



Project: WELD COUNTY, COLORADO
Site: SW SE SEC. 26 T5N R65W 6th P.M.
Well: BUNTING 26Q-304
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

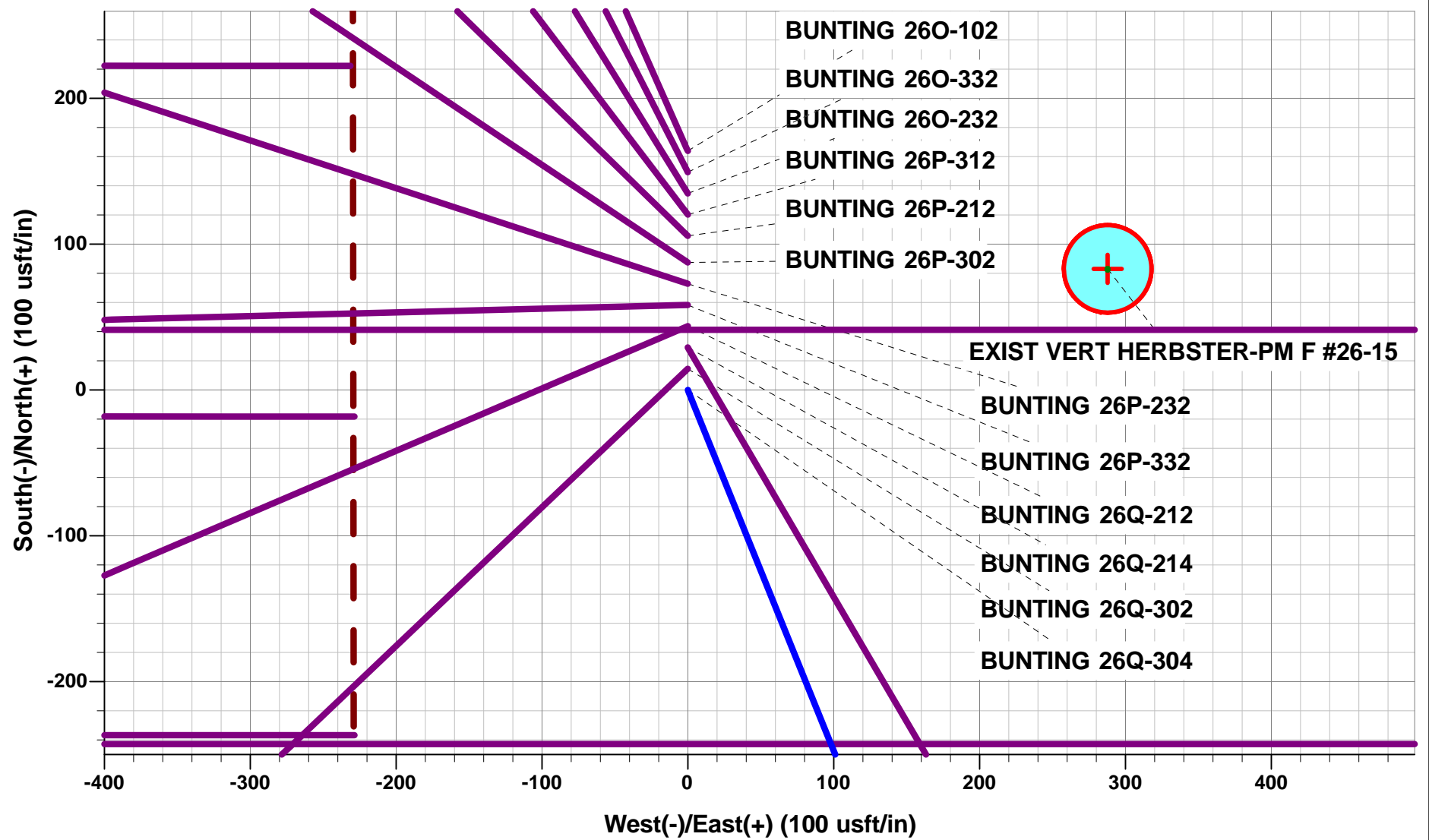


ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 730ft FSL & 2405ft FEL of Sec 26
300.0	300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
895.8	900.2	12.00	158.01	-58.1	23.5	-19.3	62.6	EOB TO 12° INC
3237.9	3294.6	12.00	158.01	-519.8	209.9	-172.4	560.6	END OF TANGENT
3833.7	3894.8	0.00	0.00	-577.9	233.4	-191.7	623.3	EOD TO VERTICAL
6383.7	6444.8	0.00	0.00	-577.9	233.4	-191.7	623.3	KOP (8°/100ft BUR)
6581.1	6644.8	16.00	270.00	-577.9	205.7	-164.0	651.0	START 12°/100ft BUR
6927.0	7263.3	90.22	270.00	-577.9	-255.1	295.6	1111.8	HZ LP *NEW*: 149.5ft FSL & 2612ft FWL of Sec 26
6897.0	15106.4	90.22	270.00	-577.9	-8098.2	8118.8	8954.9	BHL: 130ft FSL & 50ft FWL of Sec 27

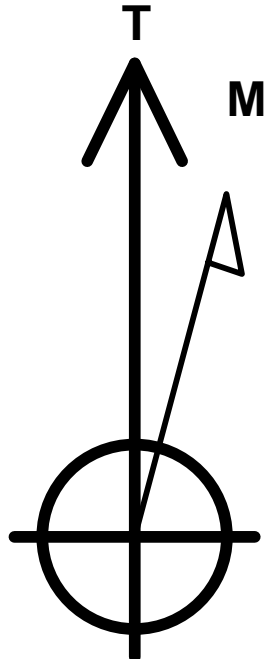
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BUNTING 26Q-304	6383.7	-577.9	233.4	40.363434	-104.628782
BHL - BUNTING 26Q-304	6897.0	-577.9	-8098.2	40.363430	-104.658680
HZ LP *NEW*- BUNTING 26Q-304	6927.0	-577.9	-255.1	40.363434	-104.630535



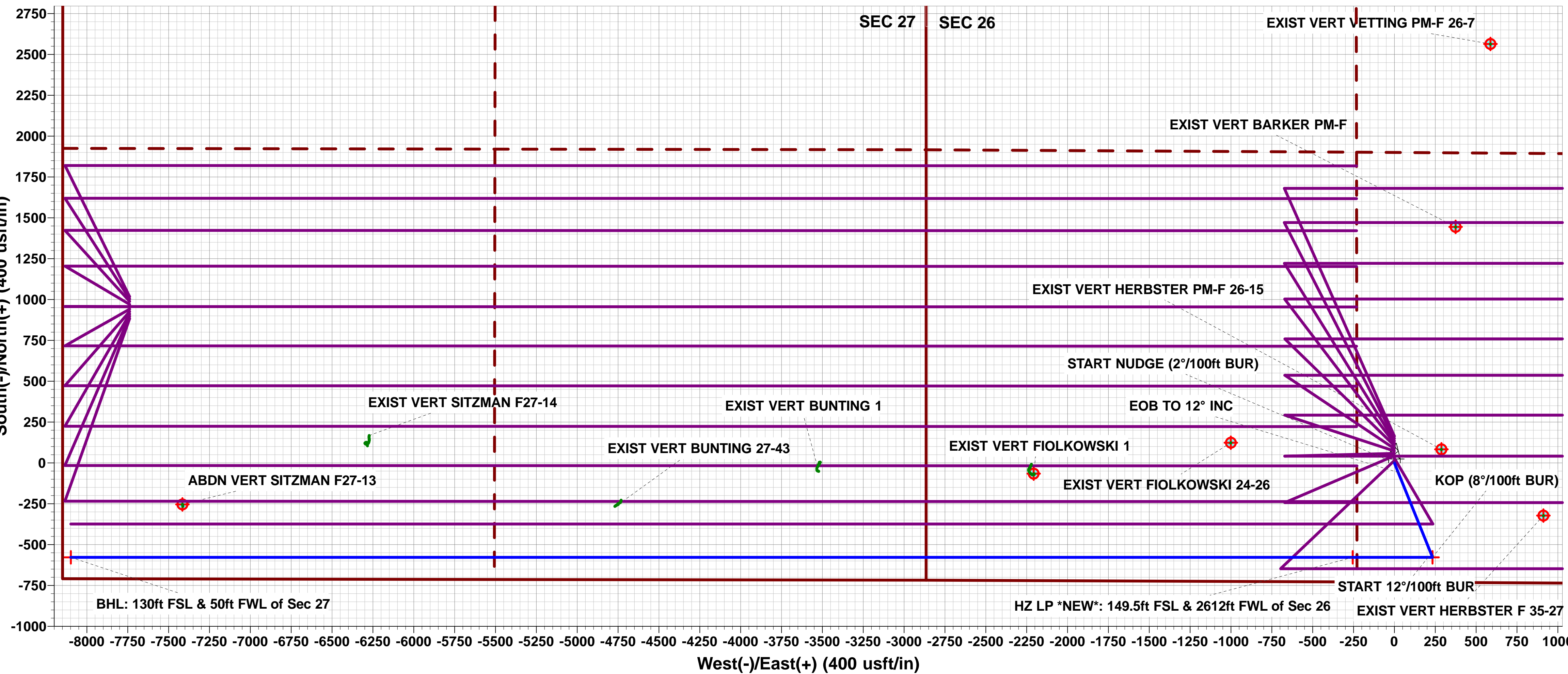
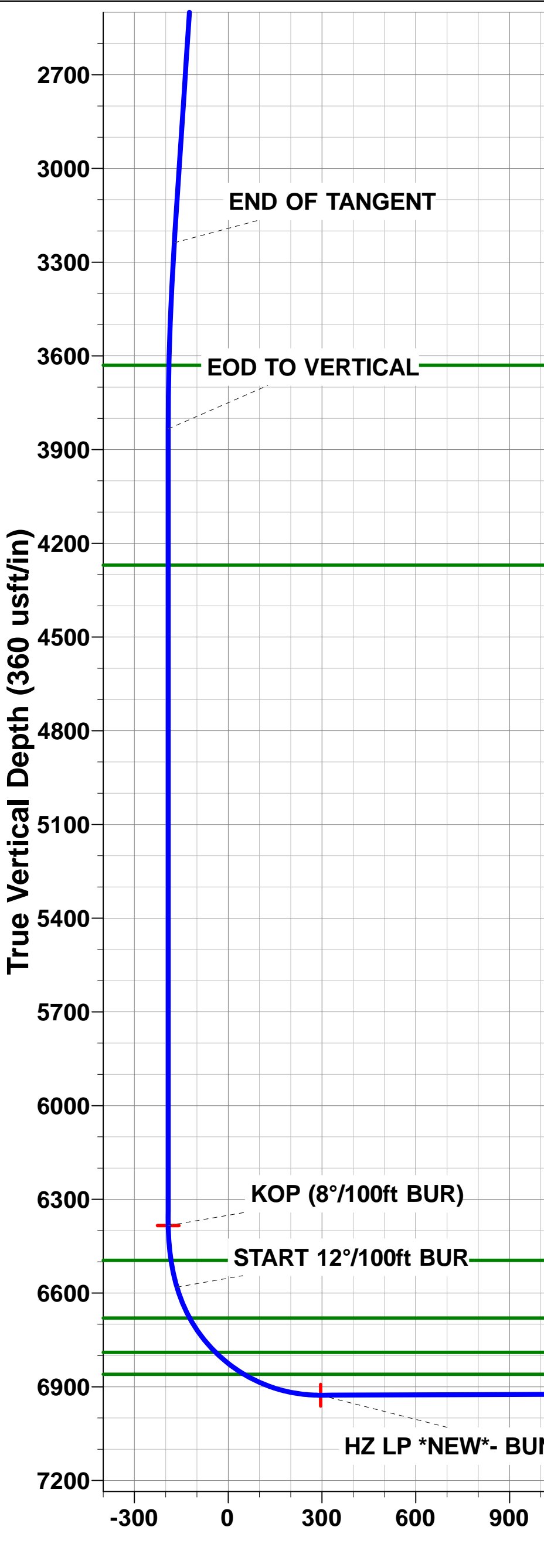
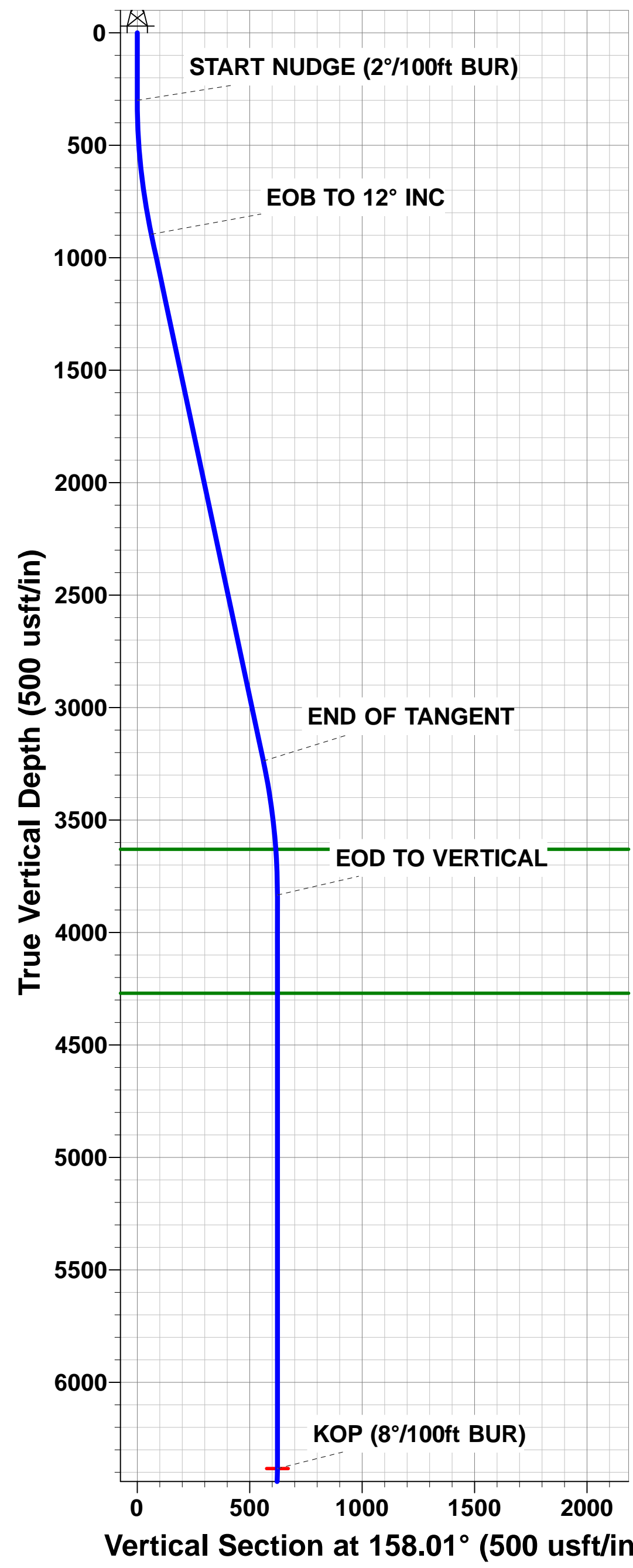
PROPOSED LOCAL COORDINATES:

SHL: 730ft FSL & 2405ft FEL of Sec 26
HZ LP *NEW*: 149.5ft FSL & 2612ft FWL of Sec 26
BHL: 130ft FSL & 50ft FWL of Sec 27



Azimuths to True North
Magnetic North: 8.22°

Magnetic Field
Strength: 52482.8snT
Dip Angle: 66.87°
Date: 23/08/2016
Model: IGRF2015



PDC ENERGY

**WELD COUNTY, COLORADO
SW SE SEC. 26 T5N R65W 6th P.M.
BUNTING 26Q-304**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

23 August, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BUNTING 26Q-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Reference Site:	SW SE SEC. 26 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	BUNTING 26Q-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 23/08/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,106.4	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offet Well - Wellbore - Design						
NW SW SEC. 27 T5N R65W 6th P.M.						
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	14,436.6	2,700.0	4,205.2	4,143.9	68.564	CC
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	14,500.0	2,700.0	4,205.7	4,143.9	68.040	ES
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	15,106.4	2,700.0	4,258.3	4,191.9	64.129	SF
BOULTER FARMS 27G-202 - ORIGINAL WELLBORE -	11,000.4	10,784.2	2,398.3	2,171.2	10.561	CC
BOULTER FARMS 27G-202 - ORIGINAL WELLBORE -	14,800.0	7,032.3	2,401.8	2,162.4	10.029	ES
BOULTER FARMS 27G-202 - ORIGINAL WELLBORE -	15,106.4	6,836.4	2,417.5	2,171.2	9.816	SF
BOULTER FARMS 27G-232 - ORIGINAL WELLBORE -	11,422.1	10,380.4	2,000.5	1,773.2	8.799	CC
BOULTER FARMS 27G-232 - ORIGINAL WELLBORE -	14,800.0	7,030.4	2,003.1	1,764.1	8.383	ES
BOULTER FARMS 27G-232 - ORIGINAL WELLBORE -	15,106.4	6,829.8	2,019.0	1,773.5	8.222	SF
BOULTER FARMS 27G-332 - ORIGINAL WELLBORE -	7,236.9	14,613.0	2,196.0	1,961.6	9.370	CC
BOULTER FARMS 27G-332 - ORIGINAL WELLBORE -	14,900.0	6,989.3	2,200.6	1,959.2	9.116	ES
BOULTER FARMS 27G-332 - ORIGINAL WELLBORE -	15,106.4	6,862.0	2,211.3	1,965.0	8.980	SF
BOULTER FARMS 27H-202 - ORIGINAL WELLBORE -	14,414.6	7,354.4	1,050.7	818.2	4.519	CC
BOULTER FARMS 27H-202 - ORIGINAL WELLBORE -	14,600.0	7,179.8	1,051.5	817.0	4.483	ES
BOULTER FARMS 27H-202 - ORIGINAL WELLBORE -	14,800.0	7,011.2	1,057.1	819.9	4.456	SF
BOULTER FARMS 27H-212 - ORIGINAL WELLBORE -	12,130.0	9,652.3	1,534.2	1,306.5	6.736	CC
BOULTER FARMS 27H-212 - ORIGINAL WELLBORE -	14,700.0	7,093.6	1,535.4	1,298.6	6.482	ES
BOULTER FARMS 27H-212 - ORIGINAL WELLBORE -	15,106.4	6,809.6	1,558.0	1,313.6	6.374	SF
BOULTER FARMS 27H-232 - ORIGINAL WELLBORE -	14,410.1	7,414.0	562.9	330.6	2.423	CC
BOULTER FARMS 27H-232 - ORIGINAL WELLBORE -	14,500.0	7,327.5	563.1	329.8	2.414	ES
BOULTER FARMS 27H-232 - ORIGINAL WELLBORE -	14,600.0	7,234.4	564.4	330.2	2.410	SF
BOULTER FARMS 27H-302 - ORIGINAL WELLBORE -	9,106.3	12,717.4	1,292.9	1,065.2	5.678	CC
BOULTER FARMS 27H-302 - ORIGINAL WELLBORE -	14,800.0	7,036.8	1,295.7	1,057.3	5.435	ES
BOULTER FARMS 27H-302 - ORIGINAL WELLBORE -	15,000.0	6,894.2	1,305.7	1,063.6	5.393	SF
BOULTER FARMS 27H-312 - ORIGINAL WELLBORE -	7,236.9	14,589.5	1,780.8	1,546.2	7.590	CC
BOULTER FARMS 27H-312 - ORIGINAL WELLBORE -	14,800.0	7,039.6	1,783.3	1,544.5	7.467	ES
BOULTER FARMS 27H-312 - ORIGINAL WELLBORE -	15,106.4	6,835.6	1,798.6	1,553.1	7.328	SF
BOULTER FARMS 27H-332 - ORIGINAL WELLBORE -	11,208.0	10,651.0	801.5	574.8	3.535	CC
BOULTER FARMS 27H-332 - ORIGINAL WELLBORE -	14,700.0	7,158.2	802.6	566.2	3.394	ES
BOULTER FARMS 27H-332 - ORIGINAL WELLBORE -	14,800.0	7,072.1	804.6	566.6	3.381	SF
BOULTER FARMS 27I-312 - ORIGINAL WELLBORE -	9,407.1	12,524.2	342.0	115.2	1.508	CC
BOULTER FARMS 27I-312 - ORIGINAL WELLBORE -	14,637.7	7,290.3	343.4	107.2	1.454	Level 3, ES
BOULTER FARMS 27I-312 - ORIGINAL WELLBORE -	14,700.0	7,232.2	344.0	107.2	1.453	Level 3, SF
EXIST VERT BARKER -PM F #26-10 - Wellbore #1 - De	300.0	279.0	1,492.2	1,487.0	283.590	CC
EXIST VERT BARKER -PM F #26-10 - Wellbore #1 - De	400.0	379.0	1,493.7	1,486.1	198.870	ES
EXIST VERT BARKER -PM F #26-10 - Wellbore #1 - De	7,175.0	6,898.2	2,093.7	1,938.9	13.524	SF
EXIST VERT BUNTING 1 - Wellbore #1 - Wellbore #1	10,533.0	6,922.8	566.9	462.3	5.419	CC, ES

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BUNTING 26Q-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Reference Site:	SW SE SEC. 26 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	BUNTING 26Q-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NW SW SEC. 27 T5N R65W 6th P.M.						
EXIST VERT BUNTING 1 - Wellbore #1 - Wellbore #1	10,600.0	6,924.3	570.9	464.4	5.362	SF
EXIST VERT BUNTING 27-43 - Wellbore #1 - Wellbore #	11,739.1	6,892.2	343.9	205.9	2.493	CC, ES, SF
EXIST VERT FIOLEKOWSKI 1 - Wellbore #1 - Wellbore #	9,237.4	6,800.0	556.0	488.3	8.211	CC, ES
EXIST VERT FIOLEKOWSKI 1 - Wellbore #1 - Wellbore #	9,400.0	6,800.0	579.3	507.2	8.035	SF
EXIST VERT FIOLEKOWSKI 24-26 - Wellbore #1 - Desigr	8,008.6	6,909.1	701.8	529.5	4.073	CC, ES
EXIST VERT FIOLEKOWSKI 24-26 - Wellbore #1 - Desigr	8,100.0	6,908.8	707.7	533.1	4.053	SF
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbc	3,571.8	3,468.2	1,630.3	1,615.4	109.076	CC
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbc	3,600.0	3,494.5	1,630.4	1,615.4	108.524	ES
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbc	15,106.4	6,774.9	9,947.5	9,737.1	47.293	SF
EXIST VERT HERBSTER F #35-27 - Wellbore #1 - Desi	6,444.8	6,374.7	724.9	583.7	5.133	CC
EXIST VERT HERBSTER F #35-27 - Wellbore #1 - Desi	6,450.0	6,379.9	724.9	579.8	4.995	ES
EXIST VERT HERBSTER F #35-27 - Wellbore #1 - Desi	6,500.0	6,429.8	726.9	581.1	4.985	SF
EXIST VERT HERBSTER PM F #26-15 - Wellbore #1 - L	720.3	701.8	298.0	283.2	20.163	CC
EXIST VERT HERBSTER PM F #26-15 - Wellbore #1 - L	900.2	878.8	299.7	280.7	15.793	ES
EXIST VERT HERBSTER PM F #26-15 - Wellbore #1 - L	6,725.0	6,639.0	670.2	522.5	4.538	SF
EXIST VERT KEATON #8-26 - Wellbore #1 - Design #1	300.0	281.0	2,910.9	2,905.6	550.824	CC
EXIST VERT KEATON #8-26 - Wellbore #1 - Design #1	400.0	381.0	2,911.8	2,904.3	386.541	ES
EXIST VERT KEATON #8-26 - Wellbore #1 - Design #1	6,644.8	6,562.1	3,290.5	3,144.0	22.470	SF
EXIST VERT MINERAL-FUELCO #1 - Wellbore #1 - Des	300.0	285.0	2,149.3	2,143.9	403.221	CC
EXIST VERT MINERAL-FUELCO #1 - Wellbore #1 - Des	700.0	683.7	2,154.2	2,139.8	150.390	ES
EXIST VERT MINERAL-FUELCO #1 - Wellbore #1 - Des	6,550.0	6,473.5	2,342.3	2,196.4	16.056	SF
EXIST VERT SITZMAN F27-14 - Wellbore #1 - Wellbore	13,291.2	6,896.1	682.3	500.5	3.753	CC
EXIST VERT SITZMAN F27-14 - Wellbore #1 - Wellbore	13,300.0	6,896.1	682.4	500.3	3.748	ES
EXIST VERT SITZMAN F27-14 - Wellbore #1 - Wellbore	13,400.0	6,895.4	690.9	506.1	3.738	SF
EXIST VERT VETTING PM F-#26-7 - Wellbore #1 - Desi	300.0	280.0	2,630.5	2,625.2	498.831	CC
EXIST VERT VETTING PM F-#26-7 - Wellbore #1 - Desi	400.0	380.0	2,631.9	2,624.4	349.924	ES
EXIST VERT VETTING PM F-#26-7 - Wellbore #1 - Desi	8,400.0	6,902.6	3,713.5	3,531.1	20.367	SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BUNTING 26Q-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Reference Site:	SW SE SEC. 26 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	BUNTING 26Q-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW SE SEC. 26 T5N R65W 6th P.M.						
BUNTING 26O-102 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	163.9	162.9	152.917	CC, ES
BUNTING 26O-102 - ORIGINAL WELLBORE - PROPOS	10,800.0	6,570.6	3,907.1	3,779.3	30.580	SF
BUNTING 26O-232 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	134.8	133.7	125.725	CC, ES
BUNTING 26O-232 - ORIGINAL WELLBORE - PROPOS	9,900.0	6,600.0	2,910.5	2,808.1	28.426	SF
BUNTING 26O-332 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	149.4	148.3	139.317	CC, ES
BUNTING 26O-332 - ORIGINAL WELLBORE - PROPOS	10,400.0	6,700.0	3,438.7	3,320.6	29.132	SF
BUNTING 26P-212 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	105.6	104.6	98.541	CC, ES
BUNTING 26P-212 - ORIGINAL WELLBORE - PROPOS	8,900.0	6,600.0	1,882.6	1,808.8	25.521	SF
BUNTING 26P-232 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	72.9	71.8	67.960	CC, ES
BUNTING 26P-232 - ORIGINAL WELLBORE - PROPOS	8,000.0	6,712.4	1,012.3	962.6	20.370	SF
BUNTING 26P-302 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	87.4	86.4	81.552	CC, ES
BUNTING 26P-302 - ORIGINAL WELLBORE - PROPOS	8,400.0	6,685.9	1,391.6	1,330.6	22.818	SF
BUNTING 26P-312 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	120.2	119.1	112.133	CC, ES
BUNTING 26P-312 - ORIGINAL WELLBORE - PROPOS	9,300.0	6,650.0	2,310.2	2,223.9	26.766	SF
BUNTING 26P-332 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	58.3	57.2	54.368	CC, ES
BUNTING 26P-332 - ORIGINAL WELLBORE - PROPOS	7,700.0	6,850.0	667.8	624.5	15.442	SF
BUNTING 26Q-212 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	43.7	42.6	40.776	CC, ES
BUNTING 26Q-212 - ORIGINAL WELLBORE - PROPOS	6,850.0	7,451.4	338.6	300.0	8.764	SF
BUNTING 26Q-214 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	29.1	28.1	27.184	CC
BUNTING 26Q-214 - ORIGINAL WELLBORE - PROPOS	15,106.4	15,051.9	217.4	-217.3	0.500	Level 1, ES, SF
BUNTING 26Q-302 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	14.6	13.5	13.592	CC, ES
BUNTING 26Q-302 - ORIGINAL WELLBORE - PROPOS	7,075.0	7,400.0	69.4	32.2	1.866	SF
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	6,120.4	6,196.1	7,955.3	7,923.5	250.741	CC
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	6,450.0	6,483.0	7,956.5	7,921.6	228.492	ES
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	8,800.0	7,096.1	9,907.5	9,834.7	136.130	SF
EXIST DD CONAGRA B30-33D - Wellbore #1 - Wellbore	5,794.0	5,848.0	7,686.1	7,670.7	498.853	CC
EXIST DD CONAGRA B30-33D - Wellbore #1 - Wellbore	5,800.0	5,850.8	7,686.1	7,670.7	498.460	ES
EXIST DD CONAGRA B30-33D - Wellbore #1 - Wellbore	9,000.0	6,968.9	9,903.8	9,841.5	158.832	SF
EXIST DD THISTLE DOWN B31-30D - Wellbore #1 - We	6,466.4	6,804.7	7,293.9	7,274.4	373.939	CC, ES
EXIST DD THISTLE DOWN B31-30D - Wellbore #1 - We	9,400.0	7,280.0	9,903.5	9,853.6	198.505	SF
EXIST HZ LASALLE 25G-402 - Wellbore #1 - Wellbore #	6,231.9	6,249.0	3,509.1	3,474.5	101.245	CC, ES
EXIST HZ LASALLE 25G-402 - Wellbore #1 - Wellbore #	14,100.0	6,281.0	9,964.3	9,754.9	47.568	SF
EXIST HZ THISTLE DOWN STATE PC F36-69HN - Well	6,444.8	11,126.0	2,779.6	2,649.3	21.324	ES, SF
EXIST HZ THISTLE DOWN STATE PC F36-69HN - Well	6,546.0	11,126.0	2,770.7	2,721.4	56.143	CC
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	3,682.4	3,617.6	5,915.3	5,900.1	389.098	CC
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	3,700.0	3,635.0	5,915.3	5,900.1	388.144	ES
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	10,900.0	6,500.0	9,965.3	9,854.1	89.579	SF
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	5,671.9	5,617.9	4,233.2	4,219.0	298.041	CC
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	5,700.0	5,638.9	4,233.2	4,219.0	296.778	ES
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	12,700.0	6,900.0	9,989.1	9,823.9	60.475	SF
EXIST VERT HAMILTON 25-12B - Wellbore #1 - Wellboi	5,587.3	5,520.3	3,351.4	3,337.5	240.981	CC
EXIST VERT HAMILTON 25-12B - Wellbore #1 - Wellboi	5,600.0	5,529.9	3,351.5	3,337.5	240.562	ES
EXIST VERT HAMILTON 25-12B - Wellbore #1 - Wellboi	13,600.0	6,900.0	9,902.9	9,712.9	52.128	SF
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	5,957.3	5,922.2	2,960.8	2,945.7	196.294	CC
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	6,000.0	5,954.1	2,960.8	2,945.7	195.135	ES
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	13,700.0	6,528.6	9,901.7	9,795.0	92.771	SF
EXIST VERT HAMILTON 25-14B - Wellbore #1 - Wellboi	3,671.0	3,537.3	4,224.0	4,209.3	287.675	CC
EXIST VERT HAMILTON 25-14B - Wellbore #1 - Wellboi	3,700.0	3,567.4	4,224.0	4,209.2	286.442	ES
EXIST VERT HAMILTON 25-14B - Wellbore #1 - Wellboi	12,400.0	6,900.0	9,910.9	9,757.8	64.750	SF
EXIST VERT HAMILTON 25-15B - Wellbore #1 - Wellboi	5,199.9	5,178.3	5,178.2	5,164.5	377.249	CC
EXIST VERT HAMILTON 25-15B - Wellbore #1 - Wellboi	5,200.0	5,178.3	5,178.2	5,164.5	377.242	ES
EXIST VERT HAMILTON 25-15B - Wellbore #1 - Wellboi	11,500.0	6,875.3	9,933.8	9,813.6	82.604	SF
EXIST VERT HAMILTON 25-16B - Wellbore #1 - Wellboi	6,457.5	6,573.7	6,666.5	6,647.3	348.569	CC, ES

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BUNTING 26Q-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Reference Site:	SW SE SEC. 26 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4672.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	BUNTING 26Q-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SW SE SEC. 26 T5N R65W 6th P.M.						
EXIST VERT HAMILTON 25-16B - Wellbore #1 - Wellbore	10,100.0	6,962.5	9,977.3	9,885.0	108.042	SF
EXIST VERT HAMILTON 25-9B - Wellbore #1 - Wellbore	4,917.1	4,879.4	7,053.2	7,040.6	558.430	CC
EXIST VERT HAMILTON 25-9B - Wellbore #1 - Wellbore	5,000.0	4,949.3	7,053.3	7,040.5	551.778	ES
EXIST VERT HAMILTON 25-9B - Wellbore #1 - Wellbore	9,700.0	6,836.8	9,912.4	9,831.3	122.249	SF
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbore	6,114.8	6,100.0	5,901.8	5,886.7	390.889	CC
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbore	6,450.0	6,350.9	5,904.8	5,885.6	308.170	ES
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbore	10,800.0	6,850.0	9,906.3	9,795.6	89.521	SF
EXIST VERT HAMILTON F 25-25 - Wellbore #1 - Wellbore	5,583.6	5,543.4	3,642.0	3,628.0	261.012	CC
EXIST VERT HAMILTON F 25-25 - Wellbore #1 - Wellbore	5,600.0	5,554.6	3,642.0	3,628.0	260.372	ES
EXIST VERT HAMILTON F 25-25 - Wellbore #1 - Wellbore	13,100.0	6,500.0	9,930.9	9,771.9	62.453	SF
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbore	3,385.9	3,312.6	2,548.6	2,534.1	175.906	CC
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbore	3,400.0	3,323.0	2,548.6	2,534.1	175.365	ES
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbore	14,300.0	6,850.0	9,952.8	9,744.0	47.656	SF
EXIST VERT HAMILTON F25-20 - Wellbore #1 - Wellbore	248.9	221.9	4,073.3	4,072.6	6,135.985	CC
EXIST VERT HAMILTON F25-20 - Wellbore #1 - Wellbore	300.0	260.6	4,073.3	4,072.5	5,073.661	ES
EXIST VERT HAMILTON F25-20 - Wellbore #1 - Wellbore	13,000.0	6,900.0	9,905.1	9,731.8	57.172	SF
EXIST VERT HAMILTON F25-21 - Wellbore #1 - Wellbore	3,188.6	3,200.0	5,370.0	5,356.1	385.386	CC
EXIST VERT HAMILTON F25-21 - Wellbore #1 - Wellbore	3,294.6	3,266.7	5,370.4	5,356.0	372.047	ES
EXIST VERT HAMILTON F25-21 - Wellbore #1 - Wellbore	11,600.0	6,900.0	9,964.1	9,829.9	74.230	SF
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbore	5,182.3	5,146.3	4,868.7	4,855.5	371.235	CC
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbore	6,450.0	6,411.7	4,874.9	4,855.1	247.238	ES
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbore	11,900.0	6,900.0	9,941.0	9,798.6	69.825	SF

Offset Design		NW SW SEC. 27 T5N R65W 6th P.M. - ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-91.96	-253.9	-7,415.4	7,419.7					
100.0	100.0	78.8	78.8	0.1	0.0	-91.96	-254.1	-7,415.4	7,419.8	7,419.7	0.11	N/A		
200.0	200.0	196.8	196.8	0.3	0.2	-91.97	-254.6	-7,415.6	7,419.9	7,419.4	0.51	N/A		
300.0	300.0	300.0	300.0	0.5	0.2	-91.97	-254.8	-7,415.5	7,419.9	7,419.1	0.75	9,912.355		
310.7	310.7	309.6	309.6	0.6	0.2	110.03	-254.7	-7,415.5	7,419.9	7,419.1	0.77	9,641.149		
400.0	400.0	382.6	382.6	0.7	0.2	110.02	-254.8	-7,415.5	7,420.5	7,419.6	0.95	7,809.763		
500.0	499.8	500.0	500.0	0.9	0.2	110.03	-255.1	-7,415.5	7,422.3	7,421.1	1.18	6,311.824		
600.0	599.5	587.3	587.3	1.2	0.3	110.03	-255.1	-7,415.4	7,425.2	7,423.8	1.42	5,215.303		
700.0	698.7	700.0	700.0	1.4	0.3	110.05	-255.3	-7,415.4	7,429.3	7,427.6	1.74	4,264.222		
800.0	797.5	781.4	781.4	1.8	0.3	110.04	-255.4	-7,415.3	7,434.7	7,432.6	2.07	3,583.309		
900.0	895.6	900.0	900.0	2.1	0.3	110.08	-255.3	-7,415.3	7,441.4	7,438.9	2.46	3,022.166		
900.2	895.8	900.0	900.0	2.1	0.3	110.08	-255.3	-7,415.3	7,441.4	7,438.9	2.46	3,021.394		
1,000.0	993.4	988.1	988.1	2.6	0.4	110.21	-255.0	-7,415.2	7,448.5	7,445.6	2.91	2,563.692		
1,100.0	1,091.3	1,085.9	1,085.9	3.0	0.4	110.36	-254.8	-7,415.2	7,455.9	7,452.6	3.33	2,241.814		
1,200.0	1,189.1	1,178.1	1,178.1	3.4	0.4	110.50	-254.8	-7,415.2	7,463.3	7,459.6	3.75	1,991.604		
1,300.0	1,286.9	1,283.7	1,283.7	3.9	0.4	110.66	-254.4	-7,415.3	7,470.8	7,466.6	4.21	1,772.693		
1,400.0	1,384.7	1,407.3	1,407.3	4.3	0.5	110.85	-253.8	-7,415.0	7,478.1	7,473.4	4.69	1,593.050		
1,500.0	1,482.5	1,492.0	1,492.0	4.8	0.5	110.98	-253.6	-7,414.8	7,485.4	7,480.2	5.16	1,450.149		
1,600.0	1,580.3	1,589.1	1,589.1	5.2	0.5	111.12	-253.4	-7,414.6	7,492.8	7,487.2	5.63	1,330.177		
1,700.0	1,678.1	1,699.2	1,699.1	5.7	0.6	111.29	-253.4	-7,414.3	7,500.2	7,494.1	6.09	1,231.825		
1,800.0	1,775.9	1,780.8	1,780.8	6.1	0.6	111.41	-253.8	-7,414.1	7,507.6	7,501.1	6.55	1,145.884		

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