

Great Western

Well Name: **Taoka KF 01-023HC**

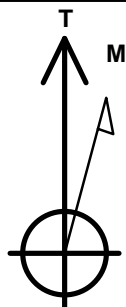
Surface Location: Taoka West Pad Sec.1-T1N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4959.7

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1270989.94	3247195.34	40.073878	-104.616672	
RKB - 16.5' WELL @ 4976.2ft (RKB - 16.5')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 240'FSL & 1384'FWL	1.0	0.0	0.0	Point
BHL 470'FNL & 778'FWL	7207.2	4495.0	-566.6	Point
Entry Pt. 460'FSL & 778'FWL	7207.2	219.7	-604.2	Point



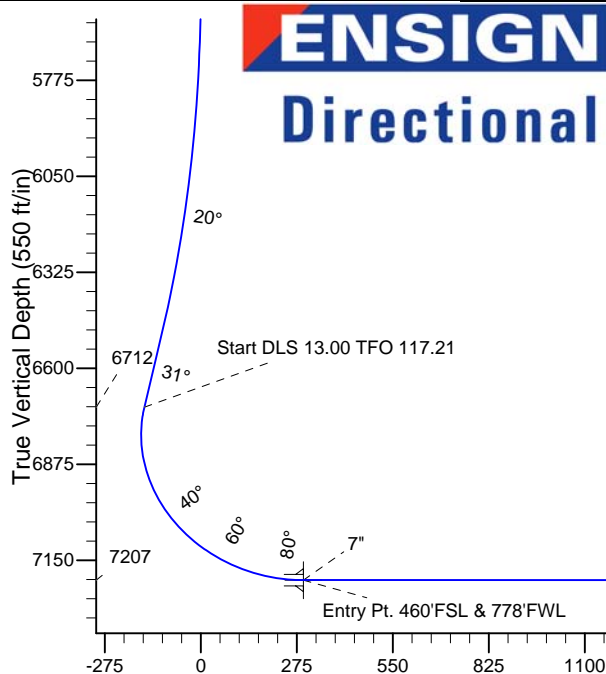
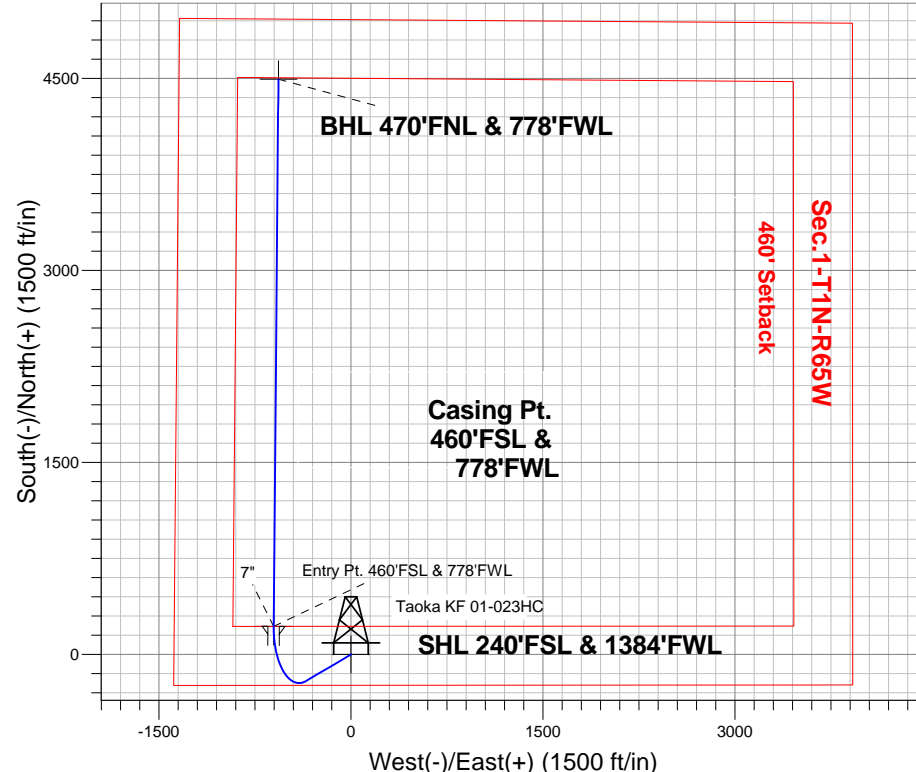
Azimuths to True North
Magnetic North: 8.43°

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

Taoka West Pad Sec.1-T1N-R65W
Taoka KF 01-023HC
Plan #1 (11-15-13)
10:41, November 19 2013

ANNOTATIONS

TVD	MD	Annotation
5500.0	5500.0	KOP - Start Build 3.00
6711.7	6799.2	Start DLS 13.00 TFO 117.21
7207.2	11884.9	TD at 11884.9



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	5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	
3	6531.5	30.95	239.55	6482.1	-137.8	-234.4	3.00	239.55	-107.4	
4	6799.2	30.95	239.55	6711.6	-207.5	-353.0	0.00	0.00	-161.7	
5	7609.4	90.00	0.49	7207.2	219.7	-604.2	13.00	117.21	293.6	Entry Pt. 460'FSL & 778'FWL
6	7610.8	90.00	0.50	7207.2	221.1	-604.2	1.00	90.00	294.9	
7	11884.9	90.00	0.50	7207.2	4495.0	-566.6	0.00	0.00	4530.6	BHL 470'FNL & 778'FWL

Vertical Section at 352.82° (550 ft/in)



Great Western

SEC.1-T1N-R65W

Taoka West Pad Sec.1-T1N-R65W

Taoka KF 01-023HC

Wellbore #1

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

Standard Planning Report

19 November, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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: From: Position Uncertainty:		Northing:	1,270,989.38 ft	Latitude:	40.073878
	Lat/Long	Easting:	3,247,135.46 ft	Longitude:	-104.616886
	0.0 ft	Slot Radius:	"	Grid Convergence:	0.57 °

Well	Taoka KF 01-023HC					
Well Position	+N-S	0.0 ft	Northing:	1,270,989.94 ft	Latitude:	40.073878
	+E-W	59.9 ft	Easting:	3,247,195.34 ft	Longitude:	-104.616672
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	352.82

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	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,531.5	30.95	239.55	6,482.1	-137.8	-234.4	3.00	3.00	0.00	239.55	
6,799.2	30.95	239.55	6,711.6	-207.5	-353.0	0.00	0.00	0.00	0.00	
7,609.4	90.00	0.49	7,207.2	219.7	-604.2	13.00	7.29	14.93	117.21	Entry Pt. 460'FSL &
7,610.8	90.00	0.50	7,207.2	221.1	-604.2	1.00	0.00	1.00	90.00	
11,884.9	90.00	0.50	7,207.2	4,495.0	-566.6	0.00	0.00	0.00	0.00	BHL 470'FNL & 77E

Database:	Landmark	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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 & 1384'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
4,900.0	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

Database:	Landmark	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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)
5,200.0	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
KOP - Start Build 3.00									
5,600.0	3.00	239.55	5,600.0	-1.3	-2.3	-1.0	3.00	3.00	0.00
5,700.0	6.00	239.55	5,699.6	-5.3	-9.0	-4.1	3.00	3.00	0.00
5,800.0	9.00	239.55	5,798.8	-11.9	-20.3	-9.3	3.00	3.00	0.00
5,900.0	12.00	239.55	5,897.1	-21.1	-36.0	-16.5	3.00	3.00	0.00
6,000.0	15.00	239.55	5,994.3	-33.0	-56.1	-25.7	3.00	3.00	0.00
6,100.0	18.00	239.55	6,090.2	-47.4	-80.6	-36.9	3.00	3.00	0.00
6,200.0	21.00	239.55	6,184.4	-64.3	-109.4	-50.1	3.00	3.00	0.00
6,300.0	24.00	239.55	6,276.8	-83.7	-142.3	-65.2	3.00	3.00	0.00
6,400.0	27.00	239.55	6,367.1	-105.5	-179.5	-82.2	3.00	3.00	0.00
6,500.0	30.00	239.55	6,454.9	-129.7	-220.6	-101.1	3.00	3.00	0.00
6,531.5	30.95	239.55	6,482.1	-137.8	-234.4	-107.4	3.00	3.00	0.00
6,600.0	30.95	239.55	6,540.8	-155.6	-264.7	-121.3	0.00	0.00	0.00
6,700.0	30.95	239.55	6,626.6	-181.7	-309.1	-141.6	0.00	0.00	0.00
6,799.2	30.95	239.55	6,711.7	-207.5	-353.0	-161.7	0.00	0.00	0.00
Start DLS 13.00 TFO 117.21									
6,800.0	30.90	239.74	6,712.4	-207.7	-353.4	-161.9	13.71	-6.25	23.74
6,900.0	27.30	265.65	6,800.1	-222.5	-398.6	-170.9	13.00	-3.60	25.90
7,000.0	29.12	293.09	6,888.6	-214.6	-444.1	-157.4	13.00	1.82	27.45
7,100.0	35.53	314.42	6,973.3	-184.6	-487.4	-122.2	13.00	6.41	21.33
7,200.0	44.58	329.03	7,049.9	-134.0	-526.4	-67.1	13.00	9.05	14.61
7,300.0	54.95	339.35	7,114.5	-65.3	-559.0	5.1	13.00	10.37	10.31
7,400.0	66.00	347.25	7,163.8	17.9	-583.6	90.8	13.00	11.04	7.91
7,500.0	77.38	353.88	7,195.2	111.4	-599.0	185.4	13.00	11.38	6.63
7,600.0	88.92	359.93	7,207.1	210.3	-604.3	284.2	13.00	11.53	6.05
7,609.4	90.00	0.49	7,207.2	219.7	-604.2	293.6	12.98	11.54	5.94
7" - Entry Pt. 460'FSL & 778'FWL									
7,610.8	90.00	0.50	7,207.2	221.1	-604.2	294.9	1.07	0.13	1.07
7,700.0	90.00	0.50	7,207.2	310.3	-603.4	383.4	0.00	0.00	0.00
7,800.0	90.00	0.50	7,207.2	410.3	-602.5	482.5	0.00	0.00	0.00
7,900.0	90.00	0.50	7,207.2	510.3	-601.7	581.6	0.00	0.00	0.00
8,000.0	90.00	0.50	7,207.2	610.3	-600.8	680.7	0.00	0.00	0.00
8,100.0	90.00	0.50	7,207.2	710.3	-599.9	779.8	0.00	0.00	0.00
8,200.0	90.00	0.50	7,207.2	810.3	-599.0	878.9	0.00	0.00	0.00
8,300.0	90.00	0.50	7,207.2	910.3	-598.1	978.0	0.00	0.00	0.00
8,400.0	90.00	0.50	7,207.2	1,010.3	-597.3	1,077.1	0.00	0.00	0.00
8,500.0	90.00	0.50	7,207.2	1,110.3	-596.4	1,176.2	0.00	0.00	0.00
8,600.0	90.00	0.50	7,207.2	1,210.3	-595.5	1,275.3	0.00	0.00	0.00
8,700.0	90.00	0.50	7,207.2	1,310.3	-594.6	1,374.4	0.00	0.00	0.00
8,800.0	90.00	0.50	7,207.2	1,410.3	-593.7	1,473.5	0.00	0.00	0.00
8,900.0	90.00	0.50	7,207.2	1,510.3	-592.9	1,572.6	0.00	0.00	0.00
9,000.0	90.00	0.50	7,207.2	1,610.3	-592.0	1,671.7	0.00	0.00	0.00
9,100.0	90.00	0.50	7,207.2	1,710.3	-591.1	1,770.8	0.00	0.00	0.00
9,200.0	90.00	0.50	7,207.2	1,810.3	-590.2	1,869.9	0.00	0.00	0.00
9,300.0	90.00	0.50	7,207.2	1,910.3	-589.3	1,969.0	0.00	0.00	0.00
9,400.0	90.00	0.50	7,207.2	2,010.3	-588.5	2,068.1	0.00	0.00	0.00
9,500.0	90.00	0.50	7,207.2	2,110.3	-587.6	2,167.2	0.00	0.00	0.00
9,600.0	90.00	0.50	7,207.2	2,210.3	-586.7	2,266.3	0.00	0.00	0.00
9,700.0	90.00	0.50	7,207.2	2,310.2	-585.8	2,365.4	0.00	0.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S	+E/-W	
			(ft)	(ft)	
	5,500.0	5,500.0	0.0	0.0	KOP - Start Build 3.00
	6,799.2	6,711.7	-207.5	-353.0	Start DLS 13.00 TFO 117.21
	11,884.9	7,207.2	4,495.1	-566.6	TD at 11884.9



Great Western

SEC.1-T1N-R65W

Taoka West Pad Sec.1-T1N-R65W

Taoka KF 01-023HC

Wellbore #1

Plan #1 (11-15-13)

Anticollision Report

19 November, 2013

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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	11,884.9	Plan #1 (11-15-13) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Taoka West Pad Sec.1-T1N-R65W						
Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)	4,133.3	4,133.3	59.9	41.5	3.263	CC, ES
Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)	4,200.0	4,198.5	60.5	41.9	3.246	SF
Taoka KF 01-022HN - Wellbore #1 - Plan #1 (11-15-13)	4,833.4	4,833.4	29.7	8.2	1.380	Level 3, CC, ES, SF
Taoka KF 01-025HN - Wellbore #1 - Plan #1 (11-15-13)	5,500.0	5,500.0	30.2	5.7	1.234	Level 2, CC, ES, SF
Taoka KF 01-027HN - Wellbore #1 - Plan #1 (11-15-13)	5,500.0	5,500.0	59.9	35.4	2.445	CC, ES, SF

Offset Design Taoka West Pad Sec.1-T1N-R65W - Taoka KF 01-021HN - Wellbore #1 - Plan #1 (11-15-13)													Offset Site Error: 0.0ft
Survey Program: 0-MWD													Offset Well Error: 0.0ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+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	-59.9	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-59.9	59.9	59.7	0.22	266.456	
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-59.9	59.9	59.2	0.67	88.819	
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-59.9	59.9	58.8	1.12	53.291	
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-59.9	59.9	58.3	1.57	38.065	
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-59.9	59.9	57.9	2.02	29.606	
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-59.9	59.9	57.4	2.47	24.223	
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-59.9	59.9	57.0	2.92	20.497	
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-59.9	59.9	56.5	3.37	17.764	
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	0.0	-59.9	59.9	50.7	9.22	6.499	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	0.0	-59.9	59.9	41.7	18.21	3.290	
4,133.3	4,133.3	4,133.3	4,133.3	9.2	9.2	-89.98	0.0	-59.9	59.9	41.5	18.36	3.263 CC, ES	
4,200.0	4,200.0	4,198.5	4,198.5	9.3	9.3	-90.09	-0.1	-60.5	60.5	41.9	18.64	3.246 SF	
4,300.0	4,300.0	4,295.2	4,295.1	9.6	9.5	-90.95	-1.1	-65.3	65.5	46.4	19.06	3.437	
4,400.0	4,400.0	4,391.3	4,390.6	9.8	9.7	-92.32	-3.0	-74.8	75.4	56.0	19.47	3.875	
4,500.0	4,500.0	4,486.1	4,484.3	10.0	9.9	-93.80	-5.9	-88.8	90.3	70.5	19.89	4.541	
4,600.0	4,600.0	4,579.2	4,575.6	10.2	10.1	-95.14	-9.6	-106.9	110.1	89.8	20.33	5.417	
4,700.0	4,700.0	4,670.3	4,663.9	10.5	10.3	-96.25	-14.1	-128.9	134.6	113.8	20.77	6.481	
4,800.0	4,800.0	4,759.1	4,748.8	10.7	10.6	-97.14	-19.3	-154.2	163.6	142.4	21.23	7.708	
4,900.0	4,900.0	4,845.2	4,830.0	10.9	10.9	-97.83	-25.1	-182.5	197.1	175.4	21.72	9.075	
5,000.0	5,000.0	4,928.5	4,907.1	11.1	11.2	-98.38	-31.4	-213.2	234.6	212.4	22.22	10.558	
5,100.0	5,100.0	5,008.7	4,980.1	11.4	11.6	-98.81	-38.1	-245.8	276.2	253.4	22.76	12.135	
5,200.0	5,200.0	5,085.8	5,048.8	11.6	12.0	-99.15	-45.1	-280.0	321.4	298.1	23.33	13.779	
5,300.0	5,300.0	5,159.8	5,113.4	11.8	12.4	-99.42	-52.3	-315.4	370.2	346.2	23.92	15.474	
5,400.0	5,400.0	5,244.4	5,186.3	12.0	13.0	-99.68	-61.0	-357.5	420.9	396.3	24.62	17.094	
5,500.0	5,500.0	5,330.5	5,260.5	12.2	13.6	-99.88	-69.8	-400.3	471.7	446.3	25.37	18.596	
5,600.0	5,600.0	5,417.9	5,335.7	12.5	14.3	19.94	-78.7	-443.8	520.3	496.1	24.24	21.466	
5,700.0	5,699.6	5,507.5	5,412.9	12.6	15.0	19.60	-87.8	-488.4	564.6	540.0	24.59	22.964	
5,800.0	5,798.8	5,599.2	5,491.9	12.8	15.8	19.49	-97.2	-534.0	604.4	579.5	24.91	24.266	
5,900.0	5,897.1	5,692.6	5,572.4	13.0	16.6	19.56	-106.7	-580.5	639.7	614.5	25.21	25.378	
6,000.0	5,994.3	5,787.6	5,654.2	13.3	17.5	19.80	-116.4	-627.8	670.4	644.9	25.48	26.307	
6,100.0	6,090.2	5,883.8	5,737.1	13.5	18.4	20.20	-126.2	-675.6	696.4	670.7	25.74	27.052	
6,200.0	6,184.4	5,981.1	5,820.9	13.8	19.3	20.74	-136.1	-724.0	717.8	691.8	26.00	27.611	
6,300.0	6,276.8	6,079.0	5,905.2	14.1	20.3	21.44	-146.1	-772.8	734.4	708.2	26.25	27.979	
6,400.0	6,367.1	6,177.5	5,990.0	14.5	21.3	22.29	-156.1	-821.8	746.5	720.0	26.52	28.144	
6,500.0	6,454.9	6,276.1	6,075.0	15.0	22.3	23.32	-166.2	-870.8	754.0	727.2	26.84	28.091	
6,600.0	6,540.8	6,374.7	6,159.9	15.6	23.3	24.51	-176.2	-919.9	758.1	730.7	27.47	27.596	
6,700.0	6,626.6	6,473.3	6,244.8	16.2	24.3	25.71	-186.3	-969.0	762.4	734.1	28.28	26.958	
6,800.0	6,712.4	6,571.9	6,329.8	16.9	25.3	26.74	-196.4	-1,018.0	767.0	737.8	29.15	26.308	
6,900.0	6,800.1	6,671.5	6,415.5	17.5	26.3	4.96	-206.5	-1,067.6	771.8	741.8	29.99	25.732	
7,000.0	6,888.6	6,769.5	6,500.0	18.0	27.3	-20.01	-216.5	-1,116.3	776.5	746.0	30.50	25.459	
7,100.0	6,973.3	6,865.7	6,583.0	18.5	28.3	-40.02	-224.0	-1,164.3	782.4	751.5	30.87	25.343	
7,200.0	7,049.9	6,973.3	6,675.3	18.9	29.2	-53.41	-210.9	-1,217.4	789.8	758.5	31.33	25.212	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,300.0	7,114.5	7,095.0	6,773.0	19.2	30.1	-62.24	-165.5	-1,273.3	798.1	766.2	31.94	24.989		
7,400.0	7,163.8	7,233.8	6,866.6	19.5	31.0	-68.10	-78.7	-1,326.5	806.0	773.2	32.75	24.607		
7,500.0	7,195.2	7,389.9	6,938.3	19.7	31.6	-71.61	53.0	-1,366.7	811.7	777.9	33.81	24.005		
7,600.0	7,207.1	7,557.0	6,966.2	20.1	31.9	-72.77	216.1	-1,381.4	813.7	778.5	35.15	23.151		
7,648.2	7,207.8	7,606.5	6,966.2	20.2	32.0	-72.72	265.5	-1,381.0	813.5	777.8	35.72	22.773		
7,700.0	7,207.2	7,658.2	6,966.2	20.5	32.1	-72.77	317.3	-1,380.5	813.6	777.3	36.38	22.368		
7,800.0	7,207.2	7,758.2	6,966.2	21.1	32.4	-72.77	417.3	-1,379.6	813.6	775.7	37.91	21.464		
7,900.0	7,207.2	7,858.2	6,966.2	21.8	32.7	-72.77	517.3	-1,378.7	813.6	773.9	39.72	20.484		
8,000.0	7,207.2	7,958.2	6,966.2	22.7	33.2	-72.77	617.3	-1,377.8	813.6	771.8	41.78	19.473		
8,100.0	7,207.2	8,058.2	6,966.2	23.8	33.7	-72.77	717.3	-1,376.9	813.6	769.5	44.05	18.469		
8,200.0	7,207.2	8,158.2	6,966.2	24.9	34.4	-72.77	817.3	-1,376.0	813.6	767.1	46.50	17.494		
8,300.0	7,207.2	8,258.2	6,966.2	26.2	35.1	-72.77	917.2	-1,375.1	813.5	764.4	49.11	16.566		
8,400.0	7,207.2	8,358.2	6,966.2	27.5	36.0	-72.77	1,017.2	-1,374.2	813.5	761.7	51.85	15.691		
8,500.0	7,207.2	8,458.2	6,966.2	28.9	36.9	-72.77	1,117.2	-1,373.3	813.5	758.8	54.69	14.874		
8,600.0	7,207.2	8,558.2	6,966.2	30.4	37.9	-72.77	1,217.2	-1,372.5	813.5	755.9	57.64	14.114		
8,700.0	7,207.2	8,658.2	6,966.2	31.9	39.0	-72.77	1,317.2	-1,371.6	813.5	752.8	60.66	13.411		
8,800.0	7,207.2	8,758.2	6,966.2	33.4	40.2	-72.77	1,417.2	-1,370.7	813.5	749.7	63.75	12.760		
8,900.0	7,207.2	8,858.2	6,966.2	35.0	41.5	-72.77	1,517.2	-1,369.8	813.5	746.6	66.90	12.159		
9,000.0	7,207.2	8,958.2	6,966.2	36.6	42.7	-72.77	1,617.2	-1,368.9	813.4	743.3	70.11	11.603		
9,100.0	7,207.2	9,058.2	6,966.2	38.2	44.1	-72.77	1,717.2	-1,368.0	813.4	740.1	73.35	11.089		
9,200.0	7,207.2	9,158.2	6,966.2	39.9	45.5	-72.77	1,817.2	-1,367.1	813.4	736.8	76.64	10.613		
9,300.0	7,207.2	9,258.2	6,966.2	41.6	46.9	-72.77	1,917.2	-1,366.2	813.4	733.4	79.96	10.172		
9,400.0	7,207.2	9,358.2	6,966.2	43.3	48.4	-72.77	2,017.2	-1,365.3	813.4	730.1	83.31	9.763		
9,500.0	7,207.2	9,458.2	6,966.2	45.0	49.9	-72.76	2,117.2	-1,364.4	813.4	726.7	86.69	9.383		
9,600.0	7,207.2	9,558.2	6,966.2	46.8	51.5	-72.76	2,217.2	-1,363.5	813.4	723.3	90.09	9.028		
9,700.0	7,207.2	9,658.2	6,966.2	48.5	53.0	-72.76	2,317.2	-1,362.6	813.3	719.8	93.51	8.698		
9,800.0	7,207.2	9,758.2	6,966.2	50.3	54.6	-72.76	2,417.2	-1,361.7	813.3	716.4	96.96	8.389		
9,900.0	7,207.2	9,858.2	6,966.2	52.0	56.2	-72.76	2,517.2	-1,360.8	813.3	712.9	100.41	8.100		
10,000.0	7,207.2	9,958.2	6,966.2	53.8	57.9	-72.76	2,617.2	-1,359.9	813.3	709.4	103.89	7.829		
10,100.0	7,207.2	10,058.2	6,966.2	55.6	59.5	-72.76	2,717.2	-1,359.0	813.3	705.9	107.38	7.574		
10,200.0	7,207.2	10,158.2	6,966.2	57.4	61.2	-72.76	2,817.2	-1,358.2	813.3	702.4	110.88	7.335		
10,300.0	7,207.2	10,258.2	6,966.2	59.2	62.9	-72.76	2,917.2	-1,357.3	813.3	698.9	114.39	7.110		
10,400.0	7,207.2	10,358.2	6,966.2	61.0	64.6	-72.76	3,017.2	-1,356.4	813.2	695.3	117.91	6.897		
10,500.0	7,207.2	10,458.2	6,966.2	62.9	66.3	-72.76	3,117.2	-1,355.5	813.2	691.8	121.44	6.697		
10,600.0	7,207.2	10,558.2	6,966.2	64.7	68.0	-72.76	3,217.2	-1,354.6	813.2	688.2	124.98	6.507		
10,700.0	7,207.2	10,658.2	6,966.2	66.5	69.8	-72.76	3,317.2	-1,353.7	813.2	684.7	128.53	6.327		
10,800.0	7,207.2	10,758.2	6,966.2	68.3	71.5	-72.76	3,417.1	-1,352.8	813.2	681.1	132.08	6.157		
10,900.0	7,207.2	10,858.2	6,966.2	70.2	73.3	-72.76	3,517.1	-1,351.9	813.2	677.5	135.64	5.995		
11,000.0	7,207.2	10,958.2	6,966.2	72.0	75.0	-72.76	3,617.1	-1,351.0	813.2	674.0	139.21	5.841		
11,100.0	7,207.2	11,058.2	6,966.2	73.9	76.8	-72.76	3,717.1	-1,350.1	813.1	670.4	142.78	5.695		
11,200.0	7,207.2	11,158.2	6,966.2	75.7	78.6	-72.76	3,817.1	-1,349.2	813.1	666.8	146.36	5.556		
11,300.0	7,207.2	11,258.2	6,966.2	77.6	80.3	-72.76	3,917.1	-1,348.3	813.1	663.2	149.94	5.423		
11,400.0	7,207.2	11,358.2	6,966.2	79.4	82.1	-72.76	4,017.1	-1,347.4	813.1	659.6	153.53	5.296		
11,500.0	7,207.2	11,458.2	6,966.2	81.3	83.9	-72.76	4,117.1	-1,346.5	813.1	656.0	157.12	5.175		
11,600.0	7,207.2	11,558.2	6,966.2	83.1	85.7	-72.76	4,217.1	-1,345.6	813.1	652.4	160.72	5.059		
11,700.0	7,207.2	11,658.2	6,966.2	85.0	87.5	-72.76	4,317.1	-1,344.7	813.1	648.7	164.32	4.948		
11,800.0	7,207.2	11,758.2	6,966.2	86.9	89.3	-72.76	4,417.1	-1,343.8	813.1	645.1	167.92	4.842		
11,858.6	7,207.2	11,816.8	6,966.2	88.0	90.4	-72.76	4,475.7	-1,343.3	813.0	643.0	170.04	4.782		
11,884.9	7,207.2	11,841.3	6,966.2	88.5	90.9	-72.76	4,500.2	-1,343.1	813.0	642.1	170.95	4.756		

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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 01-022HN - Wellbore #1 - Plan #1 (11-15-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	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	-29.7	29.7					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-29.7	29.7	29.4	0.22	131.983		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-29.7	29.7	29.0	0.67	43.994		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-29.7	29.7	28.5	1.12	26.397		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-29.7	29.7	28.1	1.57	18.855		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-29.7	29.7	27.6	2.02	14.665		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-29.7	29.7	27.2	2.47	11.998		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-29.7	29.7	26.7	2.92	10.153		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-29.7	29.7	26.3	3.37	8.799		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	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	-89.98	0.0	-29.7	29.7	8.3	21.35	1.389 Level 3		
4,833.4	4,833.4	4,833.4	4,833.4	10.8	10.8	-89.98	0.0	-29.7	29.7	8.2	21.50	1.380 Level 3, CC, ES, SF		
4,900.0	4,900.0	4,899.3	4,899.3	10.9	10.9	-90.36	-0.2	-30.3	30.3	8.5	21.79	1.389 Level 3		
5,000.0	5,000.0	4,997.5	4,997.4	11.1	11.1	-92.98	-1.8	-35.1	35.2	13.0	22.20	1.585		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,100.0	5,095.0	5,094.4	11.4	11.3	-96.47	-5.0	-44.5	45.2	22.5	22.62	1.997	
5,200.0	5,200.0	5,191.3	5,189.4	11.6	11.5	-99.51	-9.8	-58.4	60.2	37.2	23.04	2.613	
5,300.0	5,300.0	5,285.8	5,282.0	11.8	11.7	-101.77	-15.9	-76.5	80.2	56.7	23.47	3.418	
5,400.0	5,400.0	5,378.1	5,371.4	12.0	11.9	-103.37	-23.4	-98.4	105.1	81.1	23.91	4.394	
5,500.0	5,500.0	5,468.1	5,457.3	12.2	12.2	-104.50	-31.9	-123.5	134.5	110.2	24.36	5.521	
5,600.0	5,600.0	5,556.0	5,540.1	12.5	12.4	15.10	-41.6	-151.8	166.0	141.5	24.57	6.758	
5,700.0	5,699.6	5,642.9	5,620.3	12.6	12.8	14.76	-52.3	-183.2	197.1	172.3	24.85	7.932	
5,800.0	5,798.8	5,728.6	5,697.9	12.8	13.1	14.71	-64.0	-217.6	227.7	202.6	25.08	9.076	
5,900.0	5,897.1	5,813.2	5,772.9	13.0	13.6	14.84	-76.6	-254.8	257.6	232.3	25.27	10.194	
6,000.0	5,994.3	5,902.0	5,849.8	13.3	14.1	15.13	-90.9	-296.7	286.6	261.2	25.43	11.271	
6,100.0	6,090.2	5,998.7	5,933.2	13.5	14.7	15.64	-106.7	-343.1	311.5	285.9	25.57	12.181	
6,200.0	6,184.4	6,096.6	6,017.6	13.8	15.4	16.34	-122.7	-389.9	331.6	305.9	25.71	12.899	
6,300.0	6,276.8	6,195.2	6,102.7	14.1	16.1	17.23	-138.8	-437.2	346.8	320.9	25.83	13.423	
6,400.0	6,367.1	6,294.4	6,188.3	14.5	16.9	18.34	-154.9	-484.6	357.1	331.2	25.98	13.749	
6,500.0	6,454.9	6,393.8	6,274.1	15.0	17.7	19.69	-171.2	-532.3	362.7	336.6	26.16	13.867	
6,600.0	6,540.8	6,493.3	6,359.8	15.6	18.6	21.27	-187.4	-579.9	364.8	338.1	26.71	13.661	
6,700.0	6,626.6	6,592.7	6,445.6	16.2	19.4	22.85	-203.6	-627.5	366.9	339.5	27.46	13.362	
6,800.0	6,712.4	6,692.8	6,532.0	16.9	20.3	24.33	-219.5	-675.5	369.3	341.0	28.30	13.049	
6,900.0	6,800.1	6,793.6	6,620.0	17.5	21.1	4.14	-220.3	-724.2	372.1	342.8	29.25	12.722	
7,000.0	6,888.6	6,891.2	6,703.2	18.0	21.8	-17.67	-199.4	-770.1	375.3	345.5	29.85	12.575	
7,100.0	6,973.3	6,986.0	6,778.5	18.5	22.3	-33.47	-159.4	-811.4	378.9	348.8	30.06	12.604	
7,200.0	7,049.9	7,078.6	6,843.2	18.9	22.8	-42.67	-103.6	-846.7	382.5	352.5	29.96	12.769	
7,300.0	7,114.5	7,169.3	6,895.3	19.2	23.1	-47.68	-35.2	-875.0	385.8	356.1	29.71	12.986	
7,400.0	7,163.8	7,258.7	6,933.7	19.5	23.4	-50.32	42.6	-895.6	388.4	358.8	29.60	13.123	
7,500.0	7,195.2	7,347.0	6,957.5	19.7	23.6	-51.58	126.6	-908.0	390.2	360.3	29.92	13.042	
7,600.0	7,207.1	7,434.9	6,966.2	20.1	23.9	-51.95	213.8	-912.1	390.9	360.1	30.86	12.667	
7,700.0	7,207.2	7,534.1	6,966.2	20.5	24.1	-51.94	313.0	-911.2	390.9	358.9	32.09	12.183	
7,800.0	7,207.2	7,634.1	6,966.2	21.1	24.5	-51.94	413.0	-910.4	390.9	357.4	33.53	11.661	
7,900.0	7,207.2	7,734.1	6,966.2	21.8	25.1	-51.94	513.0	-909.5	390.9	355.8	35.19	11.110	
8,000.0	7,207.2	7,834.1	6,966.2	22.7	25.8	-51.94	613.0	-908.6	390.9	353.9	37.04	10.554	
8,100.0	7,207.2	7,934.1	6,966.2	23.8	26.6	-51.94	713.0	-907.7	390.9	351.9	39.06	10.008	
8,200.0	7,207.2	8,034.1	6,966.2	24.9	27.6	-51.94	813.0	-906.8	390.9	349.7	41.22	9.483	
8,300.0	7,207.2	8,134.1	6,966.2	26.2	28.7	-51.94	913.0	-906.0	390.9	347.4	43.51	8.986	
8,400.0	7,207.2	8,234.1	6,966.2	27.5	29.8	-51.94	1,013.0	-905.1	390.9	345.1	45.89	8.519	
8,500.0	7,207.2	8,334.1	6,966.2	28.9	31.1	-51.94	1,113.0	-904.2	390.9	342.6	48.36	8.084	
8,600.0	7,207.2	8,434.1	6,966.2	30.4	32.4	-51.94	1,213.0	-903.3	390.9	340.0	50.91	7.680	
8,700.0	7,207.2	8,534.1	6,966.2	31.9	33.8	-51.94	1,313.0	-902.4	390.9	337.4	53.52	7.305	
8,800.0	7,207.2	8,634.1	6,966.2	33.4	35.2	-51.94	1,413.0	-901.6	390.9	334.8	56.18	6.959	
8,900.0	7,207.2	8,734.1	6,966.2	35.0	36.7	-51.94	1,513.0	-900.7	390.9	332.1	58.89	6.638	
9,000.0	7,207.2	8,834.1	6,966.2	36.6	38.2	-51.94	1,613.0	-899.8	390.9	329.3	61.64	6.342	
9,100.0	7,207.2	8,934.1	6,966.2	38.2	39.8	-51.94	1,713.0	-898.9	390.9	326.5	64.43	6.067	
9,200.0	7,207.2	9,034.1	6,966.2	39.9	41.4	-51.94	1,813.0	-898.0	390.9	323.7	67.25	5.813	
9,300.0	7,207.2	9,134.1	6,966.2	41.6	43.0	-51.94	1,913.0	-897.2	390.9	320.8	70.10	5.577	
9,400.0	7,207.2	9,234.1	6,966.2	43.3	44.6	-51.94	2,013.0	-896.3	390.9	318.0	72.97	5.357	
9,500.0	7,207.2	9,334.1	6,966.2	45.0	46.3	-51.94	2,113.0	-895.4	390.9	315.1	75.87	5.153	
9,600.0	7,207.2	9,434.1	6,966.2	46.8	48.0	-51.94	2,213.0	-894.5	390.9	312.2	78.78	4.962	
9,700.0	7,207.2	9,534.1	6,966.2	48.5	49.7	-51.94	2,313.0	-893.6	390.9	309.2	81.71	4.784	
9,800.0	7,207.2	9,634.1	6,966.2	50.3	51.4	-51.94	2,413.0	-892.8	390.9	306.3	84.66	4.618	
9,900.0	7,207.2	9,734.1	6,966.2	52.0	53.1	-51.94	2,512.9	-891.9	390.9	303.3	87.62	4.462	
10,000.0	7,207.2	9,834.1	6,966.2	53.8	54.9	-51.94	2,612.9	-891.0	390.9	300.3	90.59	4.316	
10,100.0	7,207.2	9,934.1	6,966.2	55.6	56.6	-51.94	2,712.9	-890.1	390.9	297.4	93.57	4.178	
10,200.0	7,207.2	10,034.1	6,966.2	57.4	58.4	-51.94	2,812.9	-889.2	390.9	294.4	96.56	4.048	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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 01-022HN - Wellbore #1 - Plan #1 (11-15-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,207.2	10,134.1	6,966.2	59.2	60.2	-51.94	2,912.9	-888.4	390.9	291.4	99.57	3.926	
10,400.0	7,207.2	10,234.1	6,966.2	61.0	62.0	-51.94	3,012.9	-887.5	390.9	288.4	102.58	3.811	
10,500.0	7,207.2	10,334.1	6,966.2	62.9	63.8	-51.94	3,112.9	-886.6	390.9	285.3	105.60	3.702	
10,600.0	7,207.2	10,434.1	6,966.2	64.7	65.6	-51.94	3,212.9	-885.7	390.9	282.3	108.62	3.599	
10,700.0	7,207.2	10,534.1	6,966.2	66.5	67.4	-51.94	3,312.9	-884.8	390.9	279.3	111.66	3.501	
10,800.0	7,207.2	10,634.1	6,966.2	68.3	69.2	-51.94	3,412.9	-884.0	390.9	276.2	114.70	3.408	
10,900.0	7,207.2	10,734.1	6,966.2	70.2	71.0	-51.94	3,512.9	-883.1	390.9	273.2	117.74	3.320	
11,000.0	7,207.2	10,834.1	6,966.2	72.0	72.8	-51.94	3,612.9	-882.2	390.9	270.1	120.79	3.236	
11,100.0	7,207.2	10,934.1	6,966.2	73.9	74.6	-51.94	3,712.9	-881.3	390.9	267.1	123.84	3.157	
11,200.0	7,207.2	11,034.1	6,966.2	75.7	76.5	-51.94	3,812.9	-880.4	390.9	264.0	126.90	3.081	
11,300.0	7,207.2	11,134.1	6,966.2	77.6	78.3	-51.94	3,912.9	-879.6	390.9	261.0	129.97	3.008	
11,400.0	7,207.2	11,234.1	6,966.2	79.4	80.1	-51.94	4,012.9	-878.7	390.9	257.9	133.03	2.939	
11,500.0	7,207.2	11,334.1	6,966.2	81.3	82.0	-51.94	4,112.9	-877.8	390.9	254.8	136.10	2.872	
11,600.0	7,207.2	11,434.1	6,966.2	83.1	83.8	-51.94	4,212.9	-876.9	390.9	251.8	139.18	2.809	
11,700.0	7,207.2	11,534.1	6,966.2	85.0	85.7	-51.94	4,312.9	-876.0	390.9	248.7	142.25	2.748	
11,800.0	7,207.2	11,634.1	6,966.2	86.9	87.5	-51.94	4,412.9	-875.2	390.9	245.6	145.33	2.690	
11,861.4	7,207.2	11,695.5	6,966.2	88.0	88.7	-51.94	4,474.3	-874.6	390.9	243.7	147.22	2.655	
11,884.9	7,207.2	11,718.1	6,966.2	88.5	89.1	-51.94	4,496.9	-874.4	390.9	243.0	147.93	2.643	

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	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	30.2	30.2				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	30.2	30.2	30.0	0.22	134.473	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	30.2	30.2	29.6	0.67	44.824	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	30.2	30.2	29.1	1.12	26.895	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	30.2	30.2	28.7	1.57	19.210	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	30.2	30.2	28.2	2.02	14.941	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	30.2	30.2	27.8	2.47	12.225	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	30.2	30.2	27.3	2.92	10.344	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	30.2	30.2	26.9	3.37	8.965	
900.0	900.0	900.0	900.0	1.9	1.9	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	0.0	30.2	30.2	22.8	7.42	4.075	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	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	90.02	0.0	30.2	30.2	12.0	18.21	1.660	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	90.02	0.0	30.2	30.2	11.6	18.66	1.620	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	90.02	0.0	30.2	30.2	11.1	19.11	1.582	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	90.02	0.0	30.2	30.2	10.7	19.55	1.546	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	90.02	0.0	30.2	30.2	10.2	20.00	1.511	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	90.02	0.0	30.2	30.2	9.8	20.45	1.478 Level 3	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	90.02	0.0	30.2	30.2	9.3	20.90	1.446 Level 3	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	90.02	0.0	30.2	30.2	8.9	21.35	1.416 Level 3	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	90.02	0.0	30.2	30.2	8.4	21.80	1.386 Level 3	
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	90.02	0.0	30.2	30.2	8.0	22.25	1.358 Level 3	
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	90.02	0.0	30.2	30.2	7.5	22.70	1.331 Level 3	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	90.02	0.0	30.2	30.2	7.1	23.15	1.306	Level 3	
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	90.02	0.0	30.2	30.2	6.6	23.60	1.281	Level 3	
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	90.02	0.0	30.2	30.2	6.2	24.05	1.257	Level 3	
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	90.02	0.0	30.2	30.2	5.7	24.50	1.234	Level 2, CC, ES, SF	
5,600.0	5,600.0	5,600.0	5,600.0	12.5	12.5	-151.84	0.0	30.2	32.5	7.6	24.90	1.305	Level 3	
5,700.0	5,699.6	5,699.6	5,699.6	12.6	12.7	-157.12	0.0	30.2	39.6	14.4	25.24	1.569		
5,800.0	5,798.8	5,801.6	5,801.5	12.8	12.9	-160.72	-2.2	28.7	50.0	24.5	25.48	1.961		
5,900.0	5,897.1	5,905.4	5,904.4	13.0	13.1	-157.73	-13.1	20.9	57.9	32.3	25.67	2.257		
6,000.0	5,994.3	6,009.2	6,005.2	13.3	13.3	-149.94	-33.1	6.8	63.8	37.9	25.90	2.463		
6,100.0	6,090.2	6,111.9	6,101.8	13.5	13.5	-138.34	-61.4	-13.4	69.6	43.3	26.30	2.647		
6,200.0	6,184.4	6,212.4	6,192.2	13.8	13.8	-124.39	-97.3	-38.9	78.2	51.2	26.99	2.898		
6,300.0	6,276.8	6,310.2	6,276.9	14.1	14.1	-112.36	-137.0	-67.1	92.2	64.3	27.88	3.308		
6,400.0	6,367.1	6,408.0	6,361.5	14.5	14.5	-105.97	-176.9	-95.4	110.4	81.6	28.77	3.837		
6,500.0	6,454.9	6,526.1	6,467.6	15.0	15.0	-107.04	-214.1	-130.8	123.9	94.3	29.65	4.180		
6,600.0	6,540.8	6,643.1	6,578.1	15.6	15.4	-120.72	-220.9	-167.5	122.9	93.1	29.82	4.122		
6,670.4	6,601.2	6,714.8	6,645.3	16.0	15.6	-135.36	-209.7	-189.6	120.5	91.4	29.11	4.140		
6,700.0	6,626.6	6,741.7	6,669.9	16.2	15.7	-142.07	-202.6	-197.7	121.3	92.7	28.64	4.235		
6,800.0	6,712.4	6,818.7	6,737.6	16.9	15.8	-163.37	-173.6	-219.9	140.1	112.8	27.31	5.129		
6,900.0	6,800.1	6,883.7	6,790.4	17.5	15.9	154.07	-139.8	-237.1	181.7	153.4	28.27	6.428		
7,000.0	6,888.6	6,945.9	6,835.9	18.0	16.0	116.39	-100.2	-251.8	229.8	199.5	30.28	7.588		
7,100.0	6,973.3	7,006.2	6,874.6	18.5	16.0	89.74	-55.7	-264.3	275.9	244.6	31.34	8.803		
7,200.0	7,049.9	7,065.3	6,906.6	18.9	16.1	73.04	-7.1	-274.5	316.3	285.1	31.19	10.143		
7,300.0	7,114.5	7,125.0	6,932.4	19.2	16.2	62.82	46.0	-282.6	349.2	319.1	30.11	11.600		
7,400.0	7,163.8	7,181.6	6,950.3	19.5	16.4	56.74	99.4	-288.1	373.5	344.9	28.64	13.041		
7,500.0	7,195.2	7,239.2	6,961.8	19.7	16.6	53.44	155.7	-291.5	388.6	361.2	27.36	14.205		
7,600.0	7,207.1	7,300.0	6,966.2	20.1	17.0	52.30	216.3	-292.5	394.1	367.3	26.77	14.718		
7,700.0	7,207.2	7,391.5	6,966.2	20.5	17.5	52.29	307.8	-291.7	394.0	366.4	27.62	14.264		
7,800.0	7,207.2	7,491.5	6,966.2	21.1	18.3	52.28	407.8	-290.9	393.9	365.0	28.90	13.630		
7,900.0	7,207.2	7,591.5	6,966.2	21.8	19.2	52.28	507.8	-290.1	393.9	363.4	30.46	12.932		
8,000.0	7,207.2	7,691.5	6,966.2	22.7	20.3	52.27	607.8	-289.3	393.8	361.6	32.25	12.212		
8,100.0	7,207.2	7,791.5	6,966.2	23.8	21.5	52.26	707.8	-288.5	393.8	359.5	34.24	11.501		
8,200.0	7,207.2	7,891.5	6,966.2	24.9	22.8	52.26	807.8	-287.7	393.7	357.3	36.39	10.818		
8,300.0	7,207.2	7,991.5	6,966.2	26.2	24.2	52.25	907.8	-286.9	393.6	355.0	38.68	10.176		
8,400.0	7,207.2	8,091.5	6,966.2	27.5	25.6	52.24	1,007.8	-286.1	393.6	352.5	41.09	9.579		
8,500.0	7,207.2	8,191.5	6,966.2	28.9	27.1	52.24	1,107.8	-285.3	393.5	349.9	43.59	9.028		
8,600.0	7,207.2	8,291.5	6,966.2	30.4	28.7	52.23	1,207.8	-284.5	393.5	347.3	46.17	8.522		
8,700.0	7,207.2	8,391.5	6,966.2	31.9	30.3	52.22	1,307.8	-283.7	393.4	344.6	48.82	8.058		
8,800.0	7,207.2	8,491.5	6,966.2	33.4	31.9	52.22	1,407.8	-282.9	393.4	341.8	51.53	7.634		
8,900.0	7,207.2	8,591.5	6,966.2	35.0	33.5	52.21	1,507.8	-282.1	393.3	339.0	54.28	7.246		
9,000.0	7,207.2	8,691.5	6,966.2	36.6	35.2	52.20	1,607.8	-281.3	393.2	336.2	57.07	6.890		
9,100.0	7,207.2	8,791.5	6,966.2	38.2	36.9	52.20	1,707.8	-280.4	393.2	333.3	59.90	6.564		
9,200.0	7,207.2	8,891.5	6,966.2	39.9	38.7	52.19	1,807.8	-279.6	393.1	330.4	62.76	6.264		
9,300.0	7,207.2	8,991.5	6,966.2	41.6	40.4	52.18	1,907.8	-278.8	393.1	327.4	65.65	5.987		
9,400.0	7,207.2	9,091.5	6,966.2	43.3	42.2	52.18	2,007.8	-278.0	393.0	324.5	68.56	5.732		
9,500.0	7,207.2	9,191.5	6,966.2	45.0	43.9	52.17	2,107.8	-277.2	393.0	321.5	71.49	5.497		
9,600.0	7,207.2	9,291.5	6,966.2	46.8	45.7	52.17	2,207.7	-276.4	392.9	318.5	74.44	5.278		
9,700.0	7,207.2	9,391.5	6,966.2	48.5	47.5	52.16	2,307.7	-275.6	392.8	315.4	77.40	5.076		
9,800.0	7,207.2	9,491.5	6,966.2	50.3	49.3	52.15	2,407.7	-274.8	392.8	312.4	80.38	4.887		
9,900.0	7,207.2	9,591.5	6,966.2	52.0	51.1	52.15	2,507.7	-274.0	392.7	309.4	83.37	4.711		
10,000.0	7,207.2	9,691.5	6,966.2	53.8	52.9	52.14	2,607.7	-273.2	392.7	306.3	86.37	4.547		
10,100.0	7,207.2	9,791.5	6,966.2	55.6	54.7	52.13	2,707.7	-272.4	392.6	303.2	89.38	4.393		
10,200.0	7,207.2	9,891.5	6,966.2	57.4	56.6	52.13	2,807.7	-271.6	392.6	300.2	92.39	4.249		

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

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		Offset		Semi Major Axis			Distance					Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation		Separation Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
10,300.0	7,207.2	9,991.5	6,966.2	59.2	58.4	52.12	2,907.7	-270.8	392.5	297.1	95.42	4.113	
10,400.0	7,207.2	10,091.5	6,966.2	61.0	60.2	52.11	3,007.7	-270.0	392.4	294.0	98.45	3.986	
10,500.0	7,207.2	10,191.5	6,966.2	62.9	62.1	52.11	3,107.7	-269.2	392.4	290.9	101.49	3.866	
10,600.0	7,207.2	10,291.5	6,966.2	64.7	63.9	52.10	3,207.7	-268.3	392.3	287.8	104.54	3.753	
10,700.0	7,207.2	10,391.5	6,966.2	66.5	65.8	52.09	3,307.7	-267.5	392.3	284.7	107.59	3.646	
10,800.0	7,207.2	10,491.5	6,966.2	68.3	67.6	52.09	3,407.7	-266.7	392.2	281.6	110.65	3.545	
10,900.0	7,207.2	10,591.5	6,966.2	70.2	69.5	52.08	3,507.7	-265.9	392.2	278.4	113.71	3.449	
11,000.0	7,207.2	10,691.5	6,966.2	72.0	71.4	52.07	3,607.7	-265.1	392.1	275.3	116.77	3.358	
11,100.0	7,207.2	10,791.5	6,966.2	73.9	73.2	52.07	3,707.7	-264.3	392.0	272.2	119.84	3.271	
11,200.0	7,207.2	10,891.5	6,966.2	75.7	75.1	52.06	3,807.7	-263.5	392.0	269.1	122.91	3.189	
11,300.0	7,207.2	10,991.5	6,966.2	77.6	77.0	52.05	3,907.7	-262.7	391.9	265.9	125.99	3.111	
11,400.0	7,207.2	11,091.5	6,966.2	79.4	78.8	52.05	4,007.7	-261.9	391.9	262.8	129.07	3.036	
11,500.0	7,207.2	11,191.5	6,966.2	81.3	80.7	52.04	4,107.7	-261.1	391.8	259.7	132.15	2.965	
11,600.0	7,207.2	11,291.5	6,966.2	83.1	82.6	52.03	4,207.7	-260.3	391.8	256.5	135.23	2.897	
11,700.0	7,207.2	11,391.5	6,966.2	85.0	84.5	52.03	4,307.7	-259.5	391.7	253.4	138.31	2.832	
11,800.0	7,207.2	11,491.5	6,966.2	86.9	86.3	52.02	4,407.7	-258.7	391.6	250.2	141.40	2.770	
11,884.9	7,207.2	11,576.4	6,966.2	88.5	87.9	52.02	4,492.6	-258.0	391.6	247.6	144.02	2.719	

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	89.97	0.0	59.9	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	89.97	0.0	59.9	59.9	59.7	0.22	266.456	
200.0	200.0	200.0	200.0	0.3	0.3	89.97	0.0	59.9	59.9	59.2	0.67	88.819	
300.0	300.0	300.0	300.0	0.6	0.6	89.97	0.0	59.9	59.9	58.8	1.12	53.291	
400.0	400.0	400.0	400.0	0.8	0.8	89.97	0.0	59.9	59.9	58.3	1.57	38.065	
500.0	500.0	500.0	500.0	1.0	1.0	89.97	0.0	59.9	59.9	57.9	2.02	29.606	
600.0	600.0	600.0	600.0	1.2	1.2	89.97	0.0	59.9	59.9	57.4	2.47	24.223	
700.0	700.0	700.0	700.0	1.5	1.5	89.97	0.0	59.9	59.9	57.0	2.92	20.497	
800.0	800.0	800.0	800.0	1.7	1.7	89.97	0.0	59.9	59.9	56.5	3.37	17.764	
900.0	900.0	900.0	900.0	1.9	1.9	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	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	89.97	0.0	59.9	59.9	38.5	21.35	2.805	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	89.97	0.0	59.9	59.9	38.1	21.80	2.747	
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	89.97	0.0	59.9	59.9	37.6	22.25	2.691	
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	89.97	0.0	59.9	59.9	37.2	22.70	2.638	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	89.97	0.0	59.9	59.9	36.7	23.15	2.587		
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	89.97	0.0	59.9	59.9	36.3	23.60	2.538		
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	89.97	0.0	59.9	59.9	35.8	24.05	2.490		
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	89.97	0.0	59.9	59.9	35.4	24.50	2.445 CC, ES, SF		
5,600.0	5,600.0	5,600.0	5,600.0	12.5	12.5	-150.77	0.0	59.9	62.2	37.3	24.91	2.496		
5,700.0	5,699.6	5,698.2	5,698.2	12.6	12.7	-152.46	-1.5	60.7	69.9	44.6	25.22	2.770		
5,800.0	5,798.8	5,794.8	5,794.4	12.8	12.8	-151.27	-8.6	64.6	85.0	59.5	25.46	3.339		
5,900.0	5,897.1	5,889.1	5,887.7	13.0	13.0	-148.51	-21.0	71.3	107.6	82.0	25.67	4.193		
6,000.0	5,994.3	5,980.4	5,976.8	13.3	13.2	-145.38	-38.1	80.5	137.8	111.9	25.88	5.326		
6,100.0	6,090.2	6,067.8	6,060.8	13.5	13.4	-142.39	-59.2	91.9	175.3	149.2	26.09	6.720		
6,200.0	6,184.4	6,150.7	6,139.1	13.8	13.6	-139.68	-83.3	104.9	219.8	193.5	26.32	8.349		
6,300.0	6,276.8	6,228.7	6,211.2	14.1	13.8	-137.21	-109.5	119.1	270.8	244.2	26.59	10.182		
6,400.0	6,367.1	6,300.0	6,275.5	14.5	14.0	-134.92	-136.5	133.6	327.7	300.8	26.90	12.180		
6,500.0	6,454.9	6,369.5	6,336.7	15.0	14.2	-132.67	-165.5	149.3	390.0	362.7	27.30	14.284		
6,600.0	6,540.8	6,448.3	6,406.3	15.6	14.6	-132.43	-196.9	168.5	455.5	427.7	27.85	16.355		
6,700.0	6,626.6	6,529.9	6,482.7	16.2	14.9	-134.78	-215.8	189.7	520.2	491.9	28.33	18.366		
6,800.0	6,712.4	6,605.3	6,555.1	16.9	15.1	-138.39	-220.0	209.9	585.0	556.3	28.66	20.408		
6,900.0	6,800.1	6,675.0	6,621.8	17.5	15.3	-175.47	-212.4	228.6	652.2	624.1	28.07	23.236		
7,000.0	6,888.6	6,744.3	6,686.0	18.0	15.4	147.20	-194.2	246.7	720.1	691.5	28.68	25.111		
7,100.0	6,973.3	6,815.7	6,748.6	18.5	15.5	118.63	-164.7	264.4	784.9	755.0	29.95	26.208		
7,200.0	7,049.9	6,891.9	6,809.3	18.9	15.6	99.74	-122.2	281.7	843.2	812.3	30.91	27.279		
7,300.0	7,114.5	6,975.0	6,866.3	19.2	15.7	87.84	-64.2	298.0	892.3	861.0	31.23	28.566		
7,400.0	7,163.8	7,065.6	6,915.3	19.5	15.8	80.65	10.5	312.3	929.7	898.6	31.16	29.833		
7,500.0	7,195.2	7,163.8	6,950.6	19.7	15.9	76.78	101.3	322.8	953.7	922.5	31.20	30.568		
7,600.0	7,207.1	7,267.0	6,965.9	20.1	16.4	75.50	203.0	327.8	962.8	931.0	31.76	30.313		
7,700.0	7,207.2	7,367.9	6,966.2	20.5	17.0	75.50	303.9	328.6	962.7	929.7	32.94	29.223		
7,800.0	7,207.2	7,467.9	6,966.2	21.1	17.8	75.50	403.9	329.3	962.5	928.0	34.47	27.921		
7,900.0	7,207.2	7,567.9	6,966.2	21.8	18.8	75.50	503.9	330.0	962.3	926.0	36.32	26.495		
8,000.0	7,207.2	7,667.9	6,966.2	22.7	19.9	75.49	603.9	330.7	962.1	923.7	38.44	25.029		
8,100.0	7,207.2	7,767.9	6,966.2	23.8	21.1	75.49	703.8	331.4	962.0	921.2	40.79	23.582		
8,200.0	7,207.2	7,867.9	6,966.2	24.9	22.4	75.49	803.8	332.0	961.8	918.4	43.34	22.193		
8,300.0	7,207.2	7,967.9	6,966.2	26.2	23.8	75.49	903.8	332.7	961.6	915.6	46.04	20.885		
8,400.0	7,207.2	8,067.9	6,966.2	27.5	25.2	75.48	1,003.8	333.4	961.4	912.5	48.88	19.669		
8,500.0	7,207.2	8,167.9	6,966.2	28.9	26.7	75.48	1,103.8	334.1	961.2	909.4	51.83	18.545		
8,600.0	7,207.2	8,267.9	6,966.2	30.4	28.3	75.48	1,203.8	334.8	961.1	906.2	54.88	17.513		
8,700.0	7,207.2	8,367.9	6,966.2	31.9	29.9	75.47	1,303.8	335.5	960.9	902.9	58.00	16.566		
8,800.0	7,207.2	8,467.9	6,966.2	33.4	31.5	75.47	1,403.8	336.2	960.7	899.5	61.19	15.699		
8,900.0	7,207.2	8,567.9	6,966.2	35.0	33.2	75.47	1,503.8	336.9	960.5	896.1	64.44	14.905		
9,000.0	7,207.2	8,667.9	6,966.2	36.6	34.9	75.47	1,603.8	337.6	960.3	892.6	67.74	14.177		
9,100.0	7,207.2	8,767.9	6,966.2	38.2	36.6	75.46	1,703.8	338.3	960.2	889.1	71.08	13.508		
9,200.0	7,207.2	8,867.9	6,966.2	39.9	38.3	75.46	1,803.8	339.0	960.0	885.5	74.46	12.893		
9,300.0	7,207.2	8,967.9	6,966.2	41.6	40.1	75.46	1,903.8	339.7	959.8	881.9	77.86	12.327		
9,400.0	7,207.2	9,067.9	6,966.2	43.3	41.8	75.45	2,003.8	340.4	959.6	878.3	81.30	11.804		
9,500.0	7,207.2	9,167.9	6,966.2	45.0	43.6	75.45	2,103.8	341.1	959.4	874.7	84.76	11.320		
9,600.0	7,207.2	9,267.9	6,966.2	46.8	45.4	75.45	2,203.8	341.8	959.3	871.0	88.24	10.871		
9,700.0	7,207.2	9,367.9	6,966.2	48.5	47.2	75.45	2,303.8	342.5	959.1	867.3	91.74	10.454		
9,800.0	7,207.2	9,467.9	6,966.2	50.3	49.0	75.44	2,403.8	343.1	958.9	863.6	95.26	10.067		
9,900.0	7,207.2	9,567.9	6,966.2	52.0	50.8	75.44	2,503.8	343.8	958.7	859.9	98.79	9.705		
10,000.0	7,207.2	9,667.9	6,966.2	53.8	52.6	75.44	2,603.8	344.5	958.5	856.2	102.33	9.367		
10,100.0	7,207.2	9,767.9	6,966.2	55.6	54.5	75.44	2,703.8	345.2	958.4	852.5	105.89	9.051		
10,200.0	7,207.2	9,867.9	6,966.2	57.4	56.3	75.43	2,803.8	345.9	958.2	848.7	109.46	8.754		
10,300.0	7,207.2	9,967.9	6,966.2	59.2	58.1	75.43	2,903.8	346.6	958.0	845.0	113.04	8.475		

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

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		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,400.0	7,207.2	10,067.9	6,966.2	61.0	60.0	75.43	3,003.8	347.3	957.8	841.2	116.62	8.213		
10,500.0	7,207.2	10,167.9	6,966.2	62.9	61.8	75.42	3,103.8	348.0	957.6	837.4	120.22	7.966		
10,600.0	7,207.2	10,267.9	6,966.2	64.7	63.7	75.42	3,203.8	348.7	957.5	833.6	123.82	7.733		
10,700.0	7,207.2	10,367.9	6,966.2	66.5	65.5	75.42	3,303.8	349.4	957.3	829.9	127.43	7.512		
10,800.0	7,207.2	10,467.9	6,966.2	68.3	67.4	75.42	3,403.8	350.1	957.1	826.1	131.05	7.304		
10,900.0	7,207.2	10,567.9	6,966.2	70.2	69.3	75.41	3,503.8	350.8	956.9	822.3	134.67	7.106		
11,000.0	7,207.2	10,667.9	6,966.2	72.0	71.1	75.41	3,603.8	351.5	956.7	818.5	138.29	6.918		
11,100.0	7,207.2	10,767.9	6,966.2	73.9	73.0	75.41	3,703.8	352.2	956.6	814.6	141.93	6.740		
11,200.0	7,207.2	10,867.9	6,966.2	75.7	74.9	75.40	3,803.8	352.9	956.4	810.8	145.56	6.570		
11,300.0	7,207.2	10,967.9	6,966.2	77.6	76.7	75.40	3,903.8	353.6	956.2	807.0	149.20	6.409		
11,400.0	7,207.2	11,067.9	6,966.2	79.4	78.6	75.40	4,003.8	354.3	956.0	803.2	152.85	6.255		
11,500.0	7,207.2	11,167.9	6,966.2	81.3	80.5	75.40	4,103.8	354.9	955.8	799.4	156.49	6.108		
11,600.0	7,207.2	11,267.9	6,966.2	83.1	82.4	75.39	4,203.8	355.6	955.7	795.5	160.14	5.968		
11,700.0	7,207.2	11,367.9	6,966.2	85.0	84.2	75.39	4,303.8	356.3	955.5	791.7	163.80	5.833		
11,800.0	7,207.2	11,467.9	6,966.2	86.9	86.1	75.39	4,403.8	357.0	955.3	787.9	167.46	5.705		
11,884.9	7,207.2	11,551.9	6,966.2	88.5	87.7	75.39	4,487.8	357.6	955.2	784.6	170.55	5.601		

Reference Depths are relative to WELL @ 4976.2ft (RKB - 16.5')	Coordinates are relative to: Taoka KF 01-023HC
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: 0.57°



Company:	Great Western	Local Co-ordinate Reference:	Well Taoka KF 01-023HC
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 01-023HC	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 01-023HC
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.57°

