



Scientific Drilling

Rocky Mountain Operations

Company: Chevron
Project: Rio Blanco County, CO (NAD 83)
Site: MC Hagood



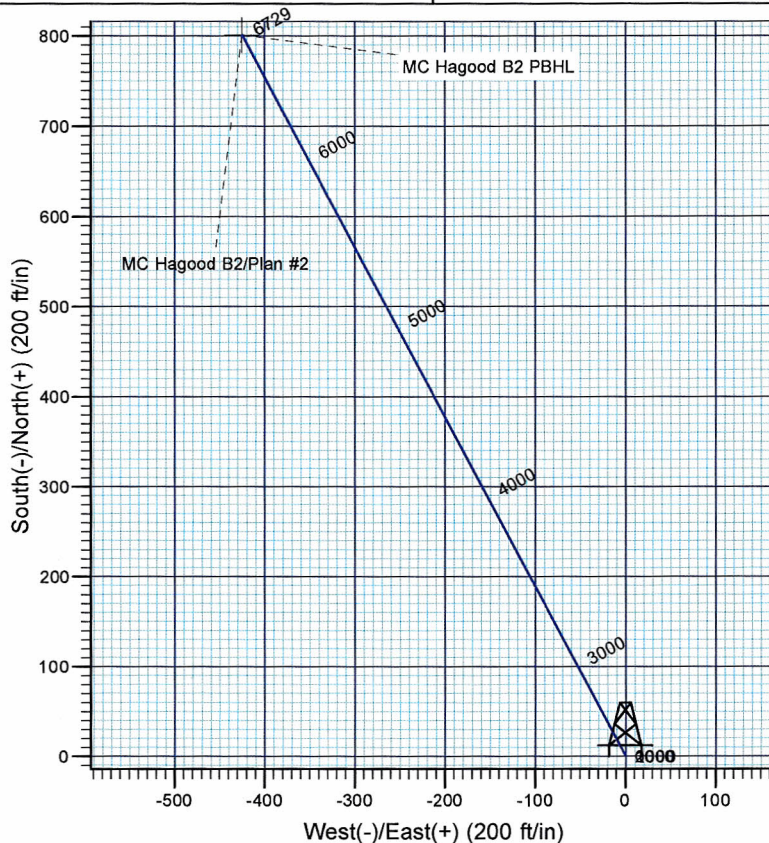
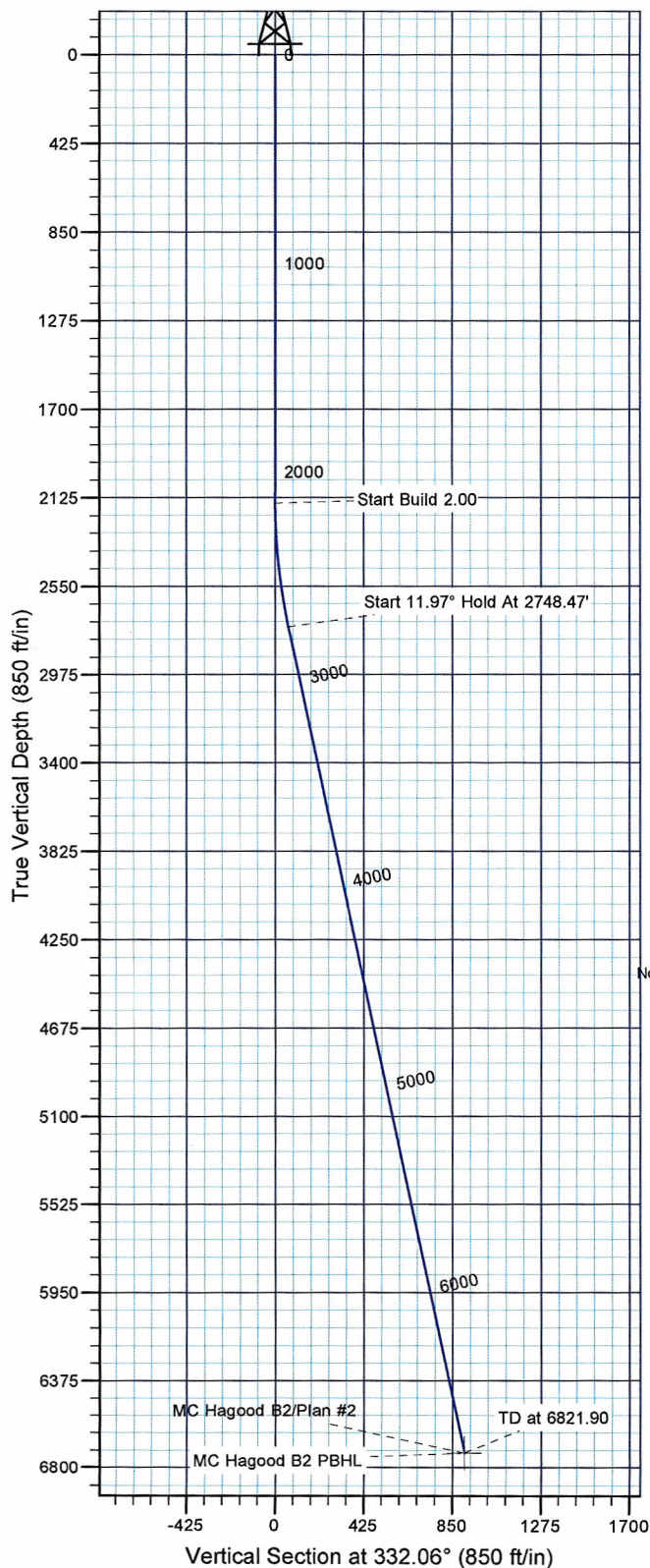
Well Details: MC Hagood B2

TVD Reference: GL 5553' & RKB 22' @ 5575.00ft Ground Level: 5553.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1310231.54 2037271.73 40° 8' 1.151 N 108° 56' 38.558 W



Azimuths to True North
Magnetic North: 10.91°

Magnetic Field
Strength: 52567.2snT
Dip Angle: 66.11°
Date: 11/3/2010
Model: IGRF200510



FORMATION TOP DETAILS

No formation data is available

Plan: Plan #2

9:24, December 15 2010
Created By: Rex Hall

PROJECT DETAILS: Rio Blanco County, CO (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2150.00	0.00	0.00	2150.00	0.00	0.00	0.00	0.00	0.00	
3	2748.47	11.97	332.06	2744.12	55.03	-29.18	2.00	332.06	62.28	
4	6821.90	11.97	332.06	6729.00	801.36	-424.96	0.00	0.00	907.07	MC Hagood B2 PBHL

Chevron

Rio Blanco County, CO (NAD 83)

MC Hagood

MC Hagood B2

OH

Plan: Plan #2

Standard Planning Report

15 December, 2010

Scientific Drilling International

Planning Report

Database:	Rockies-R5000.1	Local Co-ordinate Reference:	Well MC Hagood B2
Company:	Chevron	TVD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Site:	MC Hagood	North Reference:	True
Well:	MC Hagood B2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Rio Blanco County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		MC Hagood			
Site Position:		Northing:	1,310,664.20 usft	Latitude:	40° 8' 5.460 N
From:	Map	Easting:	2,037,368.00 usft	Longitude:	108° 56' 37.536 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-2.23 °

Well	MC Hagood B2, 814' FNL & 2229' FWL Sec 22 T2N R103W					
Well Position	+N/-S	-436.08 ft	Northing:	1,310,231.54 usft	Latitude:	40° 8' 1.151 N
	+E/-W	-79.40 ft	Easting:	2,037,271.73 usft	Longitude:	108° 56' 38.558 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,553.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/3/2010	10.91	66.11	52,567

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	332.06

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,150.00	0.00	0.00	2,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,748.47	11.97	332.06	2,744.12	55.03	-29.18	2.00	2.00	0.00	332.06	
6,821.90	11.97	332.06	6,729.00	801.36	-424.96	0.00	0.00	0.00	0.00	MC Hagood B2 PBHL

Scientific Drilling International

Planning Report

Database:	Rockies-R5000.1	Local Co-ordinate Reference:	Well MC Hagood B2
Company:	Chevron	TVD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Site:	MC Hagood	North Reference:	True
Well:	MC Hagood B2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,150.00	0.00	0.00	2,150.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,200.00	1.00	332.06	2,200.00	0.39	-0.20	0.44	2.00	2.00	0.00
2,300.00	3.00	332.06	2,299.93	3.47	-1.84	3.93	2.00	2.00	0.00
2,400.00	5.00	332.06	2,399.68	9.63	-5.11	10.90	2.00	2.00	0.00
2,500.00	7.00	332.06	2,499.13	18.87	-10.00	21.35	2.00	2.00	0.00
2,600.00	9.00	332.06	2,598.15	31.16	-16.52	35.27	2.00	2.00	0.00
2,700.00	11.00	332.06	2,696.63	46.50	-24.66	52.63	2.00	2.00	0.00
2,748.47	11.97	332.06	2,744.12	55.03	-29.18	62.28	2.00	2.00	0.00
Start 11.97° Hold At 2748.47'									
2,800.00	11.97	332.06	2,794.54	64.47	-34.19	72.97	0.00	0.00	0.00
2,900.00	11.97	332.06	2,892.36	82.79	-43.90	93.71	0.00	0.00	0.00
3,000.00	11.97	332.06	2,990.19	101.11	-53.62	114.45	0.00	0.00	0.00
3,100.00	11.97	332.06	3,088.01	119.43	-63.34	135.19	0.00	0.00	0.00
3,200.00	11.97	332.06	3,185.84	137.76	-73.05	155.93	0.00	0.00	0.00
3,300.00	11.97	332.06	3,283.67	156.08	-82.77	176.67	0.00	0.00	0.00
3,400.00	11.97	332.06	3,381.49	174.40	-92.48	197.40	0.00	0.00	0.00
3,500.00	11.97	332.06	3,479.32	192.72	-102.20	218.14	0.00	0.00	0.00
3,600.00	11.97	332.06	3,577.14	211.04	-111.92	238.88	0.00	0.00	0.00
3,700.00	11.97	332.06	3,674.97	229.37	-121.63	259.62	0.00	0.00	0.00
3,800.00	11.97	332.06	3,772.80	247.69	-131.35	280.36	0.00	0.00	0.00
3,900.00	11.97	332.06	3,870.62	266.01	-141.06	301.10	0.00	0.00	0.00
4,000.00	11.97	332.06	3,968.45	284.33	-150.78	321.84	0.00	0.00	0.00
4,100.00	11.97	332.06	4,066.27	302.65	-160.50	342.58	0.00	0.00	0.00
4,200.00	11.97	332.06	4,164.10	320.98	-170.21	363.31	0.00	0.00	0.00
4,300.00	11.97	332.06	4,261.92	339.30	-179.93	384.05	0.00	0.00	0.00
4,400.00	11.97	332.06	4,359.75	357.62	-189.64	404.79	0.00	0.00	0.00
4,500.00	11.97	332.06	4,457.58	375.94	-199.36	425.53	0.00	0.00	0.00
4,600.00	11.97	332.06	4,555.40	394.26	-209.08	446.27	0.00	0.00	0.00
4,700.00	11.97	332.06	4,653.23	412.59	-218.79	467.01	0.00	0.00	0.00
4,800.00	11.97	332.06	4,751.05	430.91	-228.51	487.75	0.00	0.00	0.00
4,900.00	11.97	332.06	4,848.88	449.23	-238.22	508.49	0.00	0.00	0.00

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Planning Report

Database:	Rockies-R5000.1	Local Co-ordinate Reference:	Well MC Hagood B2
Company:	Chevron	TVD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5553' & RKB 22' @ 5575.00ft
Site:	MC Hagood	North Reference:	True
Well:	MC Hagood B2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
5,000.00	11.97	332.06	4,946.71	467.55	-247.94	529.22	0.00	0.00	0.00
5,100.00	11.97	332.06	5,044.53	485.87	-257.66	549.96	0.00	0.00	0.00
5,200.00	11.97	332.06	5,142.36	504.20	-267.37	570.70	0.00	0.00	0.00
5,300.00	11.97	332.06	5,240.18	522.52	-277.09	591.44	0.00	0.00	0.00
5,400.00	11.97	332.06	5,338.01	540.84	-286.80	612.18	0.00	0.00	0.00
5,500.00	11.97	332.06	5,435.84	559.16	-296.52	632.92	0.00	0.00	0.00
5,600.00	11.97	332.06	5,533.66	577.48	-306.24	653.66	0.00	0.00	0.00
5,700.00	11.97	332.06	5,631.49	595.81	-315.95	674.40	0.00	0.00	0.00
5,800.00	11.97	332.06	5,729.31	614.13	-325.67	695.13	0.00	0.00	0.00
5,900.00	11.97	332.06	5,827.14	632.45	-335.39	715.87	0.00	0.00	0.00
6,000.00	11.97	332.06	5,924.96	650.77	-345.10	736.61	0.00	0.00	0.00
6,100.00	11.97	332.06	6,022.79	669.09	-354.82	757.35	0.00	0.00	0.00
6,200.00	11.97	332.06	6,120.62	687.41	-364.53	778.09	0.00	0.00	0.00
6,300.00	11.97	332.06	6,218.44	705.74	-374.25	798.83	0.00	0.00	0.00
6,400.00	11.97	332.06	6,316.27	724.06	-383.97	819.57	0.00	0.00	0.00
6,500.00	11.97	332.06	6,414.09	742.38	-393.68	840.31	0.00	0.00	0.00
6,600.00	11.97	332.06	6,511.92	760.70	-403.40	861.04	0.00	0.00	0.00
6,700.00	11.97	332.06	6,609.75	779.02	-413.11	881.78	0.00	0.00	0.00
6,800.00	11.97	332.06	6,707.57	797.35	-422.83	902.52	0.00	0.00	0.00
6,821.90	11.97	332.06	6,729.00	801.36	-424.96	907.07	0.00	0.00	0.00
TD at 6821.90									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
MC Hagood B2 PBHL	0.00	0.00	6,729.00	801.36	-424.96	1,311,048.79	2,036,878.21	40° 8' 9.070 N	108° 56' 44.030 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
2,150.00	2,150.00	0.00	0.00	Start Build 2.00
2,748.47	2,744.12	55.03	-29.18	Start 11.97° Hold At 2748.47'
6,821.90	6,729.00	801.36	-424.96	TD at 6821.90