

Cirque Resources LP

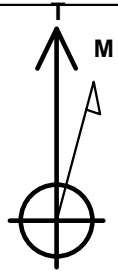
Well Name: **Pismo East 35-2-2-2CH**

Surface Location: Pismo East Pad Sec.35-T12N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 6198.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1596885.41	3209514.69	40.969350	-104.741350	
RKB - 25' WELL @ 6223.0ft (RKB - 25')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
330' Setback	1.0	-9380.9	-260.0	Polygon
Sectionline	1.0	750.0	-261.3	Polygon
SHL 750'FNL & 2093'FEL	1.0	0.0	0.0	Point
BHL 340'FSL & 660'FEL	9213.0	-9370.9	1417.3	Point
Landing Pt. 1034'FNL & 660'FEL	9213.0	-295.0	1433.3	Point



Azimuths to True North
Magnetic North: 8.47°

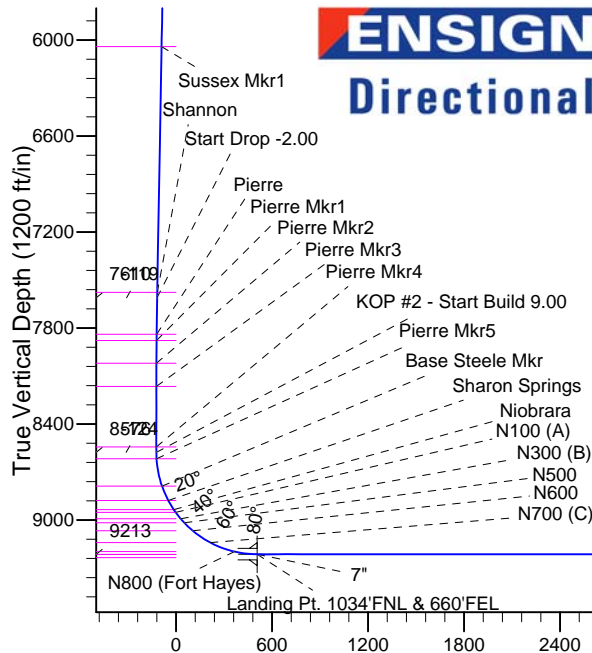
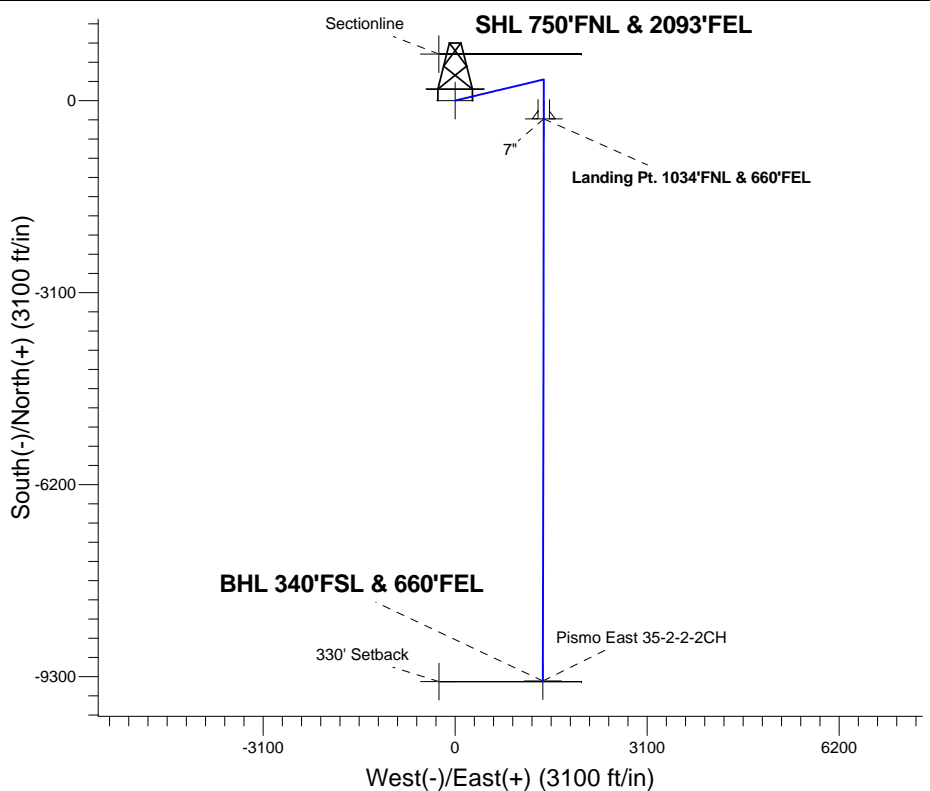
Magnetic Field
Strength: 53080.3snT
Dip Angle: 67.40°
Date: 8/28/2014
Model: IGRF2010

Pismo East Pad Sec.35-T12N-R66W
Pismo East 35-2-2-2CH
Plan #1 (8-28-14)
9:10, August 29 2014

ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP - Start Build 2.00
7609.9	7754.8	Start Drop -2.00
8576.4	8725.6	KOP #2 - Start Build 9.00
9213.0	18801.9	TD at 18801.9

South(-)/North(+) (3100 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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1194.4	11.89	76.59	1190.1	14.3	59.8	2.00	76.59	-5.2	
4	7754.8	11.89	76.59	7609.9	327.7	1374.2	0.00	0.00	-118.6	
5	8349.2	0.00	0.00	8200.0	342.0	1434.0	2.00	180.00	-123.7	
6	8725.6	0.00	0.00	8576.4	342.0	1434.0	0.00	0.00	-123.7	
7	9725.6	90.00	180.07	9213.0	-294.6	1433.3	9.00	180.07	505.6	
8	9726.0	90.00	180.07	9213.0	-295.0	1433.3	0.00	0.00	506.0	Landing Pt. 1034'FNL & 660'FEL
9	9729.4	90.00	180.10	9213.0	-298.5	1433.3	1.00	90.00	509.4	
10	18801.9	90.00	180.10	9213.0	-9370.9	1417.3	0.00	0.00	9477.5	BHL 340'FSL & 660'FEL

Vertical Section at 171.40° (1200 ft/in)



Cirque Resources LP

Sec.35-T12N-R66W

Pismo East Pad Sec.35-T12N-R66W

Pismo East 35-2-2-2CH

Wellbore #1

Plan: Plan #1 (8-28-14)

Standard Planning Report

29 August, 2014

Database:	Landmark	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

Project	Sec.35-T12N-R66W		
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						Pismo East Pad Sec.35-T12N-R66W											
Site Position:						Northing:			1,596,888.38 ft			Latitude:			40.969360		
From:			Lat/Long			Easting:			3,209,434.57 ft			Longitude:			-104.741640		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.49 °		

Well	Pismo East 35-2-2-2CH					
Well Position	+N/-S	-3.7 ft	Northing:	1,596,885.41 ft	Latitude:	40.969350
	+E/-W	80.1 ft	Easting:	3,209,514.69 ft	Longitude:	-104.741350
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,198.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/28/2014	8.47	67.40	53,080

Design	Plan #1 (8-28-14)			
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	171.40

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,194.4	11.89	76.59	1,190.1	14.3	59.8	2.00	2.00	0.00	76.59	
7,754.8	11.89	76.59	7,609.9	327.7	1,374.2	0.00	0.00	0.00	0.00	
8,349.2	0.00	0.00	8,200.0	342.0	1,434.0	2.00	-2.00	0.00	180.00	
8,725.6	0.00	0.00	8,576.4	342.0	1,434.0	0.00	0.00	0.00	0.00	
9,725.6	90.00	180.07	9,213.0	-294.6	1,433.3	9.00	9.00	0.00	180.07	
9,726.0	90.00	180.07	9,213.0	-295.0	1,433.3	0.00	0.00	0.00	0.00	Landing Pt. 1034'Fl
9,729.4	90.00	180.10	9,213.0	-298.5	1,433.3	1.00	0.00	1.00	90.00	
18,801.9	90.00	180.10	9,213.0	-9,370.9	1,417.3	0.00	0.00	0.00	0.00	BHL 340'FSL & 66C

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Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

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
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
KOP - Start Build 2.00									
700.0	2.00	76.59	700.0	0.4	1.7	-0.1	2.00	2.00	0.00
800.0	4.00	76.59	799.8	1.6	6.8	-0.6	2.00	2.00	0.00
900.0	6.00	76.59	899.5	3.6	15.3	-1.3	2.00	2.00	0.00
1,000.0	8.00	76.59	998.7	6.5	27.1	-2.3	2.00	2.00	0.00
1,100.0	10.00	76.59	1,097.5	10.1	42.3	-3.7	2.00	2.00	0.00
1,194.4	11.89	76.59	1,190.1	14.3	59.8	-5.2	2.00	2.00	0.00
1,200.0	11.89	76.59	1,195.6	14.5	60.9	-5.3	0.00	0.00	0.00
1,300.0	11.89	76.59	1,293.5	19.3	80.9	-7.0	0.00	0.00	0.00
1,400.0	11.89	76.59	1,391.3	24.1	101.0	-8.7	0.00	0.00	0.00
1,500.0	11.89	76.59	1,489.2	28.9	121.0	-10.4	0.00	0.00	0.00
1,600.0	11.89	76.59	1,587.0	33.6	141.0	-12.2	0.00	0.00	0.00
1,700.0	11.89	76.59	1,684.9	38.4	161.1	-13.9	0.00	0.00	0.00
1,800.0	11.89	76.59	1,782.8	43.2	181.1	-15.6	0.00	0.00	0.00
1,900.0	11.89	76.59	1,880.6	48.0	201.1	-17.4	0.00	0.00	0.00
2,000.0	11.89	76.59	1,978.5	52.8	221.2	-19.1	0.00	0.00	0.00
2,100.0	11.89	76.59	2,076.3	57.5	241.2	-20.8	0.00	0.00	0.00
2,200.0	11.89	76.59	2,174.2	62.3	261.3	-22.5	0.00	0.00	0.00
2,232.5	11.89	76.59	2,206.0	63.9	267.8	-23.1	0.00	0.00	0.00
Fox Hills									
2,300.0	11.89	76.59	2,272.0	67.1	281.3	-24.3	0.00	0.00	0.00
2,400.0	11.89	76.59	2,369.9	71.9	301.3	-26.0	0.00	0.00	0.00
2,500.0	11.89	76.59	2,467.7	76.6	321.4	-27.7	0.00	0.00	0.00
2,600.0	11.89	76.59	2,565.6	81.4	341.4	-29.5	0.00	0.00	0.00
2,700.0	11.89	76.59	2,663.5	86.2	361.4	-31.2	0.00	0.00	0.00
2,800.0	11.89	76.59	2,761.3	91.0	381.5	-32.9	0.00	0.00	0.00
2,900.0	11.89	76.59	2,859.2	95.8	401.5	-34.6	0.00	0.00	0.00
3,000.0	11.89	76.59	2,957.0	100.5	421.5	-36.4	0.00	0.00	0.00
3,090.9	11.89	76.59	3,046.0	104.9	439.8	-37.9	0.00	0.00	0.00
Fox Hills Mkr 1									
3,100.0	11.89	76.59	3,054.9	105.3	441.6	-38.1	0.00	0.00	0.00
3,200.0	11.89	76.59	3,152.7	110.1	461.6	-39.8	0.00	0.00	0.00
3,300.0	11.89	76.59	3,250.6	114.9	481.7	-41.6	0.00	0.00	0.00
3,400.0	11.89	76.59	3,348.4	119.6	501.7	-43.3	0.00	0.00	0.00
3,500.0	11.89	76.59	3,446.3	124.4	521.7	-45.0	0.00	0.00	0.00
3,600.0	11.89	76.59	3,544.2	129.2	541.8	-46.7	0.00	0.00	0.00
3,700.0	11.89	76.59	3,642.0	134.0	561.8	-48.5	0.00	0.00	0.00
3,800.0	11.89	76.59	3,739.9	138.8	581.8	-50.2	0.00	0.00	0.00
3,900.0	11.89	76.59	3,837.7	143.5	601.9	-51.9	0.00	0.00	0.00
4,000.0	11.89	76.59	3,935.6	148.3	621.9	-53.7	0.00	0.00	0.00
4,100.0	11.89	76.59	4,033.4	153.1	641.9	-55.4	0.00	0.00	0.00
4,200.0	11.89	76.59	4,131.3	157.9	662.0	-57.1	0.00	0.00	0.00
4,300.0	11.89	76.59	4,229.1	162.7	682.0	-58.8	0.00	0.00	0.00
4,400.0	11.89	76.59	4,327.0	167.4	702.1	-60.6	0.00	0.00	0.00
4,500.0	11.89	76.59	4,424.9	172.2	722.1	-62.3	0.00	0.00	0.00
4,600.0	11.89	76.59	4,522.7	177.0	742.1	-64.0	0.00	0.00	0.00

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Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

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)
4,700.0	11.89	76.59	4,620.6	181.8	762.2	-65.8	0.00	0.00	0.00
4,749.5	11.89	76.59	4,669.0	184.1	772.1	-66.6	0.00	0.00	0.00
Teapot									
4,800.0	11.89	76.59	4,718.4	186.5	782.2	-67.5	0.00	0.00	0.00
4,900.0	11.89	76.59	4,816.3	191.3	802.2	-69.2	0.00	0.00	0.00
5,000.0	11.89	76.59	4,914.1	196.1	822.3	-70.9	0.00	0.00	0.00
5,100.0	11.89	76.59	5,012.0	200.9	842.3	-72.7	0.00	0.00	0.00
5,105.1	11.89	76.59	5,017.0	201.1	843.3	-72.8	0.00	0.00	0.00
Parkman									
5,200.0	11.89	76.59	5,109.8	205.7	862.3	-74.4	0.00	0.00	0.00
5,300.0	11.89	76.59	5,207.7	210.4	882.4	-76.1	0.00	0.00	0.00
5,400.0	11.89	76.59	5,305.6	215.2	902.4	-77.9	0.00	0.00	0.00
5,500.0	11.89	76.59	5,403.4	220.0	922.5	-79.6	0.00	0.00	0.00
5,600.0	11.89	76.59	5,501.3	224.8	942.5	-81.3	0.00	0.00	0.00
5,700.0	11.89	76.59	5,599.1	229.6	962.5	-83.0	0.00	0.00	0.00
5,723.4	11.89	76.59	5,622.0	230.7	967.2	-83.4	0.00	0.00	0.00
Sussex									
5,800.0	11.89	76.59	5,697.0	234.3	982.6	-84.8	0.00	0.00	0.00
5,892.0	11.89	76.59	5,787.0	238.7	1,001.0	-86.4	0.00	0.00	0.00
Pierre Upper Mkr1									
5,900.0	11.89	76.59	5,794.8	239.1	1,002.6	-86.5	0.00	0.00	0.00
6,000.0	11.89	76.59	5,892.7	243.9	1,022.6	-88.2	0.00	0.00	0.00
6,100.0	11.89	76.59	5,990.5	248.7	1,042.7	-90.0	0.00	0.00	0.00
6,151.6	11.89	76.59	6,041.0	251.1	1,053.0	-90.8	0.00	0.00	0.00
Sussex Mkr1									
6,200.0	11.89	76.59	6,088.4	253.4	1,062.7	-91.7	0.00	0.00	0.00
6,300.0	11.89	76.59	6,186.3	258.2	1,082.7	-93.4	0.00	0.00	0.00
6,400.0	11.89	76.59	6,284.1	263.0	1,102.8	-95.1	0.00	0.00	0.00
6,500.0	11.89	76.59	6,382.0	267.8	1,122.8	-96.9	0.00	0.00	0.00
6,600.0	11.89	76.59	6,479.8	272.6	1,142.9	-98.6	0.00	0.00	0.00
6,700.0	11.89	76.59	6,577.7	277.3	1,162.9	-100.3	0.00	0.00	0.00
6,800.0	11.89	76.59	6,675.5	282.1	1,182.9	-102.1	0.00	0.00	0.00
6,900.0	11.89	76.59	6,773.4	286.9	1,203.0	-103.8	0.00	0.00	0.00
7,000.0	11.89	76.59	6,871.2	291.7	1,223.0	-105.5	0.00	0.00	0.00
7,100.0	11.89	76.59	6,969.1	296.5	1,243.0	-107.2	0.00	0.00	0.00
7,200.0	11.89	76.59	7,067.0	301.2	1,263.1	-109.0	0.00	0.00	0.00
7,300.0	11.89	76.59	7,164.8	306.0	1,283.1	-110.7	0.00	0.00	0.00
7,400.0	11.89	76.59	7,262.7	310.8	1,303.1	-112.4	0.00	0.00	0.00
7,500.0	11.89	76.59	7,360.5	315.6	1,323.2	-114.2	0.00	0.00	0.00
7,600.0	11.89	76.59	7,458.4	320.3	1,343.2	-115.9	0.00	0.00	0.00
7,700.0	11.89	76.59	7,556.2	325.1	1,363.3	-117.6	0.00	0.00	0.00
7,720.2	11.89	76.59	7,576.0	326.1	1,367.3	-118.0	0.00	0.00	0.00
Shannon									
7,754.8	11.89	76.59	7,609.9	327.7	1,374.2	-118.6	0.00	0.00	0.00
Start Drop -2.00									
7,800.0	10.98	76.59	7,654.2	329.8	1,383.0	-119.3	2.00	-2.00	0.00
7,900.0	8.98	76.59	7,752.6	333.8	1,399.8	-120.8	2.00	-2.00	0.00
7,986.2	7.26	76.59	7,838.0	336.7	1,411.7	-121.8	2.00	-2.00	0.00
Pierre									
8,000.0	6.98	76.59	7,851.7	337.1	1,413.3	-121.9	2.00	-2.00	0.00
8,026.5	6.45	76.59	7,878.0	337.8	1,416.3	-122.2	2.00	-2.00	0.00
Pierre Mkr1									
8,100.0	4.98	76.59	7,951.1	339.5	1,423.5	-122.8	2.00	-2.00	0.00

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Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

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)
8,168.1	3.62	76.59	8,019.0	340.7	1,428.4	-123.2	2.00	-2.00	0.00
Pierre Mkr2									
8,200.0	2.98	76.59	8,050.9	341.1	1,430.2	-123.4	2.00	-2.00	0.00
8,300.0	0.98	76.59	8,150.8	341.9	1,433.6	-123.7	2.00	-2.00	0.00
8,314.2	0.70	76.59	8,165.0	342.0	1,433.8	-123.7	2.00	-2.00	0.00
Pierre Mkr3									
8,349.2	0.00	0.00	8,200.0	342.0	1,434.0	-123.7	2.00	-2.00	0.00
8,400.0	0.00	0.00	8,250.8	342.0	1,434.0	-123.7	0.00	0.00	0.00
8,500.0	0.00	0.00	8,350.8	342.0	1,434.0	-123.7	0.00	0.00	0.00
8,600.0	0.00	0.00	8,450.8	342.0	1,434.0	-123.7	0.00	0.00	0.00
8,692.2	0.00	0.00	8,543.0	342.0	1,434.0	-123.7	0.00	0.00	0.00
Pierre Mkr4									
8,700.0	0.00	0.00	8,550.8	342.0	1,434.0	-123.7	0.00	0.00	0.00
8,725.6	0.00	0.00	8,576.4	342.0	1,434.0	-123.7	0.00	0.00	0.00
KOP #2 - Start Build 9.00									
8,766.2	3.66	180.07	8,617.0	340.7	1,434.0	-122.4	9.01	9.01	0.00
Pierre Mkr5									
8,800.0	6.70	180.07	8,650.6	337.7	1,434.0	-119.4	9.00	9.00	0.00
8,900.0	15.70	180.07	8,748.6	318.3	1,434.0	-100.2	9.00	9.00	0.00
8,940.2	19.32	180.07	8,787.0	306.1	1,434.0	-88.3	9.00	9.00	0.00
Base Steele Mkr									
9,000.0	24.70	180.07	8,842.4	283.8	1,433.9	-66.1	9.00	9.00	0.00
9,038.7	28.18	180.07	8,877.0	266.6	1,433.9	-49.1	9.00	9.00	0.00
Sharon Springs									
9,100.0	33.70	180.07	8,929.6	235.0	1,433.9	-18.0	9.00	9.00	0.00
9,106.5	34.29	180.07	8,935.0	231.4	1,433.9	-14.4	9.00	9.00	0.00
Niobrara									
9,127.3	36.16	180.07	8,952.0	219.4	1,433.9	-2.5	9.00	9.00	0.00
N100 (A)									
9,177.1	40.64	180.07	8,991.0	188.5	1,433.8	28.1	9.00	9.00	0.00
N300 (B)									
9,200.0	42.70	180.07	9,008.1	173.3	1,433.8	43.1	9.00	9.00	0.00
9,212.2	43.80	180.07	9,017.0	164.9	1,433.8	51.4	9.00	9.00	0.00
N500									
9,285.7	50.41	180.07	9,067.0	111.1	1,433.7	104.6	9.00	9.00	0.00
N600									
9,300.0	51.70	180.07	9,076.0	100.0	1,433.7	115.6	9.00	9.00	0.00
9,400.0	60.70	180.07	9,131.5	16.9	1,433.6	197.6	9.00	9.00	0.00
9,417.7	62.29	180.07	9,140.0	1.4	1,433.6	213.0	9.00	9.00	0.00
N700 (C)									
9,500.0	69.70	180.07	9,173.5	-73.7	1,433.5	287.3	9.00	9.00	0.00
9,582.5	77.13	180.07	9,197.0	-152.8	1,433.4	365.4	9.00	9.00	0.00
N800 (Fort Hayes)									
9,600.0	78.70	180.07	9,200.7	-169.9	1,433.4	382.3	9.00	9.00	0.00
9,700.0	87.70	180.07	9,212.5	-269.1	1,433.3	480.4	9.00	9.00	0.00
9,725.6	90.00	180.07	9,213.0	-294.6	1,433.3	505.6	9.00	9.00	0.00
9,726.0	90.00	180.07	9,213.0	-295.0	1,433.3	506.1	0.00	0.00	0.00
7"									
9,729.4	90.00	180.10	9,213.0	-298.5	1,433.3	509.4	1.01	0.00	1.01
9,800.0	90.00	180.10	9,213.0	-369.0	1,433.1	579.2	0.00	0.00	0.00
9,900.0	90.00	180.10	9,213.0	-469.0	1,433.0	678.1	0.00	0.00	0.00
10,000.0	90.00	180.10	9,213.0	-569.0	1,432.8	776.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

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)
10,100.0	90.00	180.10	9,213.0	-669.0	1,432.6	875.7	0.00	0.00	0.00
10,200.0	90.00	180.10	9,213.0	-769.0	1,432.4	974.6	0.00	0.00	0.00
10,300.0	90.00	180.10	9,213.0	-869.0	1,432.2	1,073.4	0.00	0.00	0.00
10,400.0	90.00	180.10	9,213.0	-969.0	1,432.1	1,172.3	0.00	0.00	0.00
10,500.0	90.00	180.10	9,213.0	-1,069.0	1,431.9	1,271.1	0.00	0.00	0.00
10,600.0	90.00	180.10	9,213.0	-1,169.0	1,431.7	1,370.0	0.00	0.00	0.00
10,700.0	90.00	180.10	9,213.0	-1,269.0	1,431.5	1,468.8	0.00	0.00	0.00
10,800.0	90.00	180.10	9,213.0	-1,369.0	1,431.4	1,567.7	0.00	0.00	0.00
10,900.0	90.00	180.10	9,213.0	-1,469.0	1,431.2	1,666.5	0.00	0.00	0.00
11,000.0	90.00	180.10	9,213.0	-1,569.0	1,431.0	1,765.4	0.00	0.00	0.00
11,100.0	90.00	180.10	9,213.0	-1,669.0	1,430.8	1,864.2	0.00	0.00	0.00
11,200.0	90.00	180.10	9,213.0	-1,769.0	1,430.7	1,963.1	0.00	0.00	0.00
11,300.0	90.00	180.10	9,213.0	-1,869.0	1,430.5	2,061.9	0.00	0.00	0.00
11,400.0	90.00	180.10	9,213.0	-1,969.0	1,430.3	2,160.8	0.00	0.00	0.00
11,500.0	90.00	180.10	9,213.0	-2,069.0	1,430.1	2,259.6	0.00	0.00	0.00
11,600.0	90.00	180.10	9,213.0	-2,169.0	1,430.0	2,358.5	0.00	0.00	0.00
11,700.0	90.00	180.10	9,213.0	-2,269.0	1,429.8	2,457.3	0.00	0.00	0.00
11,800.0	90.00	180.10	9,213.0	-2,369.0	1,429.6	2,556.2	0.00	0.00	0.00
11,900.0	90.00	180.10	9,213.0	-2,469.0	1,429.4	2,655.0	0.00	0.00	0.00
12,000.0	90.00	180.10	9,213.0	-2,569.0	1,429.3	2,753.9	0.00	0.00	0.00
12,100.0	90.00	180.10	9,213.0	-2,669.0	1,429.1	2,852.7	0.00	0.00	0.00
12,200.0	90.00	180.10	9,213.0	-2,769.0	1,428.9	2,951.6	0.00	0.00	0.00
12,300.0	90.00	180.10	9,213.0	-2,869.0	1,428.7	3,050.4	0.00	0.00	0.00
12,400.0	90.00	180.10	9,213.0	-2,969.0	1,428.5	3,149.3	0.00	0.00	0.00
12,500.0	90.00	180.10	9,213.0	-3,069.0	1,428.4	3,248.1	0.00	0.00	0.00
12,600.0	90.00	180.10	9,213.0	-3,169.0	1,428.2	3,347.0	0.00	0.00	0.00
12,700.0	90.00	180.10	9,213.0	-3,269.0	1,428.0	3,445.8	0.00	0.00	0.00
12,800.0	90.00	180.10	9,213.0	-3,369.0	1,427.8	3,544.7	0.00	0.00	0.00
12,900.0	90.00	180.10	9,213.0	-3,469.0	1,427.7	3,643.5	0.00	0.00	0.00
13,000.0	90.00	180.10	9,213.0	-3,569.0	1,427.5	3,742.4	0.00	0.00	0.00
13,100.0	90.00	180.10	9,213.0	-3,669.0	1,427.3	3,841.2	0.00	0.00	0.00
13,200.0	90.00	180.10	9,213.0	-3,769.0	1,427.1	3,940.1	0.00	0.00	0.00
13,300.0	90.00	180.10	9,213.0	-3,869.0	1,427.0	4,038.9	0.00	0.00	0.00
13,400.0	90.00	180.10	9,213.0	-3,969.0	1,426.8	4,137.8	0.00	0.00	0.00
13,500.0	90.00	180.10	9,213.0	-4,069.0	1,426.6	4,236.6	0.00	0.00	0.00
13,600.0	90.00	180.10	9,213.0	-4,169.0	1,426.4	4,335.5	0.00	0.00	0.00
13,700.0	90.00	180.10	9,213.0	-4,269.0	1,426.3	4,434.3	0.00	0.00	0.00
13,800.0	90.00	180.10	9,213.0	-4,369.0	1,426.1	4,533.2	0.00	0.00	0.00
13,900.0	90.00	180.10	9,213.0	-4,469.0	1,425.9	4,632.0	0.00	0.00	0.00
14,000.0	90.00	180.10	9,213.0	-4,569.0	1,425.7	4,730.9	0.00	0.00	0.00
14,100.0	90.00	180.10	9,213.0	-4,669.0	1,425.5	4,829.7	0.00	0.00	0.00
14,200.0	90.00	180.10	9,213.0	-4,769.0	1,425.4	4,928.6	0.00	0.00	0.00
14,300.0	90.00	180.10	9,213.0	-4,869.0	1,425.2	5,027.4	0.00	0.00	0.00
14,400.0	90.00	180.10	9,213.0	-4,969.0	1,425.0	5,126.3	0.00	0.00	0.00
14,500.0	90.00	180.10	9,213.0	-5,069.0	1,424.8	5,225.1	0.00	0.00	0.00
14,600.0	90.00	180.10	9,213.0	-5,169.0	1,424.7	5,324.0	0.00	0.00	0.00
14,700.0	90.00	180.10	9,213.0	-5,269.0	1,424.5	5,422.8	0.00	0.00	0.00
14,800.0	90.00	180.10	9,213.0	-5,369.0	1,424.3	5,521.7	0.00	0.00	0.00
14,900.0	90.00	180.10	9,213.0	-5,469.0	1,424.1	5,620.5	0.00	0.00	0.00
15,000.0	90.00	180.10	9,213.0	-5,569.0	1,424.0	5,719.4	0.00	0.00	0.00
15,100.0	90.00	180.10	9,213.0	-5,669.0	1,423.8	5,818.2	0.00	0.00	0.00
15,200.0	90.00	180.10	9,213.0	-5,769.0	1,423.6	5,917.1	0.00	0.00	0.00
15,300.0	90.00	180.10	9,213.0	-5,869.0	1,423.4	6,015.9	0.00	0.00	0.00
15,400.0	90.00	180.10	9,213.0	-5,969.0	1,423.3	6,114.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

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)	
15,500.0	90.00	180.10	9,213.0	-6,069.0	1,423.1	6,213.6	0.00	0.00	0.00	
15,600.0	90.00	180.10	9,213.0	-6,169.0	1,422.9	6,312.4	0.00	0.00	0.00	
15,700.0	90.00	180.10	9,213.0	-6,269.0	1,422.7	6,411.3	0.00	0.00	0.00	
15,800.0	90.00	180.10	9,213.0	-6,369.0	1,422.5	6,510.1	0.00	0.00	0.00	
15,900.0	90.00	180.10	9,213.0	-6,469.0	1,422.4	6,609.0	0.00	0.00	0.00	
16,000.0	90.00	180.10	9,213.0	-6,569.0	1,422.2	6,707.8	0.00	0.00	0.00	
16,100.0	90.00	180.10	9,213.0	-6,669.0	1,422.0	6,806.7	0.00	0.00	0.00	
16,200.0	90.00	180.10	9,213.0	-6,769.0	1,421.8	6,905.5	0.00	0.00	0.00	
16,300.0	90.00	180.10	9,213.0	-6,869.0	1,421.7	7,004.4	0.00	0.00	0.00	
16,400.0	90.00	180.10	9,213.0	-6,969.0	1,421.5	7,103.2	0.00	0.00	0.00	
16,500.0	90.00	180.10	9,213.0	-7,069.0	1,421.3	7,202.1	0.00	0.00	0.00	
16,600.0	90.00	180.10	9,213.0	-7,169.0	1,421.1	7,300.9	0.00	0.00	0.00	
16,700.0	90.00	180.10	9,213.0	-7,269.0	1,421.0	7,399.8	0.00	0.00	0.00	
16,800.0	90.00	180.10	9,213.0	-7,369.0	1,420.8	7,498.6	0.00	0.00	0.00	
16,900.0	90.00	180.10	9,213.0	-7,469.0	1,420.6	7,597.5	0.00	0.00	0.00	
17,000.0	90.00	180.10	9,213.0	-7,569.0	1,420.4	7,696.3	0.00	0.00	0.00	
17,100.0	90.00	180.10	9,213.0	-7,669.0	1,420.3	7,795.2	0.00	0.00	0.00	
17,200.0	90.00	180.10	9,213.0	-7,769.0	1,420.1	7,894.0	0.00	0.00	0.00	
17,300.0	90.00	180.10	9,213.0	-7,869.0	1,419.9	7,992.9	0.00	0.00	0.00	
17,400.0	90.00	180.10	9,213.0	-7,969.0	1,419.7	8,091.7	0.00	0.00	0.00	
17,500.0	90.00	180.10	9,213.0	-8,069.0	1,419.5	8,190.6	0.00	0.00	0.00	
17,600.0	90.00	180.10	9,213.0	-8,169.0	1,419.4	8,289.4	0.00	0.00	0.00	
17,700.0	90.00	180.10	9,213.0	-8,269.0	1,419.2	8,388.3	0.00	0.00	0.00	
17,800.0	90.00	180.10	9,213.0	-8,369.0	1,419.0	8,487.1	0.00	0.00	0.00	
17,900.0	90.00	180.10	9,213.0	-8,469.0	1,418.8	8,586.0	0.00	0.00	0.00	
18,000.0	90.00	180.10	9,213.0	-8,569.0	1,418.7	8,684.8	0.00	0.00	0.00	
18,100.0	90.00	180.10	9,213.0	-8,669.0	1,418.5	8,783.7	0.00	0.00	0.00	
18,200.0	90.00	180.10	9,213.0	-8,769.0	1,418.3	8,882.5	0.00	0.00	0.00	
18,300.0	90.00	180.10	9,213.0	-8,869.0	1,418.1	8,981.4	0.00	0.00	0.00	
18,400.0	90.00	180.10	9,213.0	-8,969.0	1,418.0	9,080.2	0.00	0.00	0.00	
18,500.0	90.00	180.10	9,213.0	-9,069.0	1,417.8	9,179.1	0.00	0.00	0.00	
18,600.0	90.00	180.10	9,213.0	-9,169.0	1,417.6	9,277.9	0.00	0.00	0.00	
18,700.0	90.00	180.10	9,213.0	-9,269.0	1,417.4	9,376.8	0.00	0.00	0.00	
18,800.0	90.00	180.10	9,213.0	-9,369.0	1,417.3	9,475.6	0.00	0.00	0.00	
18,801.9	90.00	180.10	9,213.0	-9,370.9	1,417.3	9,477.5	0.00	0.00	0.00	
TD at 18801.9										

Database:	Landmark	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
330' Setback	0.00	0.00	1.0	-9,380.9	-260.0	1,587,502.32	3,209,334.95	40.943603	-104.742291
- plan misses target center by 9363.5ft at 18801.9ft MD (9213.0 TVD, -9370.9 N, 1417.3 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,587,502.32	3,209,334.95		
Point 2			1.0	0.0	2,300.0	1,587,521.99	3,211,634.94		
Landing Pt. 1034'FNL	0.00	0.00	9,213.0	-295.0	1,433.3	1,596,602.68	3,210,950.47	40.968540	-104.736160
- plan hits target center									
- Point									
Sectionline	0.00	0.00	1.0	750.0	-261.3	1,597,633.17	3,209,246.93	40.971408	-104.742296
- plan misses target center by 794.2ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,597,633.17	3,209,246.93		
Point 2			1.0	0.0	2,300.0	1,597,652.85	3,211,546.93		
SHL 750'FNL & 2093'	0.00	0.00	1.0	0.0	0.0	1,596,885.42	3,209,514.69	40.969350	-104.741350
- plan hits target center									
- Point									
BHL 340'FSL & 660'F	0.00	0.00	9,213.0	-9,370.9	1,417.3	1,587,526.63	3,211,012.11	40.943630	-104.736220
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(ft)	(ft)	Name	(")	(")
	9,726.0	9,213.0	7"	7	7-1/2

Database:	Landmark	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Company:	Cirque Resources LP	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Project:	Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site:	Pismo East Pad Sec.35-T12N-R66W	North Reference:	True
Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-28-14)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,232.5	2,206.0	Fox Hills				
3,090.9	3,046.0	Fox Hills Mkr 1				
4,749.5	4,669.0	Teapot				
5,105.1	5,017.0	Parkman				
5,723.4	5,622.0	Sussex				
5,892.0	5,787.0	Pierre Upper Mkr1				
6,151.6	6,041.0	Sussex Mkr1				
7,720.2	7,576.0	Shannon				
7,986.2	7,838.0	Pierre				
8,026.5	7,878.0	Pierre Mkr1				
8,168.1	8,019.0	Pierre Mkr2				
8,314.2	8,165.0	Pierre Mkr3				
8,692.2	8,543.0	Pierre Mkr4				
8,766.2	8,617.0	Pierre Mkr5				
8,940.2	8,787.0	Base Steele Mkr				
9,038.7	8,877.0	Sharon Springs				
9,106.5	8,935.0	Niobrara				
9,127.3	8,952.0	N100 (A)				
9,177.1	8,991.0	N300 (B)				
9,212.2	9,017.0	N500				
9,285.7	9,067.0	N600				
9,417.7	9,140.0	N700 (C)				
9,582.5	9,197.0	N800 (Fort Hayes)				
	9,215.0	Codell				
	9,215.0	N900				
	9,235.0	Carlile				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP - Start Build 2.00
7,754.8	7,609.9	327.7	1,374.2	Start Drop -2.00
8,725.6	8,576.4	342.0	1,434.0	KOP #2 - Start Build 9.00
18,801.9	9,213.0	-9,370.9	1,417.3	TD at 18801.9



Cirque Resources LP

Sec.35-T12N-R66W

Pismo East Pad Sec.35-T12N-R66W

Pismo East 35-2-2-2CH

Wellbore #1

Plan #1 (8-28-14)

Anticollision Report

29 August, 2014

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (8-28-14)		
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 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 8/28/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	18,801.9	Plan #1 (8-28-14) (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						
Pismo East Pad Sec.35-T12N-R66W						
Pismo East 35-2-2-4CH - Wellbore #1 - Plan #1 (8-28-14)	600.0	601.0	80.2	77.7	32.396	CC, ES
Pismo East 35-2-2-4CH - Wellbore #1 - Plan #1 (8-28-14)	900.0	900.5	95.4	91.6	25.190	SF
Pismo East 35-26-23-2-1CH - Wellbore #1 - Plan #1 (8-2)	200.0	200.0	38.7	38.0	57.338	CC
Pismo East 35-26-23-2-1CH - Wellbore #1 - Plan #1 (8-2)	8,700.0	8,706.4	100.0	34.5	1.527	ES, SF
Pismo East 35-26-23-2-3CH - Wellbore #1 - Plan #1 (8-2)	600.0	600.0	41.6	39.1	16.819	CC, ES
Pismo East 35-26-23-2-3CH - Wellbore #1 - Plan #1 (8-2)	800.0	799.8	48.3	44.9	14.418	SF

Offset Design	Pismo East Pad Sec.35-T12N-R66W - Pismo East 35-2-2-4CH - Wellbore #1 - Plan #1 (8-28-14)												Offset Site Error:	0.0 ft
Survey Program:	0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)									
0.0	0.0	1.0	1.0	0.0	0.0	-87.40	3.6	-80.1	80.2	80.2	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-87.40	3.6	-80.1	80.2	79.9	0.23	353.150		
200.0	200.0	201.0	201.0	0.3	0.3	-87.40	3.6	-80.1	80.2	79.5	0.68	118.499		
300.0	300.0	301.0	301.0	0.6	0.6	-87.40	3.6	-80.1	80.2	79.0	1.13	71.194		
400.0	400.0	401.0	401.0	0.8	0.8	-87.40	3.6	-80.1	80.2	78.6	1.58	50.882		
500.0	500.0	501.0	501.0	1.0	1.0	-87.40	3.6	-80.1	80.2	78.1	2.03	39.587		
600.0	600.0	601.0	601.0	1.2	1.2	-87.40	3.6	-80.1	80.2	77.7	2.47	32.396	CC, ES	
700.0	700.0	701.0	701.0	1.5	1.5	-164.31	3.6	-80.1	81.8	78.9	2.92	28.078		
800.0	799.8	800.8	800.8	1.7	1.7	-165.22	3.6	-80.1	86.9	83.5	3.35	25.947		
900.0	899.5	900.5	900.5	1.9	1.9	-166.51	3.6	-80.1	95.4	91.6	3.79	25.190	SF	
1,000.0	998.7	999.7	999.7	2.2	2.1	-167.98	3.6	-80.1	107.2	103.0	4.22	25.400		
1,100.0	1,097.5	1,098.5	1,098.5	2.5	2.4	-169.45	3.6	-80.1	122.6	117.9	4.66	26.312		
1,200.0	1,195.6	1,196.6	1,196.6	2.8	2.6	-170.80	3.6	-80.1	141.4	136.3	5.10	27.744		
1,300.0	1,293.5	1,294.5	1,294.5	3.2	2.8	-171.97	3.6	-80.1	161.8	156.2	5.55	29.151		
1,400.0	1,391.3	1,392.3	1,392.3	3.6	3.0	-172.87	3.6	-80.1	182.2	176.2	6.01	30.328		
1,500.0	1,489.2	1,490.2	1,490.2	4.0	3.2	-173.60	3.6	-80.1	202.7	196.2	6.47	31.326		
1,600.0	1,587.0	1,588.0	1,588.0	4.4	3.5	-174.19	3.6	-80.1	223.1	216.2	6.93	32.180		
1,700.0	1,684.9	1,685.9	1,685.9	4.8	3.7	-174.68	3.6	-80.1	243.7	236.3	7.40	32.918		
1,800.0	1,782.8	1,783.8	1,783.8	5.3	3.9	-175.09	3.6	-80.1	264.2	256.3	7.87	33.562		
1,900.0	1,880.6	1,881.6	1,881.6	5.7	4.1	-175.45	3.6	-80.1	284.7	276.4	8.34	34.128		
2,000.0	1,978.5	1,979.5	1,979.5	6.1	4.3	-175.75	3.6	-80.1	305.2	296.4	8.81	34.629		

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

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	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		
2,100.0	2,076.3	2,083.3	2,083.3	6.6	4.6	-175.87	4.7	-79.5	325.1	315.8	9.30	34.962		
2,200.0	2,174.2	2,189.4	2,189.3	7.0	4.8	-175.47	9.1	-77.0	342.7	332.9	9.78	35.023		
2,300.0	2,272.0	2,296.2	2,295.7	7.5	5.0	-174.61	17.0	-72.5	358.1	347.8	10.28	34.835		
2,400.0	2,369.9	2,396.1	2,395.0	7.9	5.3	-173.58	26.3	-67.2	372.1	361.4	10.77	34.553		
2,500.0	2,467.7	2,494.9	2,493.2	8.4	5.5	-172.64	35.6	-62.0	386.3	375.0	11.27	34.281		
2,600.0	2,565.6	2,593.7	2,591.4	8.8	5.7	-171.76	44.9	-56.7	400.5	388.7	11.77	34.018		
2,700.0	2,663.5	2,692.5	2,689.6	9.2	6.0	-170.94	54.2	-51.4	414.9	402.6	12.29	33.766		
2,800.0	2,761.3	2,791.3	2,787.9	9.7	6.2	-170.18	63.5	-46.1	429.3	416.5	12.81	33.522		
2,900.0	2,859.2	2,890.1	2,886.1	10.1	6.5	-169.47	72.8	-40.9	443.7	430.4	13.33	33.287		
3,000.0	2,957.0	2,988.9	2,984.3	10.6	6.7	-168.80	82.1	-35.6	458.3	444.4	13.86	33.062		
3,100.0	3,054.9	3,087.7	3,082.5	11.0	7.0	-168.17	91.4	-30.3	472.9	458.5	14.40	32.846		
3,200.0	3,152.7	3,186.5	3,180.7	11.5	7.3	-167.58	100.6	-25.1	487.5	472.6	14.94	32.638		
3,300.0	3,250.6	3,285.3	3,279.0	12.0	7.5	-167.03	109.9	-19.8	502.2	486.7	15.48	32.439		
3,400.0	3,348.4	3,384.1	3,377.2	12.4	7.8	-166.50	119.2	-14.5	516.9	500.9	16.03	32.248		
3,500.0	3,446.3	3,482.9	3,475.4	12.9	8.1	-166.01	128.5	-9.2	531.7	515.1	16.58	32.064		
3,600.0	3,544.2	3,581.7	3,573.6	13.3	8.3	-165.54	137.8	-4.0	546.5	529.4	17.14	31.888		
3,700.0	3,642.0	3,680.5	3,671.9	13.8	8.6	-165.10	147.1	1.3	561.4	543.7	17.70	31.720		
3,800.0	3,739.9	3,779.3	3,770.1	14.2	8.9	-164.68	156.4	6.6	576.3	558.0	18.26	31.558		
3,900.0	3,837.7	3,878.1	3,868.3	14.7	9.2	-164.28	165.7	11.8	591.2	572.4	18.83	31.403		
4,000.0	3,935.6	3,976.9	3,966.5	15.1	9.4	-163.90	175.0	17.1	606.1	586.7	19.39	31.255		
4,100.0	4,033.4	4,075.7	4,064.7	15.6	9.7	-163.54	184.3	22.4	621.1	601.1	19.96	31.112		
4,200.0	4,131.3	4,174.5	4,163.0	16.0	10.0	-163.19	193.6	27.7	636.1	615.5	20.53	30.975		
4,300.0	4,229.1	4,273.3	4,261.2	16.5	10.3	-162.86	202.9	32.9	651.1	630.0	21.11	30.843		
4,400.0	4,327.0	4,372.1	4,359.4	16.9	10.6	-162.55	212.1	38.2	666.1	644.4	21.68	30.717		
4,500.0	4,424.9	4,470.9	4,457.6	17.4	10.8	-162.25	221.4	43.5	681.1	658.9	22.26	30.595		
4,600.0	4,522.7	4,569.7	4,555.8	17.8	11.1	-161.96	230.7	48.7	696.2	673.4	22.84	30.479		
4,700.0	4,620.6	4,668.5	4,654.1	18.3	11.4	-161.69	240.0	54.0	711.3	687.9	23.42	30.366		
4,800.0	4,718.4	4,767.3	4,752.3	18.8	11.7	-161.42	249.3	59.3	726.4	702.4	24.01	30.258		
4,900.0	4,816.3	4,866.1	4,850.5	19.2	12.0	-161.17	258.6	64.6	741.5	716.9	24.59	30.154		
5,000.0	4,914.1	4,964.9	4,948.7	19.7	12.3	-160.93	267.9	69.8	756.6	731.4	25.18	30.054		
5,100.0	5,012.0	5,063.7	5,046.9	20.1	12.5	-160.69	277.2	75.1	771.7	746.0	25.76	29.957		
5,200.0	5,109.8	5,162.5	5,145.2	20.6	12.8	-160.47	286.5	80.4	786.9	760.5	26.35	29.864		
5,300.0	5,207.7	5,261.3	5,243.4	21.0	13.1	-160.25	295.8	85.6	802.0	775.1	26.94	29.774		
5,400.0	5,305.6	5,360.1	5,341.6	21.5	13.4	-160.05	305.1	90.9	817.2	789.7	27.53	29.687		
5,500.0	5,403.4	5,458.9	5,439.8	21.9	13.7	-159.85	314.3	96.2	832.4	804.3	28.12	29.603		
5,600.0	5,501.3	5,557.7	5,538.1	22.4	14.0	-159.65	323.6	101.5	847.6	818.9	28.71	29.522		
5,700.0	5,599.1	5,656.5	5,636.3	22.9	14.3	-159.47	332.9	106.7	862.8	833.5	29.30	29.444		
5,800.0	5,697.0	5,750.6	5,729.9	23.3	14.5	-159.31	341.5	111.6	878.1	848.2	29.86	29.403		
5,900.0	5,794.8	5,838.8	5,817.7	23.8	14.7	-159.17	347.6	115.0	894.4	864.1	30.35	29.467		
6,000.0	5,892.7	5,926.5	5,905.4	24.2	14.9	-159.04	351.3	117.1	911.9	881.1	30.79	29.617		
6,100.0	5,990.5	6,013.7	5,992.5	24.7	15.0	-159.78	352.6	117.9	930.6	899.4	31.19	29.837		
6,200.0	6,088.4	6,110.6	6,089.4	25.1	15.2	-160.20	352.6	117.9	950.0	918.4	31.59	30.069		
6,300.0	6,186.3	6,208.4	6,187.3	25.6	15.4	-160.61	352.6	117.9	969.4	937.4	32.02	30.278		
6,400.0	6,284.1	6,306.3	6,285.1	26.0	15.6	-161.01	352.6	117.9	988.9	956.5	32.44	30.482		

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	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		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	38.7	38.7					
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	38.7	38.7	38.4	0.22	172.013		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	38.7	38.7	38.0	0.67	57.338 CC		
300.0	300.0	298.7	298.7	0.6	0.6	89.28	0.5	40.3	40.3	39.2	1.11	36.155		
400.0	400.0	397.1	397.0	0.8	0.8	87.42	2.0	45.1	45.3	43.7	1.56	28.960		
500.0	500.0	495.1	494.6	1.0	1.0	85.10	4.6	53.2	53.6	51.6	2.03	26.378		
600.0	600.0	592.4	591.2	1.2	1.3	82.86	8.0	64.3	65.4	62.8	2.53	25.824		
700.0	700.0	689.1	686.7	1.5	1.6	4.44	12.5	78.4	78.8	75.8	2.92	26.988		
800.0	799.8	785.4	781.3	1.7	2.0	3.00	17.9	95.5	92.1	88.7	3.36	27.413		
900.0	899.5	883.3	877.0	1.9	2.4	1.83	24.1	115.4	104.7	100.9	3.81	27.449		
1,000.0	998.7	982.9	974.2	2.2	2.8	0.91	30.6	135.9	114.1	109.8	4.27	26.694		
1,100.0	1,097.5	1,082.7	1,071.7	2.5	3.3	0.14	37.0	156.4	120.0	115.3	4.74	25.298		
1,200.0	1,195.6	1,182.6	1,169.3	2.8	3.7	-0.57	43.5	176.9	122.5	117.3	5.22	23.443		
1,300.0	1,293.5	1,282.6	1,266.9	3.2	4.2	-1.27	49.9	197.5	123.4	117.7	5.73	21.546		
1,400.0	1,391.3	1,382.6	1,364.6	3.6	4.7	-1.96	56.4	218.0	124.4	118.1	6.24	19.927		
1,500.0	1,489.2	1,482.6	1,462.2	4.0	5.1	-2.63	62.8	238.6	125.3	118.6	6.76	18.542		
1,600.0	1,587.0	1,582.6	1,559.8	4.4	5.6	-3.30	69.3	259.1	126.3	119.1	7.28	17.346		
1,700.0	1,684.9	1,682.5	1,657.5	4.8	6.1	-3.96	75.7	279.7	127.3	119.5	7.81	16.302		
1,800.0	1,782.8	1,782.5	1,755.1	5.3	6.5	-4.60	82.2	300.2	128.4	120.0	8.34	15.385		
1,900.0	1,880.6	1,882.5	1,852.7	5.7	7.0	-5.24	88.7	320.8	129.4	120.5	8.88	14.572		
2,000.0	1,978.5	1,982.5	1,950.4	6.1	7.5	-5.86	95.1	341.3	130.5	121.1	9.42	13.847		
2,100.0	2,076.3	2,082.5	2,048.0	6.6	7.9	-6.48	101.6	361.9	131.5	121.6	9.97	13.197		
2,200.0	2,174.2	2,182.5	2,145.6	7.0	8.4	-7.09	108.0	382.4	132.6	122.1	10.52	12.611		
2,300.0	2,272.0	2,282.5	2,243.3	7.5	8.9	-7.68	114.5	403.0	133.7	122.7	11.07	12.079		
2,400.0	2,369.9	2,382.4	2,340.9	7.9	9.3	-8.27	120.9	423.5	134.9	123.2	11.63	11.595		
2,500.0	2,467.7	2,482.4	2,438.6	8.4	9.8	-8.84	127.4	444.1	136.0	123.8	12.19	11.152		
2,600.0	2,565.6	2,582.4	2,536.2	8.8	10.3	-9.41	133.9	464.6	137.1	124.4	12.76	10.745		
2,700.0	2,663.5	2,682.4	2,633.8	9.2	10.8	-9.97	140.3	485.2	138.3	125.0	13.33	10.371		
2,800.0	2,761.3	2,782.4	2,731.5	9.7	11.2	-10.51	146.8	505.7	139.5	125.5	13.91	10.025		
2,900.0	2,859.2	2,882.4	2,829.1	10.1	11.7	-11.05	153.2	526.3	140.6	126.1	14.49	9.704		
3,000.0	2,957.0	2,982.3	2,926.7	10.6	12.2	-11.58	159.7	546.8	141.8	126.8	15.08	9.406		
3,100.0	3,054.9	3,082.3	3,024.4	11.0	12.6	-12.10	166.1	567.4	143.0	127.4	15.67	9.129		
3,200.0	3,152.7	3,182.3	3,122.0	11.5	13.1	-12.61	172.6	587.9	144.3	128.0	16.26	8.869		
3,300.0	3,250.6	3,282.3	3,219.6	12.0	13.6	-13.12	179.1	608.5	145.5	128.6	16.86	8.626		
3,400.0	3,348.4	3,382.3	3,317.3	12.4	14.0	-13.61	185.5	629.0	146.7	129.3	17.47	8.399		
3,500.0	3,446.3	3,482.3	3,414.9	12.9	14.5	-14.10	192.0	649.6	148.0	129.9	18.08	8.185		
3,600.0	3,544.2	3,582.3	3,512.6	13.3	15.0	-14.58	198.4	670.1	149.2	130.5	18.69	7.983		
3,700.0	3,642.0	3,682.2	3,610.2	13.8	15.5	-15.05	204.9	690.7	150.5	131.2	19.31	7.793		
3,800.0	3,739.9	3,782.2	3,707.8	14.2	15.9	-15.51	211.3	711.2	151.8	131.9	19.94	7.614		
3,900.0	3,837.7	3,882.2	3,805.5	14.7	16.4	-15.96	217.8	731.8	153.1	132.5	20.56	7.444		
4,000.0	3,935.6	3,982.2	3,903.1	15.1	16.9	-16.41	224.3	752.3	154.4	133.2	21.20	7.284		
4,100.0	4,033.4	4,082.2	4,000.7	15.6	17.4	-16.85	230.7	772.9	155.7	133.9	21.83	7.131		
4,200.0	4,131.3	4,182.2	4,098.4	16.0	17.8	-17.28	237.2	793.4	157.0	134.5	22.47	6.986		
4,300.0	4,229.1	4,282.1	4,196.0	16.5	18.3	-17.71	243.6	814.0	158.3	135.2	23.12	6.849		
4,400.0	4,327.0	4,382.1	4,293.7	16.9	18.8	-18.12	250.1	834.5	159.7	135.9	23.77	6.718		
4,500.0	4,424.9	4,482.1	4,391.3	17.4	19.2	-18.53	256.5	855.1	161.0	136.6	24.42	6.593		
4,600.0	4,522.7	4,582.1	4,488.9	17.8	19.7	-18.94	263.0	875.6	162.4	137.3	25.08	6.474		
4,700.0	4,620.6	4,682.1	4,586.6	18.3	20.2	-19.34	269.5	896.2	163.7	138.0	25.74	6.360		
4,800.0	4,718.4	4,782.1	4,684.2	18.8	20.7	-19.73	275.9	916.7	165.1	138.7	26.41	6.252		
4,900.0	4,816.3	4,882.0	4,781.8	19.2	21.1	-20.11	282.4	937.3	166.5	139.4	27.08	6.148		
5,000.0	4,914.1	4,982.0	4,879.5	19.7	21.6	-20.49	288.8	957.8	167.9	140.1	27.75	6.048		
5,100.0	5,012.0	5,082.0	4,977.1	20.1	22.1	-20.86	295.3	978.4	169.3	140.8	28.43	5.953		

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

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	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	
5,200.0	5,109.8	5,182.0	5,074.7	20.6	22.5	-21.23	301.8	998.9	170.7	141.5	29.11	5.862	
5,300.0	5,207.7	5,282.0	5,172.4	21.0	23.0	-21.59	308.2	1,019.5	172.1	142.3	29.80	5.774	
5,400.0	5,305.6	5,382.0	5,270.0	21.5	23.5	-21.94	314.7	1,040.0	173.5	143.0	30.49	5.690	
5,500.0	5,403.4	5,482.0	5,367.7	21.9	24.0	-22.29	321.1	1,060.6	174.9	143.7	31.18	5.609	
5,600.0	5,501.3	5,581.9	5,465.3	22.4	24.4	-22.63	327.6	1,081.1	176.3	144.4	31.87	5.532	
5,700.0	5,599.1	5,681.9	5,562.9	22.9	24.9	-22.97	334.0	1,101.7	177.7	145.2	32.57	5.457	
5,800.0	5,697.0	5,781.9	5,660.6	23.3	25.4	-23.30	340.5	1,122.2	179.2	145.9	33.27	5.385	
5,900.0	5,794.8	5,881.9	5,758.2	23.8	25.8	-23.63	347.0	1,142.8	180.6	146.6	33.98	5.316	
6,000.0	5,892.7	5,981.9	5,855.8	24.2	26.3	-23.95	353.4	1,163.3	182.1	147.4	34.69	5.249	
6,100.0	5,990.5	6,081.9	5,953.5	24.7	26.8	-24.26	359.9	1,183.9	183.5	148.1	35.40	5.185	
6,200.0	6,088.4	6,181.8	6,051.1	25.1	27.3	-24.57	366.3	1,204.4	185.0	148.9	36.11	5.123	
6,300.0	6,186.3	6,281.8	6,148.7	25.6	27.7	-24.88	372.8	1,225.0	186.4	149.6	36.83	5.063	
6,400.0	6,284.1	6,381.8	6,246.4	26.0	28.2	-25.18	379.2	1,245.5	187.9	150.4	37.55	5.005	
6,500.0	6,382.0	6,481.8	6,344.0	26.5	28.7	-25.48	385.7	1,266.1	189.4	151.1	38.27	4.949	
6,600.0	6,479.8	6,581.8	6,441.7	27.0	29.2	-25.77	392.2	1,286.6	190.9	151.9	39.00	4.895	
6,700.0	6,577.7	6,681.8	6,539.3	27.4	29.6	-26.06	398.6	1,307.2	192.4	152.6	39.72	4.842	
6,800.0	6,675.5	6,781.8	6,636.9	27.9	30.1	-26.34	405.1	1,327.7	193.8	153.4	40.45	4.792	
6,900.0	6,773.4	6,881.7	6,734.6	28.3	30.6	-26.62	411.5	1,348.3	195.3	154.2	41.19	4.743	
7,000.0	6,871.2	6,981.7	6,832.2	28.8	31.0	-26.89	418.0	1,368.8	196.8	154.9	41.92	4.695	
7,100.0	6,969.1	7,085.0	6,933.1	29.2	31.5	-27.23	424.5	1,389.6	197.9	155.3	42.67	4.639	
7,200.0	7,067.0	7,191.7	7,038.1	29.7	31.8	-27.97	430.3	1,407.9	196.1	152.6	43.52	4.506	
7,300.0	7,164.8	7,298.0	7,143.3	30.1	32.1	-29.22	434.8	1,422.4	190.9	146.4	44.56	4.285	
7,400.0	7,262.7	7,403.7	7,248.4	30.6	32.4	-31.08	438.2	1,433.1	182.5	136.7	45.84	3.982	
7,500.0	7,360.5	7,508.4	7,352.9	31.1	32.5	-33.74	440.4	1,440.1	171.2	123.7	47.47	3.605	
7,600.0	7,458.4	7,612.0	7,456.4	31.5	32.7	-37.50	441.4	1,443.3	157.1	107.5	49.59	3.168	
7,700.0	7,556.2	7,711.8	7,556.2	32.0	32.8	-42.56	441.5	1,443.7	141.5	89.2	52.29	2.705	
7,800.0	7,654.2	7,809.8	7,654.2	32.4	32.9	-48.58	441.5	1,443.7	127.1	71.8	55.34	2.297	
7,900.0	7,752.6	7,908.3	7,752.6	32.7	33.0	-54.76	441.5	1,443.7	116.2	58.0	58.20	1.997	
8,000.0	7,851.7	8,007.3	7,851.7	33.0	33.1	-60.57	441.5	1,443.7	108.7	48.1	60.64	1.793	
8,100.0	7,951.1	8,106.7	7,951.1	33.2	33.2	-65.47	441.5	1,443.7	104.0	41.5	62.51	1.664	
8,200.0	8,050.9	8,206.5	8,050.9	33.4	33.3	-68.99	441.5	1,443.7	101.3	37.5	63.76	1.589	
8,300.0	8,150.8	8,306.4	8,150.8	33.5	33.4	-70.81	441.5	1,443.7	100.1	35.7	64.45	1.553	
8,370.3	8,221.1	8,376.7	8,221.1	33.6	33.5	-71.23	441.5	1,443.7	99.9	35.1	64.71	1.543	
8,400.0	8,250.8	8,406.4	8,250.8	33.6	33.6	5.55	441.5	1,443.7	100.0	35.2	64.75	1.544	
8,500.0	8,350.8	8,506.4	8,350.8	33.7	33.7	5.55	441.5	1,443.7	100.0	35.0	64.99	1.538	
8,600.0	8,450.8	8,606.4	8,450.8	33.8	33.8	5.55	441.5	1,443.7	100.0	34.7	65.24	1.532	
8,700.0	8,550.8	8,706.4	8,550.8	34.0	33.9	5.55	441.5	1,443.7	100.0	34.5	65.48	1.527 ES, SF	
8,800.0	8,650.6	8,795.6	8,639.9	34.1	34.0	-174.81	444.7	1,443.7	108.0	42.8	65.18	1.657	
8,900.0	8,748.6	8,873.9	8,717.1	34.1	34.2	-175.64	457.3	1,443.7	142.9	79.3	63.57	2.247	
9,000.0	8,842.4	8,937.7	8,778.5	34.1	34.3	-176.28	474.4	1,443.7	201.3	140.8	60.56	3.325	
9,100.0	8,929.6	8,984.6	8,822.4	34.1	34.5	-176.44	490.9	1,443.7	277.6	221.5	56.19	4.941	
9,200.0	9,008.1	9,015.4	8,850.5	34.0	34.5	-175.99	503.5	1,443.7	366.1	315.4	50.65	7.228	
9,300.0	9,076.0	9,032.6	8,865.9	34.0	34.6	-173.96	511.2	1,443.7	461.8	417.8	44.04	10.488	
9,400.0	9,131.5	9,050.0	8,881.3	34.0	34.6	-160.98	519.3	1,443.7	561.3	525.6	35.69	15.729	
9,500.0	9,173.5	9,036.4	8,869.4	34.0	34.6	-6.66	512.9	1,443.7	660.9	626.6	34.28	19.276	
9,600.0	9,200.7	9,027.3	8,861.2	34.1	34.6	-2.73	508.8	1,443.7	758.9	730.3	28.58	26.550	
9,700.0	9,212.5	9,000.0	8,836.5	34.3	34.5	-1.58	497.1	1,443.7	853.5	827.2	26.30	32.448	
9,800.0	9,213.0	9,000.0	8,836.5	34.5	34.5	-1.38	497.1	1,443.7	944.5	917.9	26.58	35.537	

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	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		
0.0	0.0	0.0	0.0	0.0	0.0	-84.97	3.6	-41.4	41.6					
100.0	100.0	100.0	100.0	0.1	0.1	-84.97	3.6	-41.4	41.6	41.4	0.22	185.011		
200.0	200.0	200.0	200.0	0.3	0.3	-84.97	3.6	-41.4	41.6	40.9	0.67	61.670		
300.0	300.0	300.0	300.0	0.6	0.6	-84.97	3.6	-41.4	41.6	40.5	1.12	37.002		
400.0	400.0	400.0	400.0	0.8	0.8	-84.97	3.6	-41.4	41.6	40.0	1.57	26.430		
500.0	500.0	500.0	500.0	1.0	1.0	-84.97	3.6	-41.4	41.6	39.6	2.02	20.557		
600.0	600.0	600.0	600.0	1.2	1.2	-84.97	3.6	-41.4	41.6	39.1	2.47	16.819 CC, ES		
700.0	700.0	700.0	700.0	1.5	1.5	-162.28	3.6	-41.4	43.2	40.3	2.91	14.846		
800.0	799.8	799.8	799.8	1.7	1.7	-164.14	3.6	-41.4	48.3	44.9	3.35	14.418 SF		
900.0	899.5	899.5	899.5	1.9	1.9	-166.51	3.6	-41.4	56.7	52.9	3.78	14.985		
1,000.0	998.7	998.7	998.7	2.2	2.1	-168.84	3.6	-41.4	68.6	64.4	4.22	16.257		
1,100.0	1,097.5	1,098.6	1,098.6	2.5	2.4	-169.81	5.2	-40.8	83.3	78.7	4.66	17.897		
1,200.0	1,195.6	1,198.5	1,198.3	2.8	2.6	-168.96	10.1	-39.0	100.0	94.9	5.09	19.647		
1,300.0	1,293.5	1,298.4	1,297.9	3.2	2.8	-166.96	18.2	-36.0	117.0	111.4	5.56	21.047		
1,400.0	1,391.3	1,398.1	1,396.8	3.6	3.1	-164.09	29.4	-31.8	133.0	126.9	6.06	21.956		
1,500.0	1,489.2	1,496.6	1,494.5	4.0	3.3	-161.46	41.5	-27.2	148.9	142.3	6.58	22.614		
1,600.0	1,587.0	1,595.1	1,592.2	4.4	3.6	-159.35	53.6	-22.7	165.0	157.9	7.13	23.137		
1,700.0	1,684.9	1,693.7	1,689.8	4.8	3.9	-157.61	65.7	-18.2	181.4	173.7	7.70	23.552		
1,800.0	1,782.8	1,792.2	1,787.5	5.3	4.1	-156.16	77.8	-13.7	197.9	189.6	8.28	23.884		
1,900.0	1,880.6	1,890.7	1,885.2	5.7	4.4	-154.93	89.9	-9.1	214.5	205.6	8.88	24.152		
2,000.0	1,978.5	1,989.2	1,982.8	6.1	4.7	-153.88	102.0	-4.6	231.1	221.6	9.48	24.368		
2,100.0	2,076.3	2,087.7	2,080.5	6.6	5.0	-152.97	114.1	-0.1	247.9	237.8	10.10	24.545		
2,200.0	2,174.2	2,186.2	2,178.2	7.0	5.3	-152.18	126.2	4.5	264.7	253.9	10.72	24.691		
2,300.0	2,272.0	2,284.8	2,275.8	7.5	5.6	-151.48	138.3	9.0	281.5	270.1	11.34	24.812		
2,400.0	2,369.9	2,383.3	2,373.5	7.9	5.9	-150.86	150.4	13.5	298.4	286.4	11.98	24.914		
2,500.0	2,467.7	2,481.8	2,471.2	8.4	6.2	-150.31	162.5	18.1	315.3	302.6	12.61	24.999		
2,600.0	2,565.6	2,580.3	2,568.8	8.8	6.5	-149.81	174.6	22.6	332.2	318.9	13.25	25.072		
2,700.0	2,663.5	2,678.8	2,666.5	9.2	6.8	-149.36	186.7	27.1	349.1	335.2	13.89	25.134		
2,800.0	2,761.3	2,777.4	2,764.2	9.7	7.2	-148.95	198.8	31.6	366.1	351.6	14.53	25.187		
2,900.0	2,859.2	2,875.9	2,861.8	10.1	7.5	-148.58	210.9	36.2	383.1	367.9	15.18	25.233		
3,000.0	2,957.0	2,974.4	2,959.5	10.6	7.8	-148.24	223.0	40.7	400.1	384.2	15.83	25.272		
3,100.0	3,054.9	3,072.9	3,057.2	11.0	8.1	-147.93	235.1	45.2	417.1	400.6	16.48	25.307		
3,200.0	3,152.7	3,171.4	3,154.8	11.5	8.4	-147.64	247.2	49.8	434.1	417.0	17.13	25.337		
3,300.0	3,250.6	3,269.9	3,252.5	12.0	8.7	-147.38	259.3	54.3	451.1	433.3	17.79	25.364		
3,400.0	3,348.4	3,368.5	3,350.2	12.4	9.0	-147.13	271.4	58.8	468.2	449.7	18.44	25.387		
3,500.0	3,446.3	3,467.0	3,447.8	12.9	9.4	-146.90	283.5	63.3	485.2	466.1	19.10	25.408		
3,600.0	3,544.2	3,565.5	3,545.5	13.3	9.7	-146.69	295.6	67.9	502.3	482.5	19.75	25.426		
3,700.0	3,642.0	3,664.0	3,643.2	13.8	10.0	-146.49	307.7	72.4	519.3	498.9	20.41	25.443		
3,800.0	3,739.9	3,762.5	3,740.9	14.2	10.3	-146.30	319.8	76.9	536.4	515.3	21.07	25.457		
3,900.0	3,837.7	3,861.1	3,838.5	14.7	10.6	-146.12	331.9	81.5	553.5	531.7	21.73	25.471		
4,000.0	3,935.6	3,959.6	3,936.2	15.1	10.9	-145.96	344.0	86.0	570.5	548.1	22.39	25.482		
4,100.0	4,033.4	4,058.1	4,033.9	15.6	11.3	-145.80	356.1	90.5	587.6	564.6	23.05	25.493		
4,200.0	4,131.3	4,156.6	4,131.5	16.0	11.6	-145.66	368.2	95.0	604.7	581.0	23.71	25.502		
4,300.0	4,229.1	4,255.1	4,229.2	16.5	11.9	-145.52	380.3	99.6	621.8	597.4	24.37	25.511		
4,400.0	4,327.0	4,353.7	4,326.9	16.9	12.2	-145.39	392.4	104.1	638.9	613.8	25.04	25.518		
4,500.0	4,424.9	4,452.2	4,424.5	17.4	12.5	-145.26	404.5	108.6	656.0	630.3	25.70	25.525		
4,600.0	4,522.7	4,550.7	4,522.2	17.8	12.9	-145.14	416.6	113.2	673.1	646.7	26.36	25.532		
4,700.0	4,620.6	4,649.2	4,619.9	18.3	13.2	-145.03	428.7	117.7	690.2	663.1	27.03	25.537		
4,800.0	4,718.4	4,747.9	4,717.9	18.8	13.4	-145.05	439.4	121.7	707.2	679.6	27.61	25.515		
4,900.0	4,816.3	4,846.5	4,816.2	19.2	13.7	-145.34	446.9	124.5	724.3	696.2	28.12	25.759		
5,000.0	4,914.1	4,944.7	4,914.3	19.7	13.8	-145.89	451.2	126.1	741.4	712.9	28.56	25.956		
5,100.0	5,012.0	5,042.5	5,012.0	20.1	14.0	-146.65	452.4	126.6	758.7	729.7	28.95	26.203		

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

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Pismo East Pad Sec.35-T12N-R66W - Pismo East 35-26-23-2-3CH - Wellbore #1 - Plan #1 (8-28-14)												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	5,109.8	5,140.3	5,109.8	20.6	14.1	-147.48	452.4	126.6	776.1	746.7	29.33	26.458	
5,300.0	5,207.7	5,238.2	5,207.7	21.0	14.3	-148.28	452.4	126.6	793.6	763.9	29.72	26.703	
5,400.0	5,305.6	5,336.0	5,305.6	21.5	14.5	-149.04	452.4	126.6	811.3	781.2	30.11	26.945	
5,500.0	5,403.4	5,433.9	5,403.4	21.9	14.7	-149.77	452.4	126.6	829.1	798.6	30.50	27.185	
5,600.0	5,501.3	5,531.7	5,501.3	22.4	14.8	-150.47	452.4	126.6	847.1	816.2	30.89	27.421	
5,700.0	5,599.1	5,629.6	5,599.1	22.9	15.0	-151.13	452.4	126.6	865.2	833.9	31.29	27.653	
5,800.0	5,697.0	5,727.4	5,697.0	23.3	15.2	-151.78	452.4	126.6	883.3	851.7	31.68	27.882	
5,900.0	5,794.8	5,825.3	5,794.8	23.8	15.4	-152.39	452.4	126.6	901.6	869.5	32.08	28.107	
6,000.0	5,892.7	5,923.2	5,892.7	24.2	15.5	-152.98	452.4	126.6	920.0	887.5	32.48	28.327	
6,100.0	5,990.5	6,021.0	5,990.5	24.7	15.7	-153.55	452.4	126.6	938.5	905.6	32.88	28.544	
6,200.0	6,088.4	6,118.9	6,088.4	25.1	15.9	-154.10	452.4	126.6	957.0	923.8	33.28	28.756	
6,300.0	6,186.3	6,216.7	6,186.3	25.6	16.1	-154.63	452.4	126.6	975.7	942.0	33.69	28.964	
6,400.0	6,284.1	6,314.6	6,284.1	26.0	16.3	-155.13	452.4	126.6	994.4	960.3	34.09	29.168	

Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
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Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	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 (8-28-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 6223.0ft (RKB - 25')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Pismo East 35-2-2-2CH
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.49°



Company:	Cirque Resources LP	Local Co-ordinate Reference:	Well Pismo East 35-2-2-2CH
Project:	Sec.35-T12N-R66W	TVD Reference:	WELL @ 6223.0ft (RKB - 25')
Reference Site:	Pismo East Pad Sec.35-T12N-R66W	MD Reference:	WELL @ 6223.0ft (RKB - 25')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pismo East 35-2-2-2CH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
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Reference Depths are relative to WELL @ 6223.0ft (RKB - 25')
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