

GEOLOGISTS' REPORT

OPERATOR **MURFIN DRILLING COMP. INC.**
 LEASE **JEAN #2-8**
 LOCATION **660' FSL 1988' FEL**
 SEC. **8** TWP. **1S** RGE. **37W**
 COUNTY **CHEYENNE** STATE **KANSAS**
 FIELD _____
 CONTRACTOR **MURFIN DRILLING CO. INCRIG. NO. #8**
 COMMENCED **MAY 28 2014** COMPLETED **JUNE 6 2014**
 MUD DISPLACED **3604** MUD TYPE **CHEMICAL**
 DRILLING TIME (KEPT FROM) **3520** TO **4750**
 SAMPLES SAVED FROM _____ TO _____
 SAMPLES EXAMINED FROM **2520** TO **4750**
 GEOLOGICAL SUPERVISION FROM **3600** TO **4750**
 GEOLOGIST ON WELL **STEPHEN J MILLER**

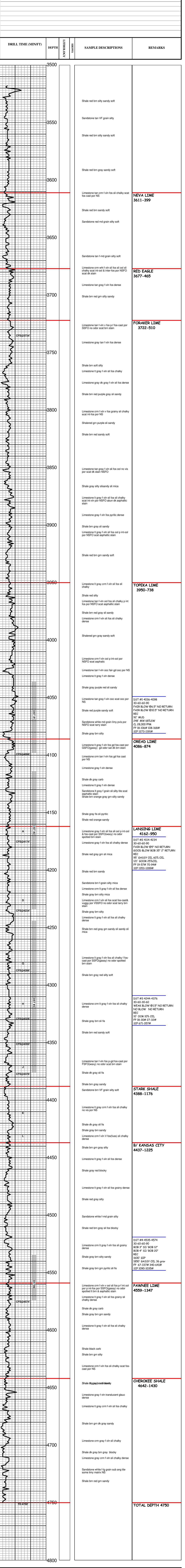
ELEVATIONS
 KB **3212'**
 GL **3207'**

CASING RECORD
 ALL MEASUREMENTS FROM K.E.B.

| FORMATION NAME | LOG TOP | DATUM | LOG TOP | DATUM | SAMPLE TOP | DATUM |
|----------------|---------|-------|---------|-------|------------|-------|
| ANNUDRITE | 3158 | +54 | 3159 | +53 | | |
| B/ ANNUDRITE | 3194 | +18 | 3193 | +19 | | |
| NEVA | 3612 | -400 | 3611 | -399 | | |
| TOPEKA | 3945 | -733 | 3950 | -738 | | |
| LANSING | 4158 | -946 | 4162 | -950 | | |
| STARK SHALE | 4377 | -1165 | 4388 | -1176 | | |
| B/ KANSAS CITY | 4433 | -1221 | 4437 | -1225 | | |
| PAWNEE LIME | 4554 | -1342 | 4559 | -1347 | | |
| CHEROKEE SHALE | 4642 | -1430 | 4642 | -1430 | | |
| | 4751 | -1539 | 4750 | -1538 | | |

ELECTRICAL SURVEYS:
 PIONEER LOGGING
 DUAL INDUCTION
 COMP. NEUDEN
 SONIC LOG
 MICRO LOG

| DRILL TIME (MIN/FT) | DEPTH | SHOWS | LITHOLOGY | REMARKS |
|---------------------|-------|-------|-----------|---------------------------------------|
| | | | | APR 15 023-21395 |
| | | | | Drilling Fluids: MORGAN MUD |
| | | | | Drill Stem Testing: TRILOBITE TESTERS |
| | | | | Gas Trailer: NONE |
| | | | | Reserve Pit Chlorides: 400 PPM |



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