SHELL OIL CO.

FORMATION & HYDROCARBON LOGGING RECORD

COMPANY SHELL OIL COMPANY.
WELL OCS P-0275-1ET. FIELD TILLAMOOK AREA.
COUNTY OFFSHORE. STATE OREGON.
ELEV. R.T. AT MLLW TO OCEAN FLOOR 538'. WATER DEPTH AT MLLW 460'
LOCATION 5992'FSL and 1258' FEL of Blk 57N and 65W Oregon Map #1
LOGGING ENGINEERS R. IANO, R. MINER, T. WILLIAMS, (GEOLOGIC ENGINEERING SERVICE).
TYPE UNIT HED - 4.

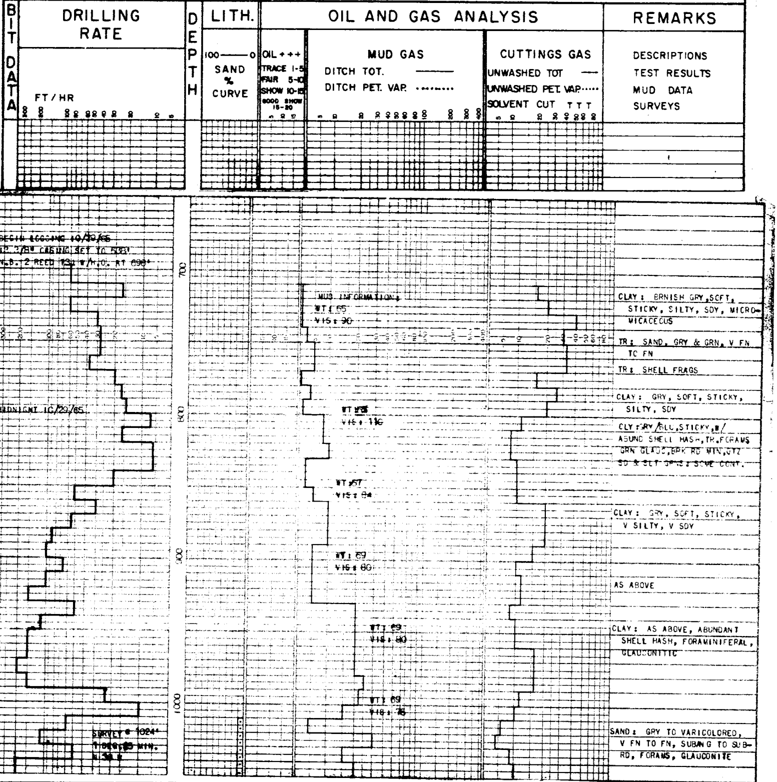
LEGEND

ABBREVIATIONS

NB	NEW BIT
NCB	NEW CORE BIT
CO	CIRCULATED OUT
DST	DRILL STEM TEST
LAT	LOGGED AFTER TRIP
TG	TRIP GAS
CG	CONNECTION GAS
PR	POOR RETURNS
NR	NO RETURNS
W	WEIGHT OF MUD
CK	FILTER CAKE
V	VISCOSITY, API SECONDS
F	FILTRATE, API cc's
S	SALINITY, ppmCl
	RESISTIVITY, OHM-METER
Rm	MUD
Rmc	MUD CAKE
Rmf	MUD FILTRATE

LITHOLOGY

SHALE, CLAY	☐
SILTY SHALE	⧅
SILTSTONE	⧅
SDY SILTST	☒
SAND	⊡
CHERT	▣
CONGLOMERATE	⊡
	☐
LIMESTONE	▣
DOLOMITE	▣
GYPSUM or ANHYDRITE	▣
SALT	☒
COAL	■
GRANITE	⊞
VOLCANICS	▣
	☐



CLAY: BRNISH GRY, SOFT, STICKY, SILTY, SDY, MICRO-MICACEOUS

TR: SAND, GRY & GRN, V FN TO FN

TR: SHELL FRAGS

CLAY: GRY, SOFT, STICKY, SILTY, SDY

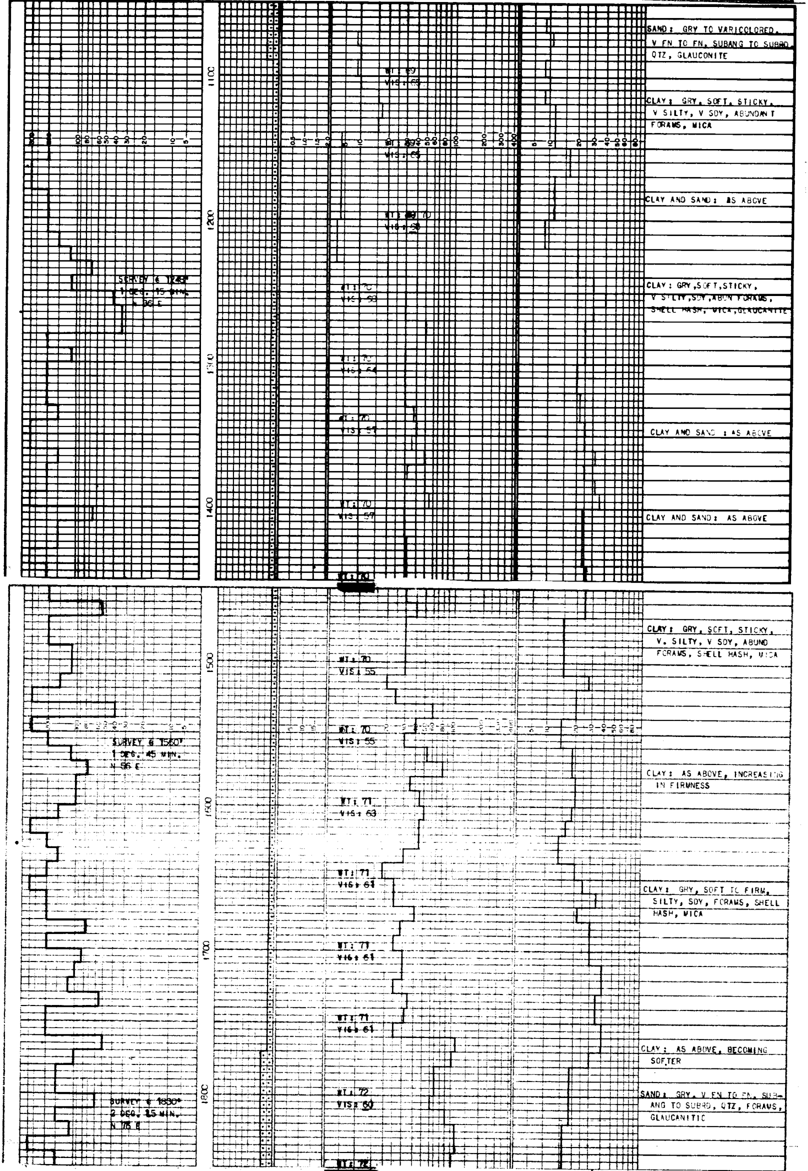
CLY: GRY/BLU, STICKY, W/ ABUND SHELL HASH, TR. FORAMS GRN GLAUC, BRK RD MIN, QTZ SD & SLT GRNS; SOME CONT.

CLAY: GRY, SOFT, STICKY, V SILTY, V SDY

AS ABOVE

CLAY: AS ABOVE, ABUNDANT SHELL HASH, FORAMINIFERAL, GLAUCONITIC

SAND: GRY TO VARICOLORED, V FN TO FN, SUBANG TO SUB-RD, FORAMS, GLAUCONITE



SAND: GRY TO VARICOLORED, V FN TO FN, SUBANG TO SUBRD, QTZ, GLAUCONITE

CLAY: GRY, SOFT, STICKY, V SILTY, V SDY, ABUNDANT FORAMS, MICA

CLAY AND SAND: AS ABOVE

SURVEY @ 1243'
1 DEG. 15 MIN.
N 36 E

CLAY: GRY, SOFT, STICKY, V SILTY, SDY, ABUN FORAMS, SHELL HASH, MICA, GLAUCANITE

CLAY AND SAND: AS ABOVE

CLAY AND SAND: AS ABOVE

CLAY: GRY, SOFT, STICKY, V. SILTY, V SDY, ABUND FORAMS, SHELL HASH, MICA

SURVEY @ 1560'
1 DEG. 45 MIN.
N 56 E

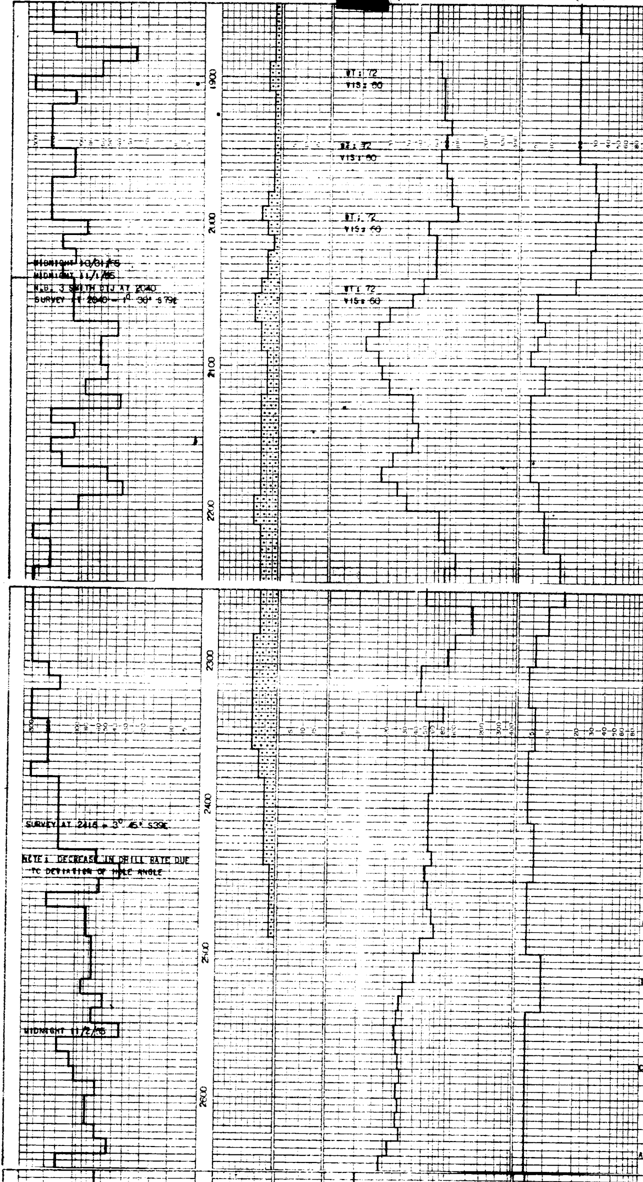
CLAY: AS ABOVE, INCREASING IN FIRMNESS

CLAY: GRY, SOFT TO FIRM, SILTY, SDY, FORAMS, SHELL HASH, MICA

CLAY: AS ABOVE, BECOMING SOFTER

SAND: GRY, V FN TO FN, SUBANG TO SUBRD, QTZ, FORAMS, GLAUCANITIC

SURVEY @ 1830'
2 DEG. 15 MIN.
N 76 E



MIDNIGHT 10/31/85
MIDNIGHT 11/1/85
N.B. 3 SMITH DTJ AT 2040
SURVEY AT 2040 - 1° 30' S79E

SURVEY AT 2416 - 3° 45' S39E

NOTE: DECREASE IN DRILL RATE DUE TO DEVIATION OF HOLE ANGLE

MIDNIGHT 11/2/85

TR: SILTSTONE, LT TO MED BRN, MOD FIRM, MICROMICA

CLAY: GRY, SOFT, STICKY, V SILTY, V SDY, FORAMS

TR: SILTSTONE, AS ABOVE

SAND, GRY, V FN, ANG, QTZ, GLAUCANITIC, FORAMS, MICA

CLAY: AS ABOVE, BECOMING FIRMER, V SDY

SAND: GRY TO VARICOLORED, V FN TO FN, SUBANG TO SUBRD, PRED QTZ

TR: SHELL FRAGS, FORAMS

CLAY: GRY, SOFT, V SILTY, V SDY, SOLUBLE

TR: TUFFACEOUS SANDSTONE FRAGS, FN TO MED, HD

WT: 71 VIS: 46

AS ABOVE, OCC. TR. TUFF, TAN, HD, TR: QTZITIC FRAGS

SAND: GRY V FN TO FN, ANG TO SUBANG, QTZ

ST TR: SHELL FRAGS, FORAMS

CLAY AND SAND: AS ABOVE, W/TR: FORAMS, MEGAFOSSILS

WT: 71 VIS: 46

SAND: GRY, V FN TO FN, ANG TO SUBANG, QTZ

ST TR: SHELL FRAGS

TR: SANDSTONE, TAN, TUFFACECUS, POORLY SORTED AND ABUNDANT FORAMS OCCASIONAL PYRITIZED FORAM

WT: 71 VIS: 46

CLAY: GRY, SOFT, SILTY, SDY, SOLUBLE

AS ABOVE

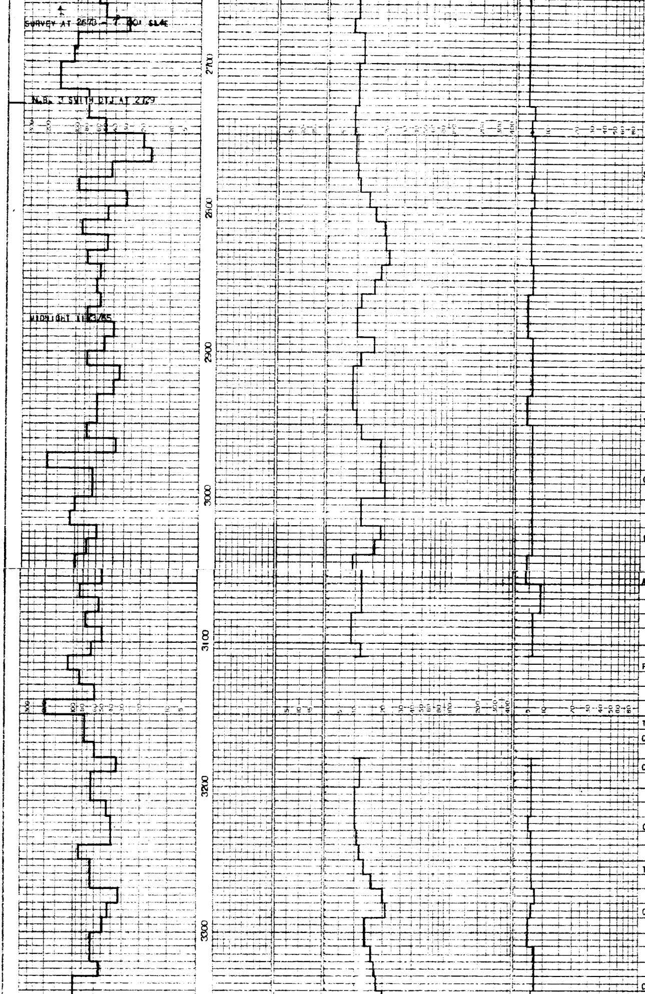
WT: 72 VIS: 57

TR: TUFFACEOUS SANDSTONE, TAN, HD, W/IMBEDDED SHELL FRAGS

CLAY: AS ABOVE, BECOMING STICKY

WT: 72 VIS: 57

AS ABOVE



CLAY: GRY, SOFT, STICKY, SDY, SILTY, SOLUBLE

TR: SILTSTONE, GRY, HD

WT: 74 VIS: 52

ST TR: DK GRY CLASTIC FRAGS AND SHELL FRAGS

WT: 76 VIS: 50

CLAY: GRY, SOFT, STICKY, SOLUBLE

WT: 76 VIS: 50

TR: TAN, HD, CLAYSTONE CHIPS

CLAY: AS ABOVE

LARGE FRAGS OF TAN, FIRM, SILTSTONE SLOUGHING IN

ABUNDANT SLOUGH MATERIAL. FRAGS OF TAN, FIRM, SILTST

WT: 78 VIS: 53

PULLED AGITATOR OUT OF DITCH TO CLEAN DITCH OF SLOUGH MATERIAL

TR: FORAMS

CLAY: AS ABOVE, BECOMING V SDY

CLAY: LT GRY BRN, SOFT, STICKY, SILTY, SDY, SOLUBLE,

CLAY: LT GRY BRN, SOFT, STICKY, SILTY, SOL.

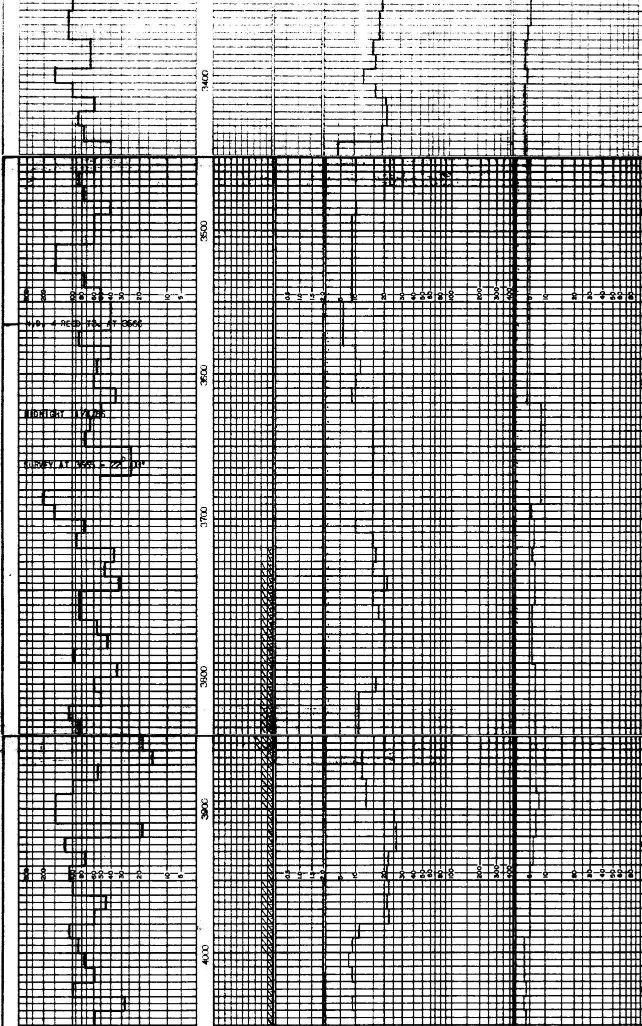
TRC. MEGAFOS. FRAGS.

CLAY: GRY-LT GRY, SOFT, STICKY, SOL.

WT. 79 VIS: 58

Rw 0.44 @ 71°

CLAY: AS ABOVE BECOMING



MORE SILTY

CLAY: GRY-LT GRY, STICKY, SOFT, V.SOL.

WT. 79 VIS: 51

TR: SHELL FRAGS

CLAY: AS ABOVE, VY SOLUBLE

CLAY: LT GRY BRN, SOFT, STICKY, SILTY, SDY, SOLUBLE

ST TR: SILTSTONE, TAN, FIRM

WT: 78 VIS: 47

CLAY: AS ABOVE, ST TR OF SILTSTONE AS ABOVE

CLAY: LT GRY-LT GRY BRN, SOFT, SOL, SL. BENT.

WT. 76.5 VIS: 47

STR. TRC OF PYRITE

WT: 77 VIS: 50

SILTSTN: GRY-LT GRY BRN, SDY-SILTY., FIRM, MICRO-MIC

RM 0.39.0 @ 77°

SILTSTONE: MED GRY BRN, FIRM

SDY, MICROMICACEOUS

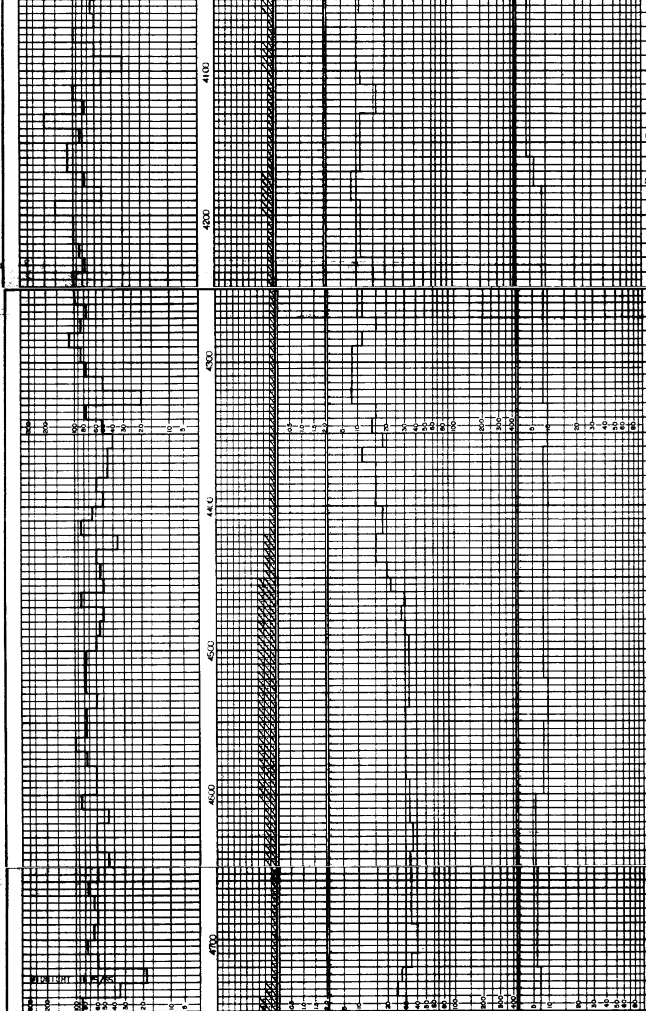
WT: 77 VIS: 47

CLAY: GRY TO LT GRY BRN, SOFT, STICKY, SLI SDY, SOLUBLE

WT: 76 VIS: 47

CLAY AND SILTSTONE: AS ABOVE

TR: SHELL FRAGS



WT: 77 VIS: 47

CLAY: LT GRY BRN, SOFT,
STICKY, SILTY, SDY, SOLUBL

SILTSTONE: MED GRY BRN,
FIRM, SDY

WT: 76½ VIS: 53

CLAY: LT GRY BRN, SOFT,
STICKY, SILTY-SDY, SOL.

WT. 76.5 VIS: 53

CLAY: LT GRY BRN, SOFT,
STICKY, SILTY-SDY, SOL.

SILTSTN: MED GRY BRN, FIRM,
SDY.

WT. 76.5 VIS: 53
Rw 0.460 @ 77°

SILTSTN: MED BRN-LT GRY BRN,
SDY.

SILTSTN. A/A. V.SDY.

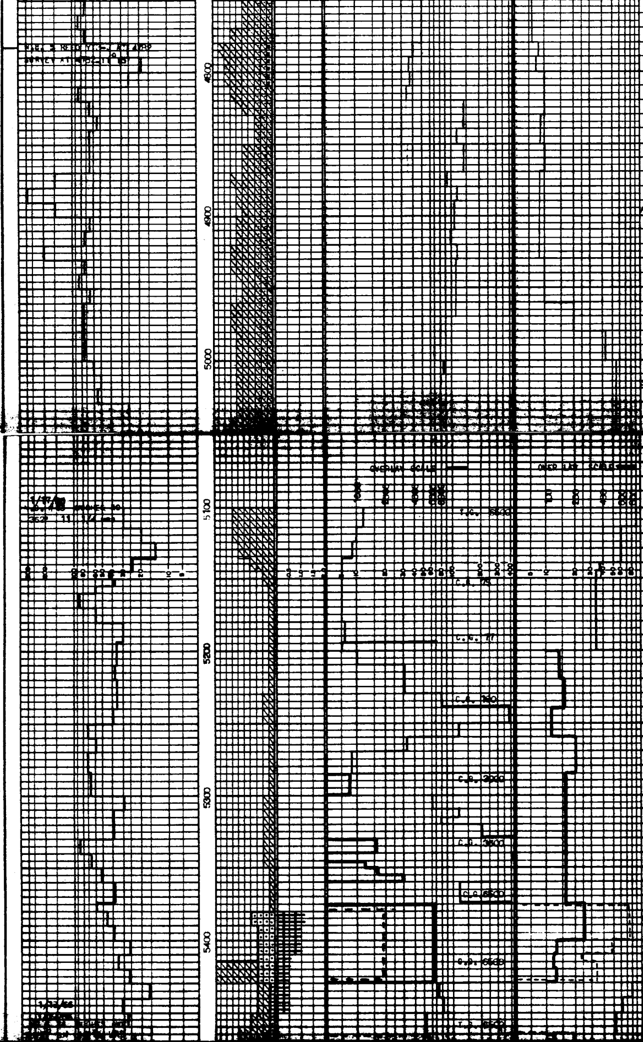
CLAY: LT GRY BRN, SOFT, STICK
STICKY, SDY, SOL.

WT. 77 VIS: 48

SILTSTN: GRY-LT GRY, FIRM,
SDY.

SILTSTN: GRY-LT GRY, FIRM,
SL. SDY, SL. CALC.

CLAY: LT GRY, SL. BENT.,
SOFT, STICKY
SILTSTN: GRY-LT GRY BRN,
FIRM, LIMY, MICRO-MICA



CCC. TRC TUFFACEOUS MATERIAL

WT. 77 VIS: 50

W.L. 2.5 F.C. 2/32

SAL 2400 G/G NACL

STR TRC TUFFACEOUS MATERIAL AND PYRITE

GRY-LT GRY, SL. BENT. CLY. SOFT, SOL., STICKY.

STR. TRC TUFFACEOUS SS & PYRITIZED SS.

AS ABOVE

WT. 74 VIS 49

STR. TRC PYRITE & WHT. DENSE TUFFACEOUS MATERIAL

TRC TAR STN'D PYRITE & SILTSTN.

HOLE SLOUGHING IN, CIRCULATING AND BUILDING MUD WT.

WT: 84 VIS: 123

SILTSTONE: GRY BRN TO MED BRN, MOD FIRM TO FIRM, SDY, MICROMICA IN PART

CLAY: GRY, SILTY, SOFT, SOL

SILST: GRY BRN, BRN GRY, SL SDY, VERY GLAUCONITIC, ABUND OF FORAMS, WELL CEMENTED, TR LIMESTONE & MICA LAMINATIONS

CLAY: GRY, SL. SILTY, MOD STICKY, SOFT

CLAY, LT GRY, SILTY, MOD PLASTIC, VERY SOFT

TRACE SHELL FRAGMENTS

SILTST: GRY, GRY BRN, SDY SL GLAUCONITIC, W/S BUFF SDY SILTST

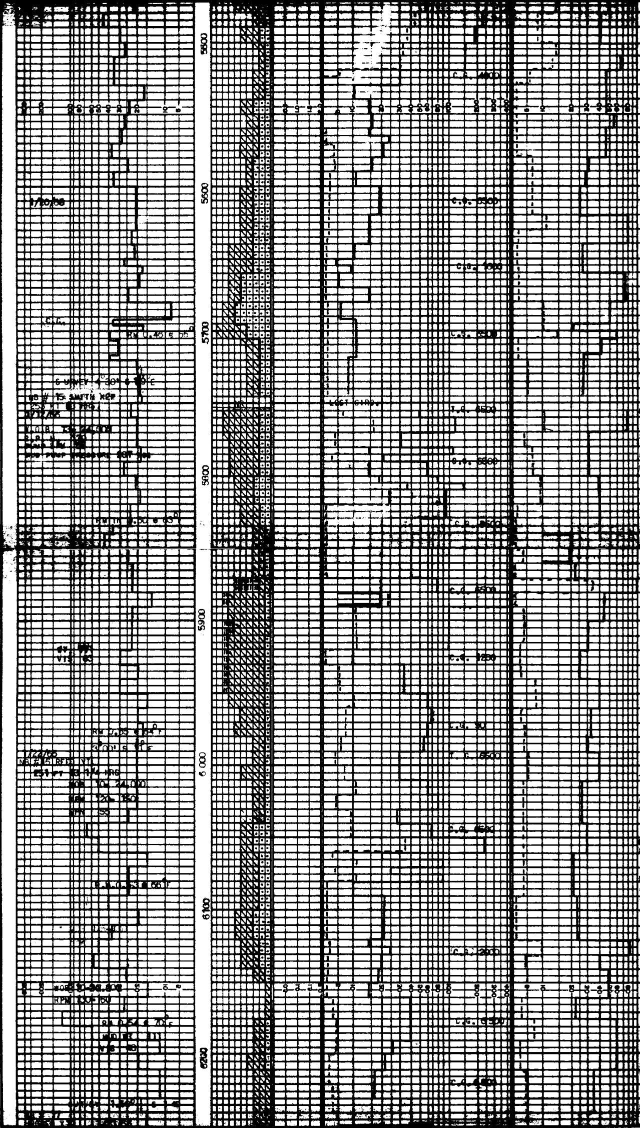
SD, GRN, GLAUCONITE GRAINS V COARSE, SUB RND, PROBABLY CONDENSATE, GRN WHITE TO WHITE YELO CUT FLUOR.

SS: GRY GRN, GRN, POORLY SORTED, CHLORITIC, GLAUC. TRACE TUFFACEOUS SS

CLAY, GRY, STICKY, BENTONIT

SOFT, SOLUBLE, ABUND CALC

CLAY W/ SLT. INCR SLSTN



BRN, SDY

NOTE: STR. TRC GASSY SMEL
ON DITCH WHEN CIRC. FOR
TRIP

SS, GRN, V.FN-FN-MED., ANG.,
POORLY SORTED SS

CLAY, GRY, SDY, BENT., SOFT,
STICKY, SOL.

SS., GRY GRN-GRN, FN-MED.,
ANG, POORLY SORTED, QTZ

CLAY, DK BRN, MOD PLASTIC,
STICKY, SILTY.

SILTSTN , DK BRN, SDY, DENSE
HD.

SS, LT GRY, V/FN, V.WELL CEM
V.FN-FN, WELL RDD QTZ

SS, LT GRY-LT BRNISH GRY,
GRNISH GRY, CALC, V. POORLY
SORTED, DENSE, FIRMLY CON-
SOLIDATED, SL. CHLORITIC.

SILTSTN: DK BRN, V. SDY,
V. FIRM, LIMY

SD, LT GRY-WHT, V. FN, POOR-
LY SORTED W/QTZ . ABUND.
CALCITE CEMENT.

NOTE: DITCH GAS OFF-SCALE
45 MIN. MUD WT. DROP TO 82.

SS: QTZ, CALC, TUFFACEOUS
SILST: MED GRY BRN- PINK BRN
FIRM TO SOFT ***CLAY LT GRY
FAIRLY STICKY SOME MICROPYRTE

SS: GRAY, MED-FN, ANG-SUBRDD
FIRM-FRIABLE, QTZ, CALC.
CEMENTATION. STR. TRC.
[illegible]
CLAY: BRY-GRY WHT, [illegible]

SILTSTN: MED DK GRY [illegible]
FIRM, LIMY

ABUND TUFFACEOUS SEDIMENT &
VOLCANICS. TUFF: WHT-VARI-
COL., HD-SOFT W/S SL ALTER-
ED

STR TRC GLAUCONITE & CALCITE

OCC TRC COAL FRAGS

SILTSTN: PRED. DK BRN - LA-
VENDER BRN, FIRM-HARD, CALC
SDY-SILTY, MICROMICA W/OCC
TRC TUFFACEOUS SILTSTN

CLAY: GRY WHT, SOFT, BENT.,
STICKY.

TUFFACEOUS SILST,PREDOMINATE
BROWNS, DRK, PURPLISH,BRN

ABUNDANCE CALCITE&GLAUCONITE
VUGS FILLED WITH CALC MATERIAL

CLAY, DRK BRN , SILTY,SL PL-
ASTIC

SS: BRN GRY , CALC, FINE, VERY
WELL CEMENTED, SILTY, HARD

SILST:DRK BRN,GREY,UNIFORM,
ASHY,CARBONIFEROUS.
CLAY,GREY-OLIVE, STICKY

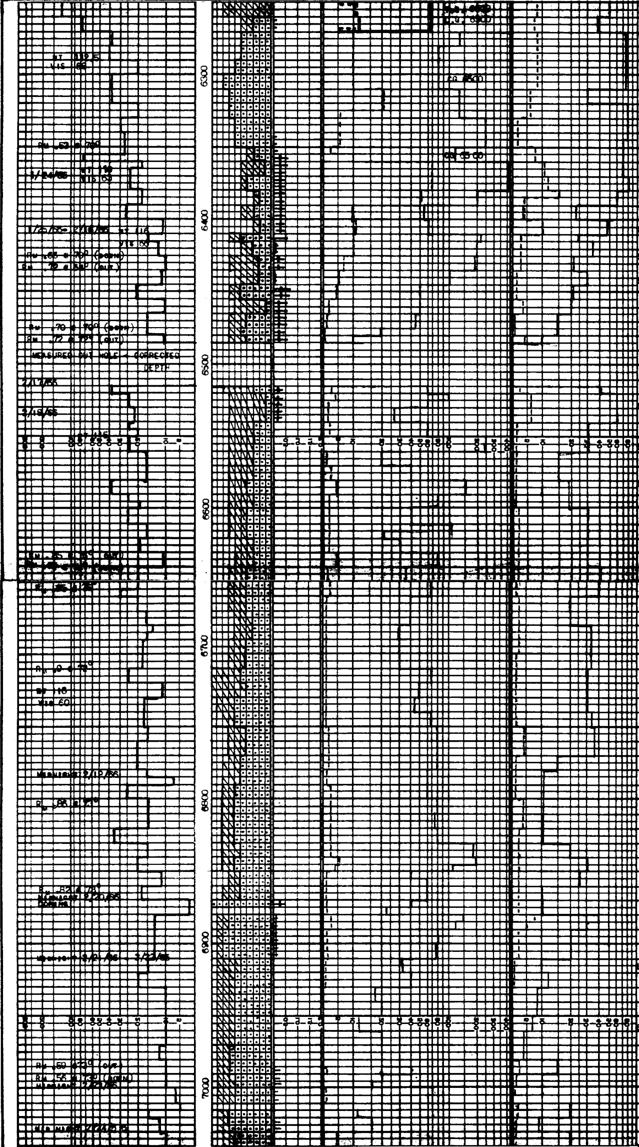
SD,LT GRY,QTZITIC, ABUND CALC
ITE, COMMON PYRITE& GLAUCONIT
SILST: DRK BRN GRY, UNIFORM
ASHY, TUFFACEOUS, CARBONACEOU
CLAY,GRY OLIVE STICKY

CLAY, GRY OLIVE , STICKY

SILST:DRK GRYBRN,W/LAVENDER
TUFFACEOUS, CARBONACEOUS,FIRM
TO FRIABLE,

SAND: LT GRY,CALC, INTERMIXED
W/TUFF DRK BRN MATERIAL,GLAUC
CALCITE VEINS

SILST: TUFFACEOUS DRK GRY
BRN ,FIRM -FRIABLE, ASHY SOFT



SILST IS PROBABLY SLOUGH.
CLAY: LT GRY WHITE, VERY SDY
W/COLUONE, GRITTY VOLCANIC
ASH

SAND, CLEAR & MILKY QTZ,V/FN
TO FN.,SUB RND WITH SOME SS
FRAG GRY WHT CALC

CLAY, GRY WHITE, V/SDY, SOL

SAND, CLEAR & MILKY QTZ, V/
FINE TO FINE ANG LOOSE GRAINS
IN SOFT CLAYEY MATRIX,SOME
OIL SHOWS PROB CONTAMINATION
DULL YELO BRN,,DRK BRN OIL
SAT.IN BENTONITIC SS.DK BRN
BLK VIS CUT PROB DUE TO SOTE
A FEW FRAG OF CONGLOMERATIC
TUFF CONTAIN A YELO OIL FLUO
ON FRESH PARTS & ABLUWHTE CU
FLUOR

CLAY MED BRN GRAY, STICKY.

SILT: BRN W/ LAVENDER HUE,
FIRM, SOME DIRTY OCHRE BRN.
SAND: MOD WELL SORTED, FINE,
LOOSE GRAINED QTZ, SOME GLAU
AND BLK MINERALS. ABUN CALCITE
FRAGS, SOME MOD SOFT.
FREE OIL: VIGOROUS STIRING
GIVES SLI POPS, 50% SURFACE
GIVES YEL FLUOR.

SILTSTONE: DK REDDISH BRN.
SLI PURPLE CAST, FIRM.

SAND AND SDST: BRNISH GRAY,
V FN-MED,SILTY, POORLY SORT
PREDOM QTZ, CALC CEMENTED.
CLAY: MED TO DK GRY BRN, SOFT
SILTSTONE: DK REDDISH BRN,
SDY, FIRM, BRITTLE.
SAND AND SDST: MED BRNISH GRY
V FN-MED, SILTY, POORLY SORT
SUBANG-SUBRD, QTZ, OCC GREEN
GRAINS, CALC CEMENT.

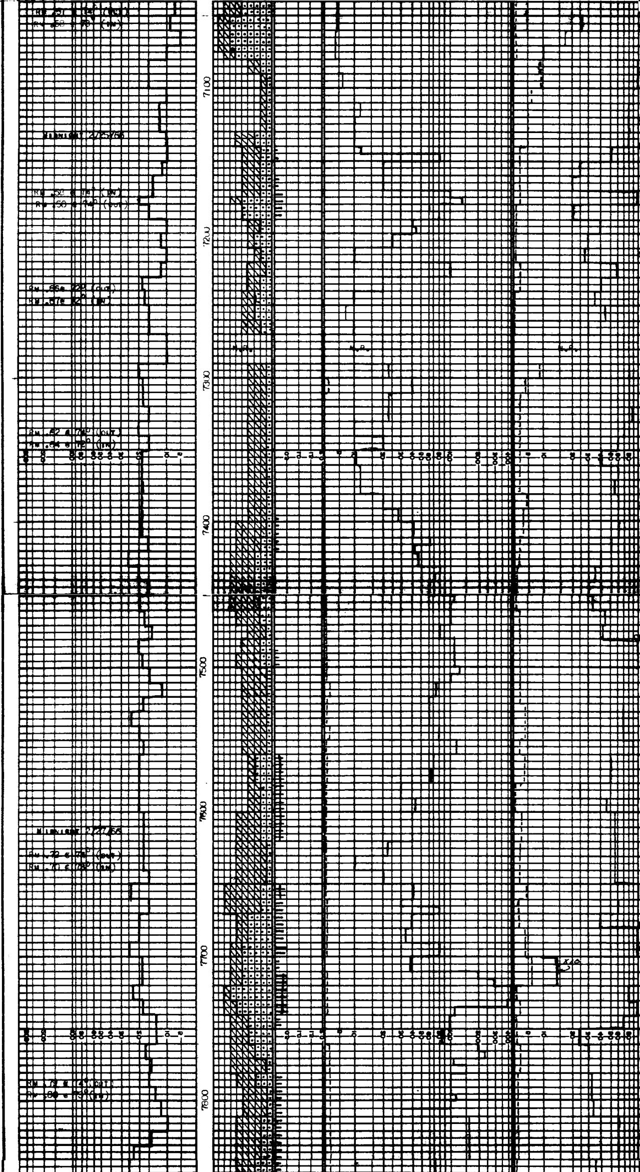
SANDSTONE,MED.GREY,VY F-CRS.
[illegible]
POORLY,SRTD,QTZ W/OCC.
VOL.GRAINS

SANDSTONE,MED.GREY,F-CRS,PRLY
SRTD,WELL CM'TD TO EASY
FRIABLE,CALC.CMT,SUBANG-
SUBRN'D,QTZ W/BIOTITE
FELDSPAR ALTERING TO
KAOLIN,TR. TUFF & OTHER
VOLCANICS,CLAYEY

SD,GREY,VY F-MED,MOD.SRTD,
SUBRND,PREDOM.QTZ,LESS
CLAY
CORE 1 6870-6901 REC.
SDST,MED,GREY,F-MED,SUBRN'D,
PRLY SRTD,W/CMTD TO FRI-
ABLE BIOTITIC QTZ,W/SHALE
FRAGS,FELDSPAR,BASALT GRNS.
SPOTTY FLUOR,PALE STRAW
CUT,SL.WHITE CUT FLUOR

SAND AND SDST: GRY TO GRY BRN
FN TO OCC CRS, SUBANG TO
SUBRD, POOR SORT, QTZ, FELD
SPATHIC GRNS, CALC CEMENT,
INTER KAOLINITE, OCC GLAU
SILTSTONE: DK BRNISH GRY, OCC
DK REDDISH BRN, SDY, V FIRM.

CORE 2 7000-7014 REC.5'
SDST,MED GREY,F-MED,PRLY
SRTD,SILTY,HD,DENSE,QTZ
IGNEOUS GRNS,W/SHALE
INCLUSIONS
SILTSTONE: DK REDDISH BRN,
SDY, V FIRM, MED BRN TO TAN



CLAYEY, OCC GLAUCONITIC.

SANDSTONE: GRY, FN TO MED, OCC CRS, CALC AND SIL CEMT.

CLAY: MED GRY, GRY BRN, SDY, STICKY, BENTONITIC.

CLAY: DK BRNISH GRY, SOFT, SILTY, OCC CALCITE GRN.

SILTSTONE: DK REDDISH BRN, SDY, MICACEOUS, HARD.

SAND AND SANDST: GRY, FN-MED, OCC CRS, POOR TO MOD SORT, SUBANG QTZ, CLAY AND CALCITE CEMENTED, ABUN CAL FL, ABUN LT GRY CLAY.

CLAY: DK BRNISH GRY, SLI CALC, SOFT, STICKY.

CLAY: LT GRY, BENTONITIC, ASHEY, SANDY.

CLAY: MED TO DK GRY W/ BRNISH CAST, SDY, SILTY.

CLAY: DK GRY BRN, SILTY, SOFT.

SILTSTONE: DK GRY BRN, SDY, MICACEOUS, FIRM.

SANDSTONE: GRY, FN-MED, SUBANG, POOR TO MOD SORTED, CALC AND SILT CEMENTED

CLAY: DK GRY BRN, SILTY, VERY STICKY.

SILTSTONE: DK BRN, SDY, CLAYEY

CLAY: AS ABOVE.

SAND: LT GRY, V FN-FN, OCC MED, ANG-SUBANG, CLAYEY, QTZ, DK GRNS. LT STRAW CUT, YG CF BLEEDS FROM ISOLATED GRAINS.

SILTSTONE: DK BRN, SDY, MICRO MICA, MOD FIRM, GY CF.

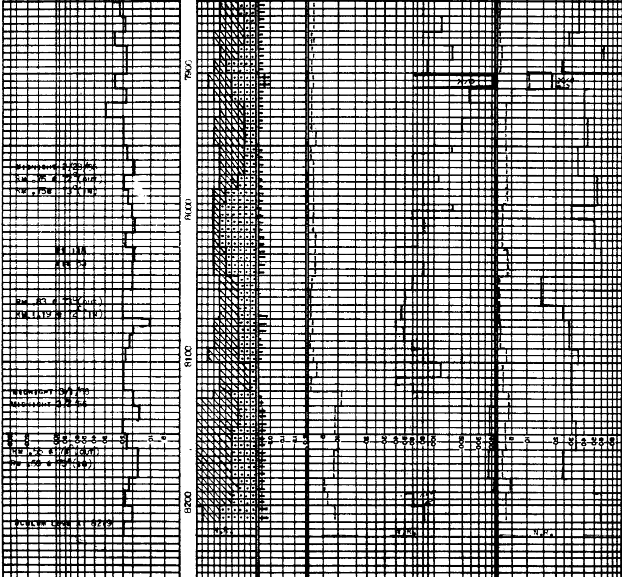
SAND: GRY, FN-MED, SUBANG, MOD SORT, KAOLONITIC, QTZ,

CLAY: LT TO MED GRY, KAOLONITE.

SAND AND SANDSTONE: GRY, V FN TO MED, POOR SORT, KAOLN. TR BLEEDING YG CF UPON CRUSHING.

CLAY: DK GRY BRN, BENTONITIC, VERY STICKY.

SILTSTONE: DK GRY BRN, MICROMICACEOUS, VY FIRM.



SILTSTONE: DK GRY BRN, SDY, VY FIRM.

CLAY: LT BUFF TO BRN, SILTY, SOFT, STICKY.

SAND: GRY, V FN - MED, PREDOM FN GR, ANG - SUBRD, QTZ.

SILTSTONE: MED TO DK GRY, SDY, FIRM.

CLAY: DK GRY BRN, STICKY, SOF .

SAND: LT GRY, V FN-MED, SUB-ANG, POOR-MOD SORT, PART CALC CEMENTED, KAOLONITIC, Q Z.

CLAY: LT GRY, KAOLONITIC, SD .

SAND: AS ABOVE.
CLAY: AS ABOVE.

BLEEDING YG CF FROM SS UPON CRUSHING.

SILTSTONE: DK GRY BRN, SDY, MICROMICACEOUS, FIRM.

SILTSTONE: DK GRY BRN, SDY, HARD, BRITTLE, FRACTURED.
CONDITION MUD FOR HIGH GAS
APPROX. 36 HOURS AT 8120

SANDSTONE: GRY, FN-MED, POOR TO MOD SORTED, PART CALC CEMENTED QTZ. ABUN MIN FL

SAND: LT GRY, V FN-MED, SUBRD, MOD SORT, KAOLONITIC, QTZ.

PULLED 8 STANDS BEFORE
BOTTOMS UP AT 8219