

CA-GMT-900 Well Files



# OCCIDENTAL GEOTHERMAL, INC.

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MEDICINE LAKE HIGHLAND, CALIFORNIA  
STRAT TEST No. 2, FEDERAL 17-6  
SEC. 6, TWP. 43N, RGE. 4E

DATE SPUD: OCTOBER 5, 1982  
DATE COMPLETED: NOVEMBER 2, 1982  
DEPTH: 4000'  
LOGGED BY: STEWART/GOODWIN, SMITH/BEALL  
K.B.: 9.2 feet above ground level

### EXPLANATION

- |  |                |  |               |  |        |  |          |
|--|----------------|--|---------------|--|--------|--|----------|
|  | Dacite         |  | Pumice & Tuff |  | Basalt |  | Clay     |
|  | Volcanic Glass |  | Andesite      |  | Scoria |  | Vesicles |

### LITHOLOGY

Alluvium, Scoria, Pumice-  
brn, red-brn, lt. gry

Basalt Scoria-  
red, brn, blk  
tr plag pheno

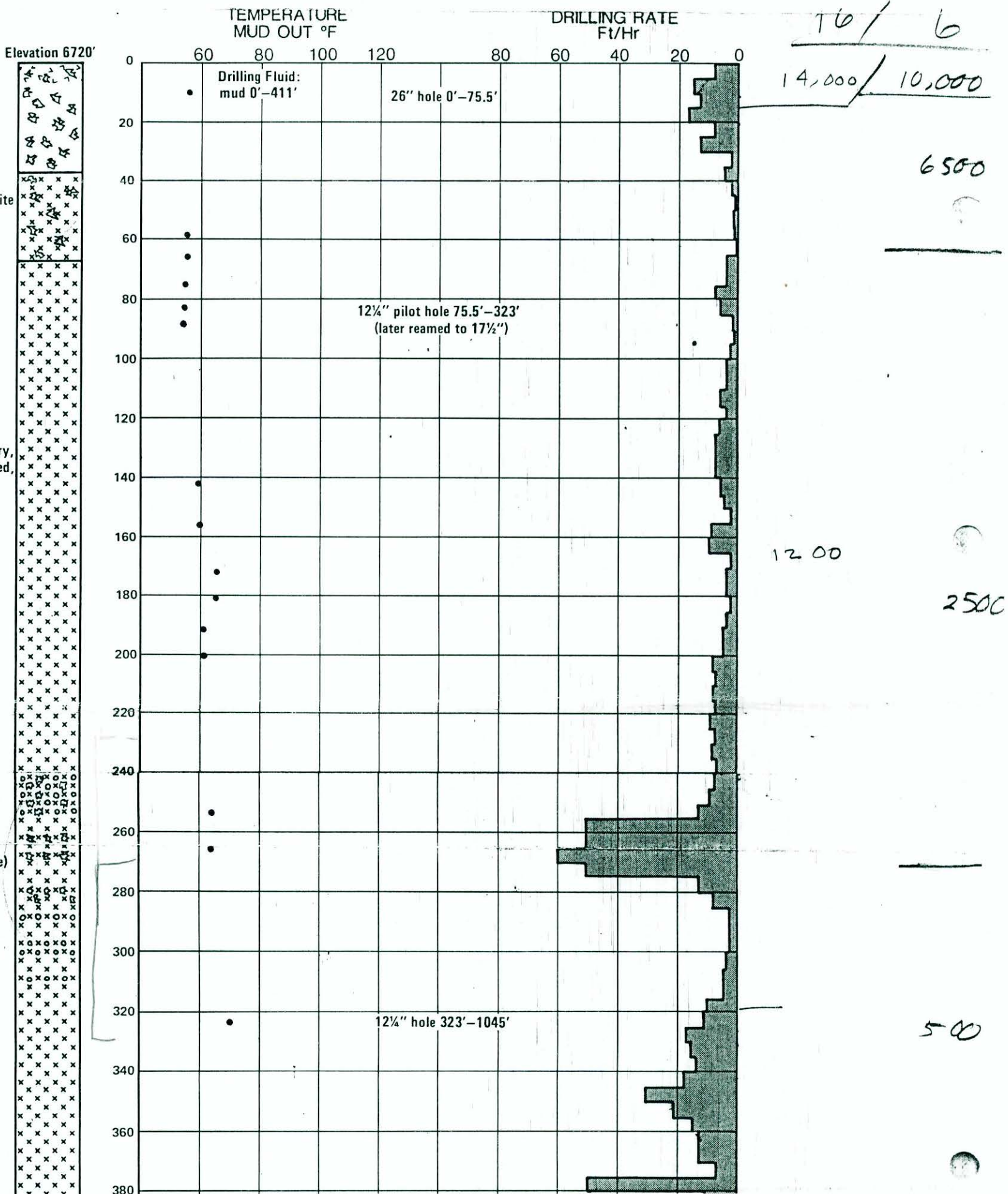
Scoria (as above) and Andesite  
red gry, vesicular, plag  
& pyx phenos

Andesite - med gry & red gry,  
plag & pyx phenos, weathered,  
massive

Andesite  
w/Cinders - dk to med  
gry & red-blk, plag pheno.

Cinders w/Andesite (as above)

Andesite - med gry, sparse  
plag pheno, vesicular locally



Andesite - med gry, aphanitic, massive

Volcanic Glass - dk gry, blk, lt-dk brown, massive

Dacite? - lt-med gry, blk, vitric to aphanitic, massive  
*obsidian*

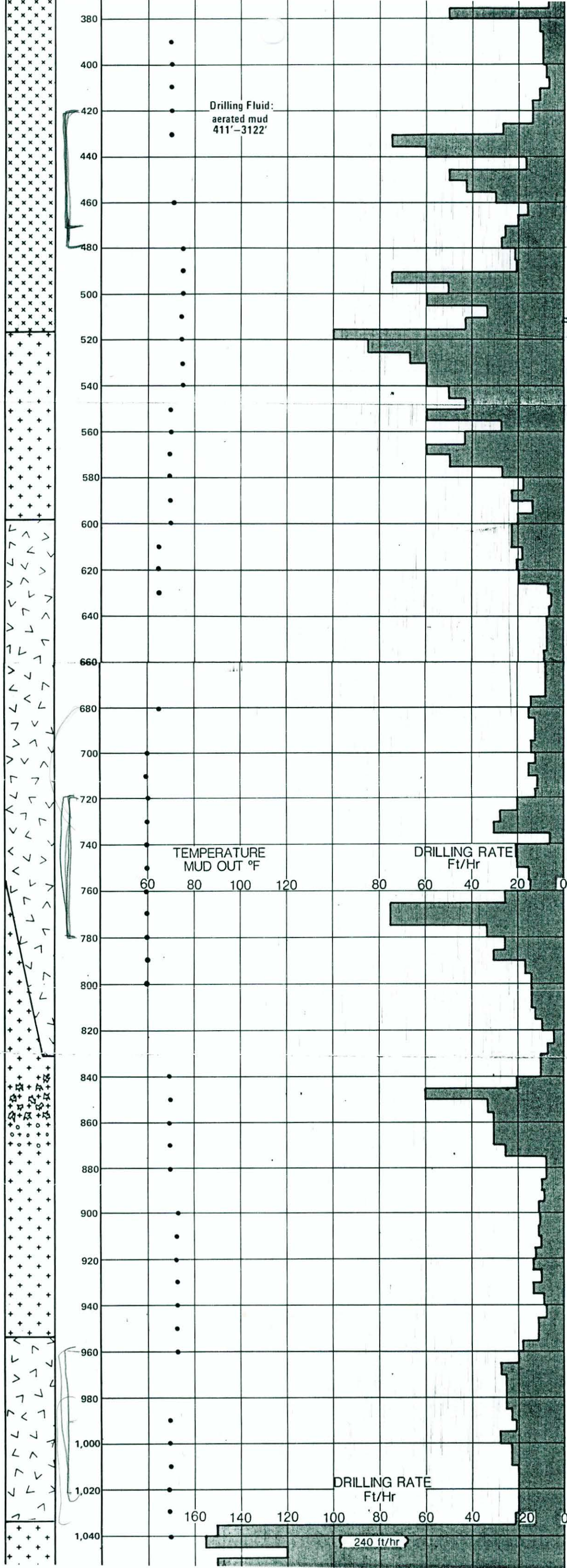
Water Entry

Andesite? - med gry, plag pheno, locally interbedded scoria

Dacite? - dk gry, plag & rare ol? phenos

Volcanic Glass - brn, med-dk gry, plag pheno

Drilling Fluid:  
aerated mud  
411'-3122'



700

1800

800

300

60



42

DRILLING RATE  
Ft/Hr

240 ft/hr

TEMPERATURE  
MUD OUT °F

DRILLING RATE  
Ft/Hr

Volcanic Glass - brn, med-dk gry, plag pheno

Silicic Volcanic Tuff w/Glass - lt to med gry, welded, aplitic

Dacite? - dk gry, vitric, massive

Silicic Volcanic Tuff? - lt to dk gry, vitric, poorly welded

No Sample

No Sample

Clay w/Glass - salmon

Andesite? - med to dk gry, vitric to aphan, massive

DRILLING RATE Ft/Hr

160 140 120 100 80 60 40 20 0

240 ft/hr

8 3/4" hole 1045'-4000'

42

300,000 yrs ± 0.4

460

chip sample primarily glassy andes or dacite

- t.s. mixture of unwelded tuff (almost aphyric - has minor plag + cpx frags) and glassy microlitic andesite

chip sample of X1 lithic andes. (?) tuff 10-20% X1s - plag + ? 70% red, gray + black sand size aphanitic lithics, minor ashy matrix

- a/a more ashy matrix

- t.s. X1-rich tuff (~20% X1s plag > cpx) > OPX f-gr granular unwelded gndms.

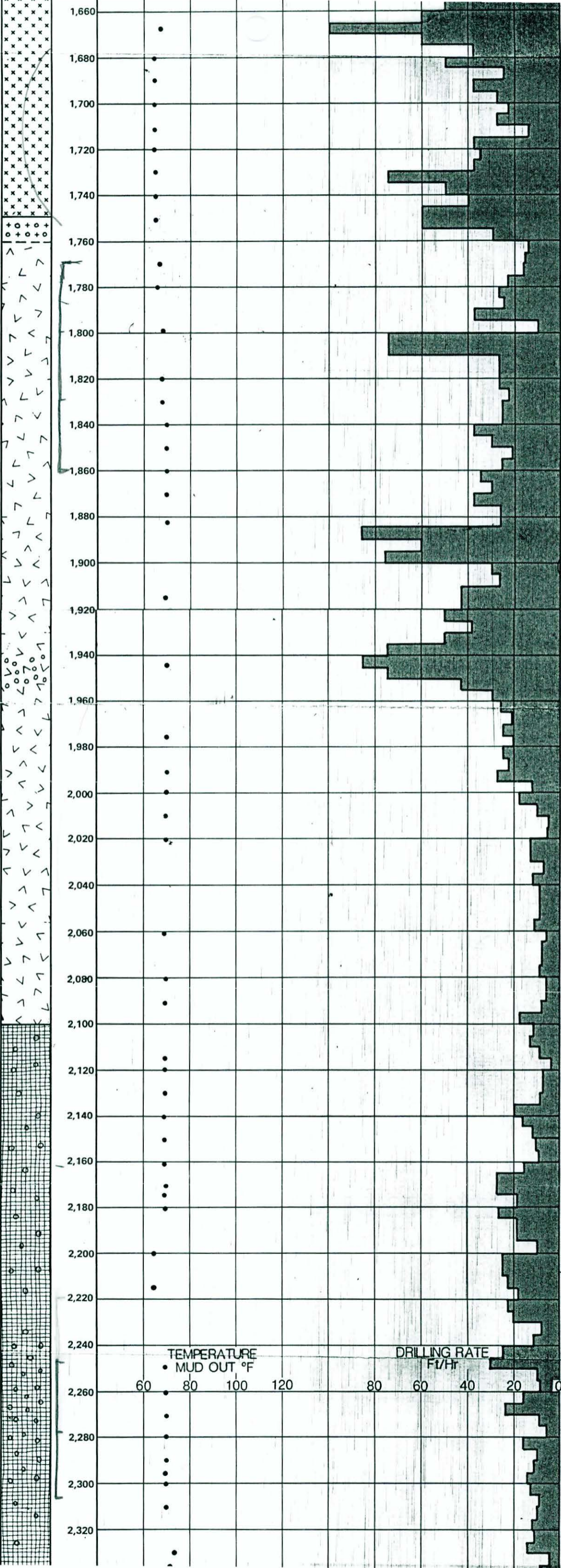
TEMPERATURE MUD OUT °F

60 80 100 120 80 60 40 20 0

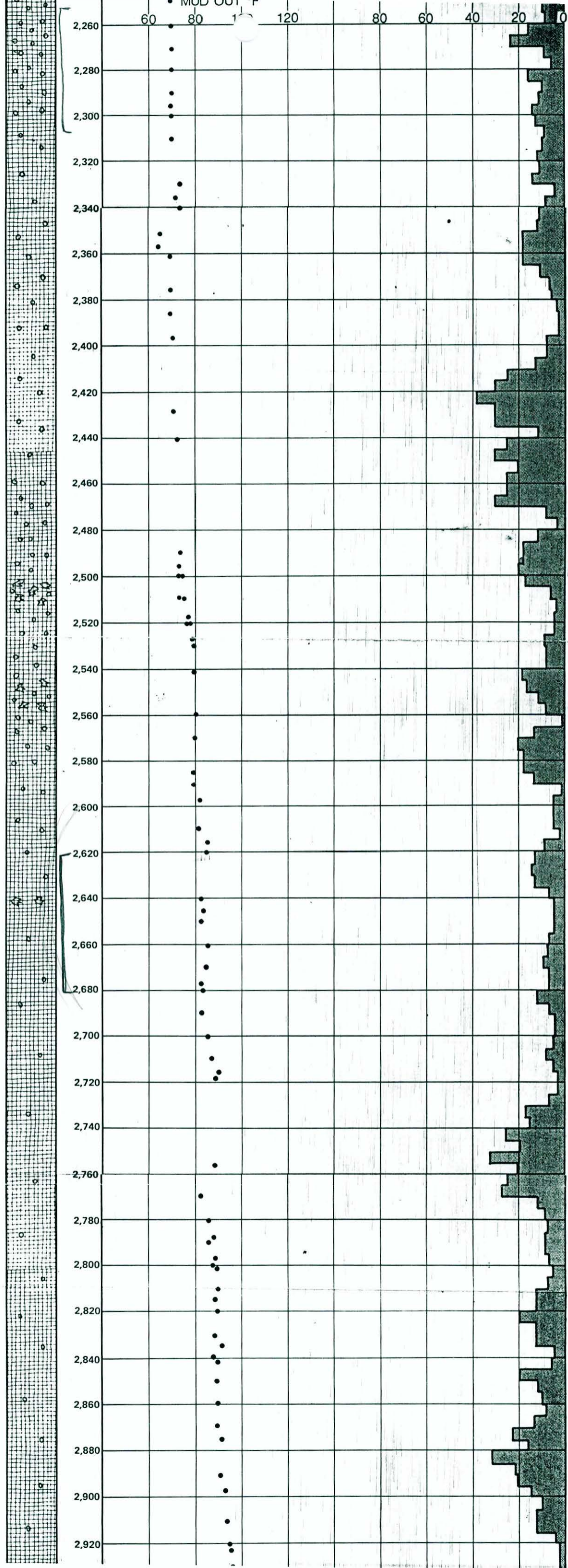
DRILLING RATE Ft/Hr

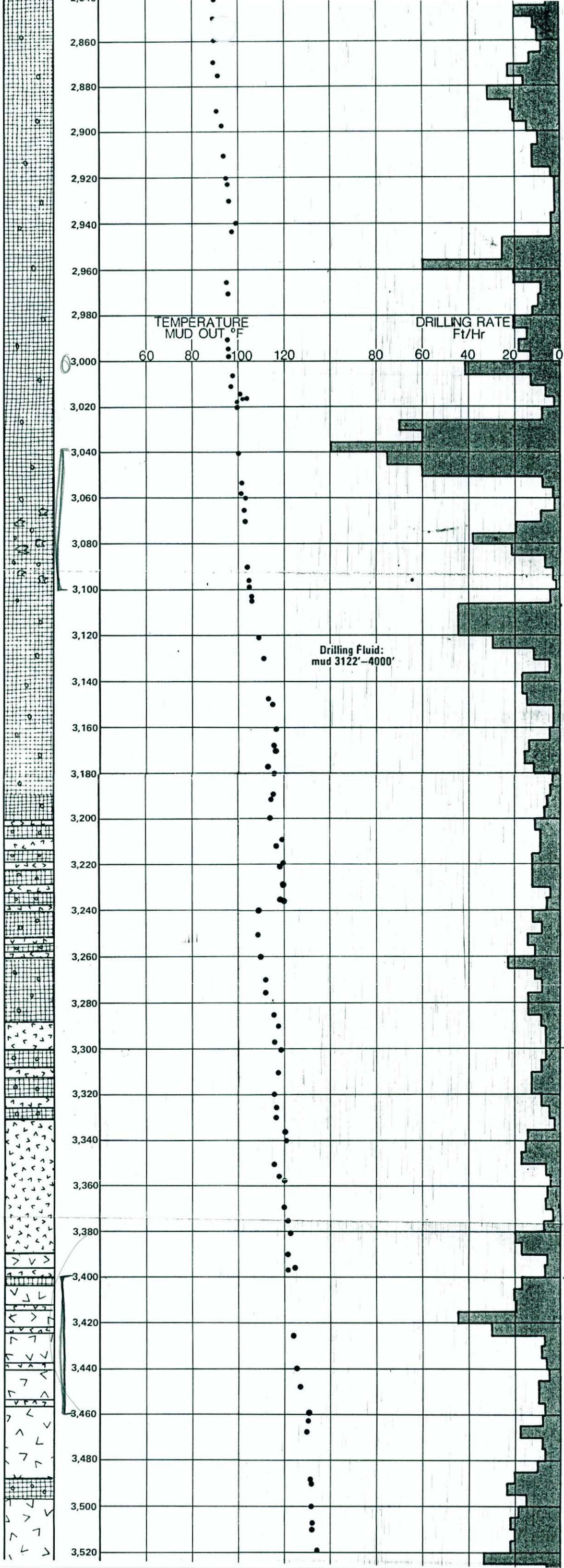
Water Entry  
 Dacite? — med to dk gry,  
 blk glass layer top 10',  
 vitric, rare plag pheno

Amygdaloidal Basalt — med to  
 dk gry to blk, plag & ol & pyx  
 phenos, locally scoriaceous,  
 tr secondary opal, pyrite,  
 drusy qtz, FeOx, chalcedony,  
 clay, epidote — disseminated  
 in vns & voids



600,000 yrs ± 0.5





Possible Water Entry

Interbedded Basalt (as above) and Silicic Ash Tuff? - lt gry, unwelded, plag pheno, minor cinders, secondary mins as above

Silicic Ash Tuff - v lt grn gry to v lt gry (as above)  
Water Entry

Dacite? w/Silicic Tuff & Minor Basalt -lt gry to gry, plag pheno, secondary mins as above

Drilling Fluid:  
mud 3122'-4000'

900,000 yrs

ts. f-gr andes. tuff  
fine plag laths in granular matrix

ts. andes. tuff  
5-7% fine-med gr plag in granular, locally autaxitic, matrix

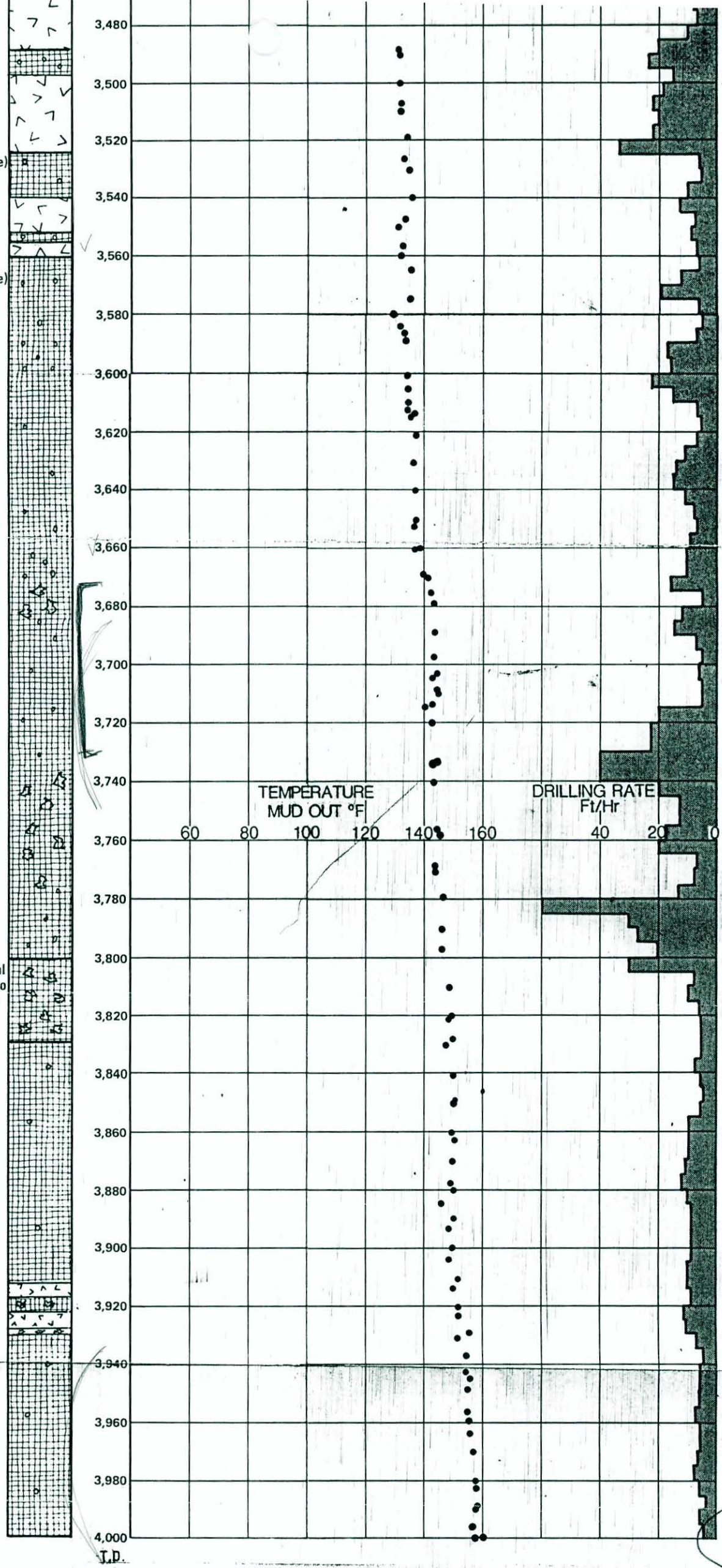
ts. same tuff  
a/a

Interbedded Dacite? (as above)  
& Amygdaloidal Basalt  
w/Minor Cinders & Tuff -  
med to dk gry, plag pheno,  
secondary mins as above

Amygdaloidal Basalt (as above)  
minor Scoria

Altered Scoria & Amygdaloidal  
Basalt (as above) - lt grn gry to  
lt red gry, plag pheno, epidote  
& qtz in voids

Basalt - plag pheno;  
tr secondary qtz, opal, pyr;  
generally massive; micro  
amygdaloidal; local Cinders  
& Tuff.



t.s. - same tuff a/a

2,300,000 yrs

- N.B. 1. All depths measured from ground level.  
2. Electric & geograph logs guided determination of rock contacts and stratigraphy when sampling practices questionable, especially in the top 500' of the hole.  
3. The lithologic descriptions are preliminary field descriptions.