

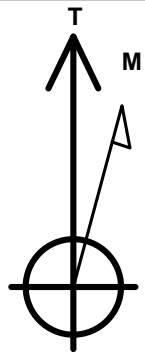
EE3

Well Name: **Surprise Unit 06-09H**

Surface Location: Surprise Unit 03-09H Pad Sec.9-T6N-R80W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 8263.1
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1429981.90 2754162.70 40.510337 -106.384140
 Original Well Elev WELL @ 8276.1ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Section Line 300' N of BHL	1.0	5925.2	1265.2	Polygon
SHL 501'FNL, 1772'FWL, SEC.9	1.0	0.0	0.0	Point
BHL 300'FNL, 2307'FEL, SEC.4	7783.1	5625.2	1765.6	Point



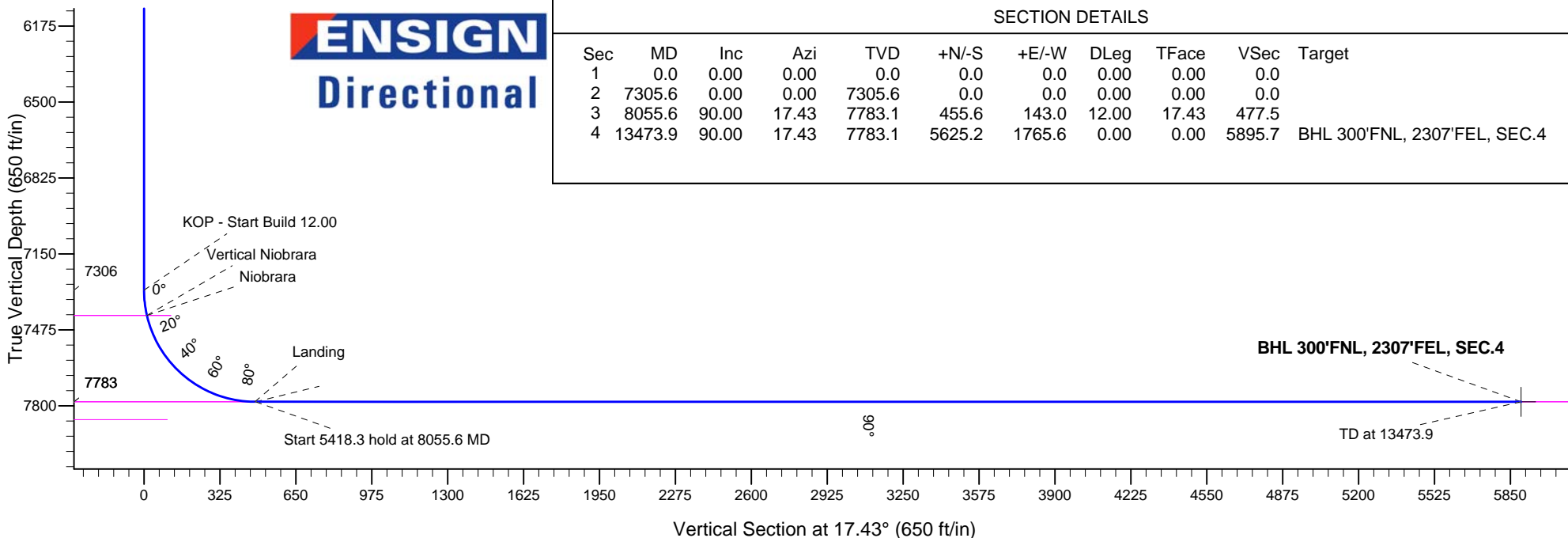
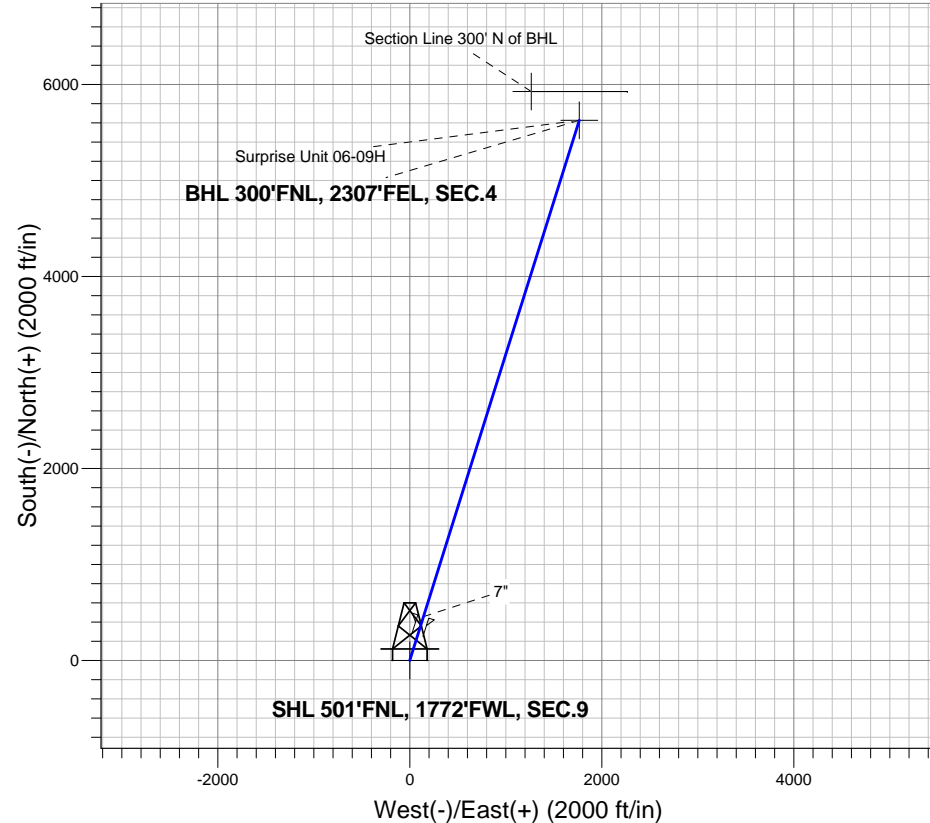
Azimuths to True North
 Magnetic North: 9.17°

Magnetic Field
 Strength: 52561.2snT
 Dip Angle: 66.73°
 Date: 6/24/2015
 Model: IGRF2010

Surprise Unit 03-09H Pad Sec.9-T6N-R80W
 Surprise Unit 06-09H
 Plan #1 (6-24-15)
 11:48, June 24 2015

ANNOTATIONS

TVD	MD	Annotation
7305.6	7305.6	KOP - Start Build 12.00
7783.1	8055.6	Start 5418.3 hold at 8055.6 MD
7783.1	13473.9	TD at 13473.9



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	7305.6	0.00	0.00	7305.6	0.0	0.0	0.00	0.00	0.0	
3	8055.6	90.00	17.43	7783.1	455.6	143.0	12.00	17.43	477.5	
4	13473.9	90.00	17.43	7783.1	5625.2	1765.6	0.00	0.00	5895.7	BHL 300'FNL, 2307'FEL, SEC.4



EE3

SEC.9-T6N-R80W

Surprise Unit 03-09H Pad Sec.9-T6N-R80W

Surprise Unit 06-09H

Wellbore #1

Plan: Plan #1 (6-24-15)

Standard Planning Report

24 June, 2015

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	
7,305.6	0.00	0.00	7,305.6	0.0	0.0	0.00	0.00	0.00	0.00	
8,055.6	90.00	17.43	7,783.1	455.6	143.0	12.00	12.00	0.00	17.43	
13,473.9	90.00	17.43	7,783.1	5,625.2	1,765.6	0.00	0.00	0.00	0.00	BHL 300'FNL, 2307

Database:	EDMNEW	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Company:	EE3	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Project:	SEC.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	North Reference:	True
Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-24-15)		

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
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
2,463.1	0.00	0.00	2,463.1	0.0	0.0	0.0	0.00	0.00	0.00
Midcoal									
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
3,243.1	0.00	0.00	3,243.1	0.0	0.0	0.0	0.00	0.00	0.00
Suddeth coal									
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

Database:	EDMNEW	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Company:	EE3	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Project:	SEC.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	North Reference:	True
Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-24-15)		

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	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
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,743.1	0.00	0.00	5,743.1	0.0	0.0	0.0	0.00	0.00	0.00
Sussex									
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,043.1	0.00	0.00	6,043.1	0.0	0.0	0.0	0.00	0.00	0.00
Shannon									
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,305.6	0.00	0.00	7,305.6	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 12.00									
7,400.0	11.32	17.43	7,399.4	8.9	2.8	9.3	12.00	12.00	0.00
7,414.0	13.01	17.43	7,413.1	11.7	3.7	12.3	12.00	12.00	0.00
Vertical Niobrara - Niobrara									
7,500.0	23.32	17.43	7,494.7	37.2	11.7	39.0	12.00	12.00	0.00
7,600.0	35.32	17.43	7,581.7	83.9	26.3	87.9	12.00	12.00	0.00
7,700.0	47.32	17.43	7,656.7	146.8	46.1	153.8	12.00	12.00	0.00
7,800.0	59.32	17.43	7,716.3	223.1	70.0	233.9	12.00	12.00	0.00
7,900.0	71.32	17.43	7,758.0	309.7	97.2	324.6	12.00	12.00	0.00
8,000.0	83.32	17.43	7,779.9	402.6	126.4	422.0	12.00	12.00	0.00
8,052.8	89.32	17.43	7,783.1	452.9	142.1	474.6	11.36	11.36	0.00
Landing - Toe									
8,055.6	90.00	17.43	7,783.1	455.5	143.0	477.4	24.15	24.15	0.00
Start 5418.3 hold at 8055.6 MD - 7"									
8,100.0	90.00	17.43	7,783.1	497.9	156.3	521.8	0.01	0.01	0.00
8,200.0	90.00	17.43	7,783.1	593.3	186.2	621.8	0.00	0.00	0.00
8,300.0	90.00	17.43	7,783.1	688.7	216.2	721.8	0.00	0.00	0.00
8,400.0	90.00	17.43	7,783.1	784.1	246.1	821.8	0.00	0.00	0.00
8,500.0	90.00	17.43	7,783.1	879.5	276.1	921.8	0.00	0.00	0.00
8,600.0	90.00	17.43	7,783.1	974.9	306.0	1,021.8	0.00	0.00	0.00
8,700.0	90.00	17.43	7,783.1	1,070.3	336.0	1,121.8	0.00	0.00	0.00
8,800.0	90.00	17.43	7,783.1	1,165.8	365.9	1,221.8	0.00	0.00	0.00
8,900.0	90.00	17.43	7,783.1	1,261.2	395.8	1,321.8	0.00	0.00	0.00
9,000.0	90.00	17.43	7,783.1	1,356.6	425.8	1,421.8	0.00	0.00	0.00

Database:	EDMNEW	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
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Project:	SEC.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	North Reference:	True
Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-24-15)		

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)
9,100.0	90.00	17.43	7,783.1	1,452.0	455.7	1,521.8	0.00	0.00	0.00
9,200.0	90.00	17.43	7,783.1	1,547.4	485.7	1,621.8	0.00	0.00	0.00
9,300.0	90.00	17.43	7,783.1	1,642.8	515.6	1,721.8	0.00	0.00	0.00
9,400.0	90.00	17.43	7,783.1	1,738.2	545.6	1,821.8	0.00	0.00	0.00
9,500.0	90.00	17.43	7,783.1	1,833.6	575.5	1,921.8	0.00	0.00	0.00
9,600.0	90.00	17.43	7,783.1	1,929.0	605.5	2,021.8	0.00	0.00	0.00
9,700.0	90.00	17.43	7,783.1	2,024.5	635.4	2,121.8	0.00	0.00	0.00
9,800.0	90.00	17.43	7,783.1	2,119.9	665.4	2,221.8	0.00	0.00	0.00
9,900.0	90.00	17.43	7,783.1	2,215.3	695.3	2,321.8	0.00	0.00	0.00
10,000.0	90.00	17.43	7,783.1	2,310.7	725.3	2,421.8	0.00	0.00	0.00
10,100.0	90.00	17.43	7,783.1	2,406.1	755.2	2,521.8	0.00	0.00	0.00
10,200.0	90.00	17.43	7,783.1	2,501.5	785.2	2,621.8	0.00	0.00	0.00
10,300.0	90.00	17.43	7,783.1	2,596.9	815.1	2,721.8	0.00	0.00	0.00
10,400.0	90.00	17.43	7,783.1	2,692.3	845.1	2,821.8	0.00	0.00	0.00
10,500.0	90.00	17.43	7,783.1	2,787.7	875.0	2,921.8	0.00	0.00	0.00
10,600.0	90.00	17.43	7,783.1	2,883.1	904.9	3,021.8	0.00	0.00	0.00
10,700.0	90.00	17.43	7,783.1	2,978.6	934.9	3,121.8	0.00	0.00	0.00
10,800.0	90.00	17.43	7,783.1	3,074.0	964.8	3,221.8	0.00	0.00	0.00
10,900.0	90.00	17.43	7,783.1	3,169.4	994.8	3,321.8	0.00	0.00	0.00
11,000.0	90.00	17.43	7,783.1	3,264.8	1,024.7	3,421.8	0.00	0.00	0.00
11,100.0	90.00	17.43	7,783.1	3,360.2	1,054.7	3,521.8	0.00	0.00	0.00
11,200.0	90.00	17.43	7,783.1	3,455.6	1,084.6	3,621.8	0.00	0.00	0.00
11,300.0	90.00	17.43	7,783.1	3,551.0	1,114.6	3,721.8	0.00	0.00	0.00
11,400.0	90.00	17.43	7,783.1	3,646.4	1,144.5	3,821.8	0.00	0.00	0.00
11,500.0	90.00	17.43	7,783.1	3,741.8	1,174.5	3,921.8	0.00	0.00	0.00
11,600.0	90.00	17.43	7,783.1	3,837.3	1,204.4	4,021.8	0.00	0.00	0.00
11,700.0	90.00	17.43	7,783.1	3,932.7	1,234.4	4,121.8	0.00	0.00	0.00
11,800.0	90.00	17.43	7,783.1	4,028.1	1,264.3	4,221.8	0.00	0.00	0.00
11,900.0	90.00	17.43	7,783.1	4,123.5	1,294.3	4,321.8	0.00	0.00	0.00
12,000.0	90.00	17.43	7,783.1	4,218.9	1,324.2	4,421.8	0.00	0.00	0.00
12,100.0	90.00	17.43	7,783.1	4,314.3	1,354.2	4,521.8	0.00	0.00	0.00
12,200.0	90.00	17.43	7,783.1	4,409.7	1,384.1	4,621.8	0.00	0.00	0.00
12,300.0	90.00	17.43	7,783.1	4,505.1	1,414.0	4,721.8	0.00	0.00	0.00
12,400.0	90.00	17.43	7,783.1	4,600.5	1,444.0	4,821.8	0.00	0.00	0.00
12,500.0	90.00	17.43	7,783.1	4,695.9	1,473.9	4,921.8	0.00	0.00	0.00
12,600.0	90.00	17.43	7,783.1	4,791.4	1,503.9	5,021.8	0.00	0.00	0.00
12,700.0	90.00	17.43	7,783.1	4,886.8	1,533.8	5,121.8	0.00	0.00	0.00
12,800.0	90.00	17.43	7,783.1	4,982.2	1,563.8	5,221.8	0.00	0.00	0.00
12,900.0	90.00	17.43	7,783.1	5,077.6	1,593.7	5,321.8	0.00	0.00	0.00
13,000.0	90.00	17.43	7,783.1	5,173.0	1,623.7	5,421.8	0.00	0.00	0.00
13,100.0	90.00	17.43	7,783.1	5,268.4	1,653.6	5,521.8	0.00	0.00	0.00
13,200.0	90.00	17.43	7,783.1	5,363.8	1,683.6	5,621.8	0.00	0.00	0.00
13,300.0	90.00	17.43	7,783.1	5,459.2	1,713.5	5,721.8	0.00	0.00	0.00
13,400.0	90.00	17.43	7,783.1	5,554.6	1,743.5	5,821.8	0.00	0.00	0.00
13,473.9	90.00	17.43	7,783.1	5,625.2	1,765.6	5,895.7	0.00	0.00	0.00
TD at 13473.9									

Plan Annotations					
	Measured	Vertical	Local Coordinates		Comment
	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	
	7,305.6	7,305.6	0.0	0.0	KOP - Start Build 12.00
	8,055.6	7,783.1	455.6	143.0	Start 5418.3 hold at 8055.6 MD
	13,473.9	7,783.1	5,625.2	1,765.6	TD at 13473.9



EE3

SEC.9-T6N-R80W

Surprise Unit 03-09H Pad Sec.9-T6N-R80W

Surprise Unit 06-09H

Wellbore #1

Plan #1 (6-24-15)

Anticollision Report

24 June, 2015

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 4500-UNKNOWN												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	
2,300.0	2,300.0	2,593.9	2,593.9	5.1	51.9	-149.31	-1,144.7	-679.3	1,331.1	1,274.2	56.94	23.379	
2,400.0	2,400.0	2,693.9	2,693.9	5.3	53.9	-149.31	-1,144.7	-679.3	1,331.1	1,271.9	59.16	22.500	
2,500.0	2,500.0	2,793.9	2,793.9	5.5	55.9	-149.31	-1,144.7	-679.3	1,331.1	1,269.7	61.38	21.685	
2,600.0	2,600.0	2,893.9	2,893.9	5.7	57.9	-149.31	-1,144.7	-679.3	1,331.1	1,267.5	63.61	20.926	
2,700.0	2,700.0	2,993.9	2,993.9	6.0	59.9	-149.31	-1,144.7	-679.3	1,331.1	1,265.3	65.83	20.219	
2,800.0	2,800.0	3,093.9	3,093.9	6.2	61.9	-149.31	-1,144.7	-679.3	1,331.1	1,263.0	68.06	19.558	
2,900.0	2,900.0	3,193.9	3,193.9	6.4	63.9	-149.31	-1,144.7	-679.3	1,331.1	1,260.8	70.28	18.939	
3,000.0	3,000.0	3,293.9	3,293.9	6.6	65.9	-149.31	-1,144.7	-679.3	1,331.1	1,258.6	72.51	18.358	
3,100.0	3,100.0	3,393.9	3,393.9	6.9	67.9	-149.31	-1,144.7	-679.3	1,331.1	1,256.4	74.73	17.811	
3,200.0	3,200.0	3,493.9	3,493.9	7.1	69.9	-149.31	-1,144.7	-679.3	1,331.1	1,254.1	76.96	17.296	
3,300.0	3,300.0	3,593.9	3,593.9	7.3	71.9	-149.31	-1,144.7	-679.3	1,331.1	1,251.9	79.18	16.810	
3,400.0	3,400.0	3,693.9	3,693.9	7.5	73.9	-149.31	-1,144.7	-679.3	1,331.1	1,249.7	81.41	16.351	
3,500.0	3,500.0	3,793.9	3,793.9	7.8	75.9	-149.31	-1,144.7	-679.3	1,331.1	1,247.5	83.63	15.916	
3,600.0	3,600.0	3,893.9	3,893.9	8.0	77.9	-149.31	-1,144.7	-679.3	1,331.1	1,245.2	85.86	15.504	
3,700.0	3,700.0	3,993.9	3,993.9	8.2	79.9	-149.31	-1,144.7	-679.3	1,331.1	1,243.0	88.08	15.112	
3,800.0	3,800.0	4,093.9	4,093.9	8.4	81.9	-149.31	-1,144.7	-679.3	1,331.1	1,240.8	90.31	14.740	
3,900.0	3,900.0	4,193.9	4,193.9	8.7	83.9	-149.31	-1,144.7	-679.3	1,331.1	1,238.6	92.53	14.385	
4,000.0	4,000.0	4,293.9	4,293.9	8.9	85.9	-149.31	-1,144.7	-679.3	1,331.1	1,236.3	94.76	14.048	
4,100.0	4,100.0	4,393.9	4,393.9	9.1	87.9	-149.31	-1,144.7	-679.3	1,331.1	1,234.1	96.98	13.725	
4,200.0	4,200.0	4,493.9	4,493.9	9.3	89.9	-149.31	-1,144.7	-679.3	1,331.1	1,231.9	99.21	13.418 CC, ES	
4,300.0	4,300.0	4,500.0	4,500.0	9.6	90.0	-149.31	-1,144.7	-679.3	1,334.4	1,234.9	99.55	13.404 SF	
4,400.0	4,400.0	4,500.0	4,500.0	9.8	90.0	-149.31	-1,144.7	-679.3	1,345.1	1,245.4	99.78	13.482	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	90.0	-149.31	-1,144.7	-679.3	1,363.2	1,263.2	100.00	13.631	
4,600.0	4,600.0	4,500.0	4,500.0	10.2	90.0	-149.31	-1,144.7	-679.3	1,388.2	1,287.9	100.23	13.850	
4,700.0	4,700.0	4,500.0	4,500.0	10.5	90.0	-149.31	-1,144.7	-679.3	1,419.8	1,319.3	100.45	14.134	
4,800.0	4,800.0	4,500.0	4,500.0	10.7	90.0	-149.31	-1,144.7	-679.3	1,457.6	1,356.9	100.68	14.478	
4,900.0	4,900.0	4,500.0	4,500.0	10.9	90.0	-149.31	-1,144.7	-679.3	1,501.1	1,400.2	100.90	14.877	
5,000.0	5,000.0	4,500.0	4,500.0	11.1	90.0	-149.31	-1,144.7	-679.3	1,549.9	1,448.7	101.13	15.326	
5,100.0	5,100.0	4,500.0	4,500.0	11.4	90.0	-149.31	-1,144.7	-679.3	1,603.4	1,502.0	101.35	15.820	
5,200.0	5,200.0	4,500.0	4,500.0	11.6	90.0	-149.31	-1,144.7	-679.3	1,661.2	1,559.6	101.58	16.355	
5,300.0	5,300.0	4,500.0	4,500.0	11.8	90.0	-149.31	-1,144.7	-679.3	1,722.9	1,621.1	101.80	16.924	
5,400.0	5,400.0	4,500.0	4,500.0	12.0	90.0	-149.31	-1,144.7	-679.3	1,788.1	1,686.1	102.02	17.526	
5,500.0	5,500.0	4,500.0	4,500.0	12.2	90.0	-149.31	-1,144.7	-679.3	1,856.3	1,754.1	102.25	18.155	
5,600.0	5,600.0	4,500.0	4,500.0	12.5	90.0	-149.31	-1,144.7	-679.3	1,927.4	1,824.9	102.47	18.808	
5,700.0	5,700.0	4,500.0	4,500.0	12.7	90.0	-149.31	-1,144.7	-679.3	2,000.9	1,898.2	102.70	19.483	
5,800.0	5,800.0	4,500.0	4,500.0	12.9	90.0	-149.31	-1,144.7	-679.3	2,076.6	1,973.7	102.92	20.176	
5,900.0	5,900.0	4,500.0	4,500.0	13.1	90.0	-149.31	-1,144.7	-679.3	2,154.3	2,051.2	103.15	20.886	
6,000.0	6,000.0	4,500.0	4,500.0	13.4	90.0	-149.31	-1,144.7	-679.3	2,233.8	2,130.4	103.37	21.609	
6,100.0	6,100.0	4,500.0	4,500.0	13.6	90.0	-149.31	-1,144.7	-679.3	2,314.9	2,211.3	103.60	22.345	
6,200.0	6,200.0	4,500.0	4,500.0	13.8	90.0	-149.31	-1,144.7	-679.3	2,397.4	2,293.6	103.82	23.091	
6,300.0	6,300.0	4,500.0	4,500.0	14.0	90.0	-149.31	-1,144.7	-679.3	2,481.2	2,377.1	104.05	23.847	
6,400.0	6,400.0	4,500.0	4,500.0	14.3	90.0	-149.31	-1,144.7	-679.3	2,566.1	2,461.9	104.27	24.610	
6,500.0	6,500.0	4,500.0	4,500.0	14.5	90.0	-149.31	-1,144.7	-679.3	2,652.1	2,547.6	104.50	25.380	
6,600.0	6,600.0	4,500.0	4,500.0	14.7	90.0	-149.31	-1,144.7	-679.3	2,739.1	2,634.4	104.72	26.156	
6,700.0	6,700.0	4,500.0	4,500.0	14.9	90.0	-149.31	-1,144.7	-679.3	2,826.9	2,722.0	104.95	26.936	
6,800.0	6,800.0	4,500.0	4,500.0	15.2	90.0	-149.31	-1,144.7	-679.3	2,915.5	2,810.3	105.17	27.721	
6,900.0	6,900.0	4,500.0	4,500.0	15.4	90.0	-149.31	-1,144.7	-679.3	3,004.8	2,899.4	105.40	28.510	
7,000.0	7,000.0	4,500.0	4,500.0	15.6	90.0	-149.31	-1,144.7	-679.3	3,094.8	2,989.2	105.62	29.301	
7,100.0	7,100.0	4,500.0	4,500.0	15.8	90.0	-149.31	-1,144.7	-679.3	3,185.4	3,079.5	105.85	30.094	
7,200.0	7,200.0	4,500.0	4,500.0	16.1	90.0	-149.31	-1,144.7	-679.3	3,276.5	3,170.4	106.07	30.889	
7,305.6	7,305.6	4,500.0	4,500.0	16.3	90.0	-149.31	-1,144.7	-679.3	3,373.3	3,267.0	106.31	31.731	
7,325.0	7,325.0	4,500.0	4,500.0	16.4	90.0	-165.35	-1,144.7	-679.3	3,391.2	3,284.9	106.27	31.910	

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

Surprise Unit 03-09H Pad Sec.9-T6N-R80W - Rich 21 (D&A) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 4500-UNKNOWN													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)			
7,350.0	7,349.9	4,500.0	4,500.0	16.4	90.0	-163.02	-1,144.7	-679.3	3,414.8	3,308.8	106.00	32.214		
7,375.0	7,374.8	4,500.0	4,500.0	16.5	90.0	-159.76	-1,144.7	-679.3	3,438.8	3,333.3	105.51	32.591		
7,400.0	7,399.4	4,500.0	4,500.0	16.5	90.0	-154.92	-1,144.7	-679.3	3,463.1	3,358.2	104.88	33.018		
7,425.0	7,423.8	4,500.0	4,500.0	16.6	90.0	-147.19	-1,144.7	-679.3	3,487.7	3,383.3	104.33	33.429		
7,450.0	7,447.8	4,500.0	4,500.0	16.6	90.0	-133.74	-1,144.7	-679.3	3,512.4	3,408.0	104.43	33.636		
7,475.0	7,471.5	4,500.0	4,500.0	16.7	90.0	-109.59	-1,144.7	-679.3	3,537.3	3,431.3	105.97	33.380		
7,500.0	7,494.7	4,500.0	4,500.0	16.7	90.0	-75.94	-1,144.7	-679.3	3,562.2	3,455.9	106.25	33.526		
7,525.0	7,517.4	4,500.0	4,500.0	16.8	90.0	-49.29	-1,144.7	-679.3	3,587.1	3,484.7	102.41	35.026		
7,550.0	7,539.5	4,500.0	4,500.0	16.9	90.0	-34.19	-1,144.7	-679.3	3,611.8	3,513.8	98.07	36.829		
7,575.0	7,560.9	4,500.0	4,500.0	16.9	90.0	-25.63	-1,144.7	-679.3	3,636.5	3,542.2	94.23	38.592		
7,600.0	7,581.7	4,500.0	4,500.0	17.0	90.0	-20.36	-1,144.7	-679.3	3,660.9	3,570.2	90.63	40.394		
7,625.0	7,601.7	4,500.0	4,500.0	17.0	90.0	-16.85	-1,144.7	-679.3	3,685.0	3,597.9	87.07	42.324		
7,650.0	7,620.9	4,500.0	4,500.0	17.1	90.0	-14.36	-1,144.7	-679.3	3,708.8	3,625.3	83.44	44.451		
7,675.0	7,639.2	4,500.0	4,500.0	17.2	90.0	-12.52	-1,144.7	-679.3	3,732.1	3,652.5	79.69	46.833		
7,700.0	7,656.7	4,500.0	4,500.0	17.2	90.0	-11.11	-1,144.7	-679.3	3,755.1	3,679.2	75.81	49.530		
7,725.0	7,673.1	4,500.0	4,500.0	17.3	90.0	-10.00	-1,144.7	-679.3	3,777.5	3,705.7	71.80	52.611		
7,750.0	7,688.6	4,500.0	4,500.0	17.4	90.0	-9.11	-1,144.7	-679.3	3,799.3	3,731.6	67.65	56.160		
7,775.0	7,703.0	4,500.0	4,500.0	17.5	90.0	-8.38	-1,144.7	-679.3	3,820.5	3,757.1	63.38	60.282		
7,800.0	7,716.3	4,500.0	4,500.0	17.7	90.0	-7.77	-1,144.7	-679.3	3,841.1	3,782.1	58.99	65.114		
7,825.0	7,728.5	4,500.0	4,500.0	17.8	90.0	-7.25	-1,144.7	-679.3	3,860.9	3,806.4	54.51	70.836		
7,850.0	7,739.5	4,500.0	4,500.0	17.9	90.0	-6.82	-1,144.7	-679.3	3,880.0	3,830.1	49.94	77.690		
7,875.0	7,749.3	4,500.0	4,500.0	18.0	90.0	-6.45	-1,144.7	-679.3	3,898.4	3,853.0	45.32	86.013		
7,900.0	7,758.0	4,500.0	4,500.0	18.2	90.0	-6.12	-1,144.7	-679.3	3,915.9	3,875.2	40.67	96.276		
7,925.0	7,765.3	4,500.0	4,500.0	18.4	90.0	-5.85	-1,144.7	-679.3	3,932.5	3,896.4	36.03	109.151		
7,950.0	7,771.5	4,500.0	4,500.0	18.5	90.0	-5.60	-1,144.7	-679.3	3,948.2	3,916.8	31.43	125.603		
7,975.0	7,776.3	4,500.0	4,500.0	18.7	90.0	-5.39	-1,144.7	-679.3	3,963.0	3,936.0	26.97	146.946		
8,000.0	7,779.9	4,500.0	4,500.0	18.9	90.0	-5.21	-1,144.7	-679.3	3,976.8	3,954.0	22.78	174.553		
8,025.0	7,782.1	4,500.0	4,500.0	19.1	90.0	-5.05	-1,144.7	-679.3	3,989.6	3,970.4	19.23	207.469		
8,050.0	7,783.1	4,500.0	4,500.0	19.3	90.0	-4.91	-1,144.7	-679.3	4,001.5	3,984.3	17.18	232.891		
8,055.6	7,783.1	4,500.0	4,500.0	19.3	90.0	-4.88	-1,144.7	-679.3	4,004.0	3,986.9	17.06	234.636		
8,100.0	7,783.1	4,500.0	4,500.0	19.7	90.0	-4.88	-1,144.7	-679.3	4,023.8	4,006.7	17.17	234.353		
8,200.0	7,783.1	4,500.0	4,500.0	20.7	90.0	-4.88	-1,144.7	-679.3	4,070.0	4,052.5	17.44	233.307		
8,300.0	7,783.1	4,500.0	4,500.0	21.8	90.0	-4.88	-1,144.7	-679.3	4,118.0	4,100.3	17.77	231.773		
8,400.0	7,783.1	4,500.0	4,500.0	23.0	90.0	-4.88	-1,144.7	-679.3	4,167.9	4,149.8	18.13	229.840		
8,500.0	7,783.1	4,500.0	4,500.0	24.3	90.0	-4.88	-1,144.7	-679.3	4,219.6	4,201.1	18.54	227.597		
8,600.0	7,783.1	4,500.0	4,500.0	25.7	90.0	-4.88	-1,144.7	-679.3	4,273.0	4,254.0	18.98	225.124		
8,700.0	7,783.1	4,500.0	4,500.0	27.2	90.0	-4.88	-1,144.7	-679.3	4,328.1	4,308.6	19.45	222.492		
8,800.0	7,783.1	4,500.0	4,500.0	28.7	90.0	-4.88	-1,144.7	-679.3	4,384.7	4,364.8	19.95	219.761		
8,900.0	7,783.1	4,500.0	4,500.0	30.2	90.0	-4.88	-1,144.7	-679.3	4,442.9	4,422.4	20.48	216.980		
9,000.0	7,783.1	4,500.0	4,500.0	31.8	90.0	-4.88	-1,144.7	-679.3	4,502.5	4,481.5	21.02	214.189		
9,100.0	7,783.1	4,500.0	4,500.0	33.4	90.0	-4.88	-1,144.7	-679.3	4,563.6	4,542.0	21.59	211.418		
9,200.0	7,783.1	4,500.0	4,500.0	35.1	90.0	-4.88	-1,144.7	-679.3	4,626.0	4,603.8	22.17	208.693		
9,300.0	7,783.1	4,500.0	4,500.0	36.7	90.0	-4.88	-1,144.7	-679.3	4,689.7	4,666.9	22.76	206.030		
9,400.0	7,783.1	4,500.0	4,500.0	38.4	90.0	-4.88	-1,144.7	-679.3	4,754.6	4,731.3	23.37	203.442		
9,500.0	7,783.1	4,500.0	4,500.0	40.2	90.0	-4.88	-1,144.7	-679.3	4,820.8	4,796.8	23.99	200.937		
9,600.0	7,783.1	4,500.0	4,500.0	41.9	90.0	-4.88	-1,144.7	-679.3	4,888.1	4,863.5	24.62	198.522		
9,700.0	7,783.1	4,500.0	4,500.0	43.6	90.0	-4.88	-1,144.7	-679.3	4,956.5	4,931.2	25.26	196.200		
9,800.0	7,783.1	4,500.0	4,500.0	45.4	90.0	-4.88	-1,144.7	-679.3	5,026.0	5,000.1	25.91	193.971		
9,900.0	7,783.1	4,500.0	4,500.0	47.2	90.0	-4.88	-1,144.7	-679.3	5,096.5	5,069.9	26.57	191.835		
10,000.0	7,783.1	4,500.0	4,500.0	49.0	90.0	-4.88	-1,144.7	-679.3	5,167.9	5,140.7	27.23	189.792		
10,100.0	7,783.1	4,500.0	4,500.0	50.8	90.0	-4.88	-1,144.7	-679.3	5,240.3	5,212.4	27.90	187.838		
10,200.0	7,783.1	4,500.0	4,500.0	52.6	90.0	-4.88	-1,144.7	-679.3	5,313.6	5,285.0	28.57	185.972		

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 4500-UNKNOWN													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		
10,300.0	7,783.1	4,500.0	4,500.0	54.4	90.0	-4.88	-1,144.7	-679.3	5,387.8	5,358.5	29.25	184.190		
10,400.0	7,783.1	4,500.0	4,500.0	56.2	90.0	-4.88	-1,144.7	-679.3	5,462.7	5,432.8	29.93	182.489		
10,500.0	7,783.1	4,500.0	4,500.0	58.0	90.0	-4.88	-1,144.7	-679.3	5,538.5	5,507.9	30.62	180.866		
10,600.0	7,783.1	4,500.0	4,500.0	59.9	90.0	-4.88	-1,144.7	-679.3	5,615.0	5,583.7	31.31	179.317		
10,700.0	7,783.1	4,500.0	4,500.0	61.7	90.0	-4.88	-1,144.7	-679.3	5,692.3	5,660.3	32.01	177.839		
10,800.0	7,783.1	4,500.0	4,500.0	63.6	90.0	-4.88	-1,144.7	-679.3	5,770.2	5,737.5	32.71	176.428		
10,900.0	7,783.1	4,500.0	4,500.0	65.4	90.0	-4.88	-1,144.7	-679.3	5,848.8	5,815.4	33.41	175.081		
11,000.0	7,783.1	4,500.0	4,500.0	67.2	90.0	-4.88	-1,144.7	-679.3	5,928.1	5,894.0	34.11	173.794		
11,100.0	7,783.1	4,500.0	4,500.0	69.1	90.0	-4.88	-1,144.7	-679.3	6,008.0	5,973.2	34.82	172.565		
11,200.0	7,783.1	4,500.0	4,500.0	71.0	90.0	-4.88	-1,144.7	-679.3	6,088.5	6,052.9	35.52	171.391		
11,300.0	7,783.1	4,500.0	4,500.0	72.8	90.0	-4.88	-1,144.7	-679.3	6,169.5	6,133.3	36.23	170.269		
11,400.0	7,783.1	4,500.0	4,500.0	74.7	90.0	-4.88	-1,144.7	-679.3	6,251.1	6,214.2	36.95	169.196		
11,500.0	7,783.1	4,500.0	4,500.0	76.6	90.0	-4.88	-1,144.7	-679.3	6,333.2	6,295.6	37.66	168.170		
11,600.0	7,783.1	4,500.0	4,500.0	78.4	90.0	-4.88	-1,144.7	-679.3	6,415.9	6,377.5	38.38	167.187		
11,700.0	7,783.1	4,500.0	4,500.0	80.3	90.0	-4.88	-1,144.7	-679.3	6,499.0	6,459.9	39.09	166.247		
11,800.0	7,783.1	4,500.0	4,500.0	82.2	90.0	-4.88	-1,144.7	-679.3	6,582.6	6,542.8	39.81	165.346		
11,900.0	7,783.1	4,500.0	4,500.0	84.0	90.0	-4.88	-1,144.7	-679.3	6,666.6	6,626.1	40.53	164.482		
12,000.0	7,783.1	4,500.0	4,500.0	85.9	90.0	-4.88	-1,144.7	-679.3	6,751.1	6,709.8	41.25	163.655		
12,100.0	7,783.1	4,500.0	4,500.0	87.8	90.0	-4.88	-1,144.7	-679.3	6,836.0	6,794.0	41.97	162.861		
12,200.0	7,783.1	4,500.0	4,500.0	89.7	90.0	-4.88	-1,144.7	-679.3	6,921.3	6,878.6	42.70	162.099		
12,300.0	7,783.1	4,500.0	4,500.0	91.6	90.0	-4.88	-1,144.7	-679.3	7,007.0	6,963.5	43.42	161.367		
12,400.0	7,783.1	4,500.0	4,500.0	93.4	90.0	-4.88	-1,144.7	-679.3	7,093.0	7,048.9	44.15	160.665		
12,500.0	7,783.1	4,500.0	4,500.0	95.3	90.0	-4.88	-1,144.7	-679.3	7,179.5	7,134.6	44.87	159.990		
12,600.0	7,783.1	4,500.0	4,500.0	97.2	90.0	-4.88	-1,144.7	-679.3	7,266.2	7,220.6	45.60	159.341		
12,700.0	7,783.1	4,500.0	4,500.0	99.1	90.0	-4.88	-1,144.7	-679.3	7,353.3	7,307.0	46.33	158.717		
12,800.0	7,783.1	4,500.0	4,500.0	101.0	90.0	-4.88	-1,144.7	-679.3	7,440.8	7,393.7	47.06	158.116		
12,900.0	7,783.1	4,500.0	4,500.0	102.9	90.0	-4.88	-1,144.7	-679.3	7,528.5	7,480.7	47.79	157.538		
13,000.0	7,783.1	4,500.0	4,500.0	104.8	90.0	-4.88	-1,144.7	-679.3	7,616.6	7,568.0	48.52	156.981		
13,100.0	7,783.1	4,500.0	4,500.0	106.7	90.0	-4.88	-1,144.7	-679.3	7,704.9	7,655.7	49.25	156.445		
13,200.0	7,783.1	4,500.0	4,500.0	108.5	90.0	-4.88	-1,144.7	-679.3	7,793.5	7,743.5	49.98	155.928		
13,300.0	7,783.1	4,500.0	4,500.0	110.4	90.0	-4.88	-1,144.7	-679.3	7,882.4	7,831.7	50.71	155.429		
13,400.0	7,783.1	4,500.0	4,500.0	112.3	90.0	-4.88	-1,144.7	-679.3	7,971.6	7,920.1	51.45	154.948		
13,473.9	7,783.1	4,500.0	4,500.0	113.7	90.0	-4.88	-1,144.7	-679.3	8,037.6	7,985.6	51.99	154.603		

COMPASS 2003.21 Build 46

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Surprise Unit 03-09H Pad Sec.9-T6N-R80W - Surprise Unit 03-09H - Wellbore #1 - Plan #1 (6-24-15)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
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
5,200.0	5,200.0	5,227.3	5,198.8	11.6	14.3	-158.57	-476.1	-186.9	511.5	488.3	23.23	22.020	
5,300.0	5,300.0	5,327.3	5,298.8	11.8	14.4	-158.57	-476.1	-186.9	511.5	487.9	23.63	21.643	
5,400.0	5,400.0	5,427.3	5,398.8	12.0	14.6	-158.57	-476.1	-186.9	511.5	487.5	24.04	21.277	
5,500.0	5,500.0	5,527.3	5,498.8	12.2	14.7	-158.57	-476.1	-186.9	511.5	487.1	24.45	20.922	
5,600.0	5,600.0	5,627.3	5,598.8	12.5	14.9	-158.57	-476.1	-186.9	511.5	486.7	24.86	20.577	
5,700.0	5,700.0	5,727.3	5,698.8	12.7	15.0	-158.57	-476.1	-186.9	511.5	486.2	25.27	20.243	
5,800.0	5,800.0	5,827.3	5,798.8	12.9	15.2	-158.57	-476.1	-186.9	511.5	485.8	25.68	19.918	
5,900.0	5,900.0	5,927.3	5,898.8	13.1	15.3	-158.57	-476.1	-186.9	511.5	485.4	26.09	19.603	
6,000.0	6,000.0	6,027.3	5,998.8	13.4	15.5	-158.57	-476.1	-186.9	511.5	485.0	26.51	19.297	
6,100.0	6,100.0	6,127.3	6,098.8	13.6	15.6	-158.57	-476.1	-186.9	511.5	484.6	26.92	18.999	
6,200.0	6,200.0	6,227.3	6,198.8	13.8	15.8	-158.57	-476.1	-186.9	511.5	484.2	27.34	18.710	
6,300.0	6,300.0	6,327.3	6,298.8	14.0	16.0	-158.57	-476.1	-186.9	511.5	483.8	27.76	18.428	
6,400.0	6,400.0	6,427.3	6,398.8	14.3	16.1	-158.57	-476.1	-186.9	511.5	483.3	28.18	18.155	
6,500.0	6,500.0	6,527.3	6,498.8	14.5	16.3	-158.57	-476.1	-186.9	511.5	482.9	28.59	17.888	
6,600.0	6,600.0	6,627.3	6,598.8	14.7	16.5	-158.57	-476.1	-186.9	511.5	482.5	29.01	17.629	
6,700.0	6,700.0	6,727.3	6,698.8	14.9	16.6	-158.57	-476.1	-186.9	511.5	482.1	29.44	17.377	
6,800.0	6,800.0	6,827.3	6,798.8	15.2	16.8	-158.57	-476.1	-186.9	511.5	481.7	29.86	17.132	
6,900.0	6,900.0	6,927.3	6,898.8	15.4	17.0	-158.57	-476.1	-186.9	511.5	481.2	30.28	16.893	
7,000.0	7,000.0	7,027.3	6,998.8	15.6	17.1	-158.57	-476.1	-186.9	511.5	480.8	30.70	16.660	
7,100.0	7,100.0	7,127.3	7,098.8	15.8	17.3	-158.57	-476.1	-186.9	511.5	480.4	31.13	16.433	
7,200.0	7,200.0	7,227.3	7,198.8	16.1	17.5	-158.57	-476.1	-186.9	511.5	480.0	31.55	16.211	
7,305.6	7,305.6	7,332.9	7,304.4	16.3	17.7	-158.57	-476.1	-186.9	511.5	479.5	32.00	15.984 SF	
7,325.0	7,325.0	7,342.3	7,313.8	16.4	17.7	-175.99	-476.2	-186.9	512.1	480.2	31.90	16.055	
7,350.0	7,349.9	7,350.0	7,321.5	16.4	17.7	-175.98	-476.4	-187.0	514.6	482.7	31.84	16.161	
7,375.0	7,374.8	7,366.1	7,337.6	16.5	17.7	-175.96	-477.2	-187.2	518.9	487.2	31.74	16.347	
7,400.0	7,399.4	7,375.0	7,346.5	16.5	17.8	-175.92	-477.9	-187.5	525.2	493.6	31.57	16.637	
7,425.0	7,423.8	7,388.9	7,360.3	16.6	17.8	-175.89	-479.3	-187.9	533.2	501.9	31.34	17.013	
7,450.0	7,447.8	7,400.0	7,371.3	16.6	17.8	-175.83	-480.6	-188.3	543.1	512.0	31.05	17.489	
7,475.0	7,471.5	7,410.1	7,381.3	16.7	17.9	-175.76	-482.1	-188.7	554.6	523.9	30.70	18.064	
7,500.0	7,494.7	7,425.0	7,396.0	16.7	17.9	-175.69	-484.6	-189.5	567.7	537.4	30.30	18.733	
7,525.0	7,517.4	7,425.0	7,396.0	16.8	17.9	-175.53	-484.6	-189.5	582.3	552.5	29.82	19.526	
7,550.0	7,539.5	7,437.6	7,408.3	16.9	18.0	-175.41	-487.1	-190.3	598.3	568.9	29.32	20.406	
7,575.0	7,560.9	7,450.0	7,420.4	16.9	18.0	-175.27	-489.8	-191.1	615.6	586.8	28.77	21.399	
7,600.0	7,581.7	7,450.0	7,420.4	17.0	18.0	-174.99	-489.8	-191.1	634.0	605.9	28.15	22.526	
7,625.0	7,601.7	7,459.5	7,429.5	17.0	18.1	-174.75	-492.1	-191.8	653.6	626.1	27.51	23.756	
7,650.0	7,620.9	7,465.4	7,435.3	17.1	18.1	-174.41	-493.6	-192.3	674.1	647.3	26.84	25.116	
7,675.0	7,639.2	7,475.0	7,444.4	17.2	18.1	-174.05	-496.2	-193.1	695.6	669.4	26.15	26.596	
7,700.0	7,656.7	7,475.0	7,444.4	17.2	18.1	-173.42	-496.2	-193.1	717.7	692.3	25.44	28.212	
7,725.0	7,673.1	7,475.0	7,444.4	17.3	18.1	-172.59	-496.2	-193.1	740.6	715.8	24.73	29.943	
7,750.0	7,688.6	7,482.7	7,451.8	17.4	18.2	-171.71	-498.4	-193.8	764.0	739.9	24.06	31.756	
7,775.0	7,703.0	7,485.5	7,454.5	17.5	18.2	-170.30	-499.2	-194.1	787.8	764.4	23.44	33.611	
7,800.0	7,716.3	7,487.8	7,456.6	17.7	18.2	-168.16	-499.9	-194.3	812.1	789.1	22.96	35.369	
7,825.0	7,728.5	7,489.4	7,458.2	17.8	18.2	-164.59	-500.4	-194.4	836.6	813.8	22.81	36.674	
7,850.0	7,739.5	7,490.6	7,459.3	17.9	18.2	-157.58	-500.8	-194.5	861.4	837.8	23.63	36.449	
7,875.0	7,749.3	7,491.2	7,459.9	18.0	18.2	-139.29	-501.0	-194.6	886.3	858.2	28.12	31.519	
7,900.0	7,758.0	7,491.4	7,460.0	18.2	18.2	-81.36	-501.0	-194.6	911.3	875.2	36.12	25.233	
7,925.0	7,765.3	7,491.1	7,459.8	18.4	18.2	-33.43	-501.0	-194.6	936.3	910.6	25.70	36.436	
7,950.0	7,771.5	7,490.4	7,459.1	18.5	18.2	-18.89	-500.7	-194.5	961.2	939.9	21.27	45.184	
7,975.0	7,776.3	7,489.3	7,458.1	18.7	18.2	-12.89	-500.4	-194.4	985.9	966.3	19.64	50.209	
8,000.0	7,779.9	7,487.9	7,456.7	18.9	18.2	-9.70	-500.0	-194.3	1,010.5	991.6	18.86	53.590	
8,025.0	7,782.1	7,486.0	7,454.9	19.1	18.2	-7.74	-499.4	-194.1	1,034.8	1,016.3	18.46	56.058	
8,050.0	7,783.1	7,483.9	7,452.9	19.3	18.2	-6.41	-498.7	-193.9	1,058.8	1,040.5	18.30	57.860	

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

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Surprise Unit 03-09H Pad Sec.9-T6N-R80W - Surprise Unit 03-09H - Wellbore #1 - Plan #1 (6-24-15)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
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
8,055.6	7,783.1	7,475.0	7,444.4	19.3	18.1	-6.03	-496.2	-193.1	1,064.3	1,046.0	18.26	58.284	
8,100.0	7,783.1	7,475.0	7,444.4	19.7	18.1	-6.03	-496.2	-193.1	1,106.4	1,088.0	18.37	60.238	
8,200.0	7,783.1	7,475.0	7,444.4	20.7	18.1	-6.03	-496.2	-193.1	1,202.0	1,183.3	18.65	64.460	
8,300.0	7,783.1	7,462.9	7,432.9	21.8	18.1	-5.84	-493.0	-192.1	1,298.0	1,279.1	18.93	68.563	
8,400.0	7,783.1	7,450.0	7,420.4	23.0	18.0	-5.64	-489.8	-191.1	1,394.5	1,375.3	19.26	72.415	
8,500.0	7,783.1	7,450.0	7,420.4	24.3	18.0	-5.64	-489.8	-191.1	1,491.3	1,471.6	19.67	75.826	
8,600.0	7,783.1	7,450.0	7,420.4	25.7	18.0	-5.64	-489.8	-191.1	1,588.5	1,568.4	20.11	78.980	
8,700.0	7,783.1	7,439.2	7,409.8	27.2	18.0	-5.48	-487.4	-190.4	1,685.8	1,665.3	20.55	82.039	
8,800.0	7,783.1	7,425.0	7,396.0	28.7	17.9	-5.29	-484.6	-189.5	1,783.6	1,762.6	21.00	84.927	
8,900.0	7,783.1	7,425.0	7,396.0	30.2	17.9	-5.29	-484.6	-189.5	1,881.3	1,859.8	21.53	87.391	
9,000.0	7,783.1	7,425.0	7,396.0	31.8	17.9	-5.29	-484.6	-189.5	1,979.3	1,957.2	22.08	89.660	
9,100.0	7,783.1	7,425.0	7,396.0	33.4	17.9	-5.29	-484.6	-189.5	2,077.4	2,054.8	22.64	91.751	
9,200.0	7,783.1	7,425.0	7,396.0	35.1	17.9	-5.29	-484.6	-189.5	2,175.7	2,152.5	23.23	93.680	
9,300.0	7,783.1	7,425.0	7,396.0	36.7	17.9	-5.29	-484.6	-189.5	2,274.2	2,250.4	23.82	95.460	
9,400.0	7,783.1	7,413.3	7,384.4	38.4	17.9	-5.13	-482.6	-188.9	2,372.6	2,348.3	24.39	97.285	
9,500.0	7,783.1	7,410.6	7,381.8	40.2	17.9	-5.10	-482.2	-188.8	2,471.3	2,446.3	25.00	98.851	
9,600.0	7,783.1	7,400.0	7,371.3	41.9	17.8	-4.97	-480.6	-188.3	2,570.1	2,544.5	25.59	100.429	
9,700.0	7,783.1	7,400.0	7,371.3	43.6	17.8	-4.97	-480.6	-188.3	2,668.8	2,642.6	26.23	101.741	
9,800.0	7,783.1	7,400.0	7,371.3	45.4	17.8	-4.97	-480.6	-188.3	2,767.7	2,740.8	26.88	102.961	
9,900.0	7,783.1	7,400.0	7,371.3	47.2	17.8	-4.97	-480.6	-188.3	2,866.6	2,839.0	27.54	104.099	
10,000.0	7,783.1	7,400.0	7,371.3	49.0	17.8	-4.97	-480.6	-188.3	2,965.6	2,937.4	28.20	105.162	
10,100.0	7,783.1	7,400.0	7,371.3	50.8	17.8	-4.97	-480.6	-188.3	3,064.6	3,035.8	28.87	106.156	
10,200.0	7,783.1	7,400.0	7,371.3	52.6	17.8	-4.97	-480.6	-188.3	3,163.8	3,134.2	29.54	107.087	
10,300.0	7,783.1	7,400.0	7,371.3	54.4	17.8	-4.97	-480.6	-188.3	3,262.9	3,232.7	30.22	107.960	
10,400.0	7,783.1	7,400.0	7,371.3	56.2	17.8	-4.97	-480.6	-188.3	3,362.2	3,331.2	30.91	108.781	
10,500.0	7,783.1	7,400.0	7,371.3	58.0	17.8	-4.97	-480.6	-188.3	3,461.4	3,429.8	31.60	109.554	
10,600.0	7,783.1	7,400.0	7,371.3	59.9	17.8	-4.97	-480.6	-188.3	3,560.7	3,528.4	32.29	110.282	
10,700.0	7,783.1	7,388.1	7,359.5	61.7	17.8	-4.83	-479.2	-187.8	3,659.9	3,627.0	32.93	111.149	
10,800.0	7,783.1	7,386.8	7,358.2	63.6	17.8	-4.82	-479.0	-187.8	3,759.3	3,725.6	33.62	111.817	
10,900.0	7,783.1	7,375.0	7,346.5	65.4	17.8	-4.69	-477.9	-187.5	3,858.8	3,824.5	34.27	112.610	
11,000.0	7,783.1	7,375.0	7,346.5	67.2	17.8	-4.69	-477.9	-187.5	3,958.1	3,923.2	34.97	113.190	
11,100.0	7,783.1	7,375.0	7,346.5	69.1	17.8	-4.69	-477.9	-187.5	4,057.5	4,021.9	35.67	113.741	
11,200.0	7,783.1	7,375.0	7,346.5	71.0	17.8	-4.69	-477.9	-187.5	4,157.0	4,120.6	36.38	114.264	
11,300.0	7,783.1	7,375.0	7,346.5	72.8	17.8	-4.69	-477.9	-187.5	4,256.4	4,219.3	37.09	114.762	
11,400.0	7,783.1	7,375.0	7,346.5	74.7	17.8	-4.69	-477.9	-187.5	4,355.9	4,318.1	37.80	115.235	
11,500.0	7,783.1	7,375.0	7,346.5	76.6	17.8	-4.69	-477.9	-187.5	4,455.4	4,416.9	38.51	115.686	
11,600.0	7,783.1	7,375.0	7,346.5	78.4	17.8	-4.69	-477.9	-187.5	4,554.9	4,515.7	39.23	116.117	
11,700.0	7,783.1	7,375.0	7,346.5	80.3	17.8	-4.69	-477.9	-187.5	4,654.5	4,614.6	39.94	116.528	
11,800.0	7,783.1	7,375.0	7,346.5	82.2	17.8	-4.69	-477.9	-187.5	4,754.1	4,713.4	40.66	116.921	
11,900.0	7,783.1	7,375.0	7,346.5	84.0	17.8	-4.69	-477.9	-187.5	4,853.6	4,812.3	41.38	117.296	
12,000.0	7,783.1	7,375.0	7,346.5	85.9	17.8	-4.69	-477.9	-187.5	4,953.3	4,911.2	42.10	117.656	
12,100.0	7,783.1	7,375.0	7,346.5	87.8	17.8	-4.69	-477.9	-187.5	5,052.9	5,010.0	42.82	118.001	
12,200.0	7,783.1	7,375.0	7,346.5	89.7	17.8	-4.69	-477.9	-187.5	5,152.5	5,109.0	43.54	118.331	
12,300.0	7,783.1	7,375.0	7,346.5	91.6	17.8	-4.69	-477.9	-187.5	5,252.1	5,207.9	44.27	118.649	
12,400.0	7,783.1	7,375.0	7,346.5	93.4	17.8	-4.69	-477.9	-187.5	5,351.8	5,306.8	44.99	118.954	
12,500.0	7,783.1	7,375.0	7,346.5	95.3	17.8	-4.69	-477.9	-187.5	5,451.5	5,405.8	45.72	119.247	
12,600.0	7,783.1	7,375.0	7,346.5	97.2	17.8	-4.69	-477.9	-187.5	5,551.2	5,504.7	46.44	119.528	
12,700.0	7,783.1	7,375.0	7,346.5	99.1	17.8	-4.69	-477.9	-187.5	5,650.9	5,603.7	47.17	119.800	
12,800.0	7,783.1	7,375.0	7,346.5	101.0	17.8	-4.69	-477.9	-187.5	5,750.6	5,702.7	47.90	120.061	
12,900.0	7,783.1	7,375.0	7,346.5	102.9	17.8	-4.69	-477.9	-187.5	5,850.3	5,801.7	48.63	120.313	
13,000.0	7,783.1	7,375.0	7,346.5	104.8	17.8	-4.69	-477.9	-187.5	5,950.0	5,900.7	49.35	120.556	
13,100.0	7,783.1	7,375.0	7,346.5	106.7	17.8	-4.69	-477.9	-187.5	6,049.7	5,999.7	50.08	120.790	

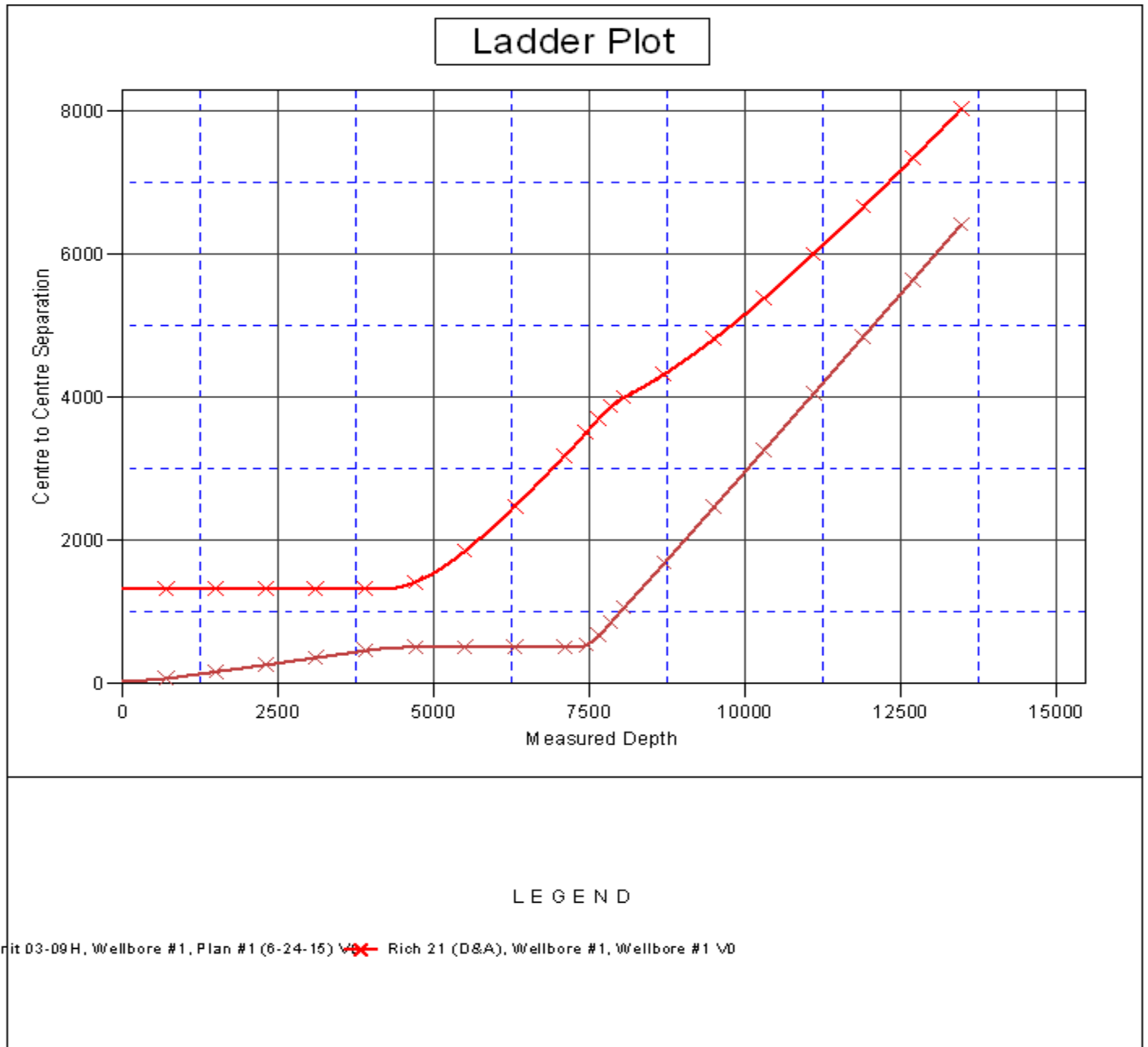
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Surprise Unit 03-09H Pad Sec.9-T6N-R80W - Surprise Unit 03-09H - Wellbore #1 - Plan #1 (6-24-15)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
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
13,200.0	7,783.1	7,375.0	7,346.5	108.5	17.8	-4.69	-477.9	-187.5	6,149.5	6,098.7	50.82	121.017	
13,300.0	7,783.1	7,375.0	7,346.5	110.4	17.8	-4.69	-477.9	-187.5	6,249.2	6,197.7	51.55	121.236	
13,400.0	7,783.1	7,375.0	7,346.5	112.3	17.8	-4.69	-477.9	-187.5	6,349.0	6,296.7	52.28	121.447	
13,473.9	7,783.1	7,375.0	7,346.5	113.7	17.8	-4.69	-477.9	-187.5	6,422.7	6,369.9	52.82	121.599	

Company:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 8276.1ft (Original Well Elev) Coordinates are relative to: Surprise Unit 06-09H
 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:	EE3	Local Co-ordinate Reference:	Well Surprise Unit 06-09H
Project:	SEC.9-T6N-R80W	TVD Reference:	WELL @ 8276.1ft (Original Well Elev)
Reference Site:	Surprise Unit 03-09H Pad Sec.9-T6N-R80W	MD Reference:	WELL @ 8276.1ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Surprise Unit 06-09H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMNEW
Reference Design:	Plan #1 (6-24-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 8276.1ft (Original Well Elev) Coordinates are relative to: Surprise Unit 06-09H
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°

