



COP Deviation Report

SAN JUAN 28-6 UNIT #466S

Operator BURLINGTON RESOURCES OIL & GAS COMPANY LP	Legal WellName SAN JUAN 28-6 UNIT #466S	API / UWI 3003930881	County RIO ARRIBA	State/Province NEW MEXICO
Surface Legal Location 034-028N-006W-J	N/S Dist (ft) 2,102.00	N/S Ref FSL	E/W Dist (ft) 2,075.00	E/W Ref FEL

Survey Data					
Date	MD (ftKB)	Incl (°)	Method	Survey Company	
1/26/2011	129.00	0.50	Inc-Drop	MO-TE DRILLING INC	
1/26/2011	238.00	1.00	Inc-Drop	MO-TE DRILLING INC	
2/24/2011	304.00	0.64	IncAzi-MWD	Scientific Drilling	
2/24/2011	365.00	0.59	IncAzi-MWD	Scientific Drilling	
2/24/2011	426.00	0.48	IncAzi-MWD	Scientific Drilling	
2/24/2011	488.00	0.41	IncAzi-MWD	Scientific Drilling	
2/24/2011	549.00	0.38	IncAzi-MWD	Scientific Drilling	
2/24/2011	611.00	0.55	IncAzi-MWD	Scientific Drilling	
2/24/2011	672.00	0.47	IncAzi-MWD	Scientific Drilling	
2/24/2011	734.00	0.41	IncAzi-MWD	Scientific Drilling	
2/24/2011	796.00	0.47	IncAzi-MWD	Scientific Drilling	
2/24/2011	857.00	0.40	IncAzi-MWD	Scientific Drilling	
2/24/2011	918.00	0.55	IncAzi-MWD	Scientific Drilling	
2/24/2011	984.00	0.59	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,047.00	0.58	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,143.00	0.38	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,206.00	0.14	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,270.00	0.17	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,333.00	0.20	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,365.00	0.47	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,429.00	0.14	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,492.00	0.18	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,556.00	0.53	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,619.00	2.02	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,683.00	3.66	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,746.00	5.28	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,810.00	6.41	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,873.00	7.55	IncAzi-MWD	Scientific Drilling	
2/24/2011	1,937.00	8.81	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,000.00	10.07	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,064.00	10.79	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,127.00	11.36	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,191.00	11.49	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,254.00	12.03	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,318.00	12.48	IncAzi-MWD	Scientific Drilling	

I, the undersigned, certify that I acting in my capacity as _____ for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

Subscribed and sworn to me this _____

Notary Public in and for San Juan County, New Mexico

My Commission expires _____

COP Deviation Report
SAN JUAN 28-6 UNIT #466S

Survey Data					
Date	MD (ftKB)	Incl (°)	Method	Survey Company	
2/24/2011	2,381.00	11.88	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,445.00	11.93	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,509.00	12.53	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,572.00	11.98	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,636.00	10.22	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,699.00	8.33	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,763.00	6.48	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,826.00	4.65	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,890.00	3.76	IncAzi-MWD	Scientific Drilling	
2/24/2011	2,953.00	3.55	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,017.00	3.20	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,080.00	3.18	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,144.00	3.01	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,207.00	2.64	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,271.00	2.02	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,334.00	1.77	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,398.00	1.19	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,461.00	0.91	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,525.00	1.01	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,588.00	1.27	IncAzi-MWD	Scientific Drilling	
2/24/2011	3,638.00	1.25	IncAzi-MWD	Scientific Drilling	



I, the undersigned, certify that I acting in my capacity as Drilling Engineer for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

[Signature]

Subscribed and sworn to me this 4/6/11

[Signature]

Notary Public in and for San Juan County, New Mexico

My Commission expires 2/8/12



ConocoPhillips

SJB (NM Central)
SEC 34-T28N-R6W
SJ 28-6 #466S
API# 30-039-30881
Original Hole

API - 30-039-30881

Survey: Actual



Standard Survey Report

02 March, 2011

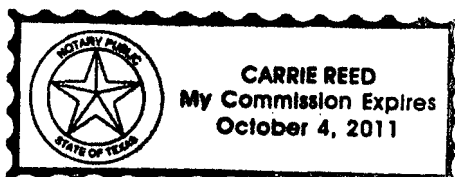
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 2nd of March, 2011.

[Signature]

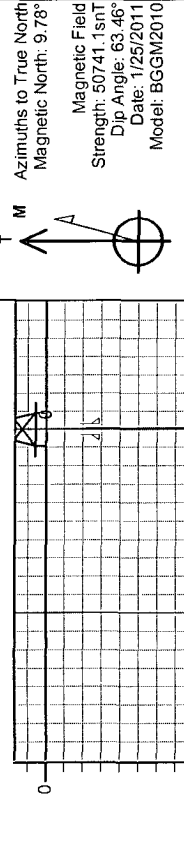
Notary Signature
County of Midland
State of Texas



Scientific Drilling
Directional Drilling Operations

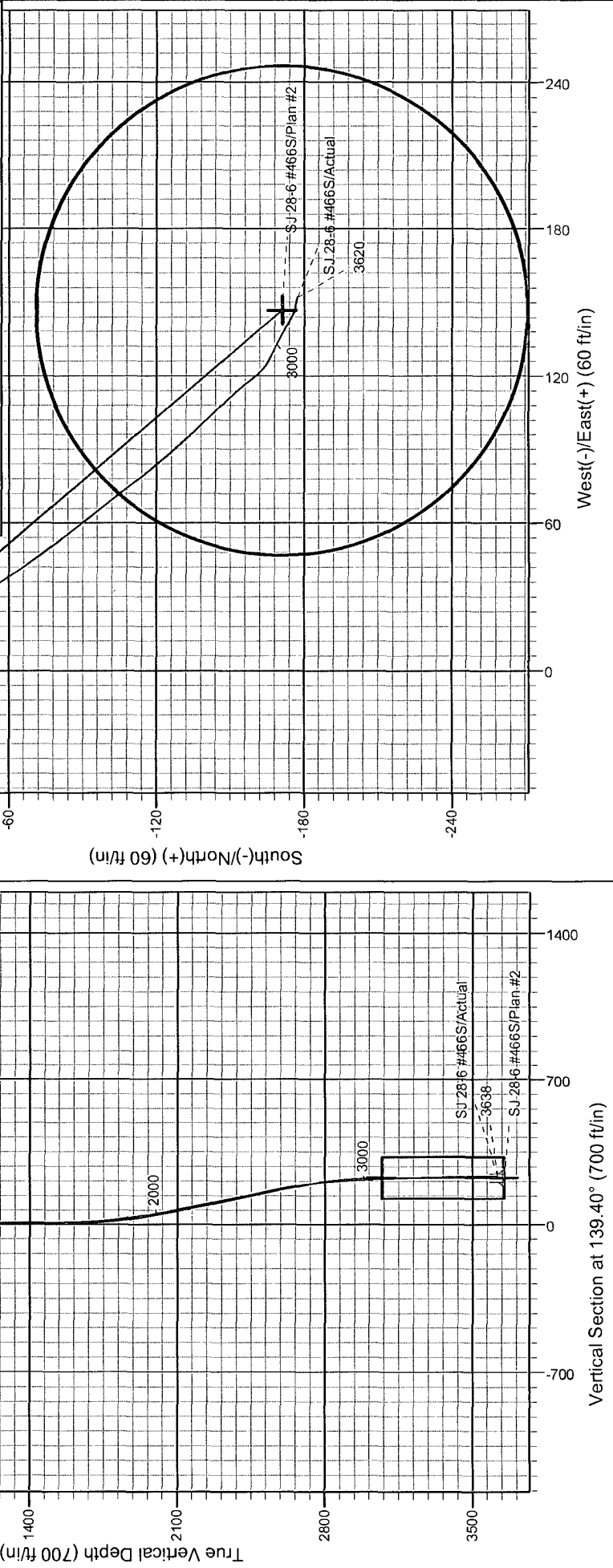


Project: SJB (NM Central)
Site: SEC 34-T28N-R6W
Well: SJ 28-6 #466S
Wellbore: Original Hole
Design: Plan #2



WELL DETAILS: SJ 28-6 #466S
AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Ground Level: 6671.0
Easting: 147261.15
Northing: 2045688.57
+E/-W: 0.0
+N/-S: 0.0
Latitude: 36° 36' 58.001 N
Longitude: 107° 27' 6.934 W
Slope: 0.0

REFERENCE INFORMATION
Co-ordinate (N/E) Reference: Site SEC 34-T28N-R6W, True North
Vertical (TVD) Reference: AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Calculation Method: Minimum Curvature



COMPANY DETAILS: ConocoPhillips
Calculation Method: Minimum Curvature
Error System: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Combined Covariances
Warning Method: Risk Ratio

PROJECT DETAILS: SJB (NM Central)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico Central 3002
System Datum: Mean Sea Level

SITE DETAILS: SEC 34-T28N-R6W
Rio Arriba County NM
Site Centre Latitude: 36° 36' 58.001 N
Longitude: 107° 27' 6.934 W
Positional Uncertainty: 7.5
Convergence: -0.72
Local North: True

Company:	ConocoPhillips	Local Co-ordinate Reference:	Site SEC 34-T28N-R6W
Project:	SJB (NM Central)	TVD Reference:	AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Site:	SEC 34-T28N-R6W	MD Reference:	AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Well:	SJ 28-6 #466S	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	edmCOP

Project	SJB (NM Central), New Mexico, S-Type MV/DK Wells		
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 Central 3002		Using geodetic scale factor

Site	SEC 34-T28N-R6W		
Site Position:		Northing:	2,045,688.57 ft
From:	Lat/Long	Easting:	147,261.15 ft
Position Uncertainty:	15.0 ft	Slot Radius:	6-1/8"
		Latitude:	36° 36' 58.001 N
		Longitude:	107° 27' 6.934 W
		Grid Convergence:	-0.72 °

Well	SJ 28-6 #466S, FC S-Type Well		
Well Position	+N/-S	0.0 ft	Northing: 2,045,688.57 ft
	+E/-W	0.0 ft	Easting: 147,261.15 ft
Position Uncertainty		3.5 ft	Wellhead Elevation: ft
			Ground Level: 6,671.0 ft

Wellbore	Original Hole		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	1/25/2011	9.78	63.46	50,741

Design	Original Hole		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.0	0.0	0.0
			Direction (°)
			139.40

Survey Program	Date 3/2/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
304.0	3,638.0	Actual (Original Hole)	MWD SDI
			Description
			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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
304.0	0.64	158.56	304.0	-1.6	0.6	1.6	0.21	0.21	0.00
365.0	0.59	171.89	365.0	-2.2	0.8	2.2	0.25	-0.08	21.85
426.0	0.48	183.93	426.0	-2.8	0.8	2.6	0.26	-0.18	19.74
488.0	0.41	183.93	488.0	-3.3	0.8	3.0	0.11	-0.11	0.00
549.0	0.38	196.79	549.0	-3.7	0.7	3.2	0.15	-0.05	21.08
611.0	0.55	218.59	611.0	-4.1	0.5	3.4	0.39	0.27	35.16
672.0	0.47	228.07	672.0	-4.5	0.1	3.5	0.19	-0.13	15.54
734.0	0.41	219.06	734.0	-4.8	-0.2	3.5	0.15	-0.10	-14.53
796.0	0.47	180.89	796.0	-5.3	-0.4	3.7	0.47	0.10	-61.56
857.0	0.40	180.42	857.0	-5.7	-0.4	4.1	0.11	-0.11	-0.77
918.0	0.55	172.64	918.0	-6.2	-0.3	4.5	0.27	0.25	-12.75
984.0	0.59	154.62	984.0	-6.8	-0.2	5.1	0.28	0.06	-27.30

Company:	ConocoPhillips	Local Co-ordinate Reference:	Site SEC 34-T28N-R6W
Project:	SJB (NM Central)	TVD Reference:	AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Site:	SEC 34-T28N-R6W	MD Reference:	AWS 711 @ 6686.0ft (15' DF + 6671' GL)
Well:	SJ 28-6 #466S	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	edmCOP

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)
1,047.0	0.58	159.15	1,047.0	-7.4	0.1	5.7	0.08	-0.02	7.19
1,143.0	0.38	166.00	1,143.0	-8.2	0.3	6.4	0.22	-0.21	7.14
1,206.0	0.14	124.04	1,206.0	-8.4	0.5	6.7	0.46	-0.38	-66.60
1,270.0	0.17	103.53	1,270.0	-8.5	0.6	6.9	0.10	0.05	-32.05
1,333.0	0.20	126.14	1,333.0	-8.6	0.8	7.0	0.12	0.05	35.89
1,365.0	0.47	134.48	1,365.0	-8.7	0.9	7.2	0.86	0.84	26.06
1,429.0	0.14	233.13	1,429.0	-9.0	1.1	7.5	0.80	-0.52	154.14
1,492.0	0.18	231.62	1,492.0	-9.1	0.9	7.5	0.06	0.06	-2.40
1,556.0	0.53	135.77	1,556.0	-9.3	1.0	7.8	0.90	0.55	-149.77
1,619.0	2.02	140.46	1,618.9	-10.4	2.0	9.2	2.37	2.37	7.44
1,683.0	3.66	135.30	1,682.9	-12.7	4.1	12.3	2.59	2.56	-8.06
1,746.0	5.28	133.35	1,745.7	-16.1	7.6	17.2	2.58	2.57	-3.10
1,810.0	6.41	145.38	1,809.3	-21.1	11.8	23.7	2.60	1.77	18.80
1,873.0	7.55	147.40	1,871.9	-27.5	16.0	31.3	1.85	1.81	3.21
1,937.0	8.81	145.80	1,935.2	-35.1	21.1	40.3	2.00	1.97	-2.50
2,000.0	10.07	146.27	1,997.4	-43.7	26.8	50.6	2.00	2.00	0.75
2,064.0	10.79	146.24	2,060.3	-53.3	33.3	62.1	1.13	1.13	-0.05
2,127.0	11.36	146.35	2,122.1	-63.4	40.0	74.1	0.91	0.90	0.17
2,191.0	11.49	142.74	2,184.9	-73.7	47.3	86.7	1.14	0.20	-5.64
2,254.0	12.03	142.27	2,246.5	-83.9	55.1	99.6	0.87	0.86	-0.75
2,318.0	12.48	142.02	2,309.1	-94.6	63.5	113.1	0.71	0.70	-0.39
2,381.0	11.88	141.79	2,370.7	-105.1	71.7	126.4	0.96	-0.95	-0.37
2,445.0	11.93	141.82	2,433.3	-115.4	79.8	139.6	0.08	0.08	0.05
2,509.0	12.53	138.87	2,495.8	-125.9	88.5	153.2	1.35	0.94	-4.61
2,572.0	11.98	136.40	2,557.4	-135.7	97.5	166.5	1.21	-0.87	-3.92
2,636.0	10.22	135.41	2,620.2	-144.6	106.1	178.8	2.77	-2.75	-1.55
2,699.0	8.33	138.14	2,682.4	-152.0	113.0	189.0	3.08	-3.00	4.33
2,763.0	6.48	142.62	2,745.8	-158.3	118.3	197.2	3.03	-2.89	7.00
2,826.0	4.65	134.16	2,808.5	-162.9	122.3	203.3	3.18	-2.90	-13.43
2,890.0	3.76	116.73	2,872.4	-165.7	126.1	207.8	2.42	-1.39	-27.23
2,953.0	3.55	117.29	2,935.2	-167.5	129.6	211.5	0.34	-0.33	0.89
3,017.0	3.20	114.61	2,999.1	-169.1	133.0	215.0	0.60	-0.55	-4.19
3,080.0	3.18	118.77	3,062.0	-170.7	136.1	218.2	0.37	-0.03	6.60
3,144.0	3.01	121.74	3,125.9	-172.4	139.1	221.5	0.37	-0.27	4.64
3,207.0	2.64	115.82	3,188.9	-173.9	141.8	224.4	0.75	-0.59	-9.40
3,271.0	2.02	120.14	3,252.8	-175.1	144.1	226.8	1.01	-0.97	6.75
3,334.0	1.77	112.40	3,315.8	-176.1	146.0	228.7	0.57	-0.40	-12.29
3,398.0	1.19	92.43	3,379.8	-176.5	147.6	230.0	1.20	-0.91	-31.20
3,461.0	0.91	96.52	3,442.7	-176.6	148.7	230.9	0.46	-0.44	6.49
3,525.0	1.01	106.54	3,506.7	-176.8	149.8	231.7	0.30	0.16	15.66
3,588.0	1.27	102.38	3,569.7	-177.1	151.0	232.7	0.43	0.41	-6.60
3,638.0	1.25	107.62	3,619.7	-177.4	152.1	233.6	0.23	-0.04	10.48