

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

VT-GLENMERE 3-16-18

ORIGINAL WELLBORE

09 March, 2016

Plan: PROPOSAL #2

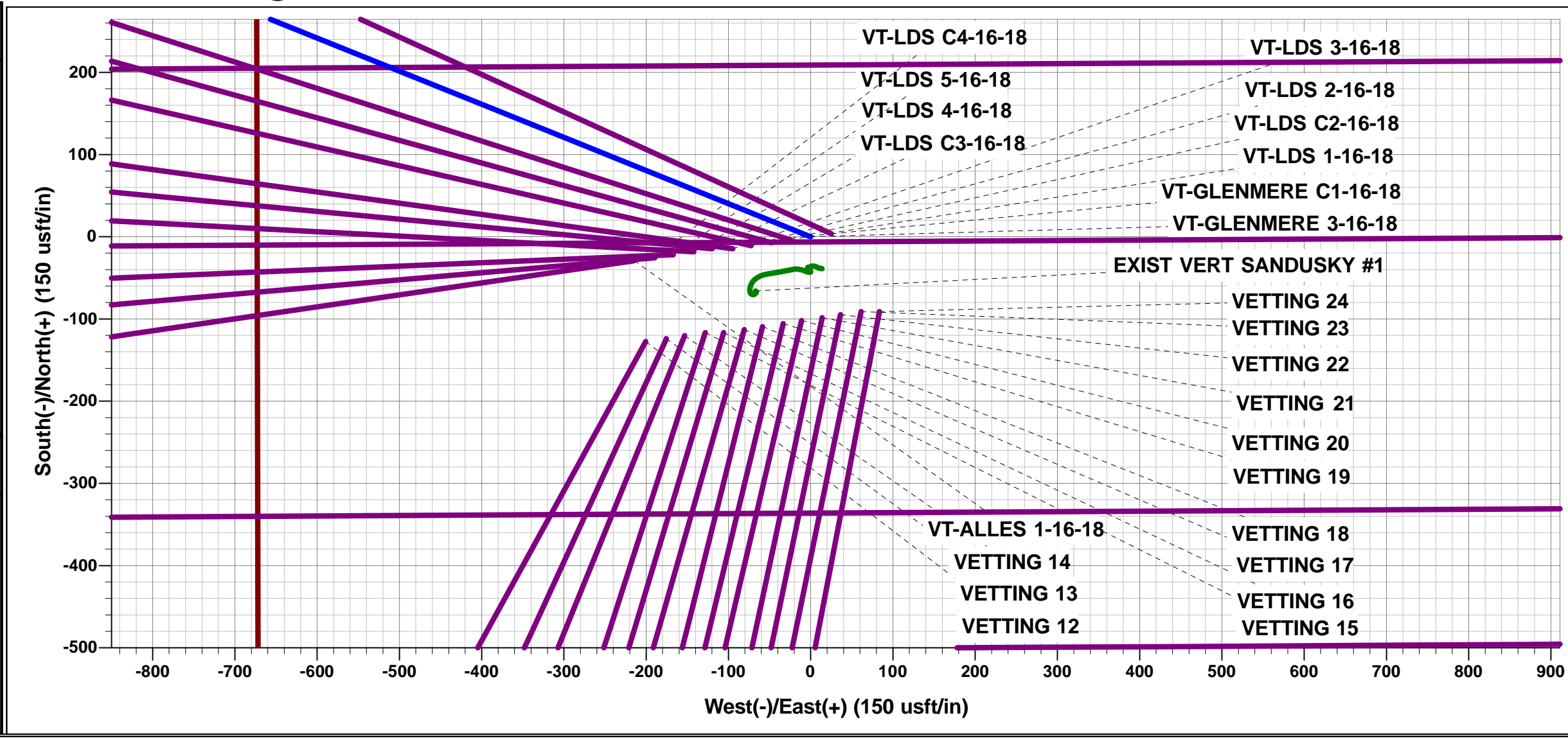




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SW NW SEC. 15 T5N R65W 6th P.M.
Well: VT-GLENMERE 3-16-18
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
1000.0	1000.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1600.0	1604.5	12.09	291.94	23.7	-58.9	61.0	63.5	9 5/8" SURFACE CASING	
1663.6	1669.5	12.09	291.94	28.8	-71.6	74.0	77.2	END OF TANGENT	
2727.1	2840.0	35.50	291.94	204.1	-506.6	524.1	546.1	EOB TO 35.5° INC	
6514.8	7492.5	35.50	291.94	1213.5	-3012.6	3116.8	3247.9	KOP (10°/100ft DGLG)	
6817.2	8135.3	71.08	291.94	1419.8	-3524.8	3646.7	3800.0	START BUILD & TURN	
6864.0	8418.2	90.00	270.50	1472.1	-3795.9	3921.6	4077.7	LANDING PNT - VT-GLENMERE 3-16-18	
6864.0	20703.3	90.00	270.50	1579.1	-16080.5	16157.8	16362.8	BHL - VT-GLENMERE 3-16-18	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - VT-GLENMERE 3-16-18	6864.0	1472.1	-3795.9	40.405370	-104.670090
BHL - VT-GLENMERE 3-16-18	6864.0	1579.1	-16080.5	40.405650	-104.714200



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3582.0	3890.0	PARKMAN
4131.0	4564.4	SUSSEX
4822.0	5413.2	SHANNON
6702.0	7789.0	SHARON SPRINGS
6722.0	7841.9	NIOBRARA
6864.0	8418.2	NIO B TARGET

PROPOSED LOCAL COORDINATES		
SHL: 1879ft FNL & 673ft FWL of Sec 15		
LP: 401ft FNL & 2193ft FWL of Sec 16		
BHL: 330ft FNL & 460ft FWL of Sec 18		

T

M

Azimuths to True North

Magnetic North: 8.32°

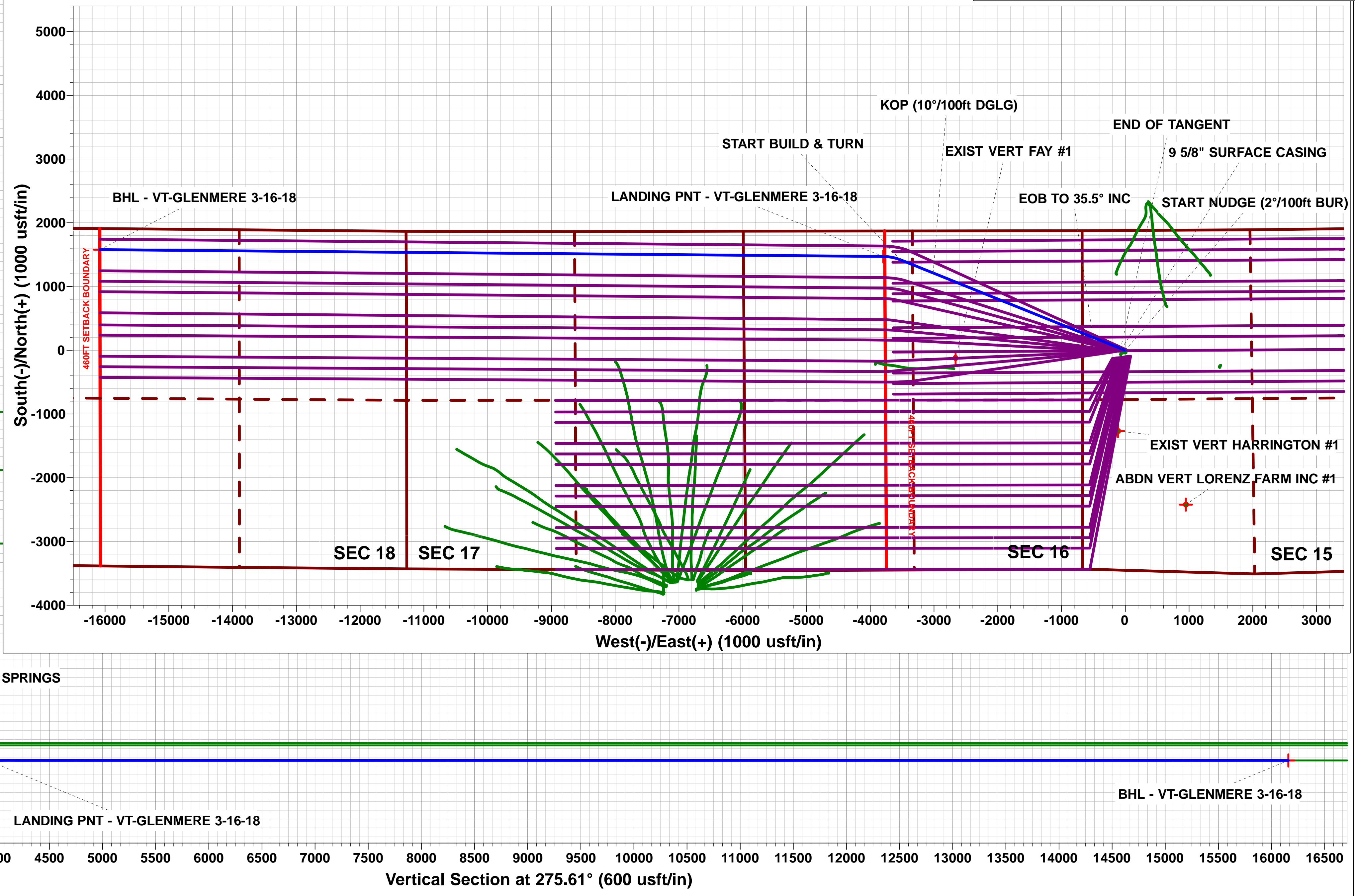
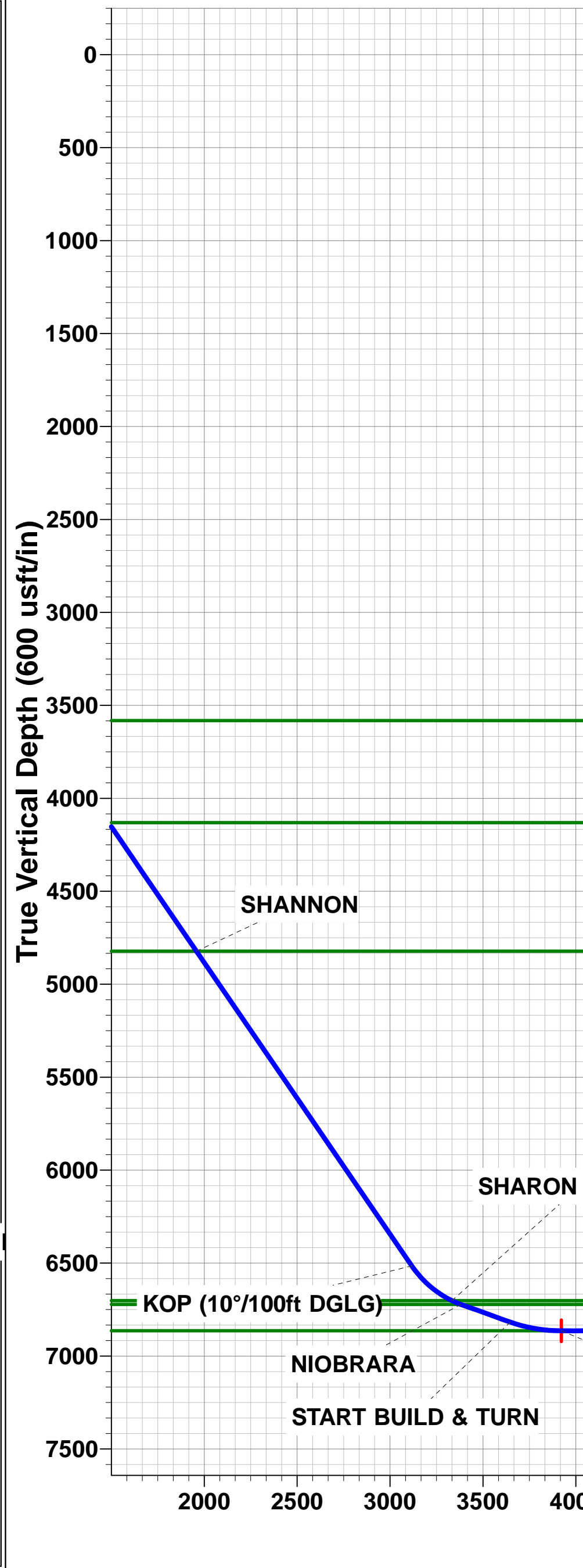
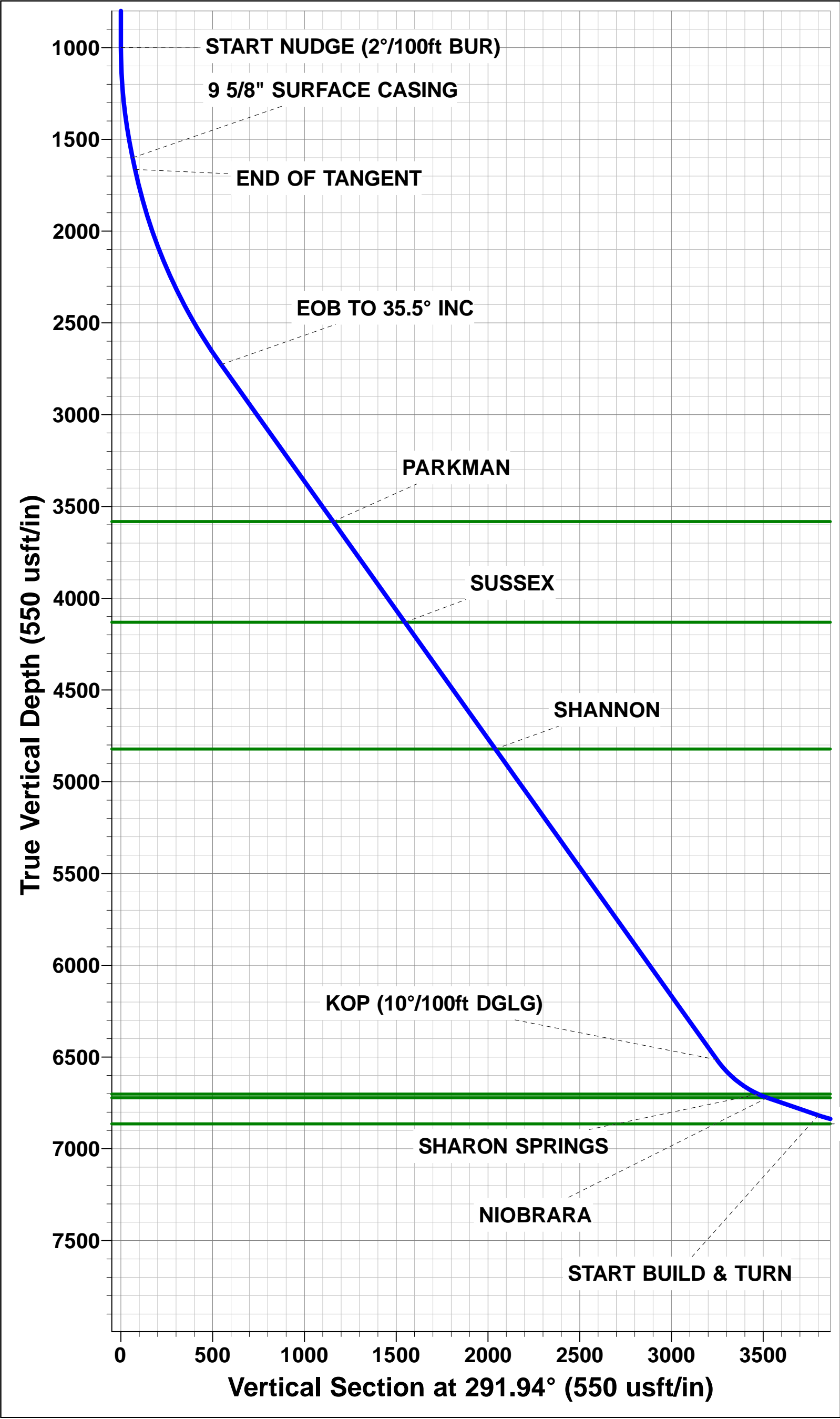
Magnetic Field

Strength: 52585.4snT

Dip Angle: 66.91°

Date: 20/11/2015

Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE 3-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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	VT-GLENMERE 3-16-18		
Well Position	+N/-S	127.5 usft	Northing:
	+E/-W	200.5 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	20/11/2015	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	275.61

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	-4,663.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	-3,663.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,604.5	12.09	291.94	1,600.0	-3,063.0	23.7	-58.9	2.00	2.00	0.00	291.94	
1,669.5	12.09	291.94	1,663.6	-2,999.4	28.8	-71.6	0.00	0.00	0.00	0.00	
2,840.0	35.50	291.94	2,727.1	-1,935.9	204.1	-506.6	2.00	2.00	0.00	0.00	
7,492.5	35.50	291.94	6,514.8	1,851.8	1,213.5	-3,012.6	0.00	0.00	0.00	0.00	
7,848.3	71.08	291.94	6,724.1	2,061.1	1,318.4	-3,273.0	10.00	10.00	0.00	0.00	
8,135.3	71.08	291.94	6,817.2	2,154.2	1,419.8	-3,524.8	0.00	0.00	0.00	0.00	
8,418.2	90.00	270.50	6,864.0	2,201.0	1,472.1	-3,795.9	10.00	6.69	-7.58	-50.45	LANDING PNT - V1
20,703.3	90.00	270.50	6,864.0	2,201.0	1,579.1	-16,080.5	0.00	0.00	0.00	0.00	BHL - VT-GLENME

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE 3-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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	4,663.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,563.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,463.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,363.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,263.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,163.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,063.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,963.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,863.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,763.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,000.0	0.00	0.00	1,000.0	3,663.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	291.94	1,100.0	3,563.02	0.7	-1.6	1.7	2.00	2.00	0.00
1,200.0	4.00	291.94	1,199.8	3,463.16	2.6	-6.5	6.7	2.00	2.00	0.00
1,300.0	6.00	291.94	1,299.5	3,363.55	5.9	-14.6	15.1	2.00	2.00	0.00
1,400.0	8.00	291.94	1,398.7	3,264.30	10.4	-25.9	26.8	2.00	2.00	0.00
1,500.0	10.00	291.94	1,497.5	3,165.53	16.3	-40.4	41.8	2.00	2.00	0.00
1,600.0	12.00	291.94	1,595.6	3,067.38	23.4	-58.1	60.1	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,604.5	12.09	291.94	1,600.0	3,062.98	23.7	-58.9	61.0	1.99	1.99	0.00
END OF TANGENT										
1,669.5	12.09	291.94	1,663.6	2,999.42	28.8	-71.6	74.0	0.00	0.00	0.00
1,700.0	12.70	291.94	1,693.4	2,969.63	31.3	-77.6	80.3	2.00	2.00	0.00
1,800.0	14.70	291.94	1,790.5	2,872.48	40.1	-99.6	103.1	2.00	2.00	0.00
1,900.0	16.70	291.94	1,886.8	2,776.21	50.2	-124.7	129.0	2.00	2.00	0.00
2,000.0	18.70	291.94	1,982.0	2,680.95	61.6	-152.9	158.2	2.00	2.00	0.00
2,100.0	20.70	291.94	2,076.2	2,586.81	74.2	-184.2	190.5	2.00	2.00	0.00
2,200.0	22.70	291.94	2,169.1	2,493.90	88.0	-218.5	226.0	2.00	2.00	0.00
2,300.0	24.70	291.94	2,260.7	2,402.34	103.0	-255.7	264.6	2.00	2.00	0.00
2,400.0	26.70	291.94	2,350.8	2,312.24	119.2	-296.0	306.2	2.00	2.00	0.00
2,500.0	28.70	291.94	2,439.3	2,223.70	136.6	-339.1	350.8	2.00	2.00	0.00
2,600.0	30.70	291.94	2,526.2	2,136.84	155.1	-385.0	398.4	2.00	2.00	0.00
2,700.0	32.70	291.94	2,611.2	2,051.77	174.7	-433.8	448.8	2.00	2.00	0.00
2,800.0	34.70	291.94	2,694.4	1,968.58	195.5	-485.2	502.0	2.00	2.00	0.00
EOB TO 35.5° INC										
2,840.0	35.50	291.94	2,727.1	1,935.85	204.1	-506.6	524.1	2.00	2.00	0.00
2,900.0	35.50	291.94	2,776.0	1,887.00	217.1	-538.9	557.5	0.00	0.00	0.00
3,000.0	35.50	291.94	2,857.4	1,805.59	238.8	-592.8	613.3	0.00	0.00	0.00
3,100.0	35.50	291.94	2,938.8	1,724.18	260.5	-646.6	669.0	0.00	0.00	0.00
3,200.0	35.50	291.94	3,020.2	1,642.77	282.2	-700.5	724.7	0.00	0.00	0.00
3,300.0	35.50	291.94	3,101.6	1,561.36	303.9	-754.4	780.4	0.00	0.00	0.00
3,400.0	35.50	291.94	3,183.1	1,479.95	325.6	-808.2	836.2	0.00	0.00	0.00
3,500.0	35.50	291.94	3,264.5	1,398.53	347.3	-862.1	891.9	0.00	0.00	0.00
3,600.0	35.50	291.94	3,345.9	1,317.12	369.0	-916.0	947.6	0.00	0.00	0.00
3,700.0	35.50	291.94	3,427.3	1,235.71	390.7	-969.8	1,003.4	0.00	0.00	0.00
3,800.0	35.50	291.94	3,508.7	1,154.30	412.3	-1,023.7	1,059.1	0.00	0.00	0.00
PARKMAN										
3,890.0	35.50	291.94	3,582.0	1,081.00	431.9	-1,072.2	1,109.3	0.00	0.00	0.00
3,900.0	35.50	291.94	3,590.1	1,072.89	434.0	-1,077.5	1,114.8	0.00	0.00	0.00
4,000.0	35.50	291.94	3,671.5	991.48	455.7	-1,131.4	1,170.5	0.00	0.00	0.00
4,100.0	35.50	291.94	3,752.9	910.06	477.4	-1,185.3	1,226.3	0.00	0.00	0.00
4,200.0	35.50	291.94	3,834.3	828.65	499.1	-1,239.1	1,282.0	0.00	0.00	0.00
4,300.0	35.50	291.94	3,915.8	747.24	520.8	-1,293.0	1,337.7	0.00	0.00	0.00
4,400.0	35.50	291.94	3,997.2	665.83	542.5	-1,346.9	1,393.4	0.00	0.00	0.00

Planning Report



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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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	35.50	291.94	4,078.6	584.42	564.2	-1,400.7	1,449.2	0.00	0.00	0.00
SUSSEX										
4,564.4	35.50	291.94	4,131.0	532.00	578.2	-1,435.4	1,485.0	0.00	0.00	0.00
4,600.0	35.50	291.94	4,160.0	503.01	585.9	-1,454.6	1,504.9	0.00	0.00	0.00
4,700.0	35.50	291.94	4,241.4	421.60	607.6	-1,508.5	1,560.6	0.00	0.00	0.00
4,800.0	35.50	291.94	4,322.8	340.18	629.3	-1,562.3	1,616.3	0.00	0.00	0.00
4,900.0	35.50	291.94	4,404.2	258.77	651.0	-1,616.2	1,672.1	0.00	0.00	0.00
5,000.0	35.50	291.94	4,485.6	177.36	672.7	-1,670.1	1,727.8	0.00	0.00	0.00
5,100.0	35.50	291.94	4,567.1	95.95	694.4	-1,723.9	1,783.5	0.00	0.00	0.00
5,200.0	35.50	291.94	4,648.5	14.54	716.1	-1,777.8	1,839.3	0.00	0.00	0.00
5,300.0	35.50	291.94	4,729.9	-66.87	737.8	-1,831.6	1,895.0	0.00	0.00	0.00
5,400.0	35.50	291.94	4,811.3	-148.29	759.5	-1,885.5	1,950.7	0.00	0.00	0.00
SHANNON										
5,413.2	35.50	291.94	4,822.0	-159.00	762.4	-1,892.6	1,958.0	0.00	0.00	0.00
5,500.0	35.50	291.94	4,892.7	-229.70	781.2	-1,939.4	2,006.4	0.00	0.00	0.00
5,600.0	35.50	291.94	4,974.1	-311.11	802.9	-1,993.2	2,062.2	0.00	0.00	0.00
5,700.0	35.50	291.94	5,055.5	-392.52	824.6	-2,047.1	2,117.9	0.00	0.00	0.00
5,800.0	35.50	291.94	5,136.9	-473.93	846.3	-2,101.0	2,173.6	0.00	0.00	0.00
5,900.0	35.50	291.94	5,218.3	-555.34	868.0	-2,154.8	2,229.3	0.00	0.00	0.00
6,000.0	35.50	291.94	5,299.8	-636.75	889.7	-2,208.7	2,285.1	0.00	0.00	0.00
6,100.0	35.50	291.94	5,381.2	-718.17	911.4	-2,262.6	2,340.8	0.00	0.00	0.00
6,200.0	35.50	291.94	5,462.6	-799.58	933.1	-2,316.4	2,396.5	0.00	0.00	0.00
6,300.0	35.50	291.94	5,544.0	-880.99	954.8	-2,370.3	2,452.3	0.00	0.00	0.00
6,400.0	35.50	291.94	5,625.4	-962.40	976.5	-2,424.2	2,508.0	0.00	0.00	0.00
6,500.0	35.50	291.94	5,706.8	-1,043.81	998.2	-2,478.0	2,563.7	0.00	0.00	0.00
6,600.0	35.50	291.94	5,788.2	-1,125.22	1,019.9	-2,531.9	2,619.4	0.00	0.00	0.00
6,700.0	35.50	291.94	5,869.6	-1,206.64	1,041.6	-2,585.8	2,675.2	0.00	0.00	0.00
6,800.0	35.50	291.94	5,951.0	-1,288.05	1,063.3	-2,639.6	2,730.9	0.00	0.00	0.00
6,900.0	35.50	291.94	6,032.5	-1,369.46	1,085.0	-2,693.5	2,786.6	0.00	0.00	0.00
7,000.0	35.50	291.94	6,113.9	-1,450.87	1,106.7	-2,747.3	2,842.3	0.00	0.00	0.00
7,100.0	35.50	291.94	6,195.3	-1,532.28	1,128.4	-2,801.2	2,898.1	0.00	0.00	0.00
7,200.0	35.50	291.94	6,276.7	-1,613.69	1,150.0	-2,855.1	2,953.8	0.00	0.00	0.00
7,300.0	35.50	291.94	6,358.1	-1,695.11	1,171.7	-2,908.9	3,009.5	0.00	0.00	0.00
7,400.0	35.50	291.94	6,439.5	-1,776.52	1,193.4	-2,962.8	3,065.3	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
7,492.5	35.50	291.94	6,514.8	-1,851.82	1,213.5	-3,012.6	3,116.8	0.00	0.00	0.00
7,500.0	36.25	291.94	6,520.9	-1,857.90	1,215.2	-3,016.7	3,121.0	10.00	10.00	0.00
7,600.0	46.25	291.94	6,596.0	-1,932.99	1,239.8	-3,077.8	3,184.2	10.00	10.00	0.00
7,700.0	56.25	291.94	6,658.5	-1,995.50	1,268.9	-3,150.0	3,259.0	10.00	10.00	0.00
SHARON SPRINGS										
7,789.0	65.15	291.94	6,702.0	-2,039.00	1,297.8	-3,221.9	3,333.3	10.00	10.00	0.00
7,800.0	66.25	291.94	6,706.5	-2,043.54	1,301.6	-3,231.3	3,343.0	10.00	10.00	0.00
NIOBRARA										
7,841.9	70.44	291.94	6,722.0	-2,059.00	1,316.1	-3,267.4	3,380.4	10.00	10.00	0.00
7,848.3	71.08	291.94	6,724.1	-2,061.10	1,318.4	-3,273.0	3,386.1	10.00	10.00	0.00
7,900.0	71.08	291.94	6,740.9	-2,077.87	1,336.7	-3,318.3	3,433.1	0.00	0.00	0.00
8,000.0	71.08	291.94	6,773.3	-2,110.30	1,372.0	-3,406.1	3,523.9	0.00	0.00	0.00
8,100.0	71.08	291.94	6,805.7	-2,142.73	1,407.3	-3,493.8	3,614.6	0.00	0.00	0.00
START BUILD & TURN										
8,135.3	71.08	291.94	6,817.2	-2,154.17	1,419.8	-3,524.8	3,646.7	0.00	0.00	0.00
8,200.0	75.27	286.78	6,835.9	-2,172.91	1,440.3	-3,583.2	3,706.8	10.01	6.48	-7.97
8,300.0	81.94	279.18	6,855.7	-2,192.68	1,462.2	-3,678.6	3,803.9	10.00	6.67	-7.60
8,400.0	88.75	271.83	6,863.8	-2,200.80	1,471.7	-3,777.7	3,903.5	10.00	6.81	-7.35

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE 3-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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)
LANDING PNT - VT-GLENMERE 3-16-18 - NIO B TARGET										
8,418.2	90.00	270.50	6,864.0	-2,201.00	1,472.1	-3,795.9	3,921.6	10.00	6.84	-7.29
8,500.0	90.00	270.50	6,864.0	-2,201.00	1,472.8	-3,877.7	4,003.1	0.00	0.00	0.00
8,600.0	90.00	270.50	6,864.0	-2,201.00	1,473.7	-3,977.7	4,102.7	0.00	0.00	0.00
8,700.0	90.00	270.50	6,864.0	-2,201.00	1,474.6	-4,077.7	4,202.3	0.00	0.00	0.00
8,800.0	90.00	270.50	6,864.0	-2,201.00	1,475.4	-4,177.7	4,301.9	0.00	0.00	0.00
8,900.0	90.00	270.50	6,864.0	-2,201.00	1,476.3	-4,277.7	4,401.5	0.00	0.00	0.00
9,000.0	90.00	270.50	6,864.0	-2,201.00	1,477.2	-4,377.7	4,501.1	0.00	0.00	0.00
9,100.0	90.00	270.50	6,864.0	-2,201.00	1,478.1	-4,477.7	4,600.7	0.00	0.00	0.00
9,200.0	90.00	270.50	6,864.0	-2,201.00	1,478.9	-4,577.7	4,700.3	0.00	0.00	0.00
9,300.0	90.00	270.50	6,864.0	-2,201.00	1,479.8	-4,677.7	4,799.9	0.00	0.00	0.00
9,400.0	90.00	270.50	6,864.0	-2,201.00	1,480.7	-4,777.7	4,899.5	0.00	0.00	0.00
9,500.0	90.00	270.50	6,864.0	-2,201.00	1,481.5	-4,877.7	4,999.1	0.00	0.00	0.00
9,600.0	90.00	270.50	6,864.0	-2,201.00	1,482.4	-4,977.7	5,098.7	0.00	0.00	0.00
9,700.0	90.00	270.50	6,864.0	-2,201.00	1,483.3	-5,077.7	5,198.3	0.00	0.00	0.00
9,800.0	90.00	270.50	6,864.0	-2,201.00	1,484.1	-5,177.6	5,297.9	0.00	0.00	0.00
9,900.0	90.00	270.50	6,864.0	-2,201.00	1,485.0	-5,277.6	5,397.5	0.00	0.00	0.00
10,000.0	90.00	270.50	6,864.0	-2,201.00	1,485.9	-5,377.6	5,497.1	0.00	0.00	0.00
10,100.0	90.00	270.50	6,864.0	-2,201.00	1,486.8	-5,477.6	5,596.7	0.00	0.00	0.00
10,200.0	90.00	270.50	6,864.0	-2,201.00	1,487.6	-5,577.6	5,696.3	0.00	0.00	0.00
10,300.0	90.00	270.50	6,864.0	-2,201.00	1,488.5	-5,677.6	5,795.9	0.00	0.00	0.00
10,400.0	90.00	270.50	6,864.0	-2,201.00	1,489.4	-5,777.6	5,895.5	0.00	0.00	0.00
10,500.0	90.00	270.50	6,864.0	-2,201.00	1,490.2	-5,877.6	5,995.1	0.00	0.00	0.00
10,600.0	90.00	270.50	6,864.0	-2,201.00	1,491.1	-5,977.6	6,094.7	0.00	0.00	0.00
10,700.0	90.00	270.50	6,864.0	-2,201.00	1,492.0	-6,077.6	6,194.3	0.00	0.00	0.00
10,800.0	90.00	270.50	6,864.0	-2,201.00	1,492.9	-6,177.6	6,293.9	0.00	0.00	0.00
10,900.0	90.00	270.50	6,864.0	-2,201.00	1,493.7	-6,277.6	6,393.5	0.00	0.00	0.00
11,000.0	90.00	270.50	6,864.0	-2,201.00	1,494.6	-6,377.6	6,493.1	0.00	0.00	0.00
11,100.0	90.00	270.50	6,864.0	-2,201.00	1,495.5	-6,477.6	6,592.7	0.00	0.00	0.00
11,200.0	90.00	270.50	6,864.0	-2,201.00	1,496.3	-6,577.6	6,692.3	0.00	0.00	0.00
11,300.0	90.00	270.50	6,864.0	-2,201.00	1,497.2	-6,677.6	6,791.9	0.00	0.00	0.00
11,400.0	90.00	270.50	6,864.0	-2,201.00	1,498.1	-6,777.6	6,891.5	0.00	0.00	0.00
11,500.0	90.00	270.50	6,864.0	-2,201.00	1,498.9	-6,877.6	6,991.1	0.00	0.00	0.00
11,600.0	90.00	270.50	6,864.0	-2,201.00	1,499.8	-6,977.6	7,090.8	0.00	0.00	0.00
11,700.0	90.00	270.50	6,864.0	-2,201.00	1,500.7	-7,077.6	7,190.4	0.00	0.00	0.00
11,800.0	90.00	270.50	6,864.0	-2,201.00	1,501.6	-7,177.6	7,290.0	0.00	0.00	0.00
11,900.0	90.00	270.50	6,864.0	-2,201.00	1,502.4	-7,277.6	7,389.6	0.00	0.00	0.00
12,000.0	90.00	270.50	6,864.0	-2,201.00	1,503.3	-7,377.6	7,489.2	0.00	0.00	0.00
12,100.0	90.00	270.50	6,864.0	-2,201.00	1,504.2	-7,477.6	7,588.8	0.00	0.00	0.00
12,200.0	90.00	270.50	6,864.0	-2,201.00	1,505.0	-7,577.6	7,688.4	0.00	0.00	0.00
12,300.0	90.00	270.50	6,864.0	-2,201.00	1,505.9	-7,677.6	7,788.0	0.00	0.00	0.00
12,400.0	90.00	270.50	6,864.0	-2,201.00	1,506.8	-7,777.5	7,887.6	0.00	0.00	0.00
12,500.0	90.00	270.50	6,864.0	-2,201.00	1,507.7	-7,877.5	7,987.2	0.00	0.00	0.00
12,600.0	90.00	270.50	6,864.0	-2,201.00	1,508.5	-7,977.5	8,086.8	0.00	0.00	0.00
12,700.0	90.00	270.50	6,864.0	-2,201.00	1,509.4	-8,077.5	8,186.4	0.00	0.00	0.00
12,800.0	90.00	270.50	6,864.0	-2,201.00	1,510.3	-8,177.5	8,286.0	0.00	0.00	0.00
12,900.0	90.00	270.50	6,864.0	-2,201.00	1,511.1	-8,277.5	8,385.6	0.00	0.00	0.00
13,000.0	90.00	270.50	6,864.0	-2,201.00	1,512.0	-8,377.5	8,485.2	0.00	0.00	0.00
13,100.0	90.00	270.50	6,864.0	-2,201.00	1,512.9	-8,477.5	8,584.8	0.00	0.00	0.00
13,200.0	90.00	270.50	6,864.0	-2,201.00	1,513.7	-8,577.5	8,684.4	0.00	0.00	0.00
13,300.0	90.00	270.50	6,864.0	-2,201.00	1,514.6	-8,677.5	8,784.0	0.00	0.00	0.00
13,400.0	90.00	270.50	6,864.0	-2,201.00	1,515.5	-8,777.5	8,883.6	0.00	0.00	0.00
13,500.0	90.00	270.50	6,864.0	-2,201.00	1,516.4	-8,877.5	8,983.2	0.00	0.00	0.00
13,600.0	90.00	270.50	6,864.0	-2,201.00	1,517.2	-8,977.5	9,082.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE 3-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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)
13,700.0	90.00	270.50	6,864.0	-2,201.00	1,518.1	-9,077.5	9,182.4	0.00	0.00	0.00
13,800.0	90.00	270.50	6,864.0	-2,201.00	1,519.0	-9,177.5	9,282.0	0.00	0.00	0.00
13,900.0	90.00	270.50	6,864.0	-2,201.00	1,519.8	-9,277.5	9,381.6	0.00	0.00	0.00
14,000.0	90.00	270.50	6,864.0	-2,201.00	1,520.7	-9,377.5	9,481.2	0.00	0.00	0.00
14,100.0	90.00	270.50	6,864.0	-2,201.00	1,521.6	-9,477.5	9,580.8	0.00	0.00	0.00
14,200.0	90.00	270.50	6,864.0	-2,201.00	1,522.5	-9,577.5	9,680.4	0.00	0.00	0.00
14,300.0	90.00	270.50	6,864.0	-2,201.00	1,523.3	-9,677.5	9,780.0	0.00	0.00	0.00
14,400.0	90.00	270.50	6,864.0	-2,201.00	1,524.2	-9,777.5	9,879.6	0.00	0.00	0.00
14,500.0	90.00	270.50	6,864.0	-2,201.00	1,525.1	-9,877.5	9,979.2	0.00	0.00	0.00
14,600.0	90.00	270.50	6,864.0	-2,201.00	1,525.9	-9,977.5	10,078.8	0.00	0.00	0.00
14,700.0	90.00	270.50	6,864.0	-2,201.00	1,526.8	-10,077.5	10,178.4	0.00	0.00	0.00
14,800.0	90.00	270.50	6,864.0	-2,201.00	1,527.7	-10,177.5	10,278.0	0.00	0.00	0.00
14,900.0	90.00	270.50	6,864.0	-2,201.00	1,528.5	-10,277.5	10,377.6	0.00	0.00	0.00
15,000.0	90.00	270.50	6,864.0	-2,201.00	1,529.4	-10,377.4	10,477.2	0.00	0.00	0.00
15,100.0	90.00	270.50	6,864.0	-2,201.00	1,530.3	-10,477.4	10,576.8	0.00	0.00	0.00
15,200.0	90.00	270.50	6,864.0	-2,201.00	1,531.2	-10,577.4	10,676.4	0.00	0.00	0.00
15,300.0	90.00	270.50	6,864.0	-2,201.00	1,532.0	-10,677.4	10,776.0	0.00	0.00	0.00
15,400.0	90.00	270.50	6,864.0	-2,201.00	1,532.9	-10,777.4	10,875.7	0.00	0.00	0.00
15,500.0	90.00	270.50	6,864.0	-2,201.00	1,533.8	-10,877.4	10,975.3	0.00	0.00	0.00
15,600.0	90.00	270.50	6,864.0	-2,201.00	1,534.6	-10,977.4	11,074.9	0.00	0.00	0.00
15,700.0	90.00	270.50	6,864.0	-2,201.00	1,535.5	-11,077.4	11,174.5	0.00	0.00	0.00
15,800.0	90.00	270.50	6,864.0	-2,201.00	1,536.4	-11,177.4	11,274.1	0.00	0.00	0.00
15,900.0	90.00	270.50	6,864.0	-2,201.00	1,537.3	-11,277.4	11,373.7	0.00	0.00	0.00
16,000.0	90.00	270.50	6,864.0	-2,201.00	1,538.1	-11,377.4	11,473.3	0.00	0.00	0.00
16,100.0	90.00	270.50	6,864.0	-2,201.00	1,539.0	-11,477.4	11,572.9	0.00	0.00	0.00
16,200.0	90.00	270.50	6,864.0	-2,201.00	1,539.9	-11,577.4	11,672.5	0.00	0.00	0.00
16,300.0	90.00	270.50	6,864.0	-2,201.00	1,540.7	-11,677.4	11,772.1	0.00	0.00	0.00
16,400.0	90.00	270.50	6,864.0	-2,201.00	1,541.6	-11,777.4	11,871.7	0.00	0.00	0.00
16,500.0	90.00	270.50	6,864.0	-2,201.00	1,542.5	-11,877.4	11,971.3	0.00	0.00	0.00
16,600.0	90.00	270.50	6,864.0	-2,201.00	1,543.3	-11,977.4	12,070.9	0.00	0.00	0.00
16,700.0	90.00	270.50	6,864.0	-2,201.00	1,544.2	-12,077.4	12,170.5	0.00	0.00	0.00
16,800.0	90.00	270.50	6,864.0	-2,201.00	1,545.1	-12,177.4	12,270.1	0.00	0.00	0.00
16,900.0	90.00	270.50	6,864.0	-2,201.00	1,546.0	-12,277.4	12,369.7	0.00	0.00	0.00
17,000.0	90.00	270.50	6,864.0	-2,201.00	1,546.8	-12,377.4	12,469.3	0.00	0.00	0.00
17,100.0	90.00	270.50	6,864.0	-2,201.00	1,547.7	-12,477.4	12,568.9	0.00	0.00	0.00
17,200.0	90.00	270.50	6,864.0	-2,201.00	1,548.6	-12,577.4	12,668.5	0.00	0.00	0.00
17,300.0	90.00	270.50	6,864.0	-2,201.00	1,549.4	-12,677.4	12,768.1	0.00	0.00	0.00
17,400.0	90.00	270.50	6,864.0	-2,201.00	1,550.3	-12,777.4	12,867.7	0.00	0.00	0.00
17,500.0	90.00	270.50	6,864.0	-2,201.00	1,551.2	-12,877.4	12,967.3	0.00	0.00	0.00
17,600.0	90.00	270.50	6,864.0	-2,201.00	1,552.1	-12,977.4	13,066.9	0.00	0.00	0.00
17,700.0	90.00	270.50	6,864.0	-2,201.00	1,552.9	-13,077.3	13,166.5	0.00	0.00	0.00
17,800.0	90.00	270.50	6,864.0	-2,201.00	1,553.8	-13,177.3	13,266.1	0.00	0.00	0.00
17,900.0	90.00	270.50	6,864.0	-2,201.00	1,554.7	-13,277.3	13,365.7	0.00	0.00	0.00
18,000.0	90.00	270.50	6,864.0	-2,201.00	1,555.5	-13,377.3	13,465.3	0.00	0.00	0.00
18,100.0	90.00	270.50	6,864.0	-2,201.00	1,556.4	-13,477.3	13,564.9	0.00	0.00	0.00
18,200.0	90.00	270.50	6,864.0	-2,201.00	1,557.3	-13,577.3	13,664.5	0.00	0.00	0.00
18,300.0	90.00	270.50	6,864.0	-2,201.00	1,558.1	-13,677.3	13,764.1	0.00	0.00	0.00
18,400.0	90.00	270.50	6,864.0	-2,201.00	1,559.0	-13,777.3	13,863.7	0.00	0.00	0.00
18,500.0	90.00	270.50	6,864.0	-2,201.00	1,559.9	-13,877.3	13,963.3	0.00	0.00	0.00
18,600.0	90.00	270.50	6,864.0	-2,201.00	1,560.8	-13,977.3	14,062.9	0.00	0.00	0.00
18,700.0	90.00	270.50	6,864.0	-2,201.00	1,561.6	-14,077.3	14,162.5	0.00	0.00	0.00
18,800.0	90.00	270.50	6,864.0	-2,201.00	1,562.5	-14,177.3	14,262.1	0.00	0.00	0.00
18,900.0	90.00	270.50	6,864.0	-2,201.00	1,563.4	-14,277.3	14,361.7	0.00	0.00	0.00
19,000.0	90.00	270.50	6,864.0	-2,201.00	1,564.2	-14,377.3	14,461.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE 3-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE 3-16-18	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)
19,100.0	90.00	270.50	6,864.0	-2,201.00	1,565.1	-14,477.3	14,560.9	0.00	0.00	0.00
19,200.0	90.00	270.50	6,864.0	-2,201.00	1,566.0	-14,577.3	14,660.6	0.00	0.00	0.00
19,300.0	90.00	270.50	6,864.0	-2,201.00	1,566.9	-14,677.3	14,760.2	0.00	0.00	0.00
19,400.0	90.00	270.50	6,864.0	-2,201.00	1,567.7	-14,777.3	14,859.8	0.00	0.00	0.00
19,500.0	90.00	270.50	6,864.0	-2,201.00	1,568.6	-14,877.3	14,959.4	0.00	0.00	0.00
19,600.0	90.00	270.50	6,864.0	-2,201.00	1,569.5	-14,977.3	15,059.0	0.00	0.00	0.00
19,700.0	90.00	270.50	6,864.0	-2,201.00	1,570.3	-15,077.3	15,158.6	0.00	0.00	0.00
19,800.0	90.00	270.50	6,864.0	-2,201.00	1,571.2	-15,177.3	15,258.2	0.00	0.00	0.00
19,900.0	90.00	270.50	6,864.0	-2,201.00	1,572.1	-15,277.3	15,357.8	0.00	0.00	0.00
20,000.0	90.00	270.50	6,864.0	-2,201.00	1,572.9	-15,377.3	15,457.4	0.00	0.00	0.00
20,100.0	90.00	270.50	6,864.0	-2,201.00	1,573.8	-15,477.3	15,557.0	0.00	0.00	0.00
20,200.0	90.00	270.50	6,864.0	-2,201.00	1,574.7	-15,577.3	15,656.6	0.00	0.00	0.00
20,300.0	90.00	270.50	6,864.0	-2,201.00	1,575.6	-15,677.2	15,756.2	0.00	0.00	0.00
20,400.0	90.00	270.50	6,864.0	-2,201.00	1,576.4	-15,777.2	15,855.8	0.00	0.00	0.00
20,500.0	90.00	270.50	6,864.0	-2,201.00	1,577.3	-15,877.2	15,955.4	0.00	0.00	0.00
20,600.0	90.00	270.50	6,864.0	-2,201.00	1,578.2	-15,977.2	16,055.0	0.00	0.00	0.00
20,700.0	90.00	270.50	6,864.0	-2,201.00	1,579.0	-16,077.2	16,154.6	0.00	0.00	0.00
BHL - VT-GLENMERE 3-16-18										
20,703.3	90.00	270.50	6,864.0	-2,201.00	1,579.1	-16,080.5	16,157.8	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,890.0	3,582.0	PARKMAN			
4,564.4	4,131.0	SUSSEX			
5,413.2	4,822.0	SHANNON			
7,789.0	6,702.0	SHARON SPRINGS			
7,841.9	6,722.0	NIOBRARA			
8,418.2	6,864.0	NIO B TARGET			

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,604.5	1,600.0	23.7	-58.9	9 5/8" SURFACE CASING
1,669.5	1,663.6	28.8	-71.6	END OF TANGENT
2,840.0	2,727.1	204.1	-506.6	EOB TO 35.5° INC
7,492.5	6,514.8	1,213.5	-3,012.6	KOP (10°/100ft DGLG)
8,135.3	6,817.2	1,419.8	-3,524.8	START BUILD & TURN
8,418.2	6,864.0	1,472.1	-3,795.9	LANDING PNT - VT-GLENMERE 3-16-18
20,703.3	6,864.0	1,579.1	-16,080.5	BHL - VT-GLENMERE 3-16-18