Great Western

Well Name: **Taoka KF 01-022HN**

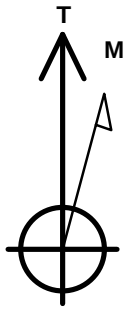
Surface Location: Taoka West Pad Sec.1-T1N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4959.7

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1270989.66	3247165.68	40.073878	-104.616778	

RKB - 16.5' WELL @ 4976.2ft (RKB - 16.5')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 240'FSL & 1354'FWL	1.0	0.0	0.0	Point
BHL 470'FNL & 470'FWL	6966.2	4496.9	-844.7	Point
Entry Pt. 460'FSL & 470'FWL	6966.2	219.7	-882.4	Point



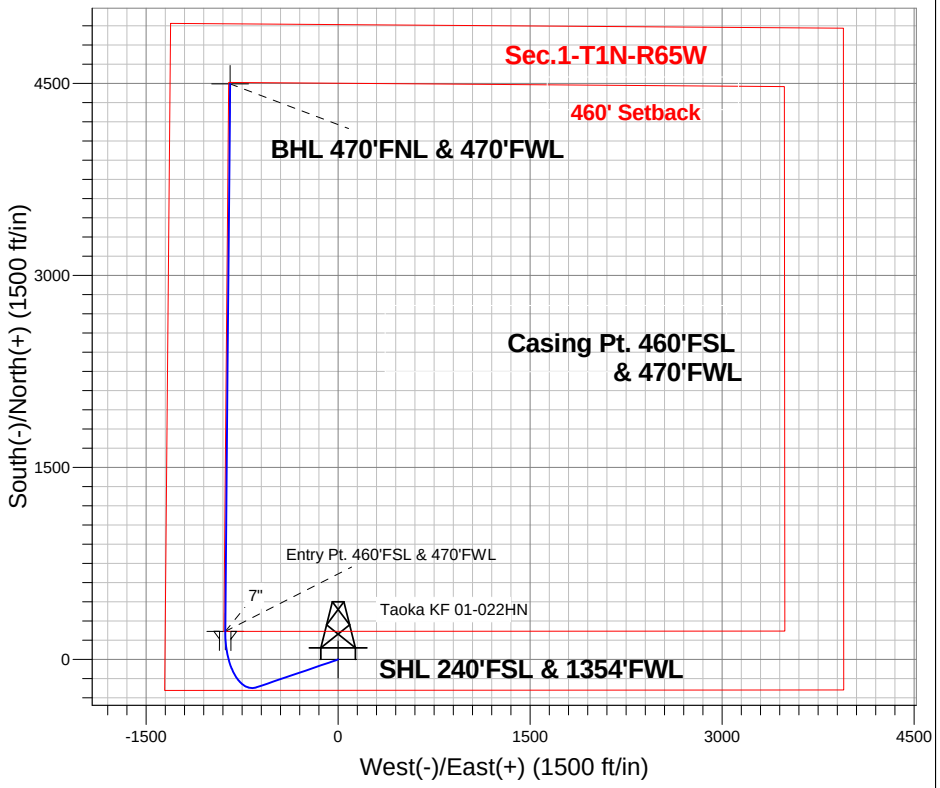
Azimuths to True North
Magnetic North: 8.43°

Magnetic Field
Strength: 52719.6snT
Dip Angle: 66.73°
Date: 11/15/2013
Model: IGRF2010

Taoka West Pad Sec.1-T1N-R65W
Taoka KF 01-022HN
Plan #1 (11-15-13)
12:36, November 18 2013

ANNOTATIONS

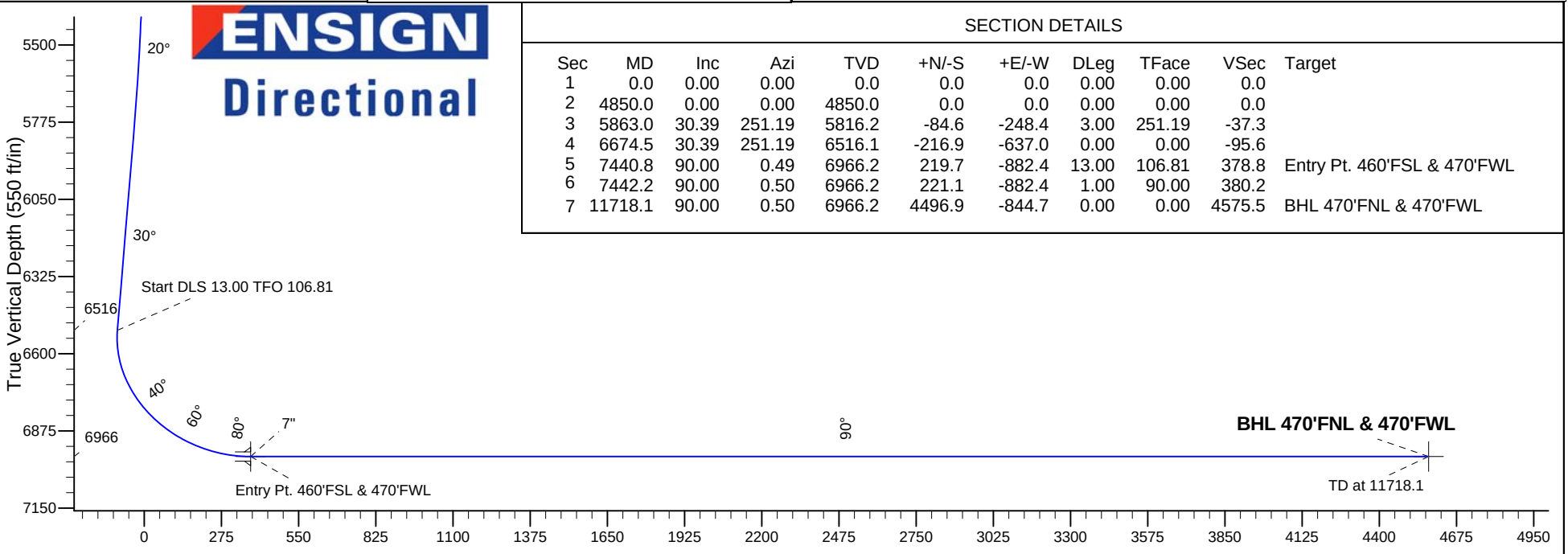
TVD	MD	Annotation
4850.0	4850.0	KOP - Start Build 3.00
6516.2	6674.5	Start DLS 13.00 TFO 106.81
6966.2	11718.1	TD at 11718.1



ENSIGN Directional

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	4850.0	0.00	0.00	4850.0	0.0	0.0	0.00	0.00	0.0	
3	5863.0	30.39	251.19	5816.2	-84.6	-248.4	3.00	251.19	-37.3	
4	6674.5	30.39	251.19	6516.1	-216.9	-637.0	0.00	0.00	-95.6	
5	7440.8	90.00	0.49	6966.2	219.7	-882.4	13.00	106.81	378.8	Entry Pt. 460'FSL & 470'FWL
6	7442.2	90.00	0.50	6966.2	221.1	-882.4	1.00	90.00	380.2	
7	11718.1	90.00	0.50	6966.2	4496.9	-844.7	0.00	0.00	4575.5	BHL 470'FNL & 470'FWL



Great Western

SEC.1-T1N-R65W
Taoka West Pad Sec.1-T1N-R65W
Taoka KF 01-022HN

Wellbore #1

Plan: Plan #1 (11-15-13)

Standard Planning Report

18 November, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Company:	Great Western	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Project:	SEC.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site:	Taoka West Pad Sec.1-T1N-R65W	**North Reference:**	True
Well:	Taoka KF 01-022HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-13)		

Project SEC.1-T1N-R65W, Weld County, CO

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 Taoka West Pad Sec.1-T1N-R65W

Site Position:		**Northing:**	1,270,989.38 ft	**Latitude:**	40.073878
From:	Lat/Long	**Easting:**	3,247,135.46 ft	**Longitude:**	-104.616886
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.57 °

Well Taoka KF 01-022HN

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,270,989.66 ft	**Latitude:**	40.073878
	+E/-W	30.2 ft	**Easting:**	3,247,165.68 ft	**Longitude:**	-104.616778
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,959.7 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/15/2013	8.43	66.73	52,720

Design Plan #1 (11-15-13)

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	349.36

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	
4,850.0	0.00	0.00	4,850.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,863.0	30.39	251.19	5,816.2	-84.6	-248.4	3.00	3.00	0.00	251.19	
6,674.5	30.39	251.19	6,516.1	-216.9	-637.0	0.00	0.00	0.00	0.00	
7,440.8	90.00	0.49	6,966.2	219.7	-882.4	13.00	7.78	14.26	106.81	Entry Pt. 460'FSL &
7,442.2	90.00	0.50	6,966.2	221.1	-882.4	1.00	0.00	1.00	90.00	
11,718.1	90.00	0.50	6,966.2	4,496.9	-844.7	0.00	0.00	0.00	0.00	BHL 470'FNL & 47(

Database:	Landmark	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Company:	Great Western	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Project:	SEC.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site:	Taoka West Pad Sec.1-T1N-R65W	**North Reference:**	True
Well:	Taoka KF 01-022HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-13)		

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 240'FSL & 1354'FWL									
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
4,850.0	0.00	0.00	4,850.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 3.00									
4,900.0	1.50	251.19	4,900.0	-0.2	-0.6	-0.1	3.00	3.00	0.00

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Site:	Taoka West Pad Sec.1-T1N-R65W	**North Reference:**	True
Well:	Taoka KF 01-022HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-13)		

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)
5,000.0	4.50	251.19	4,999.8	-1.9	-5.6	-0.8	3.00	3.00	0.00
5,100.0	7.50	251.19	5,099.3	-5.3	-15.5	-2.3	3.00	3.00	0.00
5,200.0	10.50	251.19	5,198.0	-10.3	-30.3	-4.5	3.00	3.00	0.00
5,300.0	13.50	251.19	5,295.8	-17.0	-50.0	-7.5	3.00	3.00	0.00
5,400.0	16.50	251.19	5,392.4	-25.4	-74.4	-11.2	3.00	3.00	0.00
5,500.0	19.50	251.19	5,487.5	-35.3	-103.7	-15.6	3.00	3.00	0.00
5,600.0	22.50	251.19	5,580.9	-46.9	-137.6	-20.7	3.00	3.00	0.00
5,700.0	25.50	251.19	5,672.2	-60.0	-176.1	-26.4	3.00	3.00	0.00
5,800.0	28.50	251.19	5,761.3	-74.6	-219.1	-32.9	3.00	3.00	0.00
5,863.0	30.39	251.19	5,816.2	-84.6	-248.4	-37.3	3.00	3.00	0.00
5,900.0	30.39	251.19	5,848.1	-90.6	-266.1	-39.9	0.00	0.00	0.00
6,000.0	30.39	251.19	5,934.3	-106.9	-314.0	-47.1	0.00	0.00	0.00
6,100.0	30.39	251.19	6,020.6	-123.3	-361.9	-54.3	0.00	0.00	0.00
6,200.0	30.39	251.19	6,106.9	-139.6	-409.8	-61.5	0.00	0.00	0.00
6,300.0	30.39	251.19	6,193.1	-155.9	-457.7	-68.7	0.00	0.00	0.00
6,400.0	30.39	251.19	6,279.4	-172.2	-505.6	-75.9	0.00	0.00	0.00
6,500.0	30.39	251.19	6,365.6	-188.5	-553.4	-83.1	0.00	0.00	0.00
6,600.0	30.39	251.19	6,451.9	-204.8	-601.3	-90.3	0.00	0.00	0.00
6,674.5	30.39	251.19	6,516.2	-216.9	-637.0	-95.6	0.00	0.00	0.00
Start DLS 13.00 TFO 106.81									
6,700.0	29.59	257.64	6,538.3	-220.4	-649.3	-96.7	13.02	-3.16	25.29
6,800.0	29.66	284.12	6,625.6	-219.6	-697.6	-87.1	13.00	0.08	26.48
6,900.0	34.54	306.96	6,710.6	-196.4	-744.4	-55.6	13.00	4.88	22.84
7,000.0	42.58	323.46	6,788.9	-152.0	-787.4	-4.0	13.00	8.04	16.50
7,100.0	52.33	335.19	6,856.6	-88.6	-824.3	65.1	13.00	9.75	11.74
7,200.0	62.96	344.08	6,910.1	-9.5	-853.3	148.2	13.00	10.63	8.89
7,300.0	74.05	351.39	6,946.7	81.2	-872.8	240.9	13.00	11.09	7.31
7,400.0	85.36	357.92	6,964.5	179.0	-881.8	338.7	13.00	11.31	6.53
7,440.8	90.00	0.49	6,966.2	219.7	-882.4	378.8	13.00	11.37	6.31
7" - Entry Pt. 460'FSL & 470'FWL									
7,442.2	90.00	0.50	6,966.2	221.1	-882.4	380.2	1.00	0.00	1.00
7,500.0	90.00	0.50	6,966.2	278.9	-881.9	436.9	0.00	0.00	0.00
7,600.0	90.00	0.50	6,966.2	378.9	-881.0	535.0	0.00	0.00	0.00
7,700.0	90.00	0.50	6,966.2	478.9	-880.1	633.2	0.00	0.00	0.00
7,800.0	90.00	0.50	6,966.2	578.9	-879.2	731.3	0.00	0.00	0.00
7,900.0	90.00	0.50	6,966.2	678.9	-878.4	829.4	0.00	0.00	0.00
8,000.0	90.00	0.50	6,966.2	778.9	-877.5	927.5	0.00	0.00	0.00
8,100.0	90.00	0.50	6,966.2	878.9	-876.6	1,025.6	0.00	0.00	0.00
8,200.0	90.00	0.50	6,966.2	978.9	-875.7	1,123.7	0.00	0.00	0.00
8,300.0	90.00	0.50	6,966.2	1,078.9	-874.8	1,221.8	0.00	0.00	0.00
8,400.0	90.00	0.50	6,966.2	1,178.9	-874.0	1,320.0	0.00	0.00	0.00
8,500.0	90.00	0.50	6,966.2	1,278.9	-873.1	1,418.1	0.00	0.00	0.00
8,600.0	90.00	0.50	6,966.2	1,378.9	-872.2	1,516.2	0.00	0.00	0.00
8,700.0	90.00	0.50	6,966.2	1,478.9	-871.3	1,614.3	0.00	0.00	0.00
8,800.0	90.00	0.50	6,966.2	1,578.9	-870.4	1,712.4	0.00	0.00	0.00
8,900.0	90.00	0.50	6,966.2	1,678.9	-869.6	1,810.5	0.00	0.00	0.00
9,000.0	90.00	0.50	6,966.2	1,778.8	-868.7	1,908.6	0.00	0.00	0.00
9,100.0	90.00	0.50	6,966.2	1,878.8	-867.8	2,006.8	0.00	0.00	0.00
9,200.0	90.00	0.50	6,966.2	1,978.8	-866.9	2,104.9	0.00	0.00	0.00
9,300.0	90.00	0.50	6,966.2	2,078.8	-866.0	2,203.0	0.00	0.00	0.00
9,400.0	90.00	0.50	6,966.2	2,178.8	-865.2	2,301.1	0.00	0.00	0.00
9,500.0	90.00	0.50	6,966.2	2,278.8	-864.3	2,399.2	0.00	0.00	0.00
9,600.0	90.00	0.50	6,966.2	2,378.8	-863.4	2,497.3	0.00	0.00	0.00
9,700.0	90.00	0.50	6,966.2	2,478.8	-862.5	2,595.4	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Company:	Great Western	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Project:	SEC.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site:	Taoka West Pad Sec.1-T1N-R65W	**North Reference:**	True
Well:	Taoka KF 01-022HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-15-13)		

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)
9,800.0	90.00	0.50	6,966.2	2,578.8	-861.6	2,693.6	0.00	0.00	0.00
9,900.0	90.00	0.50	6,966.2	2,678.8	-860.8	2,791.7	0.00	0.00	0.00
10,000.0	90.00	0.50	6,966.2	2,778.8	-859.9	2,889.8	0.00	0.00	0.00
10,100.0	90.00	0.50	6,966.2	2,878.8	-859.0	2,987.9	0.00	0.00	0.00
10,200.0	90.00	0.50	6,966.2	2,978.8	-858.1	3,086.0	0.00	0.00	0.00
10,300.0	90.00	0.50	6,966.2	3,078.8	-857.2	3,184.1	0.00	0.00	0.00
10,400.0	90.00	0.50	6,966.2	3,178.8	-856.3	3,282.3	0.00	0.00	0.00
10,500.0	90.00	0.50	6,966.2	3,278.8	-855.5	3,380.4	0.00	0.00	0.00
10,600.0	90.00	0.50	6,966.2	3,378.8	-854.6	3,478.5	0.00	0.00	0.00
10,700.0	90.00	0.50	6,966.2	3,478.8	-853.7	3,576.6	0.00	0.00	0.00
10,800.0	90.00	0.50	6,966.2	3,578.8	-852.8	3,674.7	0.00	0.00	0.00
10,900.0	90.00	0.50	6,966.2	3,678.8	-851.9	3,772.8	0.00	0.00	0.00
11,000.0	90.00	0.50	6,966.2	3,778.8	-851.1	3,870.9	0.00	0.00	0.00
11,100.0	90.00	0.50	6,966.2	3,878.8	-850.2	3,969.1	0.00	0.00	0.00
11,200.0	90.00	0.50	6,966.2	3,978.8	-849.3	4,067.2	0.00	0.00	0.00
11,300.0	90.00	0.50	6,966.2	4,078.8	-848.4	4,165.3	0.00	0.00	0.00
11,400.0	90.00	0.50	6,966.2	4,178.8	-847.5	4,263.4	0.00	0.00	0.00
11,500.0	90.00	0.50	6,966.2	4,278.8	-846.7	4,361.5	0.00	0.00	0.00
11,600.0	90.00	0.50	6,966.2	4,378.7	-845.8	4,459.6	0.00	0.00	0.00
11,700.0	90.00	0.50	6,966.2	4,478.7	-844.9	4,557.7	0.00	0.00	0.00
11,718.1	90.00	0.50	6,966.2	4,496.8	-844.7	4,575.5	0.00	0.00	0.00
TD at 11718.1 - BHL 470'FNL & 470'FWL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,440.8	6,966.2	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,850.0	4,850.0	0.0	0.0	KOP - Start Build 3.00
6,674.5	6,516.2	-216.9	-637.0	Start DLS 13.00 TFO 106.81
11,718.1	6,966.2	4,496.8	-844.7	TD at 11718.1

ENSIGN Directional

Great Western

SEC.1-T1N-R65W
Taoka West Pad Sec.1-T1N-R65W
Taoka KF 01-022HN

Wellbore #1
Plan #1 (11-15-13)

Anticollision Report

18 November, 2013

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (11-15-13)

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** 11/18/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,718.1	Plan #1 (11-15-13) (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
Taoka West Pad Sec.1-T1N-R65W						
Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)	4,133.4	4,133.4	30.2	11.9	1.647	CC, ES, SF
Taoka KF 01-023HC - Wellbore #1 - Plan #1 (11-15-13)	4,800.0	4,800.0	29.7	8.3	1.389	Level 3, CC
Taoka KF 01-023HC - Wellbore #1 - Plan #1 (11-15-13)	4,827.9	4,827.9	29.8	8.3	1.386	Level 3, ES, SF
Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)	4,800.0	4,800.0	59.9	38.5	2.805	CC
Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)	4,827.8	4,827.8	60.0	38.5	2.793	ES
Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)	4,900.0	4,900.0	60.5	38.7	2.777	SF
Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)	4,800.0	4,800.0	89.6	68.2	4.194	CC
Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)	4,827.8	4,827.8	89.7	68.2	4.175	ES
Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)	4,900.0	4,900.0	90.2	68.4	4.139	SF

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)

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	-89.98	0.0	-30.2	30.2				
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-30.2	30.2	30.0	0.22	134.473	
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-30.2	30.2	29.6	0.67	44.824	
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-30.2	30.2	29.1	1.12	26.895	
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-30.2	30.2	28.7	1.57	19.210	
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-30.2	30.2	28.2	2.02	14.941	
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-30.2	30.2	27.8	2.47	12.225	
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-30.2	30.2	27.3	2.92	10.344	
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-30.2	30.2	26.9	3.37	8.965	
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-30.2	30.2	26.4	3.82	7.910	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-30.2	30.2	26.0	4.27	7.078	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-30.2	30.2	25.5	4.72	6.403	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-30.2	30.2	25.1	5.17	5.847	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.98	0.0	-30.2	30.2	24.6	5.62	5.379	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.98	0.0	-30.2	30.2	24.2	6.07	4.980	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.98	0.0	-30.2	30.2	23.7	6.52	4.637	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.98	0.0	-30.2	30.2	23.3	6.97	4.338	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.98	0.0	-30.2	30.2	22.8	7.42	4.075	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13) — **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
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-89.98	0.0	-30.2	30.2	22.4	7.87	3.842	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-89.98	0.0	-30.2	30.2	21.9	8.32	3.634	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-89.98	0.0	-30.2	30.2	21.5	8.77	3.448	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-89.98	0.0	-30.2	30.2	21.0	9.22	3.280	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-89.98	0.0	-30.2	30.2	20.6	9.66	3.127	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-89.98	0.0	-30.2	30.2	20.1	10.11	2.988	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-89.98	0.0	-30.2	30.2	19.7	10.56	2.861	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-89.98	0.0	-30.2	30.2	19.2	11.01	2.744	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-89.98	0.0	-30.2	30.2	18.8	11.46	2.637	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-89.98	0.0	-30.2	30.2	18.3	11.91	2.537	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-89.98	0.0	-30.2	30.2	17.9	12.36	2.445	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-89.98	0.0	-30.2	30.2	17.4	12.81	2.359	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-89.98	0.0	-30.2	30.2	17.0	13.26	2.279	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-89.98	0.0	-30.2	30.2	16.5	13.71	2.204	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-89.98	0.0	-30.2	30.2	16.1	14.16	2.134	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-89.98	0.0	-30.2	30.2	15.6	14.61	2.069	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-89.98	0.0	-30.2	30.2	15.2	15.06	2.007	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-89.98	0.0	-30.2	30.2	14.7	15.51	1.949	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-89.98	0.0	-30.2	30.2	14.3	15.96	1.894	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-89.98	0.0	-30.2	30.2	13.8	16.41	1.842	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-89.98	0.0	-30.2	30.2	13.4	16.86	1.793	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-89.98	0.0	-30.2	30.2	12.9	17.31	1.746	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-89.98	0.0	-30.2	30.2	12.5	17.76	1.702	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-89.98	0.0	-30.2	30.2	12.0	18.21	1.660	
4,133.4	4,133.4	4,133.4	4,133.4	9.2	9.2	-89.98	0.0	-30.2	30.2	11.9	18.36	1.647	CC, ES, SF
4,200.0	4,200.0	4,199.2	4,199.2	9.3	9.3	-90.21	-0.1	-30.8	30.9	12.2	18.65	1.655	
4,300.0	4,300.0	4,297.4	4,297.3	9.6	9.5	-91.81	-1.1	-35.8	35.9	16.9	19.06	1.884	
4,400.0	4,400.0	4,394.8	4,394.2	9.8	9.7	-93.93	-3.1	-45.6	46.1	26.6	19.48	2.364	
4,500.0	4,500.0	4,491.0	4,489.2	10.0	9.9	-95.79	-6.1	-60.0	61.2	41.3	19.91	3.076	
4,600.0	4,600.0	4,585.4	4,581.7	10.2	10.1	-97.18	-9.9	-78.6	81.4	61.0	20.35	3.998	
4,700.0	4,700.0	4,677.7	4,671.1	10.5	10.4	-98.17	-14.5	-101.2	106.3	85.5	20.81	5.107	
4,800.0	4,800.0	4,767.6	4,756.9	10.7	10.6	-98.88	-19.9	-127.2	135.8	114.5	21.29	6.377	
4,900.0	4,900.0	4,854.9	4,839.0	10.9	10.9	9.37	-25.8	-156.2	169.1	147.6	21.49	7.868	
5,000.0	4,999.8	4,940.9	4,918.5	11.1	11.3	9.05	-32.4	-188.4	202.4	180.6	21.81	9.281	
5,100.0	5,099.3	5,025.7	4,995.3	11.3	11.7	8.94	-39.6	-223.5	235.1	213.0	22.08	10.644	
5,200.0	5,198.0	5,109.4	5,069.6	11.5	12.1	8.95	-47.4	-261.4	267.0	244.7	22.32	11.964	
5,300.0	5,295.8	5,196.0	5,144.6	11.7	12.7	9.07	-56.0	-303.7	298.0	275.5	22.52	13.232	
5,400.0	5,392.4	5,292.3	5,227.5	12.0	13.4	9.32	-65.9	-351.6	325.0	302.3	22.71	14.313	
5,500.0	5,487.5	5,389.8	5,311.5	12.2	14.1	9.68	-75.8	-400.1	347.1	324.2	22.88	15.172	
5,600.0	5,580.9	5,488.2	5,396.3	12.6	14.9	10.16	-85.8	-449.1	364.2	341.1	23.03	15.811	
5,700.0	5,672.2	5,587.4	5,481.7	13.0	15.7	10.75	-96.0	-498.5	376.1	353.0	23.18	16.231	
5,800.0	5,761.3	5,687.0	5,567.5	13.5	16.6	11.49	-106.1	-548.0	383.1	359.8	23.32	16.429	
5,900.0	5,848.1	5,786.8	5,653.5	14.1	17.5	12.38	-116.3	-597.7	385.3	361.7	23.63	16.302	
6,000.0	5,934.3	5,886.6	5,739.5	14.7	18.4	13.31	-126.5	-647.3	386.6	362.4	24.26	15.935	
6,100.0	6,020.6	5,986.4	5,825.4	15.4	19.4	14.23	-136.7	-697.0	388.0	363.1	24.93	15.564	
6,200.0	6,106.9	6,086.2	5,911.4	16.2	20.4	15.14	-146.8	-746.7	389.6	363.9	25.65	15.190	
6,300.0	6,193.1	6,186.0	5,997.4	16.9	21.3	16.04	-157.0	-796.3	391.2	364.8	26.40	14.815	
6,400.0	6,279.4	6,285.8	6,083.3	17.8	22.4	16.94	-167.2	-846.0	392.9	365.7	27.21	14.440	
6,500.0	6,365.6	6,385.6	6,169.3	18.6	23.4	17.83	-177.4	-895.6	394.7	366.6	28.06	14.065	
6,600.0	6,451.9	6,485.4	6,255.2	19.5	24.4	18.71	-187.5	-945.3	396.6	367.6	28.96	13.692	
6,700.0	6,538.3	6,585.2	6,341.2	20.4	25.4	13.96	-197.7	-995.0	398.5	368.7	29.88	13.337	
6,800.0	6,625.6	6,684.4	6,426.7	21.1	26.5	-10.54	-207.8	-1,044.3	399.9	369.6	30.26	13.213	

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 Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)

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
6,900.0	6,710.6	6,778.5	6,507.8	21.8	27.4	-34.09	-217.4	-1,091.2	402.2	371.9	30.37	13.246	
7,000.0	6,788.9	6,871.7	6,588.2	22.4	28.4	-52.72	-224.0	-1,137.6	410.0	379.1	30.87	13.280	
7,100.0	6,856.6	6,982.5	6,683.1	22.9	29.3	-66.74	-208.5	-1,192.2	424.0	392.2	31.84	13.316	
7,200.0	6,910.1	7,116.7	6,789.1	23.2	30.3	-77.46	-154.3	-1,252.8	441.9	409.0	32.82	13.461	
7,300.0	6,946.7	7,283.4	6,893.6	23.5	31.2	-85.44	-40.2	-1,312.1	458.9	425.4	33.50	13.698	
7,400.0	6,964.5	7,483.7	6,960.5	23.8	31.8	-89.70	143.1	-1,349.1	468.7	434.6	34.09	13.747	
7,500.0	6,966.2	7,624.1	6,966.2	24.0	32.0	-90.00	283.1	-1,351.1	469.3	434.2	35.12	13.361	
7,600.0	6,966.2	7,724.1	6,966.2	24.4	32.3	-90.00	383.1	-1,350.2	469.3	432.8	36.52	12.850	
7,700.0	6,966.2	7,824.1	6,966.2	24.9	32.6	-90.00	483.1	-1,349.4	469.3	431.0	38.25	12.269	
7,800.0	6,966.2	7,924.1	6,966.2	25.6	33.0	-90.00	583.1	-1,348.5	469.2	429.0	40.27	11.653	
7,900.0	6,966.2	8,024.1	6,966.2	26.3	33.5	-90.00	683.1	-1,347.6	469.2	426.7	42.54	11.031	
8,000.0	6,966.2	8,124.1	6,966.2	27.3	34.2	-90.00	783.1	-1,346.7	469.2	424.2	45.02	10.423	
8,100.0	6,966.2	8,224.1	6,966.2	28.3	34.9	-90.00	883.1	-1,345.8	469.2	421.5	47.68	9.842	
8,200.0	6,966.2	8,324.1	6,966.2	29.4	35.7	-90.00	983.1	-1,344.9	469.2	418.7	50.48	9.294	
8,300.0	6,966.2	8,424.1	6,966.2	30.6	36.6	-90.00	1,083.1	-1,344.0	469.2	415.8	53.42	8.783	
8,400.0	6,966.2	8,524.1	6,966.2	31.9	37.6	-90.00	1,183.1	-1,343.1	469.2	412.7	56.46	8.309	
8,500.0	6,966.2	8,624.1	6,966.2	33.3	38.7	-90.00	1,283.1	-1,342.2	469.1	409.6	59.60	7.872	
8,600.0	6,966.2	8,724.1	6,966.2	34.7	39.8	-90.00	1,383.1	-1,341.3	469.1	406.3	62.81	7.469	
8,700.0	6,966.2	8,824.1	6,966.2	36.2	41.0	-90.00	1,483.1	-1,340.4	469.1	403.0	66.08	7.099	
8,800.0	6,966.2	8,924.1	6,966.2	37.7	42.3	-90.00	1,583.1	-1,339.5	469.1	399.7	69.41	6.758	
8,900.0	6,966.2	9,024.1	6,966.2	39.2	43.6	-90.00	1,683.0	-1,338.6	469.1	396.3	72.80	6.444	
9,000.0	6,966.2	9,124.1	6,966.2	40.8	45.0	-90.00	1,783.0	-1,337.7	469.1	392.9	76.22	6.154	
9,100.0	6,966.2	9,224.1	6,966.2	42.4	46.4	-90.00	1,883.0	-1,336.8	469.1	389.4	79.68	5.887	
9,200.0	6,966.2	9,324.1	6,966.2	44.1	47.9	-90.00	1,983.0	-1,335.9	469.1	385.9	83.17	5.640	
9,300.0	6,966.2	9,424.1	6,966.2	45.7	49.4	-90.00	2,083.0	-1,335.0	469.0	382.3	86.69	5.410	
9,400.0	6,966.2	9,524.1	6,966.2	47.4	50.9	-90.00	2,183.0	-1,334.2	469.0	378.8	90.24	5.198	
9,500.0	6,966.2	9,624.1	6,966.2	49.1	52.5	-90.00	2,283.0	-1,333.3	469.0	375.2	93.80	5.000	
9,600.0	6,966.2	9,724.1	6,966.2	50.8	54.1	-90.00	2,383.0	-1,332.4	469.0	371.6	97.39	4.816	
9,700.0	6,966.2	9,824.1	6,966.2	52.6	55.7	-90.00	2,483.0	-1,331.5	469.0	368.0	101.00	4.644	
9,800.0	6,966.2	9,924.1	6,966.2	54.3	57.3	-90.00	2,583.0	-1,330.6	469.0	364.3	104.62	4.483	
9,900.0	6,966.2	10,024.1	6,966.2	56.0	59.0	-90.00	2,683.0	-1,329.7	469.0	360.7	108.25	4.332	
10,000.0	6,966.2	10,124.1	6,966.2	57.8	60.6	-90.00	2,783.0	-1,328.8	468.9	357.0	111.90	4.191	
10,100.0	6,966.2	10,224.1	6,966.2	59.6	62.3	-90.00	2,883.0	-1,327.9	468.9	353.4	115.56	4.058	
10,200.0	6,966.2	10,324.1	6,966.2	61.4	64.0	-90.00	2,983.0	-1,327.0	468.9	349.7	119.23	3.933	
10,300.0	6,966.2	10,424.1	6,966.2	63.1	65.7	-90.00	3,083.0	-1,326.1	468.9	346.0	122.91	3.815	
10,400.0	6,966.2	10,524.1	6,966.2	64.9	67.4	-90.00	3,183.0	-1,325.2	468.9	342.3	126.60	3.704	
10,500.0	6,966.2	10,624.1	6,966.2	66.7	69.2	-90.00	3,283.0	-1,324.3	468.9	338.6	130.29	3.599	
10,600.0	6,966.2	10,724.1	6,966.2	68.6	70.9	-90.00	3,383.0	-1,323.4	468.9	334.9	133.99	3.499	
10,700.0	6,966.2	10,824.1	6,966.2	70.4	72.7	-90.00	3,483.0	-1,322.5	468.8	331.1	137.71	3.405	
10,800.0	6,966.2	10,924.1	6,966.2	72.2	74.4	-90.00	3,583.0	-1,321.6	468.8	327.4	141.42	3.315	
10,900.0	6,966.2	11,024.1	6,966.2	74.0	76.2	-90.00	3,683.0	-1,320.7	468.8	323.7	145.14	3.230	
11,000.0	6,966.2	11,124.1	6,966.2	75.8	78.0	-90.00	3,783.0	-1,319.8	468.8	319.9	148.87	3.149	
11,100.0	6,966.2	11,224.1	6,966.2	77.7	79.7	-90.00	3,883.0	-1,319.0	468.8	316.2	152.60	3.072	
11,200.0	6,966.2	11,324.1	6,966.2	79.5	81.5	-90.00	3,983.0	-1,318.1	468.8	312.4	156.34	2.998	
11,300.0	6,966.2	11,424.1	6,966.2	81.4	83.3	-90.00	4,083.0	-1,317.2	468.8	308.7	160.08	2.928	
11,400.0	6,966.2	11,524.1	6,966.2	83.2	85.1	-90.00	4,182.9	-1,316.3	468.7	304.9	163.83	2.861	
11,500.0	6,966.2	11,624.1	6,966.2	85.0	86.9	-90.00	4,282.9	-1,315.4	468.7	301.2	167.58	2.797	
11,600.0	6,966.2	11,724.1	6,966.2	86.9	88.7	-90.00	4,382.9	-1,314.5	468.7	297.4	171.33	2.736	
11,700.0	6,966.2	11,824.1	6,966.2	88.7	90.5	-90.00	4,482.9	-1,313.6	468.7	293.6	175.08	2.677	
11,717.4	6,966.2	11,841.3	6,966.2	89.1	90.9	-90.00	4,500.2	-1,313.4	468.7	293.0	175.73	2.667	
11,718.1	6,966.2	11,841.3	6,966.2	89.1	90.9	-90.00	4,500.2	-1,313.4	468.7	293.0	175.75	2.667	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-023HC - Wellbore #1 - Plan #1 (11-15-13) — **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	90.02	0.0	29.7	29.7				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	29.7	29.7	29.4	0.22	131.983	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	29.7	29.7	29.0	0.67	43.994	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	29.7	29.7	28.5	1.12	26.397	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	29.7	29.7	28.1	1.57	18.855	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	29.7	29.7	27.6	2.02	14.665	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	29.7	29.7	27.2	2.47	11.998	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	29.7	29.7	26.7	2.92	10.153	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	29.7	29.7	26.3	3.37	8.799	
900.0	900.0	900.0	900.0	1.9	1.9	90.02	0.0	29.7	29.7	25.8	3.82	7.764	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.02	0.0	29.7	29.7	25.4	4.27	6.946	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.02	0.0	29.7	29.7	24.9	4.72	6.285	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.02	0.0	29.7	29.7	24.5	5.17	5.738	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.02	0.0	29.7	29.7	24.0	5.62	5.279	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.02	0.0	29.7	29.7	23.6	6.07	4.888	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.02	0.0	29.7	29.7	23.1	6.52	4.551	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.02	0.0	29.7	29.7	22.7	6.97	4.258	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.02	0.0	29.7	29.7	22.2	7.42	3.999	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	90.02	0.0	29.7	29.7	21.8	7.87	3.771	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	90.02	0.0	29.7	29.7	21.3	8.32	3.567	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	90.02	0.0	29.7	29.7	20.9	8.77	3.384	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	90.02	0.0	29.7	29.7	20.4	9.22	3.219	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	90.02	0.0	29.7	29.7	20.0	9.66	3.069	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	90.02	0.0	29.7	29.7	19.6	10.11	2.933	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	90.02	0.0	29.7	29.7	19.1	10.56	2.808	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	90.02	0.0	29.7	29.7	18.7	11.01	2.694	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	90.02	0.0	29.7	29.7	18.2	11.46	2.588	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	90.02	0.0	29.7	29.7	17.8	11.91	2.490	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	90.02	0.0	29.7	29.7	17.3	12.36	2.400	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	90.02	0.0	29.7	29.7	16.9	12.81	2.315	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	90.02	0.0	29.7	29.7	16.4	13.26	2.237	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	90.02	0.0	29.7	29.7	16.0	13.71	2.164	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	90.02	0.0	29.7	29.7	15.5	14.16	2.095	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	90.02	0.0	29.7	29.7	15.1	14.61	2.031	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	90.02	0.0	29.7	29.7	14.6	15.06	1.970	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	90.02	0.0	29.7	29.7	14.2	15.51	1.913	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	90.02	0.0	29.7	29.7	13.7	15.96	1.859	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	90.02	0.0	29.7	29.7	13.3	16.41	1.808	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	90.02	0.0	29.7	29.7	12.8	16.86	1.760	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	90.02	0.0	29.7	29.7	12.4	17.31	1.714	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	90.02	0.0	29.7	29.7	11.9	17.76	1.671	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	90.02	0.0	29.7	29.7	11.5	18.21	1.629	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	90.02	0.0	29.7	29.7	11.0	18.66	1.590	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	90.02	0.0	29.7	29.7	10.6	19.11	1.553	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	90.02	0.0	29.7	29.7	10.1	19.55	1.517	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	90.02	0.0	29.7	29.7	9.7	20.00	1.483	Level 3
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	90.02	0.0	29.7	29.7	9.2	20.45	1.450	Level 3
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	90.02	0.0	29.7	29.7	8.8	20.90	1.419	Level 3
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	90.02	0.0	29.7	29.7	8.3	21.35	1.389	Level 3, CC
4,827.9	4,827.9	4,827.9	4,827.9	10.7	10.7	-161.23	0.0	29.7	29.8	8.3	21.47	1.386	Level 3, ES, SF
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-161.56	0.0	29.7	30.3	8.5	21.79	1.390	Level 3
5,000.0	4,999.8	4,999.8	4,999.8	11.1	11.1	-164.21	0.0	29.7	35.3	13.1	22.15	1.593	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-023HC - Wellbore #1 - Plan #1 (11-15-13) — **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
5,100.0	5,099.3	5,099.3	5,099.3	11.3	11.3	-167.73	0.0	29.7	45.4	23.0	22.46	2.023	
5,200.0	5,198.0	5,198.0	5,198.0	11.5	11.6	-170.79	0.0	29.7	60.8	38.1	22.72	2.677	
5,300.0	5,295.8	5,295.8	5,295.8	11.7	11.8	-173.06	0.0	29.7	81.4	58.5	22.92	3.552	
5,400.0	5,392.4	5,392.4	5,392.4	12.0	12.0	-174.65	0.0	29.7	107.2	84.1	23.06	4.646	
5,500.0	5,487.5	5,487.5	5,487.5	12.2	12.2	-175.78	0.0	29.7	138.0	114.8	23.15	5.959	
5,600.0	5,580.9	5,588.6	5,588.6	12.6	12.4	-176.46	-1.1	27.9	171.9	148.7	23.19	7.414	
5,700.0	5,672.2	5,692.6	5,692.3	13.0	12.6	-176.59	-4.9	21.3	205.9	182.8	23.16	8.891	
5,800.0	5,761.3	5,798.6	5,797.4	13.5	12.8	-176.37	-11.8	9.6	239.9	216.8	23.10	10.385	
5,900.0	5,848.1	5,906.9	5,903.8	14.1	13.1	-175.95	-21.9	-7.6	273.3	250.1	23.20	11.779	
6,000.0	5,934.3	6,018.8	6,012.4	14.7	13.3	-175.34	-35.5	-30.7	302.4	278.8	23.65	12.790	
6,100.0	6,020.6	6,134.1	6,122.6	15.4	13.6	-174.49	-52.9	-60.3	326.1	302.0	24.12	13.516	
6,200.0	6,106.9	6,252.2	6,232.9	16.2	14.0	-173.40	-74.1	-96.4	344.1	319.4	24.64	13.961	
6,300.0	6,193.1	6,372.2	6,342.2	16.9	14.4	-172.05	-99.2	-139.1	356.3	331.1	25.22	14.129	
6,400.0	6,279.4	6,493.1	6,449.0	17.8	15.0	-170.39	-127.9	-188.0	362.7	336.9	25.86	14.025	
6,500.0	6,365.6	6,599.5	6,540.4	18.6	15.6	-168.70	-155.5	-234.8	364.9	338.3	26.55	13.743	
6,600.0	6,451.9	6,698.9	6,625.7	19.5	16.2	-167.12	-181.4	-278.9	367.0	339.7	27.29	13.449	
6,700.0	6,538.3	6,798.3	6,710.9	20.4	16.9	-171.11	-207.3	-323.0	369.4	341.3	28.13	13.133	
6,800.0	6,625.6	6,895.1	6,795.7	21.1	17.5	167.87	-222.3	-366.7	372.1	343.1	28.96	12.850	
6,900.0	6,710.6	6,995.5	6,884.7	21.8	18.0	150.55	-215.5	-412.4	375.4	345.9	29.47	12.740	
7,000.0	6,788.9	7,100.0	6,973.3	22.4	18.5	139.62	-184.6	-457.7	379.2	349.6	29.62	12.800	
7,100.0	6,856.6	7,208.8	7,056.2	22.9	18.9	133.48	-128.6	-499.9	383.1	353.5	29.51	12.979	
7,200.0	6,910.1	7,321.8	7,126.7	23.2	19.2	130.22	-48.3	-535.4	386.6	357.2	29.38	13.156	
7,300.0	6,946.7	7,438.3	7,178.0	23.5	19.6	128.63	52.8	-561.0	389.3	359.7	29.58	13.159	
7,400.0	6,964.5	7,557.3	7,204.5	23.8	19.9	128.07	167.7	-573.6	390.8	360.4	30.41	12.851	
7,500.0	6,966.2	7,665.9	7,207.2	24.0	20.3	128.06	276.2	-574.1	391.0	359.3	31.65	12.351	
7,600.0	6,966.2	7,765.9	7,207.2	24.4	20.8	128.06	376.2	-573.2	390.9	357.9	33.01	11.843	
7,700.0	6,966.2	7,865.9	7,207.2	24.9	21.6	128.06	476.2	-572.3	390.9	356.3	34.60	11.299	
7,800.0	6,966.2	7,965.9	7,207.2	25.6	22.4	128.06	576.2	-571.4	390.9	354.6	36.39	10.743	
7,900.0	6,966.2	8,065.9	7,207.2	26.3	23.4	128.06	676.2	-570.5	390.9	352.6	38.36	10.192	
8,000.0	6,966.2	8,165.9	7,207.2	27.3	24.5	128.06	776.2	-569.7	390.9	350.5	40.47	9.659	
8,100.0	6,966.2	8,265.9	7,207.2	28.3	25.8	128.06	876.2	-568.8	390.9	348.2	42.72	9.152	
8,200.0	6,966.2	8,365.9	7,207.2	29.4	27.1	128.06	976.2	-567.9	390.9	345.9	45.07	8.675	
8,300.0	6,966.2	8,465.9	7,207.2	30.6	28.4	128.06	1,076.2	-567.0	390.9	343.4	47.51	8.229	
8,400.0	6,966.2	8,565.9	7,207.2	31.9	29.9	128.06	1,176.2	-566.1	390.9	340.9	50.03	7.814	
8,500.0	6,966.2	8,665.9	7,207.2	33.3	31.3	128.06	1,276.2	-565.3	390.9	338.3	52.62	7.430	
8,600.0	6,966.2	8,765.9	7,207.2	34.7	32.9	128.06	1,376.2	-564.4	390.9	335.7	55.27	7.074	
8,700.0	6,966.2	8,865.9	7,207.2	36.2	34.4	128.06	1,476.2	-563.5	390.9	333.0	57.96	6.745	
8,800.0	6,966.2	8,965.9	7,207.2	37.7	36.0	128.06	1,576.1	-562.6	390.9	330.2	60.70	6.440	
8,900.0	6,966.2	9,065.9	7,207.2	39.2	37.7	128.06	1,676.1	-561.7	390.9	327.5	63.48	6.159	
9,000.0	6,966.2	9,165.9	7,207.2	40.8	39.3	128.06	1,776.1	-560.9	390.9	324.7	66.29	5.898	
9,100.0	6,966.2	9,265.9	7,207.2	42.4	41.0	128.06	1,876.1	-560.0	390.9	321.8	69.13	5.655	
9,200.0	6,966.2	9,365.9	7,207.2	44.1	42.7	128.06	1,976.1	-559.1	390.9	318.9	71.99	5.430	
9,300.0	6,966.2	9,465.9	7,207.2	45.7	44.4	128.06	2,076.1	-558.2	390.9	316.1	74.88	5.221	
9,400.0	6,966.2	9,565.9	7,207.2	47.4	46.2	128.06	2,176.1	-557.3	390.9	313.2	77.78	5.026	
9,500.0	6,966.2	9,665.9	7,207.2	49.1	47.9	128.06	2,276.1	-556.5	390.9	310.2	80.71	4.844	
9,600.0	6,966.2	9,765.9	7,207.2	50.8	49.7	128.06	2,376.1	-555.6	390.9	307.3	83.65	4.674	
9,700.0	6,966.2	9,865.9	7,207.2	52.6	51.4	128.06	2,476.1	-554.7	390.9	304.3	86.60	4.514	
9,800.0	6,966.2	9,965.9	7,207.2	54.3	53.2	128.06	2,576.1	-553.8	390.9	301.4	89.57	4.364	
9,900.0	6,966.2	10,065.9	7,207.2	56.0	55.0	128.06	2,676.1	-552.9	390.9	298.4	92.55	4.224	
10,000.0	6,966.2	10,165.9	7,207.2	57.8	56.8	128.06	2,776.1	-552.1	390.9	295.4	95.54	4.092	
10,100.0	6,966.2	10,265.9	7,207.2	59.6	58.6	128.06	2,876.1	-551.2	390.9	292.4	98.54	3.967	
10,200.0	6,966.2	10,365.9	7,207.2	61.4	60.4	128.06	2,976.1	-550.3	390.9	289.4	101.55	3.850	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-023HC - Wellbore #1 - Plan #1 (11-15-13)

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	6,966.2	10,465.9	7,207.2	63.1	62.2	128.06	3,076.1	-549.4	390.9	286.4	104.57	3.739	
10,400.0	6,966.2	10,565.9	7,207.2	64.9	64.1	128.06	3,176.1	-548.6	390.9	283.3	107.59	3.634	
10,500.0	6,966.2	10,665.9	7,207.2	66.7	65.9	128.06	3,276.1	-547.7	390.9	280.3	110.62	3.534	
10,600.0	6,966.2	10,765.9	7,207.2	68.6	67.7	128.06	3,376.1	-546.8	390.9	277.3	113.66	3.440	
10,700.0	6,966.2	10,865.9	7,207.2	70.4	69.6	128.06	3,476.1	-545.9	390.9	274.2	116.70	3.350	
10,800.0	6,966.2	10,965.9	7,207.2	72.2	71.4	128.06	3,576.1	-545.0	390.9	271.2	119.75	3.265	
10,900.0	6,966.2	11,065.9	7,207.2	74.0	73.2	128.06	3,676.1	-544.2	390.9	268.1	122.80	3.183	
11,000.0	6,966.2	11,165.9	7,207.2	75.8	75.1	128.06	3,776.1	-543.3	390.9	265.1	125.86	3.106	
11,100.0	6,966.2	11,265.9	7,207.2	77.7	76.9	128.06	3,876.1	-542.4	390.9	262.0	128.92	3.032	
11,200.0	6,966.2	11,365.9	7,207.2	79.5	78.8	128.06	3,976.1	-541.5	390.9	258.9	131.99	2.962	
11,300.0	6,966.2	11,465.9	7,207.2	81.4	80.6	128.06	4,076.1	-540.6	390.9	255.9	135.05	2.895	
11,400.0	6,966.2	11,565.9	7,207.2	83.2	82.5	128.06	4,176.0	-539.8	390.9	252.8	138.13	2.830	
11,500.0	6,966.2	11,665.9	7,207.2	85.0	84.4	128.06	4,276.0	-538.9	390.9	249.7	141.20	2.769	
11,600.0	6,966.2	11,765.9	7,207.2	86.9	86.2	128.06	4,376.0	-538.0	390.9	246.6	144.28	2.709	
11,700.0	6,966.2	11,865.9	7,207.2	88.7	88.1	128.06	4,476.0	-537.1	390.9	243.6	147.36	2.653	
11,718.1	6,966.2	11,884.0	7,207.2	89.1	88.4	128.06	4,494.2	-537.0	390.9	243.0	147.92	2.643	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)

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	90.02	0.0	59.9	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	59.9	59.9	59.7	0.22	266.456	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	59.9	59.9	59.2	0.67	88.819	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	59.9	59.9	58.8	1.12	53.291	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	59.9	59.9	58.3	1.57	38.065	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	59.9	59.9	57.9	2.02	29.606	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	59.9	59.9	57.4	2.47	24.223	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	59.9	59.9	57.0	2.92	20.497	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	59.9	59.9	56.5	3.37	17.764	
900.0	900.0	900.0	900.0	1.9	1.9	90.02	0.0	59.9	59.9	56.1	3.82	15.674	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.02	0.0	59.9	59.9	55.6	4.27	14.024	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.02	0.0	59.9	59.9	55.2	4.72	12.688	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.02	0.0	59.9	59.9	54.7	5.17	11.585	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.02	0.0	59.9	59.9	54.3	5.62	10.658	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.02	0.0	59.9	59.9	53.8	6.07	9.869	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.02	0.0	59.9	59.9	53.4	6.52	9.188	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.02	0.0	59.9	59.9	52.9	6.97	8.595	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.02	0.0	59.9	59.9	52.5	7.42	8.074	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	90.02	0.0	59.9	59.9	52.0	7.87	7.613	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	90.02	0.0	59.9	59.9	51.6	8.32	7.202	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	90.02	0.0	59.9	59.9	51.1	8.77	6.832	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	90.02	0.0	59.9	59.9	50.7	9.22	6.499	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	90.02	0.0	59.9	59.9	50.2	9.66	6.197	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	90.02	0.0	59.9	59.9	49.8	10.11	5.921	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	90.02	0.0	59.9	59.9	49.3	10.56	5.669	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	90.02	0.0	59.9	59.9	48.9	11.01	5.438	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	90.02	0.0	59.9	59.9	48.4	11.46	5.225	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	90.02	0.0	59.9	59.9	48.0	11.91	5.027	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	90.02	0.0	59.9	59.9	47.5	12.36	4.845	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	90.02	0.0	59.9	59.9	47.1	12.81	4.675	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	90.02	0.0	59.9	59.9	46.6	13.26	4.516	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	90.02	0.0	59.9	59.9	46.2	13.71	4.368	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	90.02	0.0	59.9	59.9	45.7	14.16	4.229	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	90.02	0.0	59.9	59.9	45.3	14.61	4.099	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	90.02	0.0	59.9	59.9	44.8	15.06	3.977	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	90.02	0.0	59.9	59.9	44.4	15.51	3.862	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	90.02	0.0	59.9	59.9	43.9	15.96	3.753	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	90.02	0.0	59.9	59.9	43.5	16.41	3.650	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	90.02	0.0	59.9	59.9	43.0	16.86	3.553	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	90.02	0.0	59.9	59.9	42.6	17.31	3.460	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	90.02	0.0	59.9	59.9	42.1	17.76	3.373	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	90.02	0.0	59.9	59.9	41.7	18.21	3.290	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	90.02	0.0	59.9	59.9	41.2	18.66	3.210	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	90.02	0.0	59.9	59.9	40.8	19.11	3.135	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	90.02	0.0	59.9	59.9	40.3	19.55	3.063	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	90.02	0.0	59.9	59.9	39.9	20.00	2.994	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	90.02	0.0	59.9	59.9	39.4	20.45	2.928	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	90.02	0.0	59.9	59.9	39.0	20.90	2.865	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	90.02	0.0	59.9	59.9	38.5	21.35	2.805	CC
4,827.8	4,827.8	4,827.8	4,827.8	10.7	10.7	-161.20	0.0	59.9	60.0	38.5	21.47	2.793	ES
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-161.36	0.0	59.9	60.5	38.7	21.79	2.777	SF
5,000.0	4,999.8	4,999.8	4,999.8	11.1	11.1	-162.78	0.0	59.9	65.5	43.3	22.15	2.956	

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 Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)

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
5,100.0	5,099.3	5,099.3	5,099.3	11.3	11.3	-165.05	0.0	59.9	75.5	53.1	22.46	3.363	
5,200.0	5,198.0	5,198.0	5,198.0	11.5	11.6	-167.50	0.0	59.9	90.7	68.0	22.72	3.994	
5,300.0	5,295.8	5,295.8	5,295.8	11.7	11.8	-169.71	0.0	59.9	111.1	88.2	22.93	4.848	
5,400.0	5,392.4	5,392.4	5,392.4	12.0	12.0	-171.53	0.0	59.9	136.7	113.6	23.07	5.925	
5,500.0	5,487.5	5,487.5	5,487.5	12.2	12.2	-172.97	0.0	59.9	167.4	144.2	23.16	7.225	
5,600.0	5,580.9	5,580.9	5,580.9	12.6	12.4	-174.09	0.0	59.9	203.0	179.8	23.20	8.748	
5,700.0	5,672.2	5,672.2	5,672.2	13.0	12.6	-174.96	0.0	59.9	243.5	220.3	23.19	10.500	
5,800.0	5,761.3	5,770.8	5,770.8	13.5	12.8	-175.59	-0.7	59.4	288.3	265.1	23.13	12.461	
5,900.0	5,848.1	5,891.3	5,890.6	14.1	13.1	-174.86	-11.1	52.0	330.7	307.4	23.24	14.231	
6,000.0	5,934.3	6,020.4	6,015.9	14.7	13.3	-172.59	-35.7	34.5	365.0	341.2	23.72	15.387	
6,100.0	6,020.6	6,154.4	6,140.6	15.4	13.6	-168.88	-75.7	6.2	390.0	365.7	24.33	16.034	
6,200.0	6,106.9	6,271.9	6,243.7	16.2	13.9	-164.64	-121.4	-26.3	407.5	382.5	25.08	16.251	
6,300.0	6,193.1	6,367.1	6,326.2	16.9	14.3	-161.26	-160.2	-53.9	425.1	399.2	25.90	16.414	
6,400.0	6,279.4	6,464.6	6,411.2	17.8	14.7	-158.30	-198.3	-82.4	444.0	417.2	26.84	16.544	
6,500.0	6,365.6	6,569.3	6,508.1	18.6	15.1	-157.86	-220.2	-114.6	462.5	434.9	27.60	16.753	
6,600.0	6,451.9	6,670.4	6,603.9	19.5	15.5	-160.31	-218.0	-146.3	479.9	452.0	27.96	17.165	
6,700.0	6,538.3	6,759.3	6,685.8	20.4	15.7	-170.67	-197.1	-173.3	498.9	470.9	27.97	17.839	
6,800.0	6,625.6	6,839.8	6,755.3	21.1	15.8	159.59	-163.5	-196.0	521.1	492.9	28.18	18.492	
6,900.0	6,710.6	6,916.3	6,814.9	21.8	15.9	134.25	-119.9	-215.4	544.7	515.7	28.99	18.791	
7,000.0	6,788.9	6,990.0	6,864.8	22.4	16.0	116.31	-68.2	-231.5	567.3	537.3	30.05	18.882	
7,100.0	6,856.6	7,061.9	6,904.9	22.9	16.1	104.38	-10.1	-244.3	587.3	556.3	31.02	18.936	
7,200.0	6,910.1	7,132.5	6,935.1	23.2	16.3	96.70	52.9	-253.8	603.2	571.5	31.70	19.028	
7,300.0	6,946.7	7,200.0	6,954.7	23.5	16.5	92.17	117.2	-259.8	614.1	581.9	32.18	19.083	
7,400.0	6,964.5	7,275.0	6,965.3	23.8	16.8	90.15	191.3	-262.7	619.2	586.6	32.65	18.964	
7,500.0	6,966.2	7,357.6	6,966.2	24.0	17.3	90.00	273.9	-262.3	619.5	586.0	33.53	18.476	
7,600.0	6,966.2	7,457.6	6,966.2	24.4	18.0	90.00	373.9	-261.5	619.5	584.5	34.99	17.704	
7,700.0	6,966.2	7,557.6	6,966.2	24.9	18.9	90.00	473.9	-260.7	619.4	582.6	36.80	16.833	
7,800.0	6,966.2	7,657.6	6,966.2	25.6	19.9	90.00	573.9	-259.9	619.3	580.4	38.90	15.922	
7,900.0	6,966.2	7,757.6	6,966.2	26.3	21.1	90.00	673.9	-259.1	619.3	578.0	41.25	15.013	
8,000.0	6,966.2	7,857.6	6,966.2	27.3	22.4	90.00	773.9	-258.3	619.2	575.4	43.81	14.134	
8,100.0	6,966.2	7,957.6	6,966.2	28.3	23.7	90.00	873.9	-257.5	619.1	572.6	46.54	13.303	
8,200.0	6,966.2	8,057.6	6,966.2	29.4	25.1	90.00	973.9	-256.7	619.0	569.6	49.42	12.526	
8,300.0	6,966.2	8,157.6	6,966.2	30.6	26.6	90.00	1,073.9	-255.9	619.0	566.5	52.42	11.808	
8,400.0	6,966.2	8,257.6	6,966.2	31.9	28.1	90.00	1,173.9	-255.1	618.9	563.4	55.52	11.147	
8,500.0	6,966.2	8,357.6	6,966.2	33.3	29.7	90.00	1,273.9	-254.3	618.8	560.1	58.71	10.540	
8,600.0	6,966.2	8,457.6	6,966.2	34.7	31.3	90.00	1,373.9	-253.5	618.7	556.8	61.97	9.984	
8,700.0	6,966.2	8,557.6	6,966.2	36.2	33.0	90.00	1,473.9	-252.7	618.7	553.4	65.29	9.475	
8,800.0	6,966.2	8,657.6	6,966.2	37.7	34.7	90.00	1,573.9	-251.9	618.6	549.9	68.67	9.009	
8,900.0	6,966.2	8,757.6	6,966.2	39.2	36.3	90.00	1,673.9	-251.1	618.5	546.4	72.09	8.580	
9,000.0	6,966.2	8,857.6	6,966.2	40.8	38.1	90.00	1,773.9	-250.2	618.4	542.9	75.55	8.186	
9,100.0	6,966.2	8,957.6	6,966.2	42.4	39.8	90.00	1,873.9	-249.4	618.4	539.3	79.04	7.824	
9,200.0	6,966.2	9,057.6	6,966.2	44.1	41.6	90.00	1,973.9	-248.6	618.3	535.7	82.56	7.489	
9,300.0	6,966.2	9,157.6	6,966.2	45.7	43.3	90.00	2,073.8	-247.8	618.2	532.1	86.11	7.179	
9,400.0	6,966.2	9,257.6	6,966.2	47.4	45.1	90.00	2,173.8	-247.0	618.1	528.5	89.68	6.893	
9,500.0	6,966.2	9,357.6	6,966.2	49.1	46.9	90.00	2,273.8	-246.2	618.1	524.8	93.27	6.626	
9,600.0	6,966.2	9,457.6	6,966.2	50.8	48.7	90.00	2,373.8	-245.4	618.0	521.1	96.88	6.379	
9,700.0	6,966.2	9,557.6	6,966.2	52.6	50.5	90.00	2,473.8	-244.6	617.9	517.4	100.51	6.148	
9,800.0	6,966.2	9,657.6	6,966.2	54.3	52.3	90.00	2,573.8	-243.8	617.9	513.7	104.15	5.932	
9,900.0	6,966.2	9,757.6	6,966.2	56.0	54.1	90.00	2,673.8	-243.0	617.8	510.0	107.80	5.731	
10,000.0	6,966.2	9,857.6	6,966.2	57.8	56.0	90.00	2,773.8	-242.2	617.7	506.2	111.47	5.542	
10,100.0	6,966.2	9,957.6	6,966.2	59.6	57.8	90.00	2,873.8	-241.4	617.6	502.5	115.14	5.364	
10,200.0	6,966.2	10,057.6	6,966.2	61.4	59.6	90.00	2,973.8	-240.6	617.6	498.7	118.83	5.197	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)

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	6,966.2	10,157.6	6,966.2	63.1	61.5	90.00	3,073.8	-239.8	617.5	495.0	122.52	5.040	
10,400.0	6,966.2	10,257.6	6,966.2	64.9	63.3	90.00	3,173.8	-239.0	617.4	491.2	126.23	4.891	
10,500.0	6,966.2	10,357.6	6,966.2	66.7	65.2	90.00	3,273.8	-238.1	617.3	487.4	129.93	4.751	
10,600.0	6,966.2	10,457.6	6,966.2	68.6	67.0	90.00	3,373.8	-237.3	617.3	483.6	133.65	4.619	
10,700.0	6,966.2	10,557.6	6,966.2	70.4	68.9	90.00	3,473.8	-236.5	617.2	479.8	137.37	4.493	
10,800.0	6,966.2	10,657.6	6,966.2	72.2	70.7	90.00	3,573.8	-235.7	617.1	476.0	141.10	4.374	
10,900.0	6,966.2	10,757.6	6,966.2	74.0	72.6	90.00	3,673.8	-234.9	617.0	472.2	144.83	4.260	
11,000.0	6,966.2	10,857.6	6,966.2	75.8	74.5	90.00	3,773.8	-234.1	617.0	468.4	148.57	4.153	
11,100.0	6,966.2	10,957.6	6,966.2	77.7	76.3	90.00	3,873.8	-233.3	616.9	464.6	152.31	4.050	
11,200.0	6,966.2	11,057.6	6,966.2	79.5	78.2	90.00	3,973.8	-232.5	616.8	460.8	156.06	3.953	
11,300.0	6,966.2	11,157.6	6,966.2	81.4	80.1	90.00	4,073.8	-231.7	616.8	456.9	159.81	3.859	
11,400.0	6,966.2	11,257.6	6,966.2	83.2	81.9	90.00	4,173.8	-230.9	616.7	453.1	163.56	3.770	
11,500.0	6,966.2	11,357.6	6,966.2	85.0	83.8	90.00	4,273.8	-230.1	616.6	449.3	167.32	3.685	
11,600.0	6,966.2	11,457.6	6,966.2	86.9	85.7	90.00	4,373.8	-229.3	616.5	445.5	171.08	3.604	
11,700.0	6,966.2	11,557.6	6,966.2	88.7	87.6	90.00	4,473.8	-228.5	616.5	441.6	174.84	3.526	
11,718.1	6,966.2	11,575.7	6,966.2	89.1	87.9	90.00	4,491.9	-228.3	616.4	440.9	175.52	3.512	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)

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	89.99	0.0	89.6	89.6				
100.0	100.0	100.0	100.0	0.1	0.1	89.99	0.0	89.6	89.6	89.3	0.22	398.439	
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	89.6	89.6	88.9	0.67	132.813	
300.0	300.0	300.0	300.0	0.6	0.6	89.99	0.0	89.6	89.6	88.4	1.12	79.688	
400.0	400.0	400.0	400.0	0.8	0.8	89.99	0.0	89.6	89.6	88.0	1.57	56.920	
500.0	500.0	500.0	500.0	1.0	1.0	89.99	0.0	89.6	89.6	87.5	2.02	44.271	
600.0	600.0	600.0	600.0	1.2	1.2	89.99	0.0	89.6	89.6	87.1	2.47	36.222	
700.0	700.0	700.0	700.0	1.5	1.5	89.99	0.0	89.6	89.6	86.6	2.92	30.649	
800.0	800.0	800.0	800.0	1.7	1.7	89.99	0.0	89.6	89.6	86.2	3.37	26.563	
900.0	900.0	900.0	900.0	1.9	1.9	89.99	0.0	89.6	89.6	85.7	3.82	23.438	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.99	0.0	89.6	89.6	85.3	4.27	20.970	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.99	0.0	89.6	89.6	84.8	4.72	18.973	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.99	0.0	89.6	89.6	84.4	5.17	17.323	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.99	0.0	89.6	89.6	83.9	5.62	15.938	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.99	0.0	89.6	89.6	83.5	6.07	14.757	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.99	0.0	89.6	89.6	83.0	6.52	13.739	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.99	0.0	89.6	89.6	82.6	6.97	12.853	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.99	0.0	89.6	89.6	82.1	7.42	12.074	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	89.99	0.0	89.6	89.6	81.7	7.87	11.384	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	89.99	0.0	89.6	89.6	81.2	8.32	10.769	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	89.99	0.0	89.6	89.6	80.8	8.77	10.216	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	89.99	0.0	89.6	89.6	80.3	9.22	9.718	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	89.99	0.0	89.6	89.6	79.9	9.66	9.266	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	89.99	0.0	89.6	89.6	79.4	10.11	8.854	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	89.99	0.0	89.6	89.6	79.0	10.56	8.477	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	89.99	0.0	89.6	89.6	78.5	11.01	8.131	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	89.99	0.0	89.6	89.6	78.1	11.46	7.813	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	89.99	0.0	89.6	89.6	77.6	11.91	7.518	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	89.99	0.0	89.6	89.6	77.2	12.36	7.244	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	89.99	0.0	89.6	89.6	76.7	12.81	6.990	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	89.99	0.0	89.6	89.6	76.3	13.26	6.753	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	89.99	0.0	89.6	89.6	75.8	13.71	6.532	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	89.99	0.0	89.6	89.6	75.4	14.16	6.324	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	89.99	0.0	89.6	89.6	74.9	14.61	6.130	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	89.99	0.0	89.6	89.6	74.5	15.06	5.947	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	89.99	0.0	89.6	89.6	74.0	15.51	5.774	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	89.99	0.0	89.6	89.6	73.6	15.96	5.612	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	89.99	0.0	89.6	89.6	73.1	16.41	5.458	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	89.99	0.0	89.6	89.6	72.7	16.86	5.313	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	89.99	0.0	89.6	89.6	72.2	17.31	5.175	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	89.99	0.0	89.6	89.6	71.8	17.76	5.044	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	89.99	0.0	89.6	89.6	71.3	18.21	4.919	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	89.99	0.0	89.6	89.6	70.9	18.66	4.800	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	89.99	0.0	89.6	89.6	70.5	19.11	4.688	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	89.99	0.0	89.6	89.6	70.0	19.55	4.580	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	89.99	0.0	89.6	89.6	69.6	20.00	4.477	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	89.99	0.0	89.6	89.6	69.1	20.45	4.378	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	89.99	0.0	89.6	89.6	68.7	20.90	4.284	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	89.99	0.0	89.6	89.6	68.2	21.35	4.194	CC
4,827.8	4,827.8	4,827.8	4,827.8	10.7	10.7	-161.22	0.0	89.6	89.7	68.2	21.47	4.175	ES
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-161.33	0.0	89.6	90.2	68.4	21.79	4.139	SF
5,000.0	4,999.8	4,999.8	4,999.8	11.1	11.1	-162.29	0.0	89.6	95.1	73.0	22.15	4.295	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)

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
5,100.0	5,099.3	5,099.3	5,099.3	11.3	11.3	-163.94	0.0	89.6	105.2	82.7	22.47	4.681	
5,200.0	5,198.0	5,198.0	5,198.0	11.5	11.6	-165.89	0.0	89.6	120.3	97.5	22.73	5.292	
5,300.0	5,295.8	5,295.8	5,295.8	11.7	11.8	-167.83	0.0	89.6	140.5	117.6	22.93	6.128	
5,400.0	5,392.4	5,392.4	5,392.4	12.0	12.0	-169.57	0.0	89.6	166.0	142.9	23.08	7.190	
5,500.0	5,487.5	5,487.5	5,487.5	12.2	12.2	-171.05	0.0	89.6	196.5	173.3	23.18	8.477	
5,600.0	5,580.9	5,580.9	5,580.9	12.6	12.4	-172.27	0.0	89.6	232.0	208.7	23.22	9.992	
5,700.0	5,672.2	5,670.0	5,670.0	13.0	12.6	-173.10	-0.6	89.9	272.5	249.4	23.19	11.752	
5,800.0	5,761.3	5,753.8	5,753.6	13.5	12.8	-172.87	-4.9	92.2	319.1	296.0	23.10	13.813	
5,900.0	5,848.1	5,833.7	5,833.0	14.1	12.9	-172.01	-13.1	96.6	371.3	348.1	23.17	16.024	
6,000.0	5,934.3	5,911.0	5,909.1	14.7	13.1	-170.84	-24.7	102.9	425.7	402.1	23.57	18.063	
6,100.0	6,020.6	5,985.8	5,982.0	15.4	13.2	-169.40	-39.3	110.8	481.6	457.6	24.00	20.071	
6,200.0	6,106.9	6,057.9	6,051.4	16.2	13.3	-167.82	-56.6	120.1	539.2	514.8	24.46	22.041	
6,300.0	6,193.1	6,127.1	6,117.0	16.9	13.5	-166.19	-76.0	130.6	598.5	573.6	24.97	23.969	
6,400.0	6,279.4	6,200.0	6,184.8	17.8	13.7	-164.38	-99.5	143.3	659.7	634.2	25.54	25.829	
6,500.0	6,365.6	6,256.2	6,236.1	18.6	13.9	-162.95	-119.6	154.2	722.6	696.5	26.11	27.673	
6,600.0	6,451.9	6,316.1	6,289.8	19.5	14.0	-161.41	-143.0	166.8	787.5	760.7	26.75	29.442	
6,700.0	6,538.3	6,380.6	6,346.3	20.4	14.3	-168.25	-170.4	181.6	854.2	827.0	27.18	31.426	
6,800.0	6,625.6	6,430.7	6,390.4	21.1	14.5	158.69	-190.9	193.8	922.3	894.8	27.47	33.581	
6,900.0	6,710.6	6,488.0	6,443.0	21.8	14.7	130.48	-207.9	208.4	989.7	961.0	28.74	34.438	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**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 (11-15-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4976.2ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Taoka KF 01-022HN
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

Company:	Great Western	**Local Co-ordinate Reference:**	Well Taoka KF 01-022HN
Project:	SEC.1-T1N-R65W	**TVD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Reference Site:	Taoka West Pad Sec.1-T1N-R65W	**MD Reference:**	WELL @ 4976.2ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Taoka KF 01-022HN	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Landmark
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Reference Depths are relative to WELL @ 4976.2ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Taoka KF 01-022HN
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°