



ConocoPhillips

LA PLATA COUNTY, CO

SEC 13-T32N-R7W

Levey 100

Lateral A

Plan: Plan #1

Standard Planning Report

22 October, 2010





Project: LA PLATA COUNTY, CO
Site: SEC 13-T32N-R7W
Well: Levey 100
Wellbore: Lateral A
Design: Plan #1



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Levey 100, True North
Vertical (TVD) Reference: AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Calculation Method: Minimum Curvature

PROJECT DETAILS

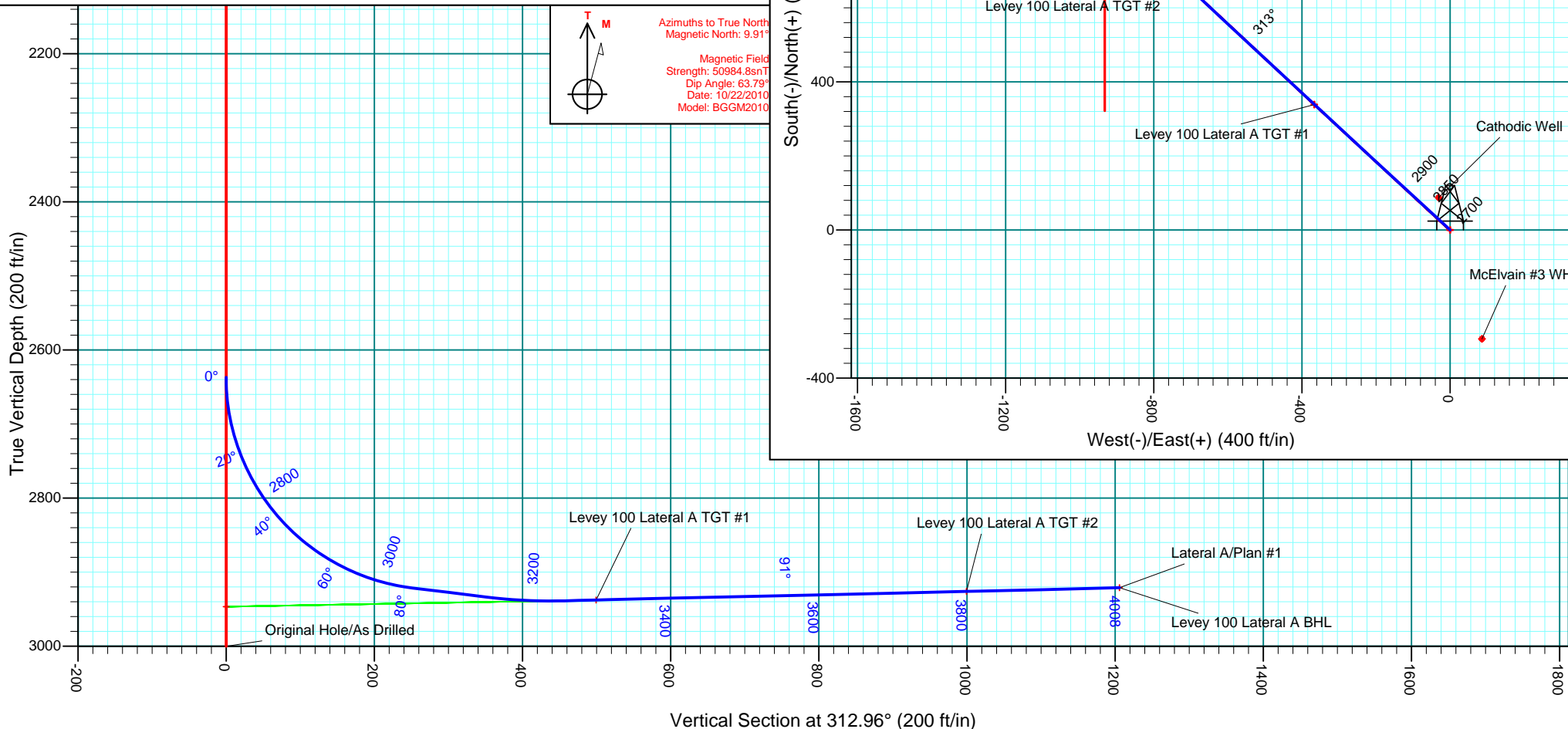
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
System Datum: Mean Sea Level

WELL DETAILS: Levey 100

Ground Level:	6403.0		
+N/-S	+E/-W	Northing	Easting
0.0	0.0	1135396.90	2397654.24
		Latitude	Longitude
		37° 1' 12.862 N	107° 33' 47.590 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2637.0	0.00	0.00	2637.0	0.0	0.0	0.00	0.00	0.0	
2	3052.0	83.00	312.75	2921.3	170.8	-184.7	20.00	312.75	251.6	
3	3152.0	83.00	312.75	2933.5	238.1	-257.6	0.00	0.00	350.8	
4	3258.4	91.51	312.75	2938.6	310.2	-335.6	8.00	0.00	457.0	
5	3277.0	91.51	312.75	2938.1	322.8	-349.3	0.02	-104.75	475.6	
6	3300.9	91.51	312.75	2937.5	339.1	-366.8	0.00	0.00	499.5	Levey 100 Lateral A TGT #1
7	3317.3	91.31	313.01	2937.1	350.2	-378.8	2.00	126.53	515.8	
8	3801.0	91.31	313.01	2926.0	680.1	-732.4	0.00	0.00	999.5	Levey 100 Lateral A TGT #2
9	3818.8	91.39	313.36	2925.6	692.2	-745.4	2.00	77.66	1017.2	
10	4007.5	91.39	313.36	2921.0	821.8	-882.6	0.00	0.00	1205.9	Levey 100 Lateral A BHL



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Levey 100
Company:	ConocoPhillips	TVD Reference:	AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Project:	LA PLATA COUNTY, CO	MD Reference:	AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Site:	SEC 13-T32N-R7W	North Reference:	True
Well:	Levey 100	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral A		
Design:	Plan #1		

Project	LA PLATA COUNTY, CO, SOUTHERN COLORADO, S-Type Fruitland		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site						SEC 13-T32N-R7W											
Site Position:			Northing:			1,135,366.84 ft			Latitude:			37° 1' 13.194 N					
From:			Lat/Long			Easting:			2,400,544.12 ft			Longitude:			107° 33' 11.958 W		
Position Uncertainty:			15.0 ft			Slot Radius:			6-1/8"			Grid Convergence:			-1.26 °		

Well	Levey 100, FC CBM HZ					
Well Position	+N/-S	-33.8 ft	Northing:	1,135,396.90 ft	Latitude:	37° 1' 12.862 N
	+E/-W	-2,889.7 ft	Easting:	2,397,654.24 ft	Longitude:	107° 33' 47.590 W
Position Uncertainty		3.5 ft	Wellhead Elevation:	ft	Ground Level:	6,403.0 ft

Wellbore	Lateral A				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	10/22/2010	9.91	63.79	50,985

Design	Plan #1				
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Audit Notes:

Version: **Phase:** PLAN **Tie On Depth:** 2,637.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	312.96

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
2,637.0	0.00	0.00	2,637.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,052.0	83.00	312.75	2,921.3	170.8	-184.7	20.00	20.00	0.00	312.75	
3,152.0	83.00	312.75	2,933.5	238.1	-257.6	0.00	0.00	0.00	0.00	
3,258.4	91.51	312.75	2,938.6	310.2	-335.6	8.00	8.00	0.00	0.00	
3,277.0	91.51	312.75	2,938.1	322.8	-349.3	0.02	0.00	-0.02	-104.75	
3,300.9	91.51	312.75	2,937.5	339.1	-366.8	0.00	0.00	0.00	0.00	Levey 100 Lateral A
3,317.3	91.31	313.01	2,937.1	350.2	-378.8	2.00	-1.19	1.61	126.53	
3,801.0	91.31	313.01	2,926.0	680.1	-732.4	0.00	0.00	0.00	0.00	Levey 100 Lateral A
3,818.8	91.39	313.36	2,925.6	692.2	-745.4	2.00	0.43	1.95	77.66	
4,007.5	91.39	313.36	2,921.0	821.8	-882.6	0.00	0.00	0.00	0.00	Levey 100 Lateral A

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Levey 100
Company:	ConocoPhillips	TVD Reference:	AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Project:	LA PLATA COUNTY, CO	MD Reference:	AWS 730 @ 6406.0ft (15' DF + 6391' GL)
Site:	SEC 13-T32N-R7W	North Reference:	True
Well:	Levey 100	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral A		
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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Levey 100 West HL - Levey 100 North HL - McElvain #3 WH - Cathodic Well									
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,637.0	0.00	0.00	2,637.0	0.0	0.0	0.0	0.00	0.00	0.00
2,650.0	2.60	312.75	2,650.0	0.2	-0.2	0.3	20.00	20.00	0.00
2,675.0	7.60	312.75	2,674.9	1.7	-1.8	2.5	20.00	20.00	0.00
2,700.0	12.60	312.75	2,699.5	4.7	-5.1	6.9	20.00	20.00	0.00
2,725.0	17.60	312.75	2,723.6	9.1	-9.8	13.4	20.00	20.00	0.00
2,750.0	22.60	312.75	2,747.1	14.9	-16.2	22.0	20.00	20.00	0.00
2,775.0	27.60	312.75	2,769.7	22.1	-23.9	32.6	20.00	20.00	0.00
2,800.0	32.60	312.75	2,791.3	30.6	-33.1	45.1	20.00	20.00	0.00
2,825.0	37.60	312.75	2,811.8	40.4	-43.7	59.5	20.00	20.00	0.00
2,850.0	42.60	312.75	2,830.9	51.3	-55.5	75.6	20.00	20.00	0.00
2,875.0	47.60	312.75	2,848.6	63.3	-68.5	93.3	20.00	20.00	0.00
Levey 100 Lateral A TGT Line									
2,900.0	52.60	312.75	2,864.6	76.4	-82.6	112.5	20.00	20.00	0.00
2,925.0	57.60	312.75	2,878.9	90.3	-97.6	133.0	20.00	20.00	0.00
2,950.0	62.60	312.75	2,891.3	105.0	-113.6	154.6	20.00	20.00	0.00
2,975.0	67.60	312.75	2,901.9	120.4	-130.2	177.3	20.00	20.00	0.00
3,000.0	72.60	312.75	2,910.4	136.3	-147.5	200.8	20.00	20.00	0.00
3,025.0	77.60	312.75	2,916.8	152.7	-165.2	225.0	20.00	20.00	0.00
3,052.0	83.00	312.75	2,921.3	170.8	-184.7	251.6	20.00	20.00	0.00
3,100.0	83.00	312.75	2,927.2	203.1	-219.7	299.2	0.00	0.00	0.00
3,152.0	83.00	312.75	2,933.5	238.1	-257.6	350.8	0.00	0.00	0.00
3,200.0	86.84	312.75	2,937.8	270.6	-292.7	398.6	8.00	8.00	0.00
3,250.0	90.84	312.75	2,938.8	304.5	-329.4	448.6	8.00	8.00	0.00
3,258.4	91.51	312.75	2,938.6	310.2	-335.6	457.0	8.00	8.00	0.00
3,277.0	91.51	312.75	2,938.1	322.8	-349.3	475.6	0.02	0.00	-0.02
3,300.9	91.51	312.75	2,937.5	339.1	-366.8	499.5	0.00	0.00	0.00
Levey 100 Lateral A TGT #1									
3,317.3	91.31	313.01	2,937.1	350.2	-378.8	515.8	2.00	-1.19	1.61
3,400.0	91.31	313.01	2,935.2	406.6	-439.3	598.6	0.00	0.00	0.00
3,500.0	91.31	313.01	2,932.9	474.8	-512.4	698.5	0.00	0.00	0.00
3,600.0	91.31	313.01	2,930.6	543.0	-585.5	798.5	0.00	0.00	0.00
3,700.0	91.31	313.01	2,928.3	611.2	-658.6	898.5	0.00	0.00	0.00
3,801.0	91.31	313.01	2,926.0	680.1	-732.4	999.5	0.00	0.00	0.00
Levey 100 Lateral A TGT #2									
3,818.8	91.39	313.36	2,925.6	692.2	-745.4	1,017.2	2.00	0.43	1.95
3,900.0	91.39	313.36	2,923.6	748.0	-804.4	1,098.4	0.00	0.00	0.00
4,007.5	91.39	313.36	2,921.0	821.8	-882.6	1,205.9	0.00	0.00	0.00
Levey 100 Lateral A BHL									

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Wellbore:	Lateral A		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Levey 100 West HL	0.00	0.00	0.0	821.8	-932.6	1,136,239.11	2,396,739.98	37° 1' 20.987 N	107° 33' 59.090 W
- plan misses target center by 1243.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			0.0	500.0	0.0	1,136,739.00	2,396,751.02		
Point 2			0.0	-500.0	0.0	1,135,739.21	2,396,728.94		
Levey 100 North HL	0.00	0.00	0.0	871.8	-882.6	1,136,288.02	2,396,791.07	37° 1' 21.482 N	107° 33' 58.474 W
- plan misses target center by 1240.6ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			0.0	0.0	500.0	1,136,276.97	2,397,290.97		
Point 2			0.0	0.0	-500.0	1,136,299.06	2,396,291.17		
McElvain #3 WH	0.00	0.00	0.0	-293.9	85.9	1,135,101.19	2,397,733.60	37° 1' 9.956 N	107° 33' 46.531 W
- plan misses target center by 306.2ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Circle (radius 5.0)									
Cathodic Well	0.00	0.00	0.0	87.7	-31.0	1,135,485.26	2,397,625.20	37° 1' 13.729 N	107° 33' 47.972 W
- plan misses target center by 93.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Circle (radius 5.0)									
Levey 100 Lateral A E	0.00	0.00	2,921.0	821.8	-882.6	1,136,238.00	2,396,790.00	37° 1' 20.987 N	107° 33' 58.473 W
- plan hits target center									
- Point									
Levey 100 Lateral A T	0.00	0.00	2,926.0	680.1	-732.4	1,136,093.00	2,396,937.00	37° 1' 19.586 N	107° 33' 56.621 W
- plan hits target center									
- Point									
Levey 100 Lateral A T	0.00	0.00	2,937.5	339.1	-366.8	1,135,744.00	2,397,295.00	37° 1' 16.214 N	107° 33' 52.113 W
- plan hits target center									
- Point									
Levey 100 Lateral A T	0.00	0.00	2,946.5	0.0	0.0	1,135,396.90	2,397,654.24	37° 1' 12.862 N	107° 33' 47.590 W
- plan misses target center by 135.3ft at 2875.0ft MD (2848.6 TVD, 63.3 N, -68.5 E)									
- Polygon									
Point 1			2,946.5	-0.9	-0.2	1,135,396.01	2,397,654.02		
Point 2			2,946.5	339.1	-366.8	1,135,744.04	2,397,295.01		
Point 3			2,946.5	680.1	-732.4	1,136,093.04	2,396,937.01		
Point 4			2,946.5	821.8	-882.6	1,136,238.03	2,396,789.97		
Point 5			2,946.5	680.1	-732.4	1,136,093.04	2,396,937.01		
Point 6			2,946.5	339.1	-366.8	1,135,744.04	2,397,295.01		
Point 7			2,946.5	-0.9	-0.2	1,135,396.01	2,397,654.02		