



Project: WELD COUNTY, COLORADO  
Site: SW SE SEC. 26 T5N R65W 6th P.M.  
Well: BUNTING 26Q-304  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

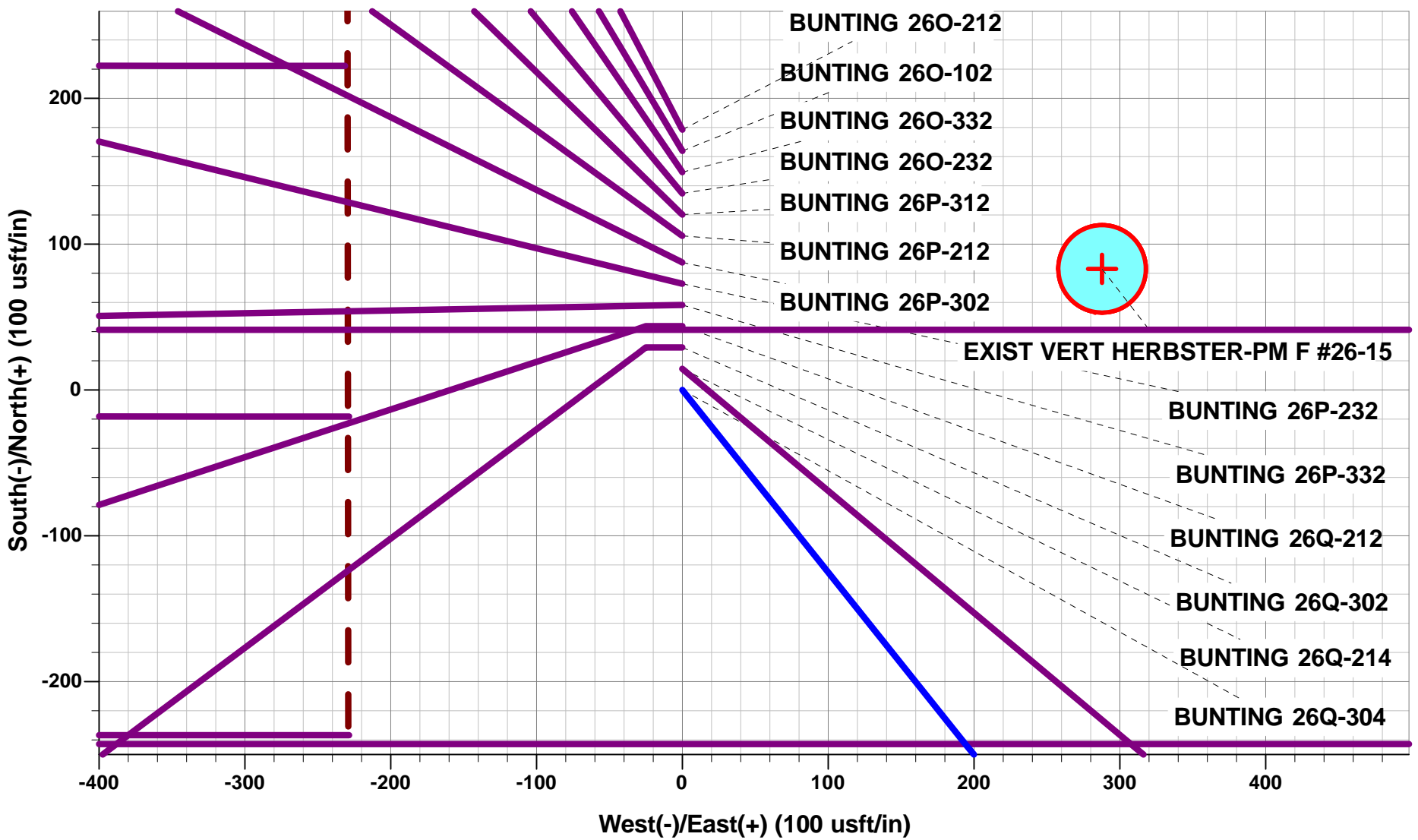


ANNOTATIONS

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)
895.5	899.9	12.00	141.35	-48.9	39.1	-35.3	62.6	EOB TO 12° INC
3788.2	3857.2	12.00	141.35	-529.0	423.0	-381.9	677.3	END OF TANGENT
4383.8	4457.2	0.00	0.00	-577.9	462.1	-417.2	739.9	EOD TO VERTICAL
6185.8	6259.2	0.00	0.00	-577.9	462.1	-417.2	739.9	KOP (8°/100ft BUR)
6902.0	7385.2	90.08	270.00	-577.9	-255.1	298.0	1457.2	HZ LP (P2): 149.5ft FSL & 2612ft FWL of Sec 26
6892.0	14776.8	90.08	270.00	-578.1	-7646.7	7668.6	8848.8	BHL (P2): 130ft FSL & 500ft FWL of Sec 27

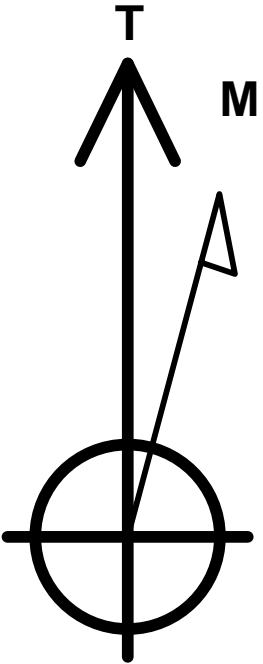
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BUNTING 26Q-304 (P2)	6185.8	-577.9	462.1	40.363434	-104.627962
HZ LP - BUNTING 26Q-304 (P2)	6902.0	-577.9	-255.1	40.363434	-104.630535
BHL - BUNTING 26Q-304 (P2)	6892.0	-578.1	-7646.8	40.363430	-104.657060



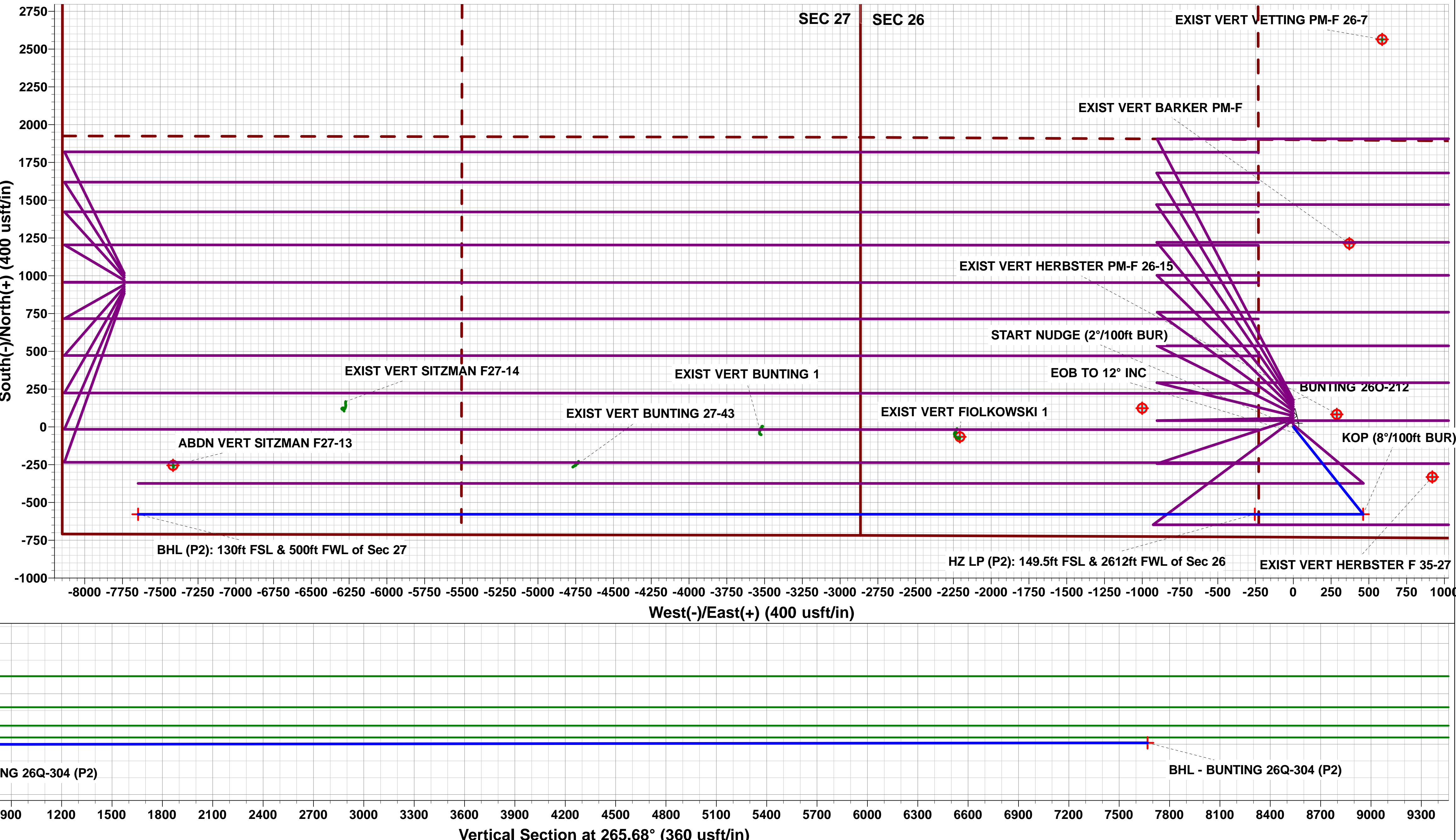
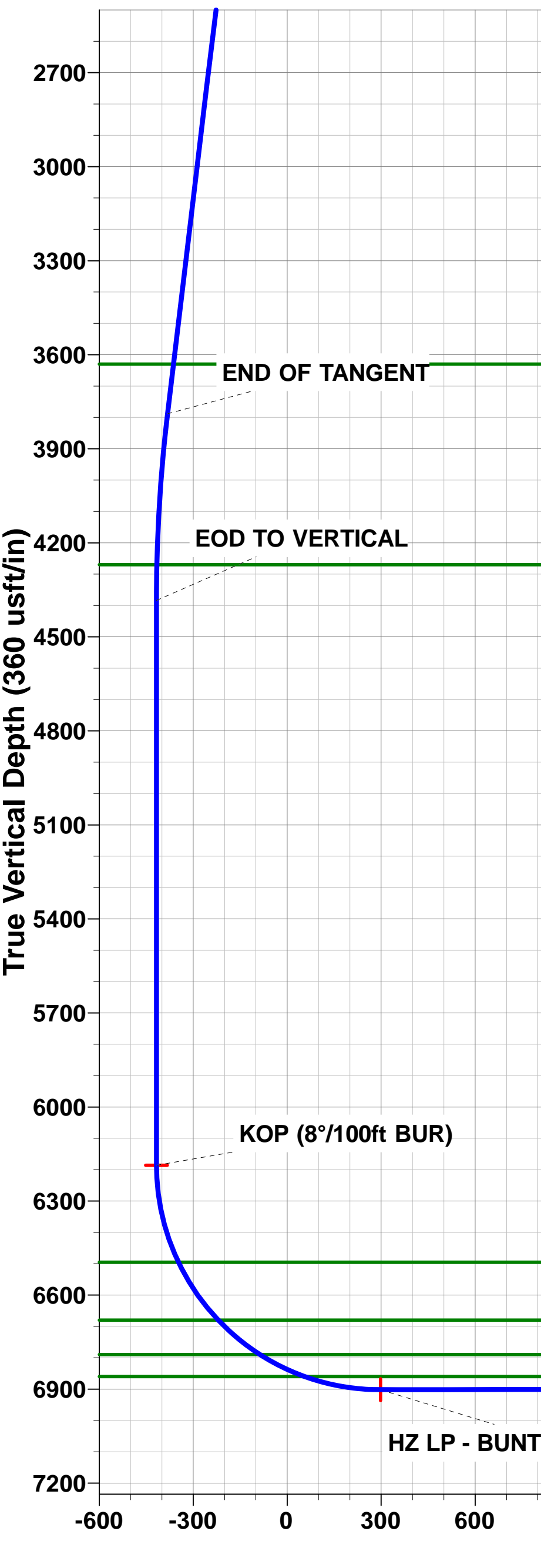
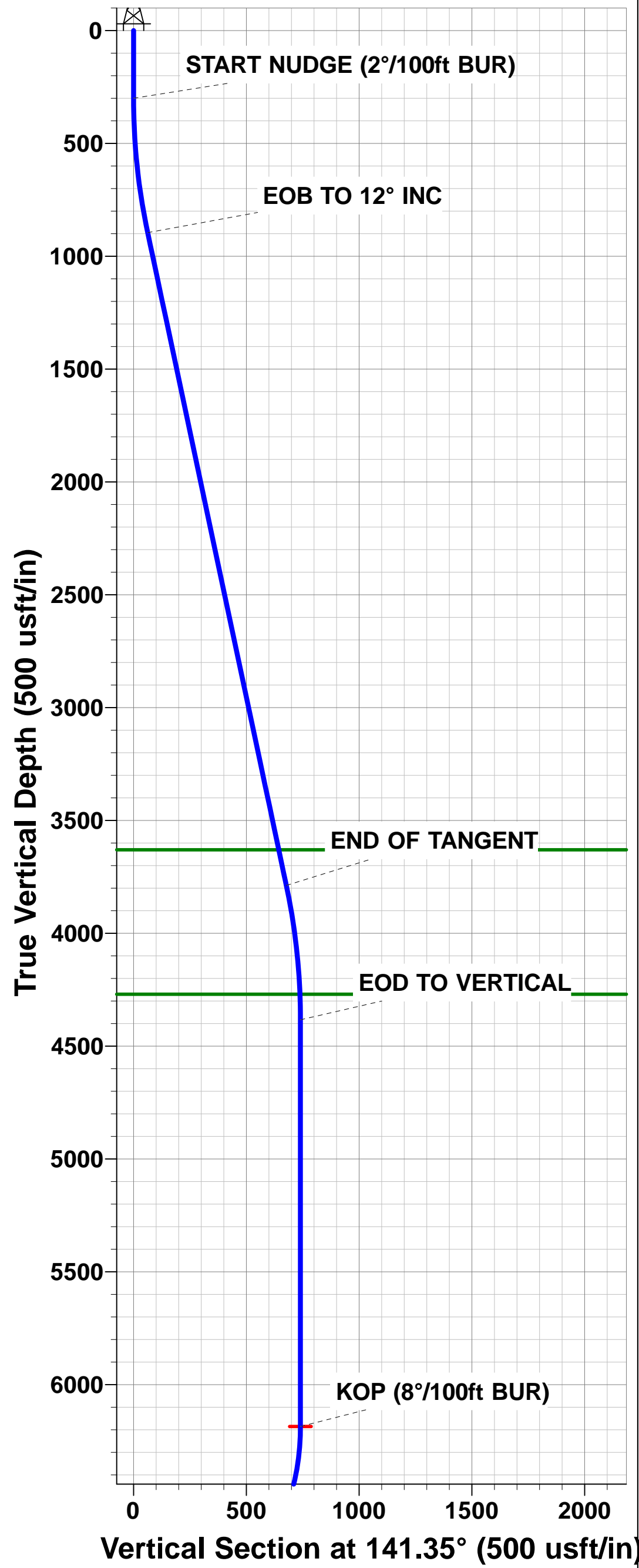
PROPOSED LOCAL COORDINATES:

SHL: 730ft FSL & 2405ft FEL of Sec 26  
HZ LP \*NEW\*: 149.5ft FSL & 2612ft FWL of Sec 26  
BHL: 130ft FSL & 500ft 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 #2**

## **Anticollision Report**

**30 June, 2017**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well BUNTING 26Q-304
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Reference Site:</b>	SW SE SEC. 26 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	BUNTING 26Q-304	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0 us	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b> 30/06/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	14,776.8	PROPOSAL #2 (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
NW SW SEC. 27 T5N R65W 6th P.M.						
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	14,547.9	2,700.0	4,188.0	4,125.2	66.670	CC
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	14,600.0	2,700.0	4,188.4	4,125.1	66.259	ES
ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore	14,776.8	2,700.0	4,194.3	4,129.7	64.977	SF
BOULTER FARMS 27G-202 - ORIGINAL WELLBORE -	7,358.0	14,544.9	2,397.5	2,159.9	10.093	CC
BOULTER FARMS 27G-202 - ORIGINAL WELLBORE -	14,776.8	7,150.0	2,399.4	2,158.6	9.962	ES, SF
BOULTER FARMS 27G-232 - ORIGINAL WELLBORE -	9,535.5	12,388.8	2,000.1	1,768.4	8.632	CC
BOULTER FARMS 27G-232 - ORIGINAL WELLBORE -	14,776.8	7,152.1	2,001.4	1,761.0	8.327	ES, SF
BOULTER FARMS 27G-332 - ORIGINAL WELLBORE -	7,360.5	14,613.0	2,195.6	1,957.8	9.233	CC
BOULTER FARMS 27G-332 - ORIGINAL WELLBORE -	14,776.8	7,191.5	2,197.9	1,957.5	9.141	ES, SF
BOULTER FARMS 27H-202 - ORIGINAL WELLBORE -	14,099.9	7,790.9	1,050.6	816.8	4.493	CC
BOULTER FARMS 27H-202 - ORIGINAL WELLBORE -	14,776.8	7,128.9	1,052.1	812.7	4.395	ES, SF
BOULTER FARMS 27H-212 - ORIGINAL WELLBORE -	10,579.7	11,324.5	1,533.9	1,302.3	6.623	CC
BOULTER FARMS 27H-212 - ORIGINAL WELLBORE -	14,776.8	7,131.9	1,535.1	1,294.9	6.391	ES, SF
BOULTER FARMS 27H-232 - ORIGINAL WELLBORE -	9,957.1	11,988.7	562.2	332.1	2.443	CC
BOULTER FARMS 27H-232 - ORIGINAL WELLBORE -	14,700.0	7,253.1	563.6	325.3	2.366	ES, SF
BOULTER FARMS 27H-302 - ORIGINAL WELLBORE -	7,360.3	14,584.2	1,292.3	1,054.5	5.434	CC, ES
BOULTER FARMS 27H-302 - ORIGINAL WELLBORE -	14,776.8	7,162.6	1,294.5	1,054.6	5.395	SF
BOULTER FARMS 27H-312 - ORIGINAL WELLBORE -	7,360.5	14,589.5	1,780.3	1,542.2	7.478	CC, ES
BOULTER FARMS 27H-312 - ORIGINAL WELLBORE -	14,776.8	7,166.2	1,782.6	1,542.4	7.421	SF
BOULTER FARMS 27H-332 - ORIGINAL WELLBORE -	9,962.6	12,018.4	801.2	570.2	3.469	CC
BOULTER FARMS 27H-332 - ORIGINAL WELLBORE -	14,776.8	7,197.8	802.6	562.9	3.348	ES, SF
BOULTER FARMS 27I-312 - ORIGINAL WELLBORE - P	7,359.3	14,693.9	341.1	103.9	1.438	Level 3, CC
BOULTER FARMS 27I-312 - ORIGINAL WELLBORE - P	14,776.8	7,271.7	343.6	103.0	1.428	Level 3, ES, SF
EXIST VERT BUNTING 1 - Wellbore #1 - Wellbore #1	10,654.5	6,906.1	567.8	459.1	5.222	CC, ES
EXIST VERT BUNTING 1 - Wellbore #1 - Wellbore #1	10,700.0	6,907.3	569.6	459.6	5.179	SF
EXIST VERT BUNTING 27-43 - Wellbore #1 - Wellbore #	11,861.0	6,878.4	344.1	202.0	2.422	CC, ES
EXIST VERT BUNTING 27-43 - Wellbore #1 - Wellbore #	11,900.0	6,878.3	346.3	203.1	2.419	SF
EXIST VERT FOLKOWSKI 1 - Wellbore #1 - Wellbore #	9,364.6	6,800.0	548.8	476.6	7.595	CC, ES
EXIST VERT FOLKOWSKI 1 - Wellbore #1 - Wellbore #	9,500.0	6,800.0	565.3	489.4	7.446	SF
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbore	5,965.0	5,886.2	1,406.7	1,390.7	87.743	CC
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbore	6,300.0	6,207.7	1,410.3	1,390.3	70.269	ES
EXIST VERT FORD PM-F #26-16 - Wellbore #1 - Wellbore	14,776.8	6,775.3	9,496.2	9,286.8	45.349	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	600.0	580.5	2,914.9	2,902.9	242.648	ES
EXIST VERT KEATON #8-26 - Wellbore #1 - Design #1	6,500.0	6,403.1	3,195.1	3,050.2	22.044	SF
EXIST VERT SITZMAN F27-14 - Wellbore #1 - Wellbore	13,413.0	6,886.4	682.5	496.6	3.672	CC, ES
EXIST VERT SITZMAN F27-14 - Wellbore #1 - Wellbore	13,500.0	6,886.0	688.0	499.7	3.654	SF

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well BUNTING 26Q-304
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Reference Site:</b>	SW SE SEC. 26 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	BUNTING 26Q-304	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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 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	2,631.6	2,624.1	349.743	ES
EXIST VERT VETTING PM F-#26-7 - Wellbore #1 - Desi	8,500.0	6,880.5	3,701.9	3,516.4	19.955	SF



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well BUNTING 26Q-304
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Reference Site:</b>	SW SE SEC. 26 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	BUNTING 26Q-304	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	10,700.0	6,500.0	3,582.6	3,455.5	28.200	SF
BUNTING 26O-212 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	178.5	177.4	166.501	CC, ES
BUNTING 26O-212 - ORIGINAL WELLBORE - PROPOS	11,000.0	6,621.3	3,934.7	3,797.2	28.606	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	9,700.0	6,550.0	2,541.2	2,441.7	25.543	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	9,900.0	6,650.0	2,834.6	2,727.5	26.474	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	8,800.0	6,584.2	1,650.2	1,576.2	22.274	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	8,200.0	6,723.8	990.5	932.8	17.157	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	8,500.0	6,672.8	1,301.6	1,234.9	19.534	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	6,600.0	2,103.8	2,014.9	23.673	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	7,900.0	6,900.0	658.1	606.5	12.758	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	6,950.0	7,669.7	336.8	290.6	7.296	SF
<b>BUNTING 26Q-214 - ORIGINAL WELLBORE - PROPOS</b>	<b>300.0</b>	<b>300.0</b>	<b>14.6</b>	<b>13.5</b>	<b>13.592</b>	<b>CC</b>
BUNTING 26Q-214 - ORIGINAL WELLBORE - PROPOS	14,776.8	14,714.4	215.8	-205.6	0.512	Level 1, ES, SF
BUNTING 26Q-302 - ORIGINAL WELLBORE - PROPOS	300.0	300.0	29.1	28.1	27.184	CC
BUNTING 26Q-302 - ORIGINAL WELLBORE - PROPOS	7,260.1	7,538.9	69.4	24.6	1.549	ES
BUNTING 26Q-302 - ORIGINAL WELLBORE - PROPOS	7,300.0	7,499.3	69.6	24.7	1.548	SF
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	6,095.6	6,159.0	7,737.5	7,704.7	236.141	CC
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	6,300.0	6,330.0	7,738.9	7,703.4	217.588	ES
EXIST DD CONAGRA B30-32D - Wellbore #1 - Wellbore	9,000.0	7,080.7	9,983.4	9,904.3	126.243	SF
EXIST DD CONAGRA B30-33D - Wellbore #1 - Wellbore	5,805.6	5,847.4	7,459.4	7,442.3	434.839	CC, ES
EXIST DD CONAGRA B30-33D - Wellbore #1 - Wellbore	9,200.0	6,955.6	9,981.4	9,912.6	145.037	SF
EXIST DD THISTLE DOWN B31-30D - Wellbore #1 - We	6,279.5	6,586.3	7,071.1	7,051.6	361.346	CC, ES
EXIST DD THISTLE DOWN B31-30D - Wellbore #1 - We	9,600.0	7,280.0	9,982.0	9,934.1	208.500	SF
EXIST HZ LASALLE 25G-402 - Wellbore #1 - Wellbore #	6,244.1	6,249.0	3,367.8	3,333.0	96.919	CC, ES
EXIST HZ LASALLE 25G-402 - Wellbore #1 - Wellbore #	14,200.0	6,281.0	9,942.8	9,729.4	46.585	SF
EXIST HZ THISTLE DOWN STATE PC F36-69HN - Well	6,259.2	11,126.0	2,601.2	2,469.2	19.699	ES, SF
EXIST HZ THISTLE DOWN STATE PC F36-69HN - Well	6,410.1	11,126.0	2,581.2	2,531.7	52.132	CC
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	4,400.0	4,361.3	5,699.4	5,681.7	321.868	ES
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	4,539.4	4,496.5	5,699.1	5,686.1	436.625	CC
EXIST VERT HAMILTON 25-10B - Wellbore #1 - Wellboi	11,000.0	6,500.0	9,943.1	9,827.9	86.325	SF
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	5,693.8	5,627.5	4,024.0	4,009.0	268.328	CC
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	5,700.0	5,632.2	4,024.0	4,009.0	268.101	ES
EXIST VERT HAMILTON 25-11B - Wellbore #1 - Wellboi	12,800.0	6,869.7	9,967.4	9,798.8	59.096	SF
EXIST VERT HAMILTON 25-12B - Wellbore #1 - Wellboi	5,603.4	5,524.1	3,152.7	3,138.3	219.168	CC, ES
EXIST VERT HAMILTON 25-12B - Wellbore #1 - Wellboi	13,800.0	6,900.0	9,980.0	9,783.7	50.848	SF
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	5,970.1	5,922.7	2,732.9	2,715.9	161.456	CC
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	6,000.0	5,945.5	2,732.9	2,715.9	160.925	ES
EXIST VERT HAMILTON 25-13B - Wellbore #1 - Wellboi	13,800.0	6,524.2	9,879.5	9,766.8	87.610	SF
EXIST VERT HAMILTON 25-14B - Wellbore #1 - Wellboi	4,400.0	4,310.3	4,007.7	3,991.1	241.945	CC, ES
EXIST VERT HAMILTON 25-14B - Wellbore #1 - Wellboi	12,600.0	6,871.6	9,988.9	9,829.0	62.481	SF
EXIST VERT HAMILTON 25-15B - Wellbore #1 - Wellboi	5,212.3	5,178.4	4,949.8	4,933.9	311.333	CC, ES
EXIST VERT HAMILTON 25-15B - Wellbore #1 - Wellboi	11,600.0	6,865.7	9,911.9	9,783.6	77.294	SF
EXIST VERT HAMILTON 25-16B - Wellbore #1 - Wellboi	6,284.7	6,500.0	6,443.9	6,424.3	329.977	CC, ES
EXIST VERT HAMILTON 25-16B - Wellbore #1 - Wellboi	10,200.0	6,944.6	9,955.5	9,859.5	103.673	SF

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

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well BUNTING 26Q-304
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Reference Site:</b>	SW SE SEC. 26 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4672.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	BUNTING 26Q-304	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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 25-9B - Wellbore #1 - Wellbore	4,929.6	4,879.7	6,833.6	6,819.6	485.926	CC
EXIST VERT HAMILTON 25-9B - Wellbore #1 - Wellbore	5,000.0	4,938.8	6,833.7	6,819.5	482.045	ES
EXIST VERT HAMILTON 25-9B - Wellbore #1 - Wellbore	9,900.0	6,825.7	9,988.9	9,901.4	114.224	SF
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbo	6,127.0	6,100.0	5,676.0	5,659.3	340.110	CC
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbo	6,300.0	6,211.9	5,678.1	5,658.4	287.595	ES
EXIST VERT HAMILTON F 25-23 - Wellbore #1 - Wellbo	11,000.0	6,850.0	9,983.9	9,866.5	85.025	SF
EXIST VERT HAMILTON F 25-25 - Wellbore #1 - Wellbo	5,603.5	5,550.0	3,420.4	3,405.1	222.947	CC, ES
EXIST VERT HAMILTON F 25-25 - Wellbore #1 - Wellbo	13,200.0	6,500.0	9,908.7	9,744.4	60.293	SF
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbo	6,173.0	6,100.0	2,345.3	2,329.6	149.199	CC
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbo	6,300.0	6,208.4	2,346.9	2,326.3	113.992	ES
EXIST VERT HAMILTON F 25-33 - Wellbore #1 - Wellbo	14,400.0	6,850.0	9,931.1	9,718.3	46.680	SF
EXIST VERT HAMILTON F25-20 - Wellbore #1 - Wellbor	5,400.0	5,300.0	3,935.0	3,921.2	283.770	CC, ES
EXIST VERT HAMILTON F25-20 - Wellbore #1 - Wellbor	13,200.0	13,200.0	9,980.9	9,800.0	55.170	SF
EXIST VERT HAMILTON F25-21 - Wellbore #1 - Wellbor	6,276.3	6,330.1	5,186.6	5,165.8	249.254	CC, ES
EXIST VERT HAMILTON F25-21 - Wellbore #1 - Wellbor	11,700.0	6,900.0	9,942.8	9,805.0	72.170	SF
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbor	5,198.0	5,149.5	4,645.8	4,631.1	316.348	CC
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbor	5,200.0	5,150.8	4,645.8	4,631.1	316.271	ES
EXIST VERT HAMILTON F25-24 - Wellbore #1 - Wellbor	12,000.0	6,900.0	9,919.2	9,773.2	67.911	SF

<b>Offset Design</b> NW SW SEC. 27 T5N R65W 6th P.M. - ABDN VERT SITZMAN F27-13 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
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	70.4	70.4	0.1	0.0	-91.96	-254.0	-7,415.4	7,419.8	7,419.7	0.12	N/A	
200.0	200.0	183.9	183.9	0.3	0.2	-91.97	-254.5	-7,415.6	7,420.0	7,419.5	0.49	N/A	
300.0	300.0	290.7	290.7	0.5	0.2	-91.97	-254.8	-7,415.5	7,419.9	7,419.1	0.75	9,885.514	
304.5	304.5	295.4	295.4	0.5	0.2	126.68	-254.8	-7,415.5	7,419.9	7,419.1	0.76	9,779.245	
400.0	400.0	374.4	374.4	0.7	0.2	126.67	-254.8	-7,415.5	7,420.9	7,420.0	0.96	7,745.332	
500.0	499.8	500.0	500.0	0.9	0.2	126.66	-255.1	-7,415.5	7,424.1	7,422.9	1.19	6,217.890	
600.0	599.5	579.7	579.7	1.2	0.3	126.62	-255.1	-7,415.4	7,429.2	7,427.7	1.45	5,124.652	
700.0	698.7	700.0	700.0	1.5	0.3	126.59	-255.3	-7,415.4	7,436.5	7,434.7	1.77	4,203.257	
800.0	797.5	774.1	774.1	1.8	0.3	126.51	-255.4	-7,415.3	7,445.8	7,443.7	2.10	3,549.698	
899.9	895.5	900.0	900.0	2.2	0.3	126.48	-255.3	-7,415.3	7,457.3	7,454.8	2.47	3,014.786	
1,000.0	993.4	980.0	980.0	2.6	0.4	126.59	-255.0	-7,415.2	7,469.7	7,466.8	2.87	2,599.630	
1,100.0	1,091.3	1,075.5	1,075.5	3.0	0.4	126.71	-254.8	-7,415.2	7,482.3	7,479.0	3.26	2,293.430	
1,200.0	1,189.1	1,168.9	1,168.9	3.5	0.4	126.83	-254.8	-7,415.2	7,494.9	7,491.3	3.65	2,053.795	
1,300.0	1,286.9	1,272.6	1,272.5	3.9	0.4	126.97	-254.4	-7,415.3	7,507.6	7,503.5	4.07	1,844.380	
1,400.0	1,384.7	1,398.3	1,398.3	4.4	0.5	127.13	-253.8	-7,415.0	7,520.1	7,515.6	4.51	1,667.840	
1,500.0	1,482.5	1,483.5	1,483.4	4.8	0.5	127.24	-253.6	-7,414.8	7,532.5	7,527.6	4.94	1,525.838	
1,600.0	1,580.3	1,579.2	1,579.2	5.3	0.5	127.36	-253.5	-7,414.6	7,545.1	7,539.8	5.37	1,405.501	
1,700.0	1,678.1	1,687.9	1,687.9	5.7	0.6	127.50	-253.4	-7,414.3	7,557.7	7,551.9	5.79	1,305.898	
1,800.0	1,776.0	1,772.4	1,772.4	6.2	0.6	127.60	-253.8	-7,414.1	7,570.2	7,564.0	6.21	1,218.837	
1,900.0	1,873.8	1,881.5	1,881.5	6.6	0.6	127.73	-254.6	-7,413.9	7,582.9	7,576.3	6.64	1,141.206	
2,000.0	1,971.6	1,978.2	1,978.2	7.1	0.7	127.85	-255.7	-7,413.5	7,595.5	7,588.5	7.07	1,073.818	
2,100.0	2,069.4	2,072.8	2,072.8	7.6	0.7	127.95	-257.1	-7,413.3	7,608.2	7,600.7	7.50	1,014.271	
2,200.0	2,167.2	2,151.1	2,151.0	8.0	0.7	128.04	-258.3	-7,413.2	7,621.0	7,613.1	7.92	961.724	
2,300.0	2,265.0	2,246.1	2,246.1	8.5	0.8	128.15	-259.8	-7,413.3	7,634.1	7,625.8	8.35	914.344	
2,400.0	2,362.9	2,361.8	2,361.7	9.0	0.8	128.28	-261.5	-7,413.1	7,647.0	7,638.2	8.78	871.218	

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