

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

VT-GLENMERE C1-16-18

ORIGINAL WELLBORE

09 March, 2016

Plan: PROPOSAL #2

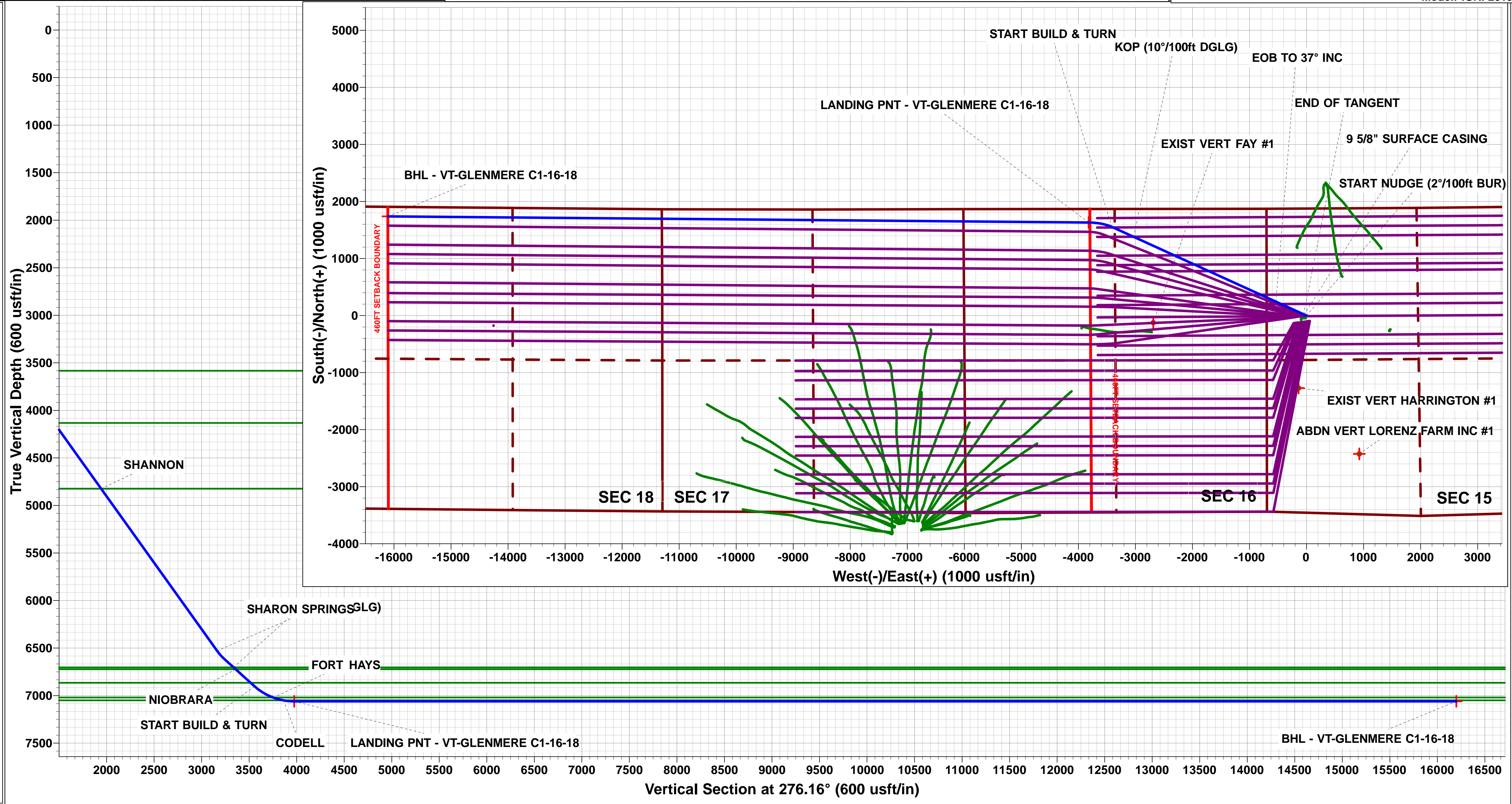
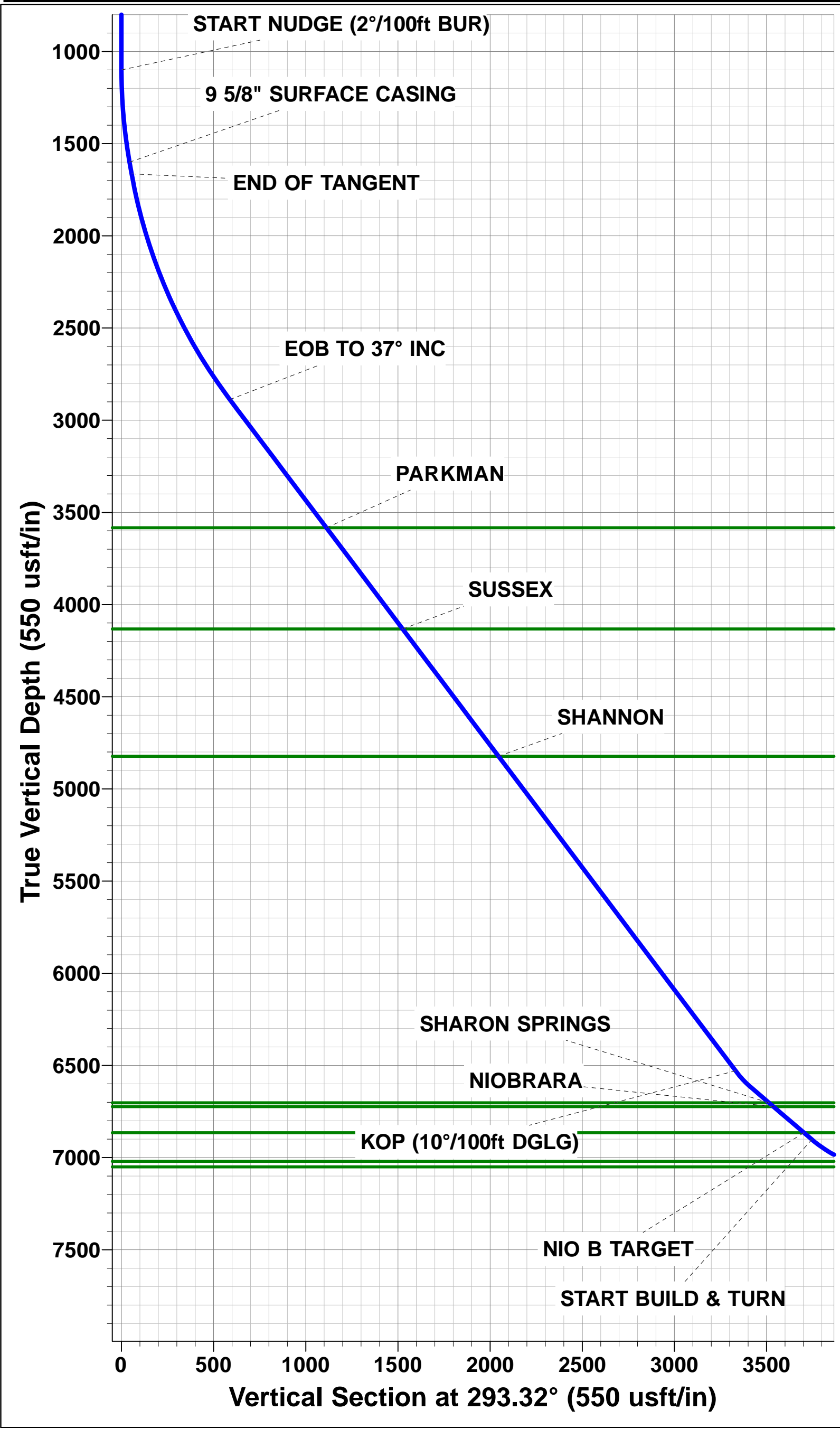
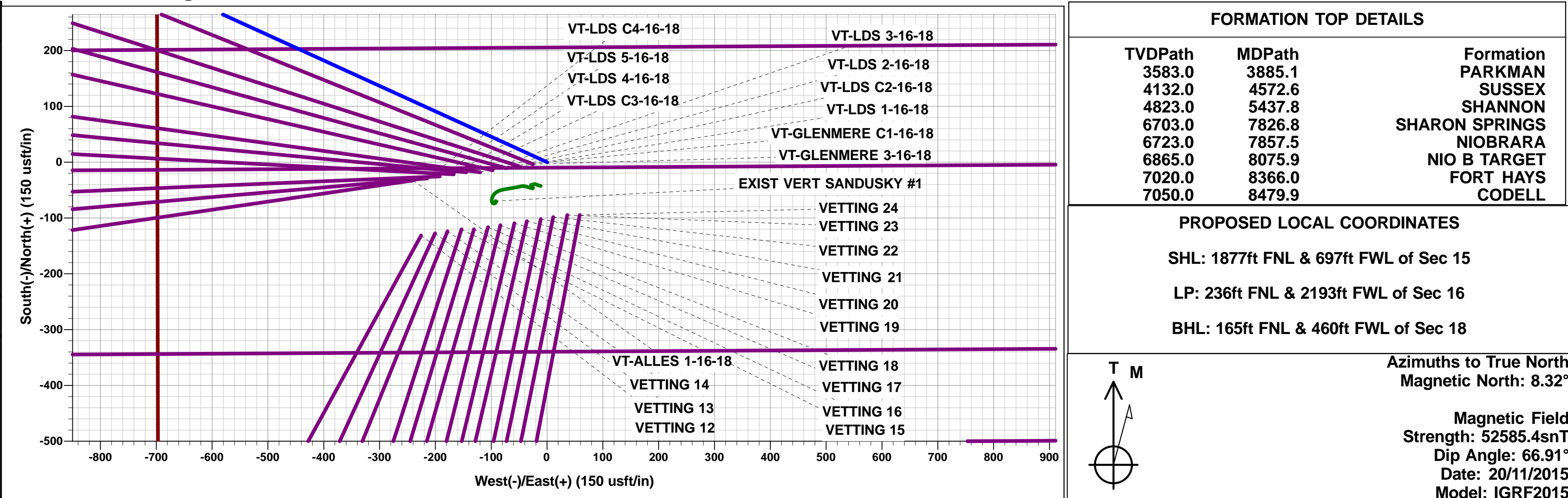




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SW NW SEC. 15 T5N R65W 6th P.M.
Well: VT-GLENMERE C1-16-18
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	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	294.50	18.2	-40.0	41.7	44.0	9 5/8" SURFACE CASING	
1664.0	1667.6	10.05	294.50	22.9	-50.3	52.5	55.3	END OF TANGENT	
2888.1	3015.0	37.00	294.50	243.9	-535.2	558.3	588.2	EOB TO 37° INC	
6529.1	7574.0	37.00	294.50	1381.7	-3031.9	3162.7	3331.9	KOP (10°/100ft DGLG)	
6901.6	8132.2	49.44	294.50	1553.6	-3409.1	3556.2	3746.5	START BUILD & TURN	
7060.0	8592.7	90.00	270.50	1632.4	-3821.0	3974.2	4168.6	LANDING PNT - VT-GLENMERE C1-16-18	
7060.0	20877.6	90.00	270.50	1739.4	-16105.4	16199.0	16453.5	BHL - VT-GLENMERE C1-16-18	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - VT-GLENMERE C1-16-18	7060.0	1632.4	-3821.0	40.405820	-104.670090
BHL - VT-GLENMERE C1-16-18	7060.0	1739.4	-16105.4	40.406100	-104.714200



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE C1-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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 C1-16-18		
Well Position	+N/-S	131.1 usft	Northing:
	+E/-W	225.6 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	40.401340
		Longitude:	-104.656370
		Ground Level:	4,647.0 usft

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	276.16

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	
1,100.0	0.00	0.00	1,100.0	-3,563.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,602.6	10.05	294.50	1,600.0	-3,063.0	18.2	-40.0	2.00	2.00	0.00	294.50	
1,667.6	10.05	294.50	1,664.0	-2,999.0	22.9	-50.3	0.00	0.00	0.00	0.00	
3,015.0	37.00	294.50	2,888.1	-1,774.9	243.9	-535.2	2.00	2.00	0.00	0.00	
7,574.0	37.00	294.50	6,529.1	1,866.1	1,381.7	-3,031.9	0.00	0.00	0.00	0.00	
7,698.4	49.44	294.50	6,619.5	1,956.5	1,416.9	-3,109.2	10.00	10.00	0.00	-0.02	
8,132.2	49.44	294.50	6,901.6	2,238.6	1,553.6	-3,409.1	0.00	0.00	0.00	0.00	
8,592.7	90.00	270.50	7,060.0	2,397.0	1,632.4	-3,821.0	10.00	8.81	-5.21	-34.39	LANDING PNT - V1
20,877.6	90.00	270.50	7,060.0	2,397.0	1,739.4	-16,105.4	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 C1-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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
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
START NUDGE (2°/100ft BUR)										
1,100.0	0.00	0.00	1,100.0	3,563.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	2.00	294.50	1,200.0	3,463.02	0.7	-1.6	1.7	2.00	2.00	0.00
1,300.0	4.00	294.50	1,299.8	3,363.16	2.9	-6.4	6.6	2.00	2.00	0.00
1,400.0	6.00	294.50	1,399.5	3,263.55	6.5	-14.3	14.9	2.00	2.00	0.00
1,500.0	8.00	294.50	1,498.7	3,164.30	11.6	-25.4	26.5	2.00	2.00	0.00
1,600.0	10.00	294.50	1,597.5	3,065.53	18.0	-39.6	41.3	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,602.6	10.05	294.50	1,600.0	3,062.97	18.2	-40.0	41.7	1.98	1.98	0.00
END OF TANGENT										
1,667.6	10.05	294.50	1,664.0	2,998.97	22.9	-50.3	52.5	0.00	0.00	0.00
1,700.0	10.70	294.50	1,695.9	2,967.10	25.4	-55.6	58.1	2.00	2.00	0.00
1,800.0	12.70	294.50	1,793.8	2,869.18	33.8	-74.1	77.3	2.00	2.00	0.00
1,900.0	14.70	294.50	1,891.0	2,772.03	43.6	-95.7	99.8	2.00	2.00	0.00
2,000.0	16.70	294.50	1,987.2	2,675.77	54.8	-120.3	125.5	2.00	2.00	0.00
2,100.0	18.70	294.50	2,082.5	2,580.51	67.4	-147.9	154.3	2.00	2.00	0.00
2,200.0	20.70	294.50	2,176.6	2,486.37	81.4	-178.6	186.3	2.00	2.00	0.00
2,300.0	22.70	294.50	2,269.5	2,393.46	96.7	-212.3	221.4	2.00	2.00	0.00
2,400.0	24.70	294.50	2,361.1	2,301.90	113.4	-248.8	259.6	2.00	2.00	0.00
2,500.0	26.70	294.50	2,451.2	2,211.79	131.4	-288.3	300.7	2.00	2.00	0.00
2,600.0	28.70	294.50	2,539.7	2,123.26	150.7	-330.6	344.8	2.00	2.00	0.00
2,700.0	30.70	294.50	2,626.6	2,036.40	171.2	-375.7	391.9	2.00	2.00	0.00
2,800.0	32.70	294.50	2,711.7	1,951.32	193.0	-423.5	441.8	2.00	2.00	0.00
2,900.0	34.70	294.50	2,794.9	1,868.13	216.0	-474.0	494.4	2.00	2.00	0.00
3,000.0	36.70	294.50	2,876.1	1,786.93	240.2	-527.1	549.8	2.00	2.00	0.00
EOB TO 37° INC										
3,015.0	37.00	294.50	2,888.1	1,774.92	243.9	-535.2	558.3	2.00	2.00	0.00
3,100.0	37.00	294.50	2,956.0	1,707.04	265.1	-581.8	606.9	0.00	0.00	0.00
3,200.0	37.00	294.50	3,035.8	1,627.18	290.1	-636.6	664.0	0.00	0.00	0.00
3,300.0	37.00	294.50	3,115.7	1,547.31	315.1	-691.3	721.2	0.00	0.00	0.00
3,400.0	37.00	294.50	3,195.6	1,467.45	340.0	-746.1	778.3	0.00	0.00	0.00
3,500.0	37.00	294.50	3,275.4	1,387.59	365.0	-800.8	835.4	0.00	0.00	0.00
3,600.0	37.00	294.50	3,355.3	1,307.72	389.9	-855.6	892.5	0.00	0.00	0.00
3,700.0	37.00	294.50	3,435.1	1,227.86	414.9	-910.4	949.7	0.00	0.00	0.00
3,800.0	37.00	294.50	3,515.0	1,148.00	439.8	-965.1	1,006.8	0.00	0.00	0.00
PARKMAN										
3,885.1	37.00	294.50	3,583.0	1,080.00	461.1	-1,011.8	1,055.4	0.00	0.00	0.00
3,900.0	37.00	294.50	3,594.9	1,068.13	464.8	-1,019.9	1,063.9	0.00	0.00	0.00
4,000.0	37.00	294.50	3,674.7	988.27	489.8	-1,074.7	1,121.0	0.00	0.00	0.00
4,100.0	37.00	294.50	3,754.6	908.41	514.7	-1,129.4	1,178.2	0.00	0.00	0.00
4,200.0	37.00	294.50	3,834.5	828.54	539.7	-1,184.2	1,235.3	0.00	0.00	0.00
4,300.0	37.00	294.50	3,914.3	748.68	564.6	-1,239.0	1,292.4	0.00	0.00	0.00
4,400.0	37.00	294.50	3,994.2	668.81	589.6	-1,293.7	1,349.5	0.00	0.00	0.00

Planning Report



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Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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	37.00	294.50	4,074.0	588.95	614.5	-1,348.5	1,406.7	0.00	0.00	0.00
SUSSEX										
4,572.6	37.00	294.50	4,132.0	531.00	632.6	-1,388.2	1,448.1	0.00	0.00	0.00
4,600.0	37.00	294.50	4,153.9	509.09	639.5	-1,403.2	1,463.8	0.00	0.00	0.00
4,700.0	37.00	294.50	4,233.8	429.22	664.5	-1,458.0	1,520.9	0.00	0.00	0.00
4,800.0	37.00	294.50	4,313.6	349.36	689.4	-1,512.8	1,578.0	0.00	0.00	0.00
4,900.0	37.00	294.50	4,393.5	269.50	714.4	-1,567.5	1,635.2	0.00	0.00	0.00
5,000.0	37.00	294.50	4,473.4	189.63	739.3	-1,622.3	1,692.3	0.00	0.00	0.00
5,100.0	37.00	294.50	4,553.2	109.77	764.3	-1,677.1	1,749.4	0.00	0.00	0.00
5,200.0	37.00	294.50	4,633.1	29.91	789.2	-1,731.8	1,806.5	0.00	0.00	0.00
5,300.0	37.00	294.50	4,713.0	-49.96	814.2	-1,786.6	1,863.7	0.00	0.00	0.00
5,400.0	37.00	294.50	4,792.8	-129.82	839.1	-1,841.3	1,920.8	0.00	0.00	0.00
SHANNON										
5,437.8	37.00	294.50	4,823.0	-160.00	848.6	-1,862.0	1,942.4	0.00	0.00	0.00
5,500.0	37.00	294.50	4,872.7	-209.68	864.1	-1,896.1	1,977.9	0.00	0.00	0.00
5,600.0	37.00	294.50	4,952.5	-289.55	889.1	-1,950.9	2,035.1	0.00	0.00	0.00
5,700.0	37.00	294.50	5,032.4	-369.41	914.0	-2,005.6	2,092.2	0.00	0.00	0.00
5,800.0	37.00	294.50	5,112.3	-449.28	939.0	-2,060.4	2,149.3	0.00	0.00	0.00
5,900.0	37.00	294.50	5,192.1	-529.14	963.9	-2,115.2	2,206.4	0.00	0.00	0.00
6,000.0	37.00	294.50	5,272.0	-609.00	988.9	-2,169.9	2,263.6	0.00	0.00	0.00
6,100.0	37.00	294.50	5,351.9	-688.87	1,013.8	-2,224.7	2,320.7	0.00	0.00	0.00
6,200.0	37.00	294.50	5,431.7	-768.73	1,038.8	-2,279.4	2,377.8	0.00	0.00	0.00
6,300.0	37.00	294.50	5,511.6	-848.59	1,063.8	-2,334.2	2,434.9	0.00	0.00	0.00
6,400.0	37.00	294.50	5,591.5	-928.46	1,088.7	-2,389.0	2,492.1	0.00	0.00	0.00
6,500.0	37.00	294.50	5,671.3	-1,008.32	1,113.7	-2,443.7	2,549.2	0.00	0.00	0.00
6,600.0	37.00	294.50	5,751.2	-1,088.18	1,138.6	-2,498.5	2,606.3	0.00	0.00	0.00
6,700.0	37.00	294.50	5,831.0	-1,168.05	1,163.6	-2,553.3	2,663.4	0.00	0.00	0.00
6,800.0	37.00	294.50	5,910.9	-1,247.91	1,188.5	-2,608.0	2,720.6	0.00	0.00	0.00
6,900.0	37.00	294.50	5,990.8	-1,327.77	1,213.5	-2,662.8	2,777.7	0.00	0.00	0.00
7,000.0	37.00	294.50	6,070.6	-1,407.64	1,238.5	-2,717.5	2,834.8	0.00	0.00	0.00
7,100.0	37.00	294.50	6,150.5	-1,487.50	1,263.4	-2,772.3	2,891.9	0.00	0.00	0.00
7,200.0	37.00	294.50	6,230.4	-1,567.36	1,288.4	-2,827.1	2,949.1	0.00	0.00	0.00
7,300.0	37.00	294.50	6,310.2	-1,647.23	1,313.3	-2,881.8	3,006.2	0.00	0.00	0.00
7,400.0	37.00	294.50	6,390.1	-1,727.09	1,338.3	-2,936.6	3,063.3	0.00	0.00	0.00
7,500.0	37.00	294.50	6,470.0	-1,806.96	1,363.2	-2,991.4	3,120.4	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
7,574.0	37.00	294.50	6,529.1	-1,866.05	1,381.7	-3,031.9	3,162.7	0.00	0.00	0.00
7,600.0	39.60	294.50	6,549.5	-1,886.46	1,388.4	-3,046.5	3,178.0	10.00	10.00	0.00
7,698.4	49.44	294.50	6,619.5	-1,956.50	1,416.9	-3,109.2	3,243.4	10.00	10.00	0.00
7,700.0	49.44	294.50	6,620.6	-1,957.57	1,417.5	-3,110.4	3,244.6	0.00	0.00	0.00
7,800.0	49.44	294.50	6,685.6	-2,022.60	1,449.0	-3,179.5	3,316.7	0.00	0.00	0.00
SHARON SPRINGS										
7,826.8	49.44	294.50	6,703.0	-2,040.00	1,457.4	-3,198.0	3,336.0	0.00	0.00	0.00
NIOBRARA										
7,857.5	49.44	294.50	6,723.0	-2,060.00	1,467.1	-3,219.2	3,358.2	0.00	0.00	0.00
7,900.0	49.44	294.50	6,750.6	-2,087.63	1,480.5	-3,248.6	3,388.8	0.00	0.00	0.00
8,000.0	49.44	294.50	6,815.7	-2,152.66	1,512.0	-3,317.8	3,460.9	0.00	0.00	0.00
NIO B TARGET										
8,075.9	49.44	294.50	6,865.0	-2,202.00	1,535.9	-3,370.2	3,515.6	0.00	0.00	0.00
8,100.0	49.44	294.50	6,880.7	-2,217.70	1,543.5	-3,386.9	3,533.0	0.00	0.00	0.00
START BUILD & TURN										
8,132.2	49.44	294.50	6,901.6	-2,238.64	1,553.6	-3,409.1	3,556.2	0.00	0.00	0.00
8,200.0	55.13	289.83	6,943.1	-2,280.11	1,573.7	-3,458.8	3,607.8	10.00	8.39	-6.88

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE C1-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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)
8,300.0	63.79	284.02	6,993.9	-2,330.91	1,598.6	-3,541.1	3,692.3	10.00	8.66	-5.81
FORT HAYS										
8,366.0	69.62	280.66	7,020.0	-2,357.00	1,611.5	-3,600.3	3,752.5	10.00	8.84	-5.09
8,400.0	72.65	279.03	7,031.0	-2,368.00	1,617.0	-3,632.0	3,784.6	10.00	8.91	-4.79
CODELL										
8,479.9	79.82	275.39	7,050.0	-2,387.00	1,626.7	-3,708.9	3,862.2	10.00	8.97	-4.56
8,500.0	81.63	274.51	7,053.2	-2,390.24	1,628.4	-3,728.7	3,882.0	10.00	9.01	-4.41
LANDING PNT - VT-GLENMERE C1-16-18										
8,592.7	90.00	270.50	7,060.0	-2,397.00	1,632.4	-3,821.0	3,974.2	10.00	9.03	-4.32
8,600.0	90.00	270.50	7,060.0	-2,397.00	1,632.5	-3,828.3	3,981.4	0.04	0.03	-0.02
8,700.0	90.00	270.50	7,060.0	-2,397.00	1,633.4	-3,928.3	4,080.9	0.00	0.00	0.00
8,800.0	90.00	270.50	7,060.0	-2,397.00	1,634.2	-4,028.3	4,180.4	0.00	0.00	0.00
8,900.0	90.00	270.50	7,060.0	-2,397.00	1,635.1	-4,128.2	4,279.9	0.00	0.00	0.00
9,000.0	90.00	270.50	7,060.0	-2,397.00	1,636.0	-4,228.2	4,379.5	0.00	0.00	0.00
9,100.0	90.00	270.50	7,060.0	-2,397.00	1,636.8	-4,328.2	4,479.0	0.00	0.00	0.00
9,200.0	90.00	270.50	7,060.0	-2,397.00	1,637.7	-4,428.2	4,578.5	0.00	0.00	0.00
9,300.0	90.00	270.50	7,060.0	-2,397.00	1,638.6	-4,528.2	4,678.0	0.00	0.00	0.00
9,400.0	90.00	270.50	7,060.0	-2,397.00	1,639.5	-4,628.2	4,777.5	0.00	0.00	0.00
9,500.0	90.00	270.50	7,060.0	-2,397.00	1,640.3	-4,728.2	4,877.0	0.00	0.00	0.00
9,600.0	90.00	270.50	7,060.0	-2,397.00	1,641.2	-4,828.2	4,976.5	0.00	0.00	0.00
9,700.0	90.00	270.50	7,060.0	-2,397.00	1,642.1	-4,928.2	5,076.0	0.00	0.00	0.00
9,800.0	90.00	270.50	7,060.0	-2,397.00	1,642.9	-5,028.2	5,175.6	0.00	0.00	0.00
9,900.0	90.00	270.50	7,060.0	-2,397.00	1,643.8	-5,128.2	5,275.1	0.00	0.00	0.00
10,000.0	90.00	270.50	7,060.0	-2,397.00	1,644.7	-5,228.2	5,374.6	0.00	0.00	0.00
10,100.0	90.00	270.50	7,060.0	-2,397.00	1,645.5	-5,328.2	5,474.1	0.00	0.00	0.00
10,200.0	90.00	270.50	7,060.0	-2,397.00	1,646.4	-5,428.2	5,573.6	0.00	0.00	0.00
10,300.0	90.00	270.50	7,060.0	-2,397.00	1,647.3	-5,528.2	5,673.1	0.00	0.00	0.00
10,400.0	90.00	270.50	7,060.0	-2,397.00	1,648.2	-5,628.2	5,772.6	0.00	0.00	0.00
10,500.0	90.00	270.50	7,060.0	-2,397.00	1,649.0	-5,728.2	5,872.1	0.00	0.00	0.00
10,600.0	90.00	270.50	7,060.0	-2,397.00	1,649.9	-5,828.2	5,971.6	0.00	0.00	0.00
10,700.0	90.00	270.50	7,060.0	-2,397.00	1,650.8	-5,928.2	6,071.2	0.00	0.00	0.00
10,800.0	90.00	270.50	7,060.0	-2,397.00	1,651.6	-6,028.2	6,170.7	0.00	0.00	0.00
10,900.0	90.00	270.50	7,060.0	-2,397.00	1,652.5	-6,128.2	6,270.2	0.00	0.00	0.00
11,000.0	90.00	270.50	7,060.0	-2,397.00	1,653.4	-6,228.2	6,369.7	0.00	0.00	0.00
11,100.0	90.00	270.50	7,060.0	-2,397.00	1,654.3	-6,328.2	6,469.2	0.00	0.00	0.00
11,200.0	90.00	270.50	7,060.0	-2,397.00	1,655.1	-6,428.2	6,568.7	0.00	0.00	0.00
11,300.0	90.00	270.50	7,060.0	-2,397.00	1,656.0	-6,528.2	6,668.2	0.00	0.00	0.00
11,400.0	90.00	270.50	7,060.0	-2,397.00	1,656.9	-6,628.2	6,767.7	0.00	0.00	0.00
11,500.0	90.00	270.50	7,060.0	-2,397.00	1,657.7	-6,728.1	6,867.3	0.00	0.00	0.00
11,600.0	90.00	270.50	7,060.0	-2,397.00	1,658.6	-6,828.1	6,966.8	0.00	0.00	0.00
11,700.0	90.00	270.50	7,060.0	-2,397.00	1,659.5	-6,928.1	7,066.3	0.00	0.00	0.00
11,800.0	90.00	270.50	7,060.0	-2,397.00	1,660.3	-7,028.1	7,165.8	0.00	0.00	0.00
11,900.0	90.00	270.50	7,060.0	-2,397.00	1,661.2	-7,128.1	7,265.3	0.00	0.00	0.00
12,000.0	90.00	270.50	7,060.0	-2,397.00	1,662.1	-7,228.1	7,364.8	0.00	0.00	0.00
12,100.0	90.00	270.50	7,060.0	-2,397.00	1,663.0	-7,328.1	7,464.3	0.00	0.00	0.00
12,200.0	90.00	270.50	7,060.0	-2,397.00	1,663.8	-7,428.1	7,563.8	0.00	0.00	0.00
12,300.0	90.00	270.50	7,060.0	-2,397.00	1,664.7	-7,528.1	7,663.3	0.00	0.00	0.00
12,400.0	90.00	270.50	7,060.0	-2,397.00	1,665.6	-7,628.1	7,762.9	0.00	0.00	0.00
12,500.0	90.00	270.50	7,060.0	-2,397.00	1,666.4	-7,728.1	7,862.4	0.00	0.00	0.00
12,600.0	90.00	270.50	7,060.0	-2,397.00	1,667.3	-7,828.1	7,961.9	0.00	0.00	0.00
12,700.0	90.00	270.50	7,060.0	-2,397.00	1,668.2	-7,928.1	8,061.4	0.00	0.00	0.00
12,800.0	90.00	270.50	7,060.0	-2,397.00	1,669.1	-8,028.1	8,160.9	0.00	0.00	0.00
12,900.0	90.00	270.50	7,060.0	-2,397.00	1,669.9	-8,128.1	8,260.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE C1-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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)
13,000.0	90.00	270.50	7,060.0	-2,397.00	1,670.8	-8,228.1	8,359.9	0.00	0.00	0.00
13,100.0	90.00	270.50	7,060.0	-2,397.00	1,671.7	-8,328.1	8,459.4	0.00	0.00	0.00
13,200.0	90.00	270.50	7,060.0	-2,397.00	1,672.5	-8,428.1	8,558.9	0.00	0.00	0.00
13,300.0	90.00	270.50	7,060.0	-2,397.00	1,673.4	-8,528.1	8,658.5	0.00	0.00	0.00
13,400.0	90.00	270.50	7,060.0	-2,397.00	1,674.3	-8,628.1	8,758.0	0.00	0.00	0.00
13,500.0	90.00	270.50	7,060.0	-2,397.00	1,675.2	-8,728.1	8,857.5	0.00	0.00	0.00
13,600.0	90.00	270.50	7,060.0	-2,397.00	1,676.0	-8,828.1	8,957.0	0.00	0.00	0.00
13,700.0	90.00	270.50	7,060.0	-2,397.00	1,676.9	-8,928.1	9,056.5	0.00	0.00	0.00
13,800.0	90.00	270.50	7,060.0	-2,397.00	1,677.8	-9,028.1	9,156.0	0.00	0.00	0.00
13,900.0	90.00	270.50	7,060.0	-2,397.00	1,678.6	-9,128.1	9,255.5	0.00	0.00	0.00
14,000.0	90.00	270.50	7,060.0	-2,397.00	1,679.5	-9,228.1	9,355.0	0.00	0.00	0.00
14,100.0	90.00	270.50	7,060.0	-2,397.00	1,680.4	-9,328.1	9,454.6	0.00	0.00	0.00
14,200.0	90.00	270.50	7,060.0	-2,397.00	1,681.2	-9,428.0	9,554.1	0.00	0.00	0.00
14,300.0	90.00	270.50	7,060.0	-2,397.00	1,682.1	-9,528.0	9,653.6	0.00	0.00	0.00
14,400.0	90.00	270.50	7,060.0	-2,397.00	1,683.0	-9,628.0	9,753.1	0.00	0.00	0.00
14,500.0	90.00	270.50	7,060.0	-2,397.00	1,683.9	-9,728.0	9,852.6	0.00	0.00	0.00
14,600.0	90.00	270.50	7,060.0	-2,397.00	1,684.7	-9,828.0	9,952.1	0.00	0.00	0.00
14,700.0	90.00	270.50	7,060.0	-2,397.00	1,685.6	-9,928.0	10,051.6	0.00	0.00	0.00
14,800.0	90.00	270.50	7,060.0	-2,397.00	1,686.5	-10,028.0	10,151.1	0.00	0.00	0.00
14,900.0	90.00	270.50	7,060.0	-2,397.00	1,687.3	-10,128.0	10,250.6	0.00	0.00	0.00
15,000.0	90.00	270.50	7,060.0	-2,397.00	1,688.2	-10,228.0	10,350.2	0.00	0.00	0.00
15,100.0	90.00	270.50	7,060.0	-2,397.00	1,689.1	-10,328.0	10,449.7	0.00	0.00	0.00
15,200.0	90.00	270.50	7,060.0	-2,397.00	1,690.0	-10,428.0	10,549.2	0.00	0.00	0.00
15,300.0	90.00	270.50	7,060.0	-2,397.00	1,690.8	-10,528.0	10,648.7	0.00	0.00	0.00
15,400.0	90.00	270.50	7,060.0	-2,397.00	1,691.7	-10,628.0	10,748.2	0.00	0.00	0.00
15,500.0	90.00	270.50	7,060.0	-2,397.00	1,692.6	-10,728.0	10,847.7	0.00	0.00	0.00
15,600.0	90.00	270.50	7,060.0	-2,397.00	1,693.4	-10,828.0	10,947.2	0.00	0.00	0.00
15,700.0	90.00	270.50	7,060.0	-2,397.00	1,694.3	-10,928.0	11,046.7	0.00	0.00	0.00
15,800.0	90.00	270.50	7,060.0	-2,397.00	1,695.2	-11,028.0	11,146.2	0.00	0.00	0.00
15,900.0	90.00	270.50	7,060.0	-2,397.00	1,696.0	-11,128.0	11,245.8	0.00	0.00	0.00
16,000.0	90.00	270.50	7,060.0	-2,397.00	1,696.9	-11,228.0	11,345.3	0.00	0.00	0.00
16,100.0	90.00	270.50	7,060.0	-2,397.00	1,697.8	-11,328.0	11,444.8	0.00	0.00	0.00
16,200.0	90.00	270.50	7,060.0	-2,397.00	1,698.7	-11,428.0	11,544.3	0.00	0.00	0.00
16,300.0	90.00	270.50	7,060.0	-2,397.00	1,699.5	-11,528.0	11,643.8	0.00	0.00	0.00
16,400.0	90.00	270.50	7,060.0	-2,397.00	1,700.4	-11,628.0	11,743.3	0.00	0.00	0.00
16,500.0	90.00	270.50	7,060.0	-2,397.00	1,701.3	-11,728.0	11,842.8	0.00	0.00	0.00
16,600.0	90.00	270.50	7,060.0	-2,397.00	1,702.1	-11,828.0	11,942.3	0.00	0.00	0.00
16,700.0	90.00	270.50	7,060.0	-2,397.00	1,703.0	-11,928.0	12,041.9	0.00	0.00	0.00
16,800.0	90.00	270.50	7,060.0	-2,397.00	1,703.9	-12,027.9	12,141.4	0.00	0.00	0.00
16,900.0	90.00	270.50	7,060.0	-2,397.00	1,704.8	-12,127.9	12,240.9	0.00	0.00	0.00
17,000.0	90.00	270.50	7,060.0	-2,397.00	1,705.6	-12,227.9	12,340.4	0.00	0.00	0.00
17,100.0	90.00	270.50	7,060.0	-2,397.00	1,706.5	-12,327.9	12,439.9	0.00	0.00	0.00
17,200.0	90.00	270.50	7,060.0	-2,397.00	1,707.4	-12,427.9	12,539.4	0.00	0.00	0.00
17,300.0	90.00	270.50	7,060.0	-2,397.00	1,708.2	-12,527.9	12,638.9	0.00	0.00	0.00
17,400.0	90.00	270.50	7,060.0	-2,397.00	1,709.1	-12,627.9	12,738.4	0.00	0.00	0.00
17,500.0	90.00	270.50	7,060.0	-2,397.00	1,710.0	-12,727.9	12,837.9	0.00	0.00	0.00
17,600.0	90.00	270.50	7,060.0	-2,397.00	1,710.8	-12,827.9	12,937.5	0.00	0.00	0.00
17,700.0	90.00	270.50	7,060.0	-2,397.00	1,711.7	-12,927.9	13,037.0	0.00	0.00	0.00
17,800.0	90.00	270.50	7,060.0	-2,397.00	1,712.6	-13,027.9	13,136.5	0.00	0.00	0.00
17,900.0	90.00	270.50	7,060.0	-2,397.00	1,713.5	-13,127.9	13,236.0	0.00	0.00	0.00
18,000.0	90.00	270.50	7,060.0	-2,397.00	1,714.3	-13,227.9	13,335.5	0.00	0.00	0.00
18,100.0	90.00	270.50	7,060.0	-2,397.00	1,715.2	-13,327.9	13,435.0	0.00	0.00	0.00
18,200.0	90.00	270.50	7,060.0	-2,397.00	1,716.1	-13,427.9	13,534.5	0.00	0.00	0.00
18,300.0	90.00	270.50	7,060.0	-2,397.00	1,716.9	-13,527.9	13,634.0	0.00	0.00	0.00

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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)
18,400.0	90.00	270.50	7,060.0	-2,397.00	1,717.8	-13,627.9	13,733.5	0.00	0.00	0.00
18,500.0	90.00	270.50	7,060.0	-2,397.00	1,718.7	-13,727.9	13,833.1	0.00	0.00	0.00
18,600.0	90.00	270.50	7,060.0	-2,397.00	1,719.6	-13,827.9	13,932.6	0.00	0.00	0.00
18,700.0	90.00	270.50	7,060.0	-2,397.00	1,720.4	-13,927.9	14,032.1	0.00	0.00	0.00
18,800.0	90.00	270.50	7,060.0	-2,397.00	1,721.3	-14,027.9	14,131.6	0.00	0.00	0.00
18,900.0	90.00	270.50	7,060.0	-2,397.00	1,722.2	-14,127.9	14,231.1	0.00	0.00	0.00
19,000.0	90.00	270.50	7,060.0	-2,397.00	1,723.0	-14,227.9	14,330.6	0.00	0.00	0.00
19,100.0	90.00	270.50	7,060.0	-2,397.00	1,723.9	-14,327.9	14,430.1	0.00	0.00	0.00
19,200.0	90.00	270.50	7,060.0	-2,397.00	1,724.8	-14,427.9	14,529.6	0.00	0.00	0.00
19,300.0	90.00	270.50	7,060.0	-2,397.00	1,725.7	-14,527.9	14,629.2	0.00	0.00	0.00
19,400.0	90.00	270.50	7,060.0	-2,397.00	1,726.5	-14,627.8	14,728.7	0.00	0.00	0.00
19,500.0	90.00	270.50	7,060.0	-2,397.00	1,727.4	-14,727.8	14,828.2	0.00	0.00	0.00
19,600.0	90.00	270.50	7,060.0	-2,397.00	1,728.3	-14,827.8	14,927.7	0.00	0.00	0.00
19,700.0	90.00	270.50	7,060.0	-2,397.00	1,729.1	-14,927.8	15,027.2	0.00	0.00	0.00
19,800.0	90.00	270.50	7,060.0	-2,397.00	1,730.0	-15,027.8	15,126.7	0.00	0.00	0.00
19,900.0	90.00	270.50	7,060.0	-2,397.00	1,730.9	-15,127.8	15,226.2	0.00	0.00	0.00
20,000.0	90.00	270.50	7,060.0	-2,397.00	1,731.7	-15,227.8	15,325.7	0.00	0.00	0.00
20,100.0	90.00	270.50	7,060.0	-2,397.00	1,732.6	-15,327.8	15,425.2	0.00	0.00	0.00
20,200.0	90.00	270.50	7,060.0	-2,397.00	1,733.5	-15,427.8	15,524.8	0.00	0.00	0.00
20,300.0	90.00	270.50	7,060.0	-2,397.00	1,734.4	-15,527.8	15,624.3	0.00	0.00	0.00
20,400.0	90.00	270.50	7,060.0	-2,397.00	1,735.2	-15,627.8	15,723.8	0.00	0.00	0.00
20,500.0	90.00	270.50	7,060.0	-2,397.00	1,736.1	-15,727.8	15,823.3	0.00	0.00	0.00
20,600.0	90.00	270.50	7,060.0	-2,397.00	1,737.0	-15,827.8	15,922.8	0.00	0.00	0.00
20,700.0	90.00	270.50	7,060.0	-2,397.00	1,737.8	-15,927.8	16,022.3	0.00	0.00	0.00
20,800.0	90.00	270.50	7,060.0	-2,397.00	1,738.7	-16,027.8	16,121.8	0.00	0.00	0.00
BHL - VT-GLENMERE C1-16-18										
20,877.6	90.00	270.50	7,060.0	-2,397.00	1,739.4	-16,105.4	16,199.0	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,885.1	3,583.0	PARKMAN			
4,572.6	4,132.0	SUSSEX			
5,437.8	4,823.0	SHANNON			
7,826.8	6,703.0	SHARON SPRINGS			
7,857.5	6,723.0	NIOBRARA			
8,075.9	6,865.0	NIO B TARGET			
8,366.0	7,020.0	FORT HAYS			
8,479.9	7,050.0	CODELL			

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well VT-GLENMERE C1-16-18
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4663.0usft (Original Well Elev)
Site:	SW NW SEC. 15 T5N R65W 6th P.M.	North Reference:	True
Well:	VT-GLENMERE C1-16-18	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	18.2	-40.0	9 5/8" SURFACE CASING
1,667.6	1,664.0	22.9	-50.3	END OF TANGENT
3,015.0	2,888.1	243.9	-535.2	EOB TO 37° INC
7,574.0	6,529.1	1,381.7	-3,031.9	KOP (10°/100ft DGLG)
8,132.2	6,901.6	1,553.6	-3,409.1	START BUILD & TURN
8,592.7	7,060.0	1,632.4	-3,821.0	LANDING PNT - VT-GLENMERE C1-16-18
20,877.6	7,060.0	1,739.4	-16,105.4	BHL - VT-GLENMERE C1-16-18