

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

SW NW SEC. 15 T5N R65W 6th P.M.

VETTING 22

ORIGINAL WELLBORE

09 March, 2016

Plan: PROPOSAL #2

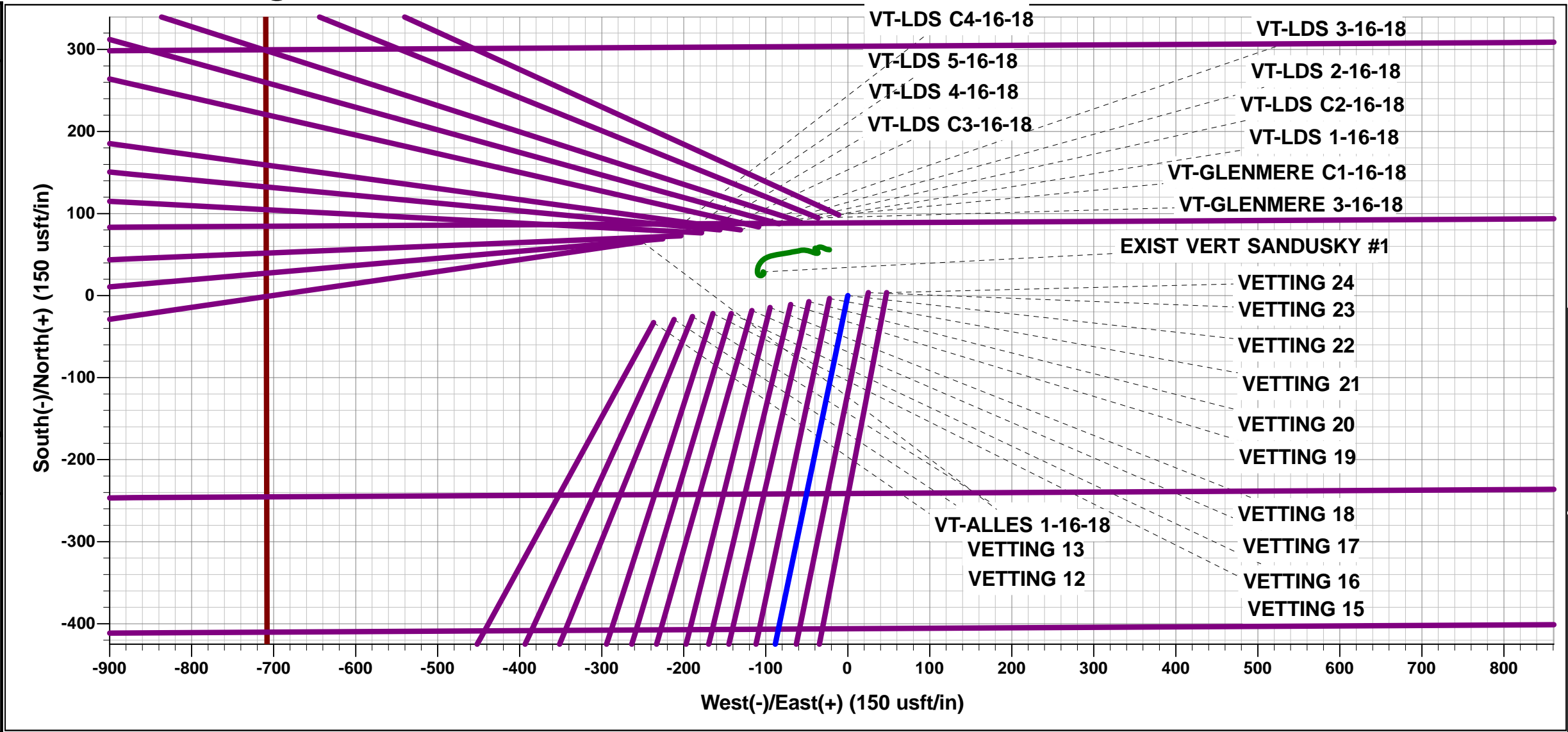




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SW NW SEC. 15 T5N R65W 6th P.M.
Well: VETTING 22
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation		
1100.0	1100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)		
1600.0	1602.6	10.05	191.74	-43.1	-8.9	21.6	44.0	9 5/8" SURFACE CASING		
1664.0	1667.6	10.05	191.74	-54.2	-11.3	27.1	55.3	END OF TANGENT		
3169.0	3385.9	44.42	191.74	-812.6	-168.9	407.3	829.9	EOB TO 44.42° INC		
4452.0	5182.1	44.42	191.74	-2043.4	-424.7	1024.3	2087.1	END OF TANGENT		
6457.0	7403.0	0.00	0.00	-2844.9	-591.3	1426.0	2905.7	EOD TO VERTICAL		
6487.0	7433.0	0.00	0.00	-2844.9	-591.3	1426.0	2905.7	KOP (10°/100ft BUR)		
7060.0	8333.0	90.00	269.96	-2845.2	-1164.3	1972.1	3478.6	LANDING PNT - VETTING 22		
7060.0	16129.6	90.00	269.95	-2850.9	-8960.9	9403.5	11275.2	BHL - VETTING 22		

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - VETTING 22	6487.0	-2844.9	-591.3	40.393261	-104.658453
LANDING POINT - VETTING 22	7060.0	-2845.2	-1164.3	40.393260	-104.660510
BHL - VETTING 22	7060.0	-2850.9	-8960.9	40.393240	-104.688500



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3583.0	3965.5	PARKMAN
4132.0	4734.1	SUSSEX
4823.0	5664.2	SHANNON
6703.0	7654.4	SHARON SPRINGS
6723.0	7676.2	NIOBRARA
6865.0	7845.8	NIO B TARGET
7020.0	8117.7	FORT HAYS
7050.0	8225.8	CODELL

PROPOSED LOCAL COORDINATES		
SHL: 1975ft FNL & 710ft FWL of Sec 15		
LP: 495ft FSL & 460ft FEL of Sec 16		
BHL: 495ft FSL & 2346ft FWL of Sec 17		

T

M

Azimuths to True North

Magnetic North: 8.32°

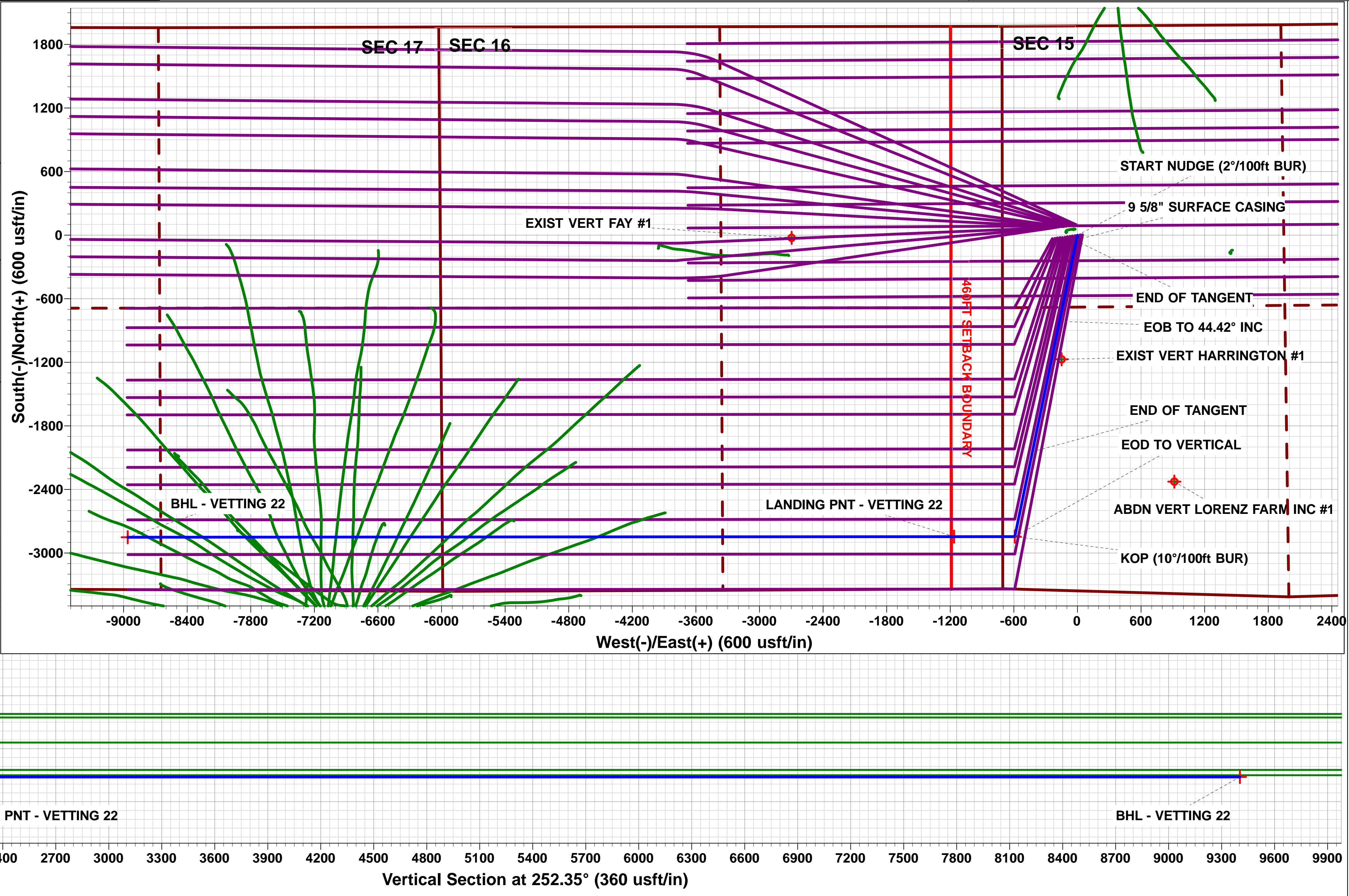
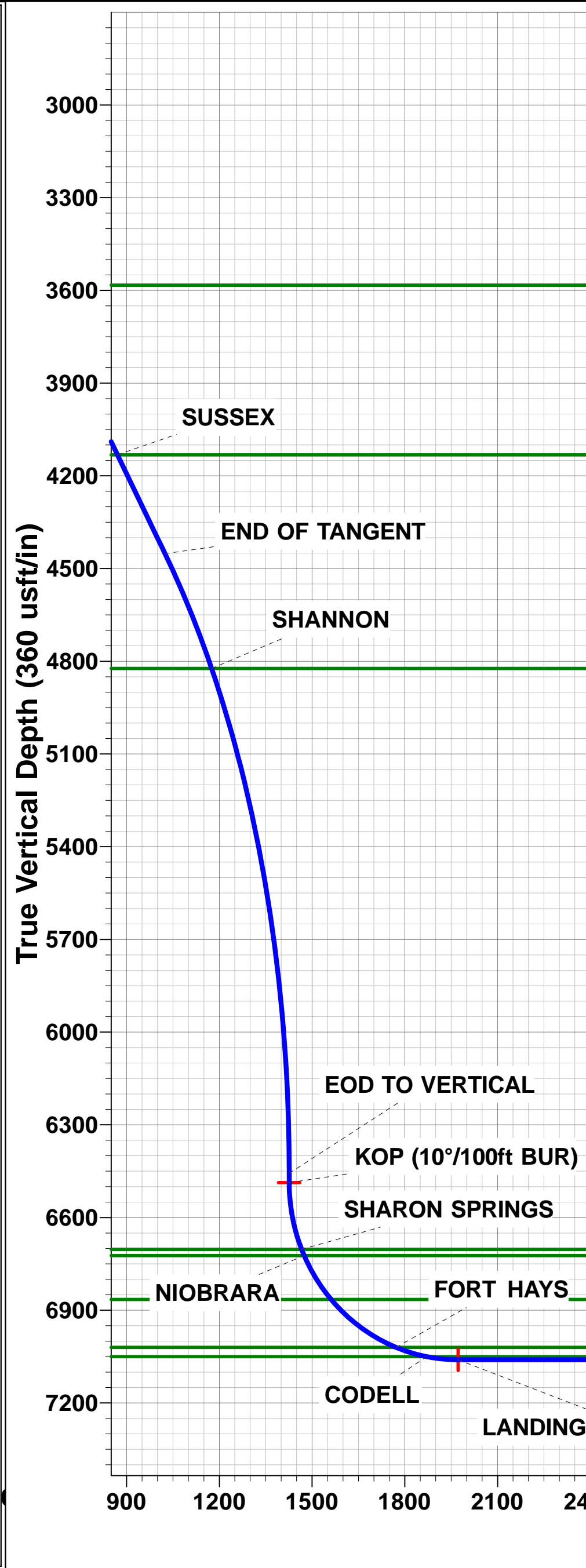
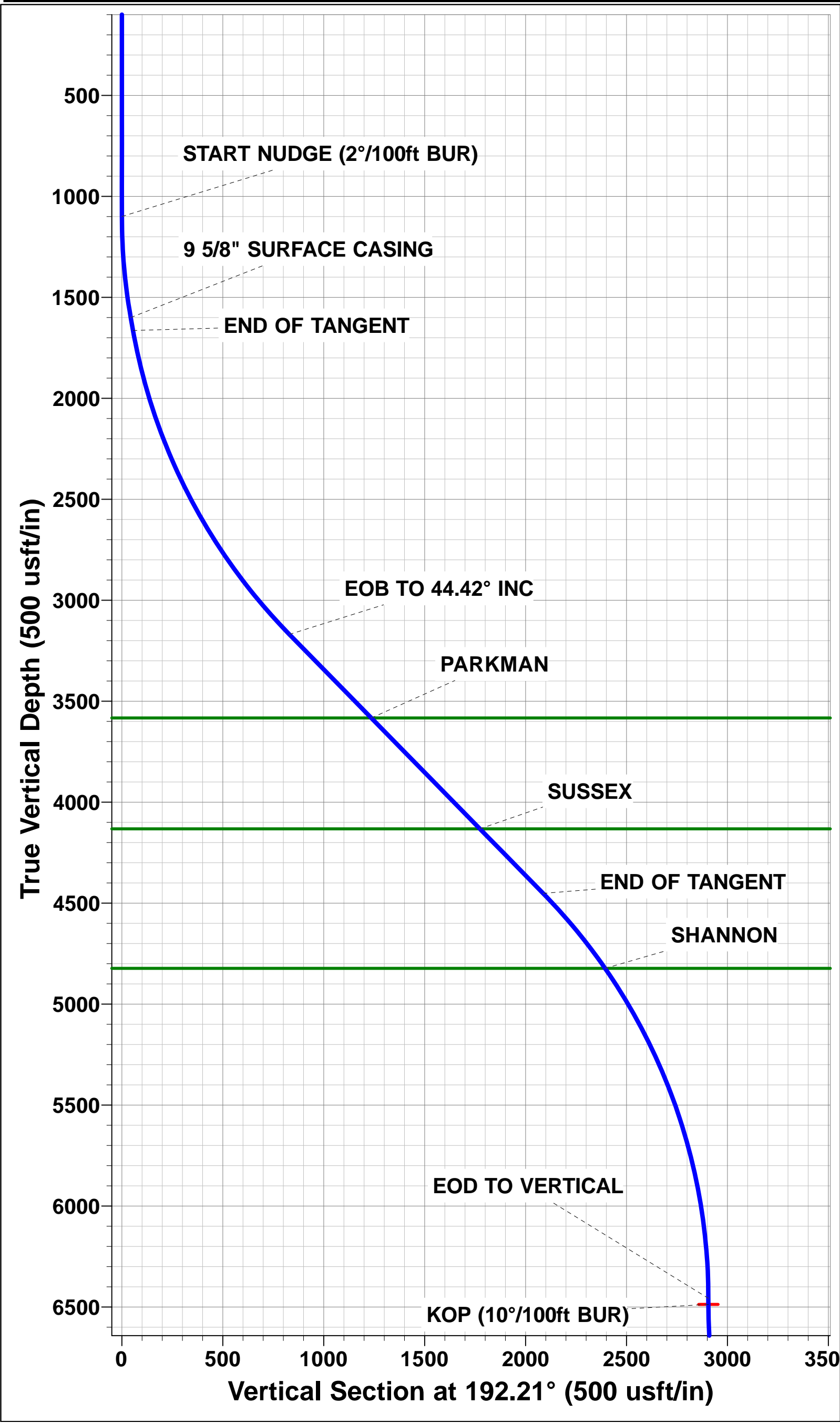
Magnetic Field

Strength: 52584.9snT

Dip Angle: 66.91°

Date: 21/11/2015

Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VETTING 22
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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	SW NW SEC. 15 T5N R65W 6th P.M.		
Site Position:		Northing:	1,390,032.91 usft
From:	Lat/Long	Easting:	3,234,727.17 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.400980
		Longitude:	-104.657180
		Grid Convergence:	0.54 °

Well	VETTING 22		
Well Position	+N/-S	32.8 usft	Northing:
	+E/-W	236.7 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	21/11/2015	8.32	66.91	52,585

Design	PROPOSAL #2			
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	252.35

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	-4,664.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	-3,564.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,602.6	10.05	191.74	1,600.0	-3,064.0	-43.1	-8.9	2.00	2.00	0.00	191.74	
1,667.6	10.05	191.74	1,664.0	-3,000.0	-54.2	-11.3	0.00	0.00	0.00	0.00	
3,385.9	44.42	191.74	3,169.0	-1,495.0	-812.6	-168.9	2.00	2.00	0.00	0.00	
5,182.1	44.42	191.74	4,452.0	-212.0	-2,043.4	-424.7	0.00	0.00	0.00	0.00	
7,403.0	0.00	0.00	6,457.0	1,793.0	-2,844.9	-591.3	2.00	-2.00	0.00	180.00	
7,433.0	0.00	0.00	6,487.0	1,823.0	-2,844.9	-591.3	0.00	0.00	0.00	0.00	KOP - VETTING 22
8,333.0	90.00	269.96	7,060.0	2,396.0	-2,845.2	-1,164.3	10.00	10.00	-10.00	269.96	LANDING POINT -
16,129.6	90.00	269.95	7,060.0	2,396.0	-2,850.9	-8,960.9	0.00	0.00	0.00	-96.67	BHL - VETTING 22

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VETTING 22
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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	4,664.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,564.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,464.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,364.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,264.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,164.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,064.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,964.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,864.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,764.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,664.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,100.0	0.00	0.00	1,100.0	3,564.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	2.00	191.74	1,200.0	3,464.02	-1.7	-0.4	0.9	2.00	2.00	0.00
1,300.0	4.00	191.74	1,299.8	3,364.16	-6.8	-1.4	3.4	2.00	2.00	0.00
1,400.0	6.00	191.74	1,399.5	3,264.55	-15.4	-3.2	7.7	2.00	2.00	0.00
1,500.0	8.00	191.74	1,498.7	3,165.30	-27.3	-5.7	13.7	2.00	2.00	0.00
1,600.0	10.00	191.74	1,597.5	3,066.53	-42.6	-8.9	21.4	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,602.6	10.05	191.74	1,600.0	3,063.97	-43.1	-8.9	21.6	1.98	1.98	0.00
END OF TANGENT										
1,667.6	10.05	191.74	1,664.0	2,999.97	-54.2	-11.3	27.1	0.00	0.00	0.00
1,700.0	10.70	191.74	1,695.9	2,968.10	-59.9	-12.4	30.0	2.00	2.00	0.00
1,800.0	12.70	191.74	1,793.8	2,870.18	-79.7	-16.6	40.0	2.00	2.00	0.00
1,900.0	14.70	191.74	1,891.0	2,773.03	-102.9	-21.4	51.6	2.00	2.00	0.00
2,000.0	16.70	191.74	1,987.2	2,676.77	-129.4	-26.9	64.9	2.00	2.00	0.00
2,100.0	18.70	191.74	2,082.5	2,581.51	-159.2	-33.1	79.8	2.00	2.00	0.00
2,200.0	20.70	191.74	2,176.6	2,487.37	-192.2	-39.9	96.3	2.00	2.00	0.00
2,300.0	22.70	191.74	2,269.5	2,394.46	-228.4	-47.5	114.5	2.00	2.00	0.00
2,400.0	24.70	191.74	2,361.1	2,302.90	-267.7	-55.6	134.2	2.00	2.00	0.00
2,500.0	26.70	191.74	2,451.2	2,212.79	-310.2	-64.5	155.5	2.00	2.00	0.00
2,600.0	28.70	191.74	2,539.7	2,124.26	-355.7	-73.9	178.3	2.00	2.00	0.00
2,700.0	30.70	191.74	2,626.6	2,037.40	-404.2	-84.0	202.6	2.00	2.00	0.00
2,800.0	32.70	191.74	2,711.7	1,952.32	-455.6	-94.7	228.4	2.00	2.00	0.00
2,900.0	34.70	191.74	2,794.9	1,869.13	-510.0	-106.0	255.6	2.00	2.00	0.00
3,000.0	36.70	191.74	2,876.1	1,787.93	-567.1	-117.9	284.3	2.00	2.00	0.00
3,100.0	38.70	191.74	2,955.2	1,708.81	-627.0	-130.3	314.3	2.00	2.00	0.00
3,200.0	40.70	191.74	3,032.1	1,631.87	-689.5	-143.3	345.6	2.00	2.00	0.00
3,300.0	42.70	191.74	3,106.8	1,557.21	-754.6	-156.9	378.3	2.00	2.00	0.00
EOB TO 44.42° INC										
3,385.9	44.42	191.74	3,169.0	1,494.97	-812.6	-168.9	407.3	2.00	2.00	0.00
3,400.0	44.42	191.74	3,179.1	1,484.90	-822.2	-170.9	412.2	0.00	0.00	0.00
3,500.0	44.42	191.74	3,250.5	1,413.47	-890.8	-185.2	446.5	0.00	0.00	0.00
3,600.0	44.42	191.74	3,322.0	1,342.04	-959.3	-199.4	480.8	0.00	0.00	0.00
3,700.0	44.42	191.74	3,393.4	1,270.62	-1,027.8	-213.6	515.2	0.00	0.00	0.00
3,800.0	44.42	191.74	3,464.8	1,199.19	-1,096.3	-227.9	549.5	0.00	0.00	0.00
3,900.0	44.42	191.74	3,536.2	1,127.77	-1,164.9	-242.1	583.9	0.00	0.00	0.00
PARKMAN										
3,965.5	44.42	191.74	3,583.0	1,081.00	-1,209.7	-251.5	606.4	0.00	0.00	0.00
4,000.0	44.42	191.74	3,607.7	1,056.34	-1,233.4	-256.4	618.2	0.00	0.00	0.00
4,100.0	44.42	191.74	3,679.1	984.91	-1,301.9	-270.6	652.6	0.00	0.00	0.00
4,200.0	44.42	191.74	3,750.5	913.49	-1,370.4	-284.9	686.9	0.00	0.00	0.00
4,300.0	44.42	191.74	3,821.9	842.06	-1,439.0	-299.1	721.3	0.00	0.00	0.00
4,400.0	44.42	191.74	3,893.4	770.64	-1,507.5	-313.3	755.6	0.00	0.00	0.00

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Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
4,500.0	44.42	191.74	3,964.8	699.21	-1,576.0	-327.6	790.0	0.00	0.00	0.00
4,600.0	44.42	191.74	4,036.2	627.78	-1,644.5	-341.8	824.3	0.00	0.00	0.00
4,700.0	44.42	191.74	4,107.6	556.36	-1,713.0	-356.1	858.7	0.00	0.00	0.00
SUSSEX										
4,734.1	44.42	191.74	4,132.0	532.00	-1,736.4	-360.9	870.4	0.00	0.00	0.00
4,800.0	44.42	191.74	4,179.1	484.93	-1,781.6	-370.3	893.0	0.00	0.00	0.00
4,900.0	44.42	191.74	4,250.5	413.51	-1,850.1	-384.6	927.4	0.00	0.00	0.00
5,000.0	44.42	191.74	4,321.9	342.08	-1,918.6	-398.8	961.7	0.00	0.00	0.00
5,100.0	44.42	191.74	4,393.3	270.65	-1,987.1	-413.0	996.1	0.00	0.00	0.00
END OF TANGENT										
5,182.1	44.42	191.74	4,452.0	212.01	-2,043.4	-424.7	1,024.3	0.00	0.00	0.00
5,200.0	44.06	191.74	4,464.8	199.19	-2,055.6	-427.3	1,030.4	2.00	-2.00	0.00
5,300.0	42.06	191.74	4,537.9	126.13	-2,122.5	-441.2	1,063.9	2.00	-2.00	0.00
5,400.0	40.06	191.74	4,613.3	50.73	-2,186.8	-454.5	1,096.1	2.00	-2.00	0.00
5,500.0	38.06	191.74	4,690.9	-26.92	-2,248.5	-467.4	1,127.1	2.00	-2.00	0.00
5,600.0	36.06	191.74	4,770.7	-106.71	-2,307.5	-479.6	1,156.6	2.00	-2.00	0.00
SHANNON										
5,664.2	34.78	191.74	4,823.0	-159.00	-2,343.9	-487.2	1,174.9	2.00	-2.00	0.00
5,700.0	34.06	191.74	4,852.6	-188.56	-2,363.7	-491.3	1,184.8	2.00	-2.00	0.00
5,800.0	32.06	191.74	4,936.4	-272.37	-2,417.1	-502.4	1,211.6	2.00	-2.00	0.00
5,900.0	30.06	191.74	5,022.0	-358.03	-2,467.6	-512.9	1,236.9	2.00	-2.00	0.00
6,000.0	28.06	191.74	5,109.4	-445.44	-2,515.2	-522.8	1,260.7	2.00	-2.00	0.00
6,100.0	26.06	191.74	5,198.5	-534.48	-2,559.7	-532.1	1,283.1	2.00	-2.00	0.00
6,200.0	24.06	191.74	5,289.1	-625.07	-2,601.2	-540.7	1,303.8	2.00	-2.00	0.00
6,300.0	22.06	191.74	5,381.1	-717.07	-2,639.5	-548.7	1,323.1	2.00	-2.00	0.00
6,400.0	20.06	191.74	5,474.4	-810.39	-2,674.7	-556.0	1,340.7	2.00	-2.00	0.00
6,500.0	18.06	191.74	5,568.9	-904.90	-2,706.7	-562.6	1,356.7	2.00	-2.00	0.00
6,600.0	16.06	191.74	5,664.5	-1,000.50	-2,735.4	-568.6	1,371.1	2.00	-2.00	0.00
6,700.0	14.06	191.74	5,761.1	-1,097.06	-2,760.8	-573.9	1,383.9	2.00	-2.00	0.00
6,800.0	12.06	191.74	5,858.5	-1,194.47	-2,783.0	-578.5	1,395.0	2.00	-2.00	0.00
6,900.0	10.06	191.74	5,956.6	-1,292.60	-2,801.7	-582.4	1,404.4	2.00	-2.00	0.00
7,000.0	8.06	191.74	6,055.4	-1,391.35	-2,817.2	-585.6	1,412.1	2.00	-2.00	0.00
7,100.0	6.06	191.74	6,154.6	-1,490.59	-2,829.2	-588.1	1,418.1	2.00	-2.00	0.00
7,200.0	4.06	191.74	6,254.2	-1,590.19	-2,837.8	-589.9	1,422.5	2.00	-2.00	0.00
7,300.0	2.06	191.74	6,354.0	-1,690.05	-2,843.0	-591.0	1,425.1	2.00	-2.00	0.00
7,400.0	0.06	191.74	6,454.0	-1,790.02	-2,844.9	-591.3	1,426.0	2.00	-2.00	0.00
EOD TO VERTICAL										
7,403.0	0.00	0.00	6,457.0	-1,793.02	-2,844.9	-591.3	1,426.0	1.98	-1.98	0.00
KOP (10°/100ft BUR)										
7,433.0	0.00	0.00	6,487.0	-1,823.02	-2,844.9	-591.3	1,426.0	0.00	0.00	0.00
7,500.0	6.70	269.96	6,553.9	-1,889.87	-2,844.9	-595.2	1,429.7	10.00	10.00	0.00
7,600.0	16.70	269.96	6,651.7	-1,987.67	-2,844.9	-615.5	1,449.0	10.00	10.00	0.00
SHARON SPRINGS										
7,654.4	22.15	269.96	6,703.0	-2,039.00	-2,844.9	-633.6	1,466.3	10.00	10.00	0.00
NIOBRARA										
7,676.2	24.32	269.96	6,723.0	-2,059.00	-2,844.9	-642.2	1,474.5	10.00	10.00	0.00
7,700.0	26.70	269.96	6,744.5	-2,080.46	-2,844.9	-652.4	1,484.2	10.00	10.00	0.00
7,800.0	36.70	269.96	6,829.4	-2,165.44	-2,844.9	-704.9	1,534.3	10.00	10.00	0.00
NIO B TARGET										
7,845.8	41.28	269.96	6,865.0	-2,201.00	-2,845.0	-733.7	1,561.7	10.00	10.00	0.00
7,900.0	46.70	269.96	6,904.0	-2,240.01	-2,845.0	-771.3	1,597.6	10.00	10.00	0.00
8,000.0	56.70	269.96	6,965.9	-2,301.91	-2,845.0	-849.7	1,672.3	10.00	10.00	0.00
8,100.0	66.70	269.96	7,013.3	-2,349.26	-2,845.1	-937.7	1,756.1	10.00	10.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VETTING 22
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
FORT HAYS										
8,117.7	68.46	269.96	7,020.0	-2,356.00	-2,845.1	-954.0	1,771.7	10.00	10.00	0.00
8,200.0	76.70	269.96	7,044.6	-2,380.62	-2,845.1	-1,032.5	1,846.5	10.00	10.00	0.00
CODELL										
8,225.8	79.28	269.96	7,050.0	-2,386.00	-2,845.2	-1,057.7	1,870.6	10.00	10.00	0.00
8,300.0	86.70	269.96	7,059.0	-2,395.05	-2,845.2	-1,131.3	1,940.7	10.00	10.00	0.00
LANDING PNT - VETTING 22										
8,333.0	90.00	269.96	7,060.0	-2,396.00	-2,845.2	-1,164.3	1,972.1	10.00	10.00	0.00
8,400.0	90.00	269.96	7,060.0	-2,396.00	-2,845.3	-1,231.3	2,036.0	0.01	0.01	0.00
8,500.0	90.00	269.96	7,060.0	-2,396.00	-2,845.3	-1,331.3	2,131.3	0.00	0.00	0.00
8,600.0	90.00	269.96	7,060.0	-2,396.00	-2,845.4	-1,431.3	2,226.6	0.00	0.00	0.00
8,700.0	90.00	269.96	7,060.0	-2,396.00	-2,845.5	-1,531.3	2,321.9	0.00	0.00	0.00
8,800.0	90.00	269.96	7,060.0	-2,396.00	-2,845.5	-1,631.3	2,417.2	0.00	0.00	0.00
8,900.0	90.00	269.96	7,060.0	-2,396.00	-2,845.6	-1,731.3	2,512.5	0.00	0.00	0.00
9,000.0	90.00	269.96	7,060.0	-2,395.99	-2,845.7	-1,831.3	2,607.8	0.00	0.00	0.00
9,100.0	90.00	269.96	7,060.0	-2,395.99	-2,845.7	-1,931.3	2,703.2	0.00	0.00	0.00
9,200.0	90.00	269.96	7,060.0	-2,395.99	-2,845.8	-2,031.3	2,798.5	0.00	0.00	0.00
9,300.0	90.00	269.96	7,060.0	-2,395.99	-2,845.9	-2,131.3	2,893.8	0.00	0.00	0.00
9,400.0	90.00	269.96	7,060.0	-2,395.99	-2,845.9	-2,231.3	2,989.1	0.00	0.00	0.00
9,500.0	90.00	269.96	7,060.0	-2,395.99	-2,846.0	-2,331.3	3,084.4	0.00	0.00	0.00
9,600.0	90.00	269.96	7,060.0	-2,395.99	-2,846.1	-2,431.3	3,179.7	0.00	0.00	0.00
9,700.0	90.00	269.96	7,060.0	-2,395.99	-2,846.2	-2,531.3	3,275.0	0.00	0.00	0.00
9,800.0	90.00	269.96	7,060.0	-2,395.99	-2,846.2	-2,631.3	3,370.4	0.00	0.00	0.00
9,900.0	90.00	269.96	7,060.0	-2,395.99	-2,846.3	-2,731.3	3,465.7	0.00	0.00	0.00
10,000.0	90.00	269.96	7,060.0	-2,395.99	-2,846.4	-2,831.3	3,561.0	0.00	0.00	0.00
10,100.0	90.00	269.96	7,060.0	-2,395.99	-2,846.4	-2,931.3	3,656.3	0.00	0.00	0.00
10,200.0	90.00	269.96	7,060.0	-2,395.99	-2,846.5	-3,031.3	3,751.6	0.00	0.00	0.00
10,300.0	90.00	269.96	7,060.0	-2,395.99	-2,846.6	-3,131.3	3,846.9	0.00	0.00	0.00
10,400.0	90.00	269.96	7,060.0	-2,395.99	-2,846.6	-3,231.3	3,942.2	0.00	0.00	0.00
10,500.0	90.00	269.96	7,060.0	-2,395.99	-2,846.7	-3,331.3	4,037.6	0.00	0.00	0.00
10,600.0	90.00	269.96	7,060.0	-2,395.99	-2,846.8	-3,431.3	4,132.9	0.00	0.00	0.00
10,700.0	90.00	269.96	7,060.0	-2,395.99	-2,846.8	-3,531.3	4,228.2	0.00	0.00	0.00
10,800.0	90.00	269.96	7,060.0	-2,395.99	-2,846.9	-3,631.3	4,323.5	0.00	0.00	0.00
10,900.0	90.00	269.96	7,060.0	-2,395.99	-2,847.0	-3,731.3	4,418.8	0.00	0.00	0.00
11,000.0	90.00	269.96	7,060.0	-2,395.99	-2,847.1	-3,831.3	4,514.1	0.00	0.00	0.00
11,100.0	90.00	269.96	7,060.0	-2,395.98	-2,847.1	-3,931.3	4,609.4	0.00	0.00	0.00
11,200.0	90.00	269.96	7,060.0	-2,395.98	-2,847.2	-4,031.3	4,704.8	0.00	0.00	0.00
11,300.0	90.00	269.96	7,060.0	-2,395.98	-2,847.3	-4,131.3	4,800.1	0.00	0.00	0.00
11,400.0	90.00	269.96	7,060.0	-2,395.98	-2,847.3	-4,231.3	4,895.4	0.00	0.00	0.00
11,500.0	90.00	269.96	7,060.0	-2,395.98	-2,847.4	-4,331.3	4,990.7	0.00	0.00	0.00
11,600.0	90.00	269.96	7,060.0	-2,395.98	-2,847.5	-4,431.3	5,086.0	0.00	0.00	0.00
11,700.0	90.00	269.96	7,060.0	-2,395.98	-2,847.6	-4,531.3	5,181.3	0.00	0.00	0.00
11,800.0	90.00	269.96	7,060.0	-2,395.98	-2,847.6	-4,631.3	5,276.6	0.00	0.00	0.00
11,900.0	90.00	269.96	7,060.0	-2,395.98	-2,847.7	-4,731.3	5,372.0	0.00	0.00	0.00
12,000.0	90.00	269.96	7,060.0	-2,395.98	-2,847.8	-4,831.3	5,467.3	0.00	0.00	0.00
12,100.0	90.00	269.96	7,060.0	-2,395.98	-2,847.8	-4,931.3	5,562.6	0.00	0.00	0.00
12,200.0	90.00	269.96	7,060.0	-2,395.98	-2,847.9	-5,031.3	5,657.9	0.00	0.00	0.00
12,300.0	90.00	269.96	7,060.0	-2,395.98	-2,848.0	-5,131.3	5,753.2	0.00	0.00	0.00
12,400.0	90.00	269.96	7,060.0	-2,395.98	-2,848.1	-5,231.3	5,848.5	0.00	0.00	0.00
12,500.0	90.00	269.96	7,060.0	-2,395.98	-2,848.1	-5,331.3	5,943.9	0.00	0.00	0.00
12,600.0	90.00	269.96	7,060.0	-2,395.98	-2,848.2	-5,431.3	6,039.2	0.00	0.00	0.00
12,700.0	90.00	269.96	7,060.0	-2,395.98	-2,848.3	-5,531.3	6,134.5	0.00	0.00	0.00
12,800.0	90.00	269.96	7,060.0	-2,395.98	-2,848.4	-5,631.3	6,229.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VETTING 22
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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)
12,900.0	90.00	269.96	7,060.0	-2,395.98	-2,848.4	-5,731.3	6,325.1	0.00	0.00	0.00
13,000.0	90.00	269.96	7,060.0	-2,395.98	-2,848.5	-5,831.3	6,420.4	0.00	0.00	0.00
13,100.0	90.00	269.96	7,060.0	-2,395.98	-2,848.6	-5,931.3	6,515.7	0.00	0.00	0.00
13,200.0	90.00	269.96	7,060.0	-2,395.98	-2,848.7	-6,031.3	6,611.1	0.00	0.00	0.00
13,300.0	90.00	269.96	7,060.0	-2,395.98	-2,848.7	-6,131.3	6,706.4	0.00	0.00	0.00
13,400.0	90.00	269.96	7,060.0	-2,395.99	-2,848.8	-6,231.3	6,801.7	0.00	0.00	0.00
13,500.0	90.00	269.96	7,060.0	-2,395.99	-2,848.9	-6,331.3	6,897.0	0.00	0.00	0.00
13,600.0	90.00	269.96	7,060.0	-2,395.99	-2,849.0	-6,431.3	6,992.3	0.00	0.00	0.00
13,700.0	90.00	269.96	7,060.0	-2,395.99	-2,849.0	-6,531.3	7,087.6	0.00	0.00	0.00
13,800.0	90.00	269.96	7,060.0	-2,395.99	-2,849.1	-6,631.3	7,183.0	0.00	0.00	0.00
13,900.0	90.00	269.96	7,060.0	-2,395.99	-2,849.2	-6,731.3	7,278.3	0.00	0.00	0.00
14,000.0	90.00	269.96	7,060.0	-2,395.99	-2,849.3	-6,831.3	7,373.6	0.00	0.00	0.00
14,100.0	90.00	269.96	7,060.0	-2,395.99	-2,849.3	-6,931.3	7,468.9	0.00	0.00	0.00
14,200.0	90.00	269.96	7,060.0	-2,395.99	-2,849.4	-7,031.3	7,564.2	0.00	0.00	0.00
14,300.0	90.00	269.96	7,060.0	-2,395.99	-2,849.5	-7,131.3	7,659.5	0.00	0.00	0.00
14,400.0	90.00	269.96	7,060.0	-2,395.99	-2,849.6	-7,231.3	7,754.9	0.00	0.00	0.00
14,500.0	90.00	269.96	7,060.0	-2,395.99	-2,849.6	-7,331.3	7,850.2	0.00	0.00	0.00
14,600.0	90.00	269.96	7,060.0	-2,395.99	-2,849.7	-7,431.3	7,945.5	0.00	0.00	0.00
14,700.0	90.00	269.96	7,060.0	-2,395.99	-2,849.8	-7,531.3	8,040.8	0.00	0.00	0.00
14,800.0	90.00	269.96	7,060.0	-2,395.99	-2,849.9	-7,631.3	8,136.1	0.00	0.00	0.00
14,900.0	90.00	269.96	7,060.0	-2,395.99	-2,850.0	-7,731.3	8,231.4	0.00	0.00	0.00
15,000.0	90.00	269.96	7,060.0	-2,395.99	-2,850.0	-7,831.3	8,326.8	0.00	0.00	0.00
15,100.0	90.00	269.96	7,060.0	-2,395.99	-2,850.1	-7,931.3	8,422.1	0.00	0.00	0.00
15,200.0	90.00	269.96	7,060.0	-2,395.99	-2,850.2	-8,031.3	8,517.4	0.00	0.00	0.00
15,300.0	90.00	269.95	7,060.0	-2,395.99	-2,850.3	-8,131.3	8,612.7	0.00	0.00	0.00
15,400.0	90.00	269.95	7,060.0	-2,395.99	-2,850.3	-8,231.3	8,708.0	0.00	0.00	0.00
15,500.0	90.00	269.95	7,060.0	-2,396.00	-2,850.4	-8,331.3	8,803.4	0.00	0.00	0.00
15,600.0	90.00	269.95	7,060.0	-2,396.00	-2,850.5	-8,431.3	8,898.7	0.00	0.00	0.00
15,700.0	90.00	269.95	7,060.0	-2,396.00	-2,850.6	-8,531.3	8,994.0	0.00	0.00	0.00
15,800.0	90.00	269.95	7,060.0	-2,396.00	-2,850.7	-8,631.3	9,089.3	0.00	0.00	0.00
15,900.0	90.00	269.95	7,060.0	-2,396.00	-2,850.7	-8,731.3	9,184.6	0.00	0.00	0.00
16,000.0	90.00	269.95	7,060.0	-2,396.00	-2,850.8	-8,831.3	9,279.9	0.00	0.00	0.00
16,100.0	90.00	269.95	7,060.0	-2,396.00	-2,850.9	-8,931.3	9,375.3	0.00	0.00	0.00
BHL - VETTING 22										
16,129.6	90.00	269.95	7,060.0	-2,396.00	-2,850.9	-8,960.9	9,403.5	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,965.5	3,583.0	PARKMAN			
4,734.1	4,132.0	SUSSEX			
5,664.2	4,823.0	SHANNON			
7,654.4	6,703.0	SHARON SPRINGS			
7,676.2	6,723.0	NIOBRARA			
7,845.8	6,865.0	NIO B TARGET			
8,117.7	7,020.0	FORT HAYS			
8,225.8	7,050.0	CODELL			

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VETTING 22
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VETTING 22	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,100.0	1,100.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,602.6	1,600.0	-43.1	-8.9	9 5/8" SURFACE CASING
1,667.6	1,664.0	-54.2	-11.3	END OF TANGENT
3,385.9	3,169.0	-812.6	-168.9	EOB TO 44.42° INC
5,182.1	4,452.0	-2,043.4	-424.7	END OF TANGENT
7,403.0	6,457.0	-2,844.9	-591.3	EOD TO VERTICAL
7,433.0	6,487.0	-2,844.9	-591.3	KOP (10°/100ft BUR)
8,333.0	7,060.0	-2,845.2	-1,164.3	LANDING PNT - VETTING 22
16,129.6	7,060.0	-2,850.9	-8,960.9	BHL - VETTING 22