

Scientific Drilling Intl. Survey Report



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|-----------------------------------|------------------------------------|--|----------------|
| Company: MACK ENERGY | Date: 06/03/2000 | Time: 05:53:23 | Page: 2 |
| Field: EAST EMPIRE YESO | Co-ordinate (NE) Reference: | Site: EDDY CO. NEW MEXICO, Grid North | |
| Site: EDDY CO. NEW MEXICO | Vertical (TVD) Reference: | SITE 0.0 above Mean Sea Level | |
| Well: G J WEST 145 H | Section (VS) Reference: | Slot (0.0E,0.0N,34.1Az) | |
| Wellpath: OH Original hole | Survey Calculation Method: | Minimum Curvature | |

Survey

| MD ft | Incl deg | Azim deg | TVD ft | N/S ft | E/W ft | VS ft | DLS d/100ft | Build d/100ft | Turn d/100ft | Tool |
|----------|-------------|-------------|-----------|-----------|-----------|----------|----------------|------------------|-----------------|------|
| 4192.0 | 88.20 | 37.20 | 2920.3 | 1194.6 | 795.1 | 1435.0 | 5.51 | 1.94 | 5.16 | |
| 4223.0 | 89.40 | 37.00 | 2921.0 | 1219.3 | 813.8 | 1465.9 | 3.92 | 3.87 | -0.65 | |
| 4255.0 | 90.50 | 37.30 | 2921.0 | 1244.8 | 833.1 | 1497.9 | 3.56 | 3.44 | 0.94 | |
| 4286.0 | 91.40 | 36.80 | 2920.5 | 1269.6 | 851.8 | 1528.8 | 3.32 | 2.90 | -1.61 | |
| 4317.0 | 92.70 | 36.10 | 2919.4 | 1294.5 | 870.2 | 1559.8 | 4.76 | 4.19 | -2.26 | |
| 4349.0 | 93.40 | 35.90 | 2917.7 | 1320.3 | 889.0 | 1591.7 | 2.27 | 2.19 | -0.62 | |
| 4380.0 | 93.20 | 35.20 | 2915.9 | 1345.5 | 907.0 | 1622.7 | 2.34 | -0.65 | -2.26 | |
| 4410.0 | 93.30 | 34.50 | 2914.2 | 1370.1 | 924.1 | 1652.6 | 2.35 | 0.33 | -2.33 | |
| 4441.0 | 92.60 | 34.00 | 2912.6 | 1395.7 | 941.5 | 1683.6 | 2.77 | -2.26 | -1.61 | |
| 4467.0 | 92.30 | 33.50 | 2911.5 | 1417.3 | 955.9 | 1709.5 | 2.24 | -1.15 | -1.92 | |
| 4504.0 | 91.70 | 33.50 | 2910.2 | 1448.1 | 976.3 | 1746.5 | 1.62 | -1.62 | 0.00 | |