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EXPLORATION LOGGING

A GEOLOGICAL - ENGINEERING SERVICE CO.

COMPANY RESERVE OIL & GAS CO.
WELL ESMOND NO. 1
AREA LEBANON
LOCATION SEC.7, T12S, R1
COUNTY, STATE LINN CO. , OREGON
ELEV. G.L. 475′ K.B. 487′ D.F. ____

CASING RECORD

10 3/4″ AT 891′
AT
AT

REMARKS

CLAY BASE MUD
AGITATOR TYPE GAS TRAP

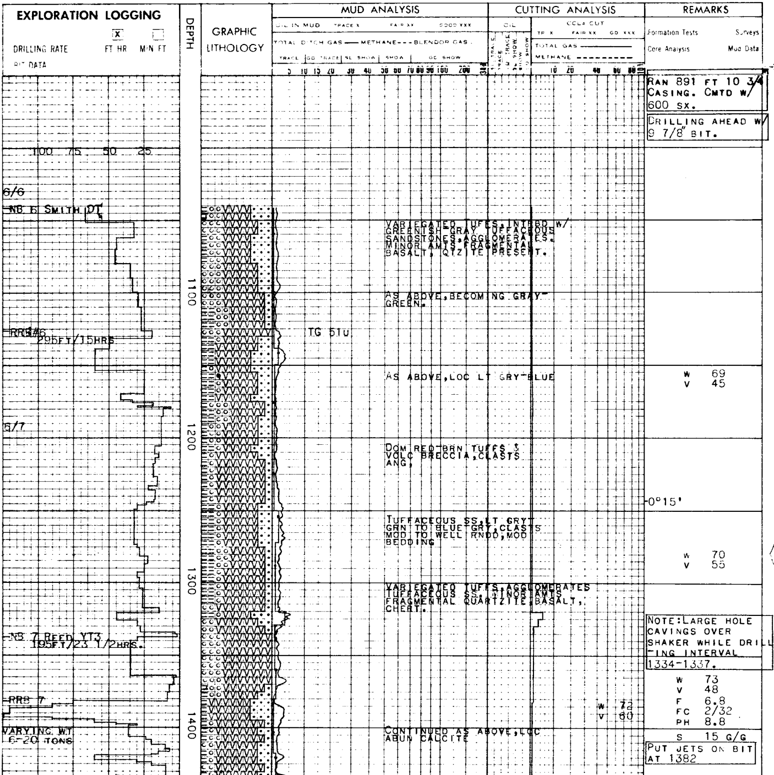
LEGEND

NB	NEW BIT	FC	FILTER CAKE		
RRB	RERUN BIT	F	MUD FILTRATE		cc 15 Min X cc 30 Min
CB	CORE BIT	S	SALINITY	X g g ppm	
WLCB	WIRE LINE CB	R	MUD RESISTIVITY		
NR	NO RETURNS	Rmf	MUD FILTRATE RESISTIVITY		
CR	CIRCULATE RETURNS	▮	CORE INTERVAL		
CG	CONNECTION GAS	[	DST INTERVAL		
TG	TRIP GAS				
DST	DRILL STEM TEST				
W	MUD WEIGHT				
V	MUD VISCOSITY				

LITHOLOGY LEGEND

Clay and Shale, Silty Shale, Siltst., Sandy Siltst., Sand, Conglomerate, Salt, L'mest., Chert, Volcanic, Intrusive, BASALT

DATE FROM 6/6/62 TO 9/6/62
DEPTH FROM 1041′ TO 8603′
UNIT NO. 11
GEO-ENGINEERS ARMSTRONG, WARD
CAHILL



RAN 891 FT 10 3/4 CASING. CMTD W/ 600 SX.

DRILLING AHEAD W/ 9 7/8″ BIT.

VARIEGATED TUFFS, INTRBD W/ GREENISH GRAY TUFFACEOUS SANDSTONES, AGGLOMERATES. MINOR AMTS FRAGMENTAL BASALT, QTZITE PRESENT.

AS ABOVE, BECOMING GRAY-GREEN.

AS ABOVE, LOC LT GRY-BLUE

W 69
V 45

DOM RED-BRN TUFFS & VOLC BRECCIA, CLASTS ANG,

0°15'

TUFFACEOUS SS, LT GRY-GRN TO BLUE GRY, CLASTS MOD TO WELL RNDD, MOD BEDDING

W 70
V 55

VARIEGATED TUFFS, AGGLOMERATES TUFFACEOUS SS. MINOR AMTS FRAGMENTAL QUARTZITE, BASALT, CHERT.

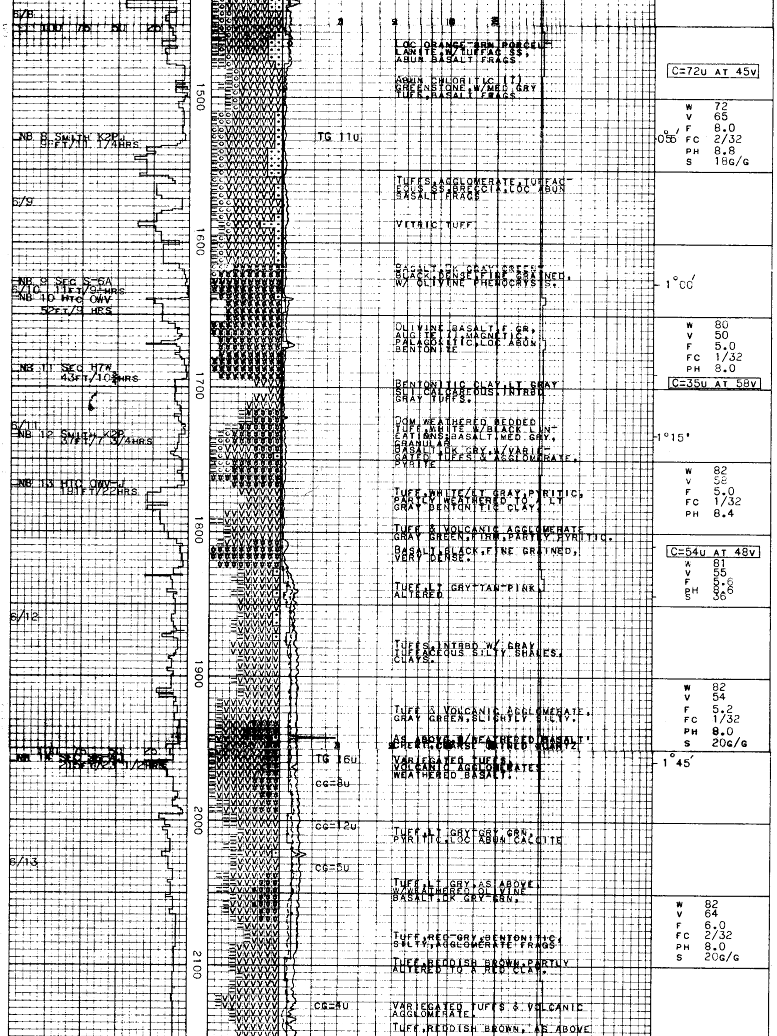
NOTE: LARGE HOLE CAVINGS OVER SHAKER WHILE DRILL-ING INTERVAL 1334-1337.

W 73
V 48
F 6.8
FC 2/32
PH 8.8
S 15 G/G

W 72
V 60

CONTINUED AS ABOVE, LOC ABUN CALCITE

PUT JETS ON BIT AT 1382



NB 8 SMITH K2PJ
9FT/11 1/4HRS

NB 9 SEC S-6A
11FT/9½HRS

NB 10 HTC OWV
52FT/9 HRS

NB 11 SEC H7W
43FT/10¾HRS

NB 12 SMITH K2P
37FT/7 3/4HRS

NB 13 HTC OWV-J
191FT/22HRS

NB 14 SEC [illegible]
[illegible]FT/23 1/2HRS

LOC ORANGE-BRN PORCELLANITE,W/TUFFAC SS, ABUN BASALT FRAGS

ABUN CHLORITIC (?) GREENSTONE,W/MED GRY TUFF,BASALT FRAGS

TUFFS,AGGLOMERATE,TUFFACEOUS SS,BRECCIA,LOC ABUN BASALT FRAGS

VITRIC TUFF

BASALT,DK GRAY/GREEN-BLACK,DENSE,FINE GRAINED, W/ OLIVINE PHENOCRYSTS.

OLIVINE BASALT,F GR, AUGITE(?),MAGNETIC, PALAGONITIC,LOC ABUN BENTONITE

BENTONITIC CLAY,LT GRAY SLI CALCAREOUS,INTRBD GRAY TUFFS.

DOM WEATHERED BEDDED TUFF,WHITE W/BLACK LINEATIONS;BASALT,MED GRY, GRANULAR
BASALT,DK GRY,W/VARIEGATED TUFFS & AGGLOMERATE, PYRITE

TUFF,WHITE/LT GRAY,PYRITIC, PARTLY WEATHERED TO A LT GRAY BENTONITIC CLAY.

TUFF & VOLCANIC AGGLOMERATE GRAY GREEN,FIRM,PARTLY PYRITIC.

BASALT,BLACK,FINE GRAINED, VERY DENSE.

TUFF,LT GRY-TAN-PINK, ALTERED

TUFFS,INTRBD W/ GRAY TUFFACEOUS SILTY SHALES, CLAYS.

TUFF & VOLCANIC AGGLOMERATE, GRAY GREEN,SLIGHTLY SILTY.

AS ABOVE,W/WEATHERED BASALT' CHERT,COARSE GRAINED QUARTZ

VARIEGATED TUFFS, VOLCANIC AGGLOMERATES WEATHERED BASALT.

TUFF,LT GRY-GRY GRN, PYRITIC,LOC ABUN CALCITE

TUFF,LT GRY,AS ABOVE, W/WEATHERED OLIVINE BASALT,DK GRY-GRN,

TUFF,RED-GRY,BENTONITIC, SILTY,AGGLOMERATE FRAGS

TUFF,REDDISH BROWN,PARTLY ALTERED TO A RED CLAY.

VARIEGATED TUFFS & VOLCANIC AGGLOMERATE.

TUFF,REDDISH BROWN, AS ABOVE

C=72U AT 45V

W 72
V 65
F 8.0
FC 2/32
PH 8.8
S 18G/G

W 80
V 50
F 5.0
FC 1/32
PH 8.0

C=35U AT 58V

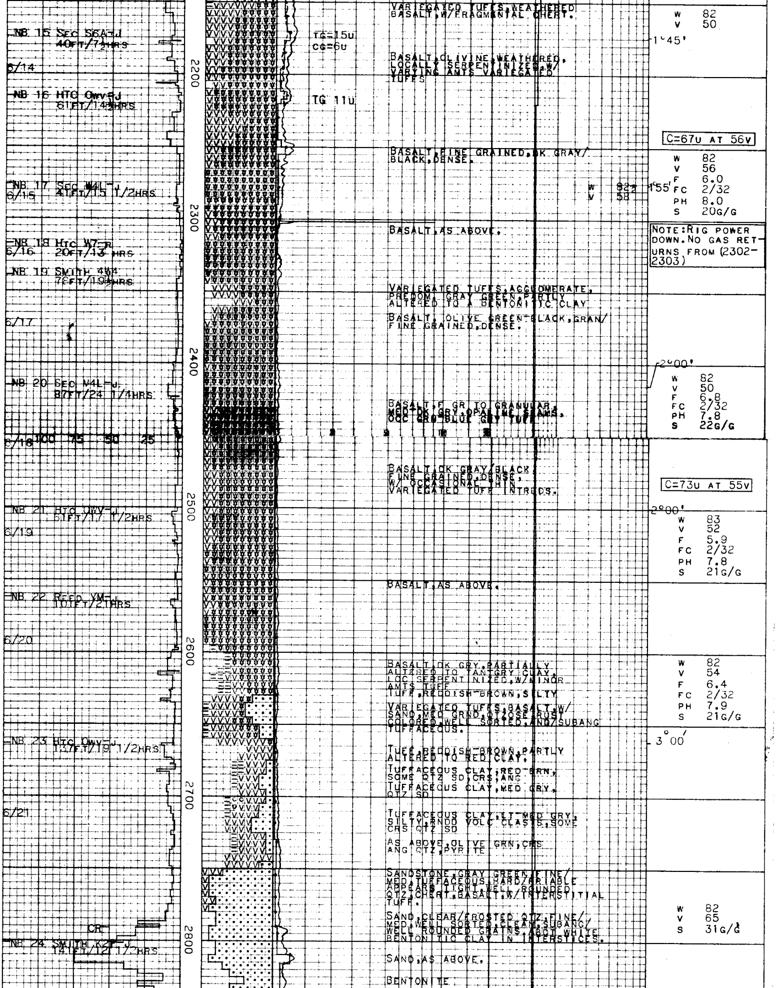
W 82
V 58
F 5.0
FC 1/32
PH 8.4

C=54U AT 48V

W 81
V 55
F 5.6
PH 8.6
S 36

W 82
V 54
F 5.2
FC 1/32
PH 8.0
S 20G/G

W 82
V 64
F 6.0
FC 2/32
PH 8.0
S 20G/G



NB 15 SEC S6A-J 40FT/7 1/2HRS

6/14

NB 16 HTC OWV-J 61FT/14 1/2HRS

NB 17 SEC M4L-J 41FT/15 1/2HRS

6/15

NB 18 HTC W7-R 20FT/13 HRS

6/16

NB 19 SMITH 4M4 76FT/19 1/2HRS

6/17

NB 20 SEC M4L-J 87FT/24 1/4HRS

6/18

NB 21 HTC OWV-J 61FT/17 1/2HRS

6/19

NB 22 REED YM-J 101FT/21HRS

6/20

NB 23 HTC OWV-J 137FT/19 1/2HRS

6/21

NB 24 SMITH K2P-J 141FT/12 1/2HRS

VARIEGATED TUFFS, WEATHERED BASALT, W/FRAGMENTAL CHERT.

W 82
V 50

1°45'

BASALT, OLIVINE, WEATHERED, LOCALLY SERPENTINIZED, W/ VARYING AMTS VARIEGATED TUFFS

C=67U AT 56V

BASALT, FINE GRAINED, DK GRAY/ BLACK, DENSE.

W 82½
V 58

1°55'

W 82
V 56
F 6.0
FC 2/32
PH 8.0
S 20G/G

BASALT, AS ABOVE.

NOTE: RIG POWER DOWN. NO GAS RETURNS FROM (2302-2303)

VARIEGATED TUFFS, AGGLOMERATE, PREDOM. GRAY GREEN, PARTLY ALTERED TO A BENTONITIC CLAY

BASALT, OLIVE GREEN-BLACK, GRAN/ FINE GRAINED, DENSE.

2°00'

W 82
V 50
F 6.8
FC 2/32
PH 7.8
S 22G/G

BASALT, F GR TO GRANULAR, MED-DK GRY, OPALINE SEAMS, OCC GRN BLUE GRY TUFF

BASALT, DK GRAY/BLACK, FINE GRAINED, DENSE, W/ OCCASIONAL THIN VARIEGATED TUFF INTRBDS.

C=73U AT 55V

2°00'

W 83
V 52
F 5.9
FC 2/32
PH 7.8
S 21G/G

BASALT, AS ABOVE.

BASALT, DK GRY, PARTIALLY ALTERED TO TAN-GRY CLAY, LOC SERPENTINIZED, W/MINOR AMTS TUFF

TUFF, REDDISH-BROWN, SILTY

VARIEGATED TUFFS, BASALT, W/ SAND, MED GRND, QTZOSE, RUST COLORED, WELL SORTED, ANG/SUBANG TUFFACEOUS.

W 82
V 54
F 6.4
FC 2/32
PH 7.9
S 21G/G

3°00'

TUFF, REDDISH-BROWN, PARTLY ALTERED TO RED CLAY.

TUFFACEOUS CLAY, RED BRN, SOME QTZ SD, CRS, ANG

TUFFACEOUS CLAY, MED GRY, QTZ SD

TUFFACEOUS CLAY, LT-MED GRY, SILTY, RNDD VOLC CLASTS, SOME CRS QTZ SD

AS ABOVE, OLIVE GRN, CRS ANG QTZ, PYRITE

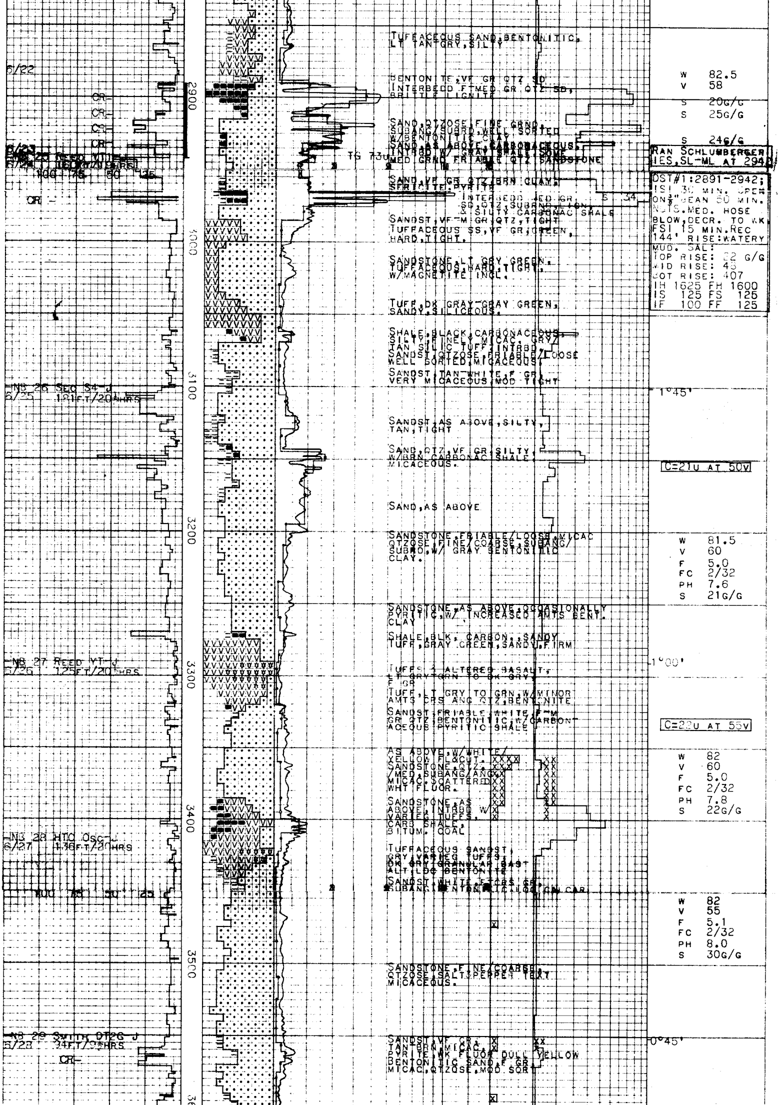
SANDSTONE, GRAY GREEN, FINE/ MED, TUFFACEOUS, HARD/FRIABLE APPEARS TIGHT, WELL ROUNDED QTZ, CHERT, BASALT, W/INTERSTITIAL TUFF.

SAND, CLEAR/FROSTED QTZ, FINE/ MED, WELL SORTED, CLEAN, SUBANG/ WELL ROUNDED GRAINS, ABDT WHITE BENTONITIC CLAY IN INTERSTICES.

W 82
V 65
S 31G/G

SAND, AS ABOVE.

BENTONITE



TUFFACEOUS SAND,BENTONITIC,
LT TAN-GRY,SILTY

BENTONITE,VF GR QTZ SD
INTERBEDD F-MED GR QTZ SD,
BRITTLE LIGNITE

SAND,QTZOSE,FINE GRND,
SUBANG/SUBRD,WELL SORTED
W/BENTONITIC CLAY
SAND,AS ABOVE,CARBONACEOUS,
INTRBD W/ GRAY SHALE,SOME
MED GRND FRIABLE QTZ SANDSTONE

RAN SCHLUMBERGER
IES,SL-ML AT 294

DST#1:2891-2942;
ISI 30 MIN. OPEN
ON ¾" BEAN 60 MIN.
NUTS.MED. HOSE
BLOW,DECR. TO WK
FSI 15 MIN.REC
144' RISE:WATERY
MUD. SAL:
TOP RISE: 22 G/G
MID RISE: 43
BOT RISE: 407
IH 1625 FH 1600
IS 125 FS 125
IF 100 FF 125

SAND,VF GR QTZ,BRN CLAY,
SERICITE,PYRITE
INTERBEDD MED GR
SD,QTZ,SUBRND,LIGN,
& SILTY CARBONAC SHALE
SANDST,VF-M GR,QTZ,TIGHT
TUFFACEOUS SS,VF GR,GREEN,
HARD,TIGHT.

SANDSTONE,LT GRY GREEN,
TUFFACEOUS,HARD,TIGHT,
W/MAGNETITE INCL.

TUFF,DK GRAY-GRAY GREEN,
SANDY,SILICEOUS.

SHALE,BLACK,CARBONACEOUS,
SILTY,FINELY MICAC. GRY/
TAN SILIC TUFF,INTRBD,
SANDST,QTZOSE,FRIABLE/LOOSE
WELL SORTED,MICACEOUS.
SANDST,TAN-WHITE,F GR,
VERY MICACEOUS,MOD TIGHT

SANDST,AS ABOVE,SILTY,
TAN,TIGHT

SAND,QTZ,VF GR,SILTY,
W/BRN CARBONAC SHALE,
MICACEOUS.

SAND,AS ABOVE

SANDSTONE,FRIABLE/LOOSE,MICAC
QTZOSE,FINE/COARSE,SUBANG/
SUBRD,W/ GRAY BENTONITIC
CLAY.

SANDSTONE,AS ABOVE,OCCASIONALLY
PYRITIC,W/ INCREASED AMTS BENT.
CLAY

SHALE,BLK, CARBON.,SANDY
TUFF,GRAY GREEN,SANDY,FIRM

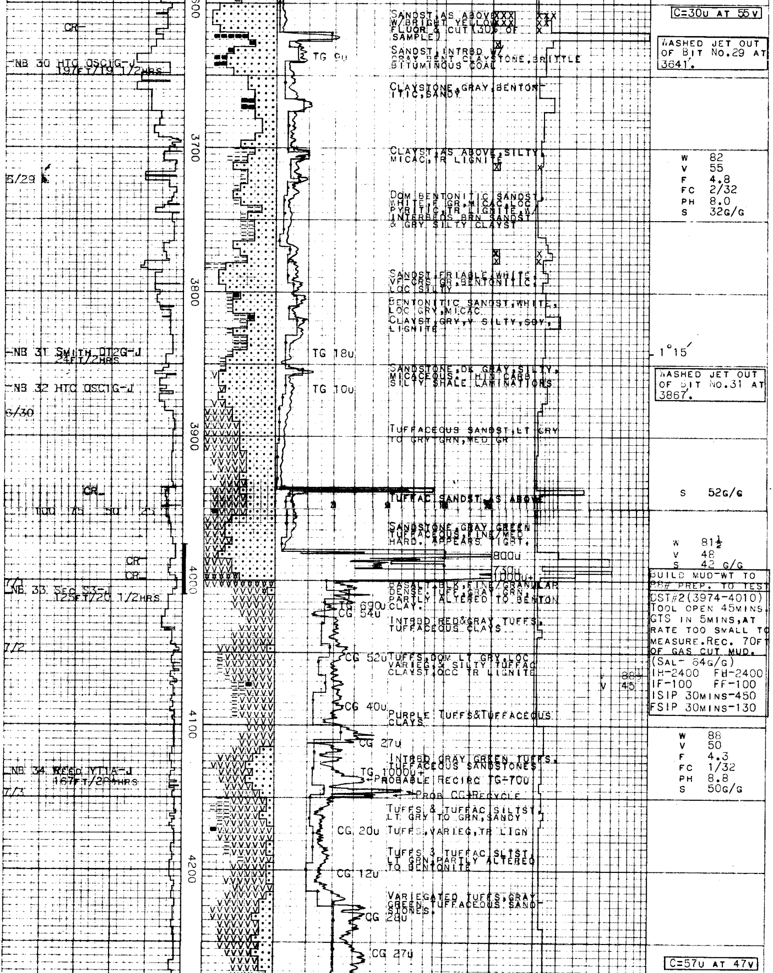
TUFFS & ALTERED BASALT,
LT GRY-GRN TO DK GRY,
F GR
TUFF,LT GRY TO GRN,W/MINOR
AMTS CRS ANG QTZ,BENTONITE
SANDST,FRIABLE,WHITE,F-M
GR QTZ,BENTONITIC,W/CARBON-
ACEOUS PYRITIC SHALE

AS ABOVE,W/WHITE/
YELLOW FL&CUT.
SANDSTONE,QTZ,
/MED,SUBANG/ANG
MICAC,SCATTERED
WHT FLUOR.
SANDSTONE,AS
ABOVE,INTRBD W/
VARIEG TUFFS.
CARB SHALE,
BITUM. COAL

TUFFACEOUS SANDST,
GRY,VARIEG TUFFS,
DK GRY GRANULAR BAST
ALT,LOC BENTONITE
SANDST,WHITE,F-CRS GR,
SUBANG,BENTONITIC,LOC CN CAR.

SANDSTONE,FINE/COARSE,
QTZOSE,SALT&PEPPER TEXT
MICACEOUS.

SANDST,VF GR,
TAN-BRN,MICAC,
PYRITE,WK FLUOR DULL YELLOW
BENTONITIC SAND,F GR,
MICAC,QTZOSE,MOD SORT



C=30u AT 55V

SANDST, AS ABOVE W/BRIGHT YELLOW FLUOR & CUT (30% OF SAMPLE)

SANDST, INTRBD W/ GRAY BENT CLAYSTONE, BRITTLE BITUMINOUS COAL

WASHED JET OUT OF BIT NO.29 AT 3641'.

CLAYSTONE, GRAY, BENTONITIC, SANDY

CLAYST, AS ABOVE, SILTY, MICAC, TR LIGNITE

W 82
V 55
F 4.8
FC 2/32
PH 8.0
S 32G/G

DOM BENTONITIC SANDST WHITE, F GR, MICAC, LOC PYRITIC, TR LIGNITE, W/ INTERBEDS BRN SANDST & GRY SILTY CLAYST

SANDST, FRIABLE, WHITE, VF-CRS GR, BENTONITIC, LOC SILTY

BENTONITIC SANDST, WHITE, LOC GRY, MICAC

CLAYST, GRY, V SILTY, SDY, LIGNITE

1°15'

SANDSTONE, DK GRAY, SILTY, MICACEOUS, THIN CARB SILTY SHALE LAMINATIONS

WASHED JET OUT OF BIT NO.31 AT 3867'.

TUFFACEOUS SANDST, LT GRY TO GRY GRN, MED GR

TUFFAC SANDST AS ABOVE

S 52G/G

SANDSTONE, GRAY GREEN TUFFACEOUS, FINE/MED HARD. APPEARS TIGHT.

W 81½
V 48
S 42 G/G

BUILD MUD-WT TO 88# PREP. TO TEST

BASALT, BLK, FINE/GRANULAR DENSE. TUFF, GRAY GRN, PARTLY ALTERED TO BENTON CLAY.

DST#2(3974-4010)
TOOL OPEN 45MINS.
GTS IN 5MINS, AT RATE TOO SMALL TO MEASURE. REC. 70FT OF GAS CUT MUD.
(SAL- 64G/G)
IH-2400 FH-2400
IF-100 FF-100
ISIP 30MINS-450
FSIP 30MINS-130

INTRBD RED&GRAY TUFFS, TUFFACEOUS CLAYS

TUFFS, DOM LT GRY, LOC VARIEG, & SILTY TUFFAC CLAYST, OCC TR LIGNITE

PURPLE TUFFS&TUFFACEOUS CLAYS

W 88
V 50
F 4.3
FC 1/32
PH 8.8
S 50G/G

INTRBD GRAY GREEN TUFFS, TUFFACEOUS SANDSTONES

PROBABLE RECIRC TG=70u

PROB CG=RECYCLE

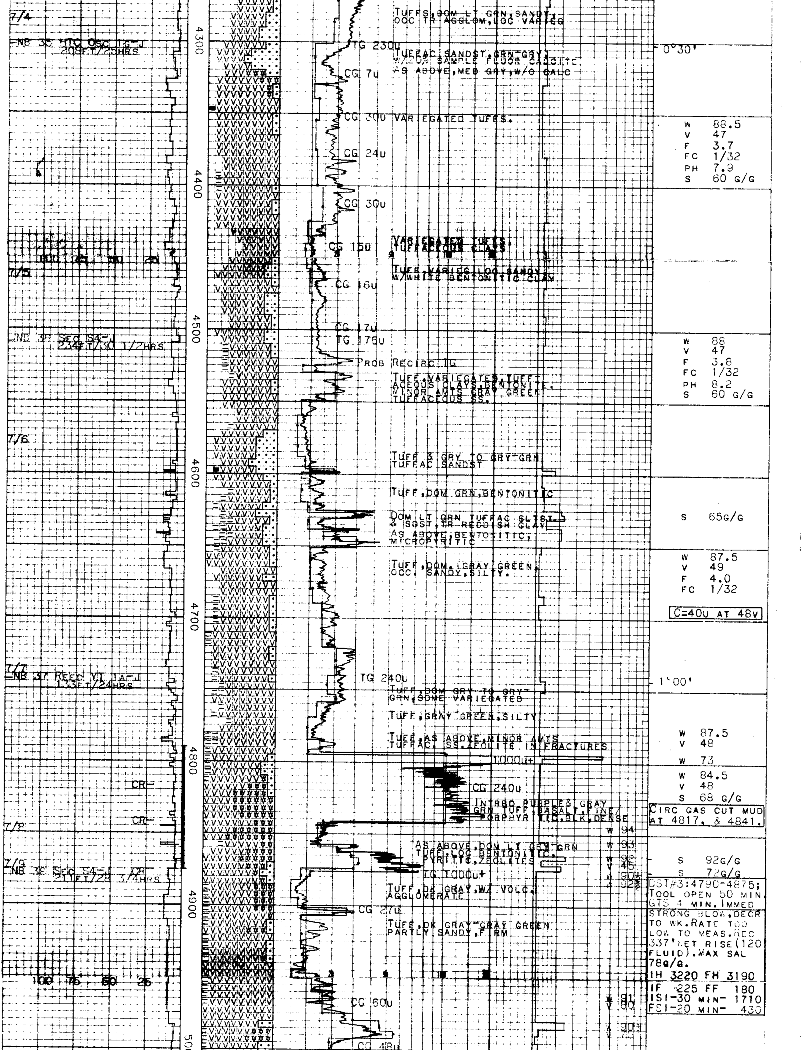
TUFFS & TUFFAC SILTST, LT GRY TO GRN, SANDY

TUFFS, VARIEG, TR LIGN

TUFFS & TUFFAC SLTST, LT GRN, PARTLY ALTERED TO BENTONITE

VARIEGATED TUFFS, GRAY GREEN, TUFFACEOUS SANDSTONES.

C=57u AT 47V



7/4

NB 35 HTC OSC TG-J
208FT/25HRS

TUFFS, DOM LT GRN, SANDY, OCC TR AGGLOM, LOC VARIEG

TUFFAC SANDST, GRN-GRY, W/20% SAMPLE FLUOR CALCITE

AS ABOVE, MED GRY, W/O CALC

VARIEGATED TUFFS.

W 88.5
V 47
F 3.7
FC 1/32
PH 7.9
S 60 G/G

VARIEGATED TUFFS, TUFFACEOUS CLAYS

7/5

TUFF, VARIEG, LOC SANDY W/WHITE BENTONITIC CLAY

NB 36 SEC S4-J
234FT/30 1/2HRS

W 88
V 47
F 3.8
FC 1/32
PH 8.2
S 60 G/G

TUFF, VARIEGATED, TUFFACEOUS CLAYS, BENTONITIC. MINOR AMTS GRAY GREEN TUFFACEOUS SS.

7/6

TUFF & GRY TO GRY-GRN TUFFAC SANDST

TUFF, DOM GRN, BENTONITIC

DOM LT GRN TUFFAC SLTST & SDST, TR REDDISH CLAY

S 65G/G

AS ABOVE, BENTONITIC, MICROPYRITIC

TUFF, DOM. GRAY GREEN, OCC. SANDY, SILTY.

W 87.5
V 49
F 4.0
FC 1/32

C=40u AT 48V

7/7

NB 37 REED YT TA-J
133FT/24HRS

TUFF, DOM GRY TO GRY-GRN, SOME VARIEGATED

TUFF, GRAY GREEN, SILTY

TUFF, AS ABOVE, MINOR AMTS TUFFAC. SS, ZEOLITE IN FRACTURES

W 87.5
V 48

W 73

W 84.5
V 48
S 68 G/G

INTRBD PURPLE & GRAY GRN TUFF, BASALT, FINE/PORPHYRITIC, BLK, DENSE

CIRC GAS CUT MUD AT 4817, & 4841.

7/8

AS ABOVE, DOM LT GRY-GRN TUFF, LOC BENTONITIC, PYRITIC, ZEOLITES

7/9

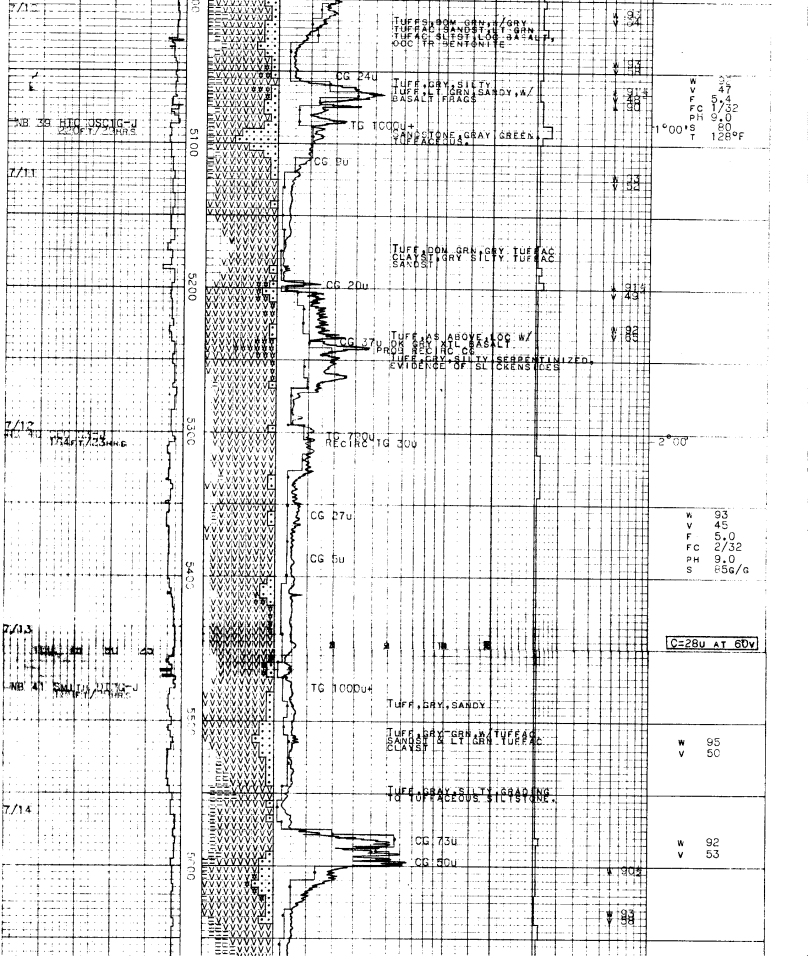
NB 38 SEC S4-J
211FT/28 3/4HRS

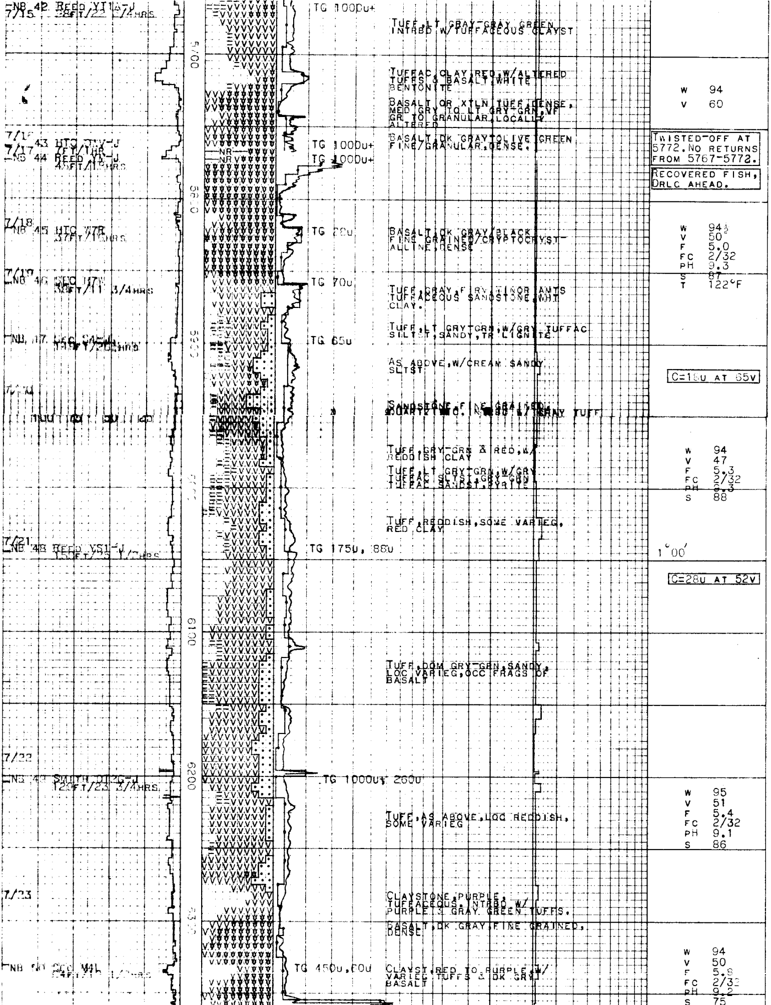
S 92G/G
S 72G/G

TUFF, DK GRAY, W/ VOLC. AGGLOMERATE

DST#3:4790-4875;
TOOL OPEN 50 MIN.
GTS 4 MIN. IMMED
STRONG BLOW, DECR TO WK. RATE TOO LOW TO MEAS. REC 337' NET RISE (120 FLUID). MAX SAL 78G/G.
IH 3220 FH 3190
IF 225 FF 180
ISI-30 MIN- 1710
FSI-20 MIN- 430

TUFF, DK GRAY-GRAY GREEN PARTLY SANDY, FIRM





7/15 NB 42 REED YT1A-J 28FT/22 3/4HRS

TG 1000u+

TUFF, LT GRAY-GRAY GREEN INTRBD W/TUFFACEOUS CLAYST

TUFFAC CLAY, RED, W/ALTERED TUFFS & BASALT, WHITE BENTONITE

W 94
V 60

BASALT OR XTLN TUFF, DENSE, MED GRY TO LT GRY-GRN, VF GR TO GRANULAR, LOCALLY ALTERED

7/16 43 HTC [illegible]-J 7FT/1HR
7/17 NB 44 REED YS-J 46FT/11 HRS

TG 1000u+
TG 1000u+

BASALT, DK GRAY TO LIVE GREEN FINE/GRANULAR, DENSE.

TWISTED-OFF AT 5772. NO RETURNS FROM 5767-5772.

RECOVERED FISH, DRLG AHEAD.

7/18 NB 45 HTC W7R 37FT/1 HRS

TG 20u

BASALT, DK GRAY/BLACK FINE GRAINED/CRYPTOCRYSTALLINE, DENSE

W 94½
V 50
F 5.0
FC 2/32
PH 9.3
S 87
T 122°F

7/19 NB 46 SEC H7W 38FT/11 3/4HRS

TG 70u

TUFF, GRAY, F IRV, MINOR AMTS TUFFACEOUS SANDSTONE, WHT CLAY.

NB 47 SEC S4-J 118FT/20 HRS

TG 65u

TUFF, LT GRY-GRN, W/GRY TUFFAC SILTST, SANDY, TR LIGNITE

AS ABOVE, W/CREAM SANDY SLTST

C=18u AT 65V

7/20

SANDSTONE, FINE GRAINED, QUARTZITIC. INTRBD W/ GRAY TUFF

TUFF, GRY-GRN & RED, W/ REDDISH CLAY

TUFF, LT GRY-GRN, W/GRY TUFFAC SLTST, GRY-GRN TUFFAC SANDST, PYRITE

W 94
V 47
F 5.3
FC 2/32
PH 9.3
S 88

TUFF, REDDISH, SOME VARIEG, RED CLAY

7/21 NB 48 REED YS1-J 150FT/23 1/2HRS

TG 175u, 88u

1°00'

C=28u AT 52V

TUFF, DOM GRY-GRN, SANDY, LOC VARIEG, OCC FRAGS OF BASALT

7/22 NB 49 SMITH DT2G-J 129FT/23 3/4HRS

TG 1000u+ 260u

W 95
V 51
F 5.4
FC 2/32
PH 9.1
S 86

TUFF, AS ABOVE, LOC REDDISH, SOME VARIEG

7/23

CLAYSTONE, PURPLE, TUFFACEOUS, INTRBD W/ PURPLE & GRAY GREEN TUFFS.

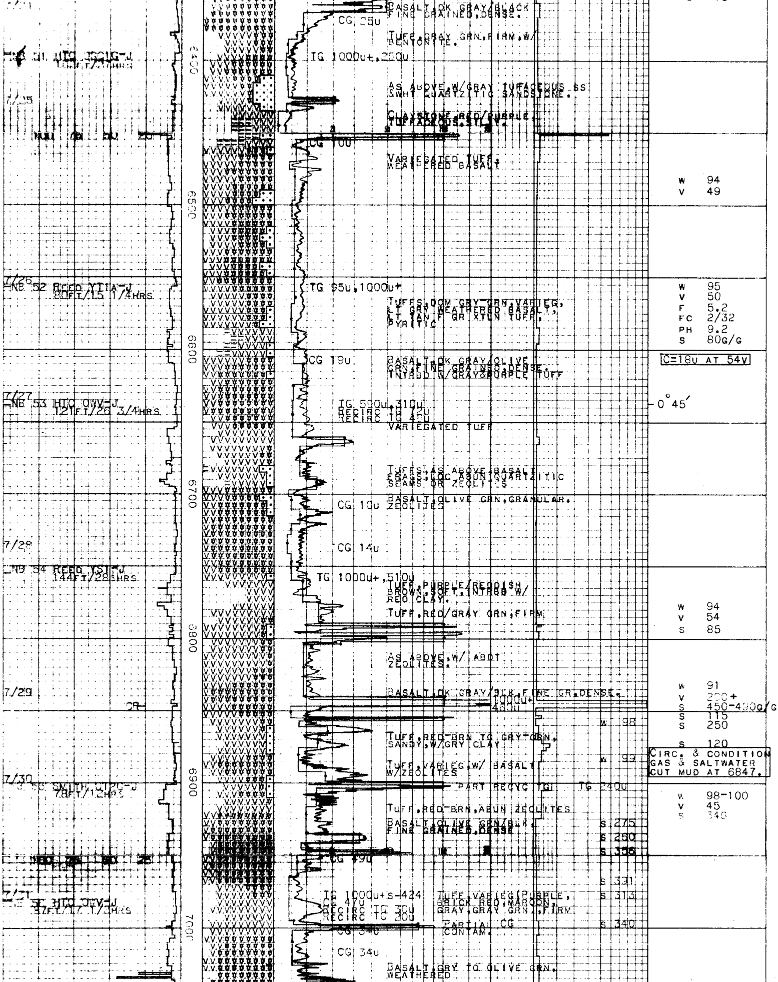
BASALT, DK GRAY, FINE GRAINED, DENSE

NB 50 SEC M4L 24FT/1 1/2HRS

TG 450u, 60u

CLAYST, RED TO PURPLE, W/ VARIEG TUFFS & DK GRY BASALT

W 94
V 50
F 5.8
FC 2/32
PH 9.2
S 75



BASALT, DK GRAY/BLACK FINE GRAINED, DENSE.

CG 25u

TUFF, GRAY GRN, FIRM, W/ BENTONITE.

NB 51 HTC J33CIG-J

TG 1000u+, 250u

AS ABOVE, W/GRAY TUFACEOUS SS &WHT QUARTZITIC SANDSTONE.

7/25

CLAYSTONE, RED/PURPLE, TUFFACEOUS, SILTY.

CG 10u

VARIEGATED TUFF, WEATHERED BASALT

W 94
V 49

7/26
NB 52 REED YT1A-J
80FT/15 1/4HRS

TG 95u, 1000u+

TUFFS, DOM GRY-GRN, VARIEG, LT GRY WEATHERED BASALT, LT TAN F GR XTLN TUFF, PYRITIC

W 95
V 50
F 5.2
FC 2/32
PH 9.2
S 80G/G

CG 19u

BASALT, DK GRAY/OLIVE GRN, FINE GRAINED, DENSE. INTRBD W/GRAY&PURPLE TUFF

C=18u AT 54V

7/27
NB 53 HTC OWV-J
121FT/26 3/4HRS

TG 590u, 310u
RECIRC TG 72u
RECIRC TG 45u

0°45′

VARIEGATED TUFF

TUFFS, AS ABOVE, BASALT FRAGS; LOC ABUN QUARTZITIC SEAMS OR ZEOLITES

BASALT, OLIVE GRN, GRANULAR, ZEOLITES

CG 10u

7/28

CG 14u

NB 54 REED YS1-J
144FT/28½HRS

TG 1000u+, 510u

TUFF, PURPLE/REDDISH BROWN, SOFT, INTRBD W/ RED CLAY.

TUFF, RED/GRAY GRN, FIRM

W 94
V 54
S 85

AS ABOVE, W/ ABDT ZEOLITES.

7/29

CR

BASALT, DK GRAY/BLK, FINE GR, DENSE.

1000u+
460u

W 91
V 200+
S 450-490G/G
S 115
S 250

W 98

TUFF, RED-BRN TO GRY-GRN, SANDY, W/GRY CLAY

S 120

CIRC. & CONDITION
GAS & SALTWATER
CUT MUD AT 6847.

TUFF, VARIEG, W/ BASALT W/ZEOLITES

W 99

7/30
NB 56 SMITH DT2C-J
78FT/12HRS

PART RECYC TG

TG 2400

W 98-100
V 45
S 340

TUFF, RED-BRN, ABUN ZEOLITES

BASALT, OLIVE GRN/BLK, FINE GRAINED, DENSE

S 275
S 260
S 356

CG 490

S 331

7/31
NB 57 HTC J33V-J
37FT/17 1/2HRS

TG 1000u+ S-424
CG 47u
RECIRC TG 30u
RECIRC TG 20u

TUFF, VARIEG (PURPLE, BRICK RED, MAROON, GRAY, GRAY GRN), FIRM

S 313

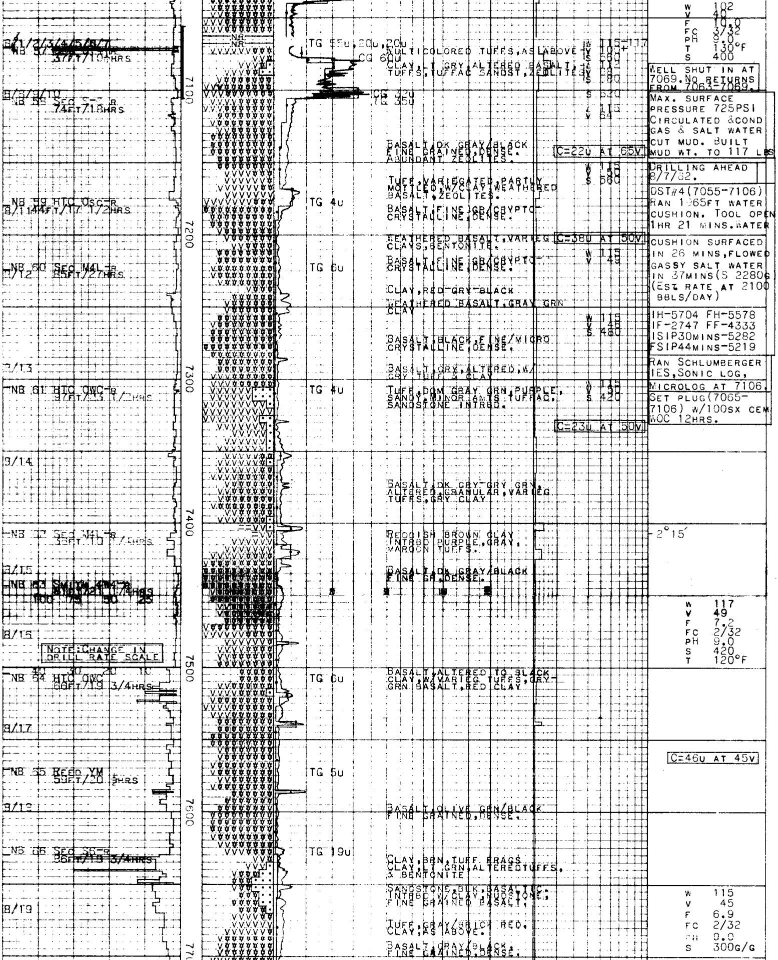
PARTIAL CG CONTAM.

S 340

CG 340

CG 34u

BASALT, GRY TO OLIVE GRN, WEATHERED



MULTICOLORED TUFFS, AS ABOVE

CLAY, LT GRY, ALTERED BASALT, TUFFS, TUFFAC SANDST, ZEOLITES

WELL SHUT IN AT 7069. NO RETURNS FROM 7063-7069.

MAX. SURFACE PRESSURE 725PSI CIRCULATED & COND GAS & SALT WATER CUT MUD. BUILT MUD WT. TO 117 LBS

BASALT, DK GRAY/BLACK FINE GRAINED, DENSE. ABUNDANT ZEOLITES.

DRILLING AHEAD 8/7/82.

TUFF, VARIEGATED, PARTLY MOTTLED, W/CLAY, WEATHERED BASALT, ZEOLITES.

BASALT, FINE GR/CRYPTO-CRYSTALLINE, DENSE.

DST#4 (7055-7106) RAN 1065FT WATER CUSHION. TOOL OPEN 1HR 21 MINS. WATER CUSHION SURFACED IN 26 MINS, FLOWED GASSY SALT WATER IN 37MINS (S 2280G) (EST. RATE AT 2100 BBLS/DAY)

IH-5704 FH-5578
IF-2747 FF-4333
ISIP30MINS-5282
FSIP44MINS-5219

WEATHERED BASALT, VARIEG CLAYS, BENTONITE.

BASALT, FINE GR/CRYPTO-CRYSTALLINE, DENSE.

CLAY, RED-GRY-BLACK

WEATHERED BASALT, GRAY GRN CLAY

BASALT, BLACK, FINE/MICRO CRYSTALLINE, DENSE.

RAN SCHLUMBERGER IES, SONIC LOG, MICROLOG AT 7106.

SET PLUG (7065-7106) W/100SX CEM WOC 12HRS.

BASALT, GRY, ALTERED, W/ GRY TUFF & CLAY

TUFF, DOM GRAY GRN, PURPLE, SANDY, MINOR AMTS TUFFAC. SANDSTONE INTRBD.

BASALT, DK GRY-GRY GRN, ALTERED, GRANULAR, VARIEG TUFFS, GRY CLAY

REDDISH BROWN CLAY INTRBD PURPLE, GRAY, MAROON TUFFS.

BASALT, DK GRAY/BLACK FINE GR, DENSE.

BASALT, ALTERED TO BLACK CLAY, W/VARIEG TUFFS, GRY-GRN BASALT, RED CLAY

BASALT, OLIVE GRN/BLACK FINE GRAINED, DENSE.

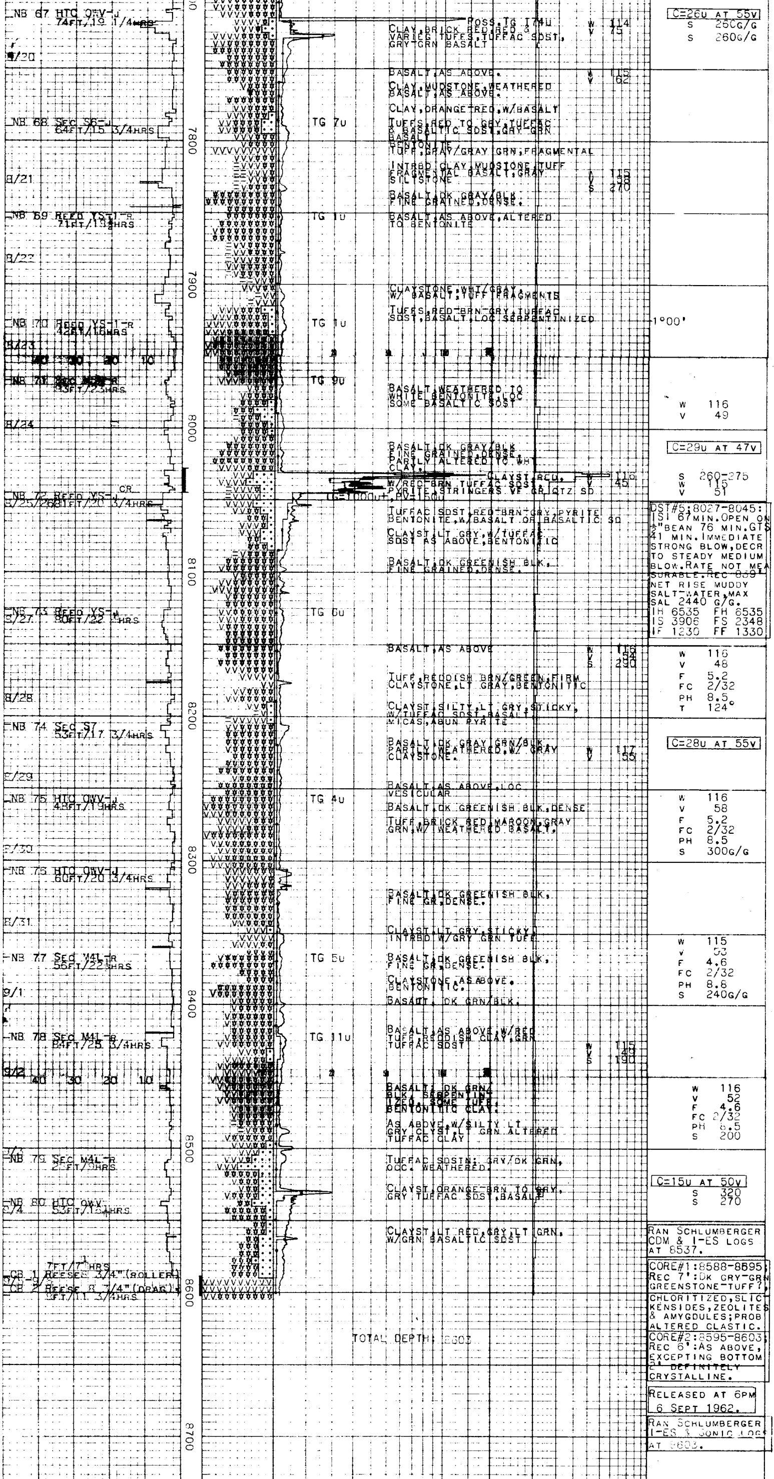
CLAY, BRN, TUFF FRAGS

CLAY, LT GRN, ALTERED TUFFS, & BENTONITE

SANDSTONE, BLK, BASALTIC, INTRBD W/CLAY, MUDSTONE, FINE GRAINED BASALT.

TUFF, GRAY/BRICK RED. CLAY, AS ABOVE.

BASALT, GRAY/BLACK, FINE GRAINED, DENSE.



CLAY,BRICK RED,RED & VARIEG TUFFS,TUFFAC SDST, GRY-GRN BASALT
W 114
V 75

C=26U AT 55V
S 250G/G
S 260G/G

BASALT,AS ABOVE.
W 115
V 62

CLAY,MUDSTONE,WEATHERED BASALT,AS ABOVE.

CLAY,ORANGE-RED,W/BASALT

TUFFS,RED TO GRY,TUFFAC & BASALTIC SDST,GRY-GRN BASALT

BENTONITE

TUFF,GRAY/GRAY GRN,FRAGMENTAL

INTRBD CLAY,MUDSTONE,TUFF FRAGMENTAL BASALT,GRAY SILTSTONE
W 115
V 58
S 270

BASALT,DK GRAY/BLK FINE GRAINED,DENSE.

BASALT,AS ABOVE,ALTERED TO BENTONITE

CLAYSTONE,WHT/GRAY, W/ BASALT,TUFF FRAGMENTS

TUFFS,RED-BRN-GRY,TUFFAC SDST,BASALT,LOC SERPENTINIZED

BASALT,WEATHERED TO WHITE BENTONITE,LOC SOME BASALTIC SDST
W 116
V 49

BASALT,DK GRAY/BLK FINE GRAINED,DENSE, PARTLY ALTERED TO WHT CLAY.

C=29U AT 47V

CLAYST,RED, W/RED-BRN TUFFAC SDST, PYRITE,STRINGERS VF GR QTZ SD
W 116
V 45

S 260-275
W 115
V 51

TUFFAC SDST,RED-BRN-GRY,PYRITE BENTONITE,W/BASALT OR BASALTIC SD

CLAYST,LT GRY,W/TUFFAC SDST AS ABOVE,BENTONITIC

BASALT,DK GREENISH BLK, FINE GRAINED,DENSE.

DST#5:8027-8045: ISI 67MIN.OPEN ON ½"BEAN 76 MIN.GTS 41 MIN.IMMEDIATE STRONG BLOW,DECR TO STEADY MEDIUM BLOW.RATE NOT MEASURABLE.REC 859' NET RISE MUDDY SALT-WATER,MAX SAL 2440 G/G.
IH 6535 FH 6535
IS 3906 FS 2348
IF 1230 FF 1330

BASALT,AS ABOVE
W 116
V 54
S 290

W 116
V 48
F 5.2
FC 2/32
PH 8.5
T 124°

TUFF,REDDISH BRN/GREEN,FIRM CLAYSTONE,LT GRAY,BENTONITIC

CLAYST,SILTY,LT GRY,STICKY, W/TUFFAC SDST,BASALT, MICAS,ABUN PYRITE

BASALT,DK GRAY GRN/BLK, PARTLY WEATHERED,W/ GRAY CLAYSTONE.
W 117
V 55

C=28U AT 55V

BASALT,AS ABOVE,LOC VESICULAR

BASALT,DK GREENISH BLK,DENSE

TUFF,BRICK RED,MAROON,GRAY GRN,W/ WEATHERED BASALT.

W 116
V 58
F 5.2
FC 2/32
PH 8.5
S 300G/G

BASALT,DK GREENISH BLK, FINE GR,DENSE.

CLAYST,LT GRY,STICKY, INTRBD W/GRY GRN TUFF

BASALT,DK GREENISH BLK, FINE GR,DENSE.

CLAYSTONE,AS ABOVE, BENTONITIC.

BASALT, DK GRN/BLK.

W 115
V 53
F 4.6
FC 2/32
PH 8.8
S 240G/G

BASALT,AS ABOVE,W/RED TUFF,REDDISH CLAY,GRN TUFFAC SDST
W 115
V 49
S 190

BASALT, DK GRN/BLK, SERPENTINIZED, SOME TUFF, BENTONITIC CLAY.

AS ABOVE,W/SILTY LT GRY CLYST,LT GRN ALTERED TUFFAC CLAY

W 116
V 52
F 4.6
FC 2/32
PH 8.5
S 200

TUFFAC SDSTN, GRY/DK GRN, OCC. WEATHERED.

CLAYST,ORANGE-BRN TO GRY, GRY TUFFAC SDST,BASALT

C=15U AT 50V
S 320
S 270

CLAYST,LT RED,GRY,LT GRN, W/GRN BASALTIC SDST

RAN SCHLUMBERGER CDM & I-ES LOGS AT 8537.

CORE#1:8588-8595; REC 7':DK GRY-GRN GREENSTONE-TUFF?, CHLORITIZED,SLICKENSIDES,ZEOLITES & AMYGDULES;PROB ALTERED CLASTIC.

CORE#2:8595-8603; REC 6':AS ABOVE, EXCEPTING BOTTOM 2' DEFINITELY CRYSTALLINE.

TOTAL DEPTH: 8603

RELEASED AT 6PM 6 SEPT 1962.

RAN SCHLUMBERGER I-ES & SONIC LOGS AT 8603.