



Delta Petroleum

Mesa County, CO

Pad 5A

NVega #24-14 (Option 2)

Wellbore #1

Plan: Preliminary Plan for APD

Standard Planning Report

02 September, 2010

Delta Petroleum
NVega #24-14 (Option 2)
Mesa County, CO

Geodetic System: US State Plane 1983
Zone: Colorado Central Zone
WELL @ 0.0ft (Original Well Elev)
Ground Level: 0.0
Latitude: 39° 15' 57.480 N
Longitude: 107° 43' 37.060 W
Magnetic North is 10.31° East of True North (Magnetic Declination)



FORMATION TOP DETAILS

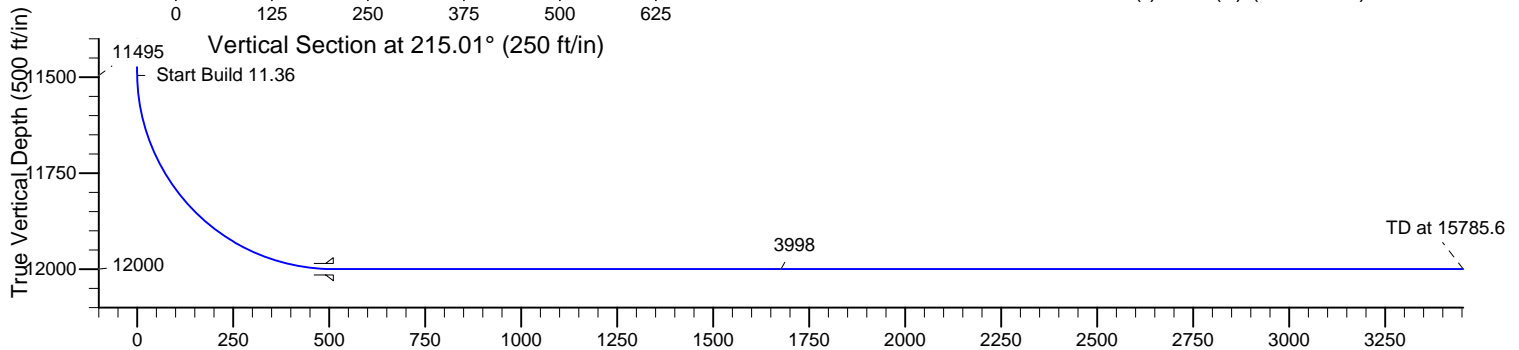
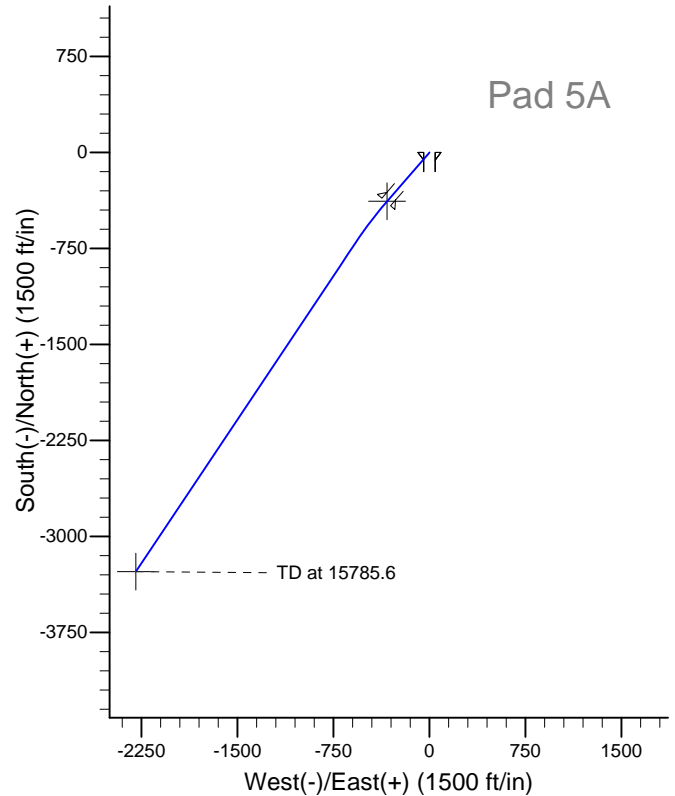
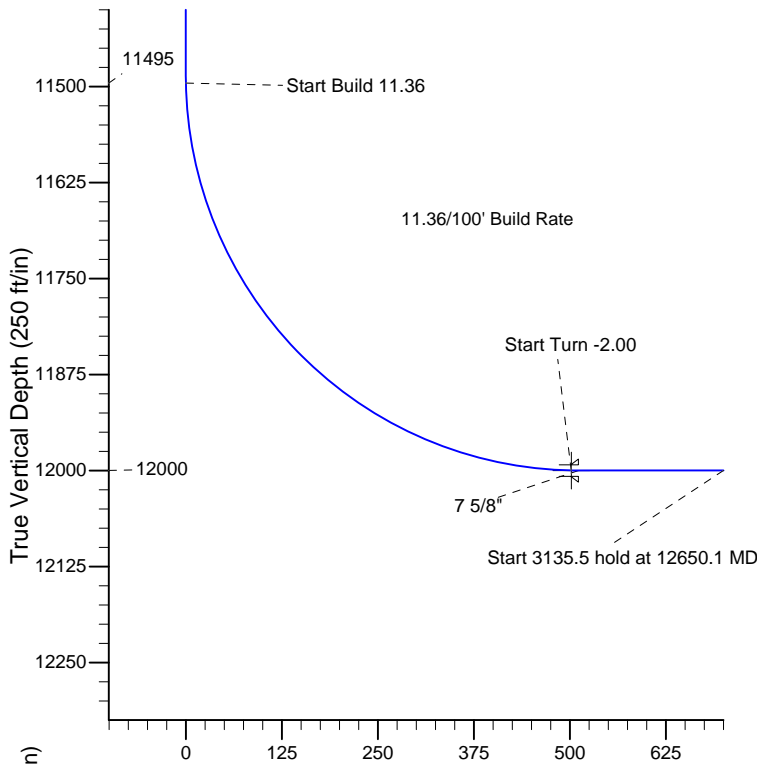
No formation data is available

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
11495.5	0.00	0.00	11495.5	0.0	0.0	0.00	0.00	0.0
12288.0	90.00	221.01	12000.0	-380.7	-331.1	11.36	221.01	501.7
12650.1	90.00	213.77	12000.0	-668.2	-550.8	2.00	-90.00	863.3
515785.6	90.00	213.77	12000.0	-3274.7	-2293.7	0.00	0.00	3998.1



magnetic field
Strength: 52287.4snT
Dip Angle: 65.62°
Date: 09/01/2010
Model: IGRF2010



Vertical Section at 215.01° (500 ft/in)
WELLBORE TARGET DETAILS (LAT/LONG)

	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Option 2 PBHL	12000.0	-3274.8	-2293.6	39° 15' 25.110 N	107° 44' 6.220 W	Point
POE Option 2	12000.0	-380.7	-331.1	39° 15' 53.717 N	107° 43' 41.270 W	Point



Crescent Directional Drilling, LP

Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14 (Option 2)
Company:	Delta Petroleum	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Mesa County, CO	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Pad 5A	North Reference:	True
Well:	NVega #24-14 (Option 2)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

Project	Mesa County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Pad 5A			
Site Position:		Northing:	1,529,489.70 ft	Latitude:	39° 15' 57.480 N
From:	Lat/Long	Easting:	2,369,559.81 ft	Longitude:	107° 43' 37.060 W
Position Uncertainty:		Slot Radius:	"	Grid Convergence:	-1.40 °
0.0 ft					

Well	NVega #24-14 (Option 2)					
Well Position	+N/-S	0.0 ft	Northing:	1,529,489.69 ft	Latitude:	39° 15' 57.480 N
	+E/-W	0.0 ft	Easting:	2,369,559.81 ft	Longitude:	107° 43' 37.060 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	0.0ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/01/10	10.31	65.62	52,287

Design	Preliminary Plan for APD			
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	215.01

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	
11,495.5	0.00	0.00	11,495.5	0.0	0.0	0.00	0.00	0.00	0.00	
12,288.0	90.00	221.01	12,000.0	-380.7	-331.1	11.36	11.36	0.00	221.01	
12,650.1	90.00	213.77	12,000.0	-668.2	-550.8	2.00	0.00	-2.00	-90.00	
15,785.6	90.00	213.77	12,000.0	-3,274.7	-2,293.7	0.00	0.00	0.00	0.00	Option 2 PBHL



Crescent Directional Drilling, LP

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Project:	Mesa County, CO	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Pad 5A	North Reference:	True
Well:	NVega #24-14 (Option 2)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

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
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	0.00
20"									
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
13 3/8"									
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00



Crescent Directional Drilling, LP

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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
5,800.0	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
6,100.0	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
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00

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Design:	Preliminary Plan for APD		

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)
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,600.0	0.0	0.0	0.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,700.0	0.0	0.0	0.0	0.00	0.00	0.00
10,800.0	0.00	0.00	10,800.0	0.0	0.0	0.0	0.00	0.00	0.00
10,900.0	0.00	0.00	10,900.0	0.0	0.0	0.0	0.00	0.00	0.00
11,000.0	0.00	0.00	11,000.0	0.0	0.0	0.0	0.00	0.00	0.00
11,100.0	0.00	0.00	11,100.0	0.0	0.0	0.0	0.00	0.00	0.00
11,200.0	0.00	0.00	11,200.0	0.0	0.0	0.0	0.00	0.00	0.00
11,300.0	0.00	0.00	11,300.0	0.0	0.0	0.0	0.00	0.00	0.00
11,400.0	0.00	0.00	11,400.0	0.0	0.0	0.0	0.00	0.00	0.00
11,495.5	0.00	0.00	11,495.5	0.0	0.0	0.0	0.00	0.00	0.00
11,500.0	0.51	221.01	11,500.0	0.0	0.0	0.0	11.36	11.36	0.00
11,600.0	11.87	221.01	11,599.3	-8.1	-7.1	10.7	11.36	11.36	0.00
11,700.0	23.23	221.01	11,694.4	-30.8	-26.8	40.7	11.36	11.36	0.00
11,800.0	34.58	221.01	11,781.8	-67.3	-58.5	88.6	11.36	11.36	0.00
11,900.0	45.94	221.01	11,858.0	-115.9	-100.8	152.8	11.36	11.36	0.00
12,000.0	57.30	221.01	11,920.0	-175.0	-152.2	230.6	11.36	11.36	0.00
12,100.0	68.65	221.01	11,965.4	-242.1	-210.6	319.1	11.36	11.36	0.00
12,200.0	80.01	221.01	11,992.3	-314.6	-273.6	414.7	11.36	11.36	0.00
12,288.0	90.00	221.01	12,000.0	-380.7	-331.1	501.8	11.35	11.35	0.00
7 5/8" - POE Option 2									
12,300.0	90.00	220.77	12,000.0	-389.8	-338.9	513.7	2.01	0.00	-2.01
12,400.0	90.00	218.77	12,000.0	-466.6	-402.9	613.4	2.00	0.00	-2.00
12,500.0	90.00	216.77	12,000.0	-545.7	-464.2	713.2	2.00	0.00	-2.00
12,600.0	90.00	214.77	12,000.0	-626.8	-522.6	813.2	2.00	0.00	-2.00
12,650.1	90.00	213.77	12,000.0	-668.2	-550.8	863.3	2.00	0.00	-2.00
12,700.0	90.00	213.77	12,000.0	-709.7	-578.6	913.2	0.00	0.00	0.00
12,800.0	90.00	213.77	12,000.0	-792.8	-634.1	1,013.2	0.00	0.00	0.00
12,900.0	90.00	213.77	12,000.0	-875.9	-689.7	1,113.2	0.00	0.00	0.00
13,000.0	90.00	213.77	12,000.0	-959.1	-745.3	1,213.1	0.00	0.00	0.00
13,100.0	90.00	213.77	12,000.0	-1,042.2	-800.9	1,313.1	0.00	0.00	0.00
13,200.0	90.00	213.77	12,000.0	-1,125.3	-856.5	1,413.1	0.00	0.00	0.00
13,300.0	90.00	213.77	12,000.0	-1,208.5	-912.1	1,513.1	0.00	0.00	0.00
13,400.0	90.00	213.77	12,000.0	-1,291.6	-967.7	1,613.0	0.00	0.00	0.00
13,500.0	90.00	213.77	12,000.0	-1,374.7	-1,023.3	1,713.0	0.00	0.00	0.00
13,600.0	90.00	213.77	12,000.0	-1,457.8	-1,078.8	1,813.0	0.00	0.00	0.00
13,700.0	90.00	213.77	12,000.0	-1,541.0	-1,134.4	1,913.0	0.00	0.00	0.00
13,800.0	90.00	213.77	12,000.0	-1,624.1	-1,190.0	2,012.9	0.00	0.00	0.00
13,900.0	90.00	213.77	12,000.0	-1,707.2	-1,245.6	2,112.9	0.00	0.00	0.00
14,000.0	90.00	213.77	12,000.0	-1,790.3	-1,301.2	2,212.9	0.00	0.00	0.00
14,100.0	90.00	213.77	12,000.0	-1,873.5	-1,356.8	2,312.9	0.00	0.00	0.00
14,200.0	90.00	213.77	12,000.0	-1,956.6	-1,412.4	2,412.9	0.00	0.00	0.00
14,300.0	90.00	213.77	12,000.0	-2,039.7	-1,467.9	2,512.8	0.00	0.00	0.00
14,400.0	90.00	213.77	12,000.0	-2,122.9	-1,523.5	2,612.8	0.00	0.00	0.00
14,500.0	90.00	213.77	12,000.0	-2,206.0	-1,579.1	2,712.8	0.00	0.00	0.00
14,600.0	90.00	213.77	12,000.0	-2,289.1	-1,634.7	2,812.8	0.00	0.00	0.00
14,700.0	90.00	213.77	12,000.0	-2,372.2	-1,690.3	2,912.7	0.00	0.00	0.00
14,800.0	90.00	213.77	12,000.0	-2,455.4	-1,745.9	3,012.7	0.00	0.00	0.00
14,900.0	90.00	213.77	12,000.0	-2,538.5	-1,801.5	3,112.7	0.00	0.00	0.00
15,000.0	90.00	213.77	12,000.0	-2,621.6	-1,857.0	3,212.7	0.00	0.00	0.00



Crescent Directional Drilling, LP

Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14 (Option 2)
Company:	Delta Petroleum	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Mesa County, CO	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Pad 5A	North Reference:	True
Well:	NVega #24-14 (Option 2)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

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)
15,100.0	90.00	213.77	12,000.0	-2,704.7	-1,912.6	3,312.6	0.00	0.00	0.00
15,200.0	90.00	213.77	12,000.0	-2,787.9	-1,968.2	3,412.6	0.00	0.00	0.00
15,300.0	90.00	213.77	12,000.0	-2,871.0	-2,023.8	3,512.6	0.00	0.00	0.00
15,400.0	90.00	213.77	12,000.0	-2,954.1	-2,079.4	3,612.6	0.00	0.00	0.00
15,500.0	90.00	213.77	12,000.0	-3,037.3	-2,135.0	3,712.5	0.00	0.00	0.00
15,600.0	90.00	213.77	12,000.0	-3,120.4	-2,190.6	3,812.5	0.00	0.00	0.00
15,700.0	90.00	213.77	12,000.0	-3,203.5	-2,246.1	3,912.5	0.00	0.00	0.00
15,785.6	90.00	213.77	12,000.0	-3,274.7	-2,293.7	3,998.1	0.00	0.00	0.00
Option 2 PBHL									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
POE Option 2	0.00	0.00	12,000.0	-380.7	-331.1	1,529,117.23	2,369,219.48	39° 15' 53.717 N	107° 43' 41.270 W
- plan hits target center									
- Point									
Option 2 PBHL	0.00	0.00	12,000.0	-3,274.8	-2,293.6	1,526,272.08	2,367,186.65	39° 15' 25.110 N	107° 44' 6.220 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
90.0	90.0	20"	20	26	
2,200.0	2,200.0	13 3/8"	13-3/8	17-1/2	
8,500.0	8,500.0	9 5/8"	9-5/8	12-1/4	
12,293.3	12,000.0	7 5/8"	7-5/8	8-3/4	