Schlumberger

# MOVED OIL CYBERLOOK

| | |
|---|---|
| COMPANY | EARTH REFERENCE SYSTEMS |
| WELL | SHAHAN #1 |
| FIELD | WILDCAT |
| COUNTY | KNOX |
| STATE | MISSOURI |
| LOCATION | 990'N & 790'E OF SECTION LINE |
| SECT. | 10 |
| TWP. | 62-N |
| RANGE | 13-W |
| Other Services | DIL-SFL, LDT-CNL, EPT-PCD |
| Permanent Datum | GL, Elev. 903.0 F |
| Log Measured From | KB, 6.0 F above Perm. Datum |
| Drilling Measured From | KB |
| Elev. | K.B. 909.0 F, D.F. 907.0 F, G.L. 903.0 F |
| Date | 01-SEP-89 |
| Run No. | 1 |
| Depth Driller | 1100.0 F |
| Depth Logger (Schl.) | 1052.0 F |
| Btm. Log Interval | 1053.0 F |
| Top Log Interval | 180.0 F |
| Casing-Driller | 8 5/8" @ 188.0 F |
| Casing-Logger | 193 F |
| Bit Size | 12 1/4" / 7 7/8" |
| Type Fluid in Hole | FRESH GEL |
| Dens. / Visc. | 9.10 LB/G / 38.0 S |
| pH / Fld. Loss | 10.5 / 8.8 C3 |
| Source of Sample | MUDPIT |
| Rm @ Meas. Temp. | 3.200 OHMM @ 73.0 DEGF |
| Rmf @ Meas. Temp. | 2.900 OHMM @ 73.0 DEGF |
| Rmc @ Meas. Temp. | 3.600 OHMM @ 73.0 DEGF |
| Source: Rmf / Rmc | EST. / EST. |
| Rm @ BHT | 3.282 OHMM @ 71.0 DEGF |
| Time: Circulated / Logger on Bottom | SEE LOG |
| Max. Rec. Temp. | 71.0 DEGF |
| Equip. / Location | 8172 / MT. VERNON |
| Recorded By | C. WILLIAMS |
| Witnessed By | MR. ERIC OLSON |

RECEIVED OCT 0 1989 MO Oil & Gas Council

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

| | | | |
|---|---|---|---|
| Run No. | 1 | | |
| Service Order No. | 563968 | | |
| Drilling Fluid Level | | | |
| Salinity | 50.0 PPM | | |
| Rmf @ BHT | 2.974 OHMM | @ 71.0 DEGF | @ |
| Rmc @ BHT | 3.692 OHMM | @ 71.0 DEGF | @ |
| Logging Speed | 10000.0 F/HR | | |
| EQUIPMENT DATA | | | |
| Tool Number 1 | IEM 1148 | | |
| Tool Number 2 | DIS 2200 | | |
| Tool Number 3 | DIC 1115 | | |
| Tool Number 4 | TCM 484 | | |
| Tool Number 5 | DRS 2764 | | |
| Tool Number 6 | CNC 244 | | |
| Tool Number 7 | EPT MICH. | | |
| Tool Number 8 | NSC 937 | | |
| Tool Number 9 | SGC 205 | | |
| Tool Number 10 | TCC 737 | | |
| Tool Number 11 | | | |
| Tool Number 12 | | | |

REMARKS:

RW'S SUPPLIED BY CLIENT

CREW: M. DAVIS

THANKS FOR USING SCHLUMBERGER!

Schlumberger — PASS TWO MOVED OIL CYBERLOOK

CSU Field Log

CHANGED PARAMETERS

| NAME | VALUE | UNIT | DEPTH ( F ) | NAME | VALUE | UNIT | DEPTH ( F ) |
|---|---|---|---|---|---|---|---|
| FNUM | .810000 | | 1035.0 | FNUM | 1.00000 | | 959.5 |
| TPM3 | 7.60000 | NS/M | 1060.0 | TPM3 | 7.20000 | NS/M | 9840.0 |
| TPM3 | 9.10000 | NS/M | 9840.0 | TPM3 | 9.10000 | NS/M | 960.0 |
| TPM3 | 7.20000 | NS/M | 664.0 | TPM3 | 9.10000 | NS/M | 524.0 |
| PMAX | .0500000 | | 664.0 | PMAX | .300000 | | 524.0 |
| RWF | .800000 | OHMM | 1060.0 | RWF | 1.30000 | OHMM | 960.0 |
| RWF | 1.00000 | OHMM | 850.0 | RWF | .800000 | OHMM | 9840.0 |
| RWF | 1.30000 | OHMM | 9840.0 | RWF | 1.00000 | OHMM | 9840.0 |
| RWF | 1.80000 | OHMM | 522.0 | RWB | 1.00000 | OHMM | 960.0 |

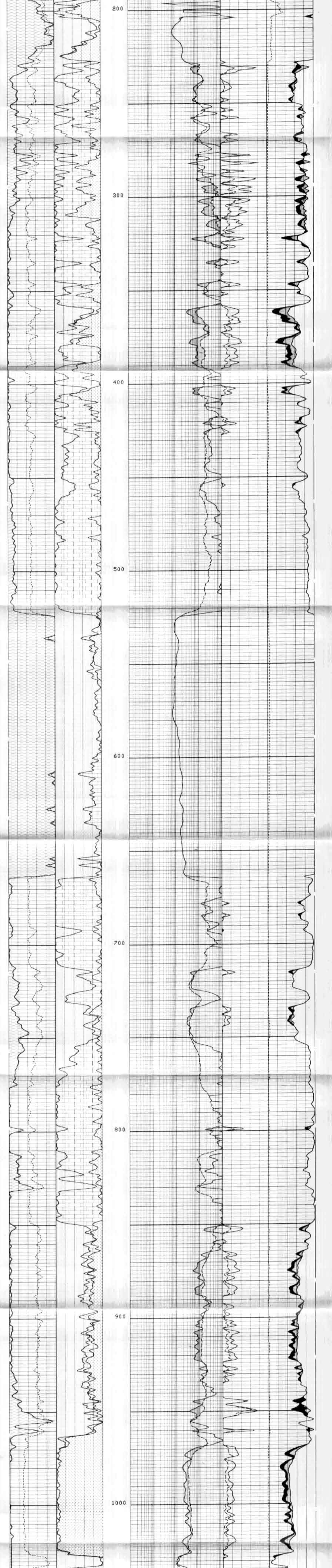
| Curve | Left | Right |
|---|---|---|
| ZERO | -1.000 | 1.0000 |
| MP3 | -1.000 | 1.0000 |
| MP2 | 2.0000 | 0.0 |
| RHGF (G/C3) | 2.5000 | 3.5000 |
| MSI | 0.0 | 2.0000 |
| RO (OHMM) | .10000 | 1000.0 |
| RT (OHMM) | .10000 | 1000.0 |
| SXO | 1.0000 | -1.000 |
| SW | 1.0000 | -1.000 |
| DCAL (IN) | -20.00 | 20.000 |
| VWXO | .50000 | 0.0 |
| BVW | .50000 | 0.0 |
| PHIE | .50000 | 0.0 |

CP 32.2 FILE 4 01-OCT-1989 15:40

INPUT FILE(S) 10 6 2

DATA ACQUIRED 01-OCT-1989 12:55 NA NA

5"/100'



5"/100'

CP 32.2 FILE 4 01-OCT-1989 15:35

INPUT FILE(S) 10 6 2

DATA ACQUIRED 01-OCT-1989 12:35 NA NA

| Curve | Left | Right |
|---|---|---|
| ZERO | -1.000 | 1.0000 |
| MP3 | -1.000 | 1.0000 |
| MP2 | 2.0000 | 0.0 |
| RHGF (G/C3) | 2.5000 | 3.5000 |
| MSI | 0.0 | 2.0000 |
| RO (OHMM) | .10000 | 1000.0 |
| RT (OHMM) | .10000 | 1000.0 |
| SXO | 1.0000 | -1.000 |
| SW | 1.0000 | -1.000 |
| DCAL (IN) | -20.00 | 20.000 |
| VWXO | .50000 | 0.0 |
| BVW | .50000 | 0.0 |
| PHIE | .50000 | 0.0 |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| PP | NORM | | DO | 0.0 | F |
| DO2 | 0.0 | F | DO3 | 0.0 | F |
| WMUD | 9.40000 | LB/G | DWCO | 512 | |
| DSIN | 5 | US | DDEL | 200 | US |
| DTF | 189.000 | US/F | DTM | 56.0000 | US/F |
| CDTS | 100.000 | | SPFS | R-H | |
| DHC | NONE | | BFM | LIQU | |
| MDEN | 2.71000 | G/C3 | FD | 1.00000 | G/C3 |
| FCD | 0.0 | IN | MATR | LIME | |
| HC | CALI | | RMF | 2.20000 | |
| FRT | DISA | | FNUM | .810000 | |
| RG21 | 2.71000 | | RG22 | 2.64400 | |
| RG23 | 2.87700 | | RG31 | 2.71000 | |
| RG32 | 2.64400 | | RG33 | 2.87700 | |
| UF | .398000 | | UM21 | 13.7700 | |
| UM22 | 4.77900 | | UM23 | 8.99700 | |
| UM31 | 13.7700 | | UM32 | 4.77900 | |
| UM33 | 8.99700 | | TPM1 | 9.80000 | NS/M |
| TPM2 | 7.20000 | NS/M | TPM3 | 7.60000 | NS/M |
| SPCL | -200.000 | MV | SPSH | 0.0 | MV |
| GRCL | 10.0000 | GAPI | GRSH | 90.0000 | GAPI |
| GRSE | 1.00000 | | RTLF | DISA | |
| BHT | 71.0000 | DEGF | FSON | PRES | |
| FRXO | PRES | | CLIM | 10.0000 | IN |
| SINP | GR | | NGSI | NEUT | |
| PMAX | .500000 | | NPCL | .0100000 | |
| NPSH | .220000 | | RWF | .800000 | OHMM |
| RWB | .600000 | OHMM | FCAL | PRES | |
| POUT | LIME | | FEPT | 123 | |
| DRUL | .110000 | G/C3 | GDCL | 0.0 | G/C3 |
| GDSH | 2.90000 | G/C3 | FRTC | NONE | |
| LSWB | ALLO | | MDET | NEIT | |
| NLIM | .0100000 | | DLLM | .350000 | |
| GULM | 999.000 | GAPI | FNMT | ABSE | |
| SDGC | M12 | | SIS | NONE | |
| GRSS | GR | | CNPS | NPHI | |
| TPCN | 7.20000 | NS/M | TPSH | 8.90000 | NS/M |
| DMRT | 1060.00 | F | SWMN | .0500000 | |
| FLDT | PRES | | CSXO | .600000 | |
| RXOS | AUTO | | BS | 7.87500 | IN |
| BHS | OPEN | | | | |

Schlumberger — PASS ONE MOVED OIL CYBERLOOK

CSU Field Log

CHANGED PARAMETERS

| NAME | VALUE | UNIT | DEPTH ( F ) | NAME | VALUE | UNIT | DEPTH ( F ) |
|---|---|---|---|---|---|---|---|
| TPM3 | 9.10000 | NS/M | 960.0 | TPM3 | 7.20000 | NS/M | 664.0 |
| TPM3 | 9.10000 | NS/M | 524.0 | | | | |

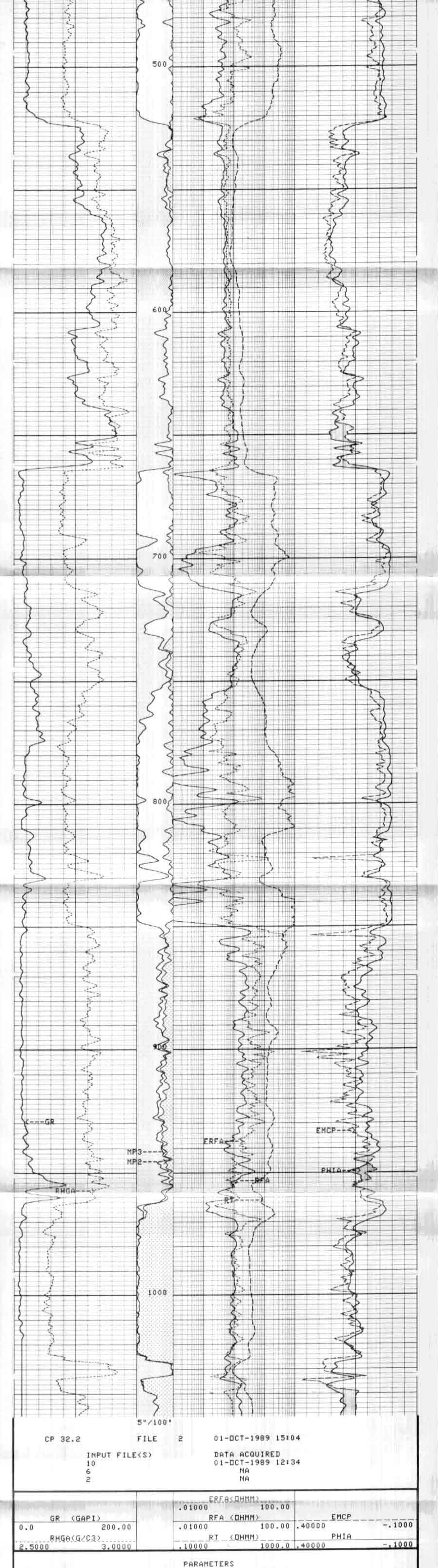
| Curve | Left | Right |
|---|---|---|
| GR (GAPI) | 0.0 | 200.00 |
| RHGA (G/C3) | 2.5000 | 3.0000 |
| ERFA (OHMM) | .01000 | 100.00 |
| RFA (OHMM) | .01000 | 100.00 |
| RT (OHMM) | .10000 | 1000.0 |
| EMCP | .40000 | -.1000 |
| PHIA | .40000 | -.1000 |

CP 32.2 FILE 2 01-OCT-1989 15:08

INPUT FILE(S) 10 6 2

DATA ACQUIRED 01-OCT-1989 12:48 NA NA

5"/100'



5"/100'

CP 32.2 FILE 2 01-OCT-1989 15:04

INPUT FILE(S) 10 6 2

DATA ACQUIRED 01-OCT-1989 12:34 NA NA

| Curve | Left | Right |
|---|---|---|
| ERFA (OHMM) | .01000 | 100.00 |
| GR (GAPI) | 0.0 | 200.00 |
| RHGA (G/C3) | 2.5000 | 3.0000 |
| RFA (OHMM) | .01000 | 100.00 |
| RT (OHMM) | .10000 | 1000.0 |
| EMCP | .40000 | -.1000 |
| PHIA | .40000 | -.1000 |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| PP | NORM | | DO | 0.0 | F |
| DO2 | 0.0 | F | DO3 | 0.0 | F |
| WMUD | 9.10000 | LB/G | DWCO | 512 | |
| DSIN | 5 | US | DDEL | 200 | US |
| DTF | 189.000 | US/F | DTM | 56.0000 | US/F |
| CDTS | 100.000 | | SPFS | R-H | |
| DHC | BS | | BFM | LIQU | |
| MDEN | 2.71000 | G/C3 | FD | 1.00000 | G/C3 |
| FCD | 4.50000 | IN | MATR | LIME | |
| HC | CALI | | RMF | 2.20000 | |
| FRT | DISA | | RG21 | 2.71000 | |
| RG22 | 2.64400 | | RG23 | 2.87700 | |
| RG31 | 2.71000 | | RG32 | 2.64400 | |
| RG33 | 2.87700 | | UF | .398000 | |
| UM21 | 13.7700 | | UM22 | 4.77900 | |
| UM23 | 8.99700 | | UM31 | 13.7700 | |
| UM32 | 4.77900 | | UM33 | 8.99700 | |
| TPM1 | 9.80000 | NS/M | TPM2 | 7.20000 | NS/M |
| TPM3 | 7.60000 | NS/M | SPCL | -200.000 | MV |
| SPSH | 0.0 | MV | GRCL | 10.0000 | GAPI |
| GRSH | 90.0000 | GAPI | GRSE | 1.00000 | |
| RTLF | DISA | | BHT | 71.0000 | DEGF |
| FSON | PRES | | FRXO | PRES | |
| CLIM | 10.0000 | IN | SINP | GR | |
| NGSI | NEUT | | PMAX | .500000 | |
| NPCL | .0100000 | | NPSH | .220000 | |
| RWF | .0500000 | OHMM | RWB | .300000 | OHMM |
| FCAL | PRES | | POUT | LIME | |
| FEPT | 123 | | DRUL | .110000 | G/C3 |
| GDCL | 0.0 | G/C3 | GDSH | 2.90000 | G/C3 |
| FRTC | NONE | | LSWB | ALLO | |
| MDET | NEIT | | NLIM | .0100000 | |
| DLLM | .350000 | | GULM | 999.000 | GAPI |
| FNMT | ABSE | | SDGC | DGCN | |
| SIS | NONE | | GRSS | GR | |
| CNPS | NPHI | | TPCN | 7.20000 | NS/M |
| TPSH | 8.90000 | NS/M | DMRT | 1062.00 | F |
| SWMN | .0500000 | | FLDT | PRES | |
| CSXO | .600000 | | RXOS | AUTO | |
| BS | 7.87500 | IN | BHS | OPEN | |