



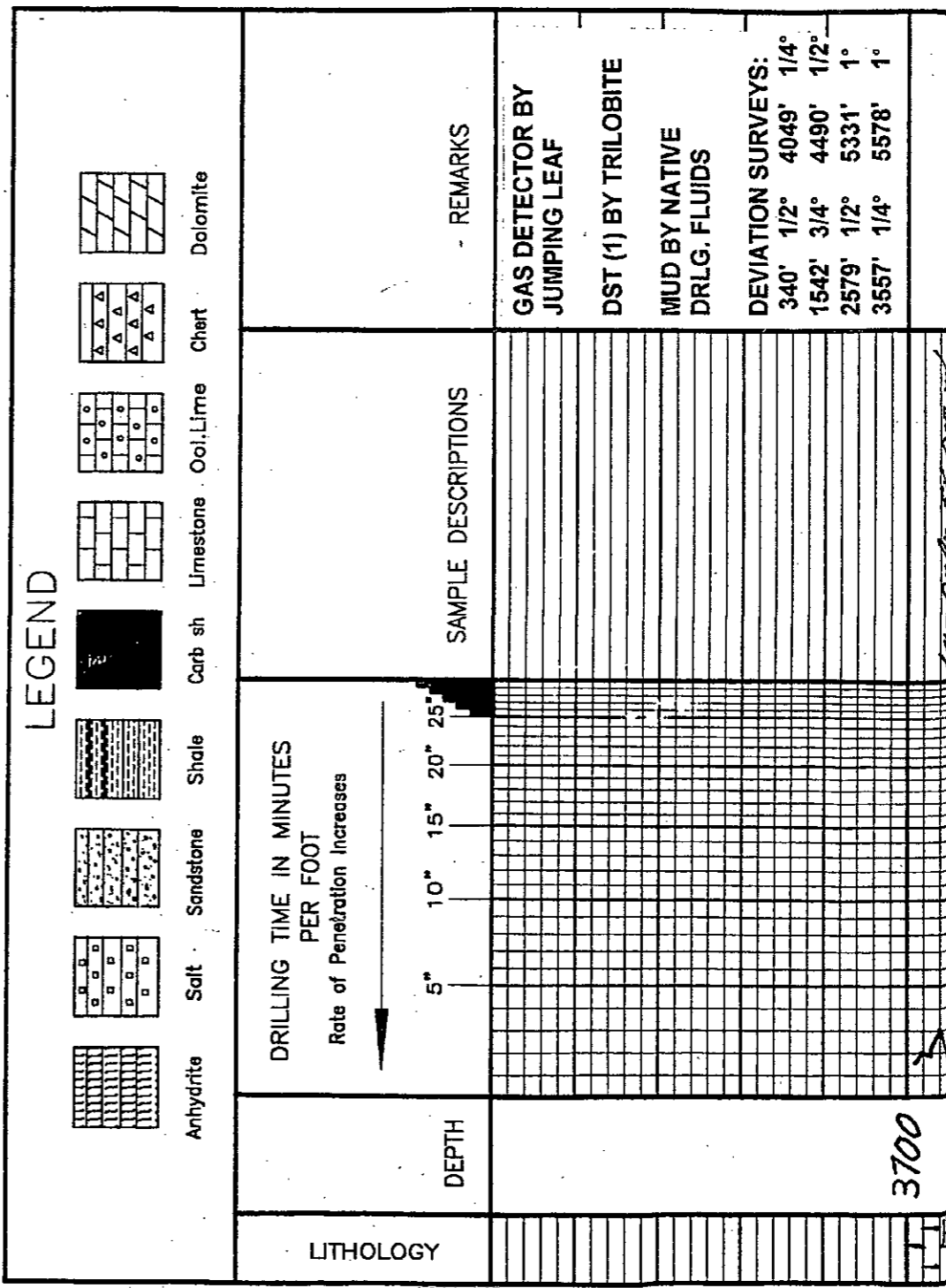
JERRY A. SMITH

CERTIFIED PETROLEUM GEOLOGIST

GEOLOGIST'S REPORT DRILLING TIME and SAMPLE LOG

COMPANY: CHIEFTAIN OIL CO., INC.		ELEVATIONS
LEASE: GILLIG #1		K.B. 1596
FIELD: AETNA GAS AREA		D.F.
LOCATION: 2240' FSL & 600' FEL		G.L. 1588
SEC. 33	TWSP. 34	RNG. 13 W
COUNTY: BARBER		STATE: KANSAS
		Measurements Are All From: KB
CONTRACTOR: FOSSIL DRLG. RIG #2		CASING
SPUD: 6/6/11	COMP. 6/17/11	SURFACE: 8 5/8" @ 333'
RTD. 5578	LTD. 5576	PRODUCTION: 5 1/2" @ 5570'
MUD UP: 3200	TYPE MUD: CHEMICAL	ELECTRICAL SURVEYS
API No. 15-007-23695		LOG-TECH: FDC-CNL, DIL
SAMPLES SAVED FROM: 3700'		TO: RTD
DRILLING TIME KEPT FROM: 3700'		TO: RTD
SAMPLES EXAMINED FROM: 3700'		TO: RTD
GEOLOGICAL SUPERVISION FROM: 3550'		TO: RTD
GEOLOGIST ON WELL: JERRY A. SMITH		

FORMATION TOPS	LOG	SAMPLES
ELGIN SAND	3771 (-2175)	3770 (-2174)
HEEBNER	3968 (-2372)	3970 (-2374)
LANSING	4173 (-2577)	4172 (-2576)
STARK	4624 (-3028)	4626 (-3030)
MISSISSIPPIAN	4837 (-3241)	4838 (-3242)
KINDERHOOK	5122 (-3526)	5122 (-3526)
VIOLA	5244 (-3648)	5247 (-3651)
SIMPSON SHALE	5346 (-3750)	5351 (-3755)
U. SIMPSON Ss	5367 (-3771)	5370 (-3774)
L. SIMPSON Ss	5488 (-3892)	5492 (-3896)
ARBUCKLE	5537 (-3941)	5539 (-3943)



20
40
60
80
20
40
60
80
20
40

30 UGK

27 UGK

28 UGK

35 UGK

3800

3900

Freedom SM - 14 - DR BY
BY - GRN. SURY IN PT.
w/ SCAR 14 - DR BY FX
DSE LM.

SH & SCAR LM - AA.

SM - DR BY, w/ LM - GRN. LR
IN FX. DSE. SUB - CHRY
IN PT.

SM - AA w/ SCAR Sp - LR
BY - GRN - GRN. V.F.C.
W.R.D. W. SR. T.F.E. M.G.

SM - M - DR BY SURY IN
FX. SCAR GRN. LR TO LM.
FX. DSE. TA T.F.E. SO - AA.

SO - LR - 14 BY BY - GRN.
V.F.C. W.R.D. W. SR.
M.G. T.F.E. T.F.E. T.F.E.
No live snobs.

SO - AA w/ FEW PAYS LR
BY - GRN. F.C. W.R.D.
W. SR. M.G. T.F.E. W. SR.
DR. T.F.E. T.F.E. T.F.E.
DEAD FLAKY. DR. T.F.E.
SCAR DR BY SR.

SO - w/ SCAR DR BY
SM - AA. No live snobs.

SO & SM - AA.

SO & SM - AA.

SO & SM - AA.

Long LR BY - GRN. LR
M - DR BY. FX. DSE.
w/ HRD M - DR BY SM.

SM - M - DR BY. SO - M
BY - GRN. M.G. T.F.E. T.F.E.
M BY FX. DSE LM.

SO & SM - AA.

SO & SM - AA. w/ LR LR
BY. FX. DSE LM.

SO, SM, LM - AA.

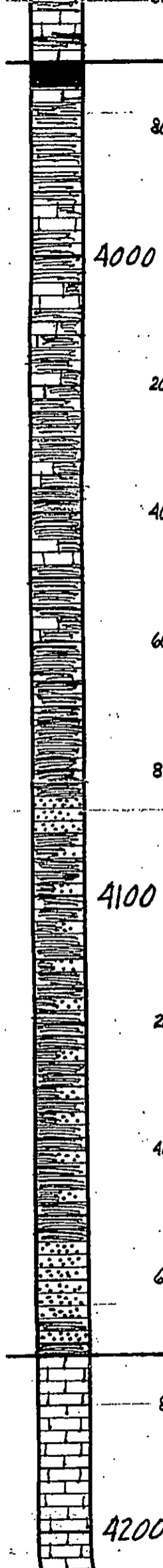
SO - LR BY. F.C. F.R. PR
M.G. T.F.E. M.G.

SO - LR - 14 BY BY - GRN.
F.C. W.R.D. W. SR.
BY M.G. T.F.E. w/ DR
BY SM.

SM - M - DR BY. FX.
DSE.

SM - DR BY. BIR CORR.

ELGIN SAND
3770 (-2174) SMPL
3771 (-2175) LOG



40 UGK

40 UGK

4000

4100

4200

SH - BLK, CARB.
 LM - M. BY. FX. DSE.
 SH - BLK, CARB.
 LM - M. DR. BY. FX. DSE.
 SH - DR. BY. BY - GN. BAK.
 SH - AA.
 SH - AA.
 SH - DR. BY. BY - GN.
 SH - AA.
 SH - AA. Silt in P.
 SH - M. DR. BY. Silt
 & Silt in P. BY. BY - GN. VEG. MIC. TYPE.
 SH, Silt, FINE SD - AA.
 SH, Silt, SD - AA.
 SH, Silt, SD - AA.
 FREDON SILT & SD - LF BY BY - GN. VEG. MIC. TYPE.
 SD - LF - M. BY. BY - GN. FG. W/DR. V. SBT. MAC. FIB IN LN. NS. DR. LN - LF - M. BY. FX. DSE.
 LN - GRM, LF - M. BY. FX. DSE.
 LN - GRM, LF - M. BY. FX. DSE.

HEEBNER
 3970 (-2374) SMPL
 3968 (-2372) LOG

MUD @ 4018':
 9.3 WT, 50 VIS, 9.4 FILT,
 5000 CHLOR, 0# LCM

LANSING
 4172 (-2576) SMPL
 4173 (-2577) LOG

Bik. Calc. In PT

SH - AA w/ SCAR M BY
FX, DSE 200.

SH - DK BY, CR-BN

LM - DK BY, FX, DSE, HD.

LM - LF - M BY, FX,
SPSLY MASS, DSE.

SH - DK BY, CR-BN, TR BLK
SH.

LM - LF - M BY, FX, DSE.

LM - LF - M BY, FX, DSE.
w/ ADD SH - LF - M - DK
BY, CR, TR, RD SH.

LM - LF - M - DK BY, CR, TR
BY SH.

LM - LF - SCAR SH - AA.

LM - AA in Dolo LM - M BY
FX, DSE, FR CORR.

Dolo LM - M - DK BY, FX
FR SCAR, VBY D, CR CORR.
FR SH TR FG.

Dolo - BY - BRN, FX, SUGAR
FR CORR, DSE, No VIS D,
FR - FR CORR.

Dolo - BY - BRN, FX, SUGAR
FR CORR, DSE, No VIS D, AS.

Dolo LM / LM Dolo - M -
DK BY, CR - CR, CR - BRN
FX, DSE, SUGAR IN PT

Dolo LM / LM Dolo - AA.

Dolo LM / LM Dolo - AA.

4800

MUD @ 4802':
9.3 WT, 54 VIS, 8.0 FILT,
4500 CHLOR, 1# LCM

MISSISSIPPIAN
4838 (-3242) SMPL
4837 (-3241) LOG

55 UGK

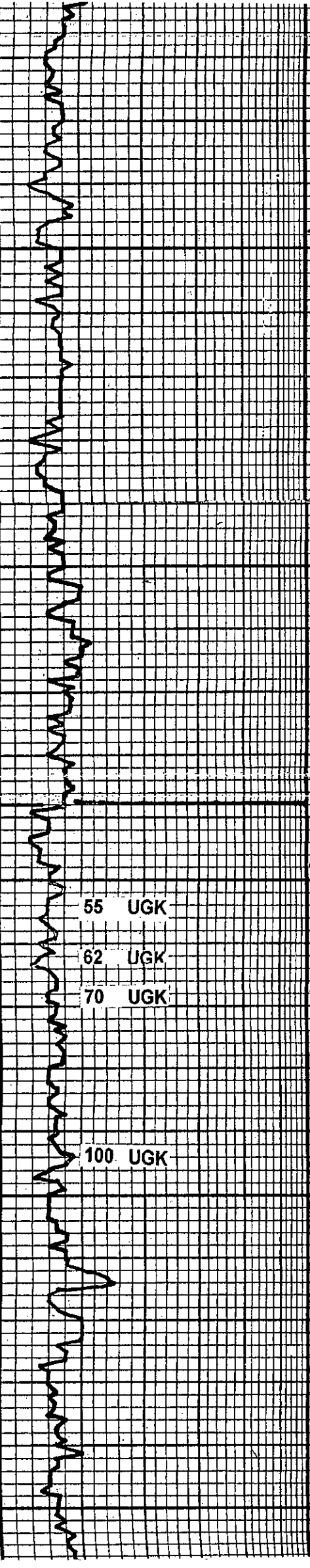
62 UGK

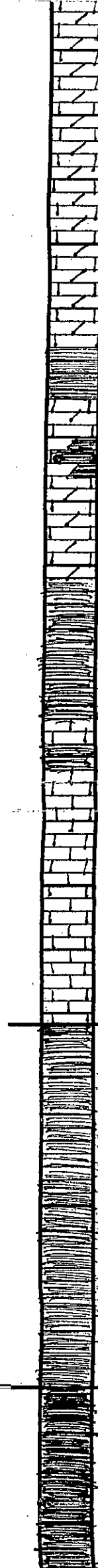
70 UGK

100 UGK

4900

20
40
60
80
20
40
60
80
20
40





5000

5100

5200

80

20

40

60

80

20

40

60

80

80 UGK
100 UGK

100+ UGK

70 UGK

Dgn Lm/Lm Dgn-AA

*Dgn Lm/Lm Dgn-M-DK
Gy (Gy-Gy) Gy-BRN FX
DSE*

*Dgn Lm/Lm Dgn-M-DK
DK Gy FX DSE JURY
IN PT*

*Dgn Lm/Lm Dgn-AA
SH-M-DK Gy BK
Gy BK*

*Lm-Lr Gy Lr Tr FX
DSE*

SH-M-DK Gy BK

*PRDGM SH-M-DK Gy
Gy-BRN GAG Lr PR
SCAT Gy, MIA SEAT*

*Lm-Gy Lr-M Gy
FX DSE SUB-CHK
IN PT*

Lm-AA

*Lm-Lr-M Gy FX
DSE IN TR W/LKX
Lm BECOMING V SHLY*

*PRDGM SH-M-DK Gy
Gy-BRN SCAT-RD SH*

*SH-M-DK Gy-BK
Gy-RD SH*

SH-AA

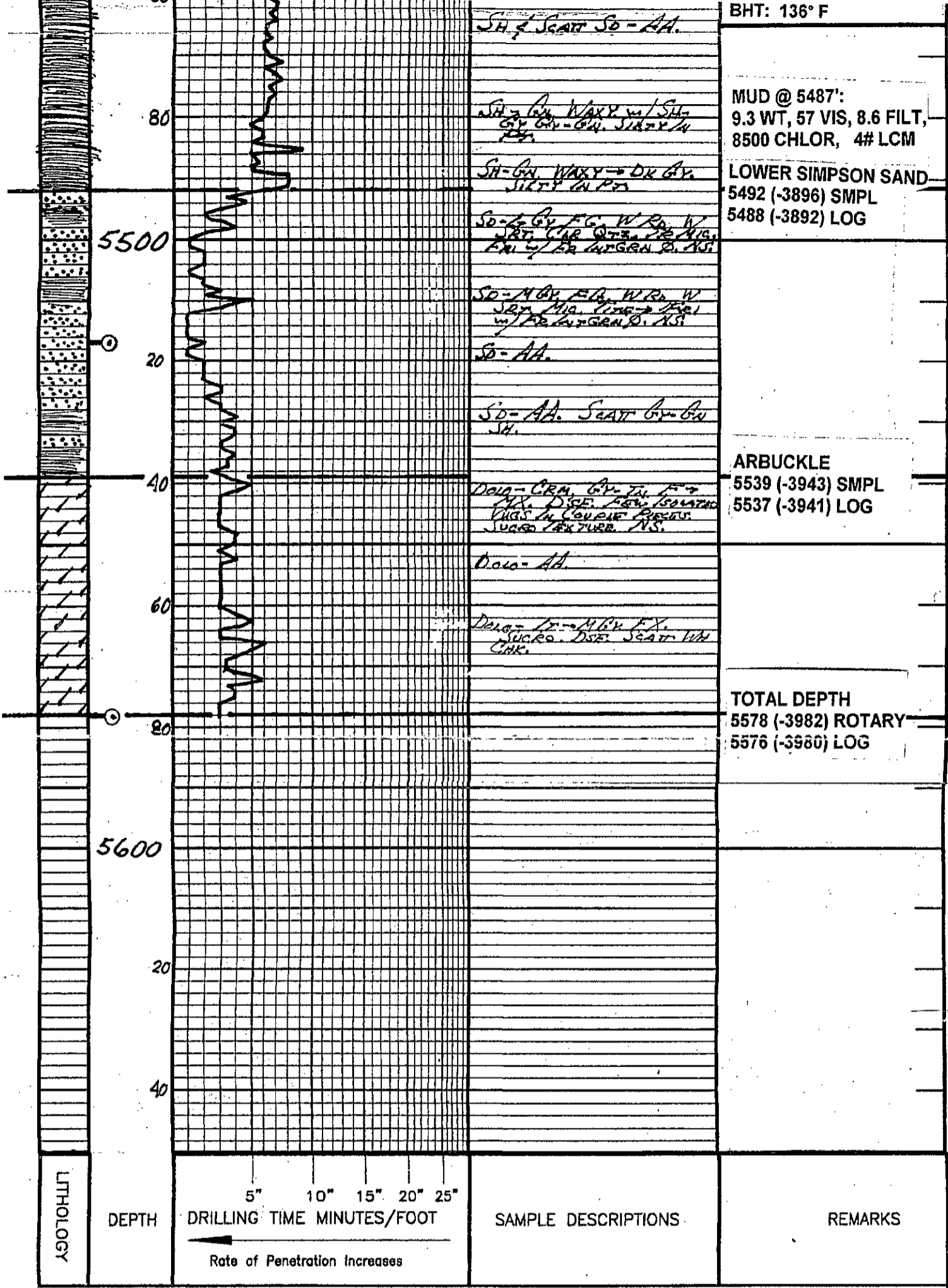
SH-M Gy-DK Gy-BK

*SH-DK Gy-BK-Gy
BRN GRAY IN TR RARE
FAVOR SPGR*

MUD @ 5085':
9.2 WT, 60 VIS, 8.8 FILT,
3500 CHLOR, 4# LCM

KINDERHOOK
5122 (-3526) SMPL & LOG

CHATTANOOGA
5179 (-3583) SMPL
5176 (-3580) LOG



COMPANY CHIEFTAIN OIL CO., INC.		ELEVATION 1596 KB	
LEASE GILLIG #1			
LOCATION 2240' FSL & 600' FEL	SEC 33	TWP 34	RGE 13W
COUNTY BARBER	STATE KS		