

GREAT WESTERN OPERATING COMPANY

**WELD COUNTY
SEC 8-T3N-R67W
BERRY IC 11-119HN**

OWB

Plan: PROPOSAL 1

Standard Planning Report

03 September, 2021

Project: WELD COUNTY
Site: SEC 8-T3N-R67W
Well: BERRY IC 11-119HN
Wellbore: OWB
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 7.90°

Magnetic Field
Strength: 51832.8nT
Dip Angle: 66.50°
Date: 9/3/2021
Model: IGRF2020

WELL DETAILS: BERRY IC 11-119HN

+N/-S	+E/-W	Northing	Easting	4843.00	Latitude	Longitude	Slot
0.00	0.00	1332316.96	3161744.00		40.244158°N	104.920581°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4841.50	0.00	0.00	4841.50	0.00	0.00	0.00	0.00	0.00	
3	5841.56	30.00	181.94	5796.48	-255.76	-8.66	3.00	181.94	27.41	
4	6586.28	30.00	181.94	6441.41	-627.92	-21.26	0.00	0.00	67.31	
5	7711.68	90.00	272.01	7062.00	-960.97	-749.55	8.00	90.06	818.08	BERRY 119HN-LP
6	12874.82	90.00	272.01	7062.00	-780.31	-5909.53	0.00	0.00	5950.87	BERRY 119HN-MID PNT
7	12969.35	90.00	269.17	7062.00	-779.35	-6004.04	3.00	-90.00	6045.06	BERRY 119HN-BTM PERF
8	181574.78	90.00	269.17	7062.00	-860.63	-11608.88	0.00	0.00	11640.74	BERRY 119HN-BTM PERF
9	181575.53	90.00	269.19	7062.00	-860.64	-11609.63	3.00	90.00	11641.49	BERRY 119HN-PBHL
10	181674.73	90.00	269.19	7062.00	-862.04	-11708.82	0.00	0.00	11740.51	BERRY 119HN-PBHL

FORMATION TOP DETAILS

Formation data is available

PROJECT DETAILS: WELD COUNTY

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:
1305' FNL, 750' FWL
Sec 8-T3N-R67W

LP:
2275' FNL, 1' FEL
Sec 7-T3N-R67W

MID POINT:
2275' FNL, 0' FWL
Sec 7-T3N-R67W

BTM PERF:
2274' FNL, 370' FEL
Sec 11-T3N-R68W

BHL:
2275' FNL, 470' FEL
Sec 11-T3N-R68W

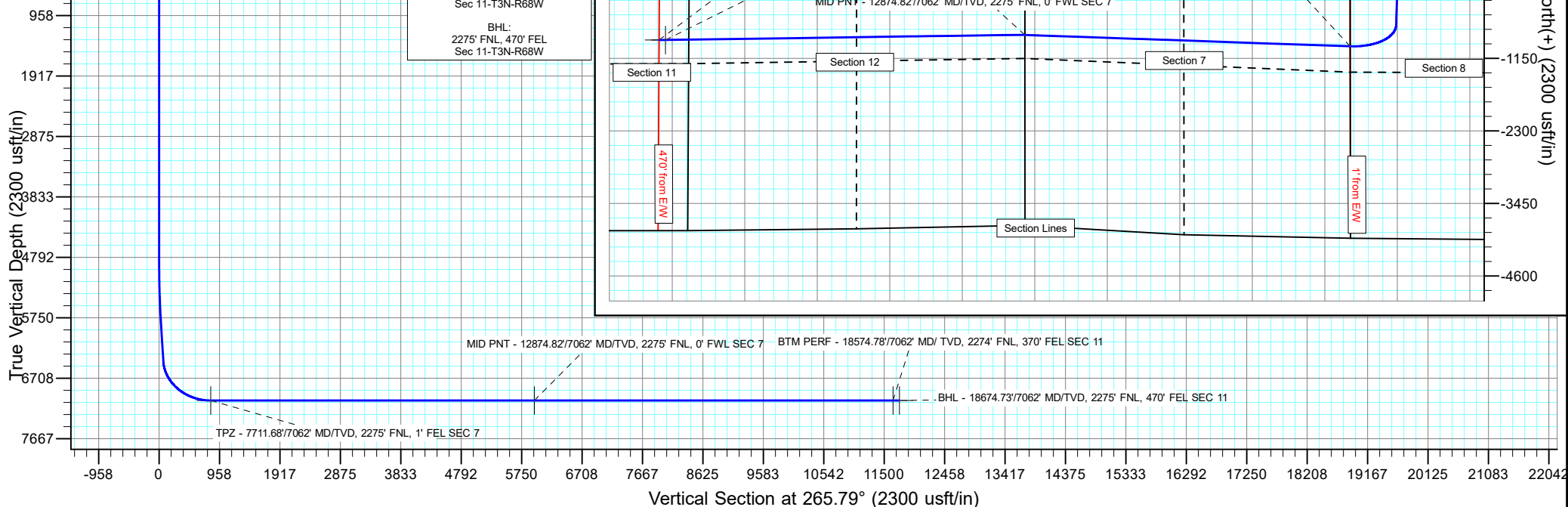
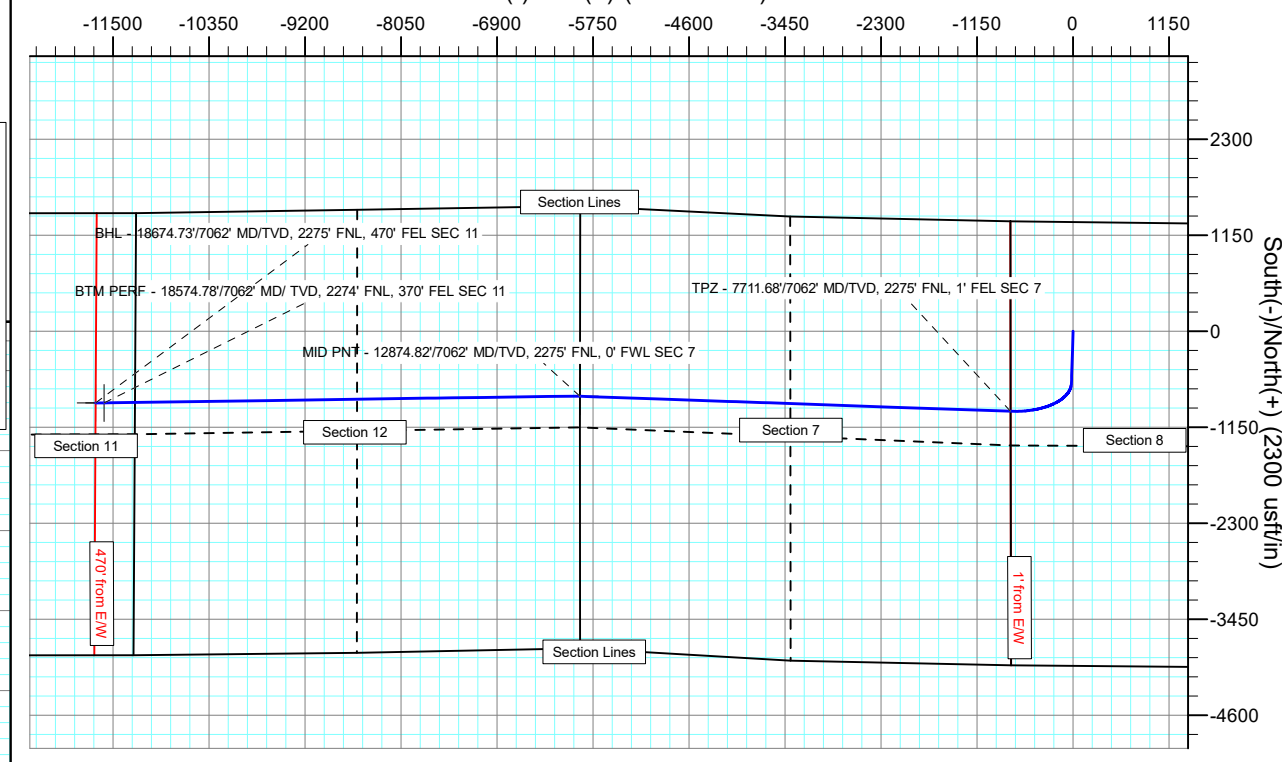
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
4841.50	0.00	0.00	4841.50	0.00	0.00	0.00	0.00	Start Build 3.00
5841.56	30.00	181.94	5796.48	-255.76	-8.66	27.41	255.90	Start 744.72 hold at 5841.56 MD
6586.28	30.00	181.94	6441.41	-627.92	-21.26	67.31	628.28	Start DLS 8.00 TFO 90.06
7711.68	90.00	272.01	7062.00	-960.97	-749.55	818.08	1496.04	TPZ - 7711.68/7062' MD/TVD, 2275' FNL, 1' FEL SEC 7
12874.82	90.00	272.01	7062.00	-780.31	-5909.53	5950.87	6659.18	MID PNT - 12874.82/7062' MD/TVD, 2275' FNL, 0' FWL SEC 7
12969.35	90.00	269.17	7062.00	-779.35	-6004.04	6045.06	6753.71	Start 5605.43 hold at 12969.35 MD
181574.78	90.00	269.17	7062.00	-860.63	-11608.88	11640.74	12359.14	BTM PERF - 18574.78/7062' MD/TVD, 2274' FNL, 370' FEL SEC 11
181575.53	90.00	269.19	7062.00	-860.64	-11609.63	11641.49	12359.89	Start 99.20 hold at 181575.53 MD
181674.73	90.00	269.19	7062.00	-862.04	-11708.82	11740.51	12459.09	BHL - 18674.73/7062' MD/TVD, 2275' FNL, 470' FEL SEC 11

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BERRY 119HN-BTM PERF	7062.00	-860.63	-11608.88	1331380.50	3150140.99	40.241788°N	104.962166°W	Point
- plan hits target center								
BERRY 119HN-LP	7062.00	-960.97	-749.55	1331351.12	3161000.75	40.241520°N	104.923266°W	Point
- plan hits target center								
BERRY 119HN-MID PNT	7062.00	-780.31	-5909.53	1331498.05	3155839.70	40.242014°N	104.941750°W	Point
- plan hits target center								
BERRY 119HN-PBHL	7062.00	-862.04	-11708.82	1331378.44	3150041.06	40.241784°N	104.962524°W	Point
- plan hits target center								

West(-)/East(+) (2300 usft/in)



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BERRY IC 11-119HN
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 4863.00usft
Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Project	WELD COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		SEC 8-T3N-R67W				
Site Position:		Northing:	1,333,626.02	usft	Latitude:	40.247765°N
From:	Lat/Long	Easting:	3,160,984.00	usft	Longitude:	104.923273°W
Position Uncertainty:		0.00	usft	Slot Radius:	13.200	in

Well		BERRY IC 11-119HN				
Well Position	+N/-S	0.00 usft	Northing:	1,332,316.96 usft	Latitude:	40.244158°N
	+E/-W	0.00 usft	Easting:	3,161,744.00 usft	Longitude:	104.920581°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,843.00 usft
Grid Convergence:		0.37 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/3/2021	7.90	66.50	51,832.78061238

Design	PROPOSAL 1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	265.79	

Plan Survey Tool Program	Date	9/3/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,674.53 PROPOSAL 1 (OWB)	MWD		
			OWSG MWD - Standard		

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Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,841.50	0.00	0.00	4,841.50	0.00	0.00	0.00	0.00	0.00	0.00	
5,841.56	30.00	181.94	5,796.48	-255.76	-8.66	3.00	3.00	0.00	181.94	
6,586.28	30.00	181.94	6,441.41	-627.92	-21.26	0.00	0.00	0.00	0.00	
7,711.68	90.00	272.01	7,062.00	-960.97	-749.55	8.00	5.33	8.00	90.06	BERRY 119HN-LP
12,874.82	90.00	272.01	7,062.00	-780.31	-5,909.53	0.00	0.00	0.00	0.00	BERRY 119HN-MID F
12,969.35	90.00	269.17	7,062.00	-779.35	-6,004.04	3.00	0.00	-3.00	-90.00	BERRY 119HN-BTM I
18,574.78	90.00	269.17	7,062.00	-860.63	-11,608.88	0.00	0.00	0.00	0.00	BERRY 119HN-BTM I
18,575.53	90.00	269.19	7,062.00	-860.64	-11,609.63	3.00	0.00	3.00	90.00	BERRY 119HN-PBHL
18,674.73	90.00	269.19	7,062.00	-862.04	-11,708.82	0.00	0.00	0.00	0.00	BERRY 119HN-PBHL

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Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 4863.00usft
Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,841.50	0.00	0.00	4,841.50	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 3.00										
4,900.00	1.76	181.94	4,899.99	-0.90	-0.03	0.10	3.00	3.00	0.00	
5,000.00	4.76	181.94	4,999.82	-6.57	-0.22	0.70	3.00	3.00	0.00	
5,100.00	7.76	181.94	5,099.21	-17.46	-0.59	1.87	3.00	3.00	0.00	
5,200.00	10.76	181.94	5,197.90	-33.53	-1.14	3.59	3.00	3.00	0.00	
5,300.00	13.76	181.94	5,295.61	-54.74	-1.85	5.87	3.00	3.00	0.00	
5,400.00	16.76	181.94	5,392.07	-81.03	-2.74	8.69	3.00	3.00	0.00	
5,500.00	19.76	181.94	5,487.03	-112.34	-3.80	12.04	3.00	3.00	0.00	
5,600.00	22.76	181.94	5,580.22	-148.56	-5.03	15.92	3.00	3.00	0.00	
5,700.00	25.76	181.94	5,671.38	-189.62	-6.42	20.32	3.00	3.00	0.00	
5,800.00	28.76	181.94	5,760.27	-235.38	-7.97	25.23	3.00	3.00	0.00	
5,841.56	30.00	181.94	5,796.48	-255.76	-8.66	27.41	3.00	3.00	0.00	
Start 744.72 hold at 5841.56 MD										
5,900.00	30.00	181.94	5,847.09	-284.96	-9.65	30.54	0.00	0.00	0.00	
6,000.00	30.00	181.94	5,933.69	-334.94	-11.34	35.90	0.00	0.00	0.00	
6,100.00	30.00	181.94	6,020.29	-384.91	-13.03	41.26	0.00	0.00	0.00	
6,200.00	30.00	181.94	6,106.89	-434.88	-14.72	46.61	0.00	0.00	0.00	
6,300.00	30.00	181.94	6,193.50	-484.86	-16.41	51.97	0.00	0.00	0.00	
6,400.00	30.00	181.94	6,280.10	-534.83	-18.11	57.33	0.00	0.00	0.00	
6,500.00	30.00	181.94	6,366.70	-584.81	-19.80	62.68	0.00	0.00	0.00	
6,586.28	30.00	181.94	6,441.41	-627.92	-21.26	67.31	0.00	0.00	0.00	
Start DLS 8.00 TFO 90.06										
6,600.00	30.02	184.13	6,453.30	-634.78	-21.62	68.17	8.00	0.12	15.99	
6,650.00	30.39	192.06	6,496.53	-659.63	-25.17	73.53	8.00	0.74	15.84	
6,700.00	31.22	199.70	6,539.49	-684.20	-32.18	82.33	8.00	1.66	15.29	
6,750.00	32.48	206.90	6,581.98	-708.38	-42.63	94.52	8.00	2.52	14.40	
6,800.00	34.12	213.55	6,623.78	-732.05	-56.45	110.05	8.00	3.28	13.30	
6,850.00	36.09	219.61	6,664.70	-755.09	-73.60	128.84	8.00	3.93	12.12	
6,900.00	38.33	225.09	6,704.53	-777.39	-93.98	150.80	8.00	4.49	10.96	
6,950.00	40.80	230.03	6,743.08	-798.84	-117.49	175.82	8.00	4.95	9.87	
7,000.00	43.47	234.48	6,780.16	-819.34	-144.02	203.79	8.00	5.33	8.90	
7,050.00	46.29	238.50	6,815.60	-838.78	-173.43	234.55	8.00	5.64	8.04	
7,100.00	49.24	242.15	6,849.21	-857.07	-205.60	267.97	8.00	5.90	7.31	
7,150.00	52.29	245.49	6,880.84	-874.13	-240.35	303.88	8.00	6.11	6.67	
7,200.00	55.43	248.56	6,910.33	-889.86	-277.52	342.11	8.00	6.28	6.14	
7,250.00	58.64	251.40	6,937.53	-904.20	-316.93	382.47	8.00	6.42	5.69	
7,300.00	61.91	254.06	6,962.32	-917.07	-358.39	424.76	8.00	6.54	5.31	
7,350.00	65.23	256.55	6,984.58	-928.42	-401.69	468.78	8.00	6.64	4.99	
7,400.00	68.59	258.92	7,004.19	-938.17	-446.63	514.31	8.00	6.71	4.73	
7,450.00	71.97	261.18	7,021.06	-946.30	-492.98	561.13	8.00	6.78	4.52	
7,500.00	75.39	263.35	7,035.11	-952.75	-540.52	609.01	8.00	6.83	4.34	
7,550.00	78.82	265.45	7,046.27	-957.50	-589.02	657.73	8.00	6.87	4.21	
7,600.00	82.27	267.51	7,054.48	-960.52	-638.23	707.04	8.00	6.90	4.11	
7,650.00	85.73	269.53	7,059.70	-961.80	-687.93	756.69	8.00	6.91	4.05	
7,700.00	89.19	271.54	7,061.92	-961.33	-737.87	806.46	8.00	6.93	4.01	
7,711.68	90.00	272.01	7,062.00	-960.97	-749.55	818.08	8.00	6.93	4.00	
Start 5163.14 hold at 7711.68 MD										
7,800.00	90.00	272.01	7,062.00	-957.88	-837.81	905.88	0.00	0.00	0.00	
7,900.00	90.00	272.01	7,062.00	-954.38	-937.75	1,005.29	0.00	0.00	0.00	
8,000.00	90.00	272.01	7,062.00	-950.88	-1,037.69	1,104.70	0.00	0.00	0.00	
8,100.00	90.00	272.01	7,062.00	-947.38	-1,137.63	1,204.12	0.00	0.00	0.00	
8,200.00	90.00	272.01	7,062.00	-943.88	-1,237.57	1,303.53	0.00	0.00	0.00	

Planning Report

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Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,300.00	90.00	272.01	7,062.00	-940.38	-1,337.50	1,402.94	0.00	0.00	0.00	
8,400.00	90.00	272.01	7,062.00	-936.88	-1,437.44	1,502.35	0.00	0.00	0.00	
8,500.00	90.00	272.01	7,062.00	-933.38	-1,537.38	1,601.77	0.00	0.00	0.00	
8,600.00	90.00	272.01	7,062.00	-929.89	-1,637.32	1,701.18	0.00	0.00	0.00	
8,700.00	90.00	272.01	7,062.00	-926.39	-1,737.26	1,800.59	0.00	0.00	0.00	
8,800.00	90.00	272.01	7,062.00	-922.89	-1,837.20	1,900.00	0.00	0.00	0.00	
8,900.00	90.00	272.01	7,062.00	-919.39	-1,937.14	1,999.41	0.00	0.00	0.00	
9,000.00	90.00	272.01	7,062.00	-915.89	-2,037.08	2,098.83	0.00	0.00	0.00	
9,100.00	90.00	272.01	7,062.00	-912.39	-2,137.01	2,198.24	0.00	0.00	0.00	
9,200.00	90.00	272.01	7,062.00	-908.89	-2,236.95	2,297.65	0.00	0.00	0.00	
9,300.00	90.00	272.01	7,062.00	-905.39	-2,336.89	2,397.06	0.00	0.00	0.00	
9,400.00	90.00	272.01	7,062.00	-901.89	-2,436.83	2,496.47	0.00	0.00	0.00	
9,500.00	90.00	272.01	7,062.00	-898.40	-2,536.77	2,595.89	0.00	0.00	0.00	
9,600.00	90.00	272.01	7,062.00	-894.90	-2,636.71	2,695.30	0.00	0.00	0.00	
9,700.00	90.00	272.01	7,062.00	-891.40	-2,736.65	2,794.71	0.00	0.00	0.00	
9,800.00	90.00	272.01	7,062.00	-887.90	-2,836.59	2,894.12	0.00	0.00	0.00	
9,900.00	90.00	272.01	7,062.00	-884.40	-2,936.53	2,993.54	0.00	0.00	0.00	
10,000.00	90.00	272.01	7,062.00	-880.90	-3,036.46	3,092.95	0.00	0.00	0.00	
10,100.00	90.00	272.01	7,062.00	-877.40	-3,136.40	3,192.36	0.00	0.00	0.00	
10,200.00	90.00	272.01	7,062.00	-873.90	-3,236.34	3,291.77	0.00	0.00	0.00	
10,300.00	90.00	272.01	7,062.00	-870.40	-3,336.28	3,391.18	0.00	0.00	0.00	
10,400.00	90.00	272.01	7,062.00	-866.91	-3,436.22	3,490.60	0.00	0.00	0.00	
10,500.00	90.00	272.01	7,062.00	-863.41	-3,536.16	3,590.01	0.00	0.00	0.00	
10,600.00	90.00	272.01	7,062.00	-859.91	-3,636.10	3,689.42	0.00	0.00	0.00	
10,700.00	90.00	272.01	7,062.00	-856.41	-3,736.04	3,788.83	0.00	0.00	0.00	
10,800.00	90.00	272.01	7,062.00	-852.91	-3,835.97	3,888.24	0.00	0.00	0.00	
10,900.00	90.00	272.01	7,062.00	-849.41	-3,935.91	3,987.66	0.00	0.00	0.00	
11,000.00	90.00	272.01	7,062.00	-845.91	-4,035.85	4,087.07	0.00	0.00	0.00	
11,100.00	90.00	272.01	7,062.00	-842.41	-4,135.79	4,186.48	0.00	0.00	0.00	
11,200.00	90.00	272.01	7,062.00	-838.91	-4,235.73	4,285.89	0.00	0.00	0.00	
11,300.00	90.00	272.01	7,062.00	-835.42	-4,335.67	4,385.30	0.00	0.00	0.00	
11,400.00	90.00	272.01	7,062.00	-831.92	-4,435.61	4,484.72	0.00	0.00	0.00	
11,500.00	90.00	272.01	7,062.00	-828.42	-4,535.55	4,584.13	0.00	0.00	0.00	
11,600.00	90.00	272.01	7,062.00	-824.92	-4,635.48	4,683.54	0.00	0.00	0.00	
11,700.00	90.00	272.01	7,062.00	-821.42	-4,735.42	4,782.95	0.00	0.00	0.00	
11,800.00	90.00	272.01	7,062.00	-817.92	-4,835.36	4,882.37	0.00	0.00	0.00	
11,900.00	90.00	272.01	7,062.00	-814.42	-4,935.30	4,981.78	0.00	0.00	0.00	
12,000.00	90.00	272.01	7,062.00	-810.92	-5,035.24	5,081.19	0.00	0.00	0.00	
12,100.00	90.00	272.01	7,062.00	-807.42	-5,135.18	5,180.60	0.00	0.00	0.00	
12,200.00	90.00	272.01	7,062.00	-803.93	-5,235.12	5,280.01	0.00	0.00	0.00	
12,300.00	90.00	272.01	7,062.00	-800.43	-5,335.06	5,379.43	0.00	0.00	0.00	
12,400.00	90.00	272.01	7,062.00	-796.93	-5,434.99	5,478.84	0.00	0.00	0.00	
12,500.00	90.00	272.01	7,062.00	-793.43	-5,534.93	5,578.25	0.00	0.00	0.00	
12,600.00	90.00	272.01	7,062.00	-789.93	-5,634.87	5,677.66	0.00	0.00	0.00	
12,700.00	90.00	272.01	7,062.00	-786.43	-5,734.81	5,777.07	0.00	0.00	0.00	
12,800.00	90.00	272.01	7,062.00	-782.93	-5,834.75	5,876.49	0.00	0.00	0.00	
12,874.82	90.00	272.01	7,062.00	-780.31	-5,909.53	5,950.87	0.00	0.00	0.00	
Start DLS 3.00 TFO -90.00										
12,900.00	90.00	271.25	7,062.00	-779.60	-5,934.69	5,975.92	3.00	0.00	-3.00	
12,969.35	90.00	269.17	7,062.00	-779.35	-6,004.04	6,045.06	3.00	0.00	-3.00	
Start 5605.43 hold at 12969.35 MD										
13,000.00	90.00	269.17	7,062.00	-779.79	-6,034.69	6,075.65	0.00	0.00	0.00	
13,100.00	90.00	269.17	7,062.00	-781.24	-6,134.68	6,175.48	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BERRY IC 11-119HN
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 4863.00usft
Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
13,200.00	90.00	269.17	7,062.00	-782.69	-6,234.66	6,275.30	0.00	0.00	0.00	
13,300.00	90.00	269.17	7,062.00	-784.14	-6,334.65	6,375.13	0.00	0.00	0.00	
13,400.00	90.00	269.17	7,062.00	-785.59	-6,434.64	6,474.96	0.00	0.00	0.00	
13,500.00	90.00	269.17	7,062.00	-787.04	-6,534.63	6,574.78	0.00	0.00	0.00	
13,600.00	90.00	269.17	7,062.00	-788.49	-6,634.62	6,674.61	0.00	0.00	0.00	
13,700.00	90.00	269.17	7,062.00	-789.94	-6,734.61	6,774.44	0.00	0.00	0.00	
13,800.00	90.00	269.17	7,062.00	-791.39	-6,834.60	6,874.26	0.00	0.00	0.00	
13,900.00	90.00	269.17	7,062.00	-792.84	-6,934.59	6,974.09	0.00	0.00	0.00	
14,000.00	90.00	269.17	7,062.00	-794.29	-7,034.58	7,073.91	0.00	0.00	0.00	
14,100.00	90.00	269.17	7,062.00	-795.74	-7,134.57	7,173.74	0.00	0.00	0.00	
14,200.00	90.00	269.17	7,062.00	-797.19	-7,234.56	7,273.57	0.00	0.00	0.00	
14,300.00	90.00	269.17	7,062.00	-798.64	-7,334.55	7,373.39	0.00	0.00	0.00	
14,400.00	90.00	269.17	7,062.00	-800.09	-7,434.54	7,473.22	0.00	0.00	0.00	
14,500.00	90.00	269.17	7,062.00	-801.54	-7,534.53	7,573.04	0.00	0.00	0.00	
14,600.00	90.00	269.17	7,062.00	-802.99	-7,634.52	7,672.87	0.00	0.00	0.00	
14,700.00	90.00	269.17	7,062.00	-804.44	-7,734.51	7,772.70	0.00	0.00	0.00	
14,800.00	90.00	269.17	7,062.00	-805.89	-7,834.50	7,872.52	0.00	0.00	0.00	
14,900.00	90.00	269.17	7,062.00	-807.34	-7,934.49	7,972.35	0.00	0.00	0.00	
15,000.00	90.00	269.17	7,062.00	-808.79	-8,034.48	8,072.17	0.00	0.00	0.00	
15,100.00	90.00	269.17	7,062.00	-810.24	-8,134.47	8,172.00	0.00	0.00	0.00	
15,200.00	90.00	269.17	7,062.00	-811.69	-8,234.45	8,271.83	0.00	0.00	0.00	
15,300.00	90.00	269.17	7,062.00	-813.14	-8,334.44	8,371.65	0.00	0.00	0.00	
15,400.00	90.00	269.17	7,062.00	-814.59	-8,434.43	8,471.48	0.00	0.00	0.00	
15,500.00	90.00	269.17	7,062.00	-816.04	-8,534.42	8,571.30	0.00	0.00	0.00	
15,600.00	90.00	269.17	7,062.00	-817.49	-8,634.41	8,671.13	0.00	0.00	0.00	
15,700.00	90.00	269.17	7,062.00	-818.94	-8,734.40	8,770.96	0.00	0.00	0.00	
15,800.00	90.00	269.17	7,062.00	-820.39	-8,834.39	8,870.78	0.00	0.00	0.00	
15,900.00	90.00	269.17	7,062.00	-821.84	-8,934.38	8,970.61	0.00	0.00	0.00	
16,000.00	90.00	269.17	7,062.00	-823.29	-9,034.37	9,070.43	0.00	0.00	0.00	
16,100.00	90.00	269.17	7,062.00	-824.74	-9,134.36	9,170.26	0.00	0.00	0.00	
16,200.00	90.00	269.17	7,062.00	-826.19	-9,234.35	9,270.09	0.00	0.00	0.00	
16,300.00	90.00	269.17	7,062.00	-827.64	-9,334.34	9,369.91	0.00	0.00	0.00	
16,400.00	90.00	269.17	7,062.00	-829.09	-9,434.33	9,469.74	0.00	0.00	0.00	
16,500.00	90.00	269.17	7,062.00	-830.54	-9,534.32	9,569.56	0.00	0.00	0.00	
16,600.00	90.00	269.17	7,062.00	-831.99	-9,634.31	9,669.39	0.00	0.00	0.00	
16,700.00	90.00	269.17	7,062.00	-833.44	-9,734.30	9,769.22	0.00	0.00	0.00	
16,800.00	90.00	269.17	7,062.00	-834.89	-9,834.29	9,869.04	0.00	0.00	0.00	
16,900.00	90.00	269.17	7,062.00	-836.34	-9,934.28	9,968.87	0.00	0.00	0.00	
17,000.00	90.00	269.17	7,062.00	-837.79	-10,034.27	10,068.70	0.00	0.00	0.00	
17,100.00	90.00	269.17	7,062.00	-839.24	-10,134.25	10,168.52	0.00	0.00	0.00	
17,200.00	90.00	269.17	7,062.00	-840.69	-10,234.24	10,268.35	0.00	0.00	0.00	
17,300.00	90.00	269.17	7,062.00	-842.14	-10,334.23	10,368.17	0.00	0.00	0.00	
17,400.00	90.00	269.17	7,062.00	-843.59	-10,434.22	10,468.00	0.00	0.00	0.00	
17,500.00	90.00	269.17	7,062.00	-845.04	-10,534.21	10,567.83	0.00	0.00	0.00	
17,600.00	90.00	269.17	7,062.00	-846.49	-10,634.20	10,667.65	0.00	0.00	0.00	
17,700.00	90.00	269.17	7,062.00	-847.94	-10,734.19	10,767.48	0.00	0.00	0.00	
17,800.00	90.00	269.17	7,062.00	-849.39	-10,834.18	10,867.30	0.00	0.00	0.00	
17,900.00	90.00	269.17	7,062.00	-850.84	-10,934.17	10,967.13	0.00	0.00	0.00	
18,000.00	90.00	269.17	7,062.00	-852.29	-11,034.16	11,066.96	0.00	0.00	0.00	
18,100.00	90.00	269.17	7,062.00	-853.74	-11,134.15	11,166.78	0.00	0.00	0.00	
18,200.00	90.00	269.17	7,062.00	-855.19	-11,234.14	11,266.61	0.00	0.00	0.00	
18,300.00	90.00	269.17	7,062.00	-856.64	-11,334.13	11,366.43	0.00	0.00	0.00	
18,400.00	90.00	269.17	7,062.00	-858.09	-11,434.12	11,466.26	0.00	0.00	0.00	
18,500.00	90.00	269.17	7,062.00	-859.54	-11,534.11	11,566.09	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BERRY IC 11-119HN
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 4863.00usft
Project:	WELD COUNTY	MD Reference:	KB 20' @ 4863.00usft
Site:	SEC 8-T3N-R67W	North Reference:	True
Well:	BERRY IC 11-119HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
18,574.78	90.00	269.17	7,062.00	-860.63	-11,608.88	11,640.74	0.00	0.00	0.00
Start Turn 3.00									
18,575.53	90.00	269.19	7,062.00	-860.64	-11,609.63	11,641.49	3.00	0.00	3.00
Start 99.20 hold at 18575.53 MD									
18,600.00	90.00	269.19	7,062.00	-860.98	-11,634.10	11,665.91	0.00	0.00	0.00
18,674.73	90.00	269.19	7,062.00	-862.04	-11,708.82	11,740.51	0.00	0.00	0.00
TD at 18674.73									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BERRY 119HN-LP - plan hits target center - Point	0.00	0.00	7,062.00	-960.97	-749.55	1,331,351.12	3,161,000.75	40.241520°N	104.923266°W
BERRY 119HN-MID PN - plan hits target center - Point	0.00	0.00	7,062.00	-780.31	-5,909.53	1,331,498.05	3,155,839.70	40.242014°N	104.941750°W
BERRY 119HN-PBHL - plan hits target center - Point	0.00	0.00	7,062.00	-862.04	-11,708.82	1,331,378.44	3,150,041.06	40.241784°N	104.962524°W
BERRY 119HN-BTM PE - plan hits target center - Point	0.00	0.00	7,062.00	-860.63	-11,608.88	1,331,380.50	3,150,140.99	40.241788°N	104.962166°W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,841.50	4,841.50	0.00	0.00	Start Build 3.00
5,841.56	5,796.48	-255.76	-8.66	Start 744.72 hold at 5841.56 MD
6,586.28	6,441.41	-627.92	-21.26	Start DLS 8.00 TFO 90.06
7,711.68	7,062.00	-960.97	-749.55	Start 5163.14 hold at 7711.68 MD
12,874.82	7,062.00	-780.31	-5,909.53	Start DLS 3.00 TFO -90.00
12,969.35	7,062.00	-779.35	-6,004.04	Start 5605.43 hold at 12969.35 MD
18,574.78	7,062.00	-860.63	-11,608.88	Start Turn 3.00
18,575.53	7,062.00	-860.64	-11,609.63	Start 99.20 hold at 18575.53 MD
18,674.73	7,062.00	-862.04	-11,708.82	TD at 18674.73