

LEAM DRILLING SYSTEMS, INC.

Survey Report

30045-30581

Company: CONOCO, INC.	Date: 7/5/2002	Time: 10:24:04	Page: 1
Field: SAN JUAN COUNTY, NEW MEXICO	Co-ordinate(NE) Reference:	Site: NEWBERRY LS #2C, Grid North	
Site: NEWBERRY LS #2C	Vertical (TVD) Reference:	SITE 0.0	
Well: 2012D-CN	Section (VS) Reference:	Well (0.00N,0.00E,305.65Azi)	
Wellpath: ST1-SVY	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: ST1-SVY	Start Date: 3/20/2002
TIED OH-SVY @ 3300' MD, RUN BY GYRODATA	
Company:	Engineer:
Tool:	Tied-to: From: Definitive Path

Well: 2012D-CN	Slot Name:
Well Position: +N/-S 0.00 ft Northing: 2161230.76 ft	Latitude: 36 56 20.446 N
+E/-W 0.00 ft Easting : 2649573.10 ft	Longitude: 108 5 5.710 W
Position Uncertainty: 0.00 ft	

Survey

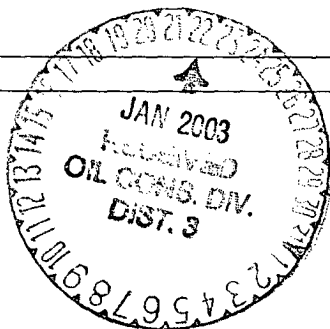
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ClsD ft	ClsA deg
3300.00	3.84	284.26	3298.43	-1.23	-63.11	50.57	0.00	0.00	0.00	63.12	268.88
3400.00	4.65	287.27	3398.16	0.80	-70.22	57.53	0.84	0.81	3.01	70.23	270.65
3469.00	4.81	44.76	3467.04	3.69	-70.86	59.73	11.72	0.23	170.28	70.96	272.98
3531.00	4.33	40.72	3528.84	7.31	-67.50	59.11	0.93	-0.77	-6.52	67.90	276.18
3573.00	4.00	38.78	3570.73	9.65	-65.55	58.89	0.85	-0.79	-4.62	66.26	278.38
3665.00	3.00	39.20	3662.56	14.02	-62.02	58.57	1.09	-1.09	0.46	63.58	282.74
3757.00	3.10	39.80	3754.43	17.80	-58.91	58.24	0.11	0.11	0.65	61.53	286.81
3852.00	2.20	29.30	3849.32	21.36	-56.37	58.25	1.07	-0.95	-11.05	60.28	290.75
3945.00	2.30	35.60	3942.25	24.43	-54.41	58.45	0.29	0.11	6.77	59.64	294.18
4038.00	2.10	24.70	4035.19	27.50	-52.61	58.78	0.50	-0.22	-11.72	59.36	297.60
4133.00	2.10	16.00	4130.12	30.75	-51.40	59.69	0.34	0.00	-9.16	59.90	300.89
4225.00	1.80	13.50	4222.07	33.78	-50.60	60.81	0.34	-0.33	-2.72	60.84	303.73
4256.00	1.70	10.10	4253.05	34.70	-50.41	61.19	0.46	-0.32	-10.97	61.20	304.55
4300.00	1.70	10.10	4297.03	35.99	-50.18	61.75	0.00	0.00	0.00	61.75	305.65

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD	TVD



Surface: 1500/S 1955/W
B/L 1536/S 1905/W