

EE3

Well Name: **Ray Ranch 7-21H**

Surface Location: Evans 2-21H Pad Sec.21-T7N-R80W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

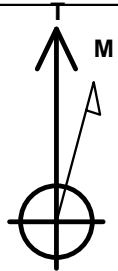
Ground Elevation: 8236.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1451578.70	2756599.83	40.569682	-106.376143	

RKB - 13' WELL @ 8249.0ft (RKB - 13')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
600' Setback BHL	1.0	4997.8	1418.0	Polygon
600' Setback	1.0	794.8	-100.0	Polygon
SHL 198'FNL & 1994'FEL, Sec.21	1.0	0.0	0.0	Point
BHL 600'FNL & 600'FEL, Sec.16	8306.0	4997.8	1418.0	Point
Landing Pt. 610'FSL & 1769'FEL, Sec.16	8306.0	804.8	228.1	Point



Azimuths to True North
Magnetic North: 9.32°

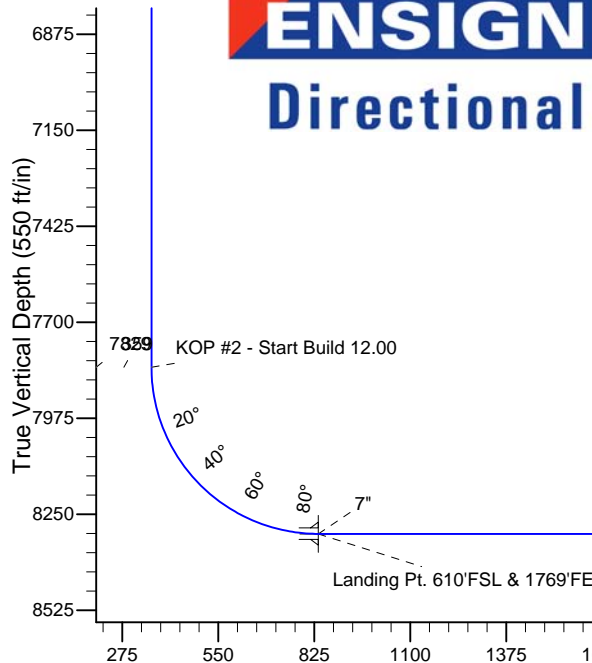
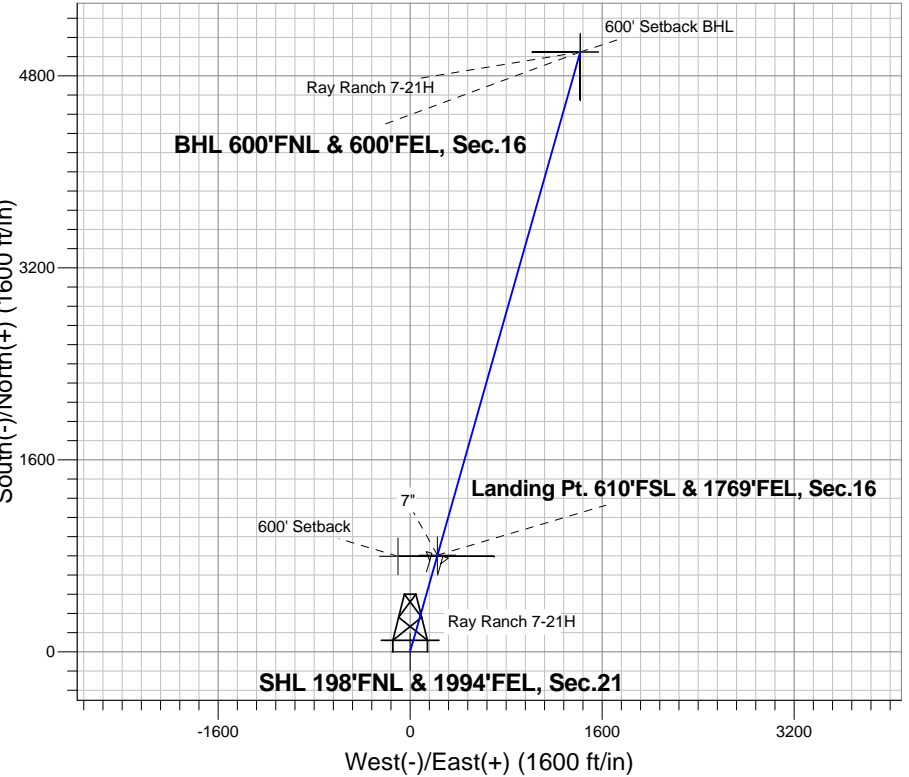
Magnetic Field
Strength: 52709.0snT
Dip Angle: 66.82°
Date: 5/12/2014
Model: IGRF2010

Evans 2-21H Pad Sec.21-T7N-R80W
Ray Ranch 7-21H
Plan #1 (5-12-14)
11:23, May 12 2014

ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP - Start Build 2.00
4316.7	4335.3	Start Drop -1.00
7828.5	7848.8	KOP #2 - Start Build 12.00
8306.0	12957.8	TD at 12957.8

South(-)/North(+) (1600 ft/in)



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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1842.5	6.85	15.86	1841.7	19.7	5.6	2.00	15.86	20.4	
4	4335.3	6.85	15.86	4316.7	305.7	86.8	0.00	0.00	317.8	
5	5020.2	0.00	0.00	5000.0	345.0	98.0	1.00	180.00	358.6	
6	7848.8	0.00	0.00	7828.5	345.0	98.0	0.00	0.00	358.6	
7	8598.8	90.00	15.80	8306.0	804.4	228.0	12.00	15.80	836.1	
8	8599.2	90.00	15.80	8306.0	804.8	228.1	0.00	0.00	836.5	Landing Pt. 610'FSL & 1769'FEL, Sec.16
9	8603.8	90.00	15.84	8306.0	809.2	229.3	1.00	90.00	841.1	
10	12957.8	90.00	15.84	8306.0	4997.8	1418.0	0.00	0.00	5195.1	BHL 600'FNL & 600'FEL, Sec.16

BHL 600'FNL & 600'FEL, Sec.16

Vertical Section at 15.84° (550 ft/in)



EE3

SEC.21-T7N-R80W

Evans 2-21H Pad Sec.21-T7N-R80W

Ray Ranch 7-21H

Wellbore #1

Plan: Plan #1 (5-12-14)

Standard Planning Report

12 May, 2014



Database:	Landmark	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Company:	EE3	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Project:	SEC.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site:	Evans 2-21H Pad Sec.21-T7N-R80W	North Reference:	True
Well:	Ray Ranch 7-21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-12-14)		

Project	SEC.21-T7N-R80W, Jackson 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						Evans 2-21H Pad Sec.21-T7N-R80W											
Site Position:						Northing:			1,451,571.05 ft			Latitude:			40.569663		
From:			Lat/Long			Easting:			2,756,674.21 ft			Longitude:			-106.375875		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			-0.57 °		

Well	Ray Ranch 7-21H					
Well Position	+N-S	6.9 ft	Northing:	1,451,578.70 ft	Latitude:	40.569682
	+E-W	-74.5 ft	Easting:	2,756,599.83 ft	Longitude:	-106.376143
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,236.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/12/2014	9.33	66.82	52,709

Design	Plan #1 (5-12-14)			
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	15.84

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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,842.5	6.85	15.86	1,841.7	19.7	5.6	2.00	2.00	0.00	15.86	
4,335.3	6.85	15.86	4,316.7	305.7	86.8	0.00	0.00	0.00	0.00	
5,020.2	0.00	0.00	5,000.0	345.0	98.0	1.00	-1.00	0.00	180.00	
7,848.8	0.00	0.00	7,828.5	345.0	98.0	0.00	0.00	0.00	0.00	
8,598.8	90.00	15.80	8,306.0	804.4	228.0	12.00	12.00	0.00	15.80	
8,599.2	90.00	15.80	8,306.0	804.8	228.1	0.00	0.00	0.00	0.00	Landing Pt. 610'FSI
8,603.8	90.00	15.84	8,306.0	809.2	229.3	1.00	0.00	1.00	90.00	
12,957.8	90.00	15.84	8,306.0	4,997.8	1,418.0	0.00	0.00	0.00	0.00	BHL 600'FNL & 600'

Database:	Landmark	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Company:	EE3	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Project:	SEC.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site:	Evans 2-21H Pad Sec.21-T7N-R80W	North Reference:	True
Well:	Ray Ranch 7-21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-12-14)		

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 198'FNL & 1994'FEL, Sec.21 - 600' Setback - 600' Setback BHL									
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	2.00	15.86	1,600.0	1.7	0.5	1.7	2.00	2.00	0.00
1,700.0	4.00	15.86	1,699.8	6.7	1.9	7.0	2.00	2.00	0.00
1,800.0	6.00	15.86	1,799.5	15.1	4.3	15.7	2.00	2.00	0.00
1,842.5	6.85	15.86	1,841.7	19.7	5.6	20.4	2.00	2.00	0.00
1,900.0	6.85	15.86	1,898.8	26.3	7.5	27.3	0.00	0.00	0.00
2,000.0	6.85	15.86	1,998.1	37.7	10.7	39.2	0.00	0.00	0.00
2,100.0	6.85	15.86	2,097.3	49.2	14.0	51.2	0.00	0.00	0.00
2,200.0	6.85	15.86	2,196.6	60.7	17.2	63.1	0.00	0.00	0.00
2,300.0	6.85	15.86	2,295.9	72.2	20.5	75.0	0.00	0.00	0.00
2,400.0	6.85	15.86	2,395.2	83.6	23.8	86.9	0.00	0.00	0.00
2,500.0	6.85	15.86	2,494.5	95.1	27.0	98.9	0.00	0.00	0.00
2,600.0	6.85	15.86	2,593.8	106.6	30.3	110.8	0.00	0.00	0.00
2,700.0	6.85	15.86	2,693.1	118.1	33.5	122.7	0.00	0.00	0.00
2,800.0	6.85	15.86	2,792.4	129.5	36.8	134.6	0.00	0.00	0.00
2,900.0	6.85	15.86	2,891.6	141.0	40.1	146.6	0.00	0.00	0.00
3,000.0	6.85	15.86	2,990.9	152.5	43.3	158.5	0.00	0.00	0.00
3,100.0	6.85	15.86	3,090.2	163.9	46.6	170.4	0.00	0.00	0.00
3,200.0	6.85	15.86	3,189.5	175.4	49.8	182.4	0.00	0.00	0.00
3,300.0	6.85	15.86	3,288.8	186.9	53.1	194.3	0.00	0.00	0.00
3,400.0	6.85	15.86	3,388.1	198.4	56.3	206.2	0.00	0.00	0.00
3,500.0	6.85	15.86	3,487.4	209.8	59.6	218.1	0.00	0.00	0.00
3,600.0	6.85	15.86	3,586.6	221.3	62.9	230.1	0.00	0.00	0.00
3,700.0	6.85	15.86	3,685.9	232.8	66.1	242.0	0.00	0.00	0.00
3,800.0	6.85	15.86	3,785.2	244.3	69.4	253.9	0.00	0.00	0.00
3,900.0	6.85	15.86	3,884.5	255.7	72.6	265.8	0.00	0.00	0.00
4,000.0	6.85	15.86	3,983.8	267.2	75.9	277.8	0.00	0.00	0.00
4,100.0	6.85	15.86	4,083.1	278.7	79.2	289.7	0.00	0.00	0.00
4,200.0	6.85	15.86	4,182.4	290.1	82.4	301.6	0.00	0.00	0.00
4,300.0	6.85	15.86	4,281.6	301.6	85.7	313.5	0.00	0.00	0.00
4,335.3	6.85	15.86	4,316.7	305.7	86.8	317.8	0.00	0.00	0.00
4,400.0	6.20	15.86	4,381.0	312.7	88.8	325.1	1.00	-1.00	0.00
4,500.0	5.20	15.86	4,480.5	322.3	91.6	335.0	1.00	-1.00	0.00
4,600.0	4.20	15.86	4,580.1	330.2	93.8	343.2	1.00	-1.00	0.00
4,700.0	3.20	15.86	4,679.9	336.4	95.6	349.7	1.00	-1.00	0.00
4,800.0	2.20	15.86	4,779.8	340.9	96.8	354.4	1.00	-1.00	0.00
4,900.0	1.20	15.86	4,879.8	343.8	97.7	357.4	1.00	-1.00	0.00

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Company:	EE3	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Project:	SEC.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site:	Evans 2-21H Pad Sec.21-T7N-R80W	North Reference:	True
Well:	Ray Ranch 7-21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-12-14)		

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	0.20	15.86	4,979.8	345.0	98.0	358.6	1.00	-1.00	0.00
5,020.2	0.00	0.00	5,000.0	345.0	98.0	358.6	1.00	-1.00	0.00
5,100.0	0.00	0.00	5,079.8	345.0	98.0	358.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,179.8	345.0	98.0	358.6	0.00	0.00	0.00
5,300.0	0.00	0.00	5,279.8	345.0	98.0	358.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,379.8	345.0	98.0	358.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,479.8	345.0	98.0	358.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,579.8	345.0	98.0	358.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,679.8	345.0	98.0	358.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,779.8	345.0	98.0	358.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,879.8	345.0	98.0	358.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,979.8	345.0	98.0	358.6	0.00	0.00	0.00
6,100.0	0.00	0.00	6,079.8	345.0	98.0	358.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,179.8	345.0	98.0	358.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,279.8	345.0	98.0	358.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,379.8	345.0	98.0	358.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,479.8	345.0	98.0	358.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,579.8	345.0	98.0	358.6	0.00	0.00	0.00
6,700.0	0.00	0.00	6,679.8	345.0	98.0	358.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,779.8	345.0	98.0	358.6	0.00	0.00	0.00
6,900.0	0.00	0.00	6,879.8	345.0	98.0	358.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,979.8	345.0	98.0	358.6	0.00	0.00	0.00
7,100.0	0.00	0.00	7,079.8	345.0	98.0	358.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,179.8	345.0	98.0	358.6	0.00	0.00	0.00
7,300.0	0.00	0.00	7,279.8	345.0	98.0	358.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,379.8	345.0	98.0	358.6	0.00	0.00	0.00
7,500.0	0.00	0.00	7,479.8	345.0	98.0	358.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,579.8	345.0	98.0	358.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,679.8	345.0	98.0	358.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,779.8	345.0	98.0	358.6	0.00	0.00	0.00
7,848.8	0.00	0.00	7,828.5	345.0	98.0	358.6	0.00	0.00	0.00
7,900.0	6.15	15.80	7,879.7	347.6	98.7	361.4	12.00	12.00	0.00
8,000.0	18.15	15.80	7,977.2	367.9	104.5	382.4	12.00	12.00	0.00
8,100.0	30.15	15.80	8,068.3	407.1	115.6	423.2	12.00	12.00	0.00
8,200.0	42.15	15.80	8,148.9	463.8	131.6	482.1	12.00	12.00	0.00
8,300.0	54.15	15.80	8,215.5	535.3	151.9	556.5	12.00	12.00	0.00
8,400.0	66.15	15.80	8,265.2	618.6	175.4	643.0	12.00	12.00	0.00
8,500.0	78.15	15.80	8,295.8	710.1	201.3	738.0	12.00	12.00	0.00
8,598.8	90.00	15.80	8,306.0	804.4	228.0	836.1	12.00	12.00	0.00
8,599.2	90.00	15.80	8,306.0	804.8	228.1	836.5	0.00	0.00	0.00
Landing Pt. 610'FSL & 1769'FEL, Sec.16									
8,600.0	90.00	15.81	8,306.0	805.6	228.3	837.3	1.00	0.00	1.00
8,603.8	90.00	15.84	8,306.0	809.2	229.3	841.1	1.00	0.00	1.00
8,700.0	90.00	15.84	8,306.0	901.8	255.6	937.3	0.00	0.00	0.00
8,800.0	90.00	15.84	8,306.0	998.0	282.9	1,037.3	0.00	0.00	0.00
8,900.0	90.00	15.84	8,306.0	1,094.2	310.2	1,137.3	0.00	0.00	0.00
9,000.0	90.00	15.84	8,306.0	1,190.4	337.5	1,237.3	0.00	0.00	0.00
9,100.0	90.00	15.84	8,306.0	1,286.6	364.8	1,337.3	0.00	0.00	0.00
9,200.0	90.00	15.84	8,306.0	1,382.8	392.1	1,437.3	0.00	0.00	0.00
9,300.0	90.00	15.84	8,306.0	1,479.0	419.4	1,537.3	0.00	0.00	0.00
9,400.0	90.00	15.84	8,306.0	1,575.2	446.7	1,637.3	0.00	0.00	0.00
9,500.0	90.00	15.84	8,306.0	1,671.4	474.0	1,737.3	0.00	0.00	0.00
9,600.0	90.00	15.84	8,306.0	1,767.6	501.3	1,837.3	0.00	0.00	0.00

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Project:	SEC.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site:	Evans 2-21H Pad Sec.21-T7N-R80W	North Reference:	True
Well:	Ray Ranch 7-21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-12-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,700.0	90.00	15.84	8,306.0	1,863.8	528.6	1,937.3	0.00	0.00	0.00
9,800.0	90.00	15.84	8,306.0	1,960.0	555.9	2,037.3	0.00	0.00	0.00
9,900.0	90.00	15.84	8,306.0	2,056.2	583.2	2,137.3	0.00	0.00	0.00
10,000.0	90.00	15.84	8,306.0	2,152.4	610.5	2,237.3	0.00	0.00	0.00
10,100.0	90.00	15.84	8,306.0	2,248.6	637.8	2,337.3	0.00	0.00	0.00
10,200.0	90.00	15.84	8,306.0	2,344.8	665.1	2,437.3	0.00	0.00	0.00
10,300.0	90.00	15.84	8,306.0	2,441.0	692.4	2,537.3	0.00	0.00	0.00
10,400.0	90.00	15.84	8,306.0	2,537.2	719.7	2,637.3	0.00	0.00	0.00
10,500.0	90.00	15.84	8,306.0	2,633.4	747.0	2,737.3	0.00	0.00	0.00
10,600.0	90.00	15.84	8,306.0	2,729.6	774.3	2,837.3	0.00	0.00	0.00
10,700.0	90.00	15.84	8,306.0	2,825.8	801.6	2,937.3	0.00	0.00	0.00
10,800.0	90.00	15.84	8,306.0	2,922.0	828.9	3,037.3	0.00	0.00	0.00
10,900.0	90.00	15.84	8,306.0	3,018.2	856.2	3,137.3	0.00	0.00	0.00
11,000.0	90.00	15.84	8,306.0	3,114.4	883.5	3,237.3	0.00	0.00	0.00
11,100.0	90.00	15.84	8,306.0	3,210.6	910.8	3,337.3	0.00	0.00	0.00
11,200.0	90.00	15.84	8,306.0	3,306.8	938.1	3,437.3	0.00	0.00	0.00
11,300.0	90.00	15.84	8,306.0	3,403.0	965.4	3,537.3	0.00	0.00	0.00
11,400.0	90.00	15.84	8,306.0	3,499.3	992.7	3,637.3	0.00	0.00	0.00
11,500.0	90.00	15.84	8,306.0	3,595.5	1,020.0	3,737.3	0.00	0.00	0.00
11,600.0	90.00	15.84	8,306.0	3,691.7	1,047.3	3,837.3	0.00	0.00	0.00
11,700.0	90.00	15.84	8,306.0	3,787.9	1,074.6	3,937.3	0.00	0.00	0.00
11,800.0	90.00	15.84	8,306.0	3,884.1	1,101.9	4,037.3	0.00	0.00	0.00
11,900.0	90.00	15.84	8,306.0	3,980.3	1,129.2	4,137.3	0.00	0.00	0.00
12,000.0	90.00	15.84	8,306.0	4,076.5	1,156.5	4,237.3	0.00	0.00	0.00
12,100.0	90.00	15.84	8,306.0	4,172.7	1,183.8	4,337.3	0.00	0.00	0.00
12,200.0	90.00	15.84	8,306.0	4,268.9	1,211.1	4,437.3	0.00	0.00	0.00
12,300.0	90.00	15.84	8,306.0	4,365.1	1,238.4	4,537.3	0.00	0.00	0.00
12,400.0	90.00	15.84	8,306.0	4,461.3	1,265.7	4,637.3	0.00	0.00	0.00
12,500.0	90.00	15.84	8,306.0	4,557.5	1,293.0	4,737.3	0.00	0.00	0.00
12,600.0	90.00	15.84	8,306.0	4,653.7	1,320.3	4,837.3	0.00	0.00	0.00
12,700.0	90.00	15.84	8,306.0	4,749.9	1,347.6	4,937.3	0.00	0.00	0.00
12,800.0	90.00	15.84	8,306.0	4,846.1	1,374.9	5,037.3	0.00	0.00	0.00
12,900.0	90.00	15.84	8,306.0	4,942.3	1,402.2	5,137.3	0.00	0.00	0.00
12,957.8	90.00	15.84	8,306.0	4,997.8	1,418.0	5,195.1	0.00	0.00	0.00
BHL 600'FNL & 600'FEL, Sec.16									



EE3

SEC.21-T7N-R80W

Evans 2-21H Pad Sec.21-T7N-R80W

Ray Ranch 7-21H

Wellbore #1

Plan #1 (5-12-14)

Anticollision Report

12 May, 2014



Company:	EE3	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Project:	SEC.21-T7N-R80W	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Reference Site:	Evans 2-21H Pad Sec.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	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 (5-12-14)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (5-12-14)		
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 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 5/12/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,957.8	Plan #1 (5-12-14) (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						
Evans 2-21H Pad Sec.21-T7N-R80W						
Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)	1,780.1	1,779.7	73.5	65.7	9.457	CC
Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)	1,800.0	1,799.5	73.5	65.7	9.353	ES
Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)	2,000.0	1,998.1	77.8	69.0	8.858	SF

Offset Design		Evans 2-21H Pad Sec.21-T7N-R80W - Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)											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		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	95.31	-6.9	74.5	74.8					
100.0	100.0	100.0	100.0	0.1	0.1	95.31	-6.9	74.5	74.8	74.6	0.22	332.691		
200.0	200.0	200.0	200.0	0.3	0.3	95.31	-6.9	74.5	74.8	74.1	0.67	110.897		
300.0	300.0	300.0	300.0	0.6	0.6	95.31	-6.9	74.5	74.8	73.7	1.12	66.538		
400.0	400.0	400.0	400.0	0.8	0.8	95.31	-6.9	74.5	74.8	73.2	1.57	47.527		
500.0	500.0	500.0	500.0	1.0	1.0	95.31	-6.9	74.5	74.8	72.8	2.02	36.966		
600.0	600.0	600.0	600.0	1.2	1.2	95.31	-6.9	74.5	74.8	72.3	2.47	30.245		
700.0	700.0	700.0	700.0	1.5	1.5	95.31	-6.9	74.5	74.8	71.9	2.92	25.592		
800.0	800.0	800.0	800.0	1.7	1.7	95.31	-6.9	74.5	74.8	71.4	3.37	22.179		
900.0	900.0	900.0	900.0	1.9	1.9	95.31	-6.9	74.5	74.8	71.0	3.82	19.570		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	95.31	-6.9	74.5	74.8	70.5	4.27	17.510		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	95.31	-6.9	74.5	74.8	70.1	4.72	15.842		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	95.31	-6.9	74.5	74.8	69.6	5.17	14.465		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	95.31	-6.9	74.5	74.8	69.2	5.62	13.308		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	95.31	-6.9	74.5	74.8	68.7	6.07	12.322		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	95.31	-6.9	74.5	74.8	68.3	6.52	11.472		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	80.78	-6.9	74.5	74.5	67.5	6.97	10.692		
1,700.0	1,699.8	1,699.8	1,699.8	3.7	3.7	84.80	-6.9	74.5	73.8	66.4	7.41	9.959		
1,780.1	1,779.7	1,779.7	1,779.7	3.9	3.9	90.00	-6.9	74.5	73.5	65.7	7.77	9.457	CC	
1,800.0	1,799.5	1,799.5	1,799.5	3.9	3.9	91.56	-6.9	74.5	73.5	65.7	7.86	9.353	ES	
1,900.0	1,898.8	1,898.8	1,898.8	4.2	4.2	100.43	-6.9	74.5	74.8	66.4	8.32	8.985		
2,000.0	1,998.1	1,998.1	1,998.1	4.4	4.4	109.04	-6.9	74.5	77.8	69.0	8.79	8.858	SF	
2,100.0	2,097.3	2,097.3	2,097.3	4.7	4.6	116.85	-6.9	74.5	82.5	73.3	9.25	8.919		
2,200.0	2,196.6	2,196.6	2,196.6	4.9	4.8	123.71	-6.9	74.5	88.6	78.9	9.72	9.116		

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

Company:	EE3	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Project:	SEC.21-T7N-R80W	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Reference Site:	Evans 2-21H Pad Sec.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	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 (5-12-14)	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						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	2,295.9	2,295.9	2,295.9	5.2	5.0	129.64	-6.9	74.5	95.7	85.6	10.18	9.405	
2,400.0	2,395.2	2,395.2	2,395.2	5.5	5.3	134.69	-6.9	74.5	103.8	93.1	10.64	9.754	
2,500.0	2,494.5	2,494.5	2,494.5	5.7	5.5	139.00	-6.9	74.5	112.5	101.4	11.10	10.139	
2,600.0	2,593.8	2,593.8	2,593.8	6.0	5.7	142.68	-6.9	74.5	121.8	110.2	11.56	10.541	
2,700.0	2,693.1	2,693.1	2,693.1	6.3	5.9	145.82	-6.9	74.5	131.5	119.5	12.01	10.949	
2,800.0	2,792.4	2,792.4	2,792.4	6.6	6.2	148.53	-6.9	74.5	141.6	129.1	12.47	11.355	
2,900.0	2,891.6	2,891.6	2,891.6	6.9	6.4	150.87	-6.9	74.5	151.9	138.9	12.92	11.753	
3,000.0	2,990.9	2,990.9	2,990.9	7.2	6.6	152.92	-6.9	74.5	162.4	149.0	13.38	12.142	
3,100.0	3,090.2	3,090.2	3,090.2	7.4	6.8	154.71	-6.9	74.5	173.1	159.3	13.83	12.517	
3,200.0	3,189.5	3,189.5	3,189.5	7.7	7.1	156.30	-6.9	74.5	184.0	169.7	14.29	12.879	
3,300.0	3,288.8	3,288.8	3,288.8	8.0	7.3	157.71	-6.9	74.5	195.0	180.2	14.74	13.227	
3,400.0	3,388.1	3,388.1	3,388.1	8.3	7.5	158.96	-6.9	74.5	206.1	190.9	15.20	13.561	
3,500.0	3,487.4	3,487.4	3,487.4	8.6	7.7	160.09	-6.9	74.5	217.3	201.6	15.65	13.881	
3,600.0	3,586.6	3,586.6	3,586.6	8.9	7.9	161.11	-6.9	74.5	228.5	212.4	16.11	14.187	
3,700.0	3,685.9	3,685.9	3,685.9	9.2	8.2	162.03	-6.9	74.5	239.8	223.3	16.56	14.479	
3,800.0	3,785.2	3,785.2	3,785.2	9.5	8.4	162.87	-6.9	74.5	251.2	234.2	17.02	14.760	
3,900.0	3,884.5	3,884.5	3,884.5	9.8	8.6	163.64	-6.9	74.5	262.7	245.2	17.48	15.028	
4,000.0	3,983.8	3,983.8	3,983.8	10.1	8.8	164.34	-6.9	74.5	274.1	256.2	17.93	15.284	
4,100.0	4,083.1	4,083.1	4,083.1	10.4	9.1	164.98	-6.9	74.5	285.6	267.2	18.39	15.530	
4,200.0	4,182.4	4,182.4	4,182.4	10.7	9.3	165.58	-6.9	74.5	297.2	278.3	18.85	15.766	
4,300.0	4,281.6	4,281.6	4,281.6	11.0	9.5	166.13	-6.9	74.5	308.7	289.4	19.31	15.991	
4,400.0	4,381.0	4,381.0	4,381.0	11.3	9.7	166.64	-6.9	74.5	320.0	300.2	19.76	16.194	
4,500.0	4,480.5	4,480.5	4,480.5	11.5	10.0	167.06	-6.9	74.5	329.7	309.5	20.18	16.339	
4,600.0	4,580.1	4,580.1	4,580.1	11.7	10.2	167.39	-6.9	74.5	337.7	317.1	20.59	16.400	
4,700.0	4,679.9	4,679.9	4,679.9	12.0	10.4	167.64	-6.9	74.5	344.0	323.0	21.00	16.382	
4,800.0	4,779.8	4,779.8	4,779.8	12.1	10.6	167.82	-6.9	74.5	348.6	327.2	21.40	16.289	
4,900.0	4,879.8	4,879.8	4,879.8	12.3	10.9	167.92	-6.9	74.5	351.5	329.7	21.80	16.125	
5,000.0	4,979.8	4,979.8	4,979.8	12.5	11.1	167.97	-6.9	74.5	352.7	330.5	22.19	15.896	
5,100.0	5,079.8	5,079.8	5,079.8	12.7	11.3	-176.17	-6.9	74.5	352.7	329.8	22.87	15.423	
5,200.0	5,179.8	5,179.8	5,179.8	12.9	11.5	-176.17	-6.9	74.5	352.7	329.4	23.30	15.135	
5,300.0	5,279.8	5,279.8	5,279.8	13.0	11.8	-176.17	-6.9	74.5	352.7	329.0	23.74	14.857	
5,400.0	5,379.8	5,379.8	5,379.8	13.2	12.0	-176.17	-6.9	74.5	352.7	328.5	24.18	14.589	
5,500.0	5,479.8	5,479.8	5,479.8	13.4	12.2	-176.17	-6.9	74.5	352.7	328.1	24.61	14.330	
5,600.0	5,579.8	5,579.8	5,579.8	13.6	12.4	-176.17	-6.9	74.5	352.7	327.7	25.05	14.080	
5,700.0	5,679.8	5,679.8	5,679.8	13.8	12.7	-176.17	-6.9	74.5	352.7	327.2	25.49	13.838	
5,800.0	5,779.8	5,779.8	5,779.8	14.0	12.9	-176.17	-6.9	74.5	352.7	326.8	25.93	13.604	
5,900.0	5,879.8	5,879.8	5,879.8	14.2	13.1	-176.17	-6.9	74.5	352.7	326.3	26.37	13.378	
6,000.0	5,979.8	5,979.8	5,979.8	14.4	13.3	-176.17	-6.9	74.5	352.7	325.9	26.80	13.159	
6,100.0	6,079.8	6,079.8	6,079.8	14.6	13.6	-176.17	-6.9	74.5	352.7	325.5	27.24	12.946	
6,200.0	6,179.8	6,179.8	6,179.8	14.8	13.8	-176.17	-6.9	74.5	352.7	325.0	27.68	12.741	
6,300.0	6,279.8	6,279.8	6,279.8	15.0	14.0	-176.17	-6.9	74.5	352.7	324.6	28.12	12.542	
6,400.0	6,379.8	6,379.8	6,379.8	15.2	14.2	-176.17	-6.9	74.5	352.7	324.1	28.56	12.348	
6,500.0	6,479.8	6,479.8	6,479.8	15.4	14.5	-176.17	-6.9	74.5	352.7	323.7	29.00	12.161	
6,600.0	6,579.8	6,579.8	6,579.8	15.6	14.7	-176.17	-6.9	74.5	352.7	323.3	29.44	11.979	
6,700.0	6,679.8	6,679.8	6,679.8	15.8	14.9	-176.17	-6.9	74.5	352.7	322.8	29.89	11.802	
6,800.0	6,779.8	6,779.8	6,779.8	16.0	15.1	-176.17	-6.9	74.5	352.7	322.4	30.33	11.630	
6,900.0	6,879.8	6,879.8	6,879.8	16.2	15.4	-176.17	-6.9	74.5	352.7	321.9	30.77	11.463	
7,000.0	6,979.8	6,979.8	6,979.8	16.4	15.6	-176.17	-6.9	74.5	352.7	321.5	31.21	11.301	
7,100.0	7,079.8	7,079.8	7,079.8	16.6	15.8	-176.17	-6.9	74.5	352.7	321.1	31.65	11.143	
7,200.0	7,179.8	7,179.8	7,179.8	16.8	16.0	-176.17	-6.9	74.5	352.7	320.6	32.09	10.990	
7,300.0	7,279.8	7,279.8	7,279.8	17.0	16.3	-176.17	-6.9	74.5	352.7	320.2	32.54	10.840	
7,400.0	7,379.8	7,379.8	7,379.8	17.3	16.5	-176.17	-6.9	74.5	352.7	319.7	32.98	10.695	

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

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	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 (5-12-14)	Offset TVD Reference:	Offset Datum

Offset Design		Evans 2-21H Pad Sec.21-T7N-R80W - Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)											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		
7,500.0	7,479.8	7,479.8	7,479.8	17.5	16.7	-176.17	-6.9	74.5	352.7	319.3	33.42	10.553		
7,600.0	7,579.8	7,579.8	7,579.8	17.7	16.9	-176.17	-6.9	74.5	352.7	318.8	33.86	10.415		
7,700.0	7,679.8	7,679.8	7,679.8	17.9	17.1	-176.17	-6.9	74.5	352.7	318.4	34.31	10.281		
7,800.0	7,779.8	7,779.8	7,779.8	18.1	17.4	-176.17	-6.9	74.5	352.7	318.0	34.75	10.150		
7,900.0	7,879.7	7,838.6	7,838.4	18.3	17.5	168.04	-10.1	73.4	361.0	326.1	34.84	10.362		
8,000.0	7,977.2	7,890.8	7,889.9	18.6	17.6	167.77	-18.6	70.6	397.6	363.4	34.27	11.603		
8,100.0	8,068.3	7,931.8	7,929.3	19.1	17.6	166.67	-29.0	67.2	460.3	427.5	32.78	14.041		
8,200.0	8,148.9	7,959.4	7,955.4	19.7	17.7	163.46	-37.8	64.3	541.8	511.1	30.73	17.634		
8,300.0	8,215.5	7,975.0	7,969.8	20.5	17.7	153.16	-43.4	62.4	635.1	605.4	29.66	21.409		
8,400.0	8,265.2	7,975.0	7,969.8	21.4	17.7	89.89	-43.4	62.4	733.7	694.6	39.12	18.756		
8,500.0	8,295.8	7,975.0	7,969.8	22.5	17.7	23.76	-43.4	62.4	832.6	807.3	25.33	32.872		
8,600.0	8,306.0	7,965.5	7,961.0	23.7	17.7	11.75	-39.9	63.6	927.9	906.5	21.40	43.357		
8,700.0	8,306.0	7,950.0	7,946.6	24.9	17.7	11.41	-34.6	65.3	1,020.9	999.3	21.62	47.228		
8,800.0	8,306.0	7,950.0	7,946.6	26.2	17.7	11.41	-34.6	65.3	1,114.9	1,092.9	21.98	50.727		
8,900.0	8,306.0	7,925.0	7,922.9	27.6	17.6	10.77	-27.0	67.8	1,209.4	1,187.3	22.19	54.512		
9,000.0	8,306.0	7,925.0	7,922.9	29.1	17.6	10.77	-27.0	67.8	1,304.5	1,281.9	22.62	57.671		
9,100.0	8,306.0	7,925.0	7,922.9	30.6	17.6	10.77	-27.0	67.8	1,400.3	1,377.2	23.09	60.649		
9,200.0	8,306.0	7,910.9	7,909.3	32.1	17.6	10.44	-23.3	69.1	1,496.3	1,472.8	23.47	63.747		
9,300.0	8,306.0	7,900.0	7,898.8	33.7	17.6	10.19	-20.6	69.9	1,592.8	1,568.9	23.91	66.622		
9,400.0	8,306.0	7,900.0	7,898.8	35.3	17.6	10.19	-20.6	69.9	1,689.6	1,665.1	24.45	69.096		
9,500.0	8,306.0	7,900.0	7,898.8	37.0	17.6	10.19	-20.6	69.9	1,786.7	1,761.7	25.02	71.414		
9,600.0	8,306.0	7,889.3	7,888.4	38.7	17.6	9.96	-18.3	70.7	1,883.9	1,858.4	25.51	73.841		
9,700.0	8,306.0	7,875.0	7,874.4	40.4	17.5	9.66	-15.5	71.6	1,981.6	1,955.6	25.99	76.232		
9,800.0	8,306.0	7,875.0	7,874.4	42.1	17.5	9.66	-15.5	71.6	2,079.3	2,052.7	26.61	78.144		
9,900.0	8,306.0	7,875.0	7,874.4	43.8	17.5	9.66	-15.5	71.6	2,177.1	2,149.9	27.24	79.936		
10,000.0	8,306.0	7,875.0	7,874.4	45.5	17.5	9.66	-15.5	71.6	2,275.2	2,247.3	27.88	81.617		
10,100.0	8,306.0	7,875.0	7,874.4	47.3	17.5	9.66	-15.5	71.6	2,373.4	2,344.9	28.53	83.195		
10,200.0	8,306.0	7,875.0	7,874.4	49.1	17.5	9.66	-15.5	71.6	2,471.7	2,442.5	29.19	84.678		
10,300.0	8,306.0	7,875.0	7,874.4	50.8	17.5	9.66	-15.5	71.6	2,570.2	2,540.3	29.86	86.072		
10,400.0	8,306.0	7,862.3	7,861.9	52.6	17.5	9.40	-13.3	72.4	2,668.6	2,638.2	30.42	87.733		
10,500.0	8,306.0	7,850.0	7,849.8	54.4	17.5	9.17	-11.5	72.9	2,767.3	2,736.3	30.99	89.309		
10,600.0	8,306.0	7,850.0	7,849.8	56.2	17.5	9.17	-11.5	72.9	2,866.0	2,834.3	31.67	90.482		
10,700.0	8,306.0	7,850.0	7,849.8	58.0	17.5	9.17	-11.5	72.9	2,964.7	2,932.3	32.37	91.590		
10,800.0	8,306.0	7,850.0	7,849.8	59.8	17.5	9.17	-11.5	72.9	3,063.5	3,030.5	33.07	92.639		
10,900.0	8,306.0	7,850.0	7,849.8	61.7	17.5	9.17	-11.5	72.9	3,162.4	3,128.6	33.78	93.631		
11,000.0	8,306.0	7,850.0	7,849.8	63.5	17.5	9.17	-11.5	72.9	3,261.4	3,226.9	34.49	94.572		
11,100.0	8,306.0	7,850.0	7,849.8	65.3	17.5	9.17	-11.5	72.9	3,360.4	3,325.2	35.20	95.465		
11,200.0	8,306.0	7,850.0	7,849.8	67.1	17.5	9.17	-11.5	72.9	3,459.5	3,423.6	35.92	96.313		
11,300.0	8,306.0	7,850.0	7,849.8	69.0	17.5	9.17	-11.5	72.9	3,558.6	3,522.0	36.64	97.119		
11,400.0	8,306.0	7,850.0	7,849.8	70.8	17.5	9.17	-11.5	72.9	3,657.8	3,620.4	37.37	97.887		
11,500.0	8,306.0	7,850.0	7,849.8	72.7	17.5	9.17	-11.5	72.9	3,757.0	3,718.9	38.10	98.618		
11,600.0	8,306.0	7,850.0	7,849.8	74.5	17.5	9.17	-11.5	72.9	3,856.3	3,817.4	38.83	99.316		
11,700.0	8,306.0	7,850.0	7,849.8	76.4	17.5	9.17	-11.5	72.9	3,955.6	3,916.0	39.56	99.982		
11,800.0	8,306.0	7,837.6	7,837.5	78.2	17.5	8.94	-10.0	73.4	4,054.7	4,014.6	40.16	100.976		
11,900.0	8,306.0	7,836.4	7,836.3	80.1	17.5	8.92	-9.8	73.5	4,154.0	4,113.2	40.88	101.619		
12,000.0	8,306.0	7,825.0	7,824.9	81.9	17.5	8.71	-8.7	73.9	4,253.5	4,212.0	41.49	102.528		
12,100.0	8,306.0	7,825.0	7,824.9	83.8	17.5	8.71	-8.7	73.9	4,352.9	4,310.7	42.23	103.087		
12,200.0	8,306.0	7,825.0	7,824.9	85.7	17.5	8.71	-8.7	73.9	4,452.3	4,409.3	42.97	103.623		
12,300.0	8,306.0	7,825.0	7,824.9	87.5	17.5	8.71	-8.7	73.9	4,551.7	4,508.0	43.71	104.138		
12,400.0	8,306.0	7,825.0	7,824.9	89.4	17.5	8.71	-8.7	73.9	4,651.1	4,606.7	44.45	104.632		
12,500.0	8,306.0	7,825.0	7,824.9	91.3	17.5	8.71	-8.7	73.9	4,750.6	4,705.4	45.20	105.106		
12,600.0	8,306.0	7,825.0	7,824.9	93.1	17.5	8.71	-8.7	73.9	4,850.1	4,804.1	45.94	105.563		

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

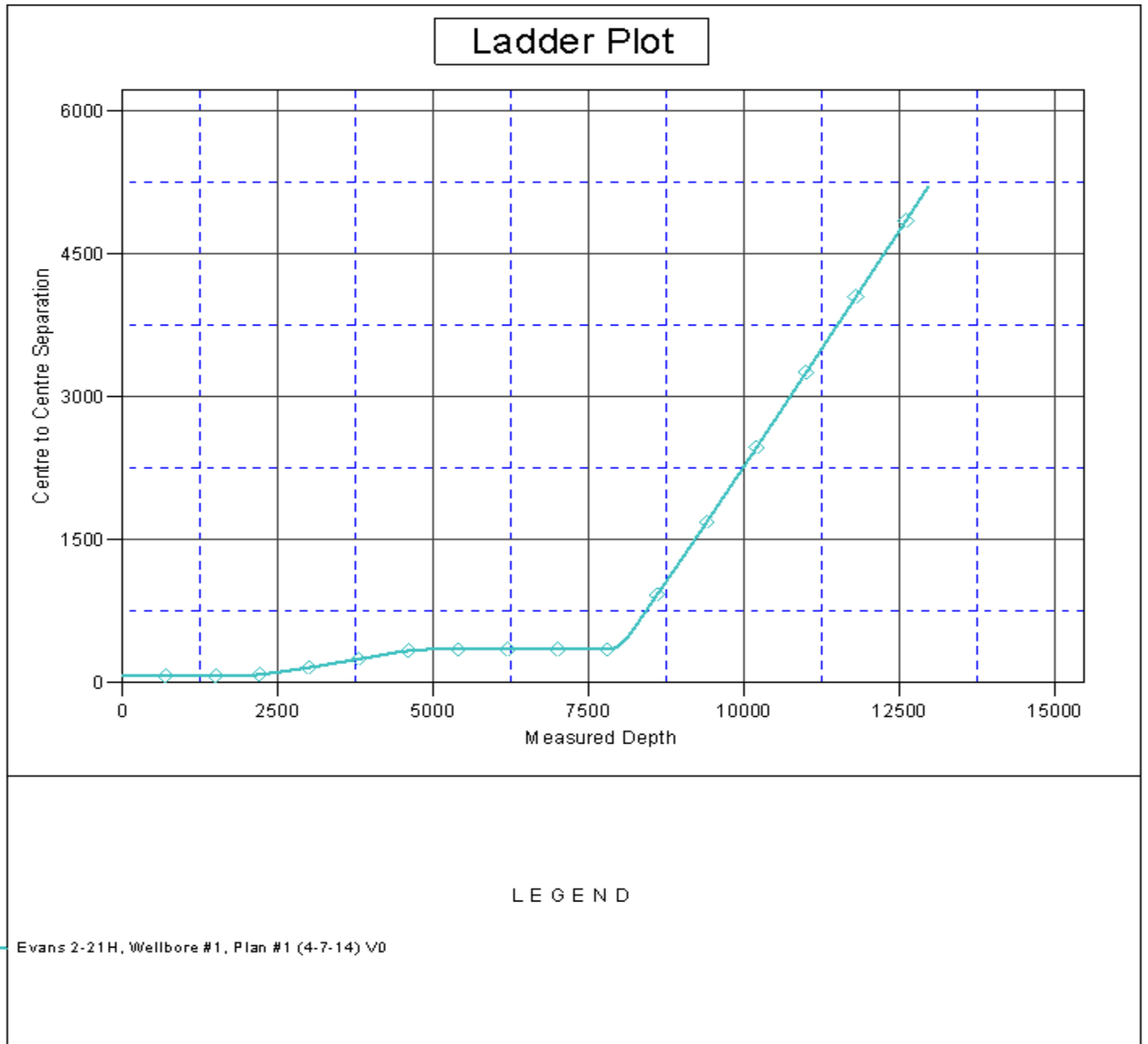
Company:	EE3	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Project:	SEC.21-T7N-R80W	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Reference Site:	Evans 2-21H Pad Sec.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-12-14)	Offset TVD Reference:	Offset Datum

Offset Design Evans 2-21H Pad Sec.21-T7N-R80W - Evans 2-21H - Wellbore #1 - Plan #1 (4-7-14)													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		
12,700.0	8,306.0	7,825.0	7,824.9	95.0	17.5	8.71	-8.7	73.9	4,949.6	4,902.9	46.69	106.002		
12,800.0	8,306.0	7,825.0	7,824.9	96.9	17.5	8.71	-8.7	73.9	5,049.1	5,001.7	47.44	106.425		
12,900.0	8,306.0	7,825.0	7,824.9	98.8	17.5	8.71	-8.7	73.9	5,148.6	5,100.4	48.19	106.832		
12,958.7	8,306.0	7,825.0	7,824.9	99.9	17.5	8.71	-8.7	73.9	5,207.1	5,158.4	48.63	107.071		

Company:	EE3	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Project:	SEC.21-T7N-R80W	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Reference Site:	Evans 2-21H Pad Sec.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	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 (5-12-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 8249.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Ray Ranch 7-21H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.57°



Company:	EE3	Local Co-ordinate Reference:	Well Ray Ranch 7-21H
Project:	SEC.21-T7N-R80W	TVD Reference:	WELL @ 8249.0ft (RKB - 13')
Reference Site:	Evans 2-21H Pad Sec.21-T7N-R80W	MD Reference:	WELL @ 8249.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ray Ranch 7-21H	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 (5-12-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 8249.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Ray Ranch 7-21H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.57°

