

Patara Oil & Gas, LLC

**San Miquel County, CO
Hamilton Creek
HC Federal 31-31B-45-14
Wellbore #1**

Plan: Preliminary Plan for APD 06/22/2011

Standard Planning Report

22 June, 2011



**Patara Oil & Gas, LLC
HC Federal 31-31B-45-14
San Miguel County, CO**



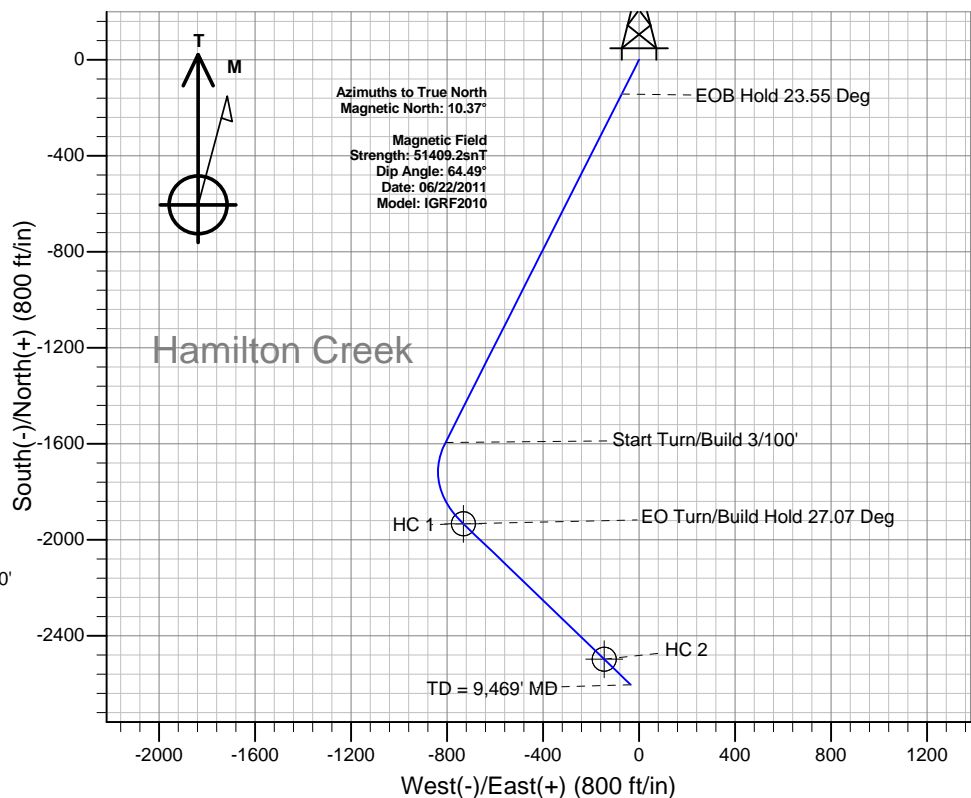
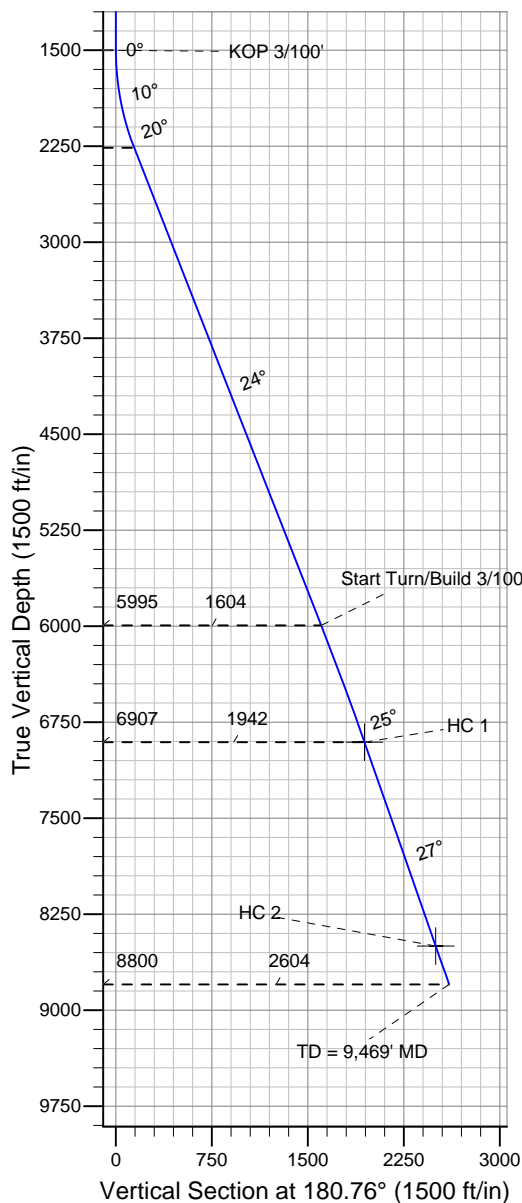
**Geodetic System: US State Plane 1927 (Exact solution)
Zone: Colorado South 503
WELL @ 6847.9ft (Original Well Elev)
Ground Level: 0.0
Latitude: 38° 6' 29.372 N
Longitude: 108° 27' 38.858 W
Magnetic North is 10.37° East of True North (Magnetic Declination)**

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
2285.2	23.55	206.83	2263.2	-142.0	-71.8	3.00	206.83	142.9	
6356.6	23.55	206.83	5995.4	-1593.9	-806.2	0.00	0.00	1604.4	
7342.9	27.07	133.88	6907.0	-1932.9	-731.7	3.00	-118.23	1942.4	HC 1
9131.9	27.07	133.88	8500.0	-2497.2	-144.9	0.00	0.00	2498.9	HC 2
9468.8	27.07	133.88	8800.0	-2603.5	-34.4	0.00	0.00	2603.7	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape
HC 1	6907.0	-1932.9	-731.7	38° 6' 10.263 N	108° 27' 48.012 W	Circle (Radius: 50.0)
HC 2	8500.0	-2497.2	-144.9	38° 6' 4.684 N	108° 27' 40.671 W	Circle (Radius: 50.0)



Plan: Preliminary Plan for APD 06/22/2011 (HC Federal 31-31B-45-14/Wellbore #1)

Created By: Mike Kirby

Date: 15:23, June 22 2011

Checked: _____

Date: _____

Reviewed: _____

Date: _____

Approved: _____

Date: _____

Crescent Directional Drilling, IP

Planning Report



Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well HC Federal 31-31B-45-14
Company:	Patara Oil & Gas, LLC	TVD Reference:	WELL @ 6847.9ft (Original Well Elev)
Project:	San Miquel County, CO	MD Reference:	WELL @ 6847.9ft (Original Well Elev)
Site:	Hamilton Creek	North Reference:	True
Well:	HC Federal 31-31B-45-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 06/22/2011		

Project	San Miquel County, CO		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado South 503		

Site	Hamilton Creek		
Site Position:		Northing:	538,370.02ft
From:	Lat/Long	Easting:	1,148,219.46ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	38° 6' 29.372 N
		Longitude:	108° 27' 38.858 W
		Grid Convergence:	-1.82 °

Well	HC Federal 31-31B-45-14		
Well Position	+N/-S	0.0 ft	Northing: 538,370.02 ft
	+E/-W	0.0 ft	Easting: 1,148,219.46 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	38° 6' 29.372 N
		Longitude:	108° 27' 38.858 W
		Ground Level:	0.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	06/22/11	10.37	64.49	51,409

Design	Preliminary Plan for APD 06/22/2011			
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	180.76

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	
2,285.2	23.55	206.83	2,263.2	-142.0	-71.8	3.00	3.00	0.00	206.83	
6,356.6	23.55	206.83	5,995.4	-1,593.9	-806.2	0.00	0.00	0.00	0.00	
7,342.9	27.07	133.88	6,907.0	-1,932.9	-731.7	3.00	0.36	-7.40	-118.23	HC 1
9,131.9	27.07	133.88	8,500.0	-2,497.2	-144.9	0.00	0.00	0.00	0.00	HC 2
9,468.8	27.07	133.88	8,800.0	-2,603.5	-34.4	0.00	0.00	0.00	0.00	

Crescent Directional Drilling, IP

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Site:	Hamilton Creek	North Reference:	True
Well:	HC Federal 31-31B-45-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 06/22/2011		

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
KOP 3'/100'									
1,600.0	3.00	206.83	1,600.0	-2.3	-1.2	2.4	3.00	3.00	0.00
1,700.0	6.00	206.83	1,699.6	-9.3	-4.7	9.4	3.00	3.00	0.00
1,800.0	9.00	206.83	1,798.8	-21.0	-10.6	21.1	3.00	3.00	0.00
1,900.0	12.00	206.83	1,897.1	-37.2	-18.8	37.5	3.00	3.00	0.00
2,000.0	15.00	206.83	1,994.3	-58.1	-29.4	58.5	3.00	3.00	0.00
2,100.0	18.00	206.83	2,090.2	-83.4	-42.2	84.0	3.00	3.00	0.00
2,200.0	21.00	206.83	2,184.4	-113.2	-57.3	113.9	3.00	3.00	0.00
2,285.2	23.55	206.83	2,263.3	-142.0	-71.8	143.0	3.00	3.00	0.00
EOB Hold 23.55 Deg									
2,300.0	23.55	206.83	2,276.8	-147.3	-74.5	148.3	0.00	0.00	0.00
2,400.0	23.55	206.83	2,368.5	-183.0	-92.5	184.2	0.00	0.00	0.00
2,500.0	23.55	206.83	2,460.2	-218.6	-110.6	220.1	0.00	0.00	0.00
2,600.0	23.55	206.83	2,551.8	-254.3	-128.6	256.0	0.00	0.00	0.00
2,700.0	23.55	206.83	2,643.5	-289.9	-146.6	291.8	0.00	0.00	0.00
2,800.0	23.55	206.83	2,735.2	-325.6	-164.7	327.7	0.00	0.00	0.00
2,900.0	23.55	206.83	2,826.8	-361.3	-182.7	363.6	0.00	0.00	0.00
3,000.0	23.55	206.83	2,918.5	-396.9	-200.8	399.5	0.00	0.00	0.00
3,100.0	23.55	206.83	3,010.2	-432.6	-218.8	435.4	0.00	0.00	0.00
3,200.0	23.55	206.83	3,101.8	-468.2	-236.8	471.3	0.00	0.00	0.00
3,300.0	23.55	206.83	3,193.5	-503.9	-254.9	507.2	0.00	0.00	0.00
3,400.0	23.55	206.83	3,285.2	-539.6	-272.9	543.1	0.00	0.00	0.00
3,500.0	23.55	206.83	3,376.8	-575.2	-290.9	579.0	0.00	0.00	0.00
3,600.0	23.55	206.83	3,468.5	-610.9	-309.0	614.9	0.00	0.00	0.00
3,700.0	23.55	206.83	3,560.2	-646.5	-327.0	650.8	0.00	0.00	0.00
3,800.0	23.55	206.83	3,651.9	-682.2	-345.0	686.7	0.00	0.00	0.00
3,900.0	23.55	206.83	3,743.5	-717.9	-363.1	722.6	0.00	0.00	0.00
4,000.0	23.55	206.83	3,835.2	-753.5	-381.1	758.5	0.00	0.00	0.00
4,100.0	23.55	206.83	3,926.9	-789.2	-399.2	794.4	0.00	0.00	0.00
4,200.0	23.55	206.83	4,018.5	-824.8	-417.2	830.3	0.00	0.00	0.00
4,300.0	23.55	206.83	4,110.2	-860.5	-435.2	866.2	0.00	0.00	0.00
4,400.0	23.55	206.83	4,201.9	-896.2	-453.3	902.1	0.00	0.00	0.00
4,500.0	23.55	206.83	4,293.5	-931.8	-471.3	938.0	0.00	0.00	0.00
4,600.0	23.55	206.83	4,385.2	-967.5	-489.3	973.9	0.00	0.00	0.00
4,700.0	23.55	206.83	4,476.9	-1,003.2	-507.4	1,009.8	0.00	0.00	0.00
4,800.0	23.55	206.83	4,568.5	-1,038.8	-525.4	1,045.7	0.00	0.00	0.00
4,900.0	23.55	206.83	4,660.2	-1,074.5	-543.5	1,081.6	0.00	0.00	0.00

Crescent Directional Drilling, IP

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Well:	HC Federal 31-31B-45-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 06/22/2011		

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	23.55	206.83	4,751.9	-1,110.1	-561.5	1,117.5	0.00	0.00	0.00
5,100.0	23.55	206.83	4,843.5	-1,145.8	-579.5	1,153.3	0.00	0.00	0.00
5,200.0	23.55	206.83	4,935.2	-1,181.5	-597.6	1,189.2	0.00	0.00	0.00
5,300.0	23.55	206.83	5,026.9	-1,217.1	-615.6	1,225.1	0.00	0.00	0.00
5,400.0	23.55	206.83	5,118.5	-1,252.8	-633.6	1,261.0	0.00	0.00	0.00
5,500.0	23.55	206.83	5,210.2	-1,288.4	-651.7	1,296.9	0.00	0.00	0.00
5,600.0	23.55	206.83	5,301.9	-1,324.1	-669.7	1,332.8	0.00	0.00	0.00
5,700.0	23.55	206.83	5,393.5	-1,359.8	-687.7	1,368.7	0.00	0.00	0.00
5,800.0	23.55	206.83	5,485.2	-1,395.4	-705.8	1,404.6	0.00	0.00	0.00
5,900.0	23.55	206.83	5,576.9	-1,431.1	-723.8	1,440.5	0.00	0.00	0.00
6,000.0	23.55	206.83	5,668.5	-1,466.7	-741.9	1,476.4	0.00	0.00	0.00
6,100.0	23.55	206.83	5,760.2	-1,502.4	-759.9	1,512.3	0.00	0.00	0.00
6,200.0	23.55	206.83	5,851.9	-1,538.1	-777.9	1,548.2	0.00	0.00	0.00
6,300.0	23.55	206.83	5,943.5	-1,573.7	-796.0	1,584.1	0.00	0.00	0.00
6,356.6	23.55	206.83	5,995.4	-1,593.9	-806.2	1,604.4	0.00	0.00	0.00
Start Turn/Build 3/100'									
6,400.0	22.97	203.89	6,035.3	-1,609.4	-813.5	1,620.0	3.00	-1.36	-6.77
6,500.0	21.83	196.59	6,127.8	-1,645.1	-826.7	1,655.8	3.00	-1.13	-7.30
6,600.0	21.05	188.66	6,220.9	-1,680.6	-834.7	1,691.5	3.00	-0.78	-7.93
6,700.0	20.66	180.30	6,314.3	-1,716.0	-837.5	1,727.0	3.00	-0.39	-8.36
6,800.0	20.68	171.80	6,407.9	-1,751.2	-835.1	1,762.0	3.00	0.02	-8.51
6,900.0	21.11	163.47	6,501.4	-1,785.9	-827.5	1,796.7	3.00	0.43	-8.33
7,000.0	21.93	155.59	6,594.4	-1,820.2	-814.6	1,830.8	3.00	0.82	-7.87
7,100.0	23.10	148.37	6,686.8	-1,853.9	-796.6	1,864.3	3.00	1.17	-7.22
7,200.0	24.56	141.88	6,778.3	-1,887.0	-773.5	1,897.0	3.00	1.46	-6.49
7,300.0	26.27	136.13	6,868.6	-1,919.3	-745.3	1,929.0	3.00	1.71	-5.75
7,342.9	27.07	133.88	6,907.0	-1,932.9	-731.7	1,942.4	3.00	1.86	-5.24
EO Turn/Build Hold 27.07 Deg - HC 1									
7,400.0	27.07	133.88	6,957.8	-1,950.9	-713.0	1,960.1	0.00	0.00	0.00
7,500.0	27.07	133.88	7,046.9	-1,982.4	-680.2	1,991.3	0.00	0.00	0.00
7,600.0	27.07	133.88	7,135.9	-2,014.0	-647.4	2,022.4	0.00	0.00	0.00
7,700.0	27.07	133.88	7,225.0	-2,045.5	-614.6	2,053.5	0.00	0.00	0.00
7,800.0	27.07	133.88	7,314.0	-2,077.1	-581.8	2,084.6	0.00	0.00	0.00
7,900.0	27.07	133.88	7,403.0	-2,108.6	-549.0	2,115.7	0.00	0.00	0.00
8,000.0	27.07	133.88	7,492.1	-2,140.2	-516.2	2,146.8	0.00	0.00	0.00
8,100.0	27.07	133.88	7,581.1	-2,171.7	-483.4	2,177.9	0.00	0.00	0.00
8,200.0	27.07	133.88	7,670.2	-2,203.2	-450.6	2,209.0	0.00	0.00	0.00
8,300.0	27.07	133.88	7,759.2	-2,234.8	-417.8	2,240.1	0.00	0.00	0.00
8,400.0	27.07	133.88	7,848.3	-2,266.3	-385.0	2,271.2	0.00	0.00	0.00
8,500.0	27.07	133.88	7,937.3	-2,297.9	-352.2	2,302.3	0.00	0.00	0.00
8,600.0	27.07	133.88	8,026.4	-2,329.4	-319.4	2,333.4	0.00	0.00	0.00
8,700.0	27.07	133.88	8,115.4	-2,361.0	-286.6	2,364.5	0.00	0.00	0.00
8,800.0	27.07	133.88	8,204.5	-2,392.5	-253.8	2,395.7	0.00	0.00	0.00
8,900.0	27.07	133.88	8,293.5	-2,424.1	-221.0	2,426.8	0.00	0.00	0.00
9,000.0	27.07	133.88	8,382.5	-2,455.6	-188.2	2,457.9	0.00	0.00	0.00
9,100.0	27.07	133.88	8,471.6	-2,487.1	-155.4	2,489.0	0.00	0.00	0.00
9,131.9	27.07	133.88	8,500.0	-2,497.2	-144.9	2,498.9	0.00	0.00	0.00
HC 2									
9,200.0	27.07	133.88	8,560.6	-2,518.7	-122.6	2,520.1	0.00	0.00	0.00
9,300.0	27.07	133.88	8,649.7	-2,550.2	-89.8	2,551.2	0.00	0.00	0.00
9,400.0	27.07	133.88	8,738.7	-2,581.8	-57.0	2,582.3	0.00	0.00	0.00
9,468.8	27.07	133.88	8,800.0	-2,603.5	-34.4	2,603.7	0.00	0.00	0.00
TD = 9,469' MD									

Crescent Directional Drilling, IP

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Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 06/22/2011		

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
HC 1	0.00	0.00	6,907.0	-1,932.9	-731.7	536,461.28	1,147,426.87	38° 6' 10.263 N	108° 27' 48.012 W
- plan hits target center									
- Circle (radius 50.0)									
HC 2	0.00	0.00	8,500.0	-2,497.2	-144.9	535,878.66	1,147,995.49	38° 6' 4.684 N	108° 27' 40.671 W
- plan hits target center									
- Circle (radius 50.0)									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP 3/100'
2,285.2	2,263.3	-142.0	-71.8	EOB Hold 23.55 Deg
6,356.6	5,995.4	-1,593.9	-806.2	Start Turn/Build 3/100'
7,342.9	6,907.0	-1,932.9	-731.7	EO Turn/Build Hold 27.07 Deg
9,468.8	8,800.0	-2,603.5	-34.4	TD = 9,469' MD