EXPLORATION LOGGING

A GEOLOGICAL - ENGINEERING SERVICE

REMARKS

DRILLING CONTRACTOR	RIG NO.
HUNNICUTT & CAMP	4

SPUD DATE 8/26/75

TYPE MUDS

POLYZONE 400/KCL,LIGNOSULFONATE

CASING RECORD

9 5/8" AT 656'

AT

HOLE SIZE

8 3/4" TO 7252'

TO

ABBREVIATIONS

NB	NEW BIT	W	MUD WEIGHT
RRB	RERUN BIT	V	MUD VISCOSITY
CB	CORE BIT	F	MUD FILTRATE ☒ CC/30 MIN
CR	CIRCULATE RETURNS	FC	FILTER CAKE
NR	NO RETURNS	SD	SAND CONTENT
PR	POOR RETURNS	S	SALINITY ☐ G/G ☒ PPM CL
LAT	LOGGED AFTER TRIP		
TG	TRIP GAS	R	RESISTIVITY OF MUD
CG	CONNECTION GAS	RF	RESISTIVITY MUD FILTRATE
C	CARBIDE		
DST	DRILL STEM TEST		
]	DST INTERVAL		
▮	CORE INTERVAL		

OIL Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

GAS UNITS Gas Detector calibrated to record 100 units with a mixture of 2% methane-in-air.

LITHOLOGY SYMBOLS

C	Z	/	⌉	■	☐	⊤	≡	∸	·	o	Λ	V	X	T	☐
LIMESTONE	DOLOMITE	GYPSUM AND ANHYDRITE	SALT	COAL AND LIGNITE	CLAY	SHALE	SILTSTONE	SANDY SILTST.	SAND	CONGLOMERATE	CHERT	VOLCANICS	INTRUSIVE	TUFF	

COMPANY REICHHOLD ENERGY CORP.

WELL N.N.G. FINN NO.1

FIELD MC COY AREA

LOCATION SEC.17,T6S-R4W, FROM SW CORNER,
SEC.17,431'N 1218'E.

COUNTY, STATE POLK CO.,OREGON

API WELL INDEX NO.

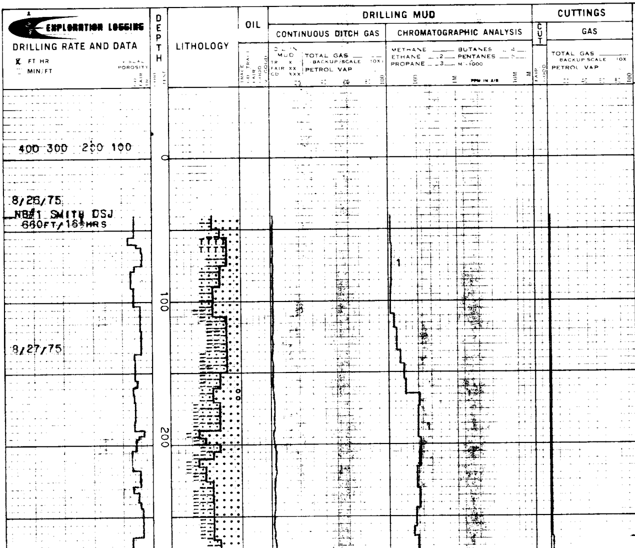
ELEVATION 212 KB

DATE FROM 8/26/75 TO 9/20/75

DEPTH FROM 40FT TO 7252'

UNIT NO. 20

LOGGING GEOLOGISTS JOHN HINER
DON RODGERS



REMARKS AND LITHOLOGY DESCRIPTION

DRLG 13¾ HOLE

TUFF SLTST:LT GY,MOD FM,VF QTZOSE

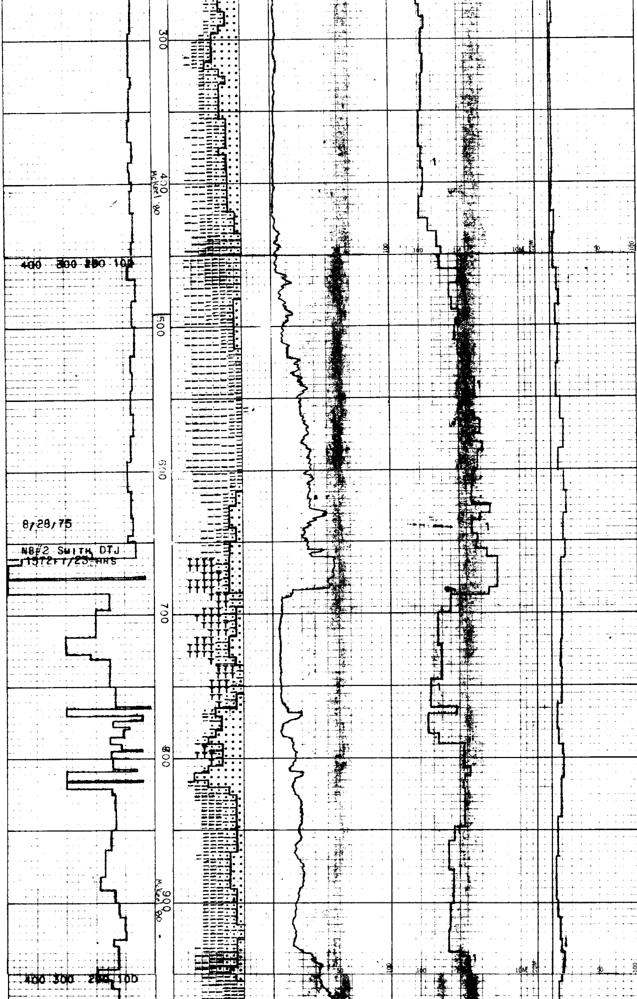
SLTY/SNDY CLYST:SFT, GUMMY,MOD HYDR,SLI-MOD SOL,W/SLT SZ-VF, WL SRTD,QTZ,VOL FRGS OCC-COM CALC,ABUN MEGAFOSS FRGS

SD:GY-GRN,VF-VCRS,PR SRT,QTZ,VCOL VOL,COM GLAU,IN CLY MTX AS LAST ABV

SS:GY-WH,VF-F,WL SRT DOM CLR QTZ,SM VOL FRGS,ABUN CHLOR,LIG MTL,V HD,SILIC CMT, OCC CALC;ABUN MEGAFSS FRGS

SS/SD:DK GY,AS LAST ABV,APPRNG AS THN STRGRS IN GY-GN SLTY BENT CLY MTX

0°00'



8/28/75

NB#2 SMITH DTJ
1372FT/23 HRS

W 67 V 40

SNDY CLYST;DK GY-GN, SFT-MOD FM,MOD-WL HY; W/VF QTZOSE SD/SS STRGRS,COM CAL CMT

SH;LT-MED BRN,SFT-FRM,GLAUC,SL CALC.

SH;CONT PRED BRN,MNR GRY-GRN,LT GRY,GLAUC.

SD,SS;LT-MED GRY,MNR TAN,PRED QTZ W/GD TR GLAUC,VF-MED.

SLTY/SNDY TUFF;GYALT GY,SFT,GUMMY,WL HYDR MOD SOL,W/COM MUSC, BIO,QTZ;VOL FRGS

POLISHED PLUG AT 649'. DRLG 8 3/4 HOLE

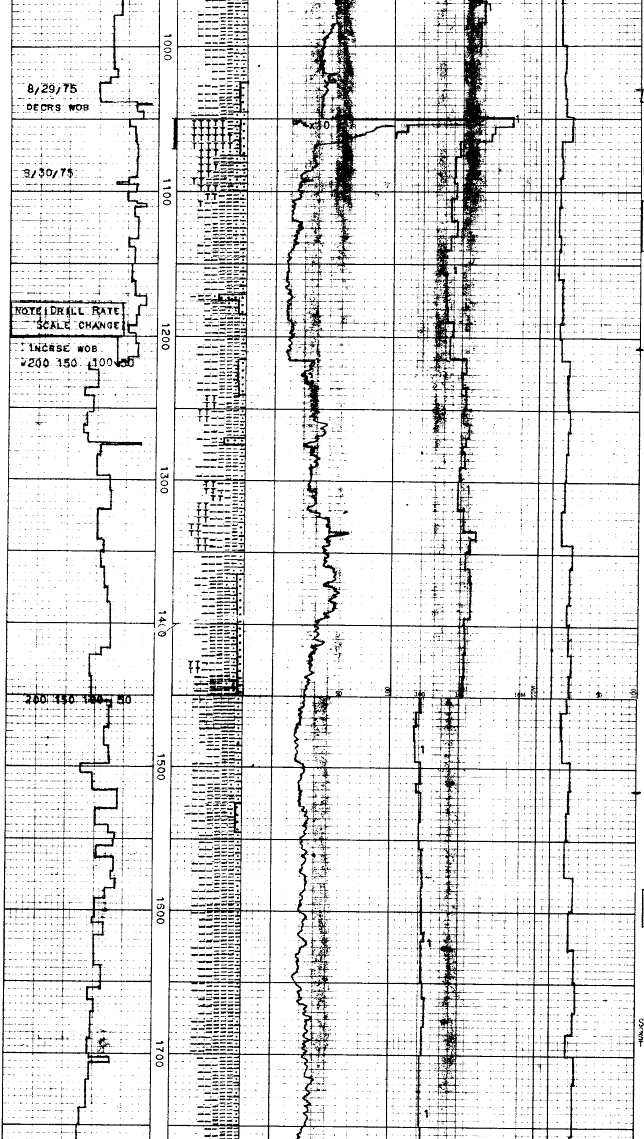
CLY/TUFF CLYST;GY,V GUMMY,COM TUFF MAT, W/DECRS INCLUS AS ABV

SD;GY-WH,SLT SZ-F,SB ANG-RD,V WL SRTD,FRI-UNCONSOL,DOM CLR/FROS QTZ,ABUN DK VOL FRGS SM MUSC,BIOT,OCC SLI CALC,IN LT GY,SFT,V WL HYDR,V SOL;BENT CLY MTX

SLTST/SNDY SLTST;GY, SFT-SLI FM,SLI-MOD HYDR,SLI SOL,W/COM SLT-VF QTZ,DK VOL MAT

C = 41U AT 53VIS
LAG=7MIN W/56SPM

SLTST/SH;GY,GY-BRN, SFT,MED FRM;SLI HYDR SLTY,OCC SLI SNDY



W 68 V 53

SLTST/SH:BRN,GY-BRN, SFT-MED FRM,MOD HYDR, MOD SOL,W/COM SNDY SLTST,OCC-COM MICRO-FOSS TESTS

4°15'

TUFF/SNDY TUFF:M GY, SFT-MOD HD,MOD-V CAL SLTY,W/MNR QTZ,VF,SB ANG,FROS/SM MLKY

DST#1 SEE DESCRIPT. BELOW

W 72 V47 F 6.6
FC 2/32 pH 8.4
SD 1/2% S 3300PPM CL

SSILT GRY,GRY-WHTE, LT TAN,VF-F,CALC.

3°45'

GD TR LT BRN,TAN LS.

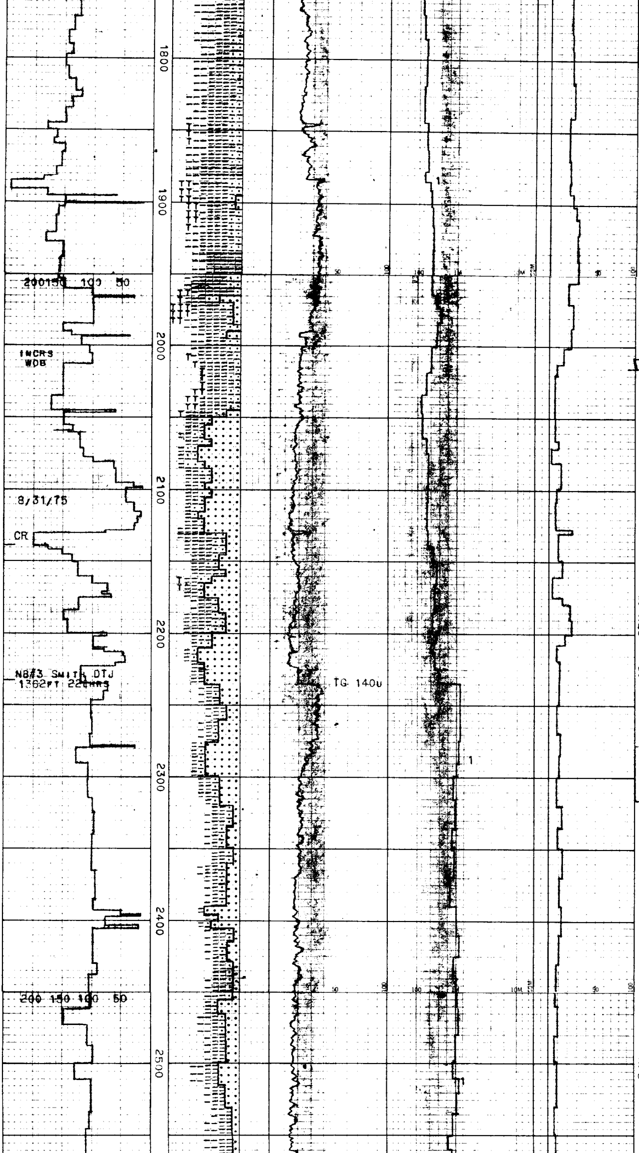
TUFF;LT GRY,GRY-BRN, SFT.

SH,SLTST:LT-MED BRN, SL CALC,GD TR GLAUC; CARB FRGS,TR SHELL FRGS.

3°30'

C= 55U AT 46VIS
LAG=12MIN 54SPM

SLTST,SH:LT BRN,MED GRY-BRN,TUFF IN PART, SL-MED CALC,TR GLAUC; TR CARB FRGS.



TUFF SLTST:BRN,LT BRN
SFT-MOD FRM,OCC SLI
BRTTL,OCC GLAU

SS STRGRS:WH,F-M,ANG-
SBRD,MOD WL SRTD,DOM
CLR/MLKY QTZ,SM MFC
MAT,OCC GLAU,MOD-V
CALC,1-5MMTHCK IN GY-
BRN,MOD FRM TUFF SLT-
ST,COM MICROCARB LAMS

2°15'

W 70 V 47

SD:M GY,SLT SZ-VF,
ANG-SBRD,WL SRTD,DOM
CLR/FROS QTZ,SM SMKY,
MICAC,SM PYR,FRI-UN-
CONSOL,OCC SLI CAL
CMT,GEN V CALC,IN LT
GY-WH,SFT,WL HYDR,V
SOL,BENT CLY MTX

SS:DK GY,VF-M,ANG-SB
ANG,MOD WL SRTD,CLR
QTZ,VOL FRGS,SM MFC
MAT,V WL SILIC CMT,
SLI-MOD CALC

SS:S&P,VF,ANG-SBANG,
FROS QTZ,DK VOL FRG,
COM BIOT,V WL CAL CMT

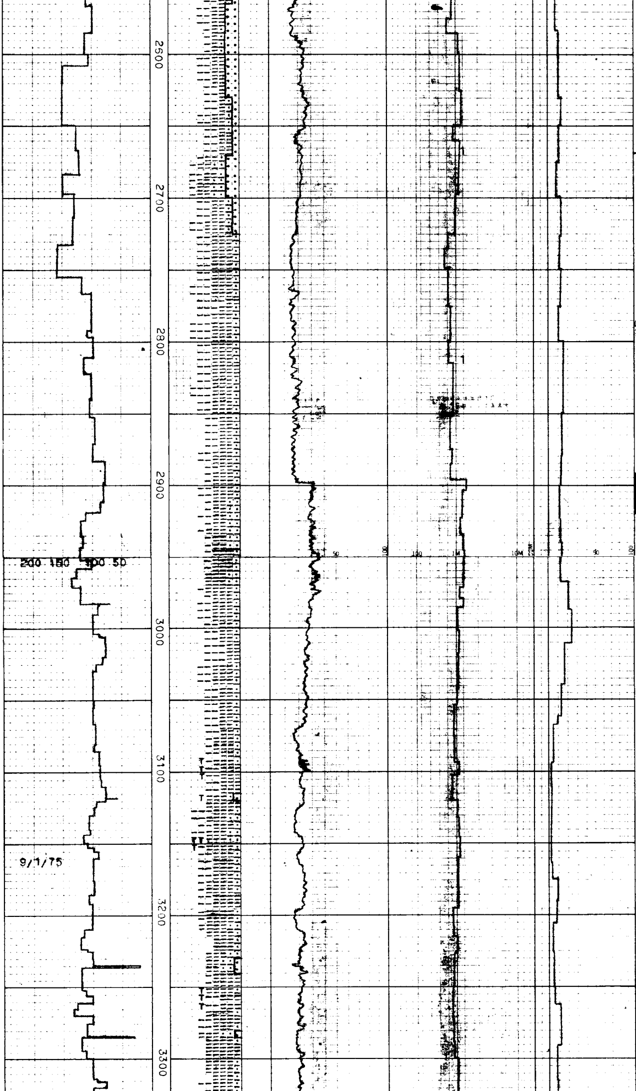
SNDY SLTST:GY-BRN,LT
BRN-BUFF,FRM BUT FRI
COM LSE QTZ

SD:VF,SBANG,WL SRTD,
CLR QTZ,GLAU,MCA,IN
GY,V STKY,GUMMY CLY

W 72 V 50 F 6.6
FC 1/32 pH 8.5
SD ½% S 3050PPM

CLAY:LT GRY,GRY-BRN,
BENT,TUFF,SLTY-SDY
IN PART.

SD,SS:LT GRY,GRY-BRN,
VF-F,GLAUC,SL-MED
CALC,TR FORAMS.



1°00'
SLST,SDY SLTST:LT GRY,LT-MED BRN,SFT-MED FRM,SL-VRY CALC.

CLAY,SH,SLTST:CONT SL SDY IN PART,TR TAN HRD LS.

NOTE: INCREASE IN GAS READINGS DUE TO DRLG MUD VIS. DECREASE

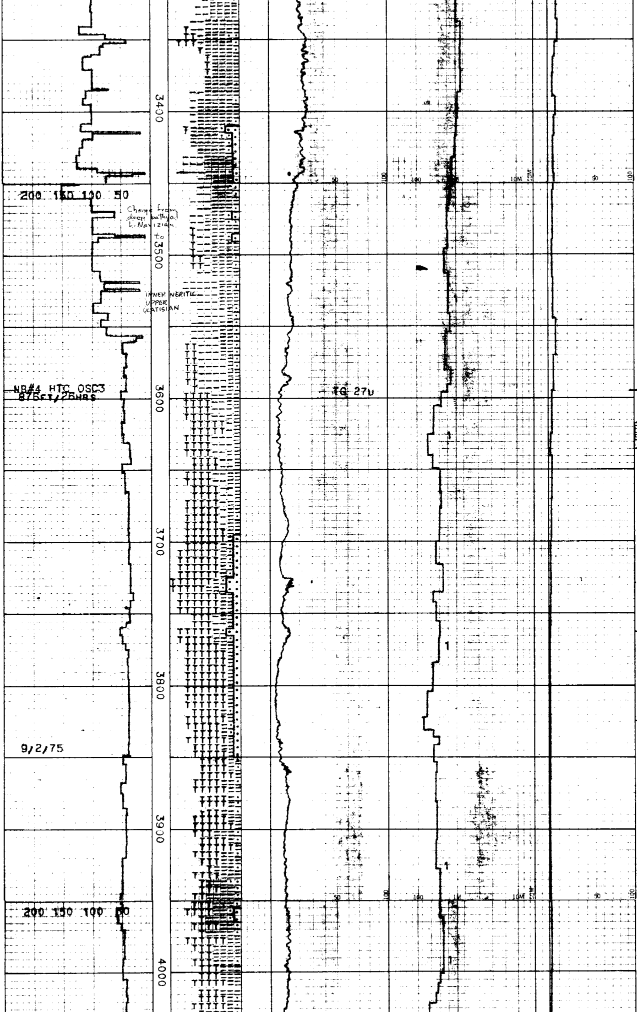
C = 26U AT 52VIS
LAG=20MIN W/55SPM

CLYST/SH:M GY-BRN,SF
MOD FRM,TUFF,COM SLT
ABUN BENT,COM FISS

TUFF SLTST:LT BRN-LT GY,MOD FRM,COM SNDY

SS SHELL:WH,VF,SBANG CLR/MLRY QTZ,V WL CA CMT

SLTST:LT BRN,SFT-SLI
FM,TUFF,ABUN BENT,GO
TRC PYR,OCC CAL VNLT



w 69 v 38

SS STRGRS:THN,VF,ANG
V WL CAL CMT QTZ;VOL
FRGS,ABUN GLAU,IN DK
BRN-DK GY SLTST/SH

TUFF SLTST/SH:M BRN-
DK GY,FM-MOD HD,LTL-
NO HYDR,OCC SDY;SM
TUFF STRGRS

w 77 v 64

TUFF:GRY,GRY-WHTE,
GRN-GRY,SDY,GLAUC.

1°45'

TUBF:LT GRY,LT BRN,
GRN-GRY,SDY IN PART.

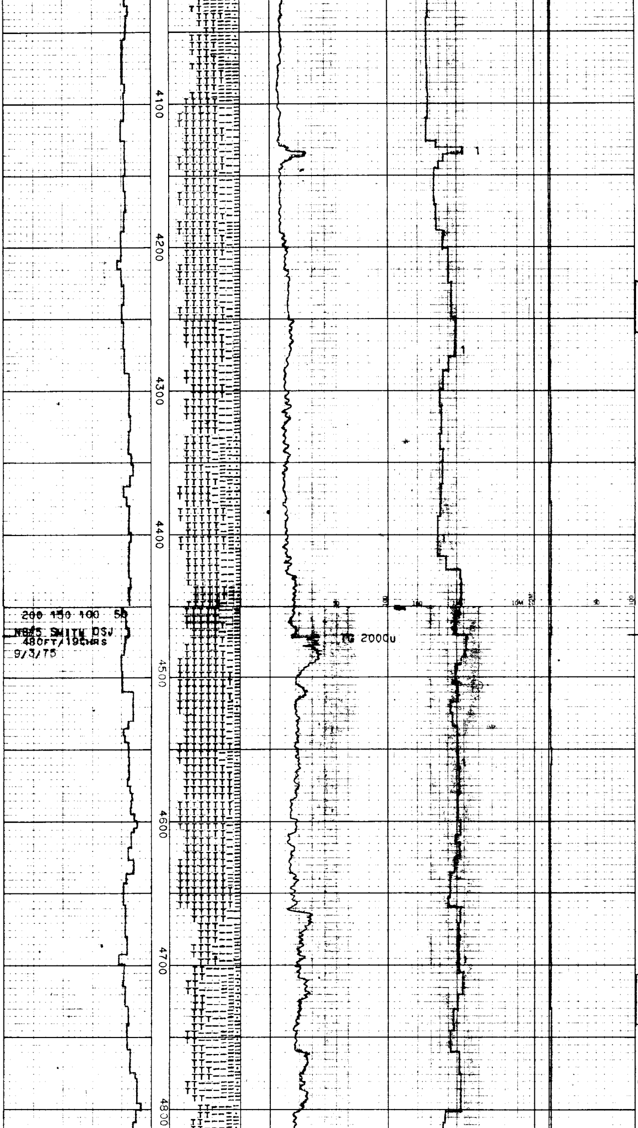
BREAK OVER TO LIGNO-
SULFONATE MUD.

SDY TUFF:GY,GY-GRN,
FRM-V HD,ABUN QTZ,
FLD,BSLT FRGS,IN SLTY
VARICOL TUFF MTX,OCC
APPRNG SLI WELDED

NOTE:SAND LOGGED AS
VARIATIONS OF ABV SDY
TUFF TO TUFFACEOUS
SS-DECRSNG AMTS MTX,
INCRS VOL FRGS & RE-
WORKED TUFF MAT

SLTST:BRN,RD-BRN,FM-
MOD HD,SDY,SLI CALC,
GEN INTBD W/GY-GRN,
QTZOSE TUFF AS LAST
ABV

INTBD SDY TUFF/SLTST:
GY-GRN,DK GY,ABUN VOL
FRGS,SM QTZ,IN VARI-
COL MTX;SLTST-LT BRN
FRM,SLI-MOD CALC



TUFF,VOLC FRGS;LT GRY,GRN-GRY,DRK GRY, SDY IN PART.

C=48U AT 45VIS
LAG=33MIN 56SPM

W 80 V 40 F 5.3
FC 2/32 pH 10.5
SD 1/4% S 3150PPM CL

TUFF;LT-DRK GRY-GRN, GRN-GRY,SLTY-SDY,SL-MED CALC.

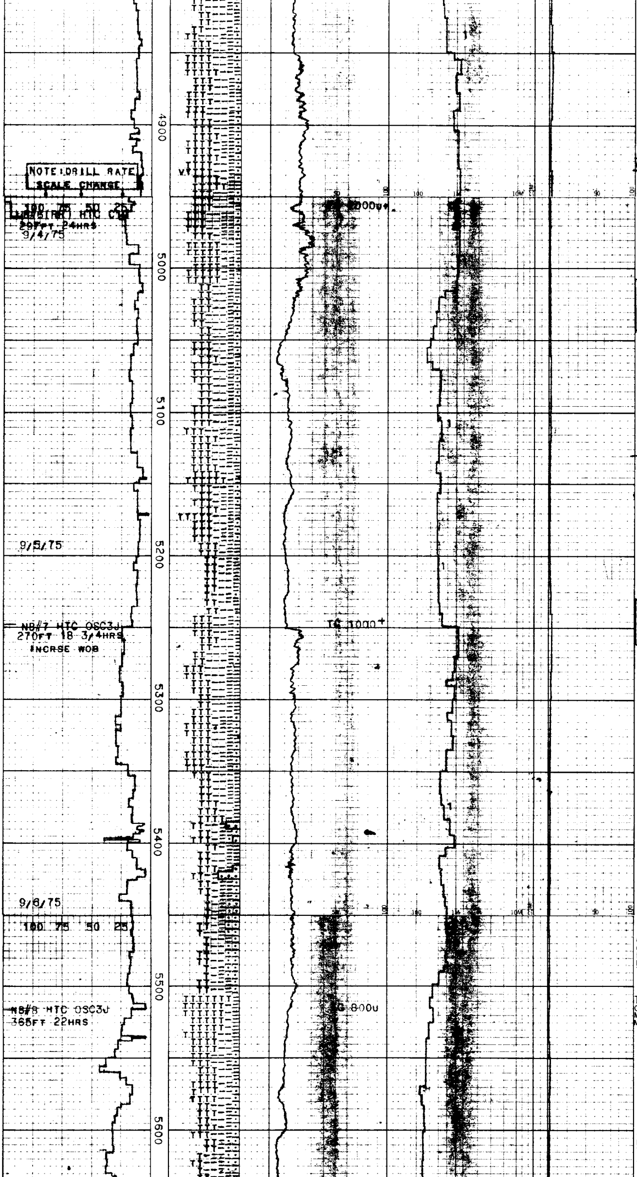
1°00'

TUFF;GY,BLU-GY,GRN, ABUN VAR VOLC FRGS, QTZ,OLIVINE,IN LT GY, LT GRN,SPARSE,ASH MT

CLAY,SH;LT GRY,LT-MED BRN,TUFF IN PART.

W 81 V 40 F 5.4
FC 2/32 pH 10.4
SD 1/2% S 3000PPM

CLAY,SH;CONT W/TR PYRITE,BLK CARB FRGS, FORAMS.



TUFF: LT GRY, GRY-WHTE, GRY-GRN, DRK GRY, SDY-SLTY, SL-MED CALC.

COM FRGS OLIVN BSLT

W 83 V 44 F 5.2
FC 2/32 pH 10.3
SD ½% S 3500 NACL

CLAY: PRED LT-MED GRY, SDY-SLTY, TUFF, SL-MED CALC, GD TR TAN LS.

C=32U AT 45 V
LAG=48MIN 56SPM

1°00'

W 86 V 45

SLTST/SH: LT GY, LT GY-BRN, OCC BUFF, FM, GEN FRI WHEN FISS, SLI-MOD CALC, INTBD W/VARICOL TUFF, SILIC TUFF, COM QTZOSE, CHLOR, VOL FRG W/VAR TEX & COMP

W 87 V 44 F 5.0
FC 2/32 pH 10.8
SD ½% S 5200 NACL

TUFF: LT-MED GRY, GRY-SFT-MED FRM, SDY-SLTY SL CALC, TR CARB FRGS PYRITE.

SDY CLY: LT GRN, V SFT V WL HYDR/SOL, BENT CLY W/ABUN F-M QTZ & VOL FRGS

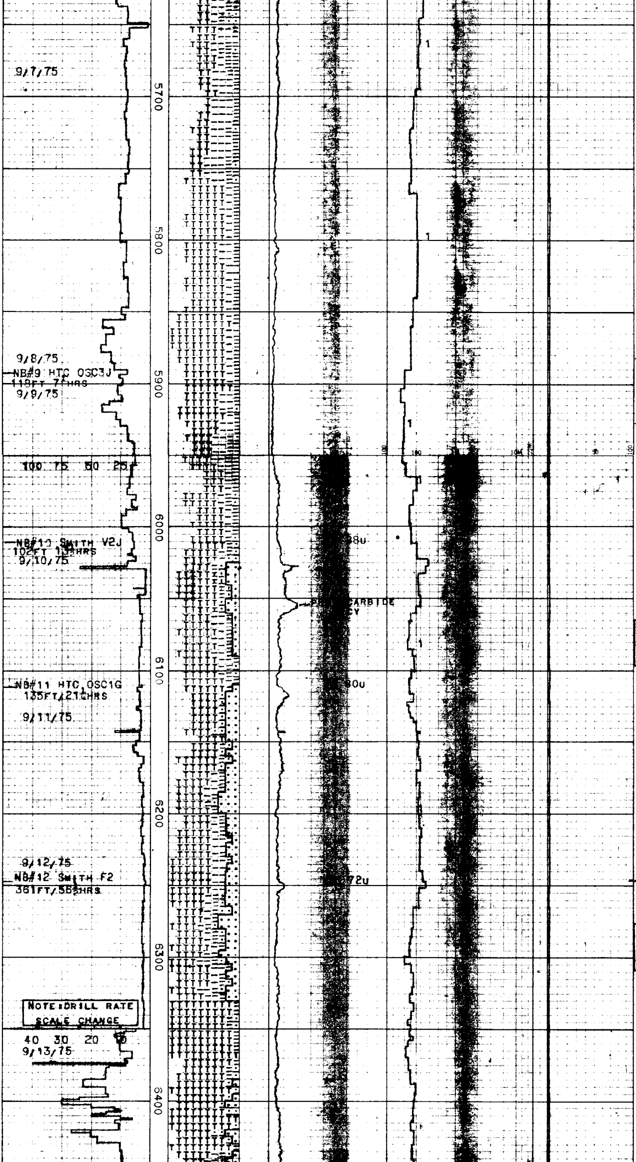
TUFF SS: GY-WH, ANG, F-CRS, PR SRTNG, DOM DK VOL FRGS, SM QTZ, MNR CHLOR & TUFF FRGS, IN MOD CALC TUFF MTX

CLYST/SH: LT GY, SFT, OCC STKY, SDY, ABUN BENT, COM SLTST INTBD MNR GRN, LT GRN SDY TUFF

TUFF: CONT W/ABUND GRY-GRN, GRN AMYGDULES, MED FRM, GD TR BLK XL MAGNETITE.

W 89 V 45

SH: LT GY, LT GY-BRN, SFT-MOD FM, MOD HYDR, BENT, INTB TUFF AS ABV, SLTY; OCC-COM SDY W/ VF-M SBRD QTZOSE MAT, VARCOL VOLC GRNS



CLAY:LT-MED GRY,MNR GRY WHTE,TUFF,SDY-SLTY W/TUFF SH,SLTST, SL CALC.

TUFF:PRED MED-DRK GRY,MNR GRY-GRN,SDY-SLTY,MED FRM W/GD TR GRAINS WHTE QTZ,SL CALC.

NOTE:WHILE POH EXTRME SHALE SLUFFING-RAISE WT-92. WHILE RIH HAD TO RAISE WT TO 102 & REAM APPROX 300' TO BOTTOM.

CLAYST:LT GRY,GRY-GRN,GRN-GRY,TUFF,SDY,SLTY.

TUFF:LT-MED GRY,SLTY, MED FRM,SDY IN PART.

TUFF SS/SS:LT GRN,GY, V HD-SLI FRI,MLKY QTZ VOLC FRGS,ABUN OLIVN, OCC MGNTITE,PYR,GEN F-CRS,GRDG TO VFW/DPTH LT GY V SILIC TUFF MTX,SPLS APRNG SLI BREC IN PART

W 96 V 45 F 5.2
FC 2/32 PH 10.4
SD ¼% S 5800 NACL

C=41U AT 43VIS
LAG=60MIN 56SPM

SS:LT-MED GRY-GRN,GRN GRY,MNR LT-MED BRN, GRY,F-CRSE,XLN-ANG; ABUN EUHEDRAL XLS, PRED FELDSPARS W/MED -DRK BRN XLS.

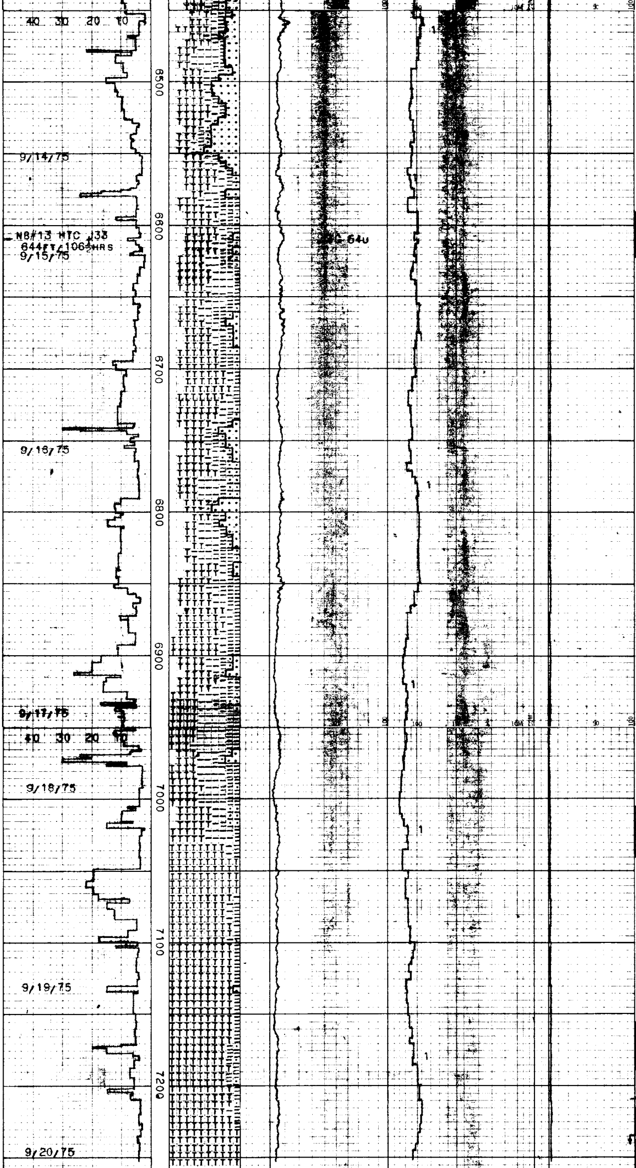
0°30'

W 94 V 43 F 4.8
FC 2/32 PH 10.5
SD ¼% S 5840 NACL

SILIC TUFF:DK GY-M GY APHANITIC,SBCONCH FRC OCC OLIVN,QTZ INCLUS, OCC-RARE THN LAMS SDY/ SLTY INTBDS,V HD

INTBD SDY TUFF/TUFF SS:LT GY-GRN,CMPCTD BUT MOD FRI,OCC SLI SILIC,COM BENT,GRDG TO VF-CRS,ANG-SBANG, DOM VOLC&TUFF FRGS IN SILIC TUFF MTX AS ABV

TUFF:BRN-WH,BUFF,VF, MSSV,MOD FM,OCC GRDG V SLI SLTY/SDY



CLAYST:LT GRY,GRN-GRY,TUFF,SDY IN PART,TUFF SL CALC.

CLAYST:LT GRY,GRY-WHTE,TAN,SL-MED CALC, MED FRM.

C=30U AT 45VIS
LAG=67MIN 56SPM

SD:VF-CRS,ANG-SBANG, FROS/MLKY QTZ,LITH, TUFF & VOLC FRGS,GEN AS LSE MAT IN LT GY, TUFF,BENT CLYST/SLTS MTX

SILIC TUFF:DK GY,HD, OCC STRG BENT TUFF, SLI-MOD SDY

W 93 V 44 F5.3
FC 2/32 PH 10.1
SD ¼% S 4950 NACL

SS:LT-MED GRY,VF-F, MED-VRY HRD,SL CALC, CLAYEY IN PART.

TUFF:LT-MED GRY,GRN-GRY,MNR RED-ORNGE, SLTY-SDY,SL-MED CALC W/MULT COL VOLC FRGS SFT-HRD.

TUFF SS:GY,VF-CRS,ANG SBRD,PR SRTG,DOM CRS TUFF&VOLC FRGS,SM QTZ MFC MINS,IN LT GY,FM SL CALC,BENT TUFF MTX

SILIC TUFF/SLTST:DK GY,SBCONCH,GEN APHNTC W/OCC SDY STRGRS

C=47U AT 45VIS
LAG=69MIN 56SPM

CLAYST,SH:LT-MED GRY SDY-SLTY,SL-MED CALC SFT-MED FRM.

TUFF,SLTST:LT-MED GRY,MNR ORNGE-RED, SFT-VRY HRD,SILICA IN PART.

W 93½ V 45

TUFF SD:GY-WH,VF-CRS, ANG-SBRD,ABUN REWRKD TUFF FRGS,SM QTZ,IN MOD FM BENT CLY MTX

SLTST/SH:DK GY-BRN, GEN MSSV,W/COM VCOL SILIC INLUS & OCC VNLT MAT

SILIC TUFF/SLTST:MED-DK GY,SBCONCH,W/ABUN BSLTIC FRGS,OLVN AL-TERNG TO IDDINGSITE

W 94 V 45 F 5.9
FC 2/32 PH 10.5
SD 3/4% S 15600PPM

TUFF:LT-MED GRY,MNR TAN,GRY-GRN,SILIC W/ VOLC FRGS.

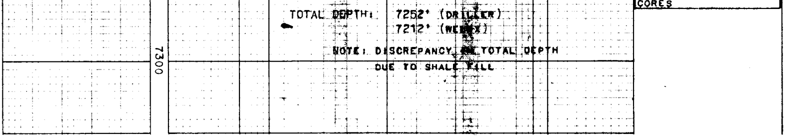
CONT TUFF AS ABV,W/ OCC SDY STRGRS,&MNR INTRBDS LT BRN,CRM, BUFF MOD FM TUFF

W 97 V 46 F 6.0
FC 2/32 PH 10.2
SD 3/4% S 15600 NACL

TUFF:LT-MED GRY,GRY-GRN,SDY-SLTY,XLINE, HRD,V SL CALC.

POSS XLN MAT:AS ABV, W/INTXL OLIVN,MGNETI PLAG,QTZC,MNR POSS PYRXENE

RAN WELEX IEL,SONIC, DIPMETER, & SIDEWALL



TOTAL DEPTH: 7252' (DRILLER)
7212' (WELEX)

NOTE: DISCREPANCY IN TOTAL DEPTH DUE TO SHALE FILL

DST#1 (1050-1070), 20FT. RAN HALLIBURTON TESTER W/ NO CUSHION. PACKERS AT 1044 AND 1050. IF 5MIN, ISI 30MIN, FF 28MIN, FSI 45MIN. GAS TO SURFACE IN 20MIN AT RATE TOO LOW TO MEASURE. RECOVERED 310' SLIGHTLY GASSY MUD (2200PPM $\text{CL}^{=}$).

PRESSURES	TOP	BOTTOM
IHP	548	562
IF_1	268	281
ISI	466	492
IF_2	175	281
FF_2	233	281
FSI	385	398
FHP	490	527

°PRESSURES IN PSI