

GREAT WESTERN OPERATING COMPANY

**ADAMS COUNTY
SEC 4-T1S-R67W
SELTZER LD 09-371HN**

OWB

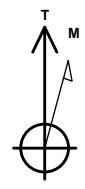
Plan: PROPOSAL 1

Standard Survey Report

27 October, 2021

Project: ADAMS COUNTY
Site: SEC 4-T1S-R67W
Well: SELTZER LD 09-371HN
Wellbore: OWB
Design: PROPOSAL 1

PROJECT DETAILS: ADAMS COUNTY
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 7.86°
Magnetic Field
Strength: 51707.1nT
Dip Angle: 66.31°
Date: 8/25/2021
Model: IGRF2020

WELL DETAILS: SELTZER LD 09-371HN

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1243061.57	3170146.59	39.998990°N	104.892671°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	1971.00	0.79	266.53	1970.47	-0.04	-29.65	0.00	0.00	2.13	
2	2026.00	0.79	266.53	2025.46	-0.09	-30.41	0.00	0.00	2.23	
3	4852.00	0.79	266.53	4851.19	-2.45	-69.30	0.00	0.00	7.31	
4	5841.60	30.00	332.66	5795.68	221.94	-192.52	3.00	67.39	-207.87	
5	6871.45	30.00	332.66	6687.56	679.32	-429.04	0.00	0.00	-647.51	
6	8326.50	90.00	179.85	7688.00	37.17	-691.43	8.00	-149.31	11.48	SELTZER 09-371HN-LP
7	17741.18	90.00	179.85	7688.00	-9377.47	-667.59	0.00	0.00	9401.20	SELTZER 09-371HN-BTM PERF
8	17741.86	90.00	179.84	7688.00	-9378.16	-667.59	2.00	-90.00	9401.89	SELTZER 09-371HN-PBHL
9	17841.35	90.00	179.84	7688.00	-9477.65	-667.31	0.00	0.00	9501.11	SELTZER 09-371HN-PBHL

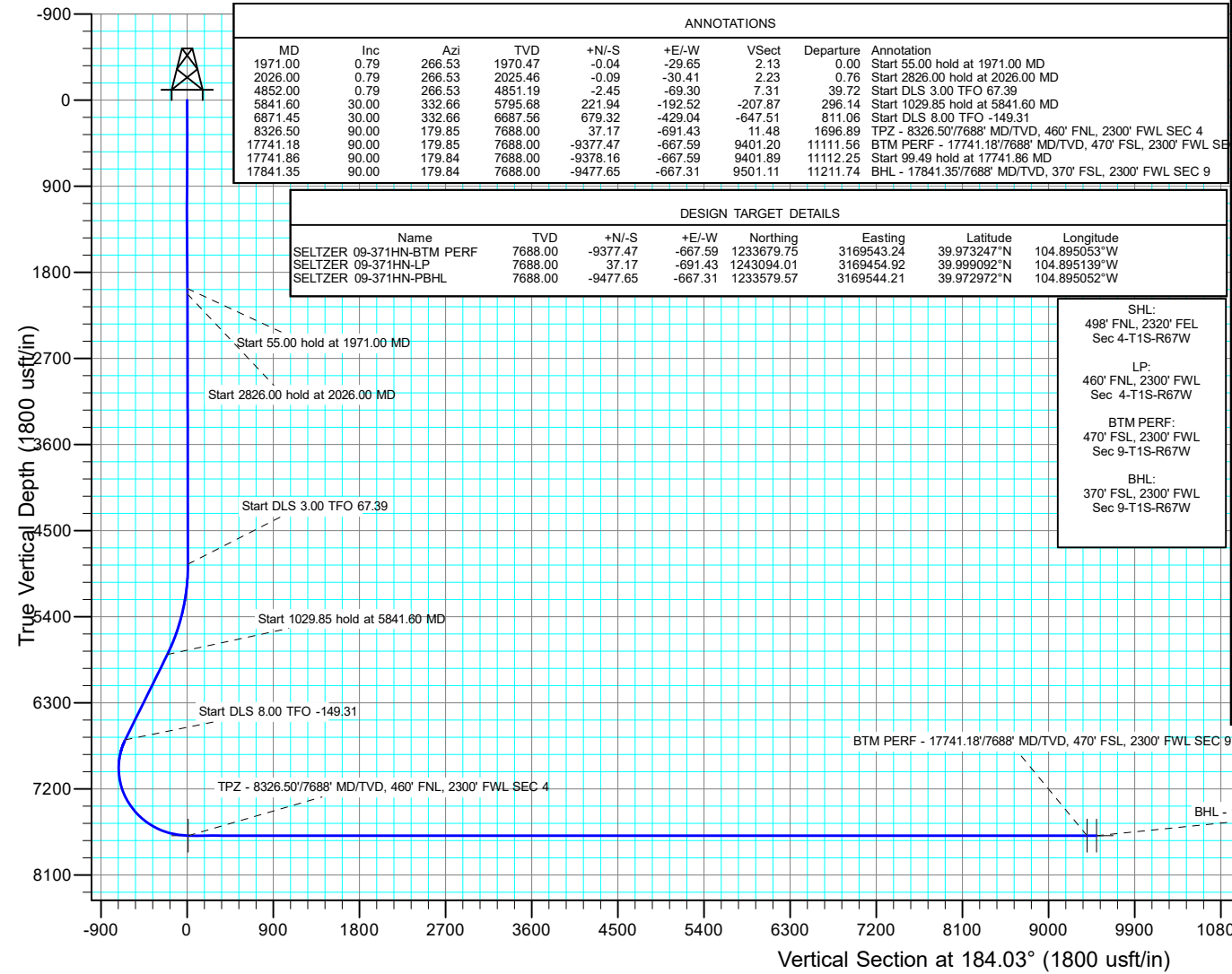
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1971.00	0.79	266.53	1970.47	-0.04	-29.65	2.13	0.00	Start 55.00 hold at 1971.00 MD
2026.00	0.79	266.53	2025.46	-0.09	-30.41	2.23	0.76	Start 2826.00 hold at 2026.00 MD
4852.00	0.79	266.53	4851.19	-2.45	-69.30	7.31	39.72	Start DLS 3.00 TFO 67.39
5841.60	30.00	332.66	5795.68	221.94	-192.52	-207.87	296.14	Start 1029.85 hold at 5841.60 MD
6871.45	30.00	332.66	6687.56	679.32	-429.04	-647.51	811.06	Start DLS 8.00 TFO -149.31
8326.50	90.00	179.85	7688.00	37.17	-691.43	11.48	1696.89	TPZ - 8326.50/7688' MD/TVD, 460' FNL, 2300' FWL SEC 4
17741.18	90.00	179.85	7688.00	-9377.47	-667.59	9401.20	11111.56	BTM PERF - 17741.18/7688' MD/TVD, 470' FSL, 2300' FWL SEC 9
17741.86	90.00	179.84	7688.00	-9378.16	-667.59	9401.89	11112.25	Start 99.49 hold at 17741.86 MD
17841.35	90.00	179.84	7688.00	-9477.65	-667.31	9501.11	11211.74	BHL - 17841.35/7688' MD/TVD, 370' FSL, 2300' FWL SEC 9

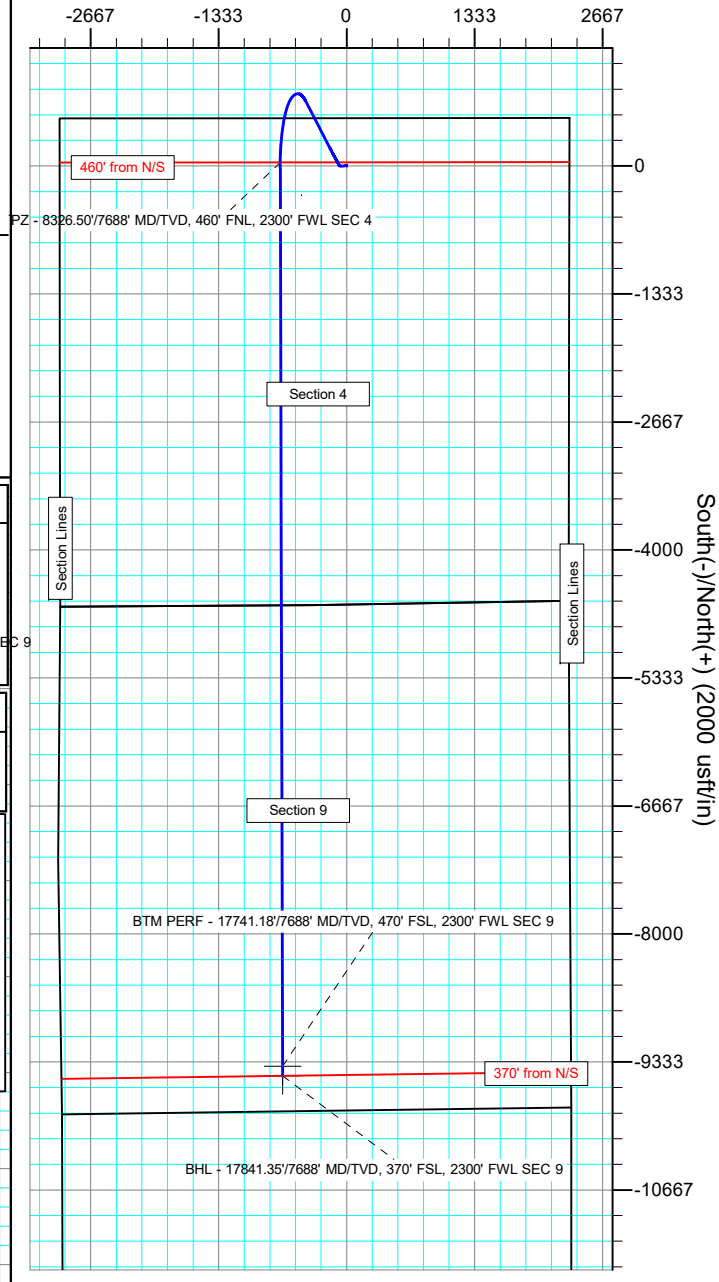
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SELTZER 09-371HN-BTM PERF	7688.00	-9377.47	-667.59	1233679.75	3169543.24	39.973247°N	104.895053°W
SELTZER 09-371HN-LP	7688.00	37.17	-691.43	1243094.01	3169454.92	39.999092°N	104.895139°W
SELTZER 09-371HN-PBHL	7688.00	-9477.65	-667.31	1233579.57	3169544.21	39.972972°N	104.895052°W

SHL:
498' FNL, 2320' FEL
Sec 4-T1S-R67W
LP:
460' FNL, 2300' FWL
Sec 4-T1S-R67W
BTM PERF:
470' FSL, 2300' FWL
Sec 9-T1S-R67W
BHL:
370' FSL, 2300' FWL
Sec 9-T1S-R67W



West(-)/East(+) (2000 usft/in)



Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

Project	ADAMS 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 4-T1S-R67W			
Site Position:		Northing:	1,243,579.17 usft	Latitude:	40.000367°N
From:	Lat/Long	Easting:	3,172,463.32 usft	Longitude:	104.884389°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in		

Well		SELTZER LD 09-371HN				
Well Position	+N/-S	0.00 usft	Northing:	1,243,061.57 usft	Latitude:	39.998990°N
	+E/-W	0.00 usft	Easting:	3,170,146.59 usft	Longitude:	104.892671°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,140.00 usft
Grid Convergence:		0.39 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/25/2021	7.86	66.31	51,707.09860451

Design	PROPOSAL 1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	1,971.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	184.03	

Survey Tool Program	Date	10/27/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
98.00	1,971.00	SURFACE SURVEY (OWB)	MWD	OWSG MWD - Standard	
1,971.00	17,841.35	PROPOSAL 1 (OWB)	MWD	OWSG MWD - Standard	

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)	
98.00	0.28	117.28	98.00	-0.11	0.21	0.09	0.00	0.00	0.00	
186.00	0.03	159.13	186.00	-0.23	0.41	0.20	0.29	-0.28	47.56	
275.00	0.32	202.71	275.00	-0.48	0.32	0.46	0.34	0.33	48.97	
368.00	0.24	277.85	368.00	-0.69	0.03	0.69	0.37	-0.09	80.80	
457.00	0.44	221.06	457.00	-0.93	-0.38	0.95	0.41	0.22	-63.81	
547.00	0.46	151.73	546.99	-1.50	-0.43	1.53	0.57	0.02	-77.03	
637.00	0.31	346.94	636.99	-1.59	-0.32	1.60	0.85	-0.17	-183.10	
727.00	0.42	354.66	726.99	-1.02	-0.40	1.05	0.13	0.12	8.58	
817.00	0.86	356.28	816.99	-0.02	-0.48	0.05	0.49	0.49	1.80	

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

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)
907.00	0.77	347.75	906.98	1.25	-0.65	-1.20	0.17	-0.10	-9.48
997.00	1.11	321.84	996.96	2.52	-1.32	-2.42	0.60	0.38	-28.79
1,087.00	1.33	294.31	1,086.95	3.64	-2.81	-3.43	0.69	0.24	-30.59
1,177.00	1.93	293.23	1,176.91	4.67	-5.15	-4.29	0.67	0.67	-1.20
1,267.00	1.97	273.22	1,266.86	5.35	-8.09	-4.77	0.75	0.04	-22.23
1,357.00	2.08	258.22	1,356.80	5.10	-11.23	-4.30	0.60	0.12	-16.67
1,447.00	2.55	264.01	1,446.73	4.56	-14.82	-3.51	0.58	0.52	6.43
1,537.00	2.40	248.54	1,536.65	3.66	-18.57	-2.35	0.76	-0.17	-17.19
1,626.00	2.17	237.29	1,625.57	2.07	-21.72	-0.54	0.57	-0.26	-12.64
1,716.00	1.70	257.35	1,715.52	0.86	-24.46	0.86	0.91	-0.52	22.29
1,806.00	1.37	253.81	1,805.49	0.27	-26.79	1.62	0.38	-0.37	-3.93
1,896.00	0.91	270.90	1,895.47	-0.02	-28.54	2.03	0.63	-0.51	18.99
1,971.00	0.79	266.53	1,970.47	-0.04	-29.65	2.13	0.18	-0.16	-5.83
Start 55.00 hold at 1971.00 MD									
2,000.00	0.79	266.53	1,999.46	-0.07	-30.05	2.18	0.00	0.00	0.00
2,026.00	0.79	266.53	2,025.46	-0.09	-30.41	2.23	0.00	0.00	0.00
Start 2826.00 hold at 2026.00 MD									
2,100.00	0.79	266.53	2,099.45	-0.15	-31.43	2.36	0.00	0.00	0.00
2,200.00	0.79	266.53	2,199.44	-0.24	-32.80	2.54	0.00	0.00	0.00
2,300.00	0.79	266.53	2,299.43	-0.32	-34.18	2.72	0.00	0.00	0.00
2,400.00	0.79	266.53	2,399.43	-0.40	-35.56	2.90	0.00	0.00	0.00
2,500.00	0.79	266.53	2,499.42	-0.49	-36.93	3.08	0.00	0.00	0.00
2,600.00	0.79	266.53	2,599.41	-0.57	-38.31	3.26	0.00	0.00	0.00
2,700.00	0.79	266.53	2,699.40	-0.65	-39.68	3.44	0.00	0.00	0.00
2,800.00	0.79	266.53	2,799.39	-0.74	-41.06	3.62	0.00	0.00	0.00
2,900.00	0.79	266.53	2,899.38	-0.82	-42.44	3.80	0.00	0.00	0.00
3,000.00	0.79	266.53	2,999.37	-0.90	-43.81	3.98	0.00	0.00	0.00
3,100.00	0.79	266.53	3,099.36	-0.99	-45.19	4.16	0.00	0.00	0.00
3,200.00	0.79	266.53	3,199.35	-1.07	-46.57	4.34	0.00	0.00	0.00
3,300.00	0.79	266.53	3,299.34	-1.15	-47.94	4.52	0.00	0.00	0.00
3,400.00	0.79	266.53	3,399.33	-1.24	-49.32	4.70	0.00	0.00	0.00
3,500.00	0.79	266.53	3,499.32	-1.32	-50.69	4.88	0.00	0.00	0.00
3,600.00	0.79	266.53	3,599.31	-1.40	-52.07	5.06	0.00	0.00	0.00
3,700.00	0.79	266.53	3,699.30	-1.49	-53.45	5.24	0.00	0.00	0.00
3,800.00	0.79	266.53	3,799.29	-1.57	-54.82	5.42	0.00	0.00	0.00
3,900.00	0.79	266.53	3,899.28	-1.65	-56.20	5.60	0.00	0.00	0.00
4,000.00	0.79	266.53	3,999.27	-1.74	-57.58	5.78	0.00	0.00	0.00
4,100.00	0.79	266.53	4,099.26	-1.82	-58.95	5.96	0.00	0.00	0.00
4,200.00	0.79	266.53	4,199.25	-1.90	-60.33	6.14	0.00	0.00	0.00
4,300.00	0.79	266.53	4,299.24	-1.99	-61.70	6.32	0.00	0.00	0.00
4,400.00	0.79	266.53	4,399.24	-2.07	-63.08	6.50	0.00	0.00	0.00
4,500.00	0.79	266.53	4,499.23	-2.15	-64.46	6.68	0.00	0.00	0.00
4,600.00	0.79	266.53	4,599.22	-2.24	-65.83	6.86	0.00	0.00	0.00

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

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)
4,700.00	0.79	266.53	4,699.21	-2.32	-67.21	7.04	0.00	0.00	0.00
4,800.00	0.79	266.53	4,799.20	-2.41	-68.59	7.22	0.00	0.00	0.00
4,852.00	0.79	266.53	4,851.19	-2.45	-69.30	7.31	0.00	0.00	0.00
Start DLS 3.00 TFO 67.39									
4,900.00	1.89	311.23	4,899.18	-1.95	-70.23	6.87	3.00	2.29	93.12
5,000.00	4.80	325.20	4,999.00	2.58	-73.85	2.62	3.00	2.91	13.97
5,100.00	7.78	328.57	5,098.39	11.79	-79.77	-6.16	3.00	2.98	3.37
5,200.00	10.77	330.08	5,197.07	25.66	-87.96	-19.42	3.00	2.99	1.51
5,300.00	13.76	330.94	5,294.78	44.16	-98.40	-37.14	3.00	2.99	0.86
5,400.00	16.76	331.50	5,391.24	67.23	-111.06	-59.27	3.00	3.00	0.56
5,500.00	19.76	331.89	5,486.19	94.82	-125.91	-85.74	3.00	3.00	0.39
5,600.00	22.75	332.18	5,579.38	126.84	-142.90	-116.49	3.00	3.00	0.29
5,700.00	25.75	332.41	5,670.54	163.20	-162.00	-151.42	3.00	3.00	0.23
5,800.00	28.75	332.59	5,759.43	203.82	-183.14	-190.45	3.00	3.00	0.18
5,841.60	30.00	332.66	5,795.68	221.94	-192.52	-207.87	3.00	3.00	0.16
Start 1029.85 hold at 5841.60 MD									
5,900.00	30.00	332.66	5,846.26	247.87	-205.93	-232.80	0.00	0.00	0.00
6,000.00	30.00	332.66	5,932.86	292.29	-228.90	-275.49	0.00	0.00	0.00
6,100.00	30.00	332.66	6,019.46	336.70	-251.86	-318.18	0.00	0.00	0.00
6,200.00	30.00	332.66	6,106.07	381.11	-274.83	-360.87	0.00	0.00	0.00
6,300.00	30.00	332.66	6,192.67	425.52	-297.80	-403.56	0.00	0.00	0.00
6,400.00	30.00	332.66	6,279.27	469.94	-320.76	-446.25	0.00	0.00	0.00
6,500.00	30.00	332.66	6,365.87	514.35	-343.73	-488.94	0.00	0.00	0.00
6,600.00	30.00	332.66	6,452.48	558.76	-366.70	-531.63	0.00	0.00	0.00
6,700.00	30.00	332.66	6,539.08	603.18	-389.66	-574.32	0.00	0.00	0.00
6,800.00	30.00	332.66	6,625.68	647.59	-412.63	-617.01	0.00	0.00	0.00
6,871.45	30.00	332.66	6,687.56	679.32	-429.04	-647.51	0.00	0.00	0.00
Start DLS 8.00 TFO -149.31									
6,900.00	28.06	330.18	6,712.52	691.49	-435.66	-659.18	8.00	-6.80	-8.68
6,950.00	24.78	325.00	6,757.30	710.28	-447.52	-677.10	8.00	-6.55	-10.36
7,000.00	21.74	318.42	6,803.24	725.80	-459.69	-691.72	8.00	-6.09	-13.17
7,050.00	19.03	309.94	6,850.11	737.96	-472.09	-702.98	8.00	-5.42	-16.95
7,100.00	16.82	299.07	6,897.70	746.71	-484.67	-710.83	8.00	-4.42	-21.74
7,150.00	15.33	285.62	6,945.76	752.01	-497.36	-715.22	8.00	-2.98	-26.90
7,200.00	14.78	270.33	6,994.06	753.83	-510.11	-716.14	8.00	-1.10	-30.59
7,250.00	15.27	254.97	7,042.37	752.16	-522.86	-713.58	8.00	0.98	-30.71
7,300.00	16.71	241.38	7,090.45	747.00	-535.53	-707.55	8.00	2.88	-27.18
7,350.00	18.88	230.35	7,138.07	738.40	-548.08	-698.08	8.00	4.34	-22.06
7,400.00	21.57	221.75	7,184.99	726.37	-560.43	-685.22	8.00	5.37	-17.21
7,450.00	24.59	215.06	7,230.99	710.99	-572.53	-669.03	8.00	6.06	-13.36
7,500.00	27.86	209.81	7,275.84	692.33	-584.32	-649.59	8.00	6.52	-10.50
7,550.00	31.28	205.60	7,319.33	670.49	-595.74	-626.99	8.00	6.84	-8.42
7,600.00	34.81	202.16	7,361.24	645.55	-606.74	-601.35	8.00	7.07	-6.89
7,650.00	38.42	199.29	7,401.37	617.66	-617.26	-572.78	8.00	7.23	-5.75

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

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)
7,700.00	42.10	196.84	7,439.52	586.94	-627.25	-541.44	8.00	7.35	-4.90
7,750.00	45.82	194.72	7,475.51	553.54	-636.66	-507.46	8.00	7.44	-4.24
7,800.00	49.57	192.85	7,509.16	517.64	-645.45	-471.03	8.00	7.51	-3.74
7,850.00	53.35	191.18	7,540.31	479.39	-653.57	-432.30	8.00	7.56	-3.34
7,900.00	57.16	189.66	7,568.80	438.99	-660.99	-391.48	8.00	7.60	-3.03
7,950.00	60.97	188.28	7,594.50	396.63	-667.66	-348.76	8.00	7.64	-2.78
8,000.00	64.81	186.99	7,617.28	352.53	-673.56	-304.35	8.00	7.66	-2.58
8,050.00	68.65	185.78	7,637.03	306.89	-678.66	-258.47	8.00	7.69	-2.42
8,100.00	72.50	184.63	7,653.66	259.94	-682.93	-211.33	8.00	7.70	-2.30
8,150.00	76.36	183.53	7,667.08	211.91	-686.35	-163.18	8.00	7.71	-2.20
8,200.00	80.22	182.46	7,677.23	163.02	-688.90	-114.24	8.00	7.72	-2.13
8,250.00	84.08	181.42	7,684.05	113.53	-690.58	-64.75	8.00	7.73	-2.08
8,300.00	87.95	180.40	7,687.53	63.67	-691.37	-14.96	8.00	7.73	-2.05
8,326.50	90.00	179.85	7,688.00	37.17	-691.43	11.48	8.00	7.74	-2.04
TPZ - 8326.50'/7688' MD/TVD, 460' FNL, 2300' FWL SEC 4									
8,400.00	90.00	179.85	7,688.00	-36.33	-691.24	84.78	0.00	0.00	0.00
8,500.00	90.00	179.85	7,688.00	-136.32	-690.99	184.52	0.00	0.00	0.00
8,600.00	90.00	179.85	7,688.00	-236.32	-690.74	284.25	0.00	0.00	0.00
8,700.00	90.00	179.85	7,688.00	-336.32	-690.48	383.99	0.00	0.00	0.00
8,800.00	90.00	179.85	7,688.00	-436.32	-690.23	483.72	0.00	0.00	0.00
8,900.00	90.00	179.85	7,688.00	-536.32	-689.98	583.46	0.00	0.00	0.00
9,000.00	90.00	179.85	7,688.00	-636.32	-689.72	683.19	0.00	0.00	0.00
9,100.00	90.00	179.85	7,688.00	-736.32	-689.47	782.93	0.00	0.00	0.00
9,200.00	90.00	179.85	7,688.00	-836.32	-689.22	882.66	0.00	0.00	0.00
9,300.00	90.00	179.85	7,688.00	-936.32	-688.96	982.40	0.00	0.00	0.00
9,400.00	90.00	179.85	7,688.00	-1,036.32	-688.71	1,082.13	0.00	0.00	0.00
9,500.00	90.00	179.85	7,688.00	-1,136.32	-688.46	1,181.87	0.00	0.00	0.00
9,600.00	90.00	179.85	7,688.00	-1,236.32	-688.20	1,281.60	0.00	0.00	0.00
9,700.00	90.00	179.85	7,688.00	-1,336.32	-687.95	1,381.34	0.00	0.00	0.00
9,800.00	90.00	179.85	7,688.00	-1,436.32	-687.70	1,481.07	0.00	0.00	0.00
9,900.00	90.00	179.85	7,688.00	-1,536.32	-687.44	1,580.81	0.00	0.00	0.00
10,000.00	90.00	179.85	7,688.00	-1,636.32	-687.19	1,680.54	0.00	0.00	0.00
10,100.00	90.00	179.85	7,688.00	-1,736.32	-686.94	1,780.28	0.00	0.00	0.00
10,200.00	90.00	179.85	7,688.00	-1,836.32	-686.68	1,880.01	0.00	0.00	0.00
10,300.00	90.00	179.85	7,688.00	-1,936.32	-686.43	1,979.75	0.00	0.00	0.00
10,400.00	90.00	179.85	7,688.00	-2,036.32	-686.18	2,079.48	0.00	0.00	0.00
10,500.00	90.00	179.85	7,688.00	-2,136.32	-685.92	2,179.22	0.00	0.00	0.00
10,600.00	90.00	179.85	7,688.00	-2,236.32	-685.67	2,278.95	0.00	0.00	0.00
10,700.00	90.00	179.85	7,688.00	-2,336.32	-685.42	2,378.69	0.00	0.00	0.00
10,800.00	90.00	179.85	7,688.00	-2,436.32	-685.16	2,478.42	0.00	0.00	0.00
10,900.00	90.00	179.85	7,688.00	-2,536.32	-684.91	2,578.16	0.00	0.00	0.00
11,000.00	90.00	179.85	7,688.00	-2,636.32	-684.66	2,677.89	0.00	0.00	0.00
11,100.00	90.00	179.85	7,688.00	-2,736.32	-684.40	2,777.63	0.00	0.00	0.00
11,200.00	90.00	179.85	7,688.00	-2,836.32	-684.15	2,877.36	0.00	0.00	0.00

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

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)
11,300.00	90.00	179.85	7,688.00	-2,936.32	-683.90	2,977.10	0.00	0.00	0.00
11,400.00	90.00	179.85	7,688.00	-3,036.32	-683.65	3,076.83	0.00	0.00	0.00
11,500.00	90.00	179.85	7,688.00	-3,136.32	-683.39	3,176.57	0.00	0.00	0.00
11,600.00	90.00	179.85	7,688.00	-3,236.32	-683.14	3,276.30	0.00	0.00	0.00
11,700.00	90.00	179.85	7,688.00	-3,336.31	-682.89	3,376.04	0.00	0.00	0.00
11,800.00	90.00	179.85	7,688.00	-3,436.31	-682.63	3,475.77	0.00	0.00	0.00
11,900.00	90.00	179.85	7,688.00	-3,536.31	-682.38	3,575.51	0.00	0.00	0.00
12,000.00	90.00	179.85	7,688.00	-3,636.31	-682.13	3,675.24	0.00	0.00	0.00
12,100.00	90.00	179.85	7,688.00	-3,736.31	-681.87	3,774.98	0.00	0.00	0.00
12,200.00	90.00	179.85	7,688.00	-3,836.31	-681.62	3,874.71	0.00	0.00	0.00
12,300.00	90.00	179.85	7,688.00	-3,936.31	-681.37	3,974.45	0.00	0.00	0.00
12,400.00	90.00	179.85	7,688.00	-4,036.31	-681.11	4,074.18	0.00	0.00	0.00
12,500.00	90.00	179.85	7,688.00	-4,136.31	-680.86	4,173.92	0.00	0.00	0.00
12,600.00	90.00	179.85	7,688.00	-4,236.31	-680.61	4,273.65	0.00	0.00	0.00
12,700.00	90.00	179.85	7,688.00	-4,336.31	-680.35	4,373.39	0.00	0.00	0.00
12,800.00	90.00	179.85	7,688.00	-4,436.31	-680.10	4,473.12	0.00	0.00	0.00
12,900.00	90.00	179.85	7,688.00	-4,536.31	-679.85	4,572.86	0.00	0.00	0.00
13,000.00	90.00	179.85	7,688.00	-4,636.31	-679.59	4,672.59	0.00	0.00	0.00
13,100.00	90.00	179.85	7,688.00	-4,736.31	-679.34	4,772.33	0.00	0.00	0.00
13,200.00	90.00	179.85	7,688.00	-4,836.31	-679.09	4,872.06	0.00	0.00	0.00
13,300.00	90.00	179.85	7,688.00	-4,936.31	-678.83	4,971.80	0.00	0.00	0.00
13,400.00	90.00	179.85	7,688.00	-5,036.31	-678.58	5,071.53	0.00	0.00	0.00
13,500.00	90.00	179.85	7,688.00	-5,136.31	-678.33	5,171.27	0.00	0.00	0.00
13,600.00	90.00	179.85	7,688.00	-5,236.31	-678.07	5,271.00	0.00	0.00	0.00
13,700.00	90.00	179.85	7,688.00	-5,336.31	-677.82	5,370.74	0.00	0.00	0.00
13,800.00	90.00	179.85	7,688.00	-5,436.31	-677.57	5,470.47	0.00	0.00	0.00
13,900.00	90.00	179.85	7,688.00	-5,536.31	-677.31	5,570.21	0.00	0.00	0.00
14,000.00	90.00	179.85	7,688.00	-5,636.31	-677.06	5,669.94	0.00	0.00	0.00
14,100.00	90.00	179.85	7,688.00	-5,736.31	-676.81	5,769.68	0.00	0.00	0.00
14,200.00	90.00	179.85	7,688.00	-5,836.31	-676.55	5,869.41	0.00	0.00	0.00
14,300.00	90.00	179.85	7,688.00	-5,936.31	-676.30	5,969.15	0.00	0.00	0.00
14,400.00	90.00	179.85	7,688.00	-6,036.31	-676.05	6,068.88	0.00	0.00	0.00
14,500.00	90.00	179.85	7,688.00	-6,136.31	-675.80	6,168.62	0.00	0.00	0.00
14,600.00	90.00	179.85	7,688.00	-6,236.31	-675.54	6,268.35	0.00	0.00	0.00
14,700.00	90.00	179.85	7,688.00	-6,336.31	-675.29	6,368.09	0.00	0.00	0.00
14,800.00	90.00	179.85	7,688.00	-6,436.30	-675.04	6,467.82	0.00	0.00	0.00
14,900.00	90.00	179.85	7,688.00	-6,536.30	-674.78	6,567.56	0.00	0.00	0.00
15,000.00	90.00	179.85	7,688.00	-6,636.30	-674.53	6,667.29	0.00	0.00	0.00
15,100.00	90.00	179.85	7,688.00	-6,736.30	-674.28	6,767.03	0.00	0.00	0.00
15,200.00	90.00	179.85	7,688.00	-6,836.30	-674.02	6,866.76	0.00	0.00	0.00
15,300.00	90.00	179.85	7,688.00	-6,936.30	-673.77	6,966.50	0.00	0.00	0.00
15,400.00	90.00	179.85	7,688.00	-7,036.30	-673.52	7,066.23	0.00	0.00	0.00
15,500.00	90.00	179.85	7,688.00	-7,136.30	-673.26	7,165.97	0.00	0.00	0.00

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

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)
15,600.00	90.00	179.85	7,688.00	-7,236.30	-673.01	7,265.70	0.00	0.00	0.00
15,700.00	90.00	179.85	7,688.00	-7,336.30	-672.76	7,365.44	0.00	0.00	0.00
15,800.00	90.00	179.85	7,688.00	-7,436.30	-672.50	7,465.17	0.00	0.00	0.00
15,900.00	90.00	179.85	7,688.00	-7,536.30	-672.25	7,564.91	0.00	0.00	0.00
16,000.00	90.00	179.85	7,688.00	-7,636.30	-672.00	7,664.64	0.00	0.00	0.00
16,100.00	90.00	179.85	7,688.00	-7,736.30	-671.74	7,764.38	0.00	0.00	0.00
16,200.00	90.00	179.85	7,688.00	-7,836.30	-671.49	7,864.11	0.00	0.00	0.00
16,300.00	90.00	179.85	7,688.00	-7,936.30	-671.24	7,963.85	0.00	0.00	0.00
16,400.00	90.00	179.85	7,688.00	-8,036.30	-670.98	8,063.58	0.00	0.00	0.00
16,500.00	90.00	179.85	7,688.00	-8,136.30	-670.73	8,163.32	0.00	0.00	0.00
16,600.00	90.00	179.85	7,688.00	-8,236.30	-670.48	8,263.05	0.00	0.00	0.00
16,700.00	90.00	179.85	7,688.00	-8,336.30	-670.22	8,362.79	0.00	0.00	0.00
16,800.00	90.00	179.85	7,688.00	-8,436.30	-669.97	8,462.52	0.00	0.00	0.00
16,900.00	90.00	179.85	7,688.00	-8,536.30	-669.72	8,562.25	0.00	0.00	0.00
17,000.00	90.00	179.85	7,688.00	-8,636.30	-669.46	8,661.99	0.00	0.00	0.00
17,100.00	90.00	179.85	7,688.00	-8,736.30	-669.21	8,761.72	0.00	0.00	0.00
17,200.00	90.00	179.85	7,688.00	-8,836.30	-668.96	8,861.46	0.00	0.00	0.00
17,300.00	90.00	179.85	7,688.00	-8,936.30	-668.70	8,961.19	0.00	0.00	0.00
17,400.00	90.00	179.85	7,688.00	-9,036.30	-668.45	9,060.93	0.00	0.00	0.00
17,500.00	90.00	179.85	7,688.00	-9,136.30	-668.20	9,160.66	0.00	0.00	0.00
17,600.00	90.00	179.85	7,688.00	-9,236.30	-667.95	9,260.40	0.00	0.00	0.00
17,700.00	90.00	179.85	7,688.00	-9,336.30	-667.69	9,360.13	0.00	0.00	0.00
17,741.18	90.00	179.85	7,688.00	-9,377.47	-667.59	9,401.20	0.00	0.00	0.00
BTM PERF - 17741.18'/7688' MD/TVD, 470' FSL, 2300' FWL SEC 9									
17,741.86	90.00	179.84	7,688.00	-9,378.16	-667.59	9,401.89	2.00	0.00	-2.00
Start 99.49 hold at 17741.86 MD									
17,800.00	90.00	179.84	7,688.00	-9,436.30	-667.42	9,459.87	0.00	0.00	0.00
17,841.35	90.00	179.84	7,688.00	-9,477.65	-667.31	9,501.11	0.00	0.00	0.00
BHL - 17841.35'/7688' MD/TVD, 370' FSL, 2300' FWL SEC 9									

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
SELTZER 09-371HN-PE - plan hits target center - Point	0.00	0.00	7,688.00	-9,477.65	-667.31	1,233,579.57	3,169,544.21	39.972972°N	104.895052°W
SELTZER 09-371HN-LP - plan hits target center - Point	0.00	0.00	7,688.00	37.17	-691.43	1,243,094.01	3,169,454.92	39.999092°N	104.895139°W
SELTZER 09-371HN-BT - plan hits target center - Point	0.00	0.00	7,688.00	-9,377.47	-667.59	1,233,679.74	3,169,543.24	39.973247°N	104.895053°W

Survey Report

Company:	GREAT WESTERN OPERATING COMPANY	Local Co-ordinate Reference:	Well SELTZER LD 09-371HN
Project:	ADAMS COUNTY	TVD Reference:	KB 20' @ 5160.00usft
Site:	SEC 4-T1S-R67W	MD Reference:	KB 20' @ 5160.00usft
Well:	SELTZER LD 09-371HN	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PROPOSAL 1	Database:	EDM 5000.16 Single User Db

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1971	1970	0	-30	Start 55.00 hold at 1971.00 MD
2026	2025	0	-30	Start 2826.00 hold at 2026.00 MD
4852	4851	-2	-69	Start DLS 3.00 TFO 67.39
5842	5796	222	-193	Start 1029.85 hold at 5841.60 MD
6871	6688	679	-429	Start DLS 8.00 TFO -149.31
8327	7688	37	-691	TPZ - 8326.50/7688' MD/TVD, 460' FNL, 2300' FWL SEC 4
17,741	7688	-9377	-668	BTM PERF - 17741.18/7688' MD/TVD, 470' FSL, 2300' FWL SEC 9
17,742	7688	-9378	-668	Start 99.49 hold at 17741.86 MD
17,841	7688	-9478	-667	BHL - 17841.35/7688' MD/TVD, 370' FSL, 2300' FWL SEC 9

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------