

Great Western

Well Name: **Tailholt FD 11-379HN**

Surface Location: Tailholt FD Horizontal Pad Sec.11-T6N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4874.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1428645.30	3175698.01	40.508314	-104.868136	
RKB - 16.5' WELL @ 4890.7ft (RKB - 16.5')						

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
SHL 241'FNL & 547'FWL	-1.3	0.0	0.0	40.508314	-104.868136
BHL 470'FSL & 570'FWL	7116.7	-4670.0	15.0	40.495495	-104.868082
WP1	7144.0	-1565.0	13.0	40.504018	-104.868089

Tailholt FD Horizontal Pad Sec.11-T6N-R67W
Tailholt FD 11-379HN
Plan 8 Sidetrack 1 (Jan 14, 2014)
13:41, January 14 2014

South(-)/North(+) (2000 ft/in)

Azimuths to True North
Magnetic North: 8.59°

Magnetic Field
Strength: 52909.8snT
Dip Angle: 67.03°
Date: 12/26/2013
Model: IGRF2010

SHL 241'FNL & 547'FWL
7" 7"

Start Sidetrack

WP1

BHL 470'FSL & 570'FWL

Tailholt FD 11-379HN

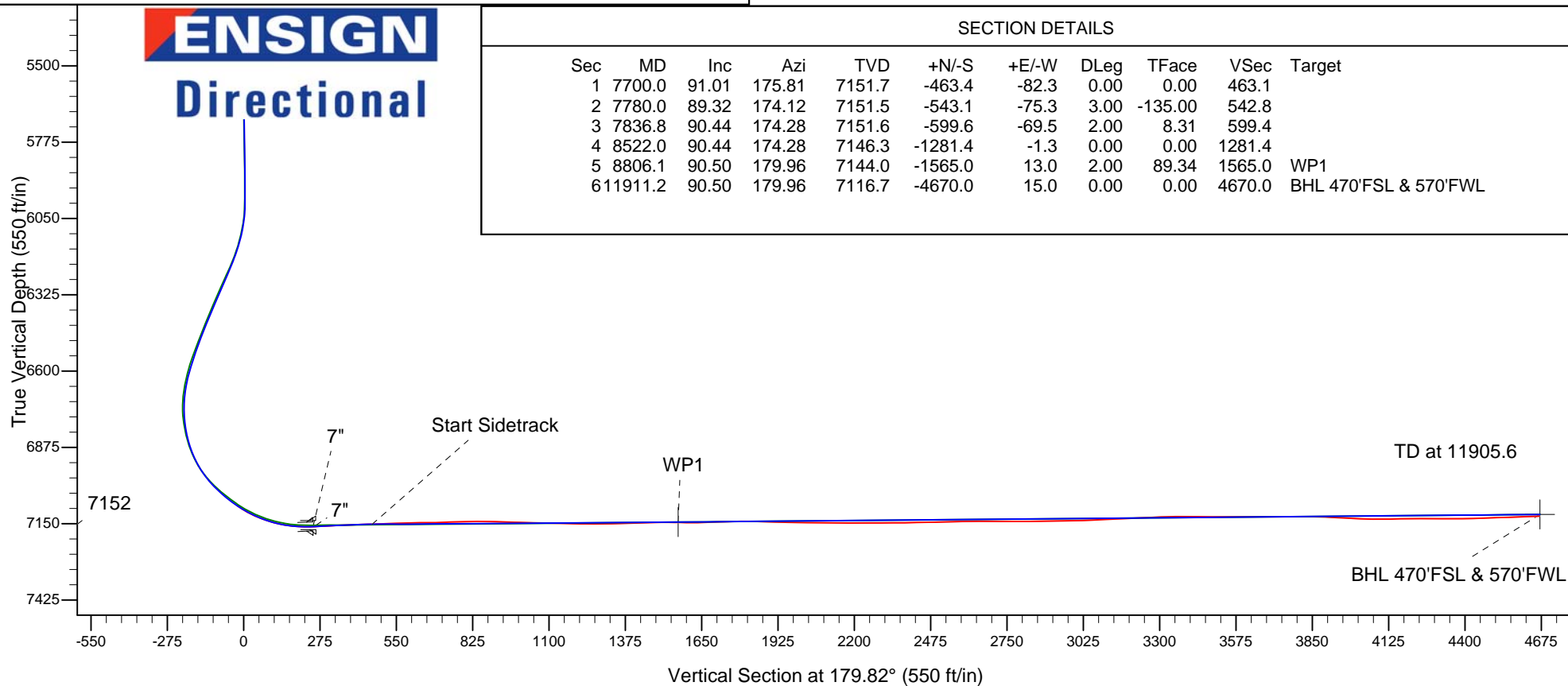
Tailholt FD 11-379HN

Tailholt FD 11-379HN

Tailholt FD 11-379HN

TD at 11905.6

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





Directional

Great Western

SEC.11-T6N-R67W

Tailholt FD Horizontal Pad Sec.11-T6N-R67W

Tailholt FD 11-379HN

Wellbore #1

Plan: Plan 8 Sidetrack 1 (Jan 14, 2014)

Standard Planning Report

14 January, 2014

Plan Sections											
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target	
7,700.0	91.01	175.81	7,151.7	-463.4	-82.3	0.00	0.00	0.00	0.00		
7,780.0	89.32	174.12	7,151.5	-543.1	-75.3	3.00	-2.12	-2.12	-135.00		
7,836.8	90.44	174.28	7,151.6	-599.6	-69.5	2.00	1.98	0.29	8.31		
8,522.0	90.44	174.28	7,146.3	-1,281.4	-1.3	0.00	0.00	0.00	0.00		
8,806.1	90.50	179.96	7,144.0	-1,565.0	13.0	2.00	0.02	2.00	89.34	WP1	
11,911.2	90.50	179.96	7,116.7	-4,670.0	15.0	0.00	0.00	0.00	0.00	BHL 470'FSL & 570'FSL	

Database:	Landmark	Local Co-ordinate Reference:	Well Tailholt FD 11-379HN
Company:	Great Western	TVD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Project:	SEC.11-T6N-R67W	MD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Site:	Tailholt FD Horizontal Pad Sec.11-T6N-R67W	North Reference:	True
Well:	Tailholt FD 11-379HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 8 Sidetrack 1 (Jan 14, 2014)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,700.0	91.01	175.81	7,151.7	-463.4	-82.3	463.1	0.00	0.00	0.00
Start Sidetrack - SHL 241'FNL & 547'FWL - Landing Pt. 460'FNL & 470'FWL									
7,750.0	89.95	174.75	7,151.3	-513.2	-78.2	513.0	3.00	-2.12	-2.12
7,780.0	89.32	174.12	7,151.5	-543.1	-75.3	542.8	3.00	-2.12	-2.12
7,800.0	89.71	174.17	7,151.7	-563.0	-73.2	562.7	2.00	1.98	0.29
7,836.8	90.44	174.28	7,151.6	-599.6	-69.5	599.4	2.00	1.98	0.29
7,850.0	90.44	174.28	7,151.5	-612.7	-68.2	612.5	0.00	0.00	0.00
7,900.0	90.44	174.28	7,151.1	-662.5	-63.2	662.3	0.00	0.00	0.00
7,950.0	90.44	174.28	7,150.7	-712.2	-58.3	712.0	0.00	0.00	0.00
8,000.0	90.44	174.28	7,150.4	-762.0	-53.3	761.8	0.00	0.00	0.00
8,050.0	90.44	174.28	7,150.0	-811.7	-48.3	811.6	0.00	0.00	0.00
8,100.0	90.44	174.28	7,149.6	-861.5	-43.3	861.3	0.00	0.00	0.00
8,150.0	90.44	174.28	7,149.2	-911.2	-38.3	911.1	0.00	0.00	0.00
8,200.0	90.44	174.28	7,148.8	-961.0	-33.3	960.9	0.00	0.00	0.00
8,250.0	90.44	174.28	7,148.4	-1,010.7	-28.4	1,010.6	0.00	0.00	0.00
8,300.0	90.44	174.28	7,148.1	-1,060.5	-23.4	1,060.4	0.00	0.00	0.00
8,350.0	90.44	174.28	7,147.7	-1,110.2	-18.4	1,110.2	0.00	0.00	0.00
8,400.0	90.44	174.28	7,147.3	-1,160.0	-13.4	1,159.9	0.00	0.00	0.00
8,450.0	90.44	174.28	7,146.9	-1,209.7	-8.4	1,209.7	0.00	0.00	0.00
8,500.0	90.44	174.28	7,146.5	-1,259.5	-3.5	1,259.5	0.00	0.00	0.00
8,522.0	90.44	174.28	7,146.3	-1,281.4	-1.3	1,281.4	0.00	0.00	0.00
8,550.0	90.45	174.84	7,146.1	-1,309.2	1.4	1,309.2	2.00	0.02	2.00
8,600.0	90.46	175.84	7,145.7	-1,359.1	5.5	1,359.1	2.00	0.02	2.00
8,650.0	90.47	176.84	7,145.3	-1,409.0	8.6	1,409.0	2.00	0.02	2.00
8,700.0	90.48	177.84	7,144.9	-1,458.9	11.0	1,458.9	2.00	0.02	2.00
8,750.0	90.49	178.84	7,144.5	-1,508.9	12.4	1,508.9	2.00	0.02	2.00
8,800.0	90.50	179.84	7,144.1	-1,558.9	13.0	1,558.9	2.00	0.02	2.00
8,806.1	90.50	179.96	7,144.0	-1,565.0	13.0	1,565.0	2.00	0.02	2.00
WP1									
8,850.0	90.50	179.96	7,143.6	-1,608.9	13.0	1,608.9	0.00	0.00	0.00
8,900.0	90.50	179.96	7,143.2	-1,658.9	13.1	1,658.9	0.00	0.00	0.00
8,950.0	90.50	179.96	7,142.7	-1,708.9	13.1	1,708.9	0.00	0.00	0.00
9,000.0	90.50	179.96	7,142.3	-1,758.9	13.1	1,758.9	0.00	0.00	0.00
9,050.0	90.50	179.96	7,141.9	-1,808.9	13.2	1,808.9	0.00	0.00	0.00
9,100.0	90.50	179.96	7,141.4	-1,858.9	13.2	1,858.9	0.00	0.00	0.00
9,150.0	90.50	179.96	7,141.0	-1,908.9	13.2	1,908.9	0.00	0.00	0.00
9,200.0	90.50	179.96	7,140.5	-1,958.9	13.3	1,958.9	0.00	0.00	0.00
9,250.0	90.50	179.96	7,140.1	-2,008.9	13.3	2,008.9	0.00	0.00	0.00
9,300.0	90.50	179.96	7,139.7	-2,058.9	13.3	2,058.9	0.00	0.00	0.00
9,350.0	90.50	179.96	7,139.2	-2,108.9	13.4	2,108.9	0.00	0.00	0.00
9,400.0	90.50	179.96	7,138.8	-2,158.9	13.4	2,158.9	0.00	0.00	0.00
9,450.0	90.50	179.96	7,138.3	-2,208.9	13.4	2,208.9	0.00	0.00	0.00
9,500.0	90.50	179.96	7,137.9	-2,258.8	13.4	2,258.9	0.00	0.00	0.00
9,550.0	90.50	179.96	7,137.5	-2,308.8	13.5	2,308.9	0.00	0.00	0.00
9,600.0	90.50	179.96	7,137.0	-2,358.8	13.5	2,358.9	0.00	0.00	0.00
9,650.0	90.50	179.96	7,136.6	-2,408.8	13.5	2,408.9	0.00	0.00	0.00
9,700.0	90.50	179.96	7,136.1	-2,458.8	13.6	2,458.9	0.00	0.00	0.00
9,750.0	90.50	179.96	7,135.7	-2,508.8	13.6	2,508.9	0.00	0.00	0.00
9,800.0	90.50	179.96	7,135.3	-2,558.8	13.6	2,558.9	0.00	0.00	0.00
9,850.0	90.50	179.96	7,134.8	-2,608.8	13.7	2,608.9	0.00	0.00	0.00
9,900.0	90.50	179.96	7,134.4	-2,658.8	13.7	2,658.9	0.00	0.00	0.00
9,950.0	90.50	179.96	7,133.9	-2,708.8	13.7	2,708.9	0.00	0.00	0.00
10,000.0	90.50	179.96	7,133.5	-2,758.8	13.8	2,758.9	0.00	0.00	0.00
10,050.0	90.50	179.96	7,133.1	-2,808.8	13.8	2,808.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Tailholt FD 11-379HN
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Project:	SEC.11-T6N-R67W	MD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Site:	Tailholt FD Horizontal Pad Sec.11-T6N-R67W	North Reference:	True
Well:	Tailholt FD 11-379HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 8 Sidetrack 1 (Jan 14, 2014)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,100.0	90.50	179.96	7,132.6	-2,858.8	13.8	2,858.9	0.00	0.00	0.00	
10,150.0	90.50	179.96	7,132.2	-2,908.8	13.9	2,908.9	0.00	0.00	0.00	
10,200.0	90.50	179.96	7,131.7	-2,958.8	13.9	2,958.9	0.00	0.00	0.00	
10,250.0	90.50	179.96	7,131.3	-3,008.8	13.9	3,008.8	0.00	0.00	0.00	
10,300.0	90.50	179.96	7,130.9	-3,058.8	14.0	3,058.8	0.00	0.00	0.00	
10,350.0	90.50	179.96	7,130.4	-3,108.8	14.0	3,108.8	0.00	0.00	0.00	
10,400.0	90.50	179.96	7,130.0	-3,158.8	14.0	3,158.8	0.00	0.00	0.00	
10,450.0	90.50	179.96	7,129.5	-3,208.8	14.1	3,208.8	0.00	0.00	0.00	
10,500.0	90.50	179.96	7,129.1	-3,258.8	14.1	3,258.8	0.00	0.00	0.00	
10,550.0	90.50	179.96	7,128.7	-3,308.8	14.1	3,308.8	0.00	0.00	0.00	
10,600.0	90.50	179.96	7,128.2	-3,358.8	14.2	3,358.8	0.00	0.00	0.00	
10,650.0	90.50	179.96	7,127.8	-3,408.8	14.2	3,408.8	0.00	0.00	0.00	
10,700.0	90.50	179.96	7,127.3	-3,458.8	14.2	3,458.8	0.00	0.00	0.00	
10,750.0	90.50	179.96	7,126.9	-3,508.8	14.3	3,508.8	0.00	0.00	0.00	
10,800.0	90.50	179.96	7,126.5	-3,558.8	14.3	3,558.8	0.00	0.00	0.00	
10,850.0	90.50	179.96	7,126.0	-3,608.8	14.3	3,608.8	0.00	0.00	0.00	
10,900.0	90.50	179.96	7,125.6	-3,658.8	14.3	3,658.8	0.00	0.00	0.00	
10,950.0	90.50	179.96	7,125.2	-3,708.8	14.4	3,708.8	0.00	0.00	0.00	
11,000.0	90.50	179.96	7,124.7	-3,758.8	14.4	3,758.8	0.00	0.00	0.00	
11,050.0	90.50	179.96	7,124.3	-3,808.8	14.4	3,808.8	0.00	0.00	0.00	
11,100.0	90.50	179.96	7,123.8	-3,858.8	14.5	3,858.8	0.00	0.00	0.00	
11,150.0	90.50	179.96	7,123.4	-3,908.8	14.5	3,908.8	0.00	0.00	0.00	
11,200.0	90.50	179.96	7,123.0	-3,958.8	14.5	3,958.8	0.00	0.00	0.00	
11,250.0	90.50	179.96	7,122.5	-4,008.8	14.6	4,008.8	0.00	0.00	0.00	
11,300.0	90.50	179.96	7,122.1	-4,058.8	14.6	4,058.8	0.00	0.00	0.00	
11,350.0	90.50	179.96	7,121.6	-4,108.8	14.6	4,108.8	0.00	0.00	0.00	
11,400.0	90.50	179.96	7,121.2	-4,158.8	14.7	4,158.8	0.00	0.00	0.00	
11,450.0	90.50	179.96	7,120.8	-4,208.8	14.7	4,208.8	0.00	0.00	0.00	
11,500.0	90.50	179.96	7,120.3	-4,258.8	14.7	4,258.8	0.00	0.00	0.00	
11,550.0	90.50	179.96	7,119.9	-4,308.8	14.8	4,308.8	0.00	0.00	0.00	
11,600.0	90.50	179.96	7,119.4	-4,358.8	14.8	4,358.8	0.00	0.00	0.00	
11,650.0	90.50	179.96	7,119.0	-4,408.8	14.8	4,408.8	0.00	0.00	0.00	
11,700.0	90.50	179.96	7,118.6	-4,458.8	14.9	4,458.8	0.00	0.00	0.00	
11,750.0	90.50	179.96	7,118.1	-4,508.8	14.9	4,508.8	0.00	0.00	0.00	
11,800.0	90.50	179.96	7,117.7	-4,558.8	14.9	4,558.8	0.00	0.00	0.00	
11,850.0	90.50	179.96	7,117.2	-4,608.8	15.0	4,608.8	0.00	0.00	0.00	
11,900.0	90.50	179.96	7,116.8	-4,658.8	15.0	4,658.8	0.00	0.00	0.00	
11,911.2	90.50	179.96	7,116.7	-4,670.0	15.0	4,670.0	0.00	0.00	0.00	
BHL 470'FSL & 570'FWL - BHL 470'FSL & 470'FWL										

Database:	Landmark	Local Co-ordinate Reference:	Well Tailholt FD 11-379HN
Company:	Great Western	TVD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Project:	SEC.11-T6N-R67W	MD Reference:	WELL @ 4890.7ft (RKB - 16.5')
Site:	Tailholt FD Horizontal Pad Sec.11-T6N-R67W	North Reference:	True
Well:	Tailholt FD 11-379HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 8 Sidetrack 1 (Jan 14, 2014)		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
BHL 470'FSL & 570'F - plan hits target center - Point	0.00	0.00	7,116.7	-4,670.0	15.0	1,423,975.69	3,175,746.29	40.495495	-104.868082
SHL 241'FNL & 547'F - plan misses target center by 7168.5ft at 7700.0ft MD (7151.7 TVD, -463.4 N, -82.3 E) - Point	0.00	0.00	-1.3	0.0	0.0	1,428,645.32	3,175,698.01	40.508314	-104.868136
BHL 470'FSL & 470'F - plan misses target center by 100.1ft at 11911.2ft MD (7116.7 TVD, -4670.0 N, 15.0 E) - Point	0.00	0.00	7,116.7	-4,670.5	-85.1	1,423,974.43	3,175,646.19	40.495494	-104.868442
Landing Pt. 460'FNL & 547'F - plan misses target center by 245.0ft at 7700.0ft MD (7151.7 TVD, -463.4 N, -82.3 E) - Point	0.00	0.00	7,158.7	-218.6	-77.3	1,428,426.19	3,175,622.27	40.507714	-104.868414
WP1 - plan hits target center - Point	0.00	0.00	7,144.0	-1,565.0	13.0	1,427,080.49	3,175,722.16	40.504018	-104.868089

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
7,700.0	7,151.7	-463.4	-82.3	Start Sidetrack