Great Western

Well Name: **Spaur Brothers EH 31-379HN**

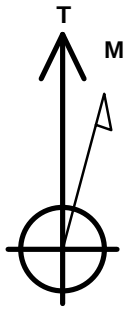
Surface Location: Spaur Brothers South Pad Sec.31-T7N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4736.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1435259.79	3286048.91	40.523633	-104.471033	

RKB - 16.5' WELL @ 4752.5ft (RKB - 16.5')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 292'FSL & 210'FEL	1.0	0.0	0.0	Point
BHL 470'FSL & 470'FWL	6715.0	136.3	-4472.1	Point
Entry Pt. 470'FSL & 460'FEL	6715.0	176.3	-250.2	Point



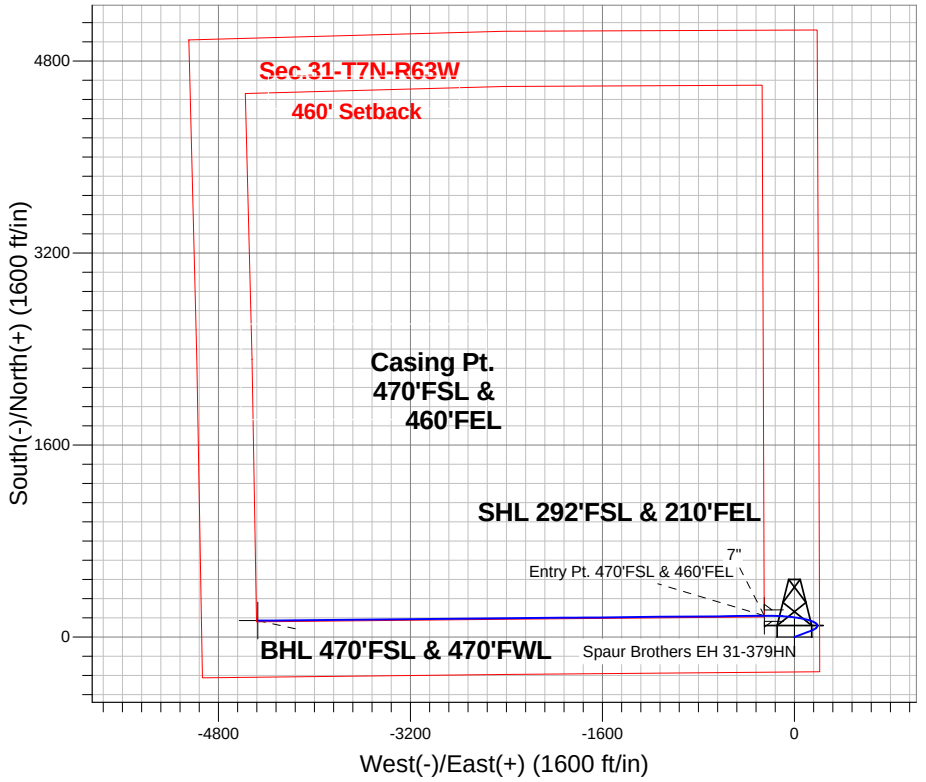
Azimuths to True North
Magnetic North: 8.39°

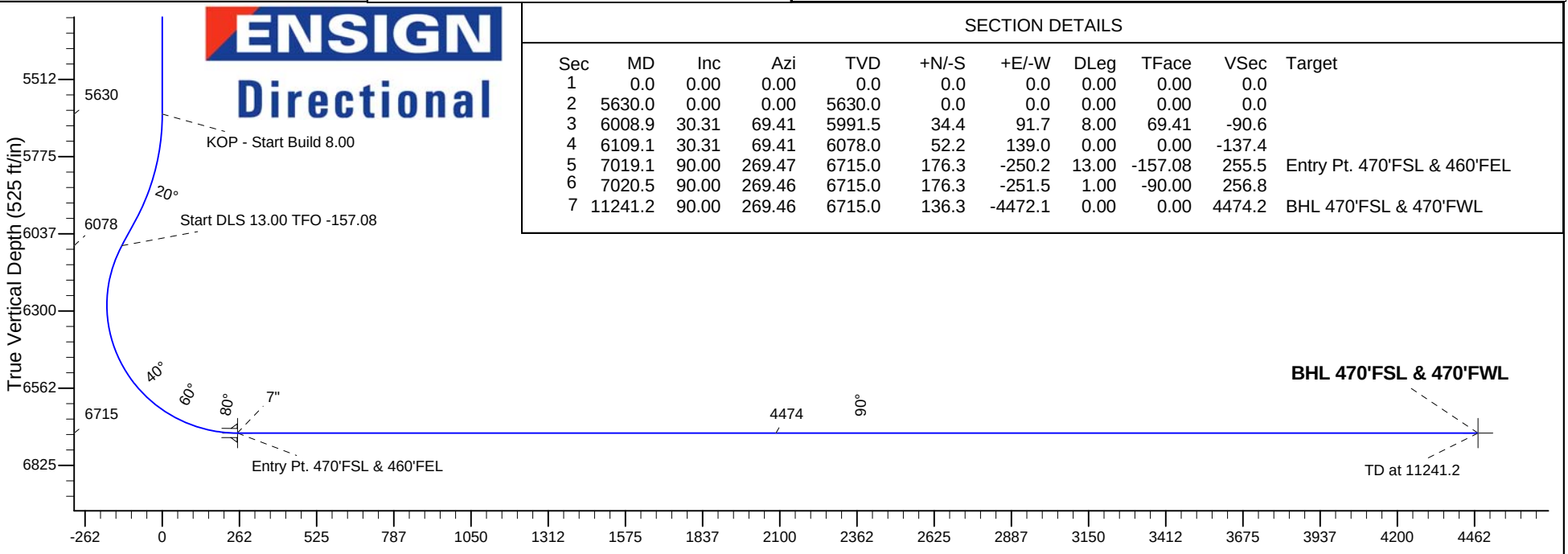
Magnetic Field
Strength: 52974.8snT
Dip Angle: 67.11°
Date: 11/6/2013
Model: IGRF2010

Spaur Brothers South Pad Sec.31-T7N-R63W
Spaur Brothers EH 31-379HN
Plan #1 (11-6-13)
8:28, November 07 2013

ANNOTATIONS

TVD	MD	Annotation
5630.0	5630.0	KOP - Start Build 8.00
6078.0	6109.1	Start DLS 13.00 TFO -157.08
6715.0	11241.2	TD at 11241.2





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5630.0	0.00	0.00	5630.0	0.0	0.0	0.00	0.00	0.0	
3	6008.9	30.31	69.41	5991.5	34.4	91.7	8.00	69.41	-90.6	
4	6109.1	30.31	69.41	6078.0	52.2	139.0	0.00	0.00	-137.4	
5	7019.1	90.00	269.47	6715.0	176.3	-250.2	13.00	-157.08	255.5	Entry Pt. 470'FSL & 460'FEL
6	7020.5	90.00	269.46	6715.0	176.3	-251.5	1.00	-90.00	256.8	
7	11241.2	90.00	269.46	6715.0	136.3	-4472.1	0.00	0.00	4474.2	BHL 470'FSL & 470'FWL

Great Western

SEC.31-T7N-R63W
Spaur Brothers South Pad Sec.31-T7N-R63W
Spaur Brothers EH 31-379HN

Wellbore #1

Plan: Plan #1 (11-6-13)

Standard Planning Report

07 November, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Company:	Great Western	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Project:	SEC.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**North Reference:**	True
Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-6-13)		

Project SEC.31-T7N-R63W, Weld County, Colorado

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Spaur Brothers South Pad Sec.31-T7N-R63W

Site Position:		**Northing:**	1,435,290.40 ft	**Latitude:**	40.523717
From:	Lat/Long	**Easting:**	3,286,048.56 ft	**Longitude:**	-104.471033
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.66 °

Well Spaur Brothers EH 31-379HN

Well Position	**+N/-S**	-30.6 ft	**Northing:**	1,435,259.79 ft	**Latitude:**	40.523633
	+E/-W	0.0 ft	**Easting:**	3,286,048.91 ft	**Longitude:**	-104.471033
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,736.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/6/2013	8.39	67.11	52,975

Design Plan #1 (11-6-13)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	271.75

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,630.0	0.00	0.00	5,630.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,008.9	30.31	69.41	5,991.5	34.4	91.7	8.00	8.00	0.00	69.41	
6,109.1	30.31	69.41	6,078.0	52.2	139.0	0.00	0.00	0.00	0.00	
7,019.1	90.00	269.47	6,715.0	176.3	-250.2	13.00	6.56	-17.58	-157.08	Entry Pt. 470'FSL &
7,020.5	90.00	269.46	6,715.0	176.3	-251.5	1.00	0.00	-1.00	-90.00	
11,241.2	90.00	269.46	6,715.0	136.3	-4,472.1	0.00	0.00	0.00	0.00	BHL 470'FSL & 47(

Database:	Landmark	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
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Project:	SEC.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**North Reference:**	True
Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-6-13)		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 292'FSL & 210'FEL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

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Project:	SEC.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**North Reference:**	True
Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-6-13)		

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)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,630.0	0.00	0.00	5,630.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 8.00									
5,700.0	5.60	69.41	5,699.9	1.2	3.2	-3.2	8.00	8.00	0.00
5,800.0	13.60	69.41	5,798.4	7.1	18.8	-18.6	8.00	8.00	0.00
5,900.0	21.60	69.41	5,893.6	17.7	47.1	-46.5	8.00	8.00	0.00
6,000.0	29.60	69.41	5,983.8	32.9	87.5	-86.5	8.00	8.00	0.00
6,008.9	30.31	69.41	5,991.5	34.4	91.7	-90.6	8.00	8.00	0.00
6,100.0	30.31	69.41	6,070.1	50.6	134.7	-133.1	0.00	0.00	0.00
6,109.1	30.31	69.41	6,078.0	52.2	139.0	-137.3	0.00	0.00	0.00
Start DLS 13.00 TFO -157.08									
6,200.0	19.92	55.87	6,160.2	69.0	173.4	-171.2	13.00	-11.43	-14.89
6,300.0	11.86	16.69	6,256.6	88.5	190.5	-187.8	13.00	-8.06	-39.19
6,400.0	14.76	319.02	6,354.3	108.0	185.1	-181.7	13.00	2.91	-57.66
6,500.0	25.07	294.85	6,448.3	126.6	157.4	-153.5	13.00	10.31	-24.18
6,600.0	37.05	284.87	6,533.9	143.4	108.9	-104.4	13.00	11.98	-9.97
6,700.0	49.49	279.33	6,606.6	157.3	41.9	-37.1	13.00	12.44	-5.54
6,800.0	62.12	275.56	6,662.7	167.8	-39.9	45.0	13.00	12.62	-3.77
6,900.0	74.82	272.59	6,699.3	174.3	-132.5	137.8	13.00	12.70	-2.97
7,000.0	87.56	269.96	6,714.6	176.4	-231.1	236.4	13.00	12.74	-2.63
7,019.1	90.00	269.47	6,715.0	176.3	-250.2	255.5	12.98	12.73	-2.55
7" - Entry Pt. 470'FSL & 460'FEL									
7,020.5	90.00	269.46	6,715.0	176.3	-251.5	256.8	1.08	0.25	-1.05
7,100.0	90.00	269.46	6,715.0	175.6	-331.1	336.3	0.00	0.00	0.00
7,200.0	90.00	269.46	6,715.0	174.6	-431.1	436.2	0.00	0.00	0.00
7,300.0	90.00	269.46	6,715.0	173.7	-531.1	536.1	0.00	0.00	0.00
7,400.0	90.00	269.46	6,715.0	172.7	-631.1	636.0	0.00	0.00	0.00
7,500.0	90.00	269.46	6,715.0	171.8	-731.1	736.0	0.00	0.00	0.00
7,600.0	90.00	269.46	6,715.0	170.8	-831.1	835.9	0.00	0.00	0.00
7,700.0	90.00	269.46	6,715.0	169.9	-931.1	935.8	0.00	0.00	0.00
7,800.0	90.00	269.46	6,715.0	168.9	-1,031.0	1,035.7	0.00	0.00	0.00
7,900.0	90.00	269.46	6,715.0	168.0	-1,131.0	1,135.6	0.00	0.00	0.00
8,000.0	90.00	269.46	6,715.0	167.0	-1,231.0	1,235.6	0.00	0.00	0.00
8,100.0	90.00	269.46	6,715.0	166.1	-1,331.0	1,335.5	0.00	0.00	0.00
8,200.0	90.00	269.46	6,715.0	165.1	-1,431.0	1,435.4	0.00	0.00	0.00
8,300.0	90.00	269.46	6,715.0	164.2	-1,531.0	1,535.3	0.00	0.00	0.00
8,400.0	90.00	269.46	6,715.0	163.3	-1,631.0	1,635.2	0.00	0.00	0.00
8,500.0	90.00	269.46	6,715.0	162.3	-1,731.0	1,735.2	0.00	0.00	0.00
8,600.0	90.00	269.46	6,715.0	161.4	-1,831.0	1,835.1	0.00	0.00	0.00
8,700.0	90.00	269.46	6,715.0	160.4	-1,931.0	1,935.0	0.00	0.00	0.00
8,800.0	90.00	269.46	6,715.0	159.5	-2,031.0	2,034.9	0.00	0.00	0.00
8,900.0	90.00	269.46	6,715.0	158.5	-2,131.0	2,134.8	0.00	0.00	0.00
9,000.0	90.00	269.46	6,715.0	157.6	-2,231.0	2,234.8	0.00	0.00	0.00
9,100.0	90.00	269.46	6,715.0	156.6	-2,331.0	2,334.7	0.00	0.00	0.00
9,200.0	90.00	269.46	6,715.0	155.7	-2,431.0	2,434.6	0.00	0.00	0.00
9,300.0	90.00	269.46	6,715.0	154.7	-2,531.0	2,534.5	0.00	0.00	0.00
9,400.0	90.00	269.46	6,715.0	153.8	-2,631.0	2,634.4	0.00	0.00	0.00
9,500.0	90.00	269.46	6,715.0	152.8	-2,731.0	2,734.4	0.00	0.00	0.00
9,600.0	90.00	269.46	6,715.0	151.9	-2,831.0	2,834.3	0.00	0.00	0.00

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Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**North Reference:**	True
Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-6-13)		

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)
9,700.0	90.00	269.46	6,715.0	150.9	-2,931.0	2,934.2	0.00	0.00	0.00
9,800.0	90.00	269.46	6,715.0	150.0	-3,031.0	3,034.1	0.00	0.00	0.00
9,900.0	90.00	269.46	6,715.0	149.0	-3,131.0	3,134.0	0.00	0.00	0.00
10,000.0	90.00	269.46	6,715.0	148.1	-3,230.9	3,234.0	0.00	0.00	0.00
10,100.0	90.00	269.46	6,715.0	147.1	-3,330.9	3,333.9	0.00	0.00	0.00
10,200.0	90.00	269.46	6,715.0	146.2	-3,430.9	3,433.8	0.00	0.00	0.00
10,300.0	90.00	269.46	6,715.0	145.2	-3,530.9	3,533.7	0.00	0.00	0.00
10,400.0	90.00	269.46	6,715.0	144.3	-3,630.9	3,633.6	0.00	0.00	0.00
10,500.0	90.00	269.46	6,715.0	143.3	-3,730.9	3,733.6	0.00	0.00	0.00
10,600.0	90.00	269.46	6,715.0	142.4	-3,830.9	3,833.5	0.00	0.00	0.00
10,700.0	90.00	269.46	6,715.0	141.4	-3,930.9	3,933.4	0.00	0.00	0.00
10,800.0	90.00	269.46	6,715.0	140.5	-4,030.9	4,033.3	0.00	0.00	0.00
10,900.0	90.00	269.46	6,715.0	139.5	-4,130.9	4,133.2	0.00	0.00	0.00
11,000.0	90.00	269.46	6,715.0	138.6	-4,230.9	4,233.2	0.00	0.00	0.00
11,100.0	90.00	269.46	6,715.0	137.6	-4,330.9	4,333.1	0.00	0.00	0.00
11,200.0	90.00	269.46	6,715.0	136.7	-4,430.9	4,433.0	0.00	0.00	0.00
11,241.2	90.00	269.46	6,715.0	136.3	-4,472.1	4,474.2	0.00	0.00	0.00
BHL 470'FSL & 470'FWL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,019.1	6,715.0	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,630.0	5,630.0	0.0	0.0	KOP - Start Build 8.00
6,109.1	6,078.0	52.2	139.0	Start DLS 13.00 TFO -157.08
11,241.2	6,715.0	136.3	-4,472.1	TD at 11241.2

ENSIGN
Directional

Great Western

SEC.31-T7N-R63W
Spaur Brothers South Pad Sec.31-T7N-R63W
Spaur Brothers EH 31-379HN

Wellbore #1
Plan #1 (11-6-13)

Anticollision Report

07 November, 2013

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (11-6-13)

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	**Error Surface:**	Elliptical Conic

Warning Levels Evaluated at: 2.00 **Sigma**

Survey Tool Program **Date** 11/6/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,241.1	Plan #1 (11-6-13) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Spaur Brothers South Pad Sec.31-T7N-R63W						
Spaur Brothers EH 31-019HN - Wellbore #1 - Plan #1 (11	5,500.0	5,500.0	29.1	4.6	1.190	Level 2, CC, ES, SF
Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (11	5,252.4	5,252.4	30.6	7.2	1.309	Level 3, CC
Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (11	5,300.0	5,299.6	30.8	7.2	1.306	Level 3, ES, SF
Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (11	4,900.0	4,900.0	60.8	39.0	2.791	CC, ES
Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (11	11,241.2	11,362.4	569.5	311.3	2.205	SF

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-019HN - Wellbore #1 - Plan #1 (**Offset Site Error:** 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-29.1	0.0	29.1				
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-29.1	0.0	29.1	28.9	0.22	129.671	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-29.1	0.0	29.1	28.5	0.67	43.224	
300.0	300.0	300.0	300.0	0.6	0.6	-180.00	-29.1	0.0	29.1	28.0	1.12	25.934	
400.0	400.0	400.0	400.0	0.8	0.8	-180.00	-29.1	0.0	29.1	27.6	1.57	18.524	
500.0	500.0	500.0	500.0	1.0	1.0	-180.00	-29.1	0.0	29.1	27.1	2.02	14.408	
600.0	600.0	600.0	600.0	1.2	1.2	-180.00	-29.1	0.0	29.1	26.7	2.47	11.788	
700.0	700.0	700.0	700.0	1.5	1.5	-180.00	-29.1	0.0	29.1	26.2	2.92	9.975	
800.0	800.0	800.0	800.0	1.7	1.7	-180.00	-29.1	0.0	29.1	25.8	3.37	8.645	
900.0	900.0	900.0	900.0	1.9	1.9	-180.00	-29.1	0.0	29.1	25.3	3.82	7.628	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-180.00	-29.1	0.0	29.1	24.9	4.27	6.825	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-180.00	-29.1	0.0	29.1	24.4	4.72	6.175	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-180.00	-29.1	0.0	29.1	24.0	5.17	5.638	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-180.00	-29.1	0.0	29.1	23.5	5.62	5.187	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-180.00	-29.1	0.0	29.1	23.1	6.07	4.803	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-180.00	-29.1	0.0	29.1	22.6	6.52	4.471	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-180.00	-29.1	0.0	29.1	22.2	6.97	4.183	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-180.00	-29.1	0.0	29.1	21.7	7.42	3.929	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-180.00	-29.1	0.0	29.1	21.3	7.87	3.705	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-180.00	-29.1	0.0	29.1	20.8	8.32	3.505	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-180.00	-29.1	0.0	29.1	20.4	8.77	3.325	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-180.00	-29.1	0.0	29.1	19.9	9.22	3.163	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-019HN - Wellbore #1 - Plan #1 (**Offset Site Error:** 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-180.00	-29.1	0.0	29.1	19.5	9.66	3.016	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-180.00	-29.1	0.0	29.1	19.0	10.11	2.882	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-180.00	-29.1	0.0	29.1	18.6	10.56	2.759	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-180.00	-29.1	0.0	29.1	18.1	11.01	2.646	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-180.00	-29.1	0.0	29.1	17.7	11.46	2.543	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-180.00	-29.1	0.0	29.1	17.2	11.91	2.447	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-180.00	-29.1	0.0	29.1	16.8	12.36	2.358	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-180.00	-29.1	0.0	29.1	16.3	12.81	2.275	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-180.00	-29.1	0.0	29.1	15.9	13.26	2.198	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-180.00	-29.1	0.0	29.1	15.4	13.71	2.126	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-180.00	-29.1	0.0	29.1	15.0	14.16	2.058	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-180.00	-29.1	0.0	29.1	14.5	14.61	1.995	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-180.00	-29.1	0.0	29.1	14.1	15.06	1.935	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-180.00	-29.1	0.0	29.1	13.6	15.51	1.879	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-180.00	-29.1	0.0	29.1	13.2	15.96	1.826	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-180.00	-29.1	0.0	29.1	12.7	16.41	1.776	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-180.00	-29.1	0.0	29.1	12.3	16.86	1.729	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-180.00	-29.1	0.0	29.1	11.8	17.31	1.684	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-180.00	-29.1	0.0	29.1	11.4	17.76	1.641	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-180.00	-29.1	0.0	29.1	10.9	18.21	1.601	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-180.00	-29.1	0.0	29.1	10.5	18.66	1.562	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-180.00	-29.1	0.0	29.1	10.0	19.11	1.526	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-180.00	-29.1	0.0	29.1	9.6	19.55	1.490	Level 3
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-180.00	-29.1	0.0	29.1	9.1	20.00	1.457	Level 3
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-180.00	-29.1	0.0	29.1	8.7	20.45	1.425	Level 3
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-180.00	-29.1	0.0	29.1	8.2	20.90	1.394	Level 3
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-180.00	-29.1	0.0	29.1	7.8	21.35	1.365	Level 3
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-180.00	-29.1	0.0	29.1	7.3	21.80	1.337	Level 3
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-180.00	-29.1	0.0	29.1	6.9	22.25	1.310	Level 3
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	-180.00	-29.1	0.0	29.1	6.4	22.70	1.284	Level 3
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	-180.00	-29.1	0.0	29.1	6.0	23.15	1.259	Level 3
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	-180.00	-29.1	0.0	29.1	5.5	23.60	1.235	Level 2
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	-180.00	-29.1	0.0	29.1	5.1	24.05	1.212	Level 2
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	-180.00	-29.1	0.0	29.1	4.6	24.50	1.190	Level 2, CC, ES, SF
5,600.0	5,600.0	5,598.7	5,598.6	12.5	12.5	174.46	-30.8	3.0	31.0	6.1	24.93	1.244	Level 2
5,700.0	5,699.9	5,696.2	5,695.4	12.7	12.6	95.15	-36.6	13.2	39.3	14.0	25.33	1.552	
5,800.0	5,798.4	5,792.2	5,789.4	12.9	12.8	96.10	-46.1	30.1	55.1	29.4	25.73	2.142	
5,900.0	5,893.6	5,885.7	5,879.0	13.1	13.1	101.01	-59.1	53.2	78.4	52.3	26.14	3.000	
6,000.0	5,983.8	5,976.0	5,963.2	13.4	13.3	105.71	-75.0	81.4	110.0	83.4	26.53	4.146	
6,100.0	6,070.1	6,063.6	6,042.3	13.8	13.6	109.90	-93.5	114.3	148.2	121.1	27.04	5.479	
6,200.0	6,160.2	6,150.0	6,117.6	14.2	13.9	125.54	-114.4	151.2	189.6	162.1	27.55	6.882	
6,300.0	6,256.6	6,234.8	6,194.6	14.4	14.2	165.20	-136.5	178.7	233.7	205.7	28.04	8.336	
6,400.0	6,354.3	6,320.6	6,276.1	14.6	14.5	-136.19	-160.2	190.4	279.4	250.9	28.48	9.810	
6,500.0	6,448.3	6,410.2	6,361.8	14.8	14.7	-111.06	-185.2	184.9	324.8	295.9	28.90	11.237	
6,600.0	6,533.9	6,506.2	6,450.2	14.9	14.8	-100.48	-211.2	159.1	367.7	338.4	29.32	12.540	
6,700.0	6,606.6	6,611.4	6,538.6	15.1	15.0	-94.93	-237.4	108.7	406.0	376.2	29.87	13.594	
6,800.0	6,662.7	6,728.6	6,620.2	15.7	15.1	-91.90	-261.9	28.9	437.2	406.4	30.82	14.186	
6,900.0	6,699.3	6,858.4	6,683.6	16.8	16.0	-90.42	-281.4	-82.2	458.7	426.1	32.63	14.060	
7,000.0	6,714.6	6,997.7	6,713.9	18.1	17.7	-89.99	-291.6	-217.2	468.2	432.6	35.58	13.161	
7,100.0	6,715.0	7,107.0	6,715.0	19.7	19.5	-90.00	-292.9	-326.5	468.5	429.7	38.87	12.054	
7,200.0	6,715.0	7,207.0	6,715.0	21.5	21.3	-90.00	-293.9	-426.5	468.6	426.0	42.55	11.013	
7,300.0	6,715.0	7,307.0	6,715.0	23.6	23.3	-90.00	-294.9	-526.5	468.6	422.0	46.61	10.053	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-019HN - Wellbore #1 - Plan #1 (

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,400.0	6,715.0	7,407.0	6,715.0	25.8	25.5	-90.00	-295.9	-626.5	468.6	417.6	50.97	9.193	
7,500.0	6,715.0	7,507.0	6,715.0	28.1	27.7	-90.00	-296.8	-726.5	468.6	413.1	55.56	8.435	
7,600.0	6,715.0	7,607.0	6,715.0	30.4	30.1	-90.00	-297.8	-826.5	468.7	408.3	60.32	7.769	
7,700.0	6,715.0	7,707.0	6,715.0	32.9	32.5	-90.00	-298.8	-926.5	468.7	403.5	65.22	7.186	
7,800.0	6,715.0	7,807.0	6,715.0	35.4	35.0	-90.00	-299.8	-1,026.5	468.7	398.5	70.22	6.675	
7,900.0	6,715.0	7,907.0	6,715.0	37.9	37.6	-90.00	-300.7	-1,126.5	468.7	393.4	75.32	6.224	
8,000.0	6,715.0	8,007.0	6,715.0	40.5	40.1	-90.00	-301.7	-1,226.5	468.8	388.3	80.48	5.825	
8,100.0	6,715.0	8,107.0	6,715.0	43.1	42.8	-90.00	-302.7	-1,326.5	468.8	383.1	85.70	5.470	
8,200.0	6,715.0	8,207.0	6,715.0	45.7	45.4	-90.00	-303.7	-1,426.5	468.8	377.9	90.96	5.154	
8,300.0	6,715.0	8,307.0	6,715.0	48.4	48.0	-90.00	-304.6	-1,526.5	468.9	372.6	96.27	4.870	
8,400.0	6,715.0	8,407.0	6,715.0	51.1	50.7	-90.00	-305.6	-1,626.4	468.9	367.3	101.61	4.615	
8,500.0	6,715.0	8,507.0	6,715.0	53.7	53.4	-90.00	-306.6	-1,726.4	468.9	361.9	106.98	4.383	
8,600.0	6,715.0	8,607.0	6,715.0	56.4	56.1	-90.00	-307.6	-1,826.4	468.9	356.6	112.37	4.173	
8,700.0	6,715.0	8,707.0	6,715.0	59.1	58.8	-90.00	-308.5	-1,926.4	469.0	351.2	117.78	3.982	
8,800.0	6,715.0	8,807.0	6,715.0	61.9	61.5	-90.00	-309.5	-2,026.4	469.0	345.8	123.21	3.806	
8,900.0	6,715.0	8,907.0	6,715.0	64.6	64.2	-90.00	-310.5	-2,126.4	469.0	340.4	128.66	3.645	
9,000.0	6,715.0	9,007.0	6,715.0	67.3	66.9	-90.00	-311.5	-2,226.4	469.0	334.9	134.12	3.497	
9,100.0	6,715.0	9,107.0	6,715.0	70.0	69.7	-90.00	-312.4	-2,326.4	469.1	329.5	139.60	3.360	
9,200.0	6,715.0	9,207.0	6,715.0	72.8	72.4	-90.00	-313.4	-2,426.4	469.1	324.0	145.08	3.233	
9,300.0	6,715.0	9,307.0	6,715.0	75.5	75.1	-90.00	-314.4	-2,526.4	469.1	318.6	150.57	3.116	
9,400.0	6,715.0	9,407.0	6,715.0	78.3	77.9	-90.00	-315.4	-2,626.4	469.2	313.1	156.08	3.006	
9,500.0	6,715.0	9,507.0	6,715.0	81.0	80.6	-90.00	-316.3	-2,726.4	469.2	307.6	161.59	2.904	
9,600.0	6,715.0	9,607.0	6,715.0	83.8	83.4	-90.00	-317.3	-2,826.4	469.2	302.1	167.11	2.808	
9,700.0	6,715.0	9,707.0	6,715.0	86.5	86.2	-90.00	-318.3	-2,926.4	469.2	296.6	172.63	2.718	
9,800.0	6,715.0	9,807.0	6,715.0	89.3	88.9	-90.00	-319.3	-3,026.4	469.3	291.1	178.16	2.634	
9,900.0	6,715.0	9,907.0	6,715.0	92.1	91.7	-90.00	-320.3	-3,126.4	469.3	285.6	183.70	2.555	
10,000.0	6,715.0	10,007.0	6,715.0	94.8	94.5	-90.00	-321.2	-3,226.4	469.3	280.1	189.24	2.480	
10,100.0	6,715.0	10,107.0	6,715.0	97.6	97.2	-90.00	-322.2	-3,326.4	469.4	274.6	194.78	2.410	
10,200.0	6,715.0	10,207.0	6,715.0	100.4	100.0	-90.00	-323.2	-3,426.4	469.4	269.0	200.33	2.343	
10,300.0	6,715.0	10,307.0	6,715.0	103.2	102.8	-90.00	-324.2	-3,526.4	469.4	263.5	205.88	2.280	
10,400.0	6,715.0	10,407.0	6,715.0	105.9	105.6	-90.00	-325.1	-3,626.4	469.4	258.0	211.44	2.220	
10,500.0	6,715.0	10,507.0	6,715.0	108.7	108.3	-90.00	-326.1	-3,726.3	469.5	252.5	217.00	2.163	
10,600.0	6,715.0	10,607.0	6,715.0	111.5	111.1	-90.00	-327.1	-3,826.3	469.5	246.9	222.56	2.110	
10,700.0	6,715.0	10,707.0	6,715.0	114.3	113.9	-90.00	-328.1	-3,926.3	469.5	241.4	228.12	2.058	
10,800.0	6,715.0	10,807.0	6,715.0	117.1	116.7	-90.00	-329.0	-4,026.3	469.5	235.9	233.69	2.009	
10,900.0	6,715.0	10,907.0	6,715.0	119.9	119.5	-90.00	-330.0	-4,126.3	469.6	230.3	239.26	1.963	
11,000.0	6,715.0	11,007.0	6,715.0	122.6	122.3	-90.00	-331.0	-4,226.3	469.6	224.8	244.83	1.918	
11,100.0	6,715.0	11,107.0	6,715.0	125.4	125.0	-90.00	-332.0	-4,326.3	469.6	219.2	250.40	1.875	
11,200.0	6,715.0	11,207.0	6,715.0	128.2	127.8	-90.00	-332.9	-4,426.3	469.7	213.7	255.98	1.835	
11,219.7	6,715.0	11,226.7	6,715.0	128.8	128.4	-90.00	-333.1	-4,446.0	469.7	212.6	257.08	1.827	
11,241.2	6,715.0	11,244.6	6,715.0	129.4	128.9	-90.00	-333.3	-4,463.8	469.7	211.5	258.17	1.819	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	30.6	0.0	30.6				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	30.6	0.0	30.6	30.4	0.22	136.172	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	30.6	0.0	30.6	29.9	0.67	45.391	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	30.6	0.0	30.6	29.5	1.12	27.234	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	30.6	0.0	30.6	29.0	1.57	19.453	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	30.6	0.0	30.6	28.6	2.02	15.130	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	30.6	0.0	30.6	28.1	2.47	12.379	
700.0	700.0	700.0	700.0	1.5	1.5	0.00	30.6	0.0	30.6	27.7	2.92	10.475	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	30.6	0.0	30.6	27.2	3.37	9.078	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	30.6	0.0	30.6	26.8	3.82	8.010	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	30.6	0.0	30.6	26.3	4.27	7.167	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	30.6	0.0	30.6	25.9	4.72	6.484	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	30.6	0.0	30.6	25.4	5.17	5.921	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.00	30.6	0.0	30.6	25.0	5.62	5.447	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.00	30.6	0.0	30.6	24.5	6.07	5.043	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	0.00	30.6	0.0	30.6	24.1	6.52	4.696	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	0.00	30.6	0.0	30.6	23.6	6.97	4.393	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	0.00	30.6	0.0	30.6	23.2	7.42	4.126	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	0.00	30.6	0.0	30.6	22.7	7.87	3.891	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	0.00	30.6	0.0	30.6	22.3	8.32	3.680	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	0.00	30.6	0.0	30.6	21.8	8.77	3.492	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	0.00	30.6	0.0	30.6	21.4	9.22	3.321	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	0.00	30.6	0.0	30.6	20.9	9.66	3.167	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	0.00	30.6	0.0	30.6	20.5	10.11	3.026	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	0.00	30.6	0.0	30.6	20.0	10.56	2.897	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	0.00	30.6	0.0	30.6	19.6	11.01	2.779	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	0.00	30.6	0.0	30.6	19.1	11.46	2.670	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	0.00	30.6	0.0	30.6	18.7	11.91	2.569	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	0.00	30.6	0.0	30.6	18.2	12.36	2.476	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	0.00	30.6	0.0	30.6	17.8	12.81	2.389	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	0.00	30.6	0.0	30.6	17.3	13.26	2.308	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	0.00	30.6	0.0	30.6	16.9	13.71	2.232	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	0.00	30.6	0.0	30.6	16.4	14.16	2.161	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	0.00	30.6	0.0	30.6	16.0	14.61	2.095	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	0.00	30.6	0.0	30.6	15.5	15.06	2.032	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	0.00	30.6	0.0	30.6	15.1	15.51	1.974	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	0.00	30.6	0.0	30.6	14.6	15.96	1.918	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	0.00	30.6	0.0	30.6	14.2	16.41	1.865	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	0.00	30.6	0.0	30.6	13.7	16.86	1.816	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	0.00	30.6	0.0	30.6	13.3	17.31	1.768	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	0.00	30.6	0.0	30.6	12.9	17.76	1.724	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	0.00	30.6	0.0	30.6	12.4	18.21	1.681	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	0.00	30.6	0.0	30.6	12.0	18.66	1.641	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	0.00	30.6	0.0	30.6	11.5	19.11	1.602	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	0.00	30.6	0.0	30.6	11.1	19.55	1.565	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	0.00	30.6	0.0	30.6	10.6	20.00	1.530	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	0.00	30.6	0.0	30.6	10.2	20.45	1.496	Level 3
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	0.00	30.6	0.0	30.6	9.7	20.90	1.464	Level 3
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	0.00	30.6	0.0	30.6	9.3	21.35	1.433	Level 3
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	0.00	30.6	0.0	30.6	8.8	21.80	1.404	Level 3
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	0.00	30.6	0.0	30.6	8.4	22.25	1.375	Level 3
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	0.00	30.6	0.0	30.6	7.9	22.70	1.348	Level 3

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (**Offset Site Error:** 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	0.00	30.6	0.0	30.6	7.5	23.15	1.322	Level 3
5,252.4	5,252.4	5,252.4	5,252.4	11.7	11.7	0.00	30.6	0.0	30.6	7.2	23.39	1.309	Level 3, CC
5,300.0	5,300.0	5,299.6	5,299.6	11.8	11.8	0.21	30.8	0.1	30.8	7.2	23.60	1.306	Level 3, ES, SF
5,400.0	5,400.0	5,398.0	5,397.9	12.0	12.0	3.53	34.3	2.1	34.5	10.4	24.04	1.434	Level 3
5,500.0	5,500.0	5,495.8	5,495.3	12.2	12.2	8.86	42.2	6.6	43.0	18.5	24.48	1.756	
5,600.0	5,600.0	5,592.4	5,590.8	12.5	12.5	13.88	54.2	13.4	56.6	31.7	24.92	2.271	
5,700.0	5,699.9	5,687.8	5,684.4	12.7	12.7	-52.99	70.2	22.5	73.3	48.0	25.32	2.894	
5,800.0	5,798.4	5,782.6	5,776.5	12.9	12.9	-56.97	90.1	33.7	87.2	61.5	25.61	3.403	
5,900.0	5,893.6	5,876.4	5,866.2	13.1	13.1	-65.21	113.6	47.1	99.8	73.8	26.00	3.837	
6,000.0	5,983.8	5,968.2	5,952.7	13.4	13.4	-75.83	140.4	62.3	114.7	88.1	26.65	4.304	
6,100.0	6,070.1	6,058.7	6,036.5	13.8	13.7	-86.32	170.3	79.2	136.1	108.7	27.46	4.958	
6,200.0	6,160.2	6,151.1	6,120.1	14.2	14.1	-80.17	204.3	98.5	159.7	131.6	28.10	5.684	
6,300.0	6,256.6	6,243.2	6,201.7	14.4	14.5	-39.64	241.7	119.7	177.5	149.0	28.47	6.232	
6,400.0	6,354.3	6,333.0	6,279.4	14.6	14.9	25.03	280.7	141.9	193.1	164.5	28.61	6.750	
6,500.0	6,448.3	6,415.5	6,350.7	14.8	15.3	57.87	316.8	162.3	213.8	184.9	28.88	7.402	
6,600.0	6,533.9	6,486.5	6,412.1	14.9	15.7	74.33	347.8	179.8	248.4	219.0	29.37	8.456	
6,700.0	6,606.6	6,569.7	6,485.6	15.1	16.1	85.29	384.9	190.9	297.7	267.7	29.98	9.927	
6,800.0	6,662.7	6,678.4	6,582.2	15.7	16.6	94.01	433.3	181.8	355.1	324.5	30.65	11.586	
6,900.0	6,699.3	6,854.5	6,726.1	16.8	17.2	104.15	504.7	112.5	412.2	381.2	31.04	13.279	
7,000.0	6,714.6	7,207.8	6,891.5	18.1	18.9	113.69	584.3	-178.4	447.7	415.2	32.54	13.758	
7,100.0	6,715.0	7,365.7	6,897.0	19.7	21.0	113.95	585.2	-335.9	448.3	412.3	35.93	12.477	
7,200.0	6,715.0	7,465.7	6,897.0	21.5	22.7	113.97	584.0	-435.9	448.1	408.8	39.24	11.419	
7,300.0	6,715.0	7,565.7	6,897.0	23.6	24.6	113.98	582.8	-535.9	447.8	404.9	42.91	10.436	
7,400.0	6,715.0	7,665.7	6,897.0	25.8	26.6	113.99	581.6	-635.9	447.6	400.7	46.87	9.550	
7,500.0	6,715.0	7,765.7	6,897.0	28.1	28.8	114.00	580.5	-735.9	447.4	396.4	51.04	8.766	
7,600.0	6,715.0	7,865.7	6,897.0	30.4	31.1	114.02	579.3	-835.9	447.2	391.8	55.38	8.075	
7,700.0	6,715.0	7,965.7	6,897.0	32.9	33.5	114.03	578.1	-935.9	447.0	387.1	59.84	7.469	
7,800.0	6,715.0	8,065.7	6,897.0	35.4	35.9	114.04	576.9	-1,035.9	446.7	382.3	64.41	6.936	
7,900.0	6,715.0	8,165.7	6,897.0	37.9	38.4	114.05	575.7	-1,135.9	446.5	377.5	69.06	6.466	
8,000.0	6,715.0	8,265.7	6,897.0	40.5	40.9	114.07	574.5	-1,235.9	446.3	372.5	73.78	6.049	
8,100.0	6,715.0	8,365.7	6,897.0	43.1	43.5	114.08	573.3	-1,335.9	446.1	367.5	78.55	5.679	
8,200.0	6,715.0	8,465.7	6,897.0	45.7	46.0	114.09	572.1	-1,435.9	445.9	362.5	83.36	5.348	
8,300.0	6,715.0	8,565.7	6,897.0	48.4	48.7	114.10	570.9	-1,535.9	445.6	357.4	88.21	5.052	
8,400.0	6,715.0	8,665.7	6,897.0	51.1	51.3	114.12	569.8	-1,635.9	445.4	352.3	93.10	4.784	
8,500.0	6,715.0	8,765.7	6,897.0	53.7	53.9	114.13	568.6	-1,735.8	445.2	347.2	98.01	4.543	
8,600.0	6,715.0	8,865.7	6,897.0	56.4	56.6	114.14	567.4	-1,835.8	445.0	342.0	102.94	4.323	
8,700.0	6,715.0	8,965.7	6,897.0	59.1	59.3	114.16	566.2	-1,935.8	444.8	336.9	107.89	4.122	
8,800.0	6,715.0	9,065.7	6,897.0	61.9	62.0	114.17	565.0	-2,035.8	444.5	331.7	112.86	3.939	
8,900.0	6,715.0	9,165.7	6,897.0	64.6	64.7	114.18	563.8	-2,135.8	444.3	326.5	117.84	3.771	
9,000.0	6,715.0	9,265.7	6,897.0	67.3	67.4	114.19	562.6	-2,235.8	444.1	321.3	122.83	3.616	
9,100.0	6,715.0	9,365.7	6,897.0	70.0	70.1	114.21	561.4	-2,335.8	443.9	316.0	127.84	3.472	
9,200.0	6,715.0	9,465.7	6,897.0	72.8	72.8	114.22	560.3	-2,435.8	443.7	310.8	132.85	3.340	
9,300.0	6,715.0	9,565.7	6,897.0	75.5	75.6	114.23	559.1	-2,535.8	443.4	305.6	137.88	3.216	
9,400.0	6,715.0	9,665.7	6,897.0	78.3	78.3	114.24	557.9	-2,635.8	443.2	300.3	142.91	3.102	
9,500.0	6,715.0	9,765.7	6,897.0	81.0	81.0	114.26	556.7	-2,735.8	443.0	295.1	147.94	2.994	
9,600.0	6,715.0	9,865.7	6,897.0	83.8	83.8	114.27	555.5	-2,835.8	442.8	289.8	152.99	2.894	
9,700.0	6,715.0	9,965.7	6,897.0	86.5	86.5	114.28	554.3	-2,935.8	442.6	284.5	158.03	2.801	
9,800.0	6,715.0	10,065.7	6,897.0	89.3	89.3	114.30	553.1	-3,035.7	442.4	279.3	163.09	2.712	
9,900.0	6,715.0	10,165.7	6,897.0	92.1	92.0	114.31	551.9	-3,135.7	442.1	274.0	168.14	2.630	
10,000.0	6,715.0	10,265.7	6,897.0	94.8	94.8	114.32	550.7	-3,235.7	441.9	268.7	173.20	2.551	
10,100.0	6,715.0	10,365.7	6,897.0	97.6	97.5	114.33	549.6	-3,335.7	441.7	263.4	178.26	2.478	
10,200.0	6,715.0	10,465.7	6,897.0	100.4	100.3	114.35	548.4	-3,435.7	441.5	258.1	183.33	2.408	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	6,715.0	10,565.7	6,897.0	103.2	103.1	114.36	547.2	-3,535.7	441.3	252.9	188.40	2.342	
10,400.0	6,715.0	10,665.7	6,897.0	105.9	105.8	114.37	546.0	-3,635.7	441.0	247.6	193.47	2.280	
10,500.0	6,715.0	10,765.7	6,897.0	108.7	108.6	114.38	544.8	-3,735.7	440.8	242.3	198.54	2.220	
10,600.0	6,715.0	10,865.7	6,897.0	111.5	111.4	114.40	543.6	-3,835.7	440.6	237.0	203.62	2.164	
10,700.0	6,715.0	10,965.7	6,897.0	114.3	114.2	114.41	542.4	-3,935.7	440.4	231.7	208.69	2.110	
10,800.0	6,715.0	11,065.7	6,897.0	117.1	116.9	114.42	541.2	-4,035.7	440.2	226.4	213.77	2.059	
10,900.0	6,715.0	11,165.7	6,897.0	119.9	119.7	114.44	540.0	-4,135.7	439.9	221.1	218.85	2.010	
11,000.0	6,715.0	11,265.7	6,897.0	122.6	122.5	114.45	538.9	-4,235.7	439.7	215.8	223.93	1.964	
11,100.0	6,715.0	11,365.7	6,897.0	125.4	125.3	114.46	537.7	-4,335.7	439.5	210.5	229.01	1.919	
11,200.0	6,715.0	11,465.7	6,897.0	128.2	128.1	114.48	536.5	-4,435.6	439.3	205.2	234.09	1.877	
11,241.2	6,715.0	11,506.9	6,897.0	129.4	129.2	114.48	536.0	-4,476.8	439.2	203.0	236.19	1.860	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (— **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	60.8	0.0	60.8				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	60.8	0.0	60.8	60.6	0.22	270.706	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	60.8	0.0	60.8	60.2	0.67	90.235	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	60.8	0.0	60.8	59.7	1.12	54.141	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	60.8	0.0	60.8	59.3	1.57	38.672	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	60.8	0.0	60.8	58.8	2.02	30.078	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	60.8	0.0	60.8	58.4	2.47	24.610	
700.0	700.0	700.0	700.0	1.5	1.5	0.00	60.8	0.0	60.8	57.9	2.92	20.824	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	60.8	0.0	60.8	57.5	3.37	18.047	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	60.8	0.0	60.8	57.0	3.82	15.924	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	60.8	0.0	60.8	56.6	4.27	14.248	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	60.8	0.0	60.8	56.1	4.72	12.891	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	60.8	0.0	60.8	55.7	5.17	11.770	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.00	60.8	0.0	60.8	55.2	5.62	10.828	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.00	60.8	0.0	60.8	54.8	6.07	10.026	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	0.00	60.8	0.0	60.8	54.3	6.52	9.335	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	0.00	60.8	0.0	60.8	53.9	6.97	8.732	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	0.00	60.8	0.0	60.8	53.4	7.42	8.203	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	0.00	60.8	0.0	60.8	53.0	7.87	7.734	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	0.00	60.8	0.0	60.8	52.5	8.32	7.316	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	0.00	60.8	0.0	60.8	52.1	8.77	6.941	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	0.00	60.8	0.0	60.8	51.6	9.22	6.603	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	0.00	60.8	0.0	60.8	51.2	9.66	6.295	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	0.00	60.8	0.0	60.8	50.7	10.11	6.016	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	0.00	60.8	0.0	60.8	50.3	10.56	5.760	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	0.00	60.8	0.0	60.8	49.8	11.01	5.525	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	0.00	60.8	0.0	60.8	49.4	11.46	5.308	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	0.00	60.8	0.0	60.8	48.9	11.91	5.108	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	0.00	60.8	0.0	60.8	48.5	12.36	4.922	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	0.00	60.8	0.0	60.8	48.0	12.81	4.749	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	0.00	60.8	0.0	60.8	47.6	13.26	4.588	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	0.00	60.8	0.0	60.8	47.1	13.71	4.438	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	0.00	60.8	0.0	60.8	46.7	14.16	4.297	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	0.00	60.8	0.0	60.8	46.2	14.61	4.165	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	0.00	60.8	0.0	60.8	45.8	15.06	4.040	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	0.00	60.8	0.0	60.8	45.3	15.51	3.923	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	0.00	60.8	0.0	60.8	44.9	15.96	3.813	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	0.00	60.8	0.0	60.8	44.4	16.41	3.708	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	0.00	60.8	0.0	60.8	44.0	16.86	3.609	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	0.00	60.8	0.0	60.8	43.5	17.31	3.516	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	0.00	60.8	0.0	60.8	43.1	17.76	3.427	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	0.00	60.8	0.0	60.8	42.6	18.21	3.342	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	0.00	60.8	0.0	60.8	42.2	18.66	3.262	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	0.00	60.8	0.0	60.8	41.7	19.11	3.185	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	0.00	60.8	0.0	60.8	41.3	19.55	3.112	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	0.00	60.8	0.0	60.8	40.8	20.00	3.042	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	0.00	60.8	0.0	60.8	40.4	20.45	2.975	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	0.00	60.8	0.0	60.8	39.9	20.90	2.911	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	0.00	60.8	0.0	60.8	39.5	21.35	2.850	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	0.00	60.8	0.0	60.8	39.0	21.80	2.791	CC, ES
5,000.0	5,000.0	4,997.0	4,997.0	11.1	11.1	0.84	63.1	0.9	63.2	41.0	22.24	2.842	
5,100.0	5,100.0	5,093.6	5,093.3	11.4	11.3	3.02	69.9	3.7	70.4	47.7	22.68	3.102	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,200.0	5,189.2	5,188.1	11.6	11.5	5.78	81.1	8.2	82.4	59.3	23.11	3.564	
5,300.0	5,300.0	5,283.3	5,280.7	11.8	11.8	8.50	96.4	14.4	99.3	75.8	23.55	4.217	
5,400.0	5,400.0	5,375.6	5,370.7	12.0	12.0	10.85	115.4	22.1	121.1	97.1	24.00	5.048	
5,500.0	5,500.0	5,465.7	5,457.4	12.2	12.2	12.77	137.9	31.2	147.7	123.2	24.45	6.039	
5,600.0	5,600.0	5,553.2	5,540.5	12.5	12.5	14.27	163.4	41.6	178.7	153.8	24.93	7.171	
5,700.0	5,699.9	5,638.7	5,620.4	12.7	12.7	-53.07	191.6	53.0	212.2	187.0	25.21	8.419	
5,800.0	5,798.4	5,723.6	5,698.3	12.9	13.0	-52.97	222.9	65.7	242.5	217.0	25.46	9.525	
5,900.0	5,893.6	5,807.2	5,773.4	13.1	13.4	-54.67	256.8	79.4	269.6	243.9	25.64	10.513	
6,000.0	5,983.8	5,888.8	5,845.2	13.4	13.7	-57.55	292.8	94.0	294.6	268.7	25.89	11.380	
6,100.0	6,070.1	5,978.4	5,922.7	13.8	14.2	-62.72	334.4	110.9	320.7	294.0	26.71	12.006	
6,200.0	6,160.2	6,072.2	6,003.9	14.2	14.7	-57.16	378.0	128.6	349.2	321.6	27.60	12.651	
6,300.0	6,256.6	6,167.9	6,086.6	14.4	15.3	-22.34	422.5	146.6	377.3	349.1	28.22	13.370	
6,400.0	6,354.3	6,260.4	6,166.7	14.6	15.8	34.16	465.5	164.1	404.3	375.6	28.64	14.117	
6,500.0	6,448.3	6,345.2	6,240.1	14.8	16.4	58.81	505.0	180.1	432.5	403.5	28.97	14.930	
6,600.0	6,533.9	6,432.7	6,316.5	14.9	16.9	69.83	546.0	190.3	464.8	435.4	29.34	15.841	
6,700.0	6,606.6	6,537.5	6,408.3	15.1	17.5	76.57	595.0	180.0	499.9	470.0	29.90	16.718	
6,800.0	6,662.7	6,671.3	6,518.1	15.7	18.0	82.04	653.2	131.9	534.8	504.0	30.80	17.361	
6,900.0	6,699.3	6,854.3	6,638.2	16.8	18.7	87.08	716.1	10.8	563.7	531.4	32.36	17.423	
7,000.0	6,714.6	7,096.7	6,713.4	18.1	20.2	89.96	753.8	-213.3	577.6	541.9	35.76	16.154	
7,100.0	6,715.0	7,221.2	6,715.0	19.7	21.6	90.00	753.2	-337.7	577.6	538.5	39.18	14.744	
7,200.0	6,715.0	7,321.2	6,715.0	21.5	23.1	90.00	752.0	-437.7	577.5	534.6	42.82	13.486	
7,300.0	6,715.0	7,421.2	6,715.0	23.6	24.9	90.00	750.9	-537.7	577.3	530.4	46.85	12.321	
7,400.0	6,715.0	7,521.2	6,715.0	25.8	26.9	90.00	749.7	-637.7	577.1	525.9	51.18	11.275	
7,500.0	6,715.0	7,621.2	6,715.0	28.1	29.0	90.00	748.6	-737.7	576.9	521.1	55.74	10.349	
7,600.0	6,715.0	7,721.2	6,715.0	30.4	31.3	90.00	747.5	-837.7	576.7	516.2	60.48	9.534	
7,700.0	6,715.0	7,821.2	6,715.0	32.9	33.6	90.00	746.3	-937.7	576.5	511.1	65.36	8.820	
7,800.0	6,715.0	7,921.2	6,715.0	35.4	36.0	90.00	745.2	-1,037.6	576.3	505.9	70.35	8.192	
7,900.0	6,715.0	8,021.2	6,715.0	37.9	38.5	90.00	744.0	-1,137.6	576.1	500.6	75.43	7.638	
8,000.0	6,715.0	8,121.2	6,715.0	40.5	41.0	90.00	742.9	-1,237.6	575.9	495.3	80.58	7.147	
8,100.0	6,715.0	8,221.2	6,715.0	43.1	43.6	90.00	741.7	-1,337.6	575.7	489.9	85.78	6.711	
8,200.0	6,715.0	8,321.2	6,715.0	45.7	46.1	90.00	740.6	-1,437.6	575.5	484.4	91.04	6.321	
8,300.0	6,715.0	8,421.2	6,715.0	48.4	48.7	90.00	739.4	-1,537.6	575.3	479.0	96.34	5.972	
8,400.0	6,715.0	8,521.2	6,715.0	51.1	51.4	90.00	738.3	-1,637.6	575.1	473.4	101.67	5.657	
8,500.0	6,715.0	8,621.2	6,715.0	53.7	54.0	90.00	737.2	-1,737.6	574.9	467.9	107.03	5.371	
8,600.0	6,715.0	8,721.2	6,715.0	56.4	56.7	90.00	736.0	-1,837.6	574.7	462.3	112.41	5.112	
8,700.0	6,715.0	8,821.2	6,715.0	59.1	59.3	90.00	734.9	-1,937.6	574.5	456.7	117.82	4.876	
8,800.0	6,715.0	8,921.2	6,715.0	61.9	62.0	90.00	733.7	-2,037.6	574.3	451.1	123.25	4.660	
8,900.0	6,715.0	9,021.2	6,715.0	64.6	64.7	90.00	732.6	-2,137.6	574.1	445.4	128.69	4.461	
9,000.0	6,715.0	9,121.2	6,715.0	67.3	67.4	90.00	731.4	-2,237.6	573.9	439.8	134.15	4.278	
9,100.0	6,715.0	9,221.2	6,715.0	70.0	70.1	90.00	730.3	-2,337.6	573.7	434.1	139.62	4.109	
9,200.0	6,715.0	9,321.2	6,715.0	72.8	72.8	90.00	729.1	-2,437.5	573.5	428.4	145.10	3.953	
9,300.0	6,715.0	9,421.2	6,715.0	75.5	75.6	90.00	728.0	-2,537.5	573.3	422.7	150.59	3.807	
9,400.0	6,715.0	9,521.2	6,715.0	78.3	78.3	90.00	726.9	-2,637.5	573.1	417.0	156.09	3.672	
9,500.0	6,715.0	9,621.2	6,715.0	81.0	81.0	90.00	725.7	-2,737.5	572.9	411.3	161.59	3.546	
9,600.0	6,715.0	9,721.2	6,715.0	83.8	83.8	90.00	724.6	-2,837.5	572.7	405.6	167.11	3.427	
9,700.0	6,715.0	9,821.2	6,715.0	86.5	86.5	90.00	723.4	-2,937.5	572.5	399.9	172.63	3.317	
9,800.0	6,715.0	9,921.2	6,715.0	89.3	89.3	90.00	722.3	-3,037.5	572.3	394.2	178.16	3.213	
9,900.0	6,715.0	10,021.2	6,715.0	92.1	92.0	90.00	721.1	-3,137.5	572.2	388.5	183.69	3.115	
10,000.0	6,715.0	10,121.2	6,715.0	94.8	94.8	90.00	720.0	-3,237.5	572.0	382.7	189.23	3.023	
10,100.0	6,715.0	10,221.2	6,715.0	97.6	97.5	90.00	718.8	-3,337.5	571.8	377.0	194.77	2.936	
10,200.0	6,715.0	10,321.2	6,715.0	100.4	100.3	90.00	717.7	-3,437.5	571.6	371.2	200.31	2.853	
10,300.0	6,715.0	10,421.2	6,715.0	103.2	103.1	90.00	716.6	-3,537.5	571.4	365.5	205.86	2.775	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

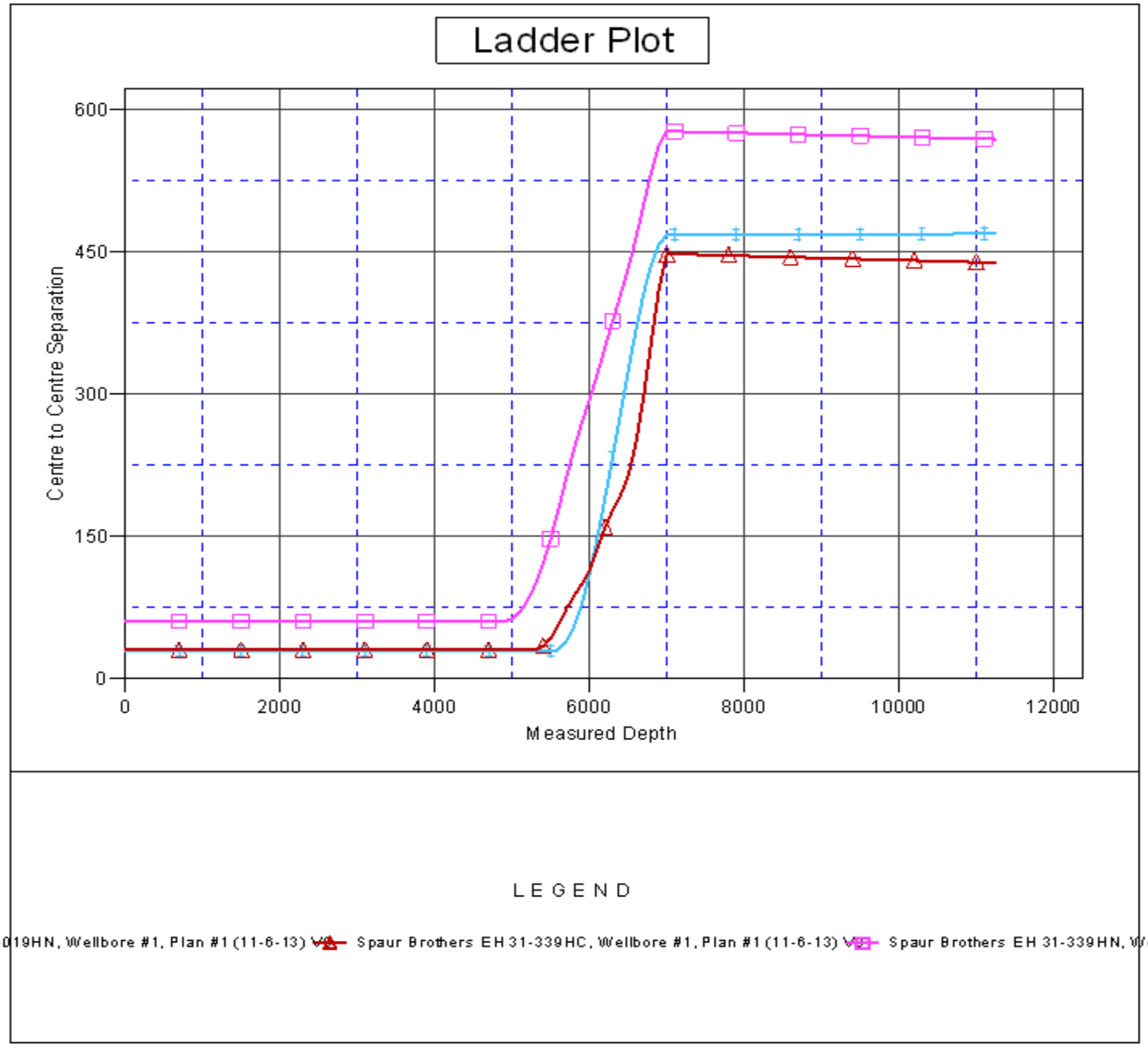
Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,715.0	10,521.2	6,715.0	105.9	105.8	90.00	715.4	-3,637.5	571.2	359.8	211.42	2.702	
10,500.0	6,715.0	10,621.2	6,715.0	108.7	108.6	90.00	714.3	-3,737.5	571.0	354.0	216.97	2.632	
10,600.0	6,715.0	10,721.2	6,715.0	111.5	111.4	90.00	713.1	-3,837.5	570.8	348.2	222.53	2.565	
10,700.0	6,715.0	10,821.2	6,715.0	114.3	114.1	90.00	712.0	-3,937.4	570.6	342.5	228.10	2.501	
10,800.0	6,715.0	10,921.2	6,715.0	117.1	116.9	90.00	710.8	-4,037.4	570.4	336.7	233.66	2.441	
10,900.0	6,715.0	11,021.2	6,715.0	119.9	119.7	90.00	709.7	-4,137.4	570.2	331.0	239.23	2.383	
11,000.0	6,715.0	11,121.2	6,715.0	122.6	122.5	90.00	708.5	-4,237.4	570.0	325.2	244.80	2.328	
11,100.0	6,715.0	11,221.2	6,715.0	125.4	125.3	90.00	707.4	-4,337.4	569.8	319.4	250.37	2.276	
11,200.0	6,715.0	11,321.2	6,715.0	128.2	128.0	90.00	706.3	-4,437.4	569.6	313.7	255.94	2.225	
11,241.2	6,715.0	11,362.4	6,715.0	129.4	129.2	90.00	705.8	-4,478.6	569.5	311.3	258.24	2.205 SF	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4752.5ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Spaur Brothers EH 31-379HN
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°



Company:	Great Western	**Local Co-ordinate Reference:**	Well Spaur Brothers EH 31-379HN
Project:	SEC.31-T7N-R63W	**TVD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Reference Site:	Spaur Brothers South Pad Sec.31-T7N-R63W	**MD Reference:**	WELL @ 4752.5ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Spaur Brothers EH 31-379HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
Reference Design:	Plan #1 (11-6-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4752.5ft (RKB - 16.5')	Coordinates are relative to: Spaur Brothers EH 31-379HN
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.66°