

MAR 23 1977



Chevron Resources Company
320 Market Street, San Francisco, CA 94111
Mail Address: P.O. Box 3722, San Francisco, CA 94119

March 18, 1977

Mr. H. D. Pilkington
Amax Exploration Inc.
4704 Harlan Street
Denver, CO 80212

Dear Mr. Pilkington:

We enclose data from our 14 drilled temperature holes at Neals-Bully Creek Area. If there are any questions, please feel free to call me. Please sign and return the attached copy.

Sincerely,

E. H. Haynes

EHH:ab

Data received March 23, 1977

Date H. D. Pilkington
March 24, 1977

NBC #1 =



Lithology

- 0-15' Clay - tan brown w/caliche
- 15-30' Dark igneous (basalt?) soft w/SiO₂ incrustacions - weathered
- 30-45' As above
- 45-60' As above
- 60-75' As above w/anhydrite - gypsum
- 75-90' As above
- 90-105' As above
- 105-120' Claystone - soft - weathered - light tan
- 120-135' Clay - tan brown
- 135-150' As above
- 150-165' Clay - w/numerous qtz frags and muscovite flakes
- 165-180' As above
- 180-195' Clay - light tan w frags of igneous material (weathered basalt?)

50

60

70

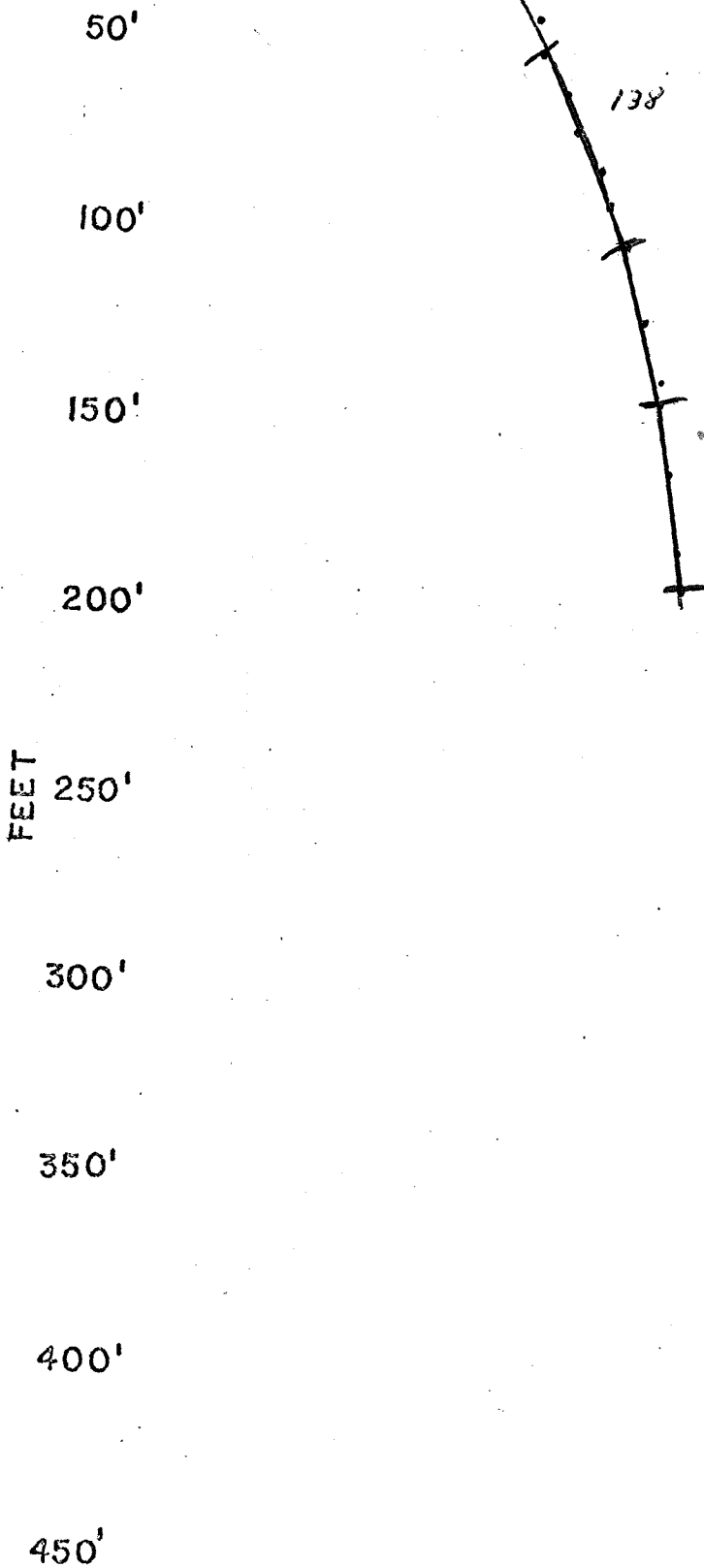
80

9

°F

#1

BC-101



$$\frac{(26.0)}{2.63}$$

$$\frac{138, 93, 76}{4.1 @ 30}$$

50

60

70

80

90

°F

#2



50'

100'

150'

200'

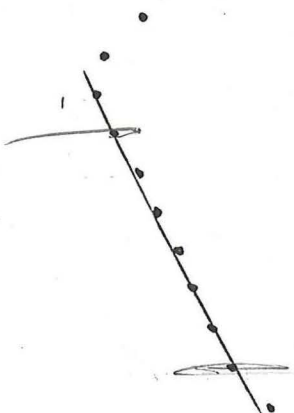
FEET
250'

300'

350'

400'

450'



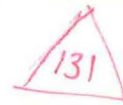
(29.6)

1.02

185

5.6 @ 3.0

NBC #3
Lithology

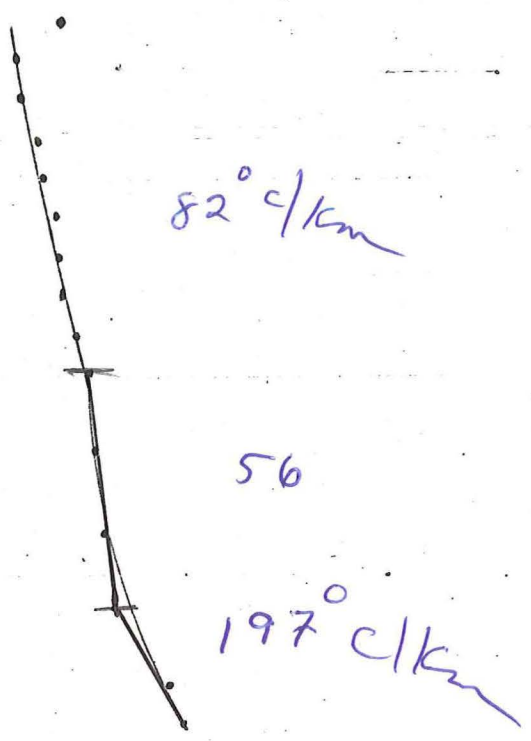


- 4.6 0-15' Clay - light tan and dark igneous material (basalt?) with frags of quartz
15-30' As above w/chalcedony
13.9 30-45' Clay - light tan - 100%
18.5 45-60' Vesicular basalt (blk) - w/clay
60-75' Clay - light tan - w/igneous frags
75-90' Clay " " " " (basalt)
90-105' Silicified clay stone (baked?) - hard 5 - or very fine grained tuff
37 105-120' As above
120-135' Igneous - dark (basalt?) w/qtz veining
135-150' As above
150-165' As above w/ minor white alt. prod.
165-180' As above
180-190' As above

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



$$\frac{(20.1)}{2.30}$$

$$\frac{82.56, 197}{3.1 @ 5.5}$$

NBC #7 =
Lithology

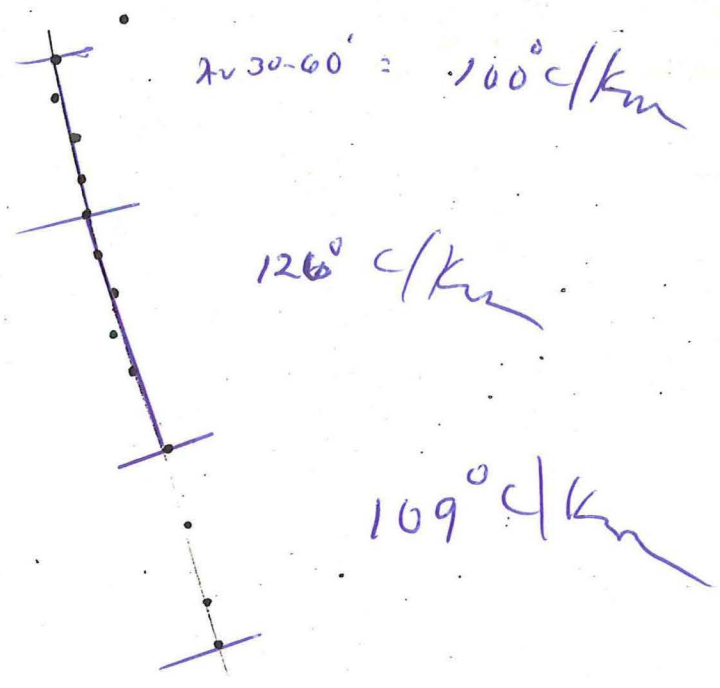


- 0-15' Clay light tan w/vol frags
- 15-30' As above
- 30-45' As above
- 45-60' Dark - fine grained igneous w qtz frags and clay/minor
- 60-75' Tuff - white w/vol frags
- 75-90' Buff colored clay or weathered tuff, w/vol frags
- 90-105' As above
- 105-120' Clay - buff or weathered tuff, vol (basalt) and traces of pyrite or chalcopryrite
- 120-135' Weathered vesicular basalt w/chalcedony and pyrite traces
- 135-150' Tuff - white, w/vol frags (basalt) & traces of quartz & occasional chards
- 150-168' Tuff weathered or claystone w/vesicular basaltic frags

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



(24.2)

1.83

$$\frac{100, \overline{126}, 109}{3.8 @ 3.0}$$

NBC #8

Lithology

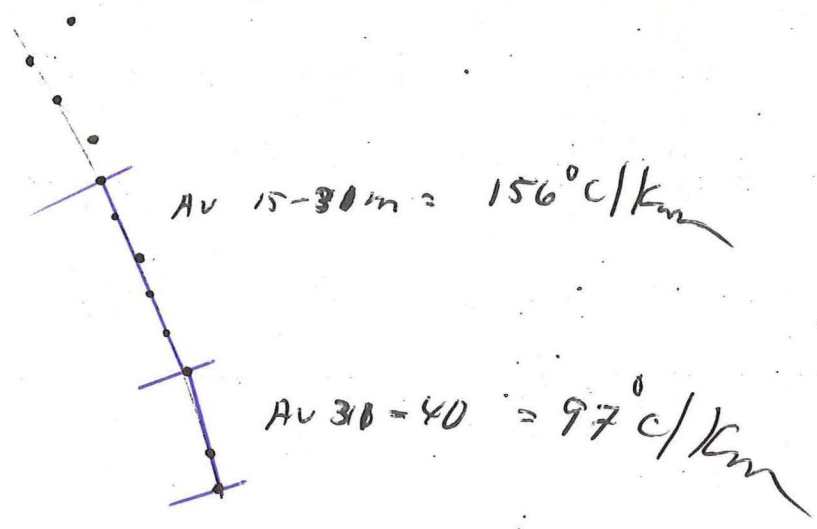


- 0-15' Clay - buff w/rounded vol frags
- 15-30' As above
- 30-45' Clay, buff w silicified vol frags (light colored)
- 45-60' As above w/pyrite traces on volcanics
- 60-75' Clay - buff w/pyrite traces and trace tuff
- 75-90' As above
- 90-105' As above
- 105-120' Aphanitic volcanics (basalt) w/qtz veining & incrustations
- 120-130' As above

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



$$\frac{(24.5)}{1.95}$$

$$\frac{150, \overline{97}}{4.9 @ 5.0}$$

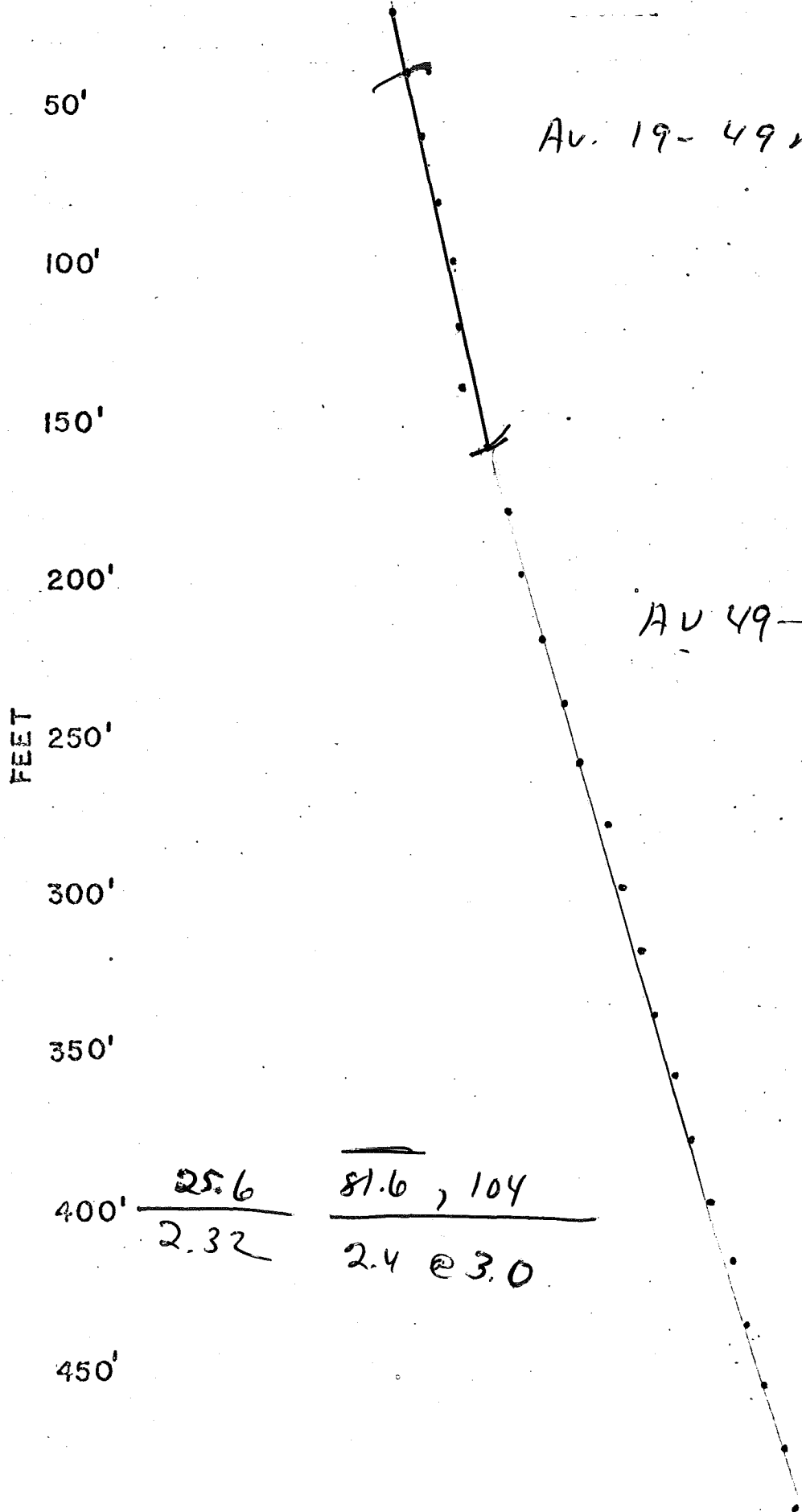
NBC #10 =

Lithology



- 0-15' Pea gravel - w/basalt? well rounded
- 15-30' Basalt?
- 30-45' Light tan clay - w rare chards
- 45-60' Clay - as above
- 60-75' Clay - with 10% chards
- 75-90' Ashy vol siltstone or claystone - w/rare basalt frags
- 90-105' As above
- 105-120' As above no basalt
- 120-135' As above no basalt
- 135-150' As above no basalt

50 60 70 80 90 °F



Av. 19-49 m = 81.6° C / km

AV 49-154 = 103.8° C / km

25.6	<u>81.6 , 104</u>
2.32	2.4 @ 3.0

450'

NBC #11
Lithology



0-15	Basalt, well rounded w/clay
15-30	As above
30-45	Clay - Buff w/igneous frags
45-60	" " "
60-75	" " "
75-90	" " "
90-105	" " "
105-120	" " "
120-135	" " "
135-150	" " "

#11

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



Av 15-46m = 72°/km

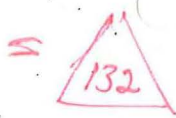
(19.6)

2.63

72

2.2 @ 3.0

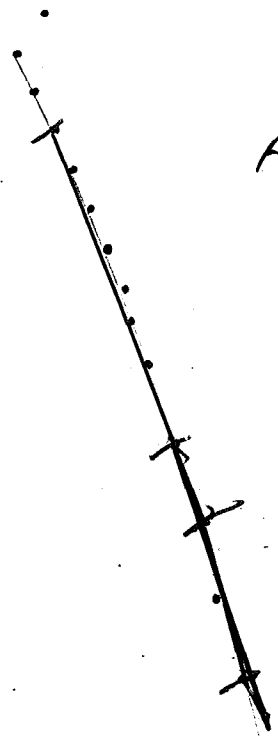
NBC #20
Lithology



0-15' Buff colored clay - consolidated - 100%
15-30' Clay reddish brn w qtz frags w/minor caliche
30-45' Dark aphanitic volcanic - w pyrite incrustacions
45-60' " " " w/clay - minor amount
60-75' As above
75-90' " " w/no clay
90-105' As above w silicified tuff - white
105-120' Silicified basalt, minor clay & tuff - trace caliche w/qtz frags
120-135' Silicified basalt w qtz frags
135-150' As above
150-165' As above w trace caliche
165-180' As above w clay traces and inclusions of red volcanic (rhyolite ?)
180-195' As above

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



Av 15-43 m = 136°/km

Av 43-89 m = 132

(26.2)
1.43

136, 132
4.1 @ 30

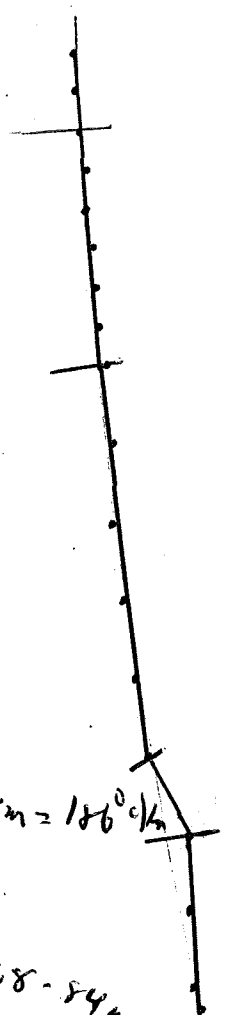
NBC #21 =
Lithology



0-15' Clay light tan w vesicular basalt
15-30' Vesicular basalt w minor amount of clay
30-45' Basalt, clay w/minor sulphur deposition
45-60' Bi-modal - basalt w red oxidized volcanics (rhyolite?) w minor amounts of clay
60-75' Silicified basalt - some vesicular (top of flow) - weathered
75-90' Fine grained silicified igneous (?) - lighter than 60-75
90-105' " " " " "
105-120' As above
120-135' As above
135-150' As above, w/minor sulphur deposition
150-165' As above w 50% clay - (transition - contact)
165-180' Clay w vol frags
180-195' " " "
195-210' Clay (baked or silicified?)
210-225' Clay - with basalt frags & traces of muscovite
225-240' As above
240-255' As above
255-270' As above
270-280' As above

50 60 70 80 90 °F

50'
100'
150'
200'
250'
300'
350'
400'
450'



AV 15-31 m = 40°C/km

AV 31-62 m = 39°C/km

AV 62-68 m = 186°C/km

AV 68-84 m = 40°C/km

(16.4)
5.0

40
1.2 @ 3.0

our log

(16.9)
5.0

40, 186 4
1.2 @ 3.0

NBC #22

Lithology



0-15' Weathered silicified basalt
15-30' As above
30-45' As above w/trace sulphur deposition
45-60' As above w/qtz veining (minor)
60-75' As above
75-90' Clay 50% light tan with vol frags
90-105' As above
105-120' As above
120-135' Fine grained igneous, silicified (basalt) w/minor alt prod. & minor sulphur dep.
135-150' Vesicular basalt w clay & great % 40% milky qtz (qtz vein?)
150-165' Silicified basalt - weathered
165-180' As above
180 - As above

°F

#22

105

50 60 70 80 90

50'

100'

150'

200'

FEET

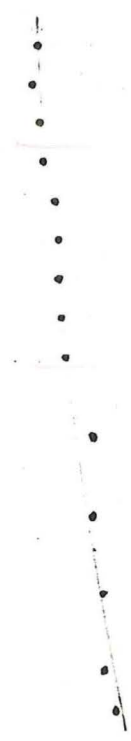
250'

300'

350'

400'

450'



(19.9)

 3.44

SS

 1.7 @ 3.0

NBC #23 =



Lithology

0-15'	Vesicular basalt weathered w/clay - tan & caliche
15-30'	Silicified basalt
30-45'	" " w/trace sulphur deposition
45-60'	As above
60-75'	As above
75-90'	As above
90-105'	As above
105-120'	As above
120-135'	As above
135-150'	As above
150-165'	As above
165-180'	As above

#23

104

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



(17.1)
4.44

45
1.4 @ 30

NBC #24 =



Lithology

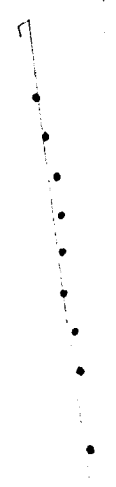
- 0-15' Buff colored clay w/CaCO₃ (caliche)
- 15-30' Qtz sand, coarse, moderately rounded 95% - many grains possibly were subject hydrothermal dissolution - w/trace caliche
- 30-45' Clay, buff colored (or weathered tuff) w qtz frags (from up hole?)
- 45-60' As above w muscovite and biotite chips
- 60-75' As above
- 75-90' As above
- 90-105' As above
- 105-120' As above
- 120-135 Coarse grained qtz sand, moderately rounded - 100%

#24

°F

50 60 70 80 90

50'
100'
150'
200'
250'
300'
350'
400'
450'



$$\frac{(19.2)}{32.8}$$

$$\frac{0.1}{1.8 @ 3.0}$$

NBC #33 =

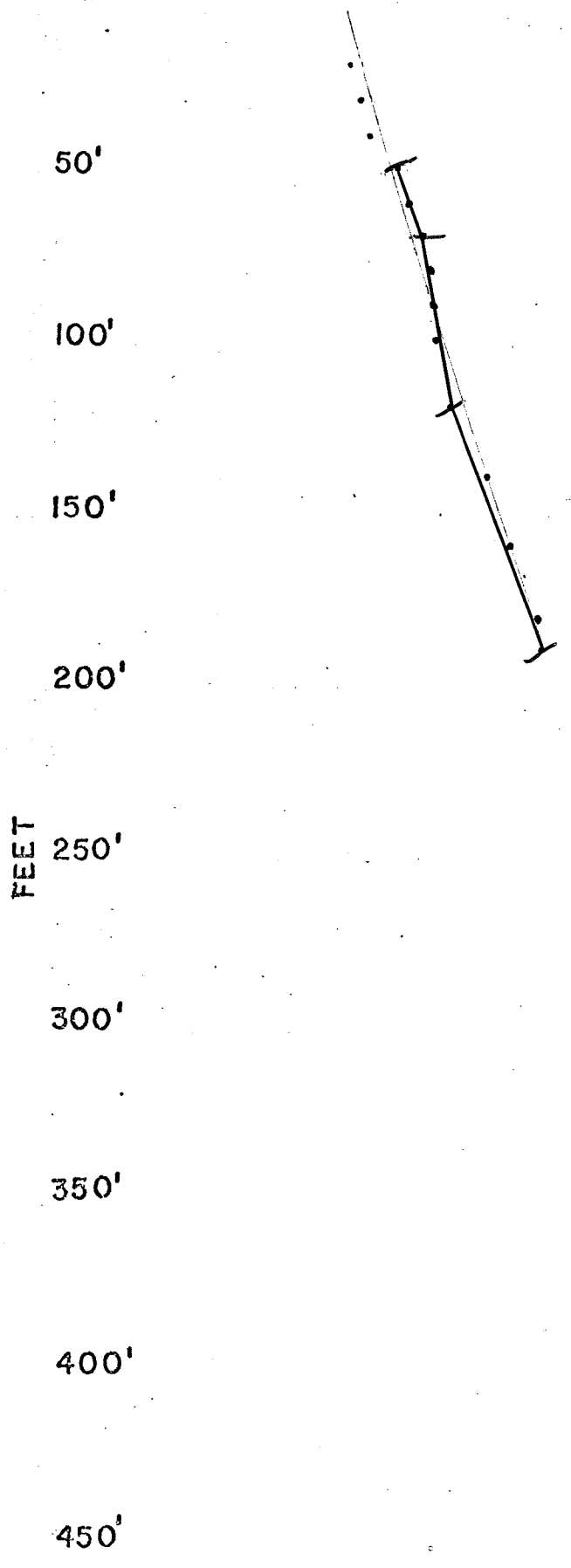


Lithology

0-15' Clay - buff, vol frags & qtz frags
15-30' Clay - buff w pink weathered vol (rhyolite?)
30-45' Tuff - white
45-60' Tuff & clay mixed
60-75' Weathered tuff w chards - light buff w rare muscovite flakes & clay
75-90' As above
90-105' As above
105-120' As above
120-135' As above w/greater amount of clay
135-150' As above
150-165' Clay w vol chards
165-180' As above
180-190' As above

°F

50 60 70 80 90



BC-102

$$\frac{(27.2)}{1.35}$$

$$\frac{111, 148}{4.4 @ 3.0}$$

NBC #35

Lithology



- 0-15' Clay - light tan - possibly 5% v. fine grain sand.
- 15-30' V. fine light tan sand composed dominantly of SiO₂ volcanic chards? Chard size is fairly uniform, all angular - w/small amount of clay present.
- 30-45' As above - with more clay.
- 45-60' As above - 50% clay and v. fine sand.
- 60-75' As above - w/rare basalt? (dark igneous frags).
- 75-90' Grey-grn-clay - ~ 10% igneous chips - less amount of fine light sand ~ 20%.
- 90-105' Grey-grn clay - 70% - SiO₂ chips (chards?)
- 105-120' Light tan-grn-volcanic decop - clay - soft - white streak - 75% w/some basalt? 15% trace of pyrite - some in small qtz vein.
- 120-135' Tan-grn-clay 70% w/volcanic decop sand ash flow 20%.
- 135-150' Clay - as above 80% w/smaller % of chards.
- 150-165' Dark 90% aphanitic volcanic (basalt?) 10% - clay - trace chalcedony.
- 165-180' As above (basalt?) pyrite frags xls w/ash
- 180-195' As above - w/qtz filling some depressions (rare)
- 195-210' Basalt (?) 95% covered with ash and clay
- 210-225' Basalt ? Gabbro? 99% - small amount chalcedony & pyrite
- 225-240' Dark igneous - ? - with small amount of trace mineral - malochite? dark green w/pyrite
- 240-255' As above
- 255-270' As above
- 270-285' As above ~ 5% pyrite
- 285-300' As above
- 300-315' As above with clay (grey-grn)
- 315-330' As above
- 330-345' Dark basalt 80% - with small amount chards

NBC #35 (continued)

345-360' Basalt? 80% clay & chards
360-375' Clay now missing sieved - 50% w/basalt? 40%
with traces of pyrite & weathered andesite?
375-390' As above
390-405' Clay - 60% - chards & basalt? 10%
clay - 80% - w/glass chards
405-420' Trace of basalt?
420-435' As above
435-450' 90% clay & chards
450-465' " "
465-480' " "
480-495 Clay - as above
495-500 " "

50

60

70

°F

80

90

50'

100'

150'

200'

250'

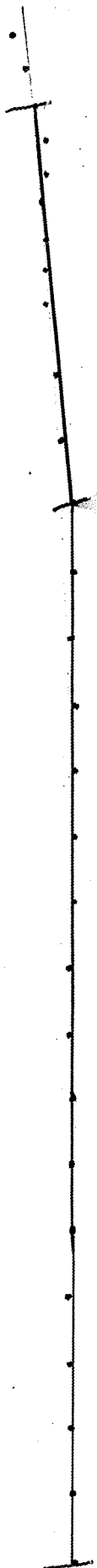
300'

350'

400'

450'

FEET



AV 19-49 m = 95°C/Km

AV 62-154 m = 69

$\frac{22.3}{2.74}$

$\frac{95 \quad \overline{69}}{3.5 @ 5.0}$