



Delta Petroleum

Mesa County, CO

Pad 5A

NVega #24-14H (Option 1)

Wellbore #1

Plan: Preliminary Plan for APD

Standard Planning Report

02 September, 2010

Delta Petroleum
NVega #24-14H (Option 1)
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)

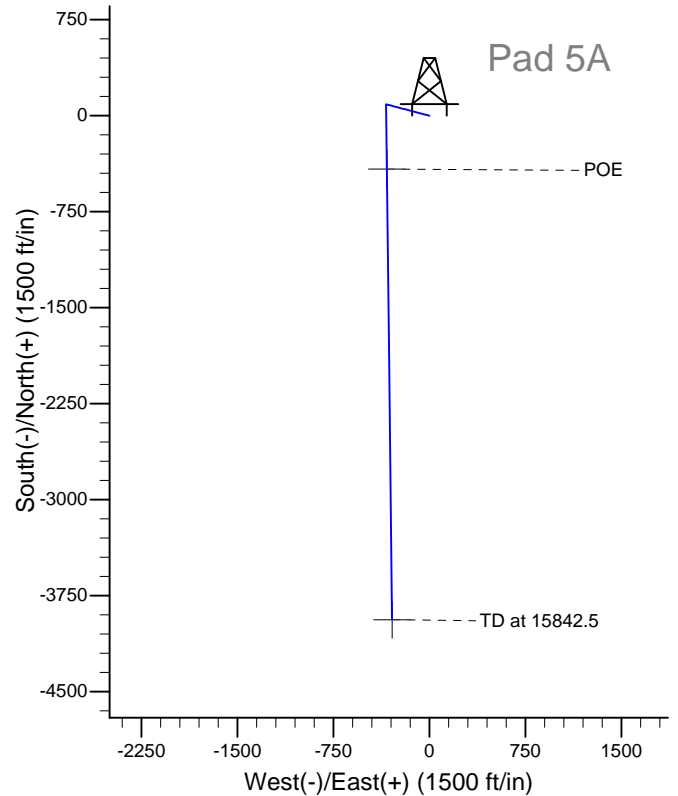
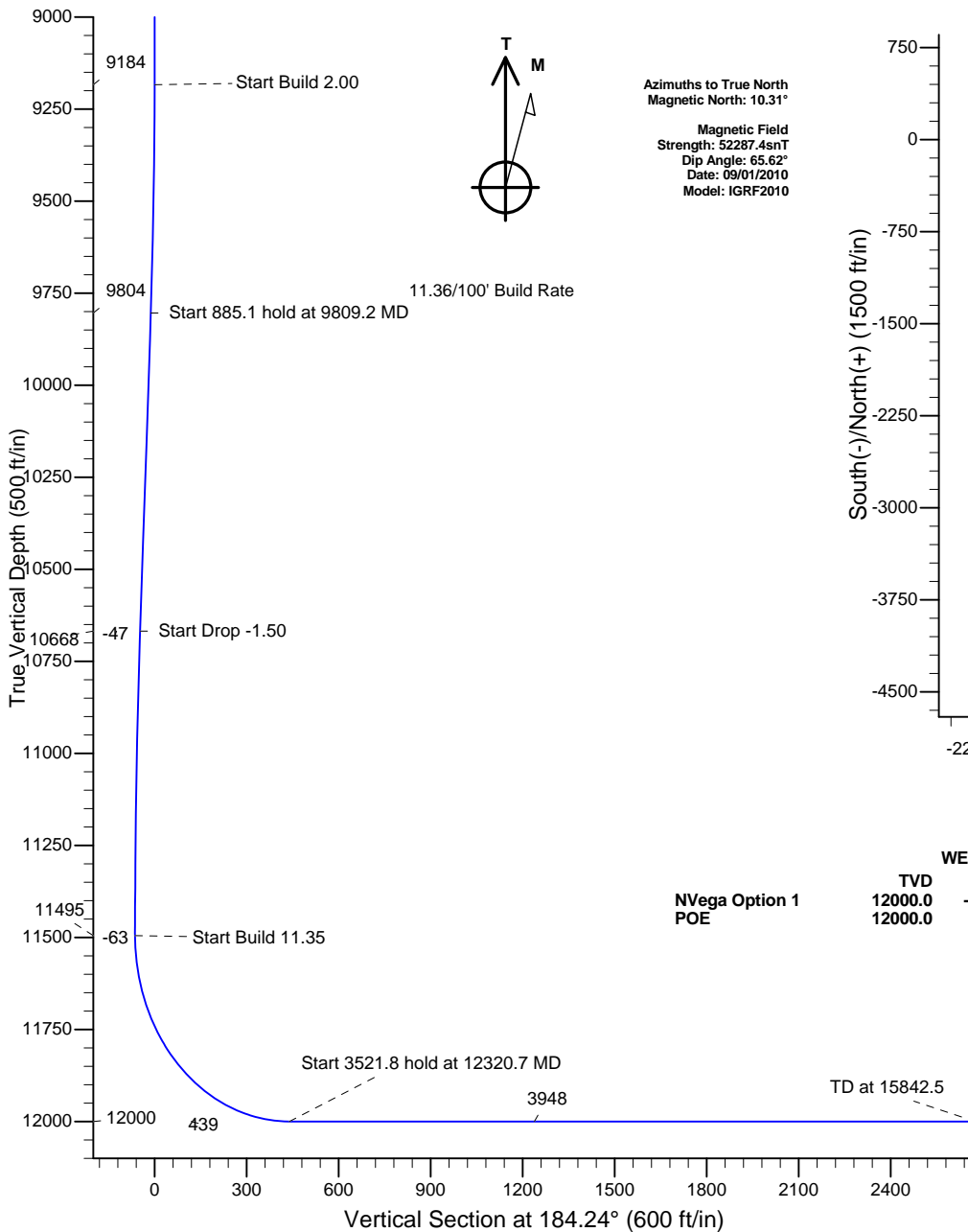


FORMATION TOP DETAILS

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	
9184.2	0.00	0.00	9184.2	0.0	0.0	0.00	0.00	0.0	
9809.2	12.50	284.70	9804.3	17.2	-65.7	2.00	284.70	-12.3	
10694.3	12.50	284.70	10668.4	65.8	-251.0	0.00	0.00	-47.1	
511527.7	0.00	0.00	11495.2	88.8	-338.6	1.50	180.00	-63.5	
612320.7	90.00	179.34	12000.0	-416.0	-332.8	11.35	179.34	439.5	
715842.5	90.00	179.34	12000.0	-3937.6	-292.2	0.00	0.00	3948.4	NVega Option 1



WELLBORE TARGET DETAILS (LAT/LONG)

	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NVega Option 1	12000.0	-3937.6	-291.8	39° 15' 18.560 N	107° 43' 40.770 W	Point
POE	12000.0	-416.0	-332.8	39° 15' 53.368 N	107° 43' 41.292 W	Point

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14H (Option 1)
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 #24-14H (Option 1)	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:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.40 °

Well	NVega #24-14H (Option 1)					
Well Position	+N/-S	0.0 ft	Northing:	1,529,489.70 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	184.24

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	
9,184.2	0.00	0.00	9,184.2	0.0	0.0	0.00	0.00	0.00	0.00	
9,809.2	12.50	284.70	9,804.3	17.2	-65.7	2.00	2.00	0.00	284.70	
10,694.3	12.50	284.70	10,668.4	65.8	-251.0	0.00	0.00	0.00	0.00	
11,527.7	0.00	0.00	11,495.2	88.8	-338.6	1.50	-1.50	0.00	180.00	
12,320.7	90.00	179.34	12,000.0	-416.0	-332.8	11.35	11.35	0.00	179.34	
15,842.5	90.00	179.34	12,000.0	-3,937.6	-292.2	0.00	0.00	0.00	0.00	NVega Option 1



Crescent Directional Drilling, LP

Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14H (Option 1)
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 #24-14H (Option 1)	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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
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



Crescent Directional Drilling, LP

Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14H (Option 1)
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 #24-14H (Option 1)	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)
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
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
9,184.2	0.00	0.00	9,184.2	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.32	284.70	9,200.0	0.0	0.0	0.0	2.00	2.00	0.00
9,300.0	2.32	284.70	9,300.0	0.6	-2.3	-0.4	2.00	2.00	0.00
9,400.0	4.32	284.70	9,399.8	2.1	-7.9	-1.5	2.00	2.00	0.00
9,500.0	6.32	284.70	9,499.4	4.4	-16.8	-3.2	2.00	2.00	0.00
9,600.0	8.32	284.70	9,598.5	7.6	-29.1	-5.5	2.00	2.00	0.00
9,700.0	10.32	284.70	9,697.2	11.7	-44.8	-8.4	2.00	2.00	0.00
9,800.0	12.32	284.70	9,795.3	16.7	-63.8	-12.0	2.00	2.00	0.00
9,809.2	12.50	284.70	9,804.3	17.2	-65.7	-12.3	2.00	2.00	0.00
9,900.0	12.50	284.70	9,892.9	22.2	-84.7	-15.9	0.00	0.00	0.00
10,000.0	12.50	284.70	9,990.5	27.7	-105.6	-19.8	0.00	0.00	0.00
10,100.0	12.50	284.70	10,088.2	33.2	-126.6	-23.7	0.00	0.00	0.00
10,200.0	12.50	284.70	10,185.8	38.7	-147.5	-27.7	0.00	0.00	0.00
10,300.0	12.50	284.70	10,283.4	44.2	-168.4	-31.6	0.00	0.00	0.00
10,400.0	12.50	284.70	10,381.0	49.7	-189.4	-35.5	0.00	0.00	0.00

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well NVega #24-14H (Option 1)
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 #24-14H (Option 1)	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)
10,500.0	12.50	284.70	10,478.7	55.2	-210.3	-39.4	0.00	0.00	0.00
10,600.0	12.50	284.70	10,576.3	60.6	-231.3	-43.4	0.00	0.00	0.00
10,694.3	12.50	284.70	10,668.4	65.8	-251.0	-47.1	0.00	0.00	0.00
10,700.0	12.42	284.70	10,673.9	66.1	-252.2	-47.3	1.50	-1.50	0.00
10,800.0	10.92	284.70	10,771.9	71.3	-271.7	-51.0	1.50	-1.50	0.00
10,900.0	9.42	284.70	10,870.3	75.7	-288.8	-54.2	1.50	-1.50	0.00
11,000.0	7.92	284.70	10,969.2	79.6	-303.4	-56.9	1.50	-1.50	0.00
11,100.0	6.42	284.70	11,068.4	82.7	-315.5	-59.2	1.50	-1.50	0.00
11,200.0	4.92	284.70	11,167.9	85.2	-325.0	-61.0	1.50	-1.50	0.00
11,300.0	3.42	284.70	11,267.6	87.1	-332.0	-62.3	1.50	-1.50	0.00
11,400.0	1.92	284.70	11,367.5	88.3	-336.5	-63.1	1.50	-1.50	0.00
11,500.0	0.42	284.70	11,467.5	88.8	-338.5	-63.5	1.50	-1.50	0.00
11,527.7	0.00	0.00	11,495.2	88.8	-338.6	-63.5	1.50	-1.50	0.00
11,600.0	8.20	179.34	11,567.2	83.6	-338.5	-58.4	11.35	11.35	0.00
11,700.0	19.55	179.34	11,664.1	59.7	-338.3	-34.5	11.35	11.35	0.00
11,800.0	30.90	179.34	11,754.5	17.1	-337.8	7.9	11.35	11.35	0.00
11,900.0	42.25	179.34	11,834.6	-42.3	-337.1	67.2	11.35	11.35	0.00
12,000.0	53.60	179.34	11,901.5	-116.5	-336.2	141.0	11.35	11.35	0.00
12,100.0	64.95	179.34	11,952.5	-202.3	-335.2	226.5	11.35	11.35	0.00
12,200.0	76.30	179.34	11,985.7	-296.5	-334.2	320.4	11.35	11.35	0.00
12,300.0	87.65	179.34	11,999.6	-395.3	-333.0	418.9	11.35	11.35	0.00
12,320.7	90.00	179.34	12,000.0	-416.0	-332.8	439.5	11.34	11.34	0.00
POE									
12,400.0	90.00	179.34	12,000.0	-495.3	-331.9	518.5	0.00	0.00	0.00
12,500.0	90.00	179.34	12,000.0	-595.3	-330.7	618.1	0.00	0.00	0.00
12,600.0	90.00	179.34	12,000.0	-695.3	-329.6	717.8	0.00	0.00	0.00
12,700.0	90.00	179.34	12,000.0	-795.3	-328.4	817.4	0.00	0.00	0.00
12,800.0	90.00	179.34	12,000.0	-895.3	-327.3	917.0	0.00	0.00	0.00
12,900.0	90.00	179.34	12,000.0	-995.3	-326.1	1,016.7	0.00	0.00	0.00
13,000.0	90.00	179.34	12,000.0	-1,095.3	-325.0	1,116.3	0.00	0.00	0.00
13,100.0	90.00	179.34	12,000.0	-1,195.2	-323.8	1,215.9	0.00	0.00	0.00
13,200.0	90.00	179.34	12,000.0	-1,295.2	-322.7	1,315.6	0.00	0.00	0.00
13,300.0	90.00	179.34	12,000.0	-1,395.2	-321.5	1,415.2	0.00	0.00	0.00
13,400.0	90.00	179.34	12,000.0	-1,495.2	-320.4	1,514.8	0.00	0.00	0.00
13,500.0	90.00	179.34	12,000.0	-1,595.2	-319.2	1,614.5	0.00	0.00	0.00
13,600.0	90.00	179.34	12,000.0	-1,695.2	-318.0	1,714.1	0.00	0.00	0.00
13,700.0	90.00	179.34	12,000.0	-1,795.2	-316.9	1,813.7	0.00	0.00	0.00
13,800.0	90.00	179.34	12,000.0	-1,895.2	-315.7	1,913.4	0.00	0.00	0.00
13,900.0	90.00	179.34	12,000.0	-1,995.2	-314.6	2,013.0	0.00	0.00	0.00
14,000.0	90.00	179.34	12,000.0	-2,095.2	-313.4	2,112.6	0.00	0.00	0.00
14,100.0	90.00	179.34	12,000.0	-2,195.2	-312.3	2,212.3	0.00	0.00	0.00
14,200.0	90.00	179.34	12,000.0	-2,295.2	-311.1	2,311.9	0.00	0.00	0.00
14,300.0	90.00	179.34	12,000.0	-2,395.2	-310.0	2,411.5	0.00	0.00	0.00
14,400.0	90.00	179.34	12,000.0	-2,495.2	-308.8	2,511.2	0.00	0.00	0.00
14,500.0	90.00	179.34	12,000.0	-2,595.2	-307.7	2,610.8	0.00	0.00	0.00
14,600.0	90.00	179.34	12,000.0	-2,695.1	-306.5	2,710.4	0.00	0.00	0.00
14,700.0	90.00	179.34	12,000.0	-2,795.1	-305.4	2,810.1	0.00	0.00	0.00
14,800.0	90.00	179.34	12,000.0	-2,895.1	-304.2	2,909.7	0.00	0.00	0.00
14,900.0	90.00	179.34	12,000.0	-2,995.1	-303.1	3,009.3	0.00	0.00	0.00
15,000.0	90.00	179.34	12,000.0	-3,095.1	-301.9	3,109.0	0.00	0.00	0.00
15,100.0	90.00	179.34	12,000.0	-3,195.1	-300.8	3,208.6	0.00	0.00	0.00
15,200.0	90.00	179.34	12,000.0	-3,295.1	-299.6	3,308.2	0.00	0.00	0.00
15,300.0	90.00	179.34	12,000.0	-3,395.1	-298.5	3,407.9	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 #24-14H (Option 1)
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 #24-14H (Option 1)	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)
15,400.0	90.00	179.34	12,000.0	-3,495.1	-297.3	3,507.5	0.00	0.00	0.00
15,500.0	90.00	179.34	12,000.0	-3,595.1	-296.2	3,607.1	0.00	0.00	0.00
15,600.0	90.00	179.34	12,000.0	-3,695.1	-295.0	3,706.8	0.00	0.00	0.00
15,700.0	90.00	179.34	12,000.0	-3,795.1	-293.9	3,806.4	0.00	0.00	0.00
15,800.0	90.00	179.34	12,000.0	-3,895.1	-292.7	3,906.0	0.00	0.00	0.00
15,842.5	90.00	179.34	12,000.0	-3,937.6	-292.2	3,948.4	0.00	0.00	0.00
NVega Option 1									

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
POE	- plan hits target center - Point	0.00	0.00	12,000.0	-416.0	-332.8	1,529,081.98	2,369,216.92	39° 15' 53.368 N	107° 43' 41.292 W
NVega Option 1	- plan hits target center - Point	0.00	0.00	12,000.0	-3,937.6	-291.8	1,525,560.44	2,369,171.57	39° 15' 18.560 N	107° 43' 40.770 W