ConocoPhillips

SJB (NM Central)
SEC 15-T28N-R6W
SJ 28-6 #122N
API 30-039-30790
Original Hole

Survey: Actual

Standard Survey Report

17 February, 2010

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

Notorized this date 19th of February, 2010.

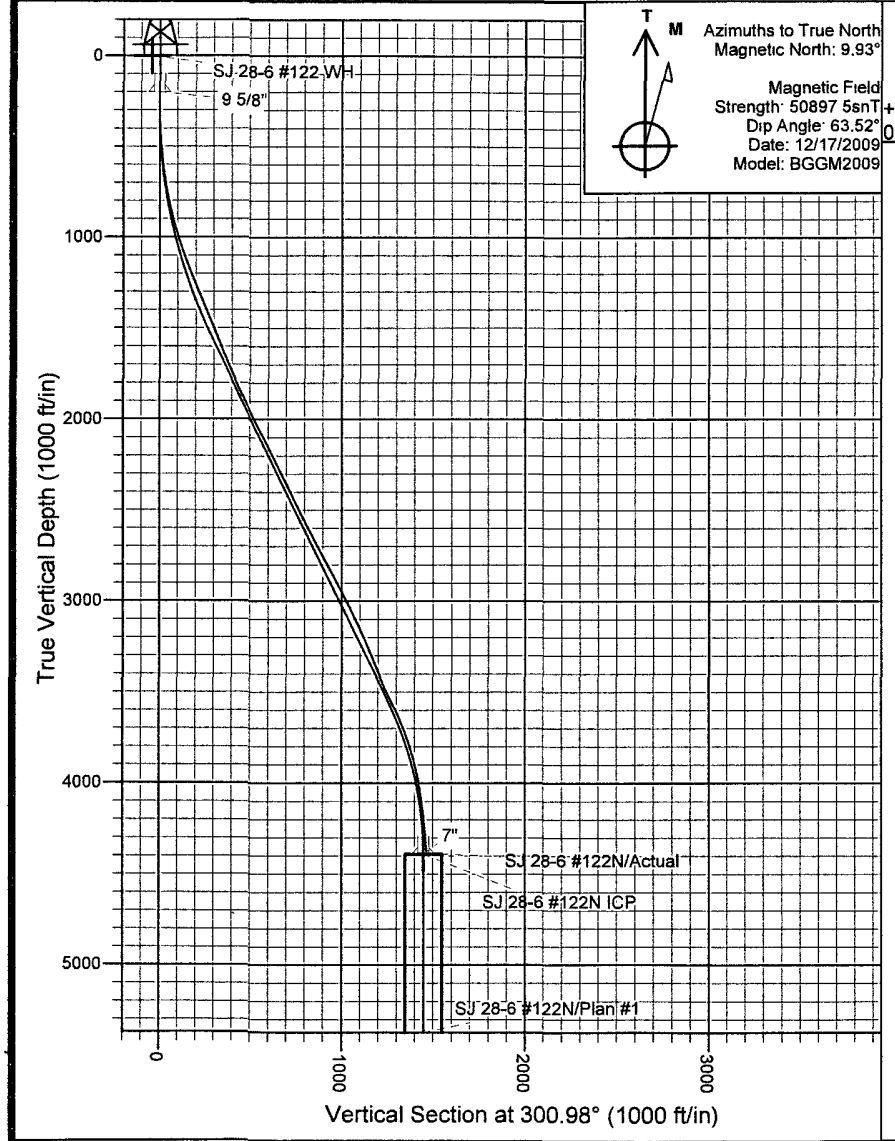
Notary Signature
County of Midland
State of Texas

NOTARY PUBLIC STATE OF TEXAS
CARRIE REED
My Commission Expires
October 4, 2011

Scientific Drilling
Directional Drilling Operations

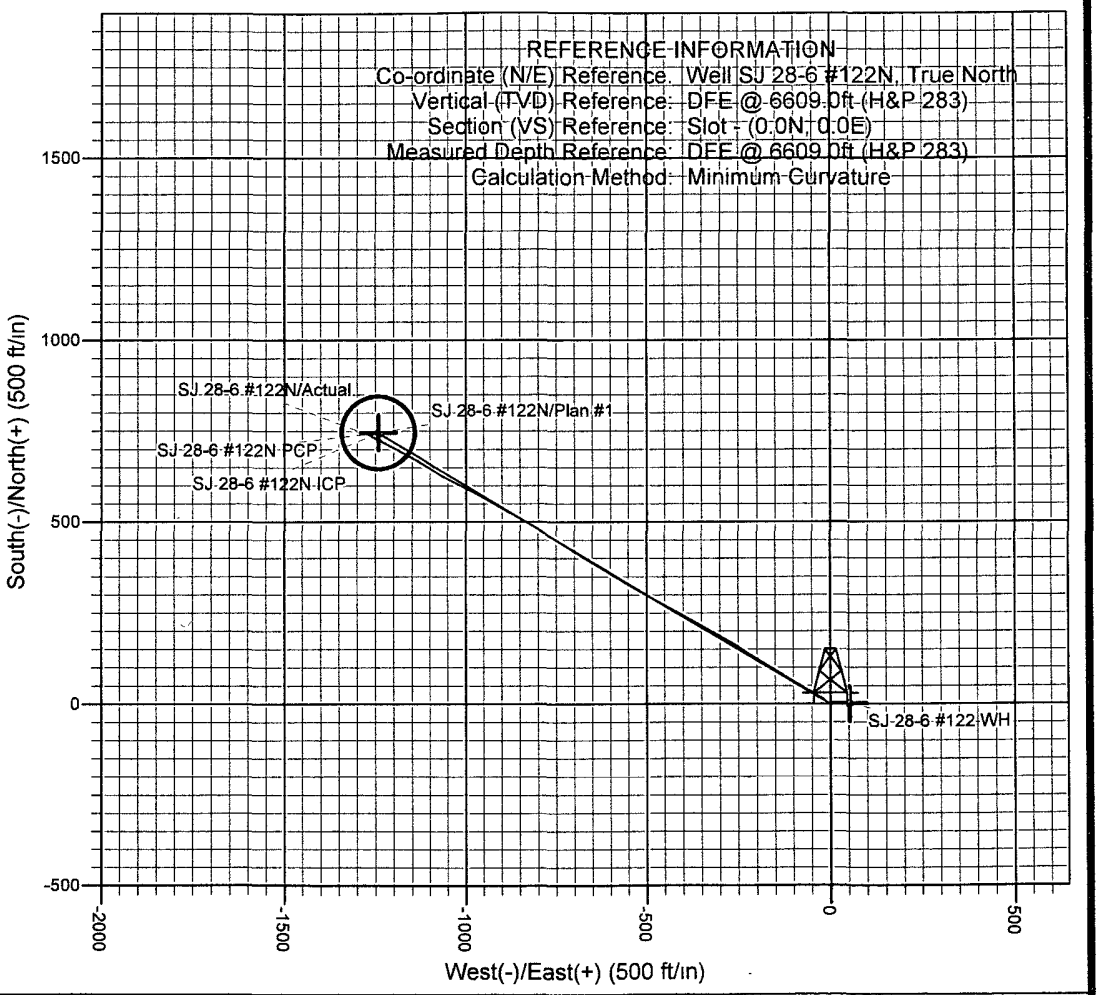
Project: SJB (NM Central)
Site: SEC 15-T28N-R6W
Well: SJ 28-6 #122N
Wellbore: Original Hole
Design: Plan #1

ConocoPhillips



WELL DETAILS: SJ 28-6 #122N
DFE @ 6609.0ft (H&P 283)
Ground Level: 6593.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	2061061.32	145772.87	36° 39' 29.808 N	107° 27' 27.558 W	



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 15-T28N-R6W
Rio Arriba County NM
Site Centre Latitude: 36° 39' 29.808 N
Longitude: 107° 27' 27.558 W
Positional Uncertainity: 0.0
Convergence: -0.72
Local North: True

Scientific Drilling International, Inc.

Survey Report

Company:	ConocoPhillips	**Local Co-ordinate Reference:**	Site SEC 15-T28N-R6W
Project:	SJB (NM Central)	**TVD Reference:**	DFE @ 6609 0ft (H&P 283)
Site:	SEC 15-T28N-R6W	**MD Reference:**	DFE @ 6609 0ft (H&P 283)
Well:	SJ 28-6 #122N	**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 15-T28N-R6W

Site Position:		**Northing:**	2,061,061.32 ft	**Latitude:**	36° 39' 29.808 N
From:	Lat/Long	**Easting:**	145,772 87 ft	**Longitude:**	107° 27' 27.558 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	6-1/8"	**Grid Convergence:**	-0.72 °

Well SJ 28-6 #122N, S-Type MV/DK Well

Well Position	**+N/-S**	0 0 ft	**Northing:**	2,061,061.32 ft	**Latitude:**	36° 39' 29.808 N
	+E/-W	0.0 ft	**Easting:**	145,772.87 ft	**Longitude:**	107° 27' 27.558 W
Position Uncertainty		3.5 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,593.0 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	12/17/2009	9 93	63.52	50,898

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)	Direction (°)
	0.0	0 0	0.0	300 26

Survey Program **Date** 2/17/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
240.0	4,681.0	Actual (Original Hole)	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)
0 0	0.00	0 00	0.0	0.0	0.0	0 0	0.00	0.00	0 00
240.0	0.24	249.12	240 0	-0 2	-0 5	0.3	0.10	0.10	0.00
271 0	0.81	305.16	271.0	-0.1	-0.7	0.6	2 27	1 84	180 77
301 0	0 59	326 98	301.0	0 2	-1.0	0.9	1 14	-0.73	72 73
332 0	1 18	321.41	332.0	0 6	-1 3	1.4	1.92	1.90	-17.97
363.0	1.92	297.81	363.0	1.1	-1.9	2 2	3.10	2.39	-76.13
393 0	2.55	302.51	393.0	1.6	-2.9	3.3	2.19	2 10	15.67
424 0	3.30	306.65	423 9	2.5	-4 2	4 9	2.51	2 42	13.35
455 0	3.60	305.09	454 9	3.6	-5 7	6.8	1 01	0.97	-5.03
485.0	4 16	302.70	484.8	4.8	-7 4	8.8	1 94	1.87	-7.97
515 0	4.69	305.15	514.7	6.1	-9.3	11.1	1.88	1.77	8 17
545.0	5.23	306 91	544 6	7 6	-11.4	13 7	1.87	1.80	5.87
576.0	5.93	307.58	575 4	9.4	-13 8	16.7	2.27	2.26	2.16

Scientific Drilling International, Inc.

Survey Report

Company:	ConocoPhillips	**Local Co-ordinate Reference:**	Site SEC 15-T28N-R6W
Project:	SJB (NM Central)	**TVD Reference:**	DFE @ 6609.0ft (H&P 283)
Site:	SEC 15-T28N-R6W	**MD Reference:**	DFE @ 6609.0ft (H&P 283)
Well:	SJ 28-6 #122N	**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)
607.0	6.85	304 91	606.3	11.4	-16.6	20 1	3.12	2 97	-8.61
638 0	7 53	304 71	637 0	13.7	-19 8	24 0	2.20	2 19	-0.65
669 0	8.37	302 92	667 7	16.0	-23 4	28 3	2.82	2.71	-5.77
699.0	9 12	302.65	697.4	18.5	-27.2	32 8	2.50	2 50	-0 90
729.0	9.94	302.69	726 9	21 2	-31.4	37.8	2.73	2.73	0.13
759 0	10.74	301.88	756.5	24 1	-35 9	43.2	2 71	2 67	-2 70
789.0	11.27	300.34	785.9	27 0	-40.8	48.9	2 02	1.77	-5 13
837.0	12.72	302.27	832.9	32 2	-49.4	58.9	3 13	3.02	4 02
882.0	13.73	301.20	876.7	37 6	-58.1	69.2	2 31	2 24	-2 38
927 0	14.89	300.76	920 3	43.4	-67 6	80 3	2.59	2 58	-0 98
972 0	16.08	301 00	963 6	49.5	-78 0	92.3	2.65	2.64	0 53
1,017 0	17 24	302.38	1,006.7	56 3	-88 9	105.2	2.72	2 58	3 07
1,062 0	17 95	301.24	1,049 6	63.5	-100 5	118 8	1.75	1.58	-2.53
1,107 0	19.48	300.74	1,092 3	70.9	-112.9	133.2	3.42	3.40	-1.11
1,152 0	20 49	301.49	1,134 5	78.9	-126 0	148.6	2.32	2.24	1 67
1,197 0	21 67	300 91	1,176 5	87.2	-139.9	164 8	2 66	2.62	-1.29
1,242 0	22.49	301 59	1,218.2	96.0	-154.3	181.7	1 91	1.82	1 51
1,287.0	22 36	301 48	1,259 8	105.0	-169.0	198.9	0.30	-0.29	-0.24
1,332 0	22.80	301.91	1,301.4	114.1	-183.7	216 1	1 04	0 98	0 96
1,377.0	22.43	302.63	1,342.9	123 3	-198.3	233.4	1 03	-0.82	1.60
1,422.0	22.79	303.31	1,384.5	132.7	-212.8	250.7	0 99	0.80	1.51
1,467 0	22.93	303.96	1,425.9	142.4	-227 4	268.2	0.64	0.31	1.44
1,512.0	23.02	302.87	1,467.4	152 1	-242 0	285 7	0.97	0 20	-2.42
1,557 0	22.05	301.59	1,508.9	161 3	-256 6	302.9	2 42	-2 16	-2.84
1,602 0	22.71	301 06	1,550 5	170 2	-271 3	320 1	1 53	1.47	-1.18
1,647 0	21.91	300 31	1,592 2	178 9	-285 9	337.1	1.89	-1 78	-1.67
1,692 0	22.10	299 15	1,633.9	187.3	-300 6	354 0	1.05	0 42	-2 58
1,737 0	22.77	299 63	1,675.5	195.7	-315.5	371 2	1.54	1.49	1 07
1,782.0	23 37	299 93	1,716.9	204.5	-330.9	388 8	1.36	1 33	0.67
1,827 0	24.34	300.54	1,758.0	213.6	-346.6	407.0	2 22	2.16	1 36
1,872 0	25 41	300 30	1,798 9	223.2	-362.9	425 9	2.39	2.38	-0.53
1,917.0	26.25	299 88	1,839 4	233.0	-379.9	445 5	1.91	1 87	-0.93
2,007 0	26.17	298 61	1,920.1	252.4	-414.5	485.3	0.63	-0.09	-1 41
2,097 0	25.99	298.86	2,000.9	271 5	-449.2	524.8	0.23	-0.20	0.28
2,142.0	26 18	299.14	2,041.4	281.1	-466 5	544.6	0 50	0.42	0.62
2,187 0	26 60	299.34	2,081 7	290.8	-484.0	564.6	0.95	0 93	0 44
2,232 0	26 14	298.69	2,122.0	300 5	-501.5	584.6	1.21	-1.02	-1.44
2,322.0	26 43	300.97	2,202.7	320 4	-536.0	624 4	1 17	0 32	2 53
2,412.0	26 35	299.90	2,283.3	340 6	-570.5	664.4	0.54	-0.09	-1.19
2,502.0	26 10	301.43	2,364 0	360.9	-604.7	704.2	0.80	-0 28	1 70
2,592.0	25 97	300 38	2,444.9	381 2	-638.6	743.7	0.53	-0.14	-1 17
2,682 0	25 52	302.29	2,526 0	401.5	-672 0	782.8	1.05	-0 50	2.12
2,772 0	26.60	302 21	2,606.8	422 6	-705.5	822.3	1.20	1 20	-0.09
2,862 0	27.40	301.84	2,687 0	444 3	-740.1	863.1	0 91	0 89	-0 41
2,951 0	27 96	301.51	2,765.8	466.0	-775 3	904.5	0 65	0.63	-0.37
3,041.0	27.56	300 51	2,845 5	487.6	-811 2	946 4	0 68	-0.44	-1.11
3,131.0	27.47	300 01	2,925 3	508.5	-847 1	988 0	0.28	-0.10	-0.56
3,221.0	27.07	298.57	3,005 3	528.7	-883 1	1,029 2	0.86	-0 44	-1.60
3,311.0	25 27	300.53	3,086.1	548.3	-917.6	1,068.9	2.22	-2 00	2.18
3,401 0	23 94	298 77	3,167 9	566.8	-950.2	1,106.3	1.69	-1.48	-1.96
3,491 0	22 65	297.58	3,250.6	583.6	-981.5	1,141 9	1.53	-1.43	-1.32
3,581.0	22.63	296.74	3,333.6	599.4	-1,012.4	1,176.5	0 36	-0.02	-0.93
3,626 0	22 01	296.61	3,375.2	607.1	-1,027 6	1,193 6	1 38	-1.38	-0.29
3,671 0	22 26	297.12	3,416.9	614 8	-1,042 8	1,210.5	0 70	0.56	1.13

Scientific Drilling International, Inc.

Survey Report

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Project:	SJB (NM Central)	**TVD Reference:**	DFE @ 6609.0ft (H&P 283)
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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)
3,716 0	23 32	298.81	3,458.4	622.9	-1,058 2	1,227 9	2 77	2 36	3.76
3,761.0	24.76	300.12	3,499.5	632.0	-1,074 1	1,246.2	3 41	3 20	2 91
3,806.0	25.85	300.74	3,540.2	641 7	-1,090.7	1,265.5	2.49	2.42	1.38
3,851 0	25 84	300 60	3,580.7	651.7	-1,107.6	1,285 1	0.14	-0.02	-0 31
3,896 0	24 83	300 09	3,621 4	661.4	-1,124 2	1,304 3	2.30	-2 24	-1.13
3,941 0	22 84	299 56	3,662.5	670.5	-1,140.0	1,322.5	4.45	-4.42	-1.18
3,986 0	21 41	299.28	3,704 2	678.8	-1,154.7	1,339.5	3.19	-3.18	-0 62
4,031.0	19.37	299.70	3,746.4	686.5	-1,168 4	1,355 1	4.54	-4 53	0.93
4,076.0	17.61	298.15	3,789.1	693.4	-1,180 9	1,369.4	4.06	-3 91	-3.44
4,121 0	16.70	298.77	3,832 1	699.8	-1,192 5	1,382 7	2.06	-2.02	1.38
4,166 0	14.47	299.43	3,875.4	705 6	-1,203 1	1,394 8	4.97	-4.96	1.47
4,211.0	12.59	298.01	3,919.2	710.7	-1,212 3	1,405.3	4 24	-4.18	-3 16
4,256.0	11.66	298.67	3,963.2	715 2	-1,220.6	1,414.7	2.09	-2.07	1.47
4,301.0	10.13	297.32	4,007.3	719 2	-1,228.1	1,423.2	3.45	-3.40	-3 00
4,346.0	8.62	297 44	4,051.7	722.6	-1,234.6	1,430.5	3.36	-3.36	0 27
4,391 0	7.68	294 90	4,096.3	725.4	-1,240.4	1,436 9	2.24	-2 09	-5 64
4,436.0	7.11	299 26	4,140 9	728.0	-1,245 5	1,442 7	1.78	-1 27	9 69
4,481.0	6.46	298 47	4,185 6	730.6	-1,250.2	1,448 0	1.46	-1.44	-1.76
4,526.0	5.77	296.62	4,230.3	732.8	-1,254.4	1,452 8	1.59	-1.53	-4.11
4,571 0	4.60	299.48	4,275.2	734.7	-1,258.0	1,456 8	2.66	-2.60	6.36
4,616.0	4 11	299.55	4,320.0	736.4	-1,261 0	1,460.3	1.09	-1.09	0.16
4,661 0	3 96	290.27	4,364.9	737 7	-1,263 9	1,463.4	1 49	-0.33	-20 62
4,681.0	3.66	287.81	4,384.9	738 2	-1,265.1	1,464.7	1.71	-1.50	-12.30