

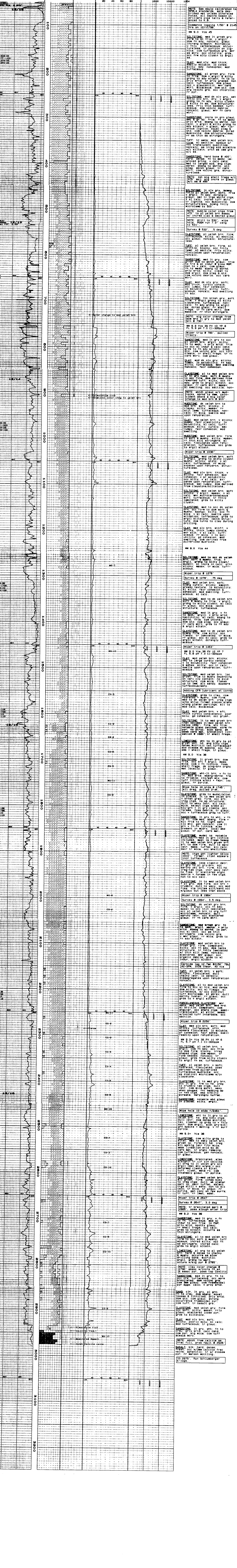
HORIZON

WELL LOGGING

711 St. Andrews Way
Lompoc, California 93438
(805) 733-0972

COMPANY: ENERGIN RESOURCES NORTHWEST
 WELL: C. O. 41-06-65 (Fishhack)
 LOCATION: Sec 8, T6N, R5W, W6C4 (S1) S4706340000E
 ELEVATION: 909' KB 919'
 FIELD: Mist
 COUNTY: Columbia, Oregon
 SPUD DATE: December 11, 1998
 LOGGING DATES: Dec. 11 to 17, 1998
 API No.: 36-009-00340
 CO. GEOLOGIST: Dave Huggins
 CO. DRILL REP: Rob Lucas-Production Specialist
 CONTRACTOR: Taylor Drilling Inc.
 RIG:
 MUD COMPANY: GEO Drilling Fluids
 MUD TYPE: Cyan
 LOGGING GEOLOGIST: Bill Gilmore, Doug Milnes
 BIT SIZE: 9 875 in. to 5 3/4"
 6.25 in. to 2 9/16"
 CASING: 12 in. to 20"
 7 in. to 5 3/4"

| ABBREVIATIONS | | SYMBOLS | |
|---------------|------------------------|--------------|---|
| CO | Circulate Out | PEBBLES >2mm | □ |
| LAT | Logged After Trip | SAND | □ |
| CG | Connection Gas | SANDSTONE | □ |
| MG | Miser Gas | SILTSTONE | □ |
| TG | Trip Gas | MUDSTONE | □ |
| SG | Survey Gas | SHALE | □ |
| NR | No Returns | MARL | □ |
| NB | New Bit | CLAY | □ |
| HR | Miser Run | CLAY | □ |
| COE | COE Interval | CLAY | □ |
| NR | NR (100,000 fpm scale) | CLAY | □ |
| PP | Pump Pressure | CLAY | □ |
| SPM | Strokes per minute | CLAY | □ |



DRILL RATE: ROP, HOE
 LITH: Lithology column
 MINERAL: Mineralogy bar chart
 GASES: Gas curves
 CHROMATOGRAPH: Chromatograph curves
 REMARKS: Descriptive text for each depth interval