

30-045-35187

ConocoPhillips SJB

San Juan Basin - New Mexico West Wells

Other Named Wells

Hudson #5M

Original Hole

OIL CONS. DIV DIST. 3

FEB 18 2013

Plan: New Plan #1 per Fodor

Standard Planning Report

15 February, 2013

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Hudson #5M
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 6025.0usft (Original Well Elev)
Project:	San Juan Basin- New Mexico West Wells	MD Reference:	RKB @ 6025.0usft (Original Well Elev)
Site:	Other Named Wells	North Reference:	Grid
Well:	Hudson #5M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	New Plan #1 per Fodor		

Project	San Juan Basin - New Mexico West Wells, New Mexico, Directional "S"		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site	Other Named Wells				
Site Position:		Northing:	2,108,178.26 usft	Latitude:	36° 47' 33.793 N
From:	Lat/Long	Easting:	643,887.63 usft	Longitude:	107° 20' 30.932 W
Position Uncertainty:	15.0 usft	Slot Radius:	6-1/8"	Grid Convergence:	0.29 °

Well	Hudson #5M, Directional S-Curve Short Stepout					
Well Position	+N/-S	0.0 usft	Northing:	2,148,080.21 usft	Latitude:	36° 54' 11.941 N
	+E/-W	0.0 usft	Easting:	477,952.58 usft	Longitude:	107° 54' 31.460 W
Position Uncertainty		3.5 usft	Wellhead Elevation:	usft	Ground Level:	6,010.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	8/2/2010	10.07	63.63	50,901

Design	New Plan #1 per Fodor				
Audit Notes:					
Version:	1	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	252.01	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
320.0	0.00	0.00	320.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,503.8	23.68	252.01	1,470.4	-74.5	-229.3	2.00	2.00	0.00	252.01	
2,991.7	23.68	252.01	2,833.1	-259.0	-797.6	0.00	0.00	0.00	0.00	
3,780.9	0.00	0.00	3,600.0	-308.7	-950.5	3.00	-3.00	0.00	180.00	Hudson #5M ICP
7,507.9	0.00	0.00	7,327.0	-308.7	-950.5	0.00	0.00	0.00	0.00	Hudson #5M PCP

ConocoPhillips

Planning Report

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Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6025.0usft (Original Well Elev)
Site:	Other Named Wells	North Reference:	Grid
Well:	Hudson #5M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	New Plan #1 per Fodor		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
Surface									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.60	252.01	400.0	-0.3	-1.1	1.1	2.00	2.00	0.00
500.0	3.60	252.01	499.9	-1.7	-5.4	5.7	2.00	2.00	0.00
600.0	5.60	252.01	599.6	-4.2	-13.0	13.7	2.00	2.00	0.00
700.0	7.60	252.01	698.9	-7.8	-23.9	25.2	2.00	2.00	0.00
800.0	9.60	252.01	797.8	-12.4	-38.2	40.1	2.00	2.00	0.00
900.0	11.60	252.01	896.0	-18.1	-55.7	58.5	2.00	2.00	0.00
1,000.0	13.60	252.01	993.6	-24.8	-76.4	80.3	2.00	2.00	0.00
1,100.0	15.60	252.01	1,090.4	-32.6	-100.4	105.5	2.00	2.00	0.00
1,200.0	17.60	252.01	1,186.2	-41.4	-127.5	134.1	2.00	2.00	0.00
1,300.0	19.60	252.01	1,281.0	-51.3	-157.9	166.0	2.00	2.00	0.00
1,314.9	19.90	252.01	1,295.0	-52.8	-162.7	171.0	2.00	2.00	0.00
Ojo Alamo									
1,376.8	21.14	252.01	1,353.0	-59.5	-183.3	192.7	2.00	2.00	0.00
Kirtland									
1,400.0	21.60	252.01	1,374.6	-62.1	-191.3	201.2	2.00	2.00	0.00
1,500.0	23.60	252.01	1,466.9	-74.0	-227.9	239.6	2.00	2.00	0.00
1,503.8	23.68	252.01	1,470.4	-74.5	-229.3	241.1	2.00	2.00	0.00
1,600.0	23.68	252.01	1,558.5	-86.4	-266.1	279.8	0.00	0.00	0.00
1,700.0	23.68	252.01	1,650.1	-98.8	-304.3	319.9	0.00	0.00	0.00
1,800.0	23.68	252.01	1,741.7	-111.2	-342.5	360.1	0.00	0.00	0.00
1,900.0	23.68	252.01	1,833.2	-123.6	-380.7	400.2	0.00	0.00	0.00
2,000.0	23.68	252.01	1,924.8	-136.0	-418.8	440.4	0.00	0.00	0.00
2,100.0	23.68	252.01	2,016.4	-148.4	-457.0	480.5	0.00	0.00	0.00
2,200.0	23.68	252.01	2,108.0	-160.8	-495.2	520.7	0.00	0.00	0.00
2,263.3	23.68	252.01	2,166.0	-168.7	-519.4	546.1	0.00	0.00	0.00
Fruitland									
2,300.0	23.68	252.01	2,199.6	-173.2	-533.4	560.9	0.00	0.00	0.00
2,400.0	23.68	252.01	2,291.2	-185.7	-571.6	601.0	0.00	0.00	0.00
2,500.0	23.68	252.01	2,382.7	-198.1	-609.8	641.2	0.00	0.00	0.00
2,600.0	23.68	252.01	2,474.3	-210.5	-648.0	681.3	0.00	0.00	0.00
2,700.0	23.68	252.01	2,565.9	-222.9	-686.2	721.5	0.00	0.00	0.00
2,800.0	23.68	252.01	2,657.5	-235.3	-724.4	761.6	0.00	0.00	0.00
2,900.0	23.68	252.01	2,749.1	-247.7	-762.6	801.8	0.00	0.00	0.00
2,945.8	23.68	252.01	2,791.0	-253.4	-780.1	820.2	0.00	0.00	0.00
Pictured Cliffs									
2,991.7	23.68	252.01	2,833.1	-259.0	-797.6	838.6	0.00	0.00	0.00
3,000.0	23.43	252.01	2,840.7	-260.1	-800.8	841.9	3.00	-3.00	0.00
3,067.4	21.40	252.01	2,903.0	-268.0	-825.2	867.6	3.00	-3.00	0.00
Lewis									
3,100.0	20.43	252.01	2,933.4	-271.6	-836.3	879.3	3.00	-3.00	0.00
3,200.0	17.43	252.01	3,028.0	-281.6	-867.1	911.7	3.00	-3.00	0.00
3,300.0	14.43	252.01	3,124.2	-290.1	-893.2	939.1	3.00	-3.00	0.00
3,400.0	11.43	252.01	3,221.6	-297.0	-914.5	961.5	3.00	-3.00	0.00
3,500.0	8.43	252.01	3,320.1	-302.3	-930.9	978.8	3.00	-3.00	0.00
3,600.0	5.43	252.01	3,419.4	-306.1	-942.4	990.8	3.00	-3.00	0.00
3,645.8	4.05	252.01	3,465.0	-307.2	-946.0	994.6	3.00	-3.00	0.00
Huerfano Bentonite									

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Site:	Other Named Wells	North Reference:	Grid
Well:	Hudson #5M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	New Plan #1 per Fodor		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,700.0	2.43	252.01	3,519.1	-308.2	-948.9	997.7	3.00	-3.00	0.00
3,780.9	0.00	0.00	3,600.0	-308.7	-950.5	999.4	3.00	-3.00	0.00
Intermediate - Hudson #5M ICP									
3,800.0	0.00	0.00	3,619.1	-308.7	-950.5	999.4	0.00	0.00	0.00
3,900.0	0.00	0.00	3,719.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,000.0	0.00	0.00	3,819.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,031.9	0.00	0.00	3,851.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Chacra									
4,100.0	0.00	0.00	3,919.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,200.0	0.00	0.00	4,019.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,300.0	0.00	0.00	4,119.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,400.0	0.00	0.00	4,219.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,418.9	0.00	0.00	4,238.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Upper Cliff House									
4,500.0	0.00	0.00	4,319.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,600.0	0.00	0.00	4,419.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,663.9	0.00	0.00	4,483.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Mass. Cliffhouse									
4,700.0	0.00	0.00	4,519.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,765.9	0.00	0.00	4,585.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Menefee									
4,800.0	0.00	0.00	4,619.1	-308.7	-950.5	999.4	0.00	0.00	0.00
4,900.0	0.00	0.00	4,719.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,819.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,100.0	0.00	0.00	4,919.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,185.9	0.00	0.00	5,005.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Point Lookout									
5,200.0	0.00	0.00	5,019.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,119.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,219.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,487.9	0.00	0.00	5,307.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Mancos									
5,500.0	0.00	0.00	5,319.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,419.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,519.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,619.1	-308.7	-950.5	999.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,719.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,819.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,100.0	0.00	0.00	5,919.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,019.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,119.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,219.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,471.9	0.00	0.00	6,291.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Upper Gallup									
6,500.0	0.00	0.00	6,319.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,419.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,519.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,619.1	-308.7	-950.5	999.4	0.00	0.00	0.00
6,900.0	0.00	0.00	6,719.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,819.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,100.0	0.00	0.00	6,919.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,189.9	0.00	0.00	7,009.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Greenhorn									

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Planning Report

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Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6025.0usft (Original Well Elev)
Site:	Other Named Wells	North Reference:	Grid
Well:	Hudson #5M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	New Plan #1 per Fodor		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,200.0	0.00	0.00	7,019.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,241.9	0.00	0.00	7,061.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Graneros									
7,299.9	0.00	0.00	7,119.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Two Wells									
7,300.0	0.00	0.00	7,119.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,391.9	0.00	0.00	7,211.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Paguate									
7,400.0	0.00	0.00	7,219.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,417.9	0.00	0.00	7,237.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Upper Cubero									
7,426.9	0.00	0.00	7,246.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Lower Cubero									
7,500.0	0.00	0.00	7,319.1	-308.7	-950.5	999.4	0.00	0.00	0.00
7,507.9	0.00	0.00	7,327.0	-308.7	-950.5	999.4	0.00	0.00	0.00
Encinal - Production - Hudson #5M PCP									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Hudson #5M ICP	0.00	0.05	3,600.0	-308.7	-950.5	2,147,771.53	477,002.16	36° 54' 8.881 N	107° 54' 43.159 W
- plan hits target center									
- Circle (radius 50.0)									
Hudson #5M PCP	0.00	0.05	7,327.0	-308.7	-950.5	2,147,771.49	477,002.12	36° 54' 8.881 N	107° 54' 43.160 W
- plan misses target center by 0.1usft at 7507.9usft MD (7327.0 TVD, -308.7 N, -950.5 E)									
- Circle (radius 50.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
200.0	200.0	Surface	9-5/8	12-1/4	
3,780.9	3,600.0	Intermediate	7	8-3/4	
7,507.9	7,327.0	Production	4-1/2	6-1/4	

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Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6025.0usft (Original Well Elev)
Site:	Other Named Wells	North Reference:	Grid
Well:	Hudson #5M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	New Plan #1 per Fodor		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,418.9	4,238.0	Upper Cliff House		0.00		
4,031.9	3,851.0	Chacra		0.00		
7,507.9	7,327.0	Encinal		0.00		
3,645.8	3,465.0	Huerfanito Bentonite		0.00		
4,663.9	4,483.0	Mass. Cliffhouse		0.00		
7,299.9	7,119.0	Two Wells		0.00		
2,263.3	2,166.0	Fruitland		0.00		
7,391.9	7,211.0	Paguate		0.00		
4,765.9	4,585.0	Menefee		0.00		
7,426.9	7,246.0	Lower Cubero		0.00		
6,471.9	6,291.0	Upper Gallup		0.00		
3,067.4	2,903.0	Lewis		0.00		
1,314.9	1,295.0	Ojo Alamo		0.00		
7,189.9	7,009.0	Greenhorn		0.00		
2,945.8	2,791.0	Pictured Cliffs		0.00		
5,185.9	5,005.0	Point Lookout		0.00		
1,376.8	1,353.0	Kirtland		0.00		
5,487.9	5,307.0	Mancos		0.00		
7,417.9	7,237.0	Upper Cubero		0.00		
7,241.9	7,061.0	Graneros		0.00		