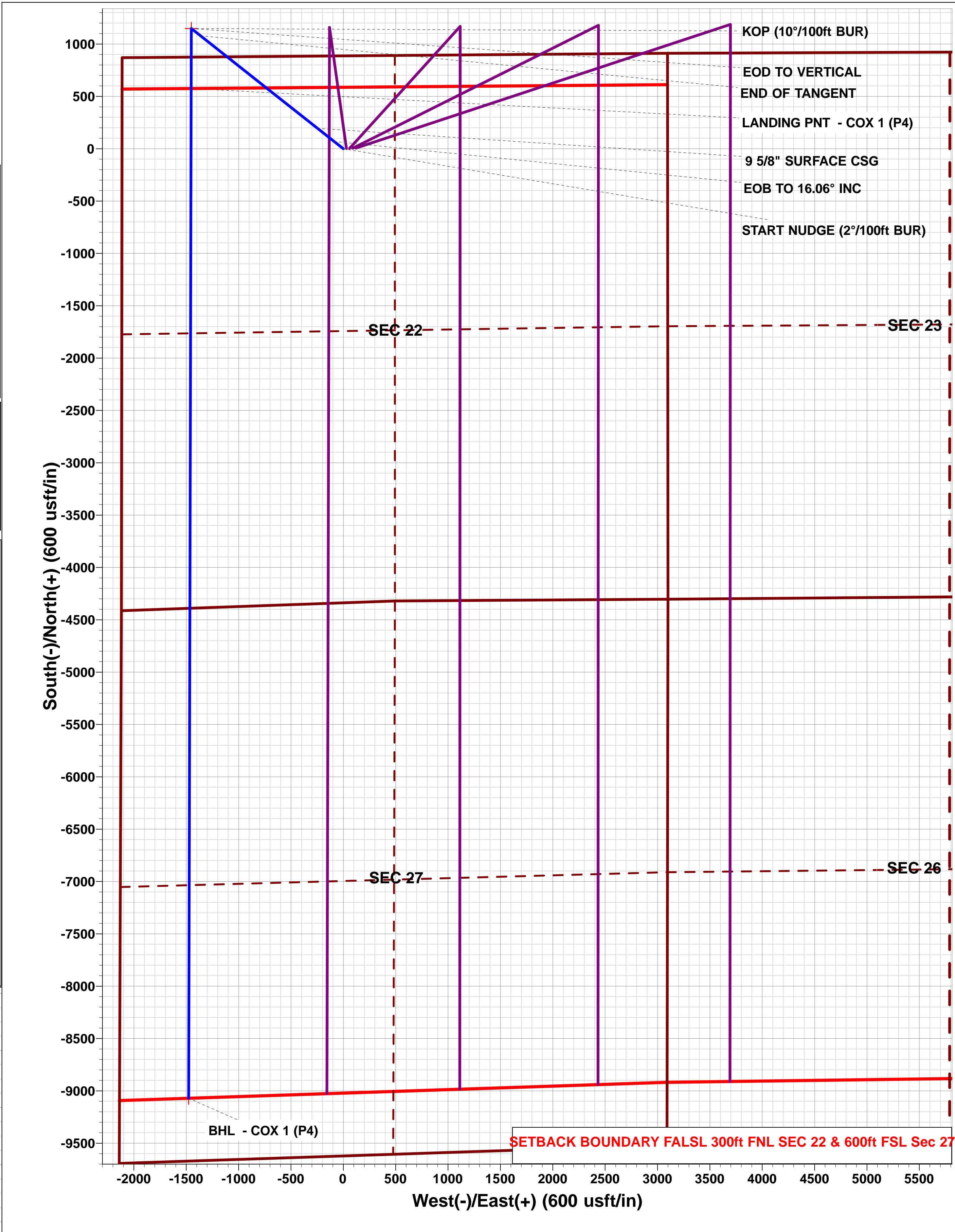
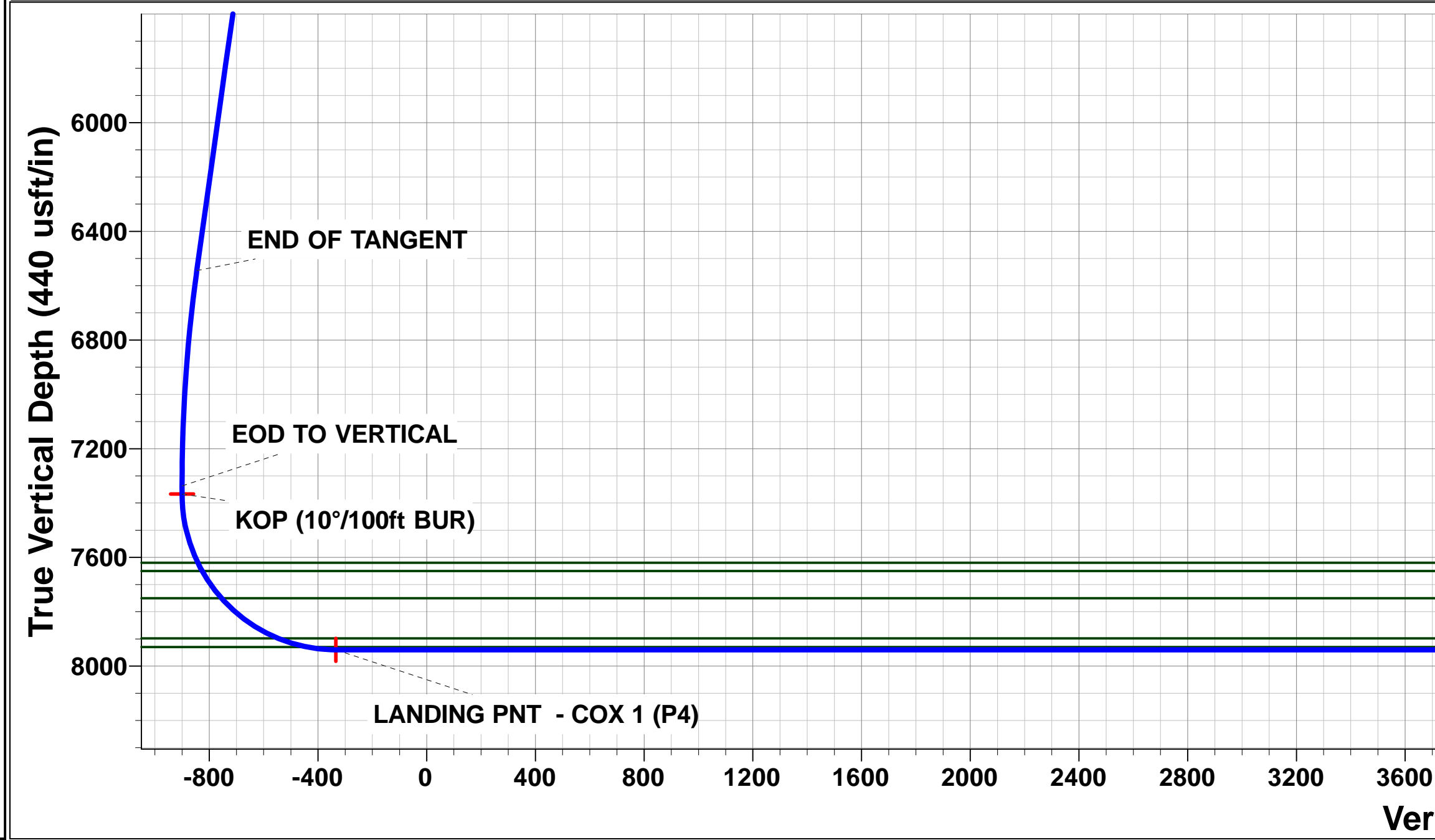
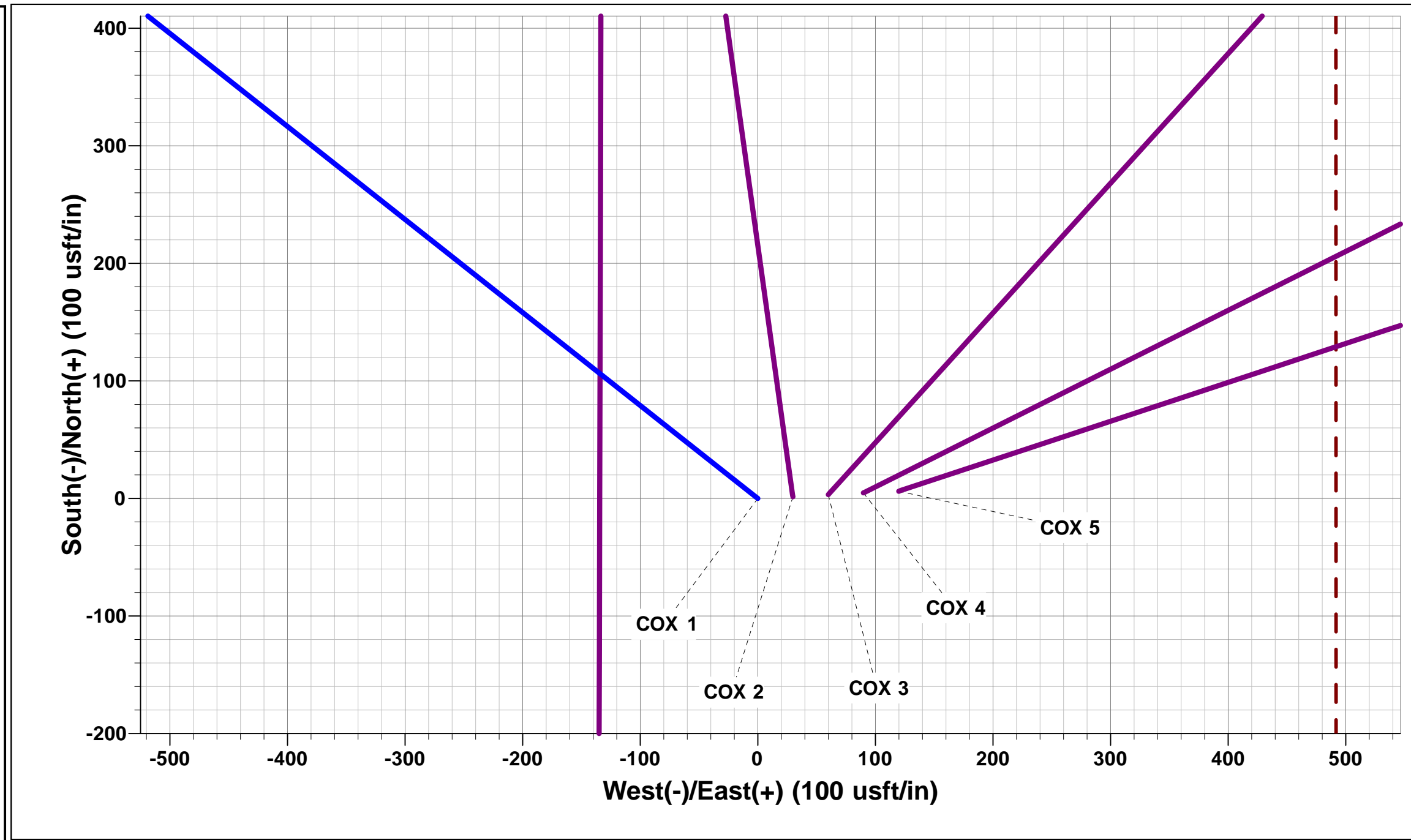
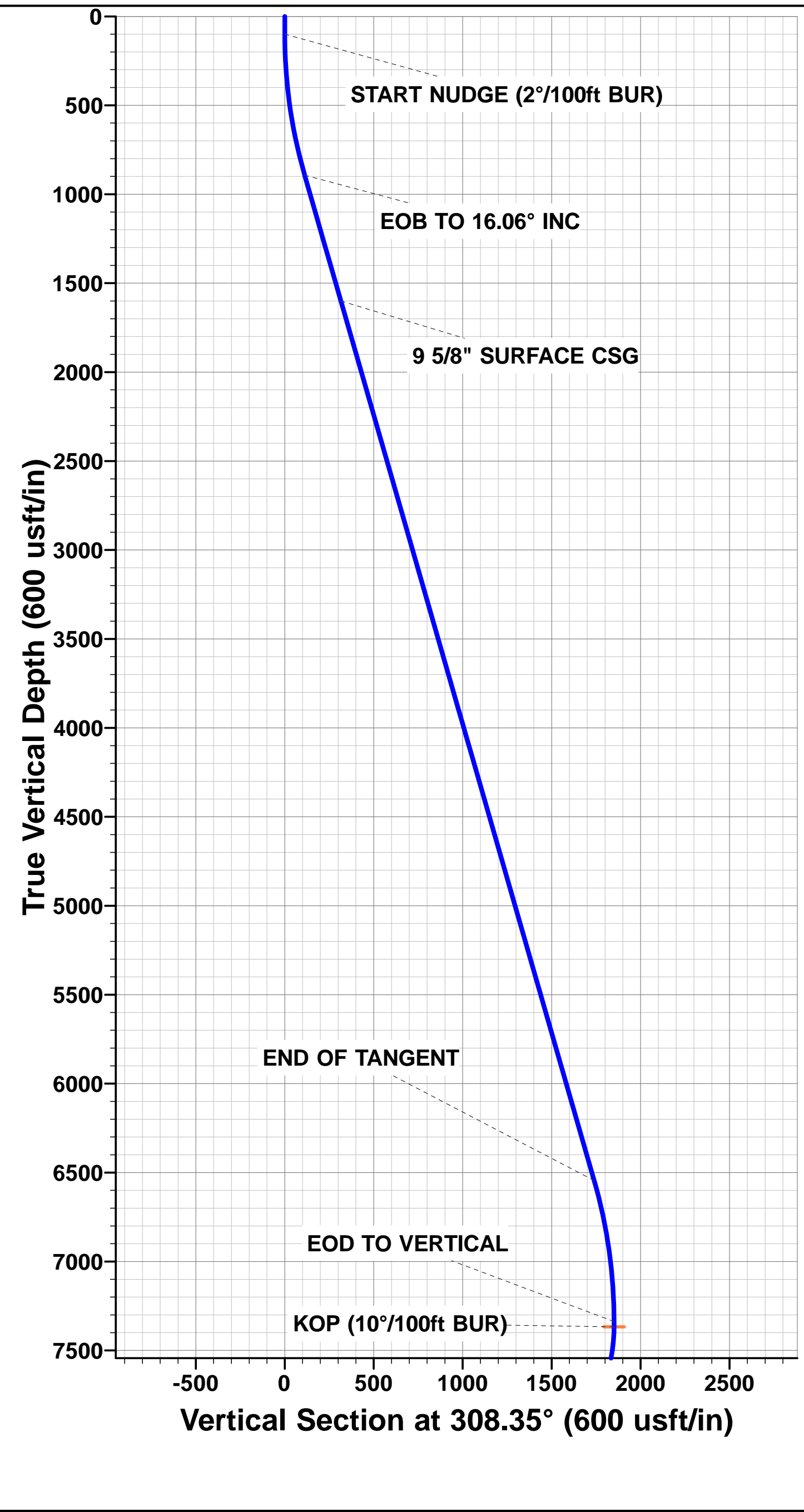
PROPOSED LOCAL COORDINATES:

SHL: 887ft FNL & 2114ft FWL Sec 22

LANDING PNT: 300ft FNL & 660ft FWL Sec 22

BHL : 600ft FSL & 660ft FWL Sec 27

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - COX 1 (P4)	7366.9	1148.4	-1451.4	41.001771	-104.540383
LANDING PNT - COX 1 (P4)	7940.0	575.4	-1452.8	41.000198	-104.540388
BHL - COX 1 (P4)	7940.0	-9070.4	-1476.8	40.973724	-104.540473



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well COX 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	NE NW SEC. 22 T12N R64W 6th P.M.		
Site Position:		Northing:	1,608,102.79 usft
From:	Lat/Long	Easting:	3,266,349.34 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.998619
		Longitude:	-104.535125
		Grid Convergence:	0.62 °

Well	COX 1		
Well Position	+N/-S	0.0 usft	Northing: 1,608,102.79 usfi
	+E/-W	0.0 usft	Easting: 3,266,349.34 usfi
Position Uncertainty	0.0 usft	Wellhead Elevation:	usfi
		Latitude:	40.998619
		Longitude:	-104.535125
		Ground Level:	5,557.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	14/04/2015	8.37	67.42	52,968

Design	PROPOSAL #4			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	189.25

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-5,573.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	-5,473.0	0.0	0.0	0.00	0.00	0.00	0.00	
903.1	16.06	308.35	892.6	-4,680.4	69.4	-87.7	2.00	2.00	0.00	308.35	
6,784.4	16.06	308.35	6,544.3	971.3	1,079.0	-1,363.7	0.00	0.00	0.00	0.00	
7,587.4	0.00	0.00	7,336.9	1,763.9	1,148.4	-1,451.4	2.00	-2.00	0.00	180.00	
7,617.4	0.00	0.00	7,366.9	1,793.9	1,148.4	-1,451.4	0.00	0.00	0.00	0.00	KOP - COX 1 (P4)
8,517.6	90.00	180.14	7,940.0	2,367.0	575.4	-1,452.8	10.00	10.00	-19.98	180.14	LANDING PNT - C
18,163.4	90.00	180.15	7,940.0	2,367.0	-9,070.4	-1,476.8	0.00	0.00	0.00	54.08	BHL - COX 1 (P4)

Planning Report



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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	5,573.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
100.0	0.00	0.00	100.0	5,473.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	2.00	308.35	200.0	5,373.02	1.1	-1.4	-0.8	2.00	2.00	0.00
300.0	4.00	308.35	299.8	5,273.16	4.3	-5.5	-3.4	2.00	2.00	0.00
400.0	6.00	308.35	399.5	5,173.55	9.7	-12.3	-7.6	2.00	2.00	0.00
500.0	8.00	308.35	498.7	5,074.30	17.3	-21.9	-13.6	2.00	2.00	0.00
600.0	10.00	308.35	597.5	4,975.53	27.0	-34.1	-21.2	2.00	2.00	0.00
700.0	12.00	308.35	695.6	4,877.38	38.8	-49.1	-30.5	2.00	2.00	0.00
800.0	14.00	308.35	793.1	4,779.94	52.8	-66.7	-41.4	2.00	2.00	0.00
900.0	16.00	308.35	889.6	4,683.36	68.9	-87.0	-54.0	2.00	2.00	0.00
EOB TO 16.06° INC										
903.1	16.06	308.35	892.6	4,680.38	69.4	-87.7	-54.4	1.97	1.97	0.00
1,000.0	16.06	308.35	985.7	4,587.26	86.0	-108.7	-67.4	0.00	0.00	0.00
1,100.0	16.06	308.35	1,081.8	4,491.16	103.2	-130.4	-80.9	0.00	0.00	0.00
1,200.0	16.06	308.35	1,177.9	4,395.07	120.4	-152.1	-94.4	0.00	0.00	0.00
1,300.0	16.06	308.35	1,274.0	4,298.97	137.5	-173.8	-107.8	0.00	0.00	0.00
1,400.0	16.06	308.35	1,370.1	4,202.87	154.7	-195.5	-121.3	0.00	0.00	0.00
1,500.0	16.06	308.35	1,466.2	4,106.78	171.9	-217.2	-134.7	0.00	0.00	0.00
1,600.0	16.06	308.35	1,562.3	4,010.68	189.0	-238.9	-148.2	0.00	0.00	0.00
9 5/8" SURFACE CSG										
1,639.2	16.06	308.35	1,600.0	3,973.00	195.8	-247.4	-153.5	0.00	0.00	0.00
1,700.0	16.06	308.35	1,658.4	3,914.58	206.2	-260.6	-161.6	0.00	0.00	0.00
1,800.0	16.06	308.35	1,754.5	3,818.49	223.4	-282.3	-175.1	0.00	0.00	0.00
1,900.0	16.06	308.35	1,850.6	3,722.39	240.5	-304.0	-188.6	0.00	0.00	0.00
2,000.0	16.06	308.35	1,946.7	3,626.29	257.7	-325.7	-202.0	0.00	0.00	0.00
2,100.0	16.06	308.35	2,042.8	3,530.20	274.9	-347.4	-215.5	0.00	0.00	0.00
2,200.0	16.06	308.35	2,138.9	3,434.10	292.0	-369.1	-228.9	0.00	0.00	0.00
2,300.0	16.06	308.35	2,235.0	3,338.00	309.2	-390.8	-242.4	0.00	0.00	0.00
2,400.0	16.06	308.35	2,331.1	3,241.91	326.4	-412.5	-255.8	0.00	0.00	0.00
2,500.0	16.06	308.35	2,427.2	3,145.81	343.5	-434.2	-269.3	0.00	0.00	0.00
2,600.0	16.06	308.35	2,523.3	3,049.71	360.7	-455.9	-282.8	0.00	0.00	0.00
2,700.0	16.06	308.35	2,619.4	2,953.62	377.9	-477.6	-296.2	0.00	0.00	0.00
2,800.0	16.06	308.35	2,715.5	2,857.52	395.0	-499.3	-309.7	0.00	0.00	0.00
2,900.0	16.06	308.35	2,811.6	2,761.42	412.2	-521.0	-323.1	0.00	0.00	0.00
3,000.0	16.06	308.35	2,907.7	2,665.33	429.4	-542.6	-336.6	0.00	0.00	0.00
3,100.0	16.06	308.35	3,003.8	2,569.23	446.5	-564.3	-350.0	0.00	0.00	0.00
3,200.0	16.06	308.35	3,099.9	2,473.13	463.7	-586.0	-363.5	0.00	0.00	0.00
PARKMAN										
3,275.1	16.06	308.35	3,172.0	2,401.00	476.6	-602.3	-373.6	0.00	0.00	0.00
3,300.0	16.06	308.35	3,196.0	2,377.04	480.9	-607.7	-376.9	0.00	0.00	0.00
3,400.0	16.06	308.35	3,292.1	2,280.94	498.0	-629.4	-390.4	0.00	0.00	0.00
3,500.0	16.06	308.35	3,388.2	2,184.84	515.2	-651.1	-403.9	0.00	0.00	0.00
3,600.0	16.06	308.35	3,484.3	2,088.75	532.4	-672.8	-417.3	0.00	0.00	0.00
3,700.0	16.06	308.35	3,580.4	1,992.65	549.5	-694.5	-430.8	0.00	0.00	0.00
3,800.0	16.06	308.35	3,676.4	1,896.55	566.7	-716.2	-444.2	0.00	0.00	0.00
3,900.0	16.06	308.35	3,772.5	1,800.46	583.9	-737.9	-457.7	0.00	0.00	0.00
4,000.0	16.06	308.35	3,868.6	1,704.36	601.0	-759.6	-471.1	0.00	0.00	0.00
4,100.0	16.06	308.35	3,964.7	1,608.26	618.2	-781.3	-484.6	0.00	0.00	0.00
4,200.0	16.06	308.35	4,060.8	1,512.17	635.4	-803.0	-498.1	0.00	0.00	0.00
4,300.0	16.06	308.35	4,156.9	1,416.07	652.5	-824.7	-511.5	0.00	0.00	0.00
4,400.0	16.06	308.35	4,253.0	1,319.97	669.7	-846.4	-525.0	0.00	0.00	0.00
4,500.0	16.06	308.35	4,349.1	1,223.88	686.9	-868.1	-538.4	0.00	0.00	0.00
4,600.0	16.06	308.35	4,445.2	1,127.78	704.0	-889.8	-551.9	0.00	0.00	0.00

Planning Report



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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	16.06	308.35	4,541.3	1,031.68	721.2	-911.5	-565.3	0.00	0.00	0.00
4,800.0	16.06	308.35	4,637.4	935.59	738.4	-933.2	-578.8	0.00	0.00	0.00
4,900.0	16.06	308.35	4,733.5	839.49	755.5	-954.9	-592.3	0.00	0.00	0.00
5,000.0	16.06	308.35	4,829.6	743.39	772.7	-976.6	-605.7	0.00	0.00	0.00
5,100.0	16.06	308.35	4,925.7	647.29	789.9	-998.3	-619.2	0.00	0.00	0.00
SUSSEX										
5,195.0	16.06	308.35	5,017.0	556.00	806.2	-1,018.9	-632.0	0.00	0.00	0.00
5,200.0	16.06	308.35	5,021.8	551.20	807.0	-1,020.0	-632.6	0.00	0.00	0.00
5,300.0	16.06	308.35	5,117.9	455.10	824.2	-1,041.7	-646.1	0.00	0.00	0.00
5,400.0	16.06	308.35	5,214.0	359.00	841.4	-1,063.4	-659.5	0.00	0.00	0.00
5,500.0	16.06	308.35	5,310.1	262.91	858.5	-1,085.1	-673.0	0.00	0.00	0.00
5,600.0	16.06	308.35	5,406.2	166.81	875.7	-1,106.7	-686.5	0.00	0.00	0.00
SHANNON										
5,614.4	16.06	308.35	5,420.0	153.00	878.2	-1,109.9	-688.4	0.00	0.00	0.00
5,700.0	16.06	308.35	5,502.3	70.71	892.9	-1,128.4	-699.9	0.00	0.00	0.00
5,800.0	16.06	308.35	5,598.4	-25.38	910.0	-1,150.1	-713.4	0.00	0.00	0.00
5,900.0	16.06	308.35	5,694.5	-121.48	927.2	-1,171.8	-726.8	0.00	0.00	0.00
6,000.0	16.06	308.35	5,790.6	-217.58	944.4	-1,193.5	-740.3	0.00	0.00	0.00
6,100.0	16.06	308.35	5,886.7	-313.67	961.5	-1,215.2	-753.7	0.00	0.00	0.00
6,200.0	16.06	308.35	5,982.8	-409.77	978.7	-1,236.9	-767.2	0.00	0.00	0.00
6,300.0	16.06	308.35	6,078.9	-505.87	995.9	-1,258.6	-780.7	0.00	0.00	0.00
6,400.0	16.06	308.35	6,175.0	-601.96	1,013.0	-1,280.3	-794.1	0.00	0.00	0.00
6,500.0	16.06	308.35	6,271.1	-698.06	1,030.2	-1,302.0	-807.6	0.00	0.00	0.00
6,600.0	16.06	308.35	6,367.2	-794.16	1,047.4	-1,323.7	-821.0	0.00	0.00	0.00
6,700.0	16.06	308.35	6,463.3	-890.25	1,064.5	-1,345.4	-834.5	0.00	0.00	0.00
END OF TANGENT										
6,784.4	16.06	308.35	6,544.4	-971.36	1,079.0	-1,363.7	-845.8	0.00	0.00	0.00
6,800.0	15.75	308.35	6,559.4	-986.36	1,081.7	-1,367.1	-847.9	2.01	-2.01	0.00
6,900.0	13.75	308.35	6,656.1	-1,083.06	1,097.5	-1,387.0	-860.3	2.00	-2.00	0.00
7,000.0	11.75	308.35	6,753.6	-1,180.59	1,111.2	-1,404.3	-871.0	2.00	-2.00	0.00
7,100.0	9.75	308.35	6,851.8	-1,278.83	1,122.7	-1,419.0	-880.1	2.00	-2.00	0.00
7,200.0	7.75	308.35	6,950.7	-1,377.66	1,132.2	-1,430.9	-887.5	2.00	-2.00	0.00
7,300.0	5.75	308.35	7,050.0	-1,476.97	1,139.5	-1,440.1	-893.2	2.00	-2.00	0.00
7,400.0	3.75	308.35	7,149.6	-1,576.62	1,144.6	-1,446.6	-897.3	2.00	-2.00	0.00
7,500.0	1.75	308.35	7,249.5	-1,676.50	1,147.6	-1,450.4	-899.6	2.00	-2.00	0.00
EOD TO VERTICAL										
7,587.4	0.00	308.35	7,336.9	-1,763.88	1,148.4	-1,451.4	-900.2	2.00	-2.00	0.00
7,600.0	0.00	0.00	7,349.5	-1,776.48	1,148.4	-1,451.4	-900.2	0.00	0.00	0.00
KOP (10°/100ft BUR)										
7,617.4	0.00	0.00	7,366.9	-1,793.88	1,148.4	-1,451.4	-900.2	0.00	0.00	0.00
7,700.0	8.26	180.14	7,449.2	-1,876.20	1,142.5	-1,451.4	-894.4	10.00	10.00	0.00
7,800.0	18.25	180.14	7,546.4	-1,973.41	1,119.6	-1,451.5	-871.8	10.00	10.00	0.00
SHARON SPRINGS										
7,879.6	26.21	180.14	7,620.0	-2,047.00	1,089.5	-1,451.5	-842.1	10.00	10.00	0.00
7,900.0	28.25	180.14	7,638.2	-2,065.17	1,080.1	-1,451.6	-832.8	10.00	10.00	0.00
NIOBRARA										
7,913.5	29.60	180.14	7,650.0	-2,077.00	1,073.6	-1,451.6	-826.4	10.00	10.00	0.00
8,000.0	38.25	180.14	7,721.7	-2,148.69	1,025.4	-1,451.7	-778.8	10.00	10.00	0.00
NIO B										
8,037.0	41.95	180.14	7,750.0	-2,177.00	1,001.5	-1,451.7	-755.2	10.00	10.00	0.00
8,100.0	48.25	180.14	7,794.4	-2,221.44	956.9	-1,451.9	-711.2	10.00	10.00	0.00
8,200.0	58.24	180.14	7,854.2	-2,281.20	876.9	-1,452.0	-632.2	10.00	10.00	0.00
FORT HAYS										

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well COX 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,296.9	67.93	180.14	7,898.0	-2,325.00	790.7	-1,452.2	-547.0	10.00	10.00	0.00
8,300.0	68.24	180.14	7,899.2	-2,326.17	787.7	-1,452.3	-544.1	10.00	10.00	0.00
8,400.0	78.24	180.14	7,928.0	-2,354.97	692.1	-1,452.5	-449.7	10.00	10.00	0.00
CODELL										
8,410.4	79.28	180.14	7,930.0	-2,357.00	681.9	-1,452.5	-439.6	10.00	10.00	0.00
8,500.0	88.24	180.14	7,939.7	-2,366.73	592.9	-1,452.7	-351.8	10.00	10.00	0.00
LANDING PNT (P4) - COX 1										
8,517.6	90.00	180.14	7,940.0	-2,367.00	575.3	-1,452.8	-334.4	9.99	9.99	0.00
8,600.0	90.00	180.14	7,940.0	-2,367.01	492.9	-1,453.0	-253.0	0.00	0.00	0.00
8,700.0	90.00	180.14	7,940.0	-2,367.02	392.9	-1,453.2	-154.3	0.00	0.00	0.00
8,800.0	90.00	180.14	7,940.0	-2,367.02	292.9	-1,453.4	-55.6	0.00	0.00	0.00
8,900.0	90.00	180.14	7,940.0	-2,367.03	192.9	-1,453.7	43.2	0.00	0.00	0.00
9,000.0	90.00	180.14	7,940.0	-2,367.04	92.9	-1,453.9	141.9	0.00	0.00	0.00
9,100.0	90.00	180.14	7,940.0	-2,367.05	-7.1	-1,454.1	240.6	0.00	0.00	0.00
9,200.0	90.00	180.14	7,940.1	-2,367.05	-107.1	-1,454.4	339.4	0.00	0.00	0.00
9,300.0	90.00	180.14	7,940.1	-2,367.06	-207.1	-1,454.6	438.1	0.00	0.00	0.00
9,400.0	90.00	180.14	7,940.1	-2,367.07	-307.1	-1,454.9	536.9	0.00	0.00	0.00
9,500.0	90.00	180.14	7,940.1	-2,367.08	-407.1	-1,455.1	635.6	0.00	0.00	0.00
9,600.0	90.00	180.14	7,940.1	-2,367.08	-507.1	-1,455.3	734.3	0.00	0.00	0.00
9,700.0	90.00	180.14	7,940.1	-2,367.09	-607.1	-1,455.6	833.1	0.00	0.00	0.00
9,800.0	90.00	180.14	7,940.1	-2,367.10	-707.1	-1,455.8	931.8	0.00	0.00	0.00
9,900.0	90.00	180.14	7,940.1	-2,367.10	-807.1	-1,456.1	1,030.6	0.00	0.00	0.00
10,000.0	90.00	180.14	7,940.1	-2,367.11	-907.1	-1,456.3	1,129.3	0.00	0.00	0.00
10,100.0	90.00	180.14	7,940.1	-2,367.11	-1,007.1	-1,456.5	1,228.0	0.00	0.00	0.00
10,200.0	90.00	180.14	7,940.1	-2,367.12	-1,107.1	-1,456.8	1,326.8	0.00	0.00	0.00
10,300.0	90.00	180.14	7,940.1	-2,367.12	-1,207.1	-1,457.0	1,425.5	0.00	0.00	0.00
10,400.0	90.00	180.14	7,940.1	-2,367.13	-1,307.1	-1,457.3	1,524.2	0.00	0.00	0.00
10,500.0	90.00	180.14	7,940.1	-2,367.14	-1,407.1	-1,457.5	1,623.0	0.00	0.00	0.00
10,600.0	90.00	180.14	7,940.1	-2,367.14	-1,507.1	-1,457.8	1,721.7	0.00	0.00	0.00
10,700.0	90.00	180.14	7,940.1	-2,367.14	-1,607.1	-1,458.0	1,820.5	0.00	0.00	0.00
10,800.0	90.00	180.14	7,940.1	-2,367.15	-1,707.1	-1,458.2	1,919.2	0.00	0.00	0.00
10,900.0	90.00	180.14	7,940.2	-2,367.15	-1,807.1	-1,458.5	2,017.9	0.00	0.00	0.00
11,000.0	90.00	180.14	7,940.2	-2,367.16	-1,907.1	-1,458.7	2,116.7	0.00	0.00	0.00
11,100.0	90.00	180.14	7,940.2	-2,367.16	-2,007.1	-1,459.0	2,215.4	0.00	0.00	0.00
11,200.0	90.00	180.14	7,940.2	-2,367.17	-2,107.1	-1,459.2	2,314.2	0.00	0.00	0.00
11,300.0	90.00	180.14	7,940.2	-2,367.17	-2,207.1	-1,459.5	2,412.9	0.00	0.00	0.00
11,400.0	90.00	180.14	7,940.2	-2,367.17	-2,307.1	-1,459.7	2,511.6	0.00	0.00	0.00
11,500.0	90.00	180.14	7,940.2	-2,367.18	-2,407.0	-1,460.0	2,610.4	0.00	0.00	0.00
11,600.0	90.00	180.14	7,940.2	-2,367.18	-2,507.0	-1,460.2	2,709.1	0.00	0.00	0.00
11,700.0	90.00	180.14	7,940.2	-2,367.18	-2,607.0	-1,460.4	2,807.9	0.00	0.00	0.00
11,800.0	90.00	180.14	7,940.2	-2,367.19	-2,707.0	-1,460.7	2,906.6	0.00	0.00	0.00
11,900.0	90.00	180.14	7,940.2	-2,367.19	-2,807.0	-1,460.9	3,005.3	0.00	0.00	0.00
12,000.0	90.00	180.14	7,940.2	-2,367.19	-2,907.0	-1,461.2	3,104.1	0.00	0.00	0.00
12,100.0	90.00	180.14	7,940.2	-2,367.19	-3,007.0	-1,461.4	3,202.8	0.00	0.00	0.00
12,200.0	90.00	180.14	7,940.2	-2,367.20	-3,107.0	-1,461.7	3,301.6	0.00	0.00	0.00
12,300.0	90.00	180.14	7,940.2	-2,367.20	-3,207.0	-1,461.9	3,400.3	0.00	0.00	0.00
12,400.0	90.00	180.14	7,940.2	-2,367.20	-3,307.0	-1,462.2	3,499.0	0.00	0.00	0.00
12,500.0	90.00	180.14	7,940.2	-2,367.20	-3,407.0	-1,462.4	3,597.8	0.00	0.00	0.00
12,600.0	90.00	180.14	7,940.2	-2,367.20	-3,507.0	-1,462.7	3,696.5	0.00	0.00	0.00
12,700.0	90.00	180.14	7,940.2	-2,367.20	-3,607.0	-1,462.9	3,795.3	0.00	0.00	0.00
12,800.0	90.00	180.14	7,940.2	-2,367.20	-3,707.0	-1,463.2	3,894.0	0.00	0.00	0.00
12,900.0	90.00	180.14	7,940.2	-2,367.21	-3,807.0	-1,463.4	3,992.7	0.00	0.00	0.00
13,000.0	90.00	180.14	7,940.2	-2,367.21	-3,907.0	-1,463.6	4,091.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well COX 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,100.0	90.00	180.14	7,940.2	-2,367.21	-4,007.0	-1,463.9	4,190.2	0.00	0.00	0.00
13,200.0	90.00	180.14	7,940.2	-2,367.21	-4,107.0	-1,464.1	4,289.0	0.00	0.00	0.00
13,300.0	90.00	180.14	7,940.2	-2,367.21	-4,207.0	-1,464.4	4,387.7	0.00	0.00	0.00
13,400.0	90.00	180.14	7,940.2	-2,367.21	-4,307.0	-1,464.6	4,486.4	0.00	0.00	0.00
13,500.0	90.00	180.14	7,940.2	-2,367.21	-4,407.0	-1,464.9	4,585.2	0.00	0.00	0.00
13,600.0	90.00	180.14	7,940.2	-2,367.21	-4,507.0	-1,465.1	4,683.9	0.00	0.00	0.00
13,700.0	90.00	180.14	7,940.2	-2,367.21	-4,607.0	-1,465.4	4,782.7	0.00	0.00	0.00
13,800.0	90.00	180.14	7,940.2	-2,367.21	-4,707.0	-1,465.6	4,881.4	0.00	0.00	0.00
13,900.0	90.00	180.14	7,940.2	-2,367.20	-4,807.0	-1,465.9	4,980.1	0.00	0.00	0.00
14,000.0	90.00	180.14	7,940.2	-2,367.20	-4,907.0	-1,466.1	5,078.9	0.00	0.00	0.00
14,100.0	90.00	180.14	7,940.2	-2,367.20	-5,007.0	-1,466.4	5,177.6	0.00	0.00	0.00
14,200.0	90.00	180.14	7,940.2	-2,367.20	-5,107.0	-1,466.6	5,276.4	0.00	0.00	0.00
14,300.0	90.00	180.14	7,940.2	-2,367.20	-5,207.0	-1,466.9	5,375.1	0.00	0.00	0.00
14,400.0	90.00	180.14	7,940.2	-2,367.20	-5,307.0	-1,467.2	5,473.8	0.00	0.00	0.00
14,500.0	90.00	180.14	7,940.2	-2,367.20	-5,407.0	-1,467.4	5,572.6	0.00	0.00	0.00
14,600.0	90.00	180.14	7,940.2	-2,367.19	-5,507.0	-1,467.7	5,671.3	0.00	0.00	0.00
14,700.0	90.00	180.14	7,940.2	-2,367.19	-5,607.0	-1,467.9	5,770.1	0.00	0.00	0.00
14,800.0	90.00	180.14	7,940.2	-2,367.19	-5,707.0	-1,468.2	5,868.8	0.00	0.00	0.00
14,900.0	90.00	180.15	7,940.2	-2,367.19	-5,807.0	-1,468.4	5,967.5	0.00	0.00	0.00
15,000.0	90.00	180.15	7,940.2	-2,367.18	-5,907.0	-1,468.7	6,066.3	0.00	0.00	0.00
15,100.0	90.00	180.15	7,940.2	-2,367.18	-6,007.0	-1,468.9	6,165.0	0.00	0.00	0.00
15,200.0	90.00	180.15	7,940.2	-2,367.18	-6,107.0	-1,469.2	6,263.8	0.00	0.00	0.00
15,300.0	90.00	180.15	7,940.2	-2,367.17	-6,207.0	-1,469.4	6,362.5	0.00	0.00	0.00
15,400.0	90.00	180.15	7,940.2	-2,367.17	-6,307.0	-1,469.7	6,461.2	0.00	0.00	0.00
15,500.0	90.00	180.15	7,940.2	-2,367.17	-6,407.0	-1,469.9	6,560.0	0.00	0.00	0.00
15,600.0	90.00	180.15	7,940.2	-2,367.16	-6,507.0	-1,470.2	6,658.7	0.00	0.00	0.00
15,700.0	90.00	180.15	7,940.2	-2,367.16	-6,607.0	-1,470.4	6,757.5	0.00	0.00	0.00
15,800.0	90.00	180.15	7,940.2	-2,367.15	-6,707.0	-1,470.7	6,856.2	0.00	0.00	0.00
15,900.0	90.00	180.15	7,940.1	-2,367.15	-6,807.0	-1,471.0	6,955.0	0.00	0.00	0.00
16,000.0	90.00	180.15	7,940.1	-2,367.14	-6,907.0	-1,471.2	7,053.7	0.00	0.00	0.00
16,100.0	90.00	180.15	7,940.1	-2,367.14	-7,007.0	-1,471.5	7,152.4	0.00	0.00	0.00
16,200.0	90.00	180.15	7,940.1	-2,367.13	-7,107.0	-1,471.7	7,251.2	0.00	0.00	0.00
16,300.0	90.00	180.15	7,940.1	-2,367.13	-7,207.0	-1,472.0	7,349.9	0.00	0.00	0.00
16,400.0	90.00	180.15	7,940.1	-2,367.12	-7,307.0	-1,472.2	7,448.7	0.00	0.00	0.00
16,500.0	90.00	180.15	7,940.1	-2,367.12	-7,407.0	-1,472.5	7,547.4	0.00	0.00	0.00
16,600.0	90.00	180.15	7,940.1	-2,367.11	-7,507.0	-1,472.8	7,646.1	0.00	0.00	0.00
16,700.0	90.00	180.15	7,940.1	-2,367.11	-7,607.0	-1,473.0	7,744.9	0.00	0.00	0.00
16,800.0	90.00	180.15	7,940.1	-2,367.10	-7,707.0	-1,473.3	7,843.6	0.00	0.00	0.00
16,900.0	90.00	180.15	7,940.1	-2,367.09	-7,807.0	-1,473.5	7,942.4	0.00	0.00	0.00
17,000.0	90.00	180.15	7,940.1	-2,367.09	-7,907.0	-1,473.8	8,041.1	0.00	0.00	0.00
17,100.0	90.00	180.15	7,940.1	-2,367.08	-8,007.0	-1,474.0	8,139.8	0.00	0.00	0.00
17,200.0	90.00	180.15	7,940.1	-2,367.07	-8,107.0	-1,474.3	8,238.6	0.00	0.00	0.00
17,300.0	90.00	180.15	7,940.1	-2,367.07	-8,207.0	-1,474.6	8,337.3	0.00	0.00	0.00
17,400.0	90.00	180.15	7,940.1	-2,367.06	-8,307.0	-1,474.8	8,436.1	0.00	0.00	0.00
17,500.0	90.00	180.15	7,940.1	-2,367.05	-8,407.0	-1,475.1	8,534.8	0.00	0.00	0.00
17,600.0	90.00	180.15	7,940.0	-2,367.05	-8,507.0	-1,475.3	8,633.6	0.00	0.00	0.00
17,700.0	90.00	180.15	7,940.0	-2,367.04	-8,607.0	-1,475.6	8,732.3	0.00	0.00	0.00
17,800.0	90.00	180.15	7,940.0	-2,367.03	-8,707.0	-1,475.9	8,831.0	0.00	0.00	0.00
17,900.0	90.00	180.15	7,940.0	-2,367.02	-8,807.0	-1,476.1	8,929.8	0.00	0.00	0.00
18,000.0	90.00	180.15	7,940.0	-2,367.01	-8,907.0	-1,476.4	9,028.5	0.00	0.00	0.00
18,100.0	90.00	180.15	7,940.0	-2,367.01	-9,007.0	-1,476.6	9,127.3	0.00	0.00	0.00
BHL (P4) - COX 1										
18,163.4	90.00	180.15	7,940.0	-2,367.00	-9,070.4	-1,476.8	9,189.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well COX 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 5573.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 5573.0usft
Site:	NE NW SEC. 22 T12N R64W 6th P.M.	North Reference:	True
Well:	COX 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,275.1	3,172.0	PARKMAN		0.00	
5,195.0	5,017.0	SUSSEX		0.00	
5,614.4	5,420.0	SHANNON		0.00	
7,879.6	7,620.0	SHARON SPRINGS		0.00	
7,913.5	7,650.0	NIOBRARA		0.00	
8,037.0	7,750.0	NIO B		0.00	
8,296.9	7,898.0	FORT HAYS		0.00	
8,410.4	7,930.0	CODELL		0.00	

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.0	100.0	0.0	0.0	START NUDGE (2°/100ft BUR)
903.1	892.6	69.4	-87.7	EOB TO 16.06° INC
1,639.2	1,600.0	195.8	-247.4	9 5/8" SURFACE CSG
6,784.4	6,544.4	1,079.0	-1,363.7	END OF TANGENT
7,587.4	7,336.9	1,148.4	-1,451.4	EOD TO VERTICAL
7,617.4	7,366.9	1,148.4	-1,451.4	KOP (10°/100ft BUR)
8,517.6	7,940.0	575.3	-1,452.8	LANDING PNT (P4) - COX 1
18,163.4	7,940.0	-9,070.4	-1,476.8	BHL (P4) - COX 1