

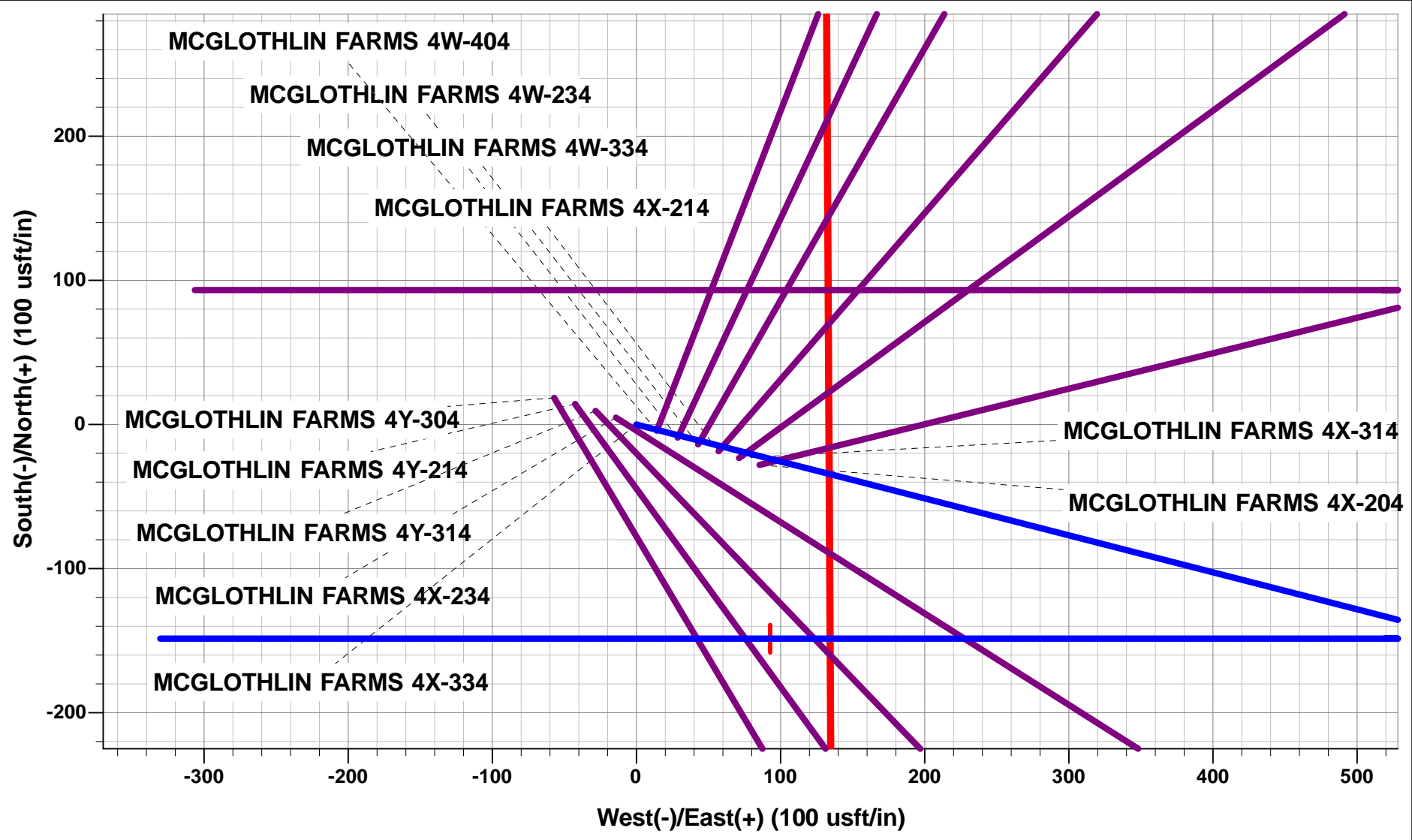


Project: WELD COUNTY, COLORADO
Site: SE SE SEC. 4 T5N R64W 6th P.M.
Well: MCGLOTHLIN FARMS 4X-334
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1



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:1189ft FSL & 594ft FEL of Sec 4	
900.0	900.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1495.6	1500.0	12.00	104.38	-15.6	60.6	-60.3	62.6	EOB TO 12° INC	
3721.1	3775.2	12.00	104.38	-133.0	518.9	-516.0	535.6	END OF TANGENT	
4316.7	4375.2	0.00	0.00	-148.6	579.5	-576.4	598.2	EOD TO VERTICAL	
6201.7	6260.2	0.00	0.00	-148.6	579.5	-576.4	598.2	KOP (8°/100ft BUR)	
6399.1	6460.2	16.00	270.00	-148.6	551.8	-548.6	626.0	START 12°/100ft BUR	
6745.0	7076.8	90.00	270.00	-148.6	92.8	-89.7	1085.0	HZ LP *NEW*: 1040.4ft FSL & 501.6ft FEL of Sec 4	
6745.0	14482.1	90.00	270.00	-148.6	-7312.5	7314.0	8490.3	BHL: 1064ft FSL & 2630ft FEL of Sec 5	

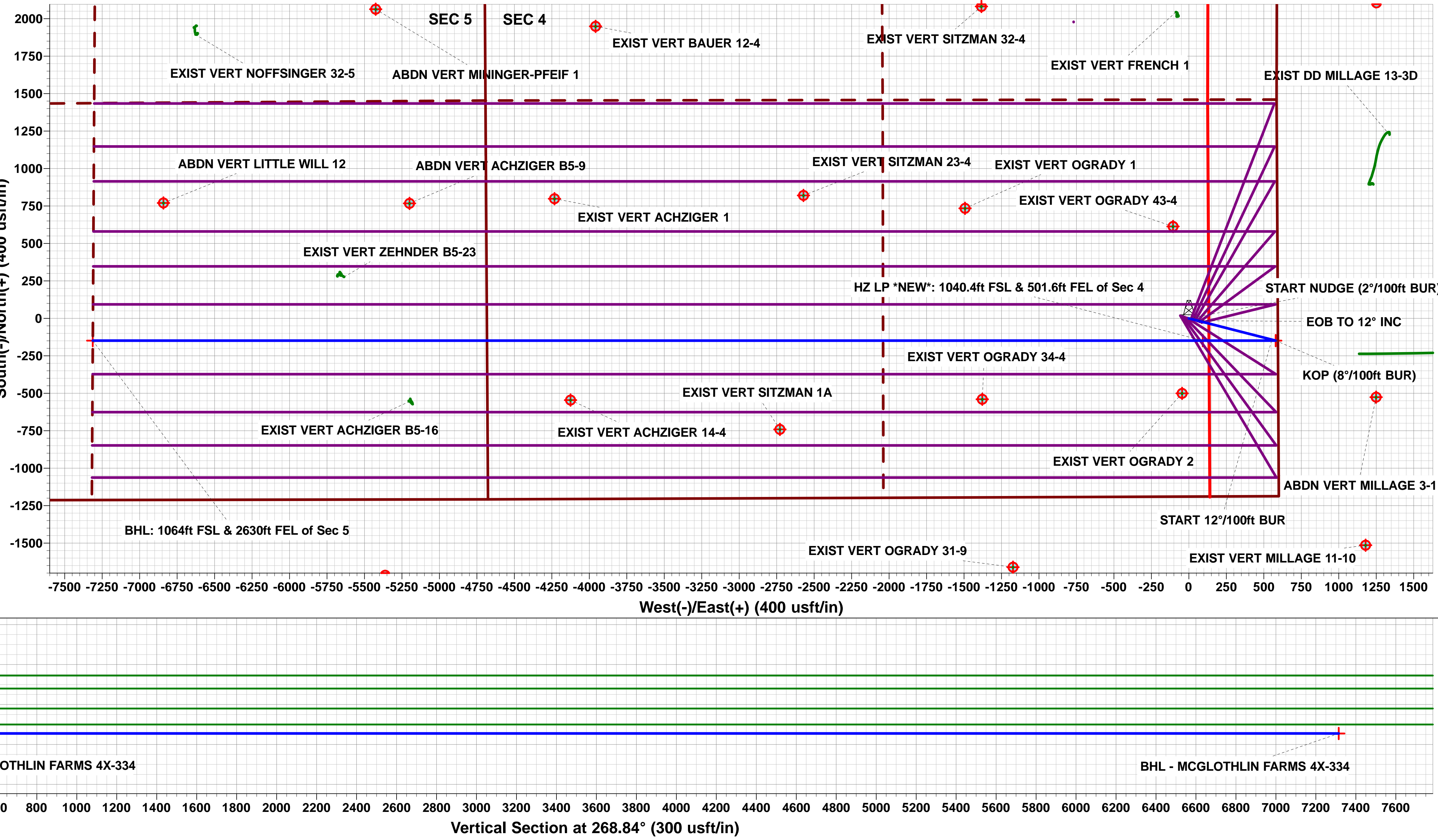
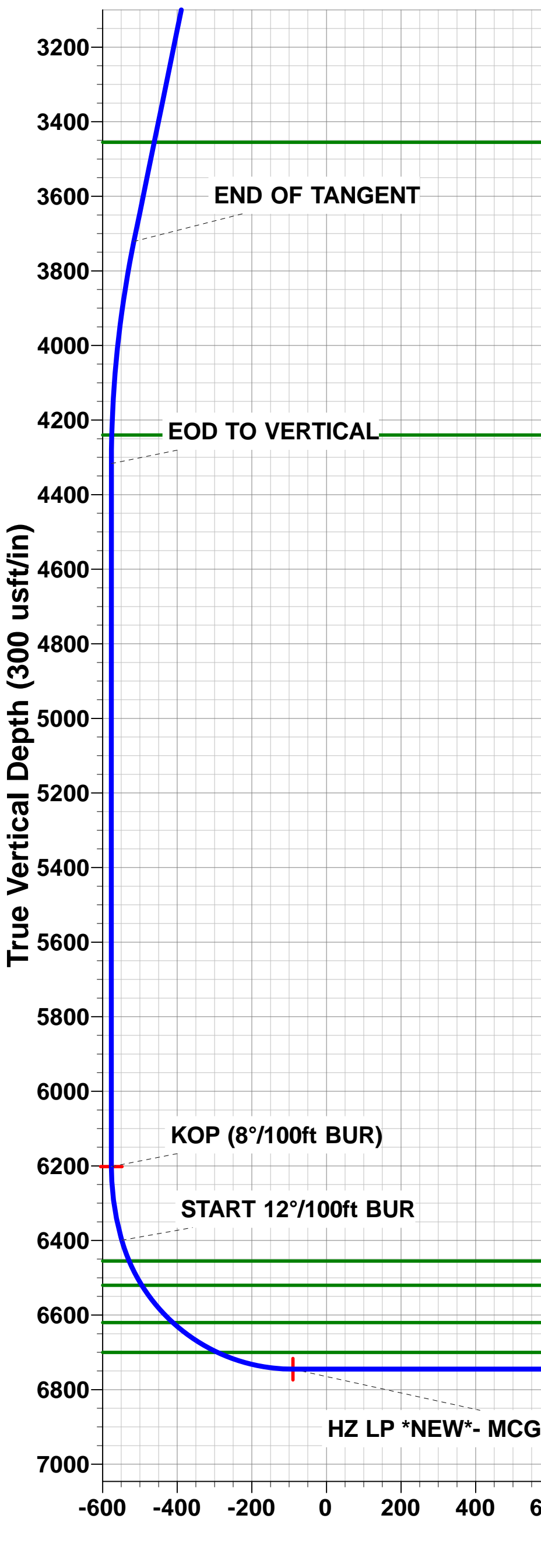
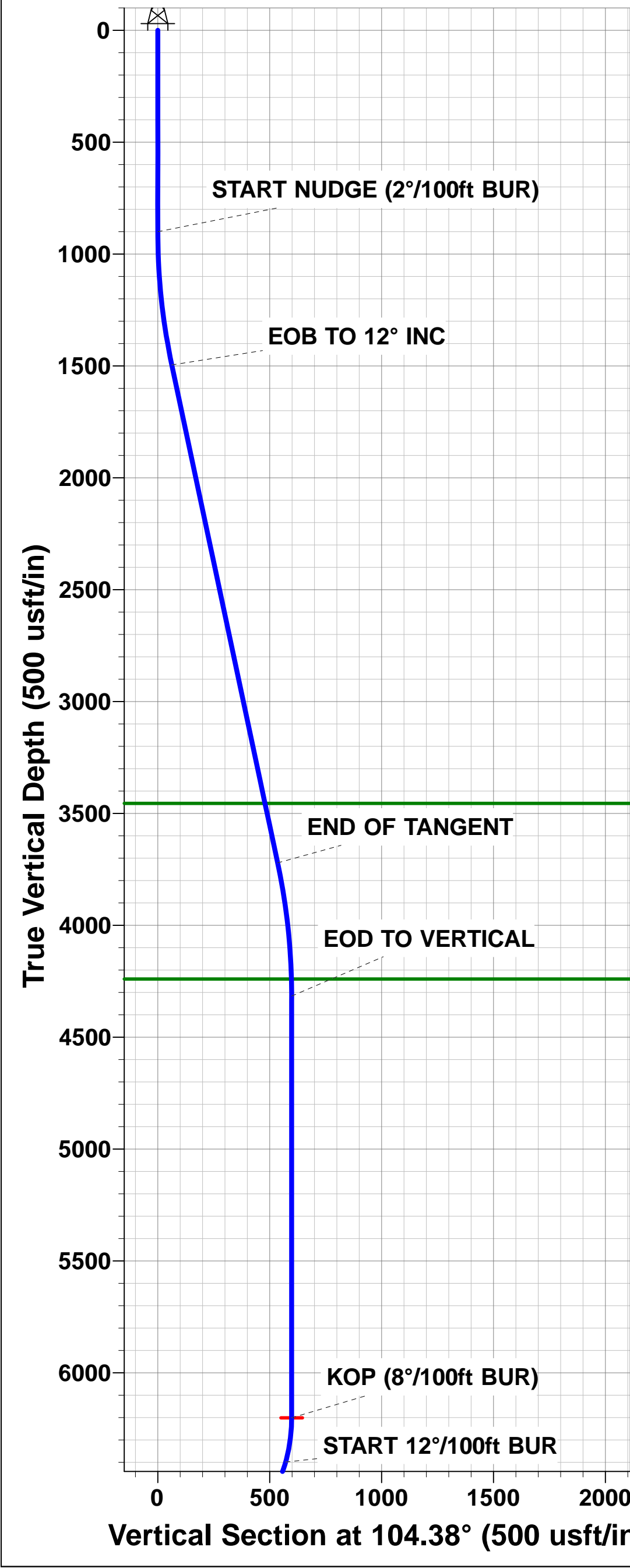
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - MCGLOTHLIN FARMS 4X-334	6201.7	-148.6	579.5	40.423850	-104.545792
BHL - MCGLOTHLIN FARMS 4X-334	6745.0	-148.6	-7312.5	40.423847	-104.574137
HZ LP *NEW*- MCGLOTHLIN FARMS 4X-334	6745.0	-148.6	92.8	40.423850	-104.547540



PROPOSED LOCAL COORDINATES:
SHL: 1189ft FSL & 594ft FEL of Sec 4
HZ LP *NEW*: 1040.4ft FSL & 501.6ft FEL of Sec 4
BHL: 1064ft FSL & 2630ft FEL of Sec 5

Azimuths to True North
Magnetic North: 8.19°

Magnetic Field
Strength: 52530.1snT
Dip Angle: 66.93°
Date: 29/07/2016
Model: IGRF2015



PDC ENERGY

**WELD COUNTY, COLORADO
SE SE SEC. 4 T5N R64W 6th P.M.
MCGLOTHLIN FARMS 4X-334**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

29 July, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well MCGLOTHLIN FARMS 4X-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Reference Site:	SE SE SEC. 4 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	MCGLOTHLIN FARMS 4X-334	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	29/07/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,482.1	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
NW NW SEC. 5 T5N R64W 6th P.M.						
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	14,010.8	6,728.0	919.0	583.2	2.737	CC, ES
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	14,100.0	6,728.0	923.3	585.0	2.729	SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	14,482.1	6,400.0	2,385.8	2,169.8	11.049	CC, ES, SF
EHRlich 5M-243 - ORIGINAL WELLBORE - PROPOSAL	14,482.1	10,839.0	302.5	210.4	3.285	CC, ES, SF
EHRlich 5M-343 - ORIGINAL WELLBORE - PROPOSAL	14,482.1	10,800.0	554.1	463.6	6.122	CC, ES, SF
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	14,482.1	6,768.7	3,553.5	3,335.6	16.308	CC, ES, SF
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	13,791.5	6,729.8	2,101.7	1,902.9	10.573	CC
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	13,900.0	6,731.2	2,104.5	1,902.7	10.427	ES
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	14,400.0	6,737.8	2,188.0	1,972.2	10.137	SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	14,482.1	6,693.4	1,223.3	1,005.5	5.616	CC, ES, SF
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	14,482.1	6,709.1	675.0	457.2	3.099	CC, ES, SF
SE SE SEC. 4 T5N R64W 6th P.M.						
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Design #1	12,369.0	6,737.0	916.0	626.1	3.159	CC
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Design #1	12,400.0	6,737.0	916.6	625.8	3.152	ES
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Design #1	12,500.0	6,737.0	925.3	631.8	3.152	SF
ABDN VERT MILLAGE 3-1 - Wellbore #1 - Design #1	6,260.2	6,188.7	768.9	629.7	5.523	CC, ES, SF
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	12,594.8	6,748.0	2,211.9	1,915.6	7.464	CC
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	12,700.0	6,748.0	2,214.4	1,915.1	7.399	ES
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	13,100.0	6,748.0	2,268.9	1,958.4	7.308	SF
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	8,542.9	6,737.0	1,721.4	1,536.9	9.333	CC
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	8,600.0	6,737.0	1,722.3	1,536.4	9.263	ES
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	9,000.0	6,737.0	1,781.0	1,584.4	9.056	SF
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	4,906.2	4,884.8	1,226.8	1,204.0	53.818	CC
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	5,100.0	5,074.7	1,227.1	1,203.6	52.229	ES
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	14,482.1	6,750.6	8,605.9	8,376.1	37.440	SF
EXIST HZ WOLFPACK PC B3-63-1HN - Wellbore #1 - V	6,260.2	10,966.0	716.9	571.6	4.935	ES, SF
EXIST HZ WOLFPACK PC B3-63-1HN - Wellbore #1 - V	6,492.8	10,966.0	637.9	592.3	13.984	CC
EXIST VERT ACHZIGER #B5-16 - Wellbore #1 - Wellbore	12,364.0	6,724.9	388.3	229.6	2.446	CC, ES
EXIST VERT ACHZIGER #B5-16 - Wellbore #1 - Wellbore	12,400.0	6,725.0	390.0	230.2	2.441	SF
EXIST VERT ACHZIGER 14-4 - Wellbore #1 - Design #1	11,294.8	6,731.0	396.8	134.7	1.514	CC
EXIST VERT ACHZIGER 14-4 - Wellbore #1 - Design #1	11,300.0	6,731.0	396.8	134.6	1.513	ES, SF
EXIST VERT ACHZIGER 1 - Wellbore #1 - Design #1	11,401.8	6,743.0	947.2	682.0	3.572	CC, ES
EXIST VERT ACHZIGER 1 - Wellbore #1 - Design #1	11,500.0	6,743.0	952.3	684.3	3.554	SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,127.6	6,745.0	2,097.6	1,840.1	8.144	CC
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,200.0	6,745.0	2,098.9	1,839.3	8.086	ES
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,600.0	6,745.0	2,150.2	1,879.4	7.942	SF

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 MCGLOTHLIN FARMS 4X-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Reference Site:	SE SE SEC. 4 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	MCGLOTHLIN FARMS 4X-334	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						
SE SE SEC. 4 T5N R64W 6th P.M.						
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	11,161.9	6,708.0	1,770.3	1,514.3	6.916	CC
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	11,200.0	6,708.0	1,770.7	1,513.7	6.889	ES
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	11,500.0	6,708.0	1,802.3	1,536.9	6.791	SF
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	9,847.4	6,716.0	1,742.4	1,522.8	7.934	CC
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	9,900.0	6,716.0	1,743.2	1,522.1	7.885	ES
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	10,200.0	6,716.0	1,777.7	1,548.4	7.751	SF
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	6,260.2	6,188.7	2,352.4	2,214.6	17.070	CC
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	6,300.0	6,228.5	2,352.8	2,210.3	16.519	ES
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	6,550.0	6,469.6	2,370.4	2,224.3	16.226	SF
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	942.2	930.9	2,044.3	2,041.8	801.430	CC, ES
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	14,482.1	6,694.8	7,548.4	7,330.5	34.644	SF
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	12,531.6	6,709.0	1,565.6	1,271.4	5.322	CC
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	12,600.0	6,709.0	1,567.1	1,271.0	5.293	ES
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	12,800.0	6,709.0	1,588.5	1,286.8	5.265	SF
EXIST VERT HEINRICH 41-9 - Wellbore #1 - Design #1	7,147.1	6,734.0	1,700.3	1,547.6	11.138	CC, ES
EXIST VERT HEINRICH 41-9 - Wellbore #1 - Design #1	7,600.0	6,734.0	1,759.6	1,598.6	10.934	SF
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	6,260.2	6,181.7	1,491.1	1,354.0	10.872	CC
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	6,300.0	6,221.5	1,491.6	1,352.8	10.747	ES
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	6,460.2	6,379.1	1,502.5	1,361.3	10.642	SF
EXIST VERT OGRADY 1 - Wellbore #1 - Design #1	8,662.8	6,742.0	883.1	693.3	4.652	CC
EXIST VERT OGRADY 1 - Wellbore #1 - Design #1	8,700.0	6,742.0	883.9	693.1	4.632	ES
EXIST VERT OGRADY 1 - Wellbore #1 - Design #1	8,800.0	6,742.0	893.7	700.2	4.618	SF
EXIST VERT OGRADY 2 - Wellbore #1 - Design #1	7,214.5	6,738.0	352.0	196.2	2.259	CC, ES, SF
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	8,342.7	6,726.0	1,511.9	1,332.8	8.443	CC
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	8,400.0	6,726.0	1,513.0	1,332.4	8.379	ES
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	8,700.0	6,726.0	1,553.6	1,365.1	8.242	SF
EXIST VERT OGRADY 34-4 - Wellbore #1 - Design #1	8,547.8	6,734.0	391.3	204.6	2.096	CC, ES, SF
EXIST VERT OGRADY 43-4 - Wellbore #1 - Design #1	900.0	884.0	622.5	603.2	32.244	CC
EXIST VERT OGRADY 43-4 - Wellbore #1 - Design #1	1,100.0	1,083.8	625.3	601.6	26.354	ES
EXIST VERT OGRADY 43-4 - Wellbore #1 - Design #1	7,300.0	6,729.0	762.5	605.4	4.854	SF
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	9,904.6	6,739.0	2,309.1	2,085.5	10.327	CC
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	10,000.0	6,739.0	2,311.1	2,084.9	10.216	ES
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	10,600.0	6,739.0	2,411.6	2,168.7	9.931	SF
EXIST VERT SITZMAN 1A - Wellbore #1 - Design #1	9,898.0	6,741.0	592.3	368.8	2.651	CC
EXIST VERT SITZMAN 1A - Wellbore #1 - Design #1	9,900.0	6,741.0	592.3	368.8	2.650	ES, SF
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Design #1	9,740.5	6,733.0	969.2	750.1	4.425	CC, ES
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Design #1	9,900.0	6,733.0	982.2	758.8	4.396	SF
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	8,553.3	6,740.0	2,230.3	2,043.4	11.933	CC
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	8,600.0	6,740.0	2,230.8	2,042.7	11.857	ES
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	9,300.0	6,740.0	2,352.0	2,145.0	11.361	SF
EXIST VERT ZEHNDER B5-23 - Wellbore #1 - Wellbore	12,849.0	6,734.4	429.3	257.2	2.495	CC, ES
EXIST VERT ZEHNDER B5-23 - Wellbore #1 - Wellbore	12,900.0	6,734.0	432.3	258.8	2.491	SF
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	700.0	700.0	30.1	27.2	10.483	CC
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	800.0	799.8	30.4	27.0	9.150	ES
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	14,482.1	14,507.5	1,297.5	866.5	3.010	SF
MCGLOTHLIN FARMS 4W-334 - ORIGINAL WELLBORI	600.0	600.0	45.1	42.6	18.613	CC
MCGLOTHLIN FARMS 4W-334 - ORIGINAL WELLBORI	700.0	699.6	45.4	42.6	15.842	ES
MCGLOTHLIN FARMS 4W-334 - ORIGINAL WELLBORI	14,482.1	14,530.5	1,063.1	631.6	2.464	SF
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	800.0	800.0	14.9	11.5	4.475	CC
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	1,000.0	999.6	15.2	11.0	3.632	ES, SF
MCGLOTHLIN FARMS 4X-204 - ORIGINAL WELLBORE	300.0	300.0	90.0	88.9	83.907	CC
MCGLOTHLIN FARMS 4X-204 - ORIGINAL WELLBORE	14,482.1	14,404.7	250.5	-168.8	0.597	Level 1, ES, SF
MCGLOTHLIN FARMS 4X-214 - ORIGINAL WELLBORE	500.0	500.0	60.0	58.1	30.451	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 MCGLOTHLIN FARMS 4X-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Reference Site:	SE SE SEC. 4 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4639.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	MCGLOTHLIN FARMS 4X-334	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
SE SE SEC. 4 T5N R64W 6th P.M.						
MCGLOTHLIN FARMS 4X-214 - ORIGINAL WELLBORE	14,482.1	14,428.9	731.9	301.4	1.700 SF	
MCGLOTHLIN FARMS 4X-234 - ORIGINAL WELLBORE	900.0	900.0	15.0	11.2	3.971 CC	
MCGLOTHLIN FARMS 4X-234 - ORIGINAL WELLBORE	14,482.1	14,429.3	233.3	-183.0	0.560 Level 1, ES, SF	
MCGLOTHLIN FARMS 4X-314 - ORIGINAL WELLBORE	400.0	400.0	75.0	73.5	49.283 CC	
MCGLOTHLIN FARMS 4X-314 - ORIGINAL WELLBORE	14,482.1	14,489.4	495.8	63.5	1.147 Level 2, ES, SF	
MCGLOTHLIN FARMS 4Y-214 - ORIGINAL WELLBORE	900.0	900.0	44.9	41.1	11.913 CC, ES	
MCGLOTHLIN FARMS 4Y-214 - ORIGINAL WELLBORE	14,482.1	14,489.3	702.1	272.0	1.632 SF	
MCGLOTHLIN FARMS 4Y-304 - ORIGINAL WELLBORE	900.0	900.0	60.0	56.3	15.924 CC, ES	
MCGLOTHLIN FARMS 4Y-304 - ORIGINAL WELLBORE	14,482.1	14,600.7	914.3	482.5	2.117 SF	
MCGLOTHLIN FARMS 4Y-314 - ORIGINAL WELLBORE	900.0	900.0	29.9	26.2	7.942 CC, ES	
MCGLOTHLIN FARMS 4Y-314 - ORIGINAL WELLBORE	14,482.1	14,510.6	477.3	45.5	1.105 Level 2, SF	

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-83.58	770.4	-6,841.2	6,884.4				
100.0	100.0	83.0	83.0	0.1	0.0	-83.58	770.4	-6,841.2	6,884.4	6,884.3	0.09	N/A	
200.0	200.0	183.0	183.0	0.3	0.9	-83.58	770.4	-6,841.2	6,884.4	6,883.2	1.17	5,867.939	
300.0	300.0	283.0	283.0	0.5	3.0	-83.58	770.4	-6,841.2	6,884.4	6,880.9	3.51	1,963.893	
400.0	400.0	383.0	383.0	0.8	5.1	-83.58	770.4	-6,841.2	6,884.4	6,878.5	5.85	1,176.272	
500.0	500.0	483.0	483.0	1.0	7.1	-83.58	770.4	-6,841.2	6,884.4	6,876.3	8.13	847.141	
600.0	600.0	583.0	583.0	1.2	9.2	-83.58	770.4	-6,841.2	6,884.4	6,874.0	10.38	663.054	
700.0	700.0	683.0	683.0	1.4	11.2	-83.58	770.4	-6,841.2	6,884.4	6,871.8	12.63	545.019	
800.0	800.0	783.0	783.0	1.7	13.2	-83.58	770.4	-6,841.2	6,884.4	6,869.5	14.88	462.782	
900.0	900.0	883.0	883.0	1.9	15.2	-83.58	770.4	-6,841.2	6,884.4	6,867.3	17.12	402.165	
1,000.0	1,000.0	983.0	983.0	2.1	17.2	172.04	770.4	-6,841.2	6,886.1	6,866.8	19.33	356.230	
1,100.0	1,099.8	1,082.8	1,082.8	2.3	19.3	172.03	770.4	-6,841.2	6,891.3	6,869.8	21.50	320.527	
1,200.0	1,199.5	1,182.5	1,182.5	2.5	21.3	172.02	770.4	-6,841.2	6,899.9	6,876.3	23.64	291.936	
1,300.0	1,298.7	1,281.7	1,281.7	2.8	23.3	172.00	770.4	-6,841.2	6,912.0	6,886.3	25.73	268.667	
1,400.0	1,397.5	1,380.5	1,380.5	3.0	25.3	171.97	770.4	-6,841.2	6,927.5	6,899.7	27.77	249.484	
1,500.0	1,495.6	1,478.6	1,478.6	3.3	27.2	171.94	770.4	-6,841.2	6,946.4	6,916.7	29.75	233.506	
1,600.0	1,593.4	1,576.4	1,576.4	3.7	29.2	171.96	770.4	-6,841.2	6,967.0	6,935.1	31.91	218.351	
1,700.0	1,691.3	1,674.3	1,674.3	4.1	31.2	171.99	770.4	-6,841.2	6,987.6	6,953.5	34.07	205.081	
1,800.0	1,789.1	1,772.1	1,772.1	4.5	33.1	172.01	770.4	-6,841.2	7,008.2	6,972.0	36.24	193.371	
1,900.0	1,886.9	1,869.9	1,869.9	4.9	35.1	172.04	770.4	-6,841.2	7,028.8	6,990.4	38.42	182.965	
2,000.0	1,984.7	1,967.7	1,967.7	5.3	37.1	172.06	770.4	-6,841.2	7,049.4	7,008.8	40.59	173.660	
2,100.0	2,082.5	2,065.5	2,065.5	5.7	39.0	172.08	770.4	-6,841.2	7,070.0	7,027.2	42.77	165.292	
2,200.0	2,180.3	2,163.3	2,163.3	6.2	41.0	172.11	770.4	-6,841.2	7,090.6	7,045.6	44.95	157.727	
2,300.0	2,278.1	2,261.1	2,261.1	6.6	43.0	172.13	770.4	-6,841.2	7,111.2	7,064.1	47.14	150.857	
2,400.0	2,376.0	2,359.0	2,359.0	7.0	44.9	172.15	770.4	-6,841.2	7,131.8	7,082.5	49.32	144.591	
2,500.0	2,473.8	2,456.8	2,456.8	7.5	46.9	172.17	770.4	-6,841.2	7,152.4	7,100.9	51.51	138.852	
2,600.0	2,571.6	2,554.6	2,554.6	7.9	48.9	172.20	770.4	-6,841.2	7,173.0	7,119.3	53.70	133.578	
2,700.0	2,669.4	2,652.4	2,652.4	8.4	50.8	172.22	770.4	-6,841.2	7,193.6	7,137.7	55.89	128.715	
2,800.0	2,767.2	2,750.2	2,750.2	8.8	52.8	172.24	770.4	-6,841.2	7,214.2	7,156.2	58.08	124.217	
2,900.0	2,865.0	2,848.0	2,848.0	9.3	54.8	172.26	770.4	-6,841.2	7,234.8	7,174.6	60.27	120.044	
3,000.0	2,962.8	2,945.8	2,945.8	9.7	56.7	172.29	770.4	-6,841.2	7,255.5	7,193.0	62.46	116.162	
3,100.0	3,060.7	3,043.7	3,043.7	10.2	58.7	172.31	770.4	-6,841.2	7,276.1	7,211.4	64.65	112.542	

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