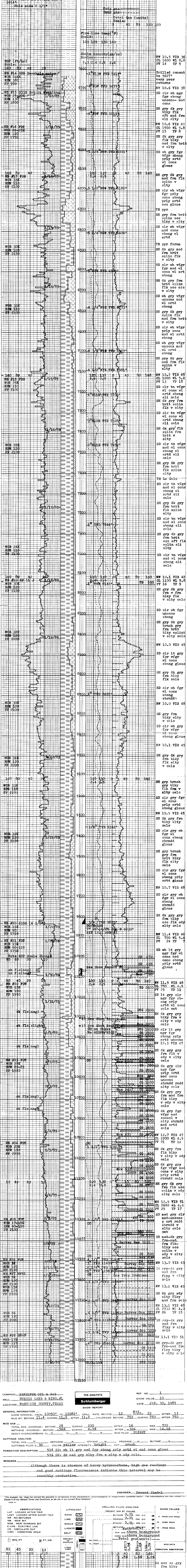


COMPANY **SANDEFER OIL & GAS** HOLE SIZE 12 1/4" TO 30 1/4" CASING RECORD  
WELL **NUCCES LAND & MINERS #1** 8 1/2" TO 3806' 7" TO 3936'  
AREA **MO MULLEN COUNTY TEXAS** 6 1/8" TO 12010'  
SUPERVISOR **O. BAKER** STATE **TEXAS** JOB# 40-30770 TO  
STARTED LOGGING AT **5639** FEET **12/26/84** CEASED LOGGING AT **12010** FEET **2/21/85**

MUD TYPES **NAPIV-CEL** TO **6000** FT. **CHROME LIGNOSULFONATE** TO **12010** FT.

Abbreviations: LAT. LOGGED AFTER TRIP; LAST. LOGGED AFTER SHORT TRIP; NR. NO RETURNS; NB. NEW BIT; NDB. NEW DIAMOND BIT; ELOG. ELECTRIC LOG; CIRC. CIRCULATE OUT; CIRC. CONDITION HOLE.



COMPANY **SANDEFER OIL & GAS** REF NO. **1**  
WELL **NUCCES LAND & MINERS #1** SHOW VALUE **10**  
LOCATION **MO MULLEN COUNTY, TEXAS** DATE **JAN. 30, 1985**

GENERAL INFORMATION - SHOW INTERVAL FROM **10050** TO **10082** DRILL RATE BEFORE **12** DURING **75** AFTER **13**  
MUD WT. BEFORE **11.4** DURING **11.0** AFTER **11.2** CHLORIDES BEFORE **MAX** DURING **22** AFTER **75**

MUD GAS - TOTAL GAS (AVERAGE) BEFORE **28** DURING **200** AFTER **16** MAX **700**  
METHANE (AVERAGE) BEFORE **56%** DURING **4.0%** AFTER **32%** MAX **14.0%**  
HEAVY HYDROCARBONS: C<sub>1</sub> - C<sub>2</sub> - C<sub>3</sub> - C<sub>4</sub> - MUD FLUO. **SLIGHT**

CUTTINGS ANALYSIS - TOTAL GAS - **None** METHANE - **None** ETHANE - **None** PROPANE - **None** BUTANE - **None**  
CUTTINGS FLUO. - **30** COLOR - **yellow** INTENSITY - **light** CUT - **Grain**

FORMATION DESCRIPTION: **50% SD: wh lt gry med fgr sbang prly strd wl mod cons glauc**  
**50% SH: dk med gry blk frm v silty v sdy calc.**

REMARKS: **Although there is absence of heavy hydrocarbons, high gas readings and good outtings fluorescence indicate this interval may be possibly productive.**

ENGINEER **R. Lee**

THE ANALYSTS **Schlumberger**

COMPANY **SANDEFER OIL & GAS** REF NO. **2**  
WELL **NUCCES LAND & MINERS #1** SHOW VALUE **15**  
LOCATION **MO MULLEN CO., TEXAS** DATE **1/31/85**

GENERAL INFORMATION - SHOW INTERVAL FROM **10297** TO **10299** DRILL RATE BEFORE **11.4** FT/HZ DURING **11.7** FT/HZ AFTER **11.7** FT/HZ  
MUD WT. BEFORE **11.7** DURING **11.0** AFTER **11.7** CHLORIDES BEFORE **830** DURING **850** AFTER **850**

MUD GAS - TOTAL GAS (AVERAGE) BEFORE **25** DURING **1800** AFTER **40** MAX **2000**  
METHANE (AVERAGE) BEFORE **5%** DURING **36.0%** AFTER **32%** MAX **40.0%**  
HEAVY HYDROCARBONS: C<sub>1</sub> - C<sub>2</sub> - C<sub>3</sub> - C<sub>4</sub> - MUD FLUO. **None**

CUTTINGS ANALYSIS - TOTAL GAS - **N/A** METHANE - **None** ETHANE - **None** PROPANE - **None** BUTANE - **None**  
CUTTINGS FLUO. - **None** COLOR - **None** INTENSITY - **None** CUT - **None**

FORMATION DESCRIPTION: **SD: lt-med gry clr mxy med fgr sbmd slly silty mod-laly consol**

REMARKS: **Due to the high gas readings, the presence of heavy hydrocarbons, and the good visible porosity this zone was given a show value of 15 and is probably productive.**

ENGINEER **R. Lee**

THE ANALYSTS **Schlumberger**

COMPANY **SANDEFER OIL & GAS** REF NO. **3**  
WELL **NUCCES LAND & MINERS #1** SHOW VALUE **15**  
LOCATION **MO MULLEN CO., TEXAS** DATE **1/31/85**

GENERAL INFORMATION - SHOW INTERVAL FROM **10341** TO **10342** DRILL RATE BEFORE **9.3** FT/HZ DURING **11.5** FT/HZ AFTER **11.5** FT/HZ  
MUD WT. BEFORE **11.7** DURING **11.7** AFTER **12.3** CHLORIDES BEFORE **850** DURING **850** AFTER **850**

MUD GAS - TOTAL GAS (AVERAGE) BEFORE **20** DURING **1800** AFTER **22** MAX **2000**  
METHANE (AVERAGE) BEFORE **4%** DURING **36.0%** AFTER **44%** MAX **40.0%**  
HEAVY HYDROCARBONS: C<sub>1</sub> - C<sub>2</sub> - C<sub>3</sub> - C<sub>4</sub> - MUD FLUO. **None**

CUTTINGS ANALYSIS - TOTAL GAS - **None** METHANE - **None** ETHANE - **None** PROPANE - **None** BUTANE - **None**  
CUTTINGS FLUO. - **None** COLOR - **None** INTENSITY - **None** CUT - **None**

FORMATION DESCRIPTION: **SD: lt-med gry clr mxy med fgr sbmd slly silty mod-laly consol**

REMARKS: **Due to the high gas readings and the presence of heavy hydrocarbons this zone was given a show value of 15 and is probably productive.**

ENGINEER **R. Lee**

THE ANALYSTS **Schlumberger**

COMPANY **SANDEFER OIL & GAS** REF NO. **4**  
WELL **NUCCES LAND & MINERS #1** SHOW VALUE **15**  
LOCATION **MO MULLEN CO., TEXAS** DATE **2/1/85**

GENERAL INFORMATION - SHOW INTERVAL FROM **10341** TO **10342** DRILL RATE BEFORE **9.3** FT/HZ DURING **11.5** FT/HZ AFTER **11.5** FT/HZ  
MUD WT. BEFORE **11.7** DURING **11.7** AFTER **12.3** CHLORIDES BEFORE **850** DURING **850** AFTER **850**

MUD GAS - TOTAL GAS (AVERAGE) BEFORE **20** DURING **1800** AFTER **22** MAX **2000**  
METHANE (AVERAGE) BEFORE **4%** DURING **36.0%** AFTER **44%** MAX **40.0%**  
HEAVY HYDROCARBONS: C<sub>1</sub> - C<sub>2</sub> - C<sub>3</sub> - C<sub>4</sub> - MUD FLUO. **None**

CUTTINGS ANALYSIS - TOTAL GAS - **None** METHANE - **None** ETHANE - **None** PROPANE - **None** BUTANE - **None**  
CUTTINGS FLUO. - **None** COLOR - **None** INTENSITY - **None** CUT - **None**

FORMATION DESCRIPTION: **SD: lt-med gry clr mxy med fgr sbmd slly silty mod-laly consol**

REMARKS: **Due to the high gas readings and the presence of heavy hydrocarbons this zone was given a show value of 15 and is probably productive.**

ENGINEER **R. Lee**

THE ANALYSTS **Schlumberger**