

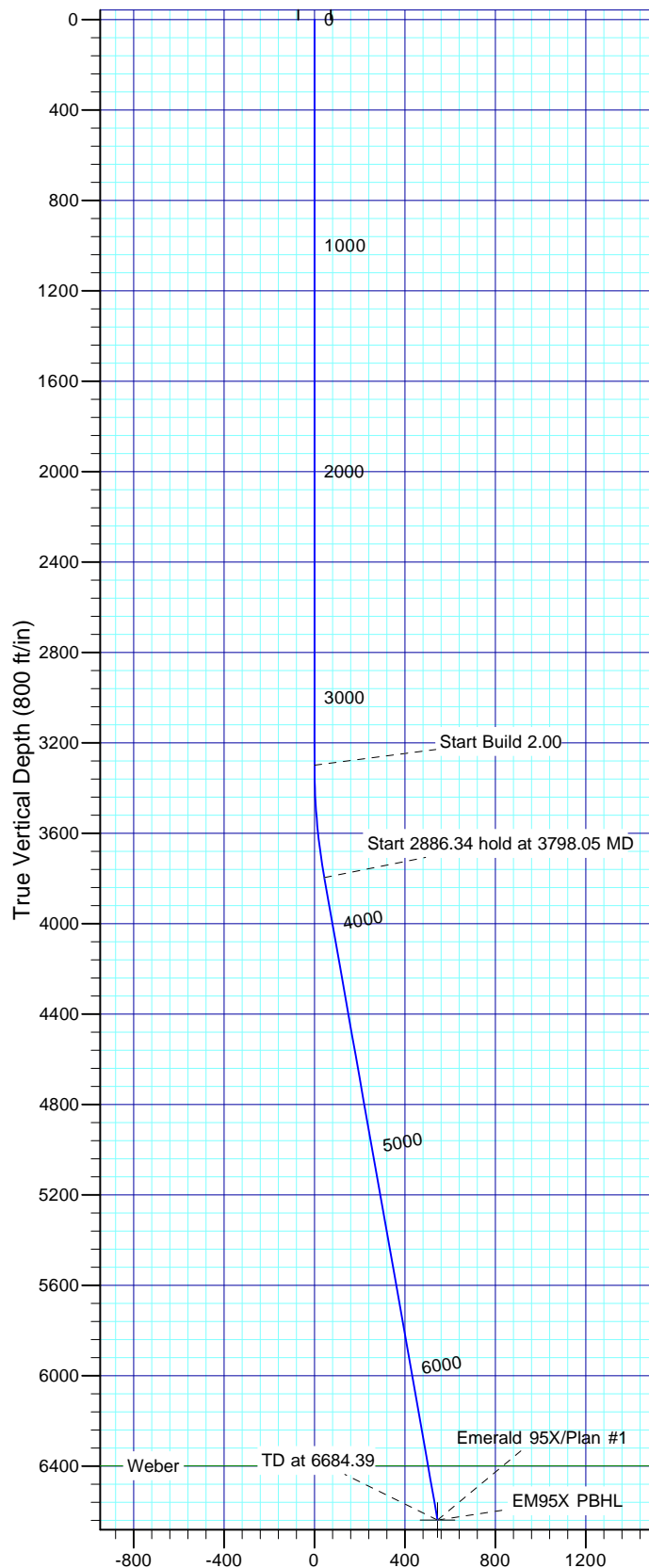
Well Details: Emerald 95X

TVD Reference: GL 5452' @ 5452.00ft (Ground Level) Ground Level: 5452.00

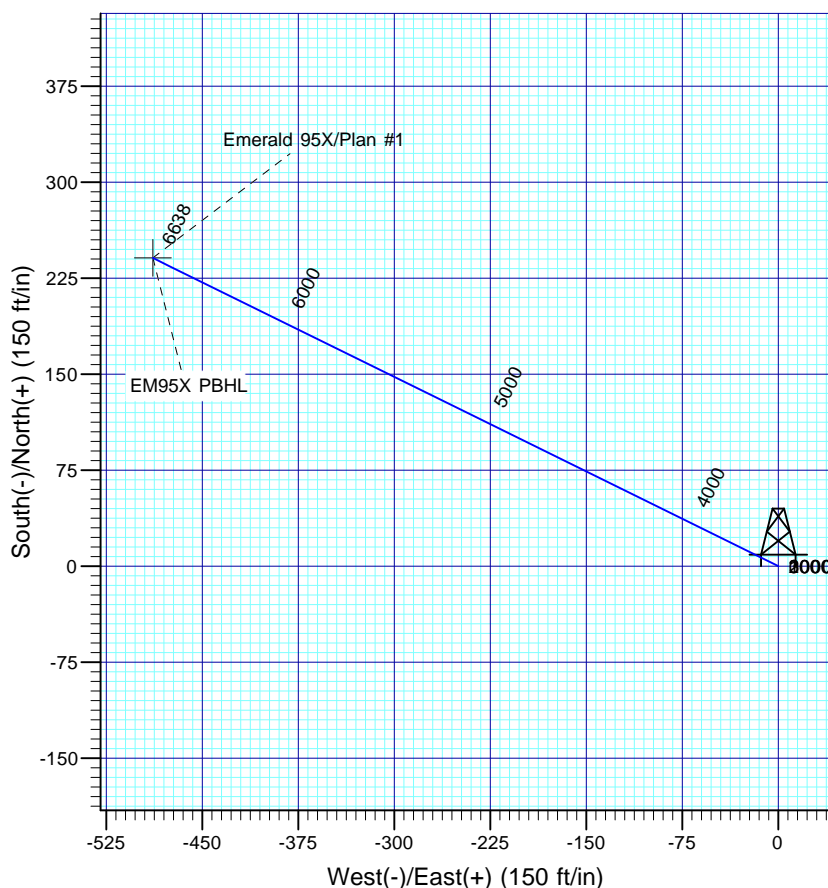
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1298578.56	2045946.46	40° 6' 9.389 N	108° 54' 41.180 W	

T M Azimuths to True North
Magnetic North: 10.75°

Magnetic Field
Strength: 52447.0snT
Dip Angle: 66.06°
Date: 12/20/2011
Model: IGRF200510



Vertical Section at 296.23° (800 ft/in)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6398.00	6440.69	Weber

Plan: Plan #1

18:33, December 20 2011
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	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3298.00	0.00	0.00	3298.00	0.00	0.00	0.00	0.00	0.00	
3	3798.05	10.00	296.23	3795.52	19.24	-39.05	2.00	296.23	43.53	
4	6684.39	10.00	296.23	6638.00	240.80	-488.69	0.00	0.00	544.79	EM95X PBHL

Chevron

Rio Blanco County, CO (NAD 83)

Emerald 95X & 96X Pad

Emerald 95X

OH

Plan: Plan #1

Standard Planning Report

20 December, 2011

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Emerald 95X
Company:	Chevron	TVD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Site:	Emerald 95X & 96X Pad	North Reference:	True
Well:	Emerald 95X	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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		Emerald 95X & 96X Pad				
Site Position:		Northing:	1,298,578.57 usft	Latitude:	40° 6' 9.389 N	
From:	Lat/Long	Easting:	2,045,946.46 usft	Longitude:	108° 54' 41.180 W	
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-2.20 °

Well	Emerald 95X					
Well Position	+N/-S	0.00 ft	Northing:	1,298,578.56 usft	Latitude:	40° 6' 9.389 N
	+E/-W	0.00 ft	Easting:	2,045,946.46 usft	Longitude:	108° 54' 41.180 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,452.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/20/11	10.75	66.06	52,447

Design	Plan #1			
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	296.23

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	
3,298.00	0.00	0.00	3,298.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,798.05	10.00	296.23	3,795.52	19.24	-39.05	2.00	2.00	0.00	296.23	
6,684.39	10.00	296.23	6,638.00	240.80	-488.69	0.00	0.00	0.00	0.00	EM95X PBHL

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Emerald 95X
Company:	Chevron	TVD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Site:	Emerald 95X & 96X Pad	North Reference:	True
Well:	Emerald 95X	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,298.00	0.00	0.00	3,298.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.04	296.23	3,300.00	0.00	0.00	0.00	2.00	2.00	0.00
3,400.00	2.04	296.23	3,399.98	0.80	-1.63	1.82	2.00	2.00	0.00
3,500.00	4.04	296.23	3,499.83	3.15	-6.39	7.12	2.00	2.00	0.00
3,600.00	6.04	296.23	3,599.44	7.03	-14.27	15.90	2.00	2.00	0.00
3,700.00	8.04	296.23	3,698.68	12.45	-25.26	28.16	2.00	2.00	0.00
3,798.05	10.00	296.23	3,795.52	19.24	-39.05	43.53	2.00	2.00	0.00
3,800.00	10.00	296.23	3,797.44	19.39	-39.35	43.87	0.00	0.00	0.00
3,900.00	10.00	296.23	3,895.92	27.07	-54.93	61.24	0.00	0.00	0.00
4,000.00	10.00	296.23	3,994.40	34.74	-70.51	78.60	0.00	0.00	0.00
4,100.00	10.00	296.23	4,092.88	42.42	-86.09	95.97	0.00	0.00	0.00
4,200.00	10.00	296.23	4,191.36	50.09	-101.66	113.34	0.00	0.00	0.00
4,300.00	10.00	296.23	4,289.84	57.77	-117.24	130.70	0.00	0.00	0.00
4,400.00	10.00	296.23	4,388.32	65.45	-132.82	148.07	0.00	0.00	0.00
4,500.00	10.00	296.23	4,486.80	73.12	-148.40	165.44	0.00	0.00	0.00
4,600.00	10.00	296.23	4,585.28	80.80	-163.98	182.80	0.00	0.00	0.00
4,700.00	10.00	296.23	4,683.76	88.47	-179.56	200.17	0.00	0.00	0.00
4,800.00	10.00	296.23	4,782.24	96.15	-195.13	217.54	0.00	0.00	0.00
4,900.00	10.00	296.23	4,880.72	103.83	-210.71	234.90	0.00	0.00	0.00
5,000.00	10.00	296.23	4,979.20	111.50	-226.29	252.27	0.00	0.00	0.00
5,100.00	10.00	296.23	5,077.68	119.18	-241.87	269.64	0.00	0.00	0.00

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Emerald 95X
Company:	Chevron	TVD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Project:	Rio Blanco County, CO (NAD 83)	MD Reference:	GL 5452' @ 5452.00ft (Ground Level)
Site:	Emerald 95X & 96X Pad	North Reference:	True
Well:	Emerald 95X	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)	
5,200.00	10.00	296.23	5,176.16	126.85	-257.45	287.00	0.00	0.00	0.00	
5,300.00	10.00	296.23	5,274.64	134.53	-273.02	304.37	0.00	0.00	0.00	
5,400.00	10.00	296.23	5,373.12	142.21	-288.60	321.74	0.00	0.00	0.00	
5,500.00	10.00	296.23	5,471.60	149.88	-304.18	339.10	0.00	0.00	0.00	
5,600.00	10.00	296.23	5,570.08	157.56	-319.76	356.47	0.00	0.00	0.00	
5,700.00	10.00	296.23	5,668.56	165.23	-335.34	373.84	0.00	0.00	0.00	
5,800.00	10.00	296.23	5,767.04	172.91	-350.92	391.20	0.00	0.00	0.00	
5,900.00	10.00	296.23	5,865.52	180.59	-366.49	408.57	0.00	0.00	0.00	
6,000.00	10.00	296.23	5,964.01	188.26	-382.07	425.94	0.00	0.00	0.00	
6,100.00	10.00	296.23	6,062.49	195.94	-397.65	443.30	0.00	0.00	0.00	
6,200.00	10.00	296.23	6,160.97	203.62	-413.23	460.67	0.00	0.00	0.00	
6,300.00	10.00	296.23	6,259.45	211.29	-428.81	478.04	0.00	0.00	0.00	
6,400.00	10.00	296.23	6,357.93	218.97	-444.38	495.40	0.00	0.00	0.00	
6,440.69	10.00	296.23	6,398.00	222.09	-450.72	502.47	0.00	0.00	0.00	
Weber										
6,500.00	10.00	296.23	6,456.41	226.64	-459.96	512.77	0.00	0.00	0.00	
6,600.00	10.00	296.23	6,554.89	234.32	-475.54	530.14	0.00	0.00	0.00	
6,684.39	10.00	296.23	6,638.00	240.80	-488.69	544.79	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
EM95X PBHL	0.00	0.00	6,638.00	240.80	-488.69	1,298,837.98	2,045,467.40	40° 6' 11.768 N	108° 54' 47.470 W	
- hit/miss target										
- Shape										
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,440.69	6,398.00	Weber		0.00		