



DIRECTIONAL DRILLING CONTRACTORS, LLC.

Job Number: MID-DR-1021

Company: LOUIS DREYFUS NAT. GAS

Lease/Well: Saragossa '16' State #2

Location: Eddy County

Rig Name: Patterson #75

RKB: N/A

G.L. or M.S.L.: 3336'

State/Country: New Mexico / USA

Declination: 9.11512

Grid: True North

File name: C:\PROPOS~1\01030'S\01-033\ILDSAR2.SVY

Date/Time: 27-Apr-01 / 09:11

Curve Name: DDC As-Drilled Side-Track

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 238.40

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE Distance Direction FT Deg	
Tie-In Point										
9706.00	3.70	201.90	9704.70	-6368.70	46.24	.00	-53.30	-21.50	57.47	201.97
9778.00	4.10	220.80	9776.54	-6440.54	50.56	1.86	-57.40	-24.05	62.24	202.73
9811.00	5.70	226.30	9809.41	-6473.41	53.29	5.05	-59.43	-26.00	64.87	203.63
9904.00	20.10	226.90	9899.83	-6563.83	73.57	15.48	-73.61	-41.09	84.31	209.17
9999.00	21.70	230.60	9988.58	-6652.58	106.97	2.18	-95.92	-66.58	116.76	214.77
10093.00	23.80	237.00	10075.27	-6739.27	143.16	3.45	-117.28	-95.93	151.52	219.28
10188.00	30.00	237.80	10159.95	-6823.95	186.11	6.54	-140.40	-132.14	192.80	223.26
10283.00	35.50	241.80	10239.83	-6903.83	237.44	6.22	-166.12	-176.58	242.44	226.75
10377.00	44.60	248.10	10311.74	-6975.74	297.37	10.59	-191.39	-231.39	300.28	230.41
Strawn @ 10390' MD										
10390.00	46.94	248.20	10320.81	-6984.81	306.55	17.99	-194.85	-240.04	309.17	230.93
10471.00	61.50	248.70	10368.04	-7032.04	371.07	17.99	-218.90	-301.00	372.18	233.97
10503.00	63.90	248.40	10382.72	-7046.72	399.06	7.55	-229.30	-327.47	399.76	235.00
10534.00	64.10	248.40	10396.31	-7060.31	426.50	.65	-239.55	-353.37	426.92	235.87
10597.00	60.10	247.80	10425.78	-7089.78	481.37	6.40	-260.31	-405.02	481.46	237.27
10661.00	54.40	247.00	10460.39	-7124.39	534.51	8.97	-280.98	-454.70	534.51	238.29
10724.00	51.30	244.30	10498.44	-7162.44	584.30	5.99	-301.65	-500.44	584.33	238.92
10787.00	47.40	241.10	10539.47	-7203.47	631.94	7.29	-323.53	-542.92	632.01	239.21
10851.00	42.70	238.40	10584.68	-7248.68	677.20	7.93	-346.30	-582.05	677.28	239.25
10914.00	38.50	238.50	10632.50	-7296.50	718.19	6.67	-367.75	-616.98	718.26	239.20