



Scientific Drilling
Directional Drilling Operations

ConocoPhillips

SAN JUAN BASIN
SEC 17-T29N-R5W
SJ 29-6 #4B
ST00BP00

38-039-30127

Surface 1220/N 880/W

BHL 504:/N 399/W

Survey: SDI MWD

IMD 3721

ITV 3581

Standard Survey Report

09 July, 2007

ConocoPhillips

Company:	ConocoPhillips	Local Co-ordinate Reference:	Well SJ 29-6 #4B
Project:	SAN JUAN BASIN	TVD Reference:	RKB @ 6431.0ft (Aztec Rig 673)
Site:	SEC 17-T29N-R5W	MD Reference:	RKB @ 6431.0ft (Aztec Rig 673)
Well:	SJ 29-6 #4B	North Reference:	Grid
Wellbore:	ST00BP00	Survey Calculation Method:	Minimum Curvature
Design:	Survey	Database:	EDM 2003.16 Single User Db

Project	SAN JUAN BASIN, NEW MEXICO		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		Using Well Reference Point
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site	SEC 17-T29N-R5W				
Site Position:		Northing:	2,085,004.23ft	Latitude:	36° 43' 46.524 N
From:	Lat/Long	Easting:	599,926.91ft	Longitude:	107° 29' 32.424 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.20 °

Well	SJ 29-6 #4B					
Well Position	+N/-S	0.0 ft	Northing:	2,085,004.23 ft	Latitude:	36° 43' 46.524 N
	+E/-W	0.0 ft	Easting:	599,926.91 ft	Longitude:	107° 29' 32.424 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,416.0 ft

Wellbore	ST00BP00				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	BGGM2006	3/16/2007	10.34	63.64	51,206

Design	Survey				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	326.31	

Survey Program	Date 7/9/2007			
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
400.0	3,721.0	SDI MWD (ST00BP00)	MWD SDI	MWD - Standard ver 1.0.1

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)	
338.0	1.11	293.46	338.0	0.1	-0.3	0.3	0.00	0.00	0.00	
400.0	1.72	322.46	400.0	1.1	-1.5	1.7	1.49	0.98	46.77	
461.0	2.62	329.48	460.9	3.1	-2.7	4.1	1.54	1.48	11.51	
523.0	4.47	332.89	522.8	6.4	-4.5	7.9	3.00	2.98	5.50	
583.0	5.82	334.82	582.6	11.3	-6.9	13.2	2.27	2.25	3.22	
645.0	6.97	335.43	644.2	17.5	-9.8	20.0	1.86	1.85	0.98	
707.0	8.14	328.18	705.6	24.7	-13.7	28.1	2.43	1.89	-11.69	
769.0	9.08	326.21	766.9	32.5	-18.7	37.4	1.59	1.52	-3.18	
829.0	9.10	326.03	826.2	40.3	-24.0	46.9	0.06	0.03	-0.30	
892.0	9.59	325.50	888.4	48.8	-29.8	57.1	0.79	0.78	-0.84	
955.0	11.18	325.17	950.3	58.1	-36.2	68.5	2.53	2.52	-0.52	
1,018.0	12.68	325.94	1,012.0	68.9	-43.6	81.5	2.39	2.38	1.22	
1,081.0	14.14	327.19	1,073.2	81.1	-51.6	96.1	2.36	2.32	1.98	

Company: ConocoPhillips
Project: SAN JUAN BASIN
Site: SEC 17-T29N-R5W
Well: SJ 29-6 #4B
Wellbore: ST00BP00
Design: Survey

Local Co-ordinate Reference: Well SJ 29-6 #4B
TVD Reference: RKB @ 6431.0ft (Aztec Rig 673)
MD Reference: RKB @ 6431.0ft (Aztec Rig 673)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

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)
1,143.0	15.89	327.65	1,133.1	94.6	-60.3	112.2	2.83	2.82	0.74
1,206.0	17.75	327.91	1,193.4	110.0	-70.0	130.4	2.95	2.95	0.41
1,268.0	19.29	326.05	1,252.2	126.5	-80.7	150.1	2.66	2.48	-3.00
1,331.0	20.66	325.56	1,311.4	144.3	-92.8	171.6	2.19	2.17	-0.78
1,395.0	21.15	325.88	1,371.2	163.2	-105.7	194.4	0.79	0.77	0.50
1,458.0	21.03	324.68	1,430.0	181.8	-118.6	217.1	0.71	-0.19	-1.90
1,520.0	21.10	325.01	1,487.8	200.1	-131.4	239.4	0.22	0.11	0.53
1,584.0	21.00	325.20	1,547.6	218.9	-144.6	262.3	0.19	-0.16	0.30
1,648.0	21.11	325.61	1,607.3	237.8	-157.6	285.3	0.29	0.17	0.64
1,712.0	20.96	325.74	1,667.0	256.8	-170.6	308.3	0.25	-0.23	0.20
1,775.0	21.26	327.32	1,725.8	275.7	-183.1	331.0	1.02	0.48	2.51
1,838.0	21.95	329.43	1,784.4	295.5	-195.3	354.2	1.65	1.10	3.35
1,901.0	21.79	329.50	1,842.9	315.7	-207.2	377.6	0.26	-0.25	0.11
1,965.0	21.97	328.68	1,902.2	336.2	-219.4	401.4	0.55	0.28	-1.28
2,028.0	22.37	328.17	1,960.6	356.4	-231.9	425.2	0.70	0.63	-0.81
2,090.0	22.12	325.05	2,018.0	376.0	-244.8	448.6	1.95	-0.40	-5.03
2,154.0	21.89	324.39	2,077.3	395.6	-258.6	472.6	0.53	-0.36	-1.03
2,215.0	21.36	323.61	2,134.0	413.8	-271.9	495.1	0.99	-0.87	-1.28
2,279.0	21.20	323.68	2,193.7	432.5	-285.6	518.3	0.25	-0.25	0.11
2,341.0	20.75	323.16	2,251.5	450.3	-298.8	540.4	0.79	-0.73	-0.84
2,404.0	20.47	325.84	2,310.5	468.4	-311.7	562.6	1.56	-0.44	4.25
2,467.0	21.18	328.80	2,369.4	487.2	-323.8	585.0	2.01	1.13	4.70
2,528.0	22.13	330.09	2,426.1	506.6	-335.2	607.5	1.74	1.56	2.11
2,591.0	22.79	328.81	2,484.3	527.3	-347.5	631.5	1.30	1.05	-2.03
2,655.0	23.23	325.23	2,543.2	548.3	-361.1	656.5	2.29	0.69	-5.59
2,718.0	21.91	324.64	2,601.4	568.1	-375.0	680.7	2.13	-2.10	-0.94
2,781.0	20.81	324.23	2,660.1	586.7	-388.3	703.6	1.76	-1.75	-0.65
2,843.0	19.39	324.36	2,718.3	604.0	-400.8	724.9	2.29	-2.29	0.21
2,906.0	17.86	325.10	2,778.0	620.5	-412.4	745.0	2.46	-2.43	1.17
2,969.0	16.31	324.65	2,838.2	635.6	-423.0	763.5	2.47	-2.46	-0.71
3,032.0	14.56	324.03	2,898.9	649.2	-432.8	780.3	2.79	-2.78	-0.98
3,094.0	13.37	324.64	2,959.1	661.4	-441.5	795.2	1.93	-1.92	0.98
3,157.0	12.07	327.07	3,020.6	672.9	-449.3	809.1	2.23	-2.06	3.86
3,220.0	9.29	326.22	3,082.5	682.6	-455.7	820.8	4.42	-4.41	-1.35
3,282.0	8.00	323.70	3,143.8	690.3	-461.1	830.1	2.17	-2.08	-4.06
3,344.0	6.33	321.45	3,205.3	696.4	-465.8	837.8	2.73	-2.69	-3.63
3,406.0	4.73	322.17	3,267.0	701.1	-469.5	843.8	2.58	-2.58	1.16
3,470.0	4.16	323.03	3,330.8	705.0	-472.5	848.7	0.90	-0.89	1.34
3,534.0	4.16	323.17	3,394.6	708.7	-475.3	853.3	0.02	0.00	0.22
3,597.0	3.06	321.96	3,457.5	711.9	-477.7	857.3	1.75	-1.75	-1.92
3,660.0	2.64	312.83	3,520.4	714.2	-479.8	860.4	0.98	-0.67	-14.49
3,721.0	1.66	319.99	3,581.4	715.8	-481.4	862.6	1.66	-1.61	11.74



Scientific Drilling Survey Report



Company:	ConocoPhillips	Local Co-ordinate Reference:	Well SJ 29-6 #4B
Project:	SAN JUAN BASIN	TVD Reference:	RKB @ 6431.0ft (Aztec Rig 673)
Site:	SEC 17-T29N-R5W	MD Reference:	RKB @ 6431.0ft (Aztec Rig 673)
Well:	SJ 29-6 #4B	North Reference:	Grid
Wellbore:	ST00BP00	Survey Calculation Method:	Minimum Curvature
Design:	Survey	Database:	EDM 2003.16 Single User Db

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
SJ 29-6 #4B - PCP	0.00	0.00	5,792.0	720.1	-480.0	2,085,724.23	599,446.91	36° 43' 53.661 N	107° 29' 38.289 W
- survey misses by 2210.6ft at 3721.0ft MD (3581.4 TVD, 715.8 N, -481.4 E)									
- Circle (radius 100.0)									
SJ 29-6 #4B - ICP	0.00	0.00	3,612.0	720.1	-480.0	2,085,724.23	599,446.91	36° 43' 53.661 N	107° 29' 38.289 W
- survey misses by 31.0ft at 3721.0ft MD (3581.4 TVD, 715.8 N, -481.4 E)									
- Point									

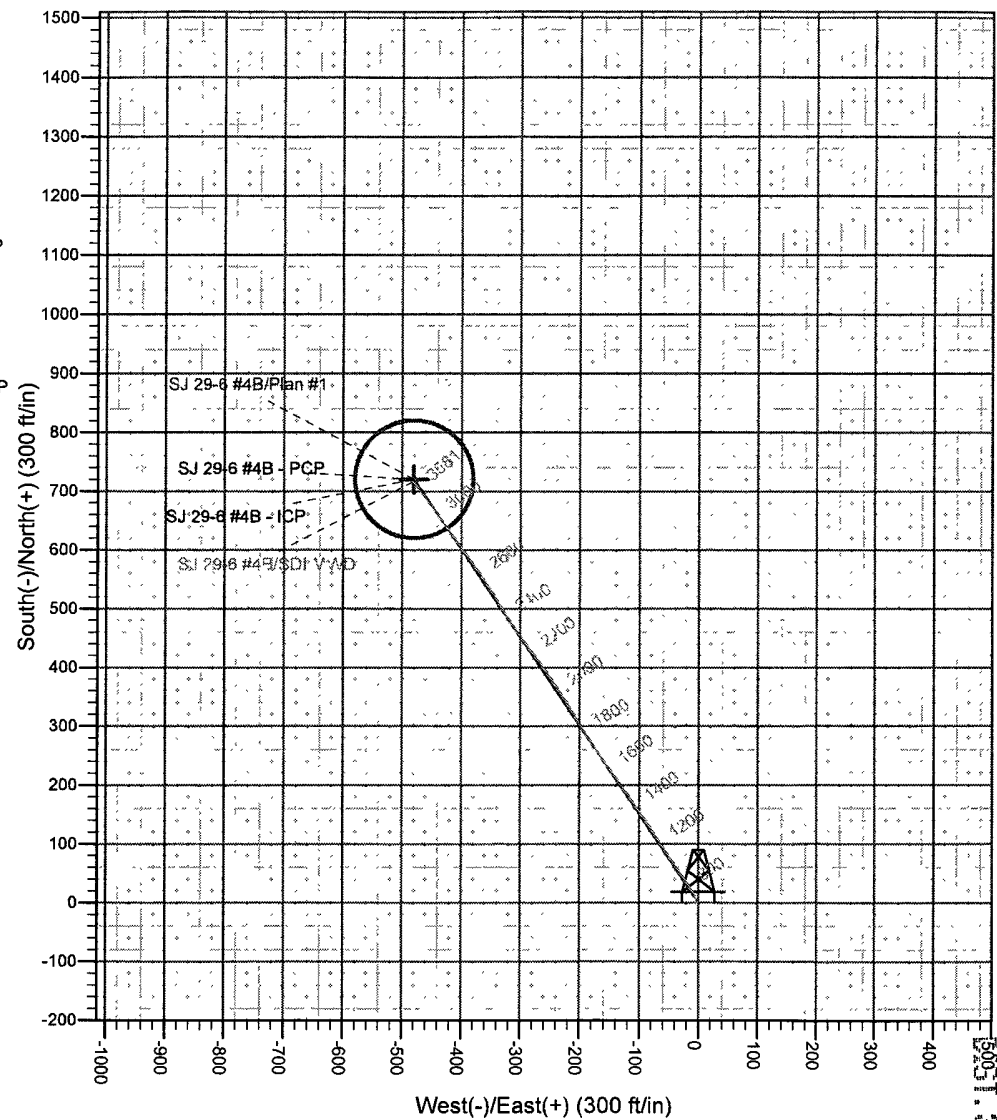
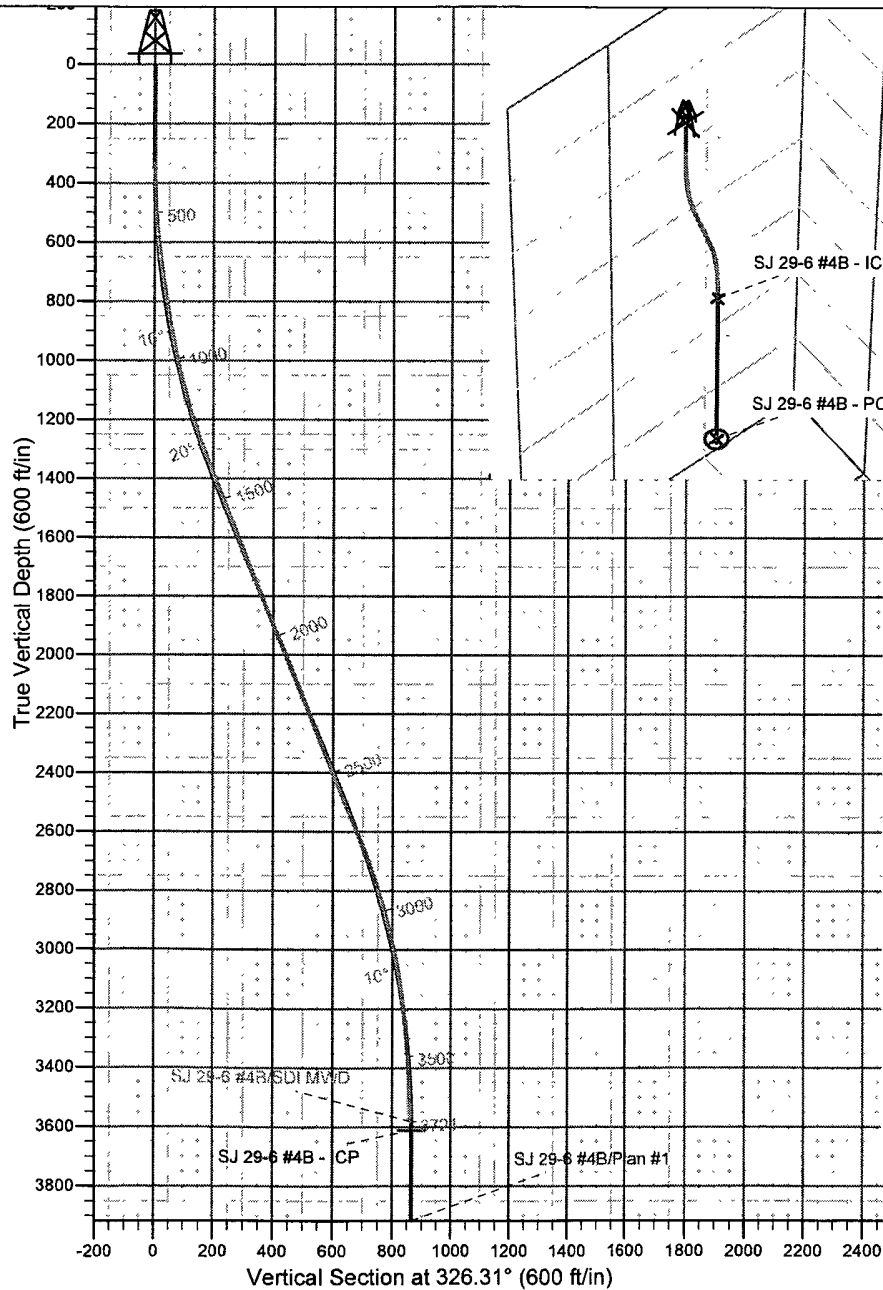
Checked By: _____	Approved By: _____	Date: _____
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Scientific Drilling
Directional Drilling Operations

Project: SAN JUAN BASIN
Site: SEC 17-T29N-R5W
Well: SJ 29-6 #4B R6W
Wellbore: ST00BP00
Design: Survey

ConocoPhillips



WELL DETAILS: SJ 29-6 #4B
RKB @ 6431.0ft (Aztec Rig 673)
Ground Level: 6416.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	2085004.23	599926.91	36° 43' 46.524 N	107° 29' 32.424 W	

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M. PONS, INC.