

Western Cretaceous Coal Seam Project

**Summary of the Cooperative Research Well
FC Federal #12**

Operated by Mesa Operating Limited Partnership

Submitted to the
Gas Research Institute
GRI Topical Report No. GRI-92/0015

GRI Manager
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Coal and Shales Resources

Prepared by
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February 7, 1992

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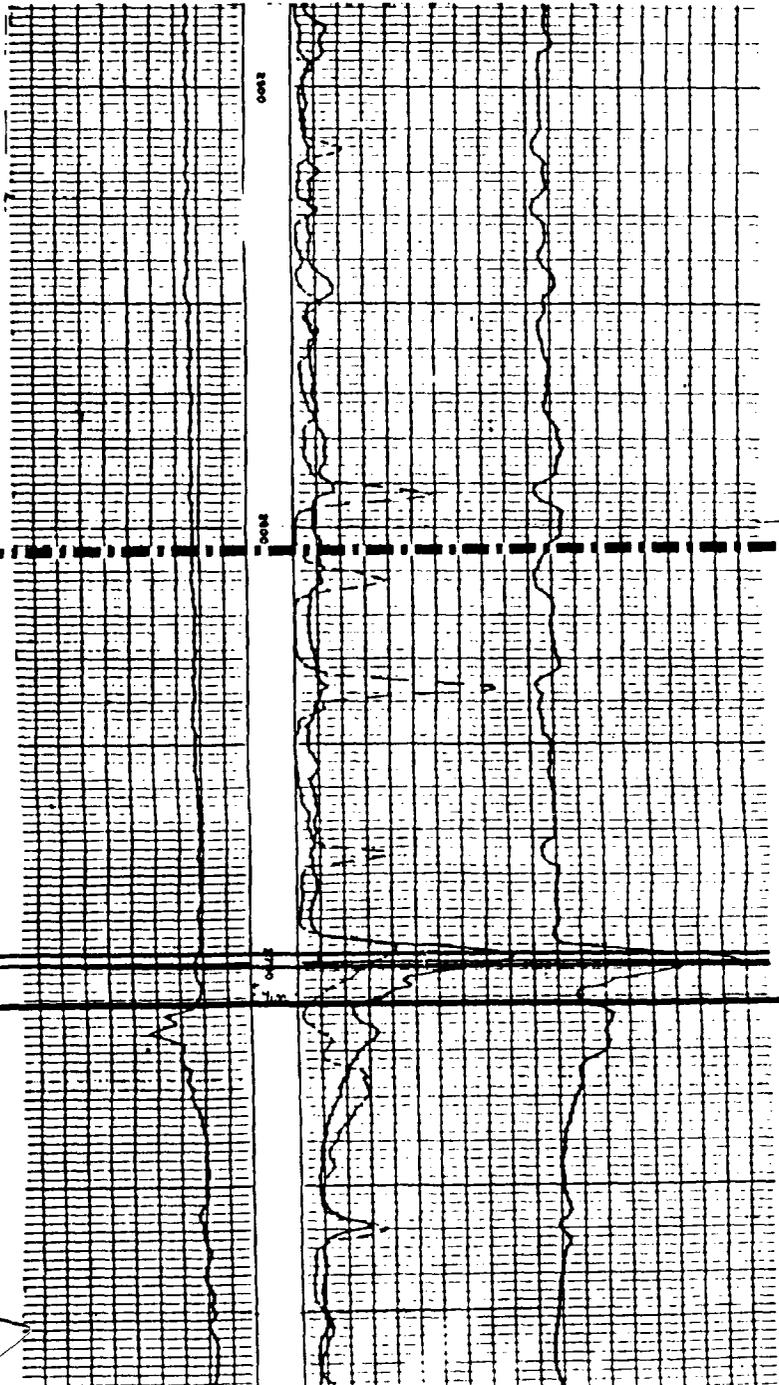
| | |
|---------------------------|----------------|
| BEFORE EXAMINER CATANACH | |
| OIL CONSERVATION DIVISION | |
| M/W | EXHIBIT NO. 49 |
| CASE NO: | 11996 |

Cross Section
1

| SCHEDULE | |
|----------------------------------|---------------------------|
| ELECTRICAL LOG | |
| Location of Well 10906 | COMPANY: Superior Oil Co. |
| | WELL: Hightover #2-3 |
| Field: Wildcat | LOCATION: N.V. SE. SK |
| 3-25N-7W | COUNTY: Rio Arriba |
| STATE: New Mexico | COMPANY: Superior Oil Co. |
| COUNTY: Rio Arriba | WELL: Hightover #2-3 |
| STATE: New Mexico | WELL: Hightover #2-3 |

| | One | Two |
|--------------------|----------|----------|
| Date | 5-29-54 | 5-29-54 |
| First Reading | 2820 | 2853 |
| Last Reading | 211 | 2820 |
| Fastest Interval | 2609 | 33 |
| Core Shoe Setting | 211 | 211 |
| Core Shoe Driller | 211 | 211 |
| Max. Depth Reached | 2820 | 2854 |
| Bottom Driller | 2840 | 2855 |
| Bottom Driller | RDB | RDB |
| Oil Mud | Dil Emul | Dil Emul |
| • Density | 8.8 | 8.8 |
| • Viscosity | 58 | 58 |
| • Gel Strength | 2.4, 58 | 2.4, 58 |
| • Plasticity Index | 3.108 | 3.108 |
| • pH | 7.8 | 7.8 |
| • Water Loss | 8 | 8 |
| Maximum Temp. °F | 108 | 108 |
| Drift Rate | 3 3/4" | 3 3/4" |
| • Diameter | 6" | 6" |
| • Length | 54" | 54" |
| • Weight | 8.8" | 8.8" |
| • Time | 2 Hr | 1 Hr |
| • Location | 714 Farm | 714 Farm |
| • Recorder | Kuhlmann | Kuhlmann |
| • Observer | Caine | Caine |

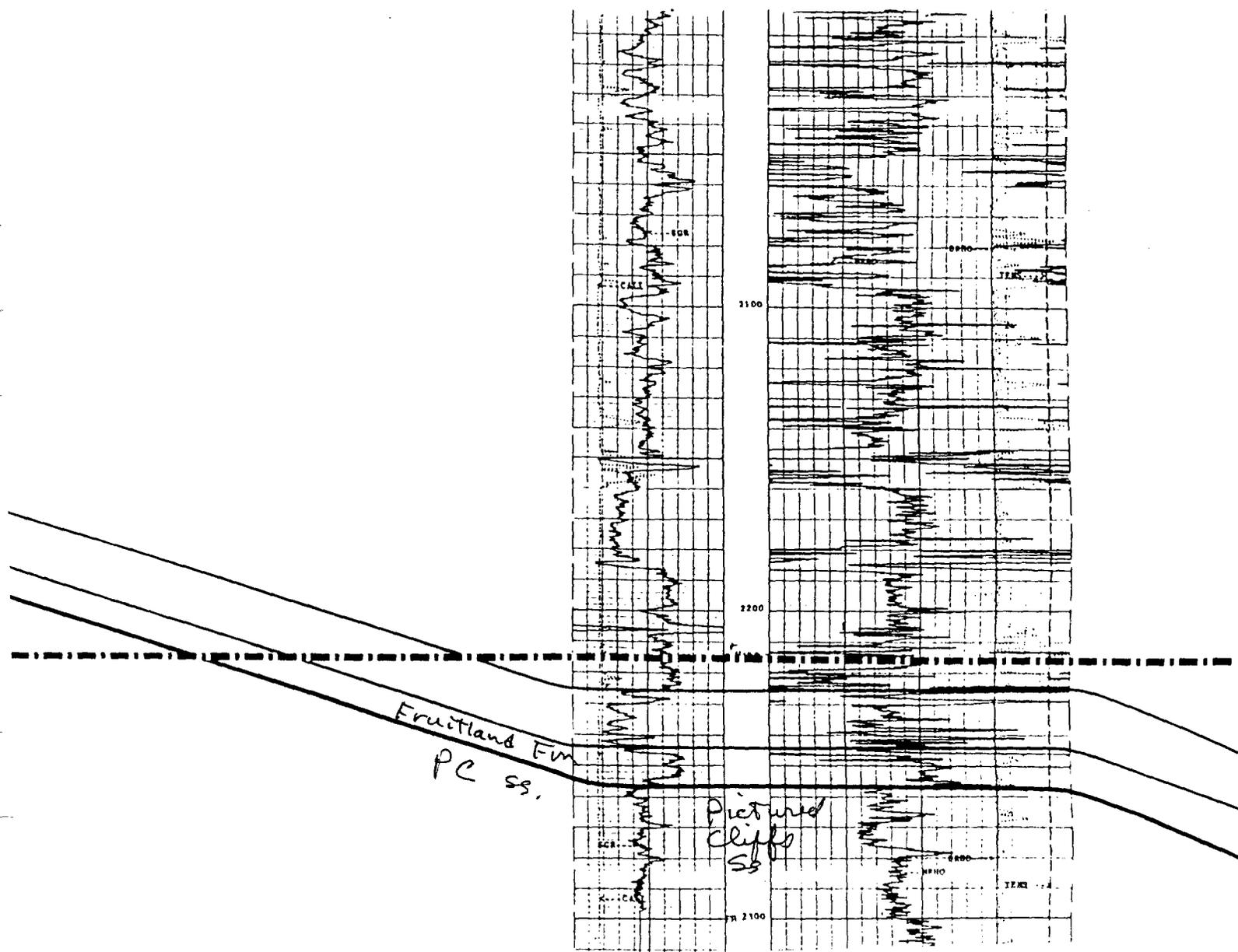
REMARKS
 Run one mud from flow line
 Run two mud from flow line
 Run two includes rerun of run one



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Cross section 2

| Schlumberger | | SP-DLTA-ECUS COMPENSATED NEUTRON-LITHO-DENSITY | | | |
|----------------------|--|---|-------|----------|--------------------|
| COMPANY | | Mesa Operating Ltd & REI | | | |
| WELL | | F.C. Federal #12 | | | |
| FIELD | | Pubco | | | |
| COUNTY | | Rio Arriba | STATE | | New Mexico |
| APR SERIAL NO. | | 33 | TRIP | 26 N | 7 W |
| Log Measured From | | 6 L | Start | 6300.0 F | Depth: 6.8.254.8 F |
| Coring Measured From | | 6 B | Stop | 12.0 F | Depth: 6.8.254.8 F |
| Date | | 07-22-1960 | | | Drill: 6.8.254.8 F |
| Run In | | 0.0 | | | |
| Depth Bottom | | 2262.0 F | | | |
| Depth Logger (Base) | | 2262.0 F | | | |
| Open Log Interval | | 2279.0 F | | | |
| Top Log Interval | | 2202.0 F | | | |
| Coring Depth | | 0.87 @ 7.0 F | | | |
| Coring Logger | | 222.0 F | | | |
| Run Size | | 1.75 in | | | |
| Type Hole in Rock | | Oil | | | |
| Casing | | 0.00 LWD 82.0 S | | | |
| Casing | | 0.0 PHL LWD 8.0 S.C.S. | | | |
| Casing or Strength | | PLDPLR | | | |
| Run @ Meas. Temp. | | 2740 Ohm @ 84.0 DEG | | | |
| Cable @ Meas. Temp. | | 1.250 Ohm @ 84.0 DEG | | | |
| Run @ Meas. Temp. | | 3.200 Ohm @ 84.0 DEG | | | |
| Extreme Run Time | | None | | | |
| Run @ 80F | | 2.07 Ohm @ 77 DEG | | | |
| Circuitry on Surface | | 7.7 @ 2000 | | | |
| Logger on Surface | | 7.2 @ 2000 | | | |
| Max. Run. Time | | 17.0 DEG | | | |
| Depth | | 6208 | | | |
| Numbered by | | Shaw | | | |
| Reviewed by | | Walter Cho & Hughes | | | |



| S C H L O M B E R G E | | | | | |
|--|-------------------------|---|--|---|--|
| ELECTRICAL LOG | | | | | |
| Location of Well  Bureau of Geology No. 6290 | | COMPANY, Pubco Development Inc. Well, Hughes #34-3 FIELD, South Blanco LOCATION, 34 26N 7W COUNTY, Rio Arriba STATE, New Mexico FRING No. | | COMPANY, Pubco Development COUNTY, Rio Arriba 6150E FIELD OR NE SW SW LOCATION 34 26N 7W WELL, Hughes #34-3 | |
| RUN NO | 01 | 27-53 | | | |
| Date | 11-27-53 | | | | |
| First Reading | 2246 | | | | |
| Last Reading | 2246 | | | | |
| Footage Measured | 089 | | | | |
| Cog Shoe Sinker | 006 | | | | |
| Cog Shoe Depth | 006 | | | | |
| Moist Depth Sinker | 006 | | | | |
| Bottom Depth | 006 | | | | |
| Depth Down | 006 | | | | |
| Mud Nature | 001 - Quiet-Caus | | | | |
| - Density | 1.0 | | | | |
| - Viscosity | 1.4 | | | | |
| - Resistivity | 1.4 | | | | |
| - Resistivity Sp. C | 1.4 | | | | |
| - pH | 7.7 | | | | |
| - Water Loss | CC 30 min | | | | |
| Maximum Temp. °F | 82 | | | | |
| Bit Size | 3 3/4" FR. Csg. to 2155 | | | | |
| Spacings - A | 16" | | | | |
| - M | 64" | | | | |
| - AD | 15' 8" | | | | |
| 24 Sp. Time | 1 hour | | | | |
| Truck No. | 717EFARM | | | | |
| Recorded By | Miller | | | | |
| Witnessed By | Peters | | | | |
| REMARKS | | | | | |
| Run one mud from flow line. | | | | | |

Cross section 1

