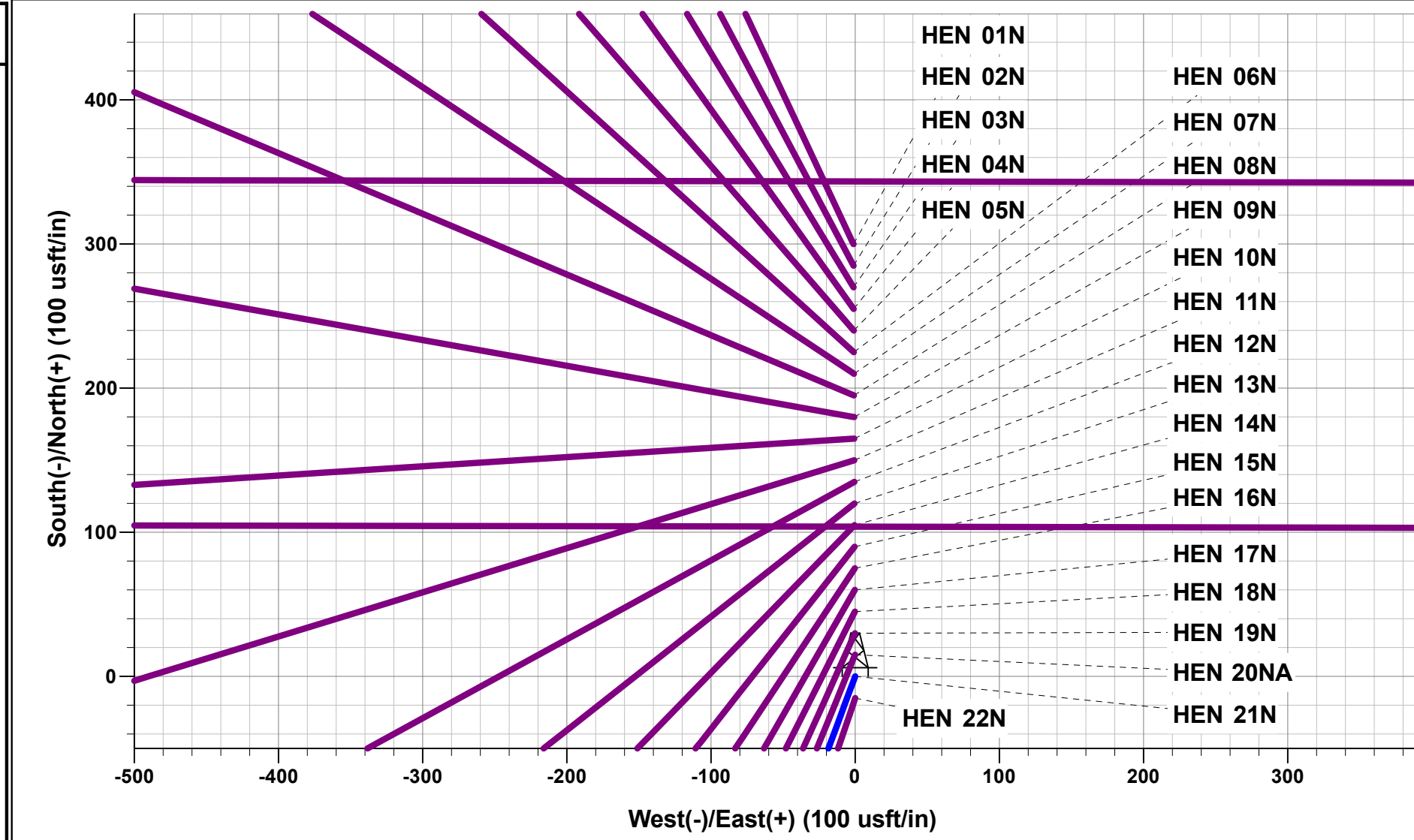




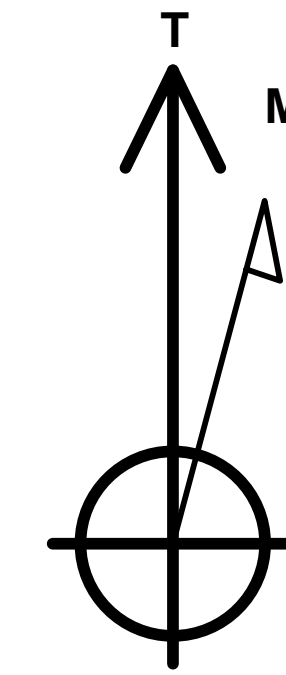
Project: WELD COUNTY, COLORADO (TRUE)  
 Site: SW NE SEC. 8 T4N R64W 6th P.M. (HEN)  
 Well: HEN 21N  
 Wellbore: ORIGINAL WELLBORE  
 Design: PROPOSAL #2

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 2384ft FNL & 2042ft FEL of Sec 8
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	START NUDDGE (2.5°/100ft BUR)
1671.80	31.79	200.33	1607.52	-322.49	-119.49	-3.86	343.92	EOB TO 31.8° INC
5489.44	31.80	200.33	4852.28	-2208.62	-818.37	-26.43	2355.36	END OF TANGENT
6761.24	0.00	200.33	6059.81	-2531.11	-937.86	-30.29	2699.28	EOD TO VERTICAL
6861.24	0.00	0.00	6159.81	-2531.11	-937.86	-30.29	2699.28	KOP (8°/100ft BUR)
7798.74	75.00	90.10	6851.60	-2532.04	-407.03	469.82	3230.11	EP: 360ft FSL & 2440ft FEL of Sec 8
7989.11	90.23	90.10	6876.00	-2532.37	-218.80	647.17	3418.34	HZ LANDING POINT
15320.70	90.24	90.10	6846.00	-2545.11	7112.72	7554.36	10749.87	BHL: 360ft FSL & 200ft FEL of Sec 9



PROPOSED LOCAL COORDINATES:  
 SHL: 2384ft FNL & 2042ft FEL of Sec 8  
 EP: 360ft FSL & 2440ft FEL of Sec 8  
 BHL : 360ft FSL & 200ft FEL of Sec 9

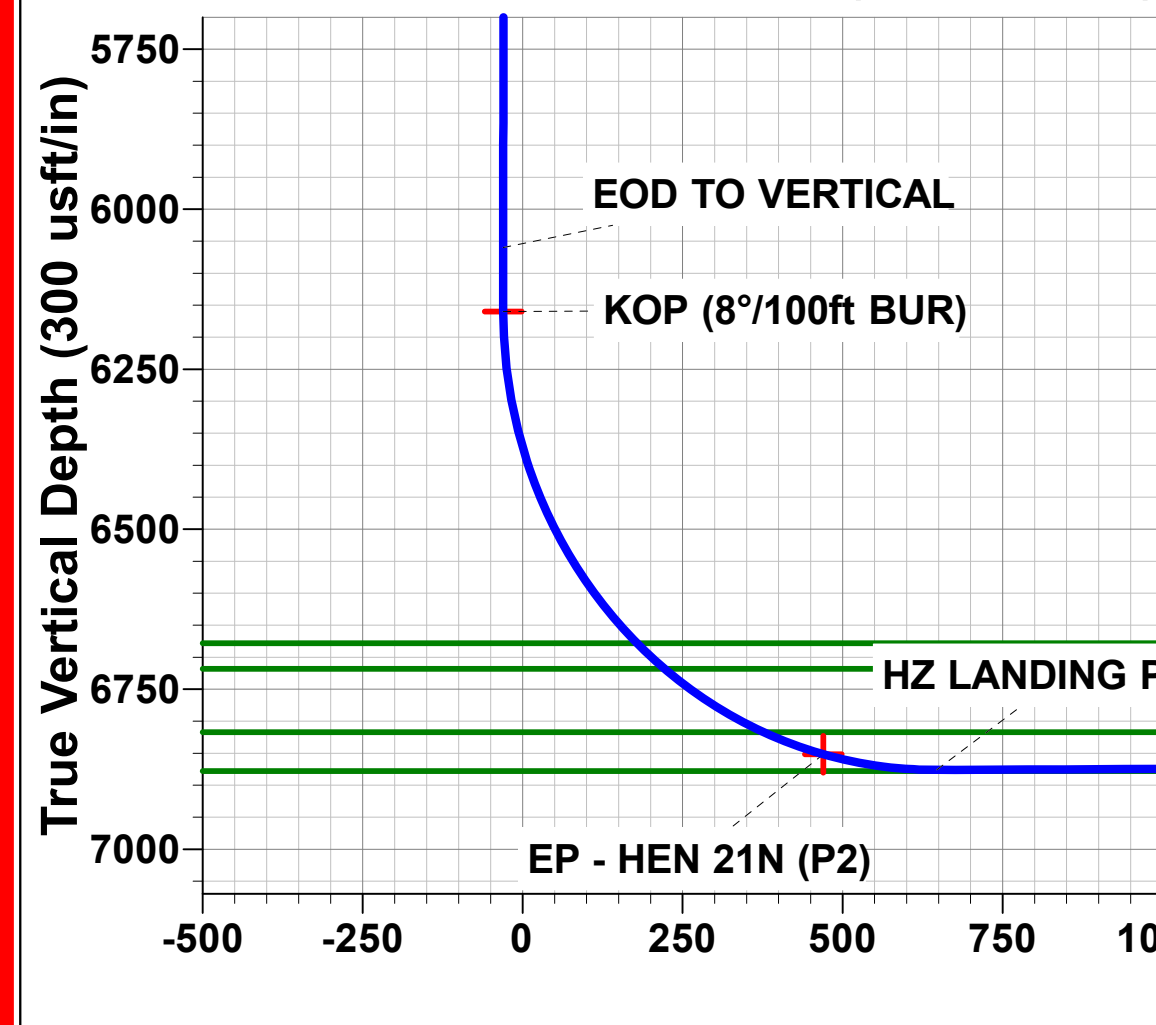
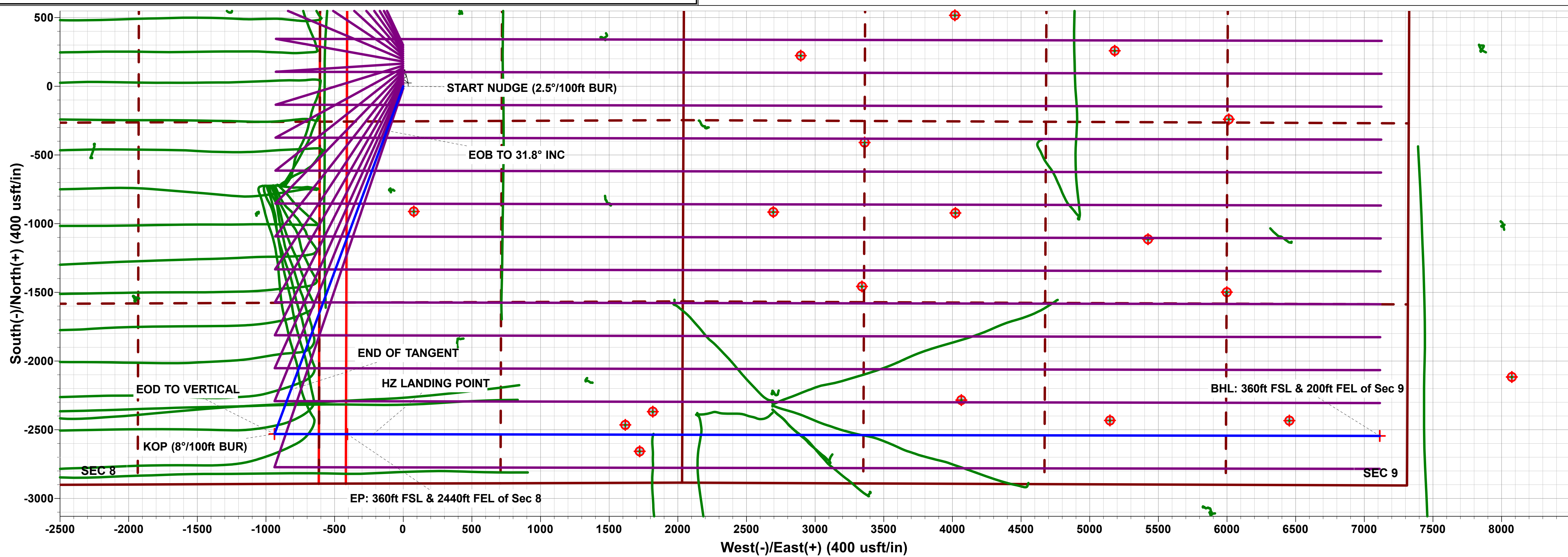
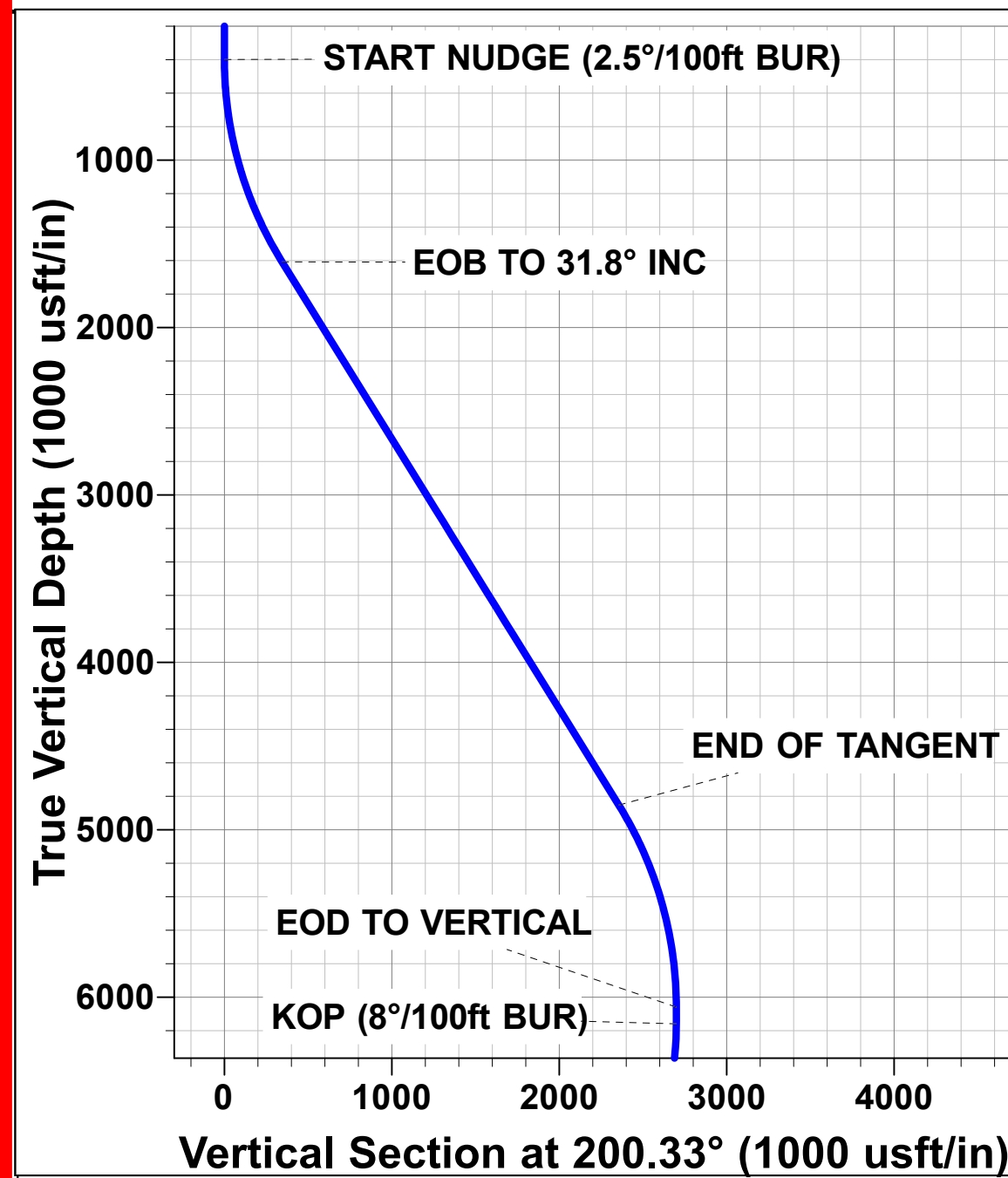


Azimuths to True North  
 Magnetic North: 7.76°

Magnetic Field  
 Strength: 51952.5nT  
 Dip Angle: 66.63°  
 Date: 2021-04-20  
 Model: IGRF2020

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - HEN 21N (P2)	6846.00	-2545.11	7112.72	1361065.22	3265772.44	40.320604	-104.546834
EP - HEN 21N (P2)	6851.60	-2532.04	-407.03	1360999.62	3258253.28	40.320642	-104.573801
KOP - HEN 21N (P2)	6159.81	-2531.11	-937.86	1360995.00	3257722.49	40.320645	-104.575705





## **PDC ENERGY**

**WELD COUNTY, COLORADO (TRUE)  
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)  
HEN 21N**

**ORIGINAL WELLBORE  
PROPOSAL #2**

# **Anticollision Report**

**19 June, 2022**



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 3,280.83usft	<b>Error Surface:</b>	Ellipsoid Separation
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	2022-06-19		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	15,320.70	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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	12,758.45	7,207.76	356.51	173.67	1.950	CC
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	12,800.00	7,208.27	358.92	170.86	1.909	ES, SF
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - V	11,612.90	6,913.58	420.00	288.40	3.191	CC, ES
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - V	11,700.00	6,913.54	428.94	291.23	3.115	SF
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	11,323.15	6,843.44	156.70	39.76	1.340	Level 3, CC, ES, SF
ABDN HZ FRANKLIN C08-62HNX - ORIGINAL WELLBO	7,727.34	9,443.58	216.07	107.50	1.990	CC
ABDN HZ FRANKLIN C08-62HNX - ORIGINAL WELLBO	8,200.00	9,906.50	219.34	101.72	1.865	ES
ABDN HZ FRANKLIN C08-62HNX - ORIGINAL WELLBO	9,000.00	10,707.07	261.36	113.91	1.773	SF
ABDN HZ FRANKLIN C08-62HNX - SIDETRACK - SIDE	7,789.47	9,523.71	246.71	136.24	2.233	CC
ABDN HZ FRANKLIN C08-62HNX - SIDETRACK - SIDE	7,850.00	9,582.29	247.72	134.64	2.191	ES
ABDN HZ FRANKLIN C08-62HNX - SIDETRACK - SIDE	8,300.00	10,021.77	272.42	142.22	2.092	SF
ABDN VERT CONQUEST SWD 1-8 - Wellbore #1 - Des	10,025.52	6,781.78	167.75	-33.59	0.833	Level 3, CC, ES, SF
ABDN VERT COX 8-1 - Wellbore #1 - Wellbore #1	353.10	320.10	2,124.46	2,123.48	2,175.238	CC
ABDN VERT COX 8-1 - Wellbore #1 - Wellbore #1	400.00	365.37	2,124.47	2,123.37	1,923.026	ES
ABDN VERT COX 8-1 - Wellbore #1 - Wellbore #1	4,000.00	3,474.51	3,271.14	3,250.13	155.701	SF
ABDN VERT COX PM C 8-4 - Wellbore #1 - Wellbore #1	0.00	0.00	3,079.28			
ABDN VERT COX PM C 8-4 - Wellbore #1 - Wellbore #1	455.30	460.62	3,079.51	3,078.31	2,574.660	ES
ABDN VERT COX PM C 8-4 - Wellbore #1 - Wellbore #1	2,000.00	1,864.94	3,260.47	3,249.71	303.014	SF
ABDN VERT COX PM C 8-5 - Wellbore #1 - Wellbore #1	1,806.66	1,724.57	2,730.76	2,721.10	282.537	CC
ABDN VERT COX PM C 8-5 - Wellbore #1 - Wellbore #1	1,900.00	1,793.68	2,731.36	2,720.74	257.214	ES
ABDN VERT COX PM C 8-5 - Wellbore #1 - Wellbore #1	5,200.00	4,540.29	3,278.66	3,239.88	84.549	SF
ABDN VERT GEHRING 8-1514 - Wellbore #1 - Wellbore	8,625.51	6,800.00	694.30	655.49	17.889	CC, ES
ABDN VERT GEHRING 8-1514 - Wellbore #1 - Wellbore	8,800.00	6,801.01	715.89	674.05	17.111	SF
ABDN VERT GEHRING C 8-10X - Wellbore #1 - Wellbor	2,422.71	2,207.05	172.48	156.60	10.860	CC, ES
ABDN VERT GEHRING C 8-10X - Wellbore #1 - Wellbor	2,500.00	2,271.91	177.43	161.00	10.799	SF
ABDN VERT HAGEN 9-16 - Wellbore #1 - Design #1	14,662.06	6,717.74	110.63	-214.16	0.341	Level 3, CC, ES, SF
ABDN VERT HEISER 1 - Wellbore #1 - Design #1	2,590.27	2,345.16	388.90	325.36	6.120	CC
ABDN VERT HEISER 1 - Wellbore #1 - Design #1	2,600.00	2,353.44	388.93	325.13	6.095	ES
ABDN VERT HEISER 1 - Wellbore #1 - Design #1	2,800.00	2,523.42	404.30	335.61	5.886	SF
ABDN VERT LEVI C 5-15 - Wellbore #1 - Wellbore #1	100.00	68.50	3,169.67	3,169.52	10,000.000	CC
ABDN VERT LEVI C 5-15 - Wellbore #1 - Wellbore #1	200.00	162.73	3,169.87	3,169.38	6,461.161	ES
ABDN VERT LEVI C 5-15 - Wellbore #1 - Wellbore #1	1,000.00	882.48	3,259.98	3,257.22	1,181.822	SF
ABDN VERT REINICK 1 - Wellbore #1 - Wellbore #1	14,432.79	6,685.30	3,269.62	3,076.15	16.900	CC
ABDN VERT REINICK 1 - Wellbore #1 - Wellbore #1	14,500.00	6,684.60	3,270.31	3,075.45	16.782	ES
ABDN VERT REINICK 1 - Wellbore #1 - Wellbore #1	14,700.00	6,682.49	3,280.52	3,082.01	16.526	SF
ABDN VERT REINICK 2 - Wellbore #1 - Wellbore #1						Out of range
ABDN VERT REINICK 9-7 - Wellbore #1 - Design #1	13,385.28	6,756.03	2,800.35	2,502.11	9.390	CC

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 HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
ABDN VERT REINICK 9-7 - Wellbore #1 - Design #1	13,400.00	6,755.97	2,800.39	2,501.85	9.380	ES
ABDN VERT REINICK 9-7 - Wellbore #1 - Design #1	13,700.00	6,754.73	2,817.98	2,514.39	9.282	SF
ABDN VERT RICHARDSON 10-12 - Wellbore #1 - Wellb	15,320.70	6,754.39	1,759.07	1,561.88	8.921	CC, ES, SF
ABDN VERT RUFF 1 - Wellbore #1 - Design #1	100.00	71.33	1,730.10	1,729.16	1,838.152	CC
ABDN VERT RUFF 1 - Wellbore #1 - Design #1	500.00	471.37	1,732.20	1,722.18	172.893	ES
ABDN VERT RUFF 1 - Wellbore #1 - Design #1	4,000.00	3,557.75	3,268.75	3,184.53	38.812	SF
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	14,105.25	6,733.59	567.40	383.34	3.083	CC, ES
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	14,200.00	6,739.29	575.23	387.40	3.062	SF
ABDN VERT RYDGREN 8-1 - Wellbore #1 - Wellbore #1	4,315.38	3,840.61	2,119.18	2,083.35	59.148	CC
ABDN VERT RYDGREN 8-1 - Wellbore #1 - Wellbore #1	4,400.00	3,911.50	2,119.67	2,082.95	57.722	ES
ABDN VERT RYDGREN 8-1 - Wellbore #1 - Wellbore #1	6,862.20	6,178.50	2,341.02	2,290.89	46.692	SF
ABDN VERT SLEDGE C 9-28 - Wellbore #1 - Design #1						Out of range
ABDN VERT SLEDGE C 9-29 - Wellbore #1 - Design #1						Out of range
ABDN VERT SMITH 1 - Wellbore #1 - Design #1	400.00	357.00	3,195.98	3,188.49	426.639	CC
ABDN VERT SMITH 1 - Wellbore #1 - Design #1	500.00	456.97	3,197.72	3,188.00	328.801	ES
ABDN VERT SMITH 1 - Wellbore #1 - Design #1	1,000.00	950.17	3,258.46	3,237.49	155.418	SF
ABDN VERT SMITH 2 - Wellbore #1 - Design #1						Out of range
ABDN VERT SMITH 3 - Wellbore #1 - Design #1	12,220.71	6,790.11	3,056.41	2,789.73	11.461	CC
ABDN VERT SMITH 3 - Wellbore #1 - Design #1	12,300.00	6,789.79	3,057.44	2,789.12	11.395	ES
ABDN VERT SMITH 3 - Wellbore #1 - Design #1	12,700.00	6,788.14	3,093.76	2,818.54	11.241	SF
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	13,265.14	6,733.58	1,251.40	1,089.72	7.740	CC
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	13,300.00	6,733.50	1,251.89	1,088.68	7.670	ES
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	13,500.00	6,733.02	1,273.25	1,103.87	7.517	SF
ABDN VERT THEA C 09-32 - Wellbore #1 - Wellbore #1	472.15	423.64	2,242.26	2,240.95	1,719.636	CC
ABDN VERT THEA C 09-32 - Wellbore #1 - Wellbore #1	10,400.00	6,785.02	2,287.49	2,205.17	27.790	ES
ABDN VERT THEA C 09-32 - Wellbore #1 - Wellbore #1	11,000.00	6,767.37	2,374.92	2,283.45	25.965	SF
EXIST DD ALTER C 09-24D - Wellbore #1 - Wellbore #1	12,967.26	7,287.44	983.65	788.64	5.044	CC, ES
EXIST DD ALTER C 09-24D - Wellbore #1 - Wellbore #1	13,000.00	7,287.89	984.20	788.65	5.033	SF
EXIST DD ALTER C 09-33D - Wellbore #1 - Wellbore #1	10,182.07	6,894.87	978.23	884.18	10.401	CC, ES
EXIST DD ALTER C 09-33D - Wellbore #1 - Wellbore #1	10,200.00	6,894.75	978.40	884.32	10.400	SF
EXIST DD BURMAN C 04-33D - Wellbore #1 - Wellbore						Out of range
EXIST DD BURMAN C 05-23D - Wellbore #1 - Wellbore						Out of range
EXIST DD BURMAN C05-24D - Wellbore #1 - Wellbore #						Out of range
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	10,125.45	6,423.68	1,911.73	1,821.86	21.271	CC
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	10,200.00	6,426.13	1,913.18	1,820.80	20.709	ES
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	11,000.00	6,461.73	2,101.99	1,984.88	17.949	SF
EXIST DD RUFF C 08-27D - Wellbore #1 - Wellbore #1	400.00	374.00	2,109.44	2,108.27	1,795.162	CC, ES
EXIST DD RUFF C 08-27D - Wellbore #1 - Wellbore #1	2,900.00	2,254.91	3,239.07	3,225.69	242.071	SF
EXIST DD SLEDGE C 9-30D - Wellbore #1 - Wellbore #1	400.00	356.00	3,234.38	3,233.23	2,800.421	CC, ES
EXIST DD SLEDGE C 9-30D - Wellbore #1 - Wellbore #1	900.00	839.56	3,278.27	3,275.24	1,082.361	SF
EXIST HZ CHALLENGER 1N - ORIGINAL WELLBORE -	0.00	0.00	1,334.35			
EXIST HZ CHALLENGER 1N - ORIGINAL WELLBORE -	200.00	188.00	1,334.49	1,333.99	2,682.713	ES
EXIST HZ CHALLENGER 1N - ORIGINAL WELLBORE -	3,500.00	2,570.23	2,833.41	2,813.12	139.671	SF
EXIST HZ CHALLENGER 1N - SIDETRACK - SIDETRA	0.00	0.00	1,334.35			
EXIST HZ CHALLENGER 1N - SIDETRACK - SIDETRA	200.00	188.00	1,334.49	1,333.99	2,682.713	ES
EXIST HZ CHALLENGER 1N - SIDETRACK - SIDETRA	3,500.00	2,570.23	2,833.41	2,813.12	139.671	SF
EXIST HZ CHALLENGER 2N - Wellbore #1 - Wellbore #	325.96	318.42	1,321.21	1,320.11	1,203.197	CC, ES
EXIST HZ CHALLENGER 2N - Wellbore #1 - Wellbore #	4,300.00	3,309.96	3,255.05	3,230.13	130.629	SF
EXIST HZ CHALLENGER 3N - Wellbore #1 - Wellbore #	406.39	400.49	1,310.01	1,308.57	907.877	CC, ES
EXIST HZ CHALLENGER 3N - Wellbore #1 - Wellbore #	4,100.00	3,208.95	3,012.07	2,988.27	126.593	SF
EXIST HZ CHALLENGER 4N - Wellbore #1 - Wellbore #	0.00	0.00	1,298.86			
EXIST HZ CHALLENGER 4N - Wellbore #1 - Wellbore #	100.00	88.27	1,298.98	1,298.81	7,553.154	ES

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 HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
EXIST HZ CHALLENGER 4N - Wellbore #1 - Wellbore #	3,400.00	2,855.09	2,419.62	2,399.12	118.037	SF
EXIST HZ CHALLENGER 5N - Wellbore #1 - Wellbore #	397.13	389.37	1,285.61	1,284.21	913.689	CC
EXIST HZ CHALLENGER 5N - Wellbore #1 - Wellbore #	400.00	392.02	1,285.61	1,284.19	905.954	ES
EXIST HZ CHALLENGER 5N - Wellbore #1 - Wellbore #	5,000.00	4,545.30	3,254.47	3,224.24	107.668	SF
EXIST HZ CHALLENGER 6N - Wellbore #1 - Wellbore #	270.87	263.46	1,274.24	1,273.39	1,498.572	CC
EXIST HZ CHALLENGER 6N - Wellbore #1 - Wellbore #	400.00	391.40	1,274.30	1,272.88	900.572	ES
EXIST HZ CHALLENGER 6N - Wellbore #1 - Wellbore #	5,400.00	4,774.25	3,189.17	3,157.39	100.360	SF
EXIST HZ CHALLENGER 7N - Wellbore #1 - Wellbore #	0.00	0.00	1,262.58			
EXIST HZ CHALLENGER 7N - Wellbore #1 - Wellbore #	400.00	384.81	1,263.83	1,262.44	907.355	ES
EXIST HZ CHALLENGER 7N - Wellbore #1 - Wellbore #	3,800.00	3,674.00	2,138.28	2,113.96	87.906	SF
EXIST HZ CHALLENGER 8N - Wellbore #1 - Wellbore #	419.50	417.18	1,250.27	1,248.77	832.377	CC, ES
EXIST HZ CHALLENGER 8N - Wellbore #1 - Wellbore #	8,700.00	6,492.49	3,253.81	3,202.74	63.710	SF
EXIST HZ CHALLENGER 9N - Wellbore #1 - Wellbore #	912.75	1,037.70	1,210.20	1,205.95	284.993	CC, ES
EXIST HZ CHALLENGER 9N - Wellbore #1 - Wellbore #	9,100.00	6,347.00	3,248.18	3,191.78	57.586	SF
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	8,474.11	10,204.05	267.79	132.02	1.972	CC
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	9,115.62	10,846.00	276.73	108.03	1.640	ES, SF
EXIST HZ HAROLD 6X-232 - Wellbore #1 - Wellbore #1						Out of range
EXIST HZ HAROLD 6X-302 - Wellbore #1 - Wellbore #1						Out of range
EXIST HZ HAROLD 6Y-202 - Wellbore #1 - Wellbore #1						Out of range
EXIST HZ HAROLD 6Y-312 - Wellbore #1 - Wellbore #1						Out of range
EXIST HZ JAGGED 10N - Wellbore #1 - Wellbore #1	4,400.00	4,081.23	199.33	152.61	4.266	SF
EXIST HZ JAGGED 10N - Wellbore #1 - Wellbore #1	4,483.59	4,157.34	196.71	151.68	4.368	CC, ES
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,344.99	6,885.52	104.95	57.26	2.201	CC
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,350.00	6,886.78	105.07	56.91	2.182	ES, SF
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	5,149.25	4,795.67	29.31	-14.25	0.673	Level 3, CC, ES, SF
EXIST HZ JAGGED 1N - Wellbore #1 - Wellbore #1	2,354.69	2,208.46	552.67	531.76	26.439	CC, ES
EXIST HZ JAGGED 1N - Wellbore #1 - Wellbore #1	2,600.00	2,403.46	573.87	550.50	24.558	SF
EXIST HZ JAGGED 2N - Wellbore #1 - Wellbore #1	2,429.17	2,277.27	525.63	504.20	24.525	CC, ES
EXIST HZ JAGGED 2N - Wellbore #1 - Wellbore #1	2,600.00	2,406.06	537.65	514.39	23.119	SF
EXIST HZ JAGGED 3N - Wellbore #1 - Wellbore #1	2,674.60	2,504.04	459.40	435.89	19.540	CC
EXIST HZ JAGGED 3N - Wellbore #1 - Wellbore #1	2,700.00	2,524.43	459.66	435.87	19.317	ES
EXIST HZ JAGGED 3N - Wellbore #1 - Wellbore #1	2,800.00	2,602.36	466.06	441.35	18.858	SF
EXIST HZ JAGGED 4N - Wellbore #1 - Wellbore #1	2,975.09	2,768.06	461.41	435.36	17.710	CC
EXIST HZ JAGGED 4N - Wellbore #1 - Wellbore #1	3,000.00	2,788.38	461.63	435.36	17.570	ES
EXIST HZ JAGGED 4N - Wellbore #1 - Wellbore #1	3,100.00	2,869.03	467.00	440.01	17.305	SF
EXIST HZ JAGGED 5N - Wellbore #1 - Wellbore #1	3,153.50	2,915.38	488.25	459.96	17.259	CC, ES
EXIST HZ JAGGED 5N - Wellbore #1 - Wellbore #1	3,300.00	3,039.73	493.94	464.56	16.808	SF
EXIST HZ JAGGED 6N - Wellbore #1 - Wellbore #1	3,349.91	3,095.22	438.96	408.15	14.245	CC, ES
EXIST HZ JAGGED 6N - Wellbore #1 - Wellbore #1	3,500.00	3,221.00	445.42	413.84	14.106	SF
EXIST HZ JAGGED 7N - Wellbore #1 - Wellbore #1	3,558.36	3,276.24	350.61	316.33	10.228	CC, ES
EXIST HZ JAGGED 7N - Wellbore #1 - Wellbore #1	3,600.00	3,308.96	351.34	316.91	10.205	SF
EXIST HZ JAGGED 8N - Wellbore #1 - Wellbore #1	3,818.93	3,529.88	375.11	337.93	10.089	CC, ES, SF
EXIST HZ JAGGED 9N - Wellbore #1 - Wellbore #1	4,100.00	3,802.69	292.80	251.66	7.118	SF
EXIST HZ JAGGED 9N - Wellbore #1 - Wellbore #1	4,187.46	3,884.32	291.10	250.51	7.171	CC, ES
EXIST HZ MARK ALTER C16-79HN - Wellbore #1 - Well	10,355.62	6,773.84	203.20	135.18	2.987	CC, ES
EXIST HZ MARK ALTER C16-79HN - Wellbore #1 - Well	10,400.00	6,771.88	207.97	137.14	2.936	SF
EXIST HZ NORTHROP C 08-73HN - Wellbore #1 - Wellb	8,400.00	10,430.00	987.47	906.06	12.130	SF
EXIST HZ NORTHROP C 08-73HN - Wellbore #1 - Wellb	8,900.00	10,430.00	837.43	777.19	13.901	ES
EXIST HZ NORTHROP C 08-73HN - Wellbore #1 - Wellb	8,923.81	10,430.00	837.09	777.33	14.007	CC
EXIST HZ NORTHROP C 08-75HN - Wellbore #1 - Wellb	7,673.00	10,667.00	925.37	878.59	19.780	CC
EXIST HZ NORTHROP C 08-75HN - Wellbore #1 - Wellb	7,700.00	10,667.00	925.82	877.57	19.191	ES
EXIST HZ NORTHROP C 08-75HN - Wellbore #1 - Wellb	8,300.00	10,667.00	1,131.64	1,042.88	12.750	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 HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well						Out of range
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	9,671.78	11,004.00	1,618.15	1,437.26	8.946	CC
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	9,700.00	11,004.00	1,618.39	1,436.71	8.908	ES
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	9,900.00	11,004.00	1,634.16	1,448.07	8.781	SF
EXIST HZ STOCKLEY C15-79HN - Wellbore #1 - Wellbo	15,320.70	11,666.97	334.88	194.11	2.379	CC, ES, SF
EXIST HZ ZANE ALTER C 09-21 - Wellbore #1 - Wellbor	13,127.90	6,811.72	1,574.84	1,404.04	9.221	CC, ES
EXIST HZ ZANE ALTER C 09-21 - Wellbore #1 - Wellbor	13,200.00	6,810.56	1,576.48	1,404.97	9.192	SF
EXIST VERT ALTER C 9-23 - Wellbore #1 - Design #1	14,204.86	6,734.74	1,044.53	724.08	3.260	CC, ES, SF
EXIST VERT ALTER C 9-25 - Wellbore #1 - Design #1	11,547.16	6,768.20	1,081.69	834.09	4.369	CC, ES
EXIST VERT ALTER C 9-25 - Wellbore #1 - Design #1	11,600.00	6,767.99	1,082.98	835.01	4.367	SF
EXIST VERT AMANDA ALTER C 9-20 - Wellbore #1 - De	11,564.71	6,783.37	2,129.10	1,880.68	8.570	CC
EXIST VERT AMANDA ALTER C 9-20 - Wellbore #1 - De	11,600.00	6,783.23	2,129.40	1,880.33	8.549	ES
EXIST VERT AMANDA ALTER C 9-20 - Wellbore #1 - De	11,800.00	6,782.41	2,142.07	1,889.91	8.495	SF
EXIST VERT BARTON C 15-29 - Wellbore #1 - Design #	15,320.70	6,701.42	1,490.74	1,309.61	8.230	CC, ES, SF
EXIST VERT BENNER 1 - Wellbore #1 - Wellbore #1	100.00	41.27	1,480.77	1,480.64	10,000.000	CC
EXIST VERT BENNER 1 - Wellbore #1 - Wellbore #1	402.26	347.11	1,481.19	1,480.20	1,500.154	ES
EXIST VERT BENNER 1 - Wellbore #1 - Wellbore #1	11,000.00	6,731.94	3,194.11	3,109.13	37.588	SF
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #						Out of range
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1						Out of range
EXIST VERT CONNELL C 4-25 - Wellbore #1 - Wellbore						Out of range
EXIST VERT COX 8-19D - Wellbore #1 - Design #1	400.00	389.00	2,343.71	2,335.56	287.763	CC
EXIST VERT COX 8-19D - Wellbore #1 - Design #1	800.00	786.97	2,348.11	2,330.99	137.191	ES
EXIST VERT COX 8-19D - Wellbore #1 - Design #1	4,800.00	4,255.30	3,251.64	3,136.29	28.190	SF
EXIST VERT COX PM C 8-6 - Wellbore #1 - Wellbore #1	0.00	0.00	1,388.86			
EXIST VERT COX PM C 8-6 - Wellbore #1 - Wellbore #1	100.00	73.70	1,388.95	1,388.78	8,410.155	ES
EXIST VERT COX PM C 8-6 - Wellbore #1 - Wellbore #1	4,100.00	3,694.78	2,203.23	2,179.52	92.946	SF
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	9,484.77	6,763.43	930.21	871.39	15.815	CC
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	9,500.00	6,763.39	930.34	870.95	15.665	ES
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	9,800.00	6,762.71	982.17	912.66	14.130	SF
EXIST VERT EMBRICK C 10-19 - Wellbore #1 - Wellbor						Out of range
EXIST VERT ENGLAND 8-3-17 - Wellbore #1 - Wellbore	3,288.66	2,982.82	1,956.44	1,931.43	78.202	CC
EXIST VERT ENGLAND 8-3-17 - Wellbore #1 - Wellbore	3,400.00	3,075.65	1,957.38	1,931.20	74.782	ES
EXIST VERT ENGLAND 8-3-17 - Wellbore #1 - Wellbore	5,489.44	4,888.11	2,233.67	2,190.58	51.833	SF
EXIST VERT ENGLAND 8-35 - Wellbore #1 - Wellbore #	4,952.29	4,362.36	1,300.75	1,258.09	30.493	CC
EXIST VERT ENGLAND 8-35 - Wellbore #1 - Wellbore #	5,000.00	4,400.00	1,301.06	1,257.89	30.135	ES
EXIST VERT ENGLAND 8-35 - Wellbore #1 - Wellbore #	5,500.00	4,828.21	1,335.45	1,287.75	27.994	SF
EXIST VERT GEHRING 1 - Wellbore #1 - Wellbore #1	9,544.62	6,783.26	409.88	349.99	6.843	CC, ES, SF
EXIST VERT GEHRING 8-9I4 - Wellbore #1 - Wellbore #	1,420.90	1,309.65	1,716.88	1,710.98	290.969	CC
EXIST VERT GEHRING 8-9I4 - Wellbore #1 - Wellbore #	9,700.00	6,800.00	1,734.13	1,670.22	27.133	ES
EXIST VERT GEHRING 8-9I4 - Wellbore #1 - Wellbore #	10,200.00	6,792.26	1,811.64	1,740.72	25.544	SF
EXIST VERT HAGEN 9-10 - Wellbore #1 - Design #1	13,629.97	6,745.58	1,429.21	1,124.47	4.690	CC, ES
EXIST VERT HAGEN 9-10 - Wellbore #1 - Design #1	13,700.00	6,745.29	1,430.92	1,125.53	4.685	SF
<b>EXIST VERT HAGEN 9-15 - Wellbore #1 - Design #1</b>	<b>13,355.37</b>	<b>6,736.54</b>	<b>109.52</b>	<b>-179.03</b>	<b>0.380</b>	<b>Level 3, CC, ES, SF</b>
EXIST VERT HAGEN 9-9 - Wellbore #1 - Wellbore #1	14,543.52	6,650.65	1,487.52	1,291.53	7.590	CC, ES
EXIST VERT HAGEN 9-9 - Wellbore #1 - Wellbore #1	14,600.00	6,647.58	1,488.59	1,292.06	7.574	SF
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	8,241.61	6,812.08	1,203.77	1,037.17	7.226	CC, ES
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	8,500.00	6,811.04	1,231.19	1,059.25	7.161	SF
EXIST VERT JOHNSON 9-11 - Wellbore #1 - Design #1	12,226.79	6,763.33	1,617.41	1,351.16	6.075	CC, ES
EXIST VERT JOHNSON 9-11 - Wellbore #1 - Design #1	12,300.00	6,763.03	1,619.06	1,351.84	6.059	SF
EXIST VERT JOHNSON 9-13 - Wellbore #1 - Wellbore #	10,900.00	6,766.82	318.39	221.19	3.276	SF
EXIST VERT JOHNSON 9-13 - Wellbore #1 - Wellbore #	10,939.95	6,766.94	315.88	219.57	3.280	CC, ES
EXIST VERT MCCLINTOCK C 4-15 - Wellbore #1 - Well						Out of range

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 HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
EXIST VERT NGL C1A - Wellbore #1 - Design #1	9,930.40	6,786.17	121.32	-73.38	0.623	Level 3, CC, ES, SF
EXIST VERT NGL C1B - Wellbore #1 - Design #1	9,825.20	6,792.59	70.84	-116.30	0.379	Level 3, CC, ES, SF
EXIST VERT REINICK 10-5 - Wellbore #1 - Wellbore #1	15,320.70	6,770.68	2,899.62	2,683.26	13.402	CC, ES, SF
EXIST VERT REINICK 1-10-4-64 - Wellbore #1 - Wellbo						Out of range
EXIST VERT REINICK 3 - Wellbore #1 - Wellbore #1						Out of range
EXIST VERT REINICK C 10-31 - Wellbore #1 - Wellbore						Out of range
EXIST VERT REINICK C 9-18 - Wellbore #1 - Design #1						Out of range
EXIST VERT REINICK C 9-22 - Wellbore #1 - Design #1	14,217.16	6,744.59	2,302.88	1,981.77	7.172	CC, ES
EXIST VERT REINICK C 9-22 - Wellbore #1 - Design #1	14,400.00	6,743.83	2,310.12	1,986.26	7.133	SF
EXIST VERT REISTAD 1 - Wellbore #1 - Wellbore #1						Out of range
EXIST VERT RICHARDSON 10-13 - Wellbore #1 - Desig	15,320.70	6,700.00	1,053.24	817.85	4.474	CC, ES, SF
EXIST VERT ROHR 15-414 - Wellbore #1 - Wellbore #1	15,320.70	6,700.00	1,257.16	1,122.04	9.304	CC, ES, SF
EXIST VERT ROHR C 15-19 - Wellbore #1 - Wellbore #1	15,320.70	6,710.30	2,148.47	1,999.64	14.436	CC, ES, SF
EXIST VERT RUFF 8-114 - Wellbore #1 - Wellbore #1	415.46	390.80	1,753.08	1,751.91	1,493.912	CC, ES
EXIST VERT RUFF 8-114 - Wellbore #1 - Wellbore #1	3,900.00	3,460.55	3,229.89	3,215.96	231.941	SF
EXIST VERT RUFF 8-714 - Wellbore #1 - Wellbore #1	353.44	332.36	647.82	646.86	673.294	CC
EXIST VERT RUFF 8-714 - Wellbore #1 - Wellbore #1	400.00	378.20	647.85	646.76	593.499	ES
EXIST VERT RUFF 8-714 - Wellbore #1 - Wellbore #1	9,700.00	6,769.21	3,246.58	3,187.96	55.384	SF
EXIST VERT RUFF C 8-1 - Wellbore #1 - Design #1	400.00	372.00	2,536.83	2,529.03	325.343	CC
EXIST VERT RUFF C 8-1 - Wellbore #1 - Design #1	500.00	471.97	2,538.87	2,528.84	253.115	ES
EXIST VERT RUFF C 8-1 - Wellbore #1 - Design #1	2,500.00	2,283.44	3,277.17	3,223.61	61.185	SF
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	14,650.47	6,677.94	1,087.50	887.71	5.443	CC
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	14,700.00	6,677.09	1,088.62	886.55	5.387	ES
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	14,800.00	6,675.36	1,097.73	892.51	5.349	SF
EXIST VERT RYDGREN 8-31 - Wellbore #1 - Wellbore #	3,345.31	2,996.59	671.39	645.72	26.162	CC, ES
EXIST VERT RYDGREN 8-31 - Wellbore #1 - Wellbore #	3,700.00	3,301.46	697.24	668.80	24.518	SF
EXIST VERT SLEDGE C 9-31 - Wellbore #1 - Design #1	400.00	347.63	2,441.35	2,434.05	334.444	CC
EXIST VERT SLEDGE C 9-31 - Wellbore #1 - Design #1	500.00	447.60	2,442.85	2,433.32	256.203	ES
EXIST VERT SLEDGE C 9-31 - Wellbore #1 - Design #1	3,000.00	2,684.04	3,250.52	3,183.35	48.392	SF
EXIST VERT SMITH 9-5 - Wellbore #1 - Design #1	11,098.45	6,800.66	2,760.67	2,524.56	11.692	CC
EXIST VERT SMITH 9-5 - Wellbore #1 - Design #1	11,200.00	6,800.25	2,762.54	2,524.37	11.599	ES
EXIST VERT SMITH 9-5 - Wellbore #1 - Design #1	11,600.00	6,798.62	2,805.86	2,560.93	11.456	SF
EXIST VERT SMITH C 9-19 - Wellbore #1 - Design #1						Out of range
EXIST VERT STATE 16-314 - Wellbore #1 - Design #1	12,213.28	6,749.11	814.00	548.56	3.067	CC, ES
EXIST VERT STATE 16-314 - Wellbore #1 - Design #1	12,300.00	6,748.76	818.61	549.26	3.039	SF
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	11,491.17	6,759.55	1,483.50	1,237.56	6.032	CC
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	11,500.00	6,759.51	1,483.53	1,237.23	6.023	ES
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	11,700.00	6,758.70	1,498.13	1,244.84	5.915	SF
EXIST VERT VERN JOHNSON 1-A - Wellbore #1 - Desi	12,272.31	6,753.10	255.71	-9.26	0.965	Level 3, CC, ES, SF
EXIST VERT VERN JOHNSON 2 - Wellbore #1 - Design	10,900.64	6,786.25	1,622.21	1,391.80	7.041	CC, ES
EXIST VERT VERN JOHNSON 2 - Wellbore #1 - Design	11,000.00	6,785.85	1,625.25	1,393.37	7.009	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1						Out of range
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore						Out of range
EXIST VERT WILMOTH C 4-23 - Wellbore #1 - Wellbore						Out of range
EXIST VERT WILMOTH C 4-24 - Wellbore #1 - Wellbore						Out of range
EXIST VERT WILMOTH C 9-27 - Wellbore #1 - Wellbore						Out of range
HEN 01N - ORIGINAL WELLBORE - PROPOSAL #2	216.33	217.33	299.94	299.24	429.549	CC
HEN 01N - ORIGINAL WELLBORE - PROPOSAL #2	300.00	300.00	299.94	298.87	279.731	ES
HEN 01N - ORIGINAL WELLBORE - PROPOSAL #2	1,200.00	1,065.11	537.21	531.94	101.861	SF
HEN 02N - ORIGINAL WELLBORE - PROPOSAL #2	316.33	317.33	284.96	283.82	248.271	CC
HEN 02N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	400.00	284.96	283.44	187.262	ES

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 HEN 21N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4801.00usft
<b>Reference Site:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN)	<b>MD Reference:</b>	KB 23ft @ 4801.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	HEN 21N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<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 NE SEC. 8 T4N R64W 6th P.M. (HEN)						
HEN 02N - ORIGINAL WELLBORE - PROPOSAL #2	1,200.00	1,087.12	498.17	492.91	94.767	SF
HEN 03N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	269.95	268.43	177.145	CC, ES
HEN 03N - ORIGINAL WELLBORE - PROPOSAL #2	1,100.00	1,028.64	416.14	411.41	87.986	SF
HEN 04N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	254.94	253.42	167.293	CC, ES
HEN 04N - ORIGINAL WELLBORE - PROPOSAL #2	1,100.00	1,044.71	385.65	380.93	81.664	SF
HEN 05N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	239.93	238.41	157.446	CC, ES
HEN 05N - ORIGINAL WELLBORE - PROPOSAL #2	1,100.00	1,058.94	358.44	353.72	75.983	SF
HEN 06N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	402.00	224.96	223.44	147.403	CC, ES
HEN 06N - ORIGINAL WELLBORE - PROPOSAL #2	1,100.00	1,072.09	334.72	330.00	70.964	SF
HEN 07N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	209.95	208.43	137.771	CC, ES
HEN 07N - ORIGINAL WELLBORE - PROPOSAL #2	1,100.00	1,080.98	314.28	309.56	66.652	SF
HEN 08N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	194.98	193.45	127.946	CC, ES
HEN 08N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,736.37	3,115.36	2,680.53	7.164	SF
HEN 09N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	179.97	178.45	118.097	CC, ES
HEN 09N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,685.47	2,876.56	2,442.55	6.628	SF
HEN 10N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	164.96	163.44	108.247	CC, ES
HEN 10N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,777.52	2,636.08	2,201.16	6.061	SF
HEN 11N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	149.99	148.46	98.422	CC, ES
HEN 11N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,730.64	2,397.31	1,962.84	5.518	SF
HEN 12N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	134.98	133.45	88.572	CC, ES
HEN 12N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,839.84	2,156.82	1,722.28	4.963	SF
HEN 13N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	119.97	118.44	78.723	CC, ES
HEN 13N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,793.69	1,918.09	1,484.33	4.422	SF
HEN 14N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	104.96	103.43	68.874	CC, ES
HEN 14N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,905.78	1,677.54	1,243.51	3.865	SF
HEN 15N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	89.98	88.46	59.048	CC, ES
HEN 15N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,871.99	1,439.32	1,006.71	3.327	SF
HEN 16N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	75.01	73.49	49.223	CC, ES
HEN 16N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,964.29	1,198.23	764.66	2.764	SF
HEN 17N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	60.00	58.48	39.374	CC, ES
HEN 17N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	14,963.51	961.13	530.89	2.234	SF
HEN 18N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	44.99	43.47	29.524	CC, ES
HEN 18N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	15,090.93	718.93	287.20	1.665	SF
HEN 19N - ORIGINAL WELLBORE - PROPOSAL #2	400.00	401.00	29.98	28.46	19.675	CC, ES
HEN 19N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	15,088.28	485.91	86.04	1.215	Level 3, SF
HEN 20NA - ORIGINAL WELLBORE - PROPOSAL #2	400.00	400.00	15.01	13.49	9.864	CC, ES
HEN 20NA - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	15,109.97	270.28	14.26	1.056	Level 3, SF
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #2	300.00	299.00	15.01	13.94	14.029	CC
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #2	15,320.70	15,355.99	254.27	-40.23	0.863	Level 3, ES, SF

<b>Offset Design:</b>	SW NE SEC. 8 T4N R64W 6th P.M. (HEN) - ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1											<b>Offset Site Error:</b>	0.00 usft
<b>Survey Program:</b>	283-MWD											<b>Offset Well Error:</b>	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:			Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
9,500.00	6,869.91	7,177.56	6,756.85	60.50	41.36	86.17	-2,897.65	4,549.45	3,277.70	3,209.74	67.96	48.231	
9,600.00	6,869.50	7,178.20	6,757.48	62.83	41.36	86.27	-2,897.64	4,549.46	3,178.32	3,110.56	67.76	46.903	
9,700.00	6,869.10	7,178.84	6,758.12	65.24	41.36	86.38	-2,897.63	4,549.47	3,078.97	3,011.41	67.56	45.571	
9,800.00	6,868.69	7,179.50	6,758.78	67.69	41.36	86.48	-2,897.61	4,549.48	2,979.67	2,912.32	67.36	44.236	
9,900.00	6,868.29	7,180.17	6,759.45	70.18	41.36	86.59	-2,897.60	4,549.49	2,880.42	2,813.28	67.15	42.898	
10,000.00	6,867.88	7,195.00	6,774.28	72.71	41.37	88.97	-2,897.34	4,549.71	2,781.27	2,714.35	66.93	41.555	

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