

LEAM Drilling System

SURVEY REPORT

Company: LOUIS DREYFUS NATURAL GAS
Field: EDDY COUNTY, NEW MEXICO
Site: MCGRUDER "13" FED COM #1
Well: MC13FC1
Wellpath: MFC13-SVY

Date: 1/16/98 **Time:** 11:27:43 **Page:** 2
Co-ordinate(NE) Reference: Site: MCGRUDER "13" FED COM #1
Vertical (TVD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Slot (0.0E,0.0N,75.0Azi)
Survey Calculation Method: Minimum Curvature

Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	DLS d/100ft	Build d/100ft	Turn d/100ft	ClsD ft	ClsA deg
9234.0	23.00	90.60	8929.0	1440.5	423.1	1378.0	0.86	0.00	-2.21	1441.4	72.93
9329.0	22.30	88.40	9016.6	1476.0	423.4	1414.5	1.16	-0.74	-2.32	1476.5	73.34
9393.0	21.30	89.90	9076.1	1499.0	423.7	1438.3	1.79	-1.56	2.34	1499.4	73.58
9487.0	17.60	90.10	9164.7	1529.2	423.7	1469.6	3.94	-3.94	0.21	1529.5	73.92
9612.0	14.00	90.90	9284.9	1562.0	423.5	1503.6	2.89	-2.88	0.64	1562.1	74.27
9735.0	11.60	86.40	9404.9	1588.4	424.0	1530.9	2.11	-1.95	-3.66	1588.5	74.52
9831.0	10.00	88.60	9499.2	1606.0	424.8	1548.8	1.72	-1.67	2.29	1606.0	74.66
9957.0	6.50	89.10	9623.9	1623.6	425.2	1566.9	2.78	-2.78	0.40	1623.6	74.82
10082.0	5.80	87.90	9748.1	1636.6	425.5	1580.3	0.57	-0.56	-0.96	1636.6	74.93
10209.0	4.50	82.80	9874.6	1647.8	426.4	1591.6	1.08	-1.02	-4.02	1647.8	75.00
10304.0	2.30	86.00	9969.4	1653.3	427.0	1597.2	2.32	-2.32	3.37	1653.3	75.03
10461.0	1.50	68.30	10126.4	1658.5	428.0	1602.3	0.63	-0.51	-11.27	1658.5	75.05
10557.0	0.50	93.10	10222.3	1660.1	428.4	1603.9	1.11	-1.04	25.83	1660.1	75.04
10652.0	0.40	115.00	10317.3	1660.8	428.3	1604.6	0.21	-0.11	23.05	1660.8	75.06
10747.0	0.00	71.20	10412.3	1661.0	428.1	1604.9	0.42	-0.42	0.00	1661.0	75.06
10843.0	0.40	332.00	10508.3	1660.9	428.4	1604.7	0.42	0.42	0.00	1660.9	75.05
10906.0	0.80	302.00	10571.3	1660.6	428.8	1604.3	0.79	0.63	-47.62	1660.6	75.03
11028.0	1.00	308.00	10693.3	1659.4	430.0	1602.7	0.18	0.16	4.92	1659.4	74.98
11216.0	0.50	290.00	10881.3	1657.7	431.2	1600.6	0.29	-0.27	-9.57	1657.7	74.92
11398.0	1.50	281.00	11063.3	1654.9	432.0	1597.5	0.55	0.55	-4.95	1654.9	74.87
11523.0	1.50	275.00	11188.2	1651.9	432.4	1594.3	0.13	0.00	-4.80	1651.9	74.82
11708.0	2.25	290.00	11373.1	1646.7	433.9	1588.5	0.48	0.41	8.11	1646.7	74.72
11825.0	2.25	290.00	11490.0	1642.9	435.4	1584.2	0.00	0.00	0.00	1642.9	74.63