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James Doyle Sell Mining Collection

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HOLE NO. M-143

Coordinates N 361,566.86 E 776,362.06

Dip Vert Bearing —

Date started 6-7-67 Completed 6-20-67

Collar Elevation 3008.6 Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400.3 | 410.5 | 10.2 | | Nil | | Fangl | Run | Trchlor locmod bom Ark, blk sh, Pyro clastic frags | Run | 10-40 | Sp-locmod occas bom smeared fracs | sharp angular, poorly sorted frags in pale grn matrix, mod indurated occas bot fr rhyolite boulders |
| | 418.0 | 7.5 | | | | Fangl | Run | As above | Run | 60± | As above | As above, Ark to (0.6') |
| | 426.2 | 8.2 | | | | Fangl | Run | As above, Tr bom | Run | 45-60 | As above | As above |
| | 432.4 | 13.2 | | Tr | | Fangl | Run | As above | Run | 45-60 | Mod-lot occas bom smeared frags | As above lots of Rhyolite boulders |
| | 439.1 | 8.7 | | | | Fangl | Run | As above | Run | 30-60 | As above | As above Nil boulders |
| | 458.0 | 9.9 | | | | Fangl | Run | As above | Run | 30-60 | Sp-locmod occas bom smeared fracs | sharp angular poorly sorted frags in pale grn matrix, frag size from 22mm to 0.2' |
| | 468.1 | 10.1 | | Tr | | Fangl | Run | As above | Run | 45± | As above | As above mod well indurated |
| | 477.2 | 9.8 | | | | Fangl | Run | As above, inc bom to loc wk | Run | 45± | Sp-locmod occas bom smeared fracs | As above |
| | 489.1 | 10.2 | | | | Fangl | Run | As above | Run | 45± | As above | As above |
| | 500.0 | 11.9 | | Tr | | Fang. | Run | As above | Run | 10-45 | As above | As above, slight inc in chlor alt |
| | | | | | | | | Bottom | | | | |

HOLE NO. M-143

Coordinates N 361,556.86 E 770,362.06

Dip Vert Bearing

Date started 6-7-67 Completed 6-20-67

Collar Elevation 3008.6 Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT

1/2

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 200.0 | 200.0 | | | | Alluv | | | | | | Unconsol Gravels Top of B 200.0± |
| | 300.0 | 16.0 | | | | Cgl | Run | Non recovery Rock Bit | | | | |
| | 308.3 | 8.3 | | | | Cgl | Run | Cal Cem. Cgl Tr. Cu Ox in pebbles, occas Mp frags | Run | Low 4 | wk Fracs | small med rounded pebbles, occas Mp frags |
| | 317.7 | 8.9 | | ·01 | | Cgl | To 316.5± | As above | Run | Low 4 | As above | As above |
| | | | | | | Fangl | To 317.7 | Tr Cu Ox & lim. fgmr clastics Tr chlor? | 314.0 | ? | 3.8' stly bx & fg lt zone occas hem smeared | sharp occas and rounded pebbles in chlor or Cu Ox rich matrix |
| | 329.9 | 12.2 | | | | Fangl | Run | Tr Cu Ox & hem occas bleach frags; occas large (0.6) bio, rhyolite? frags & carbonaceous frags | Run | ? | med to local fracs & shears with local fg | sharp med (1-5mm) frags in lt grn (chlor?) matrix poorly indurated |
| | 339.0 | 9.1 | | | | Fangl | Run | As above w/ Cu Ox & sp hem, many pale green (chlorite) frags | Run | Low 4 | As above | sharp angular frags (1-6mm) & occas v large Ark frags (0.6') in hem rich matrix |
| | 345.1 | 6.1 | | Tr | | Fangl | Run | As above | Run | 50± | As above | As above |
| | 354.4 | 9.3 | | | | Fangl | Run | As above | Run | 50± | sp occas hem smeared frags | sharp angular frags in chlor? matrix occas Ark boulders (1.0'±) |
| | 367.2 | 12.8 | | | | Fangl | Run | Leached hem, Tr chlor alt, bleach, Ark frags, possible pyroclastics | Run | 50-80 | As above occas hem filling in wk shears | As above, mod A |
| | 378.7 | 11.5 | | Nil | | Fangl | Run | As above, Tr qtz in Ark? Frags & occas biotite rhyolite? frags | Run | Low 4 | As above | sharp angular bleach, Ark frags, wk occas large (0.5') Ark & pyroclastic frags & wk well indurated Tr chlor |
| | 388.6 | 9.9 | | | | Fangl | Run | As above | Run | 45± | sp hem at fracs | As above |
| | 400.3 | 11.7 | | | | Fangl | Run | Tr-wk hem, Tr chlor Rhyolite, Ark, bleach? carbonaceous frags | Run | Low 4 | sp occas hem smeared fracs | As above |

MIS-807-A 75

HOLE NO [illegible]

Coordinates. N 560,035.99 E 776,486.09

Dip Vert Bearing —

Date started 5-31-62 Completed 6-6-62

Collar Elevation 3027.3 Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT



| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 8.7 | | .04 | | Fangl | Run | Tr. hem, chlor | Run | 10-50 | wk fracs with hem, bot fracs zones | Small unsorted (1-3mm) Ark fragments inclusion with matrix with occas large Ark (1.0') boulders; (2.0'+) occas pyroclastic boulder |
| | 458.0 | 10.2 | | | | Fangl | Run | Tr. hem chlor, gyp | Run | 10-50 | wk hem, emerald, gyp, bit / fracs | As above, with occas boulders; frags range to 0.3' |
| | 466.6 | 8.6 | | | | Fangl | Run | As above | Run | 10-60 | As above | As above, Ark frags range to 0.5' |
| | 478.8 | 12.2 | | .03 | | Fangl | Run | As above | Run | 10-60 | As above | As above, Nil pyroclastics |
| | 488.5 | 9.7 | | | | Fangl | Run | Tr. hem, gyp, sp, chlor | Run | 10-60 | As above | small to large unsorted Ark bleset frags, chlor alteration, wk fracture induration occas Ark boulders |
| | 500.0 | 11.5 | | .02 | | Fangl / | Run | As above | Run 492.5 | 10-60 ? | As above Pass. wk 3.2' shear zone | As above, Nil boulders |
| | | | | | | | | Bottom | | | | |

MIS-807-A 75

HOLE NO. M-142

Coordinates. N 360,038.99 E 776,496.09

Dip Vert. Bearing —

Date started 5-31-67 Completed 6-6-67

Collar Elevation 3027.3 Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT

1/2

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 310.0 | 310.0 | | | | Alluv | RUN | | 310.0± | — | Aprox loc. bedrock | Uncon Dated Gravels |
| | 320.0 | 10.0 | | | | Fangl | RUN | | | | | RB. to 320.0 |
| | 329.0 | 9.0 | | Nil | | Fangl | RUN | wk lim & hem Sp chlor | RUN | 60 | wk hem smeared fracs | Unsorted angular to subangular frags ranging from 1-2mm to 6-8" in size in chlor rich clay matrix (Hel[illegible] fanglomerate) |
| | 341.0 | 12.0 | | | | Fangl | RUN | As Above less lim | RUN | 30-60 | As Above | As Above |
| | 352.7 | 11.7 | | | | Fangl | RUN | As Above | RUN | 30-60 | " " | As Above frags are Blk sh, slts & Lg Ark of Amole form. |
| | 366.2 | 13.5 | | TR | | Fangl | RUN | wk hem Tr lim mod chlor | RUN | 30-50 | wk occas hem smeared fracs | As Above |
| | 375.2 | 9.0 | | | | Fangl | RUN | As Above | RUN | 30-50 | As Above | " " |
| | 385.2 | 10.0 | | | | Fangl | RUN | As Above + Tr gyp | RUN | 10-50 | wk fracs occas gyp filled or hem smeared | As Above frag's up to 2' in dia |
| | 394.9 | 9.7 | | .04 | | Fangl | Run | Tr hem leach & gyp, Tr chlor | Run | 10-50 | As above | As above with occas large Ark & bouldersat large blk sh & Ark frags 0.5' |
| | 399.0 | 4.1 | | | | Fangl | Run | As above, Nil gyp | Run | 40 or ? | wk occas hem smeared fracs | As above, no Ark boulders |
| | 408.7 | 9.7 | | | | Fangl | Run | Tr hem gyp, lim | Run | 40 or ? | wk occas hem & gyp filled fracs | Unsorted angular frags from 1-2mm to occas large Ark (0.2-0.3') frags with occas. pyroclastics |
| | 418.9 | 10.2 | | .05 | | Fangl | Run | Tr-lee wk hem gyp Tr chlor | Run | 20-70 | wk-lee wk fracs occas hem smeared, gyp filled | As above, Nil pyroclastics |
| | 429.3 | 10.4 | | | | Fangl | Run | As above | Run | 10-50 | As above | As above with occas Ark boulders (1-2.0') |
| | 439.1 | 10.3 | | | | Fangl | Run | As above | Run 436.0 | 0-50 ? | As above. Silicified-chlor alt zone | As above |

HOLE NO M-141

Coordinates: N 36,275.00 E 779,153.58

Dip Vert Bearing —

Date started 5-25-62 Completed 5-29-61

Collar Elevation 2955Z Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT

| DEPTH | | | % COPPER | | | ROCK TYPE | MINERALIZATION | | STRUCTURES | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From | To | Interval | N.S. | Total | Weighted Average | | Depth | Description | Depth | Dip | Description | |
| 494.4 | 494.3 | 2.2 | | | | Fanglt silst | Run | wk-lockgyp wk bom | Run | 10-20 | wk frac. loc stilgyp filled Space Bedded 15-20° | wk bom stained lg Fanglt with Aok/carbon frags. Ch for bedded fg-vc fg red silt silst. |
| | 500.0 | 5.7 | | .03 | | Fanglt silst | Run | sph/chalcopyrite bom | Run | 10-30 | As above | As above |
| | | | | | | | | Bottom | | | | |

This rock corralates with The Helmet fangomerate immediately below the basalt porphyry flow as seen in D.D.H M-139

MIS-607-A 75

HOLE NO M-141

Coordinates: N 361,275.00 E 779,153.58

Dip Vert Bearing —

Date Started 5-23-67 Completed 5-29-67

Collar Elevation 2956.2 Total Depth 500.0

# GEOLOGIC LOG

## MISSION UNIT



| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N S | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 380.0 | 380.0 | | | | Alluv | | | | | | Unsorted, Graded ±Cgl |
| | 390.6 | 10.6 | | .05 | | Cgl | Run: | Calcgl Frags of Ark, Blk sltst Tr lim stains | Run 390.0 | 20 w/q ? | mod-st. fracs 0.6' G.G.Bx. Tr chlor alt | Cal. cement of Cgl Top B.R. @ 390.0± |
| | 396.7 | 6.1 | | | | slt±st | Run | sp hem, Tr chlor alt | Run | 10-60 | sp-mod fracs, slips with bedding @ 45° | Hemstained occas interbed vr fg ± fg sltst |
| | 407.0 | 10.3 | | | | sltst | Run | mod hem. | Run | 10-60 | As above | As above grading to cng w/ occas pebble mg hem stained sltst |
| | 416.5 | 9.5 | | .01 | | sltst | Run | mod hem, Tr chlor, poss pyroclastics | Run 407.0 | 20-70 ? | As above 2.0' sharp angular pebbles, Almost a fang poorly indurated | with Ark fragments & pebbles |
| | 426.0 | 9.5 | | | | sltst. | Run | As above, possible pyroclastics | Run | 10-30 | mod-loc st fracs, beds @ 45°± | hemstained interbedded vr fg ± fg sltst |
| | 435.6 | 9.6 | | | | Blk sltst | Run | Tr hem, occas Ark & carbon. frags | Run 934.5 432.4 | 15-40 15? ? | mod-loc st fracs beds @ 15-20° w/ calcite bx 4.0' Poorly indurated Fang. Ark & carbonaceous frags | Blk vr fg to fg sltst Sub-pebble sed mg |
| | 444.0 | 9.0 | | .01 | | Fangl & Blk sltst | Run | wk-sp hem, wk gyp | Run | 15± | sp fracs occas gyp filled. Beds @ 15°± - Pebble sorting | vr fg to fg hem stained mod to well indurated Fangl with occas interbedded vr fg blk sltst |
| | 454.6 | 10.0 | | | | Fangl & Blk sltst | Run | st gyp, lo wk hem | Run | 10-20 | sp gyp filled fracs Bedding 15°± | Hemstained fagry cg Fangl with Ark & carbonaceous frags occas Ark boulders finer beds of vr fg dk gry sltst |
| | 464.7 | 10.1 | | | | Fangl & sltst | Run | As above | Run | 10-30 | As above | As above grading to red sltst |
| | 474.5 | 9.8 | | .03 | | Fangl & sltst | Run | sp-mod hem, gyp, sp. chlor | Run | 10-20 | sp. occas gyp filled fracs Beds @ 15-20 | As above with interbed dk fine sltst |
| | 484.4 | 9.9 | | | | Fangl & sltst | Run | As above | Run | 10-20 | As above | As above |

MIS-807-A 75

HOLE NO. M-180

Coordinates N 363,638.63 E 726,244.02

Dip Vert. Bearing —

Date started 5/3/67 Completed 5/22/67

Collar Elevation 3983.71 Total Depth 1000.0'

# GEOLOGIC LOG

## MISSION UNIT

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N/S | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 897.3 | 909.3 | 12.0 | | | | Ark & Blk sh | Run | Tr. py, wk cal, Finely dis. organic material Trace bornite | Run | 10-50 | wk-moderate occas cal filled fracs. Bedding (Blk sh) @ 50°± | Lt gry grn fg Ark with occas zones of interbed Blk sh well indurated |
| | 918.7 | 9.4 | | | | Ark & Blk sh | Run | As above | Run | 10-80 | Sp: leached shears Bedding to 80°. occas minor shears | As above |
| | 928.5 | 9.8 | | | | Ark & Blk sh | Run | As above | Run | 10-80 | As above. Bedding @ 70°± | As above |
| | 938.1 | 9.6 | | Nil | | Ark & Blk sh | Run | Tr-wk py, wk calite chlorite | Run 936.0 | 10-70 35± | As above Inc. in color - limit of hydrolt? | As above with occas Blk sh frags in Ark. Interbed. Begins last 20' |
| | 948.7 | 10.6 | | | | Ark & Blk sh | Run | Tr. py, poss above | Run | 10-70 | As above. Run | Lt gry grn fg Ark with interbedded fg Blk sh. |
| | 955.8 | 7.1 | | | | Ark & Blk sh | Run | As above | Run | 10-60 | wk occas cal filled fracs | Pale gry grn fg Ark with wk, evenly distributed interbedded Blk sh. |
| | 964.0 | 8.2 | | Nil | | Ark | RUN | Tr. py wk cal | RUN | 10-60 | As ABOVE | Pale gry, with slt grn cast, fg Ark occas fg frags of carboniferous matter silty bearing @ 50° on bedding planes |
| | 975.8 | 11.8 | | | | Ark | RUN | As ABOVE | RUN | 10-60 | As ABOVE | As ABOVE |
| | 988.6 | 12.8 | | | | Ark | RUN | " " | RUN 988.6 | 10-60 55° | " " cnt Ark & interbedded blk sh & fg Ark below wk cal coated fracs | fg grad to mg Ark below 983.5. 2-5 cm frags of blk sh are abundant finely interbd blk silt to sh and fg gry ark |
| | 1000.0 | 11.4 | | Nil | | Ark & Blk sh | RUN | " " | RUN | 10-60 | | |
| | | | | | Bottom | | | | | | | |

# GEOLOGIC LOG
## MISSION UNIT

HOLE NO. M-140
Coordinates: N 363,638.63 E 776,244.02
Dip Vert. Bearing —
Date started 5/3/67 Completed 5/22/67
Collar Elevation 2981.21 Total Depth 1000.0'

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 765.7 | 772.8 | 7.1 | | | | Ark | Run | sphem, Tr. cal & chlor alt. Tr. Blk sh | Run | 45-70 | sphem smeared occas cal filled fracs approx bedding @ 45° | Pale grn-gry fg Ark |
| | 782.9 | 10.1 | | Nil | | Ark & Blk sh | Run | sphem, Tr. cal & chlor alt. | Run<br>774.4 | 45°<br>45± | As above<br>Deg Cut | As above, Interbedded vr fg Blk sh below 774.4 |
| | 791.8 | 8.9 | | | | Ark & Blk sh | Run | As above | Run<br>791.4 | 45-60<br>45± | As above Run<br>0.4 mod brx f55 flt. | Interbedded vr fg Blk sh & fg gry Ark, occ [illegible] st Ark zones |
| | 800.7 | 8.9 | | | | Ark & Blk sh | Run | As above | Run<br>796.2 | 30-60<br>? | mod-local hem smeared fracs<br>1.8' Faul zone | do above with occas Faul zones |
| | 811.7 | 11.0 | | Nil | | Ark Faul Blk sh | Run | As above | Run<br>804.7 | 20-80<br>20± | As above Run<br>1.0' Faul zone | As above |
| | 819.5 | 7.8 | | | | Ark | Run | sphem, Tr. chlor alt | Run | 10-70 | sphem smeared fracs | Lt gry-gry grn fg Ark occas Blk sh pods |
| | 831.8 | 12.3 | | | | Ark & Faul Blk sh | Run | As above, Tr. cal | Run | 10-50 | wk hem smeared fracs | Lt gry grn Ark Faul w/ occas Blk sh frags grade to interbedded Ark & Blk sh. @ 827.0± |
| | 839.1 | 7.3 | | Nil | | Ark & Blk sh | RUN | Tr cal & hem in fracs Mod carbonaceous matter in shaly & silty zones | RUN | 60<br>30° | sp smeared fracs<br>bedding | fg gry Ark & interbd blk silt. and/or shale |
| | 846.7 | 7.6 | | | | Ark & Blk sh | RUN | AS ABOVE | RUN | 60°<br>40° | fracs As ABOVE<br>bedding | As ABOVE |
| | 857.9 | 11.2 | | | | Ark & Blk sh | RUN | " " | RUN | 60-80<br>80± | fracs As ABOVE<br>bedding | " " |
| | 865.8 | 7.9 | | Nil | | Ark & Blk sh | RUN | As ABOVE Less hem | RUN | 70 & 50 | bedding | " " |
| | 874.6 | 8.8 | | | | Ark & Blk sh | RUN | Tr cal | RUN | 50 | bedding | As ABOVE with deep blk sh zones |
| | 884.7 | 10.1 | | | | Ark & Blk sh | RUN | As ABOVE | RUN | 60<br>30-60 | bedding<br>wk occas cal coated fracs | fg gry Ark with sp blk shale zones |
| | 897.3 | 12.6 | | Nil | | Ark & Blk sh | Run | Tr py, wk cal finely diss argillic alter Tr chlorite | Run<br>890.0 | 10-70<br>low | wk occas cal filled fracs<br>0.3' folding<br>Bedding 70° to 45° | Fg gry grn Ark with occas zones of interbedded fg Blk sh |

HOLE NO. M-140

Coordinates: N 363,638.63 E 776,244.02

Dip Vert. Bearing ——

Date started 5/3/67 Completed 5/22/67

Collar Elevation 2982.7 Total Depth 1000.0'

# GEOLOGIC LOG

## MISSION UNIT

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 615.9 | 628.6 | 12.7 | | | | Ark & Blk sltst | Run | Tr-wk hem & cal in fracs Tr chlor alt | Run | 40-45 | mod hem-cal filled fracs | Blk vr fg sltst & gry fg Ark. Inc. in carbon |
| | | | | | | | | | 622.1 | 45± | 0.2' cal filled & GG flt bx | |
| | 635.5 | 6.9 | | | | Ark & sltst | Run | As above with decrease in Ark | Run | 45± | mod bx & GG flt & shear zone | Blk vr fg sltst, lt gry Ark 1' & 0.5' frags |
| | 641.9 | 6.4 | | | | Blk Sh | Run | Tr-wk hem & Cal in fracs. Tr chlor | Run | 45°-50° | wk-mod hem filled fracs, tr Cal frac | fg gry-Blk Shale |
| | 652.5 | 10.6 | | Nil | | Ark & Blk sh | Run | Tr-wk hem & Cal in fracs Tr chlor alt | Run | 35°-40° | wk hem Smeared frac bedding | Gry-Blk fg Ark & fg Blk Sh |
| | | | | | | | | | 648.0 | 40°± | 0.5 GG Flt Bx | |
| | 664.4 | 11.9 | | | | Ark & Blk sh | Run | As above | Run | 45± | Tr hem & mod Cal filled fracs, bedding | as above |
| | 673.5 | 9.1 | | | | Ark & Blk sh | Run | As above | 667.0 | 40± | 0.5' Flt Bx Tr-wk hem & Cal filled fracs bedding | Blk fg Sh & gry fg Ark |
| | 685.9 | 12.4 | | | | Ark & Blk sh | Run | sp hem, Tr cal & chlor alt inc. Carbon | Run | 20-70 | sp-loose & hem smeared fracs with occas cal filling | Interbed. gry fg Ark & vr fg blk sh |
| | 695.9 | 10.0 | | Nil | | Ark & Blk sh | Run | As above | Run | 20-70 | As above | |
| | | | | | | | | | 689.7 | 30± | 28' hem smeared bx & GG Flt & shear zone | As above with decrease in Ark |
| | 706.0 | 10.1 | | | | Ark & Blk sh | Run | As above | Run | 20-70 | mod-st fracs & shears with loose mod bx & GG beds @ 45± | As above |
| | 713.6 | 7.6 | | | | Ark & Blk sh | Run | As above | Run | 20-60 | As above | As above |
| | 721.0 | 7.4 | | Nil | | Ark & Blk sh | Run | As above | Run | 20-70 | As above | As above |
| | 731.6 | 10.6 | | | | Ark & Blk sh | Run | As above | Run | 20-45 | As above | As above with inc. Ark |
| | 742.4 | 10.8 | | | | Ark & Blk sh | Run | As above | Run | 45± | As above | As above with st Ark zones |
| | 754.3 | 11.9 | | Nil | | Ark & Blk sh | Run | As above | Run | 45± | As above | As above |
| | | | | | | | | | 754.3 | (vert) | Dep Cat. | |
| | 765.7 | 11.4 | | | | Ark | Run | sp hem Tr chlor alt & Cal | Run | 30-50 | sp-loose mod hem smear fracs | Pale gry-grygrn fg Ark occas st Blk pods |

MIS-807-A 75

HOLE NO. M-140

Coordinates N 363,638.63 E 776,244.02

Dip Vert Bearing —

Date started 5/3/67 Completed 5/22/67

Collar Elevation 2982.7 Total Depth 1000.0'

# GEOLOGIC LOG

## MISSION UNIT

| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 442.4 | 455.1 | 2.7 | | | | Ark & Slt sh | Run | Tr hem tr chlorall along fracs | Run<br>444.4 | 10-70<br>? | mod hem smeared fracs, bedding @ 70° ±<br>2.7' mod bx & lt zone | Pale gry to dk gry fg Ark interbedded blk sh with occas fang/ zones |
| | 465.0 | 12.9 | | Nil | | Ark & Slt sh | Run | As above | Run | 20-70 | As above Run | As above |
| | 476.8 | 11.8 | | | | Ark | RUN | Mod hem | RUN<br>RUN | 60°<br>30-60 | bedding<br>hem smeared fracs | fg gry to blk arkose |
| | 484.4 | 7.6 | | | | Ark | RUN | Sp hem chlor | 482.0 | 40° | lt gg & lt bx | Ark As ABOVE occas chlor alt |
| | 494.4 | 10.0 | | Nil | | Ark & blk sh | RUN | Sp hem Tr cal on fracs | RUN<br>RUN | 45°<br>40-60 | bedding<br>sp hem smeared fracs | Finely bedded fg ark & blk sh or sltst (carbonaceous) |
| | 505.9 | 11.5 | | | | Ark & blk sh | RUN | As ABOVE | RUN<br>RUN | 45°<br>30-60 | bedding<br>Sp to mod smeared fracs | As ABOVE |
| | 515.2 | 9.3 | | | | Ark & blk sh | RUN | As ABOVE, tr wk chlorall | RUN | As above | beddeng & fracs. As ABOVE | As ABOVE slt. incr in Ark zones |
| | 526.6 | 11.4 | | Nil | | Ark & Blk sh | Run | As above | Run | 30-60 | As above beds @ 45° ± | As above |
| | 536.8 | 10.2 | | | | Ark & Blk sh | Run | As above | Run | 30-60 | As above with lt to sd hem smeared gg flt zones | As above |
| | 547.2 | 10.4 | | | | Ark & Blk sh | Run | As above | Run | 20-70 | As above | As above |
| | 555.7 | 8.5 | | | | Ark & Blk sh | Run | As above with tr. cal in fracs | Run | 20-70 | sp-mod hem smeared fracs. | Interbedded Ark & blk sh with occas mod Ark zones |
| | 568.2 | 12.5 | | Nil | | Ark & Blk sh | Run | As above, Tr chlorall. | Run | 20-60 | As above, Mod. @ 50° ± | As above with stronger zones |
| | 578.8 | 10.6 | | | | Ark & Blk sh | Run | As above | Run | 20-60 | As above | As above |
| | 586.7 | 7.9 | | | | Ark & Blk sh | Run | sp hem, wk chlorall. | Run<br>581.8 | 10-70<br>80° ± | As above<br>mod bx & gg flts ± chlorall cgl & or bx zone | As above<br>As above |
| | 605.9 | 9.2 | | Nil | | Ark & Blk sh | Run | Tr hem wk chlorall Tr cal in fracs | Run | 20-45 | sp-lec stereo hem smeared fracs beds @ 45° ± | Blk & fg ark occasl blk sh as lenses in Ark, later bedded. |
| | 615.9 | 10.0 | | | | Ark & Blk sh | Run | As above | Run | 20-45 | As above | As above |

HOLE NO. [illegible]

Coordinates: N 363,638.63 E 776,244.02

Dip Vert. Bearing —

Date started 5/3/67 Completed 5/22/67

Collar Elevation 2982.71 Total Depth 1000.0'

# GEOLOGIC LOG

## MISSION UNIT

J. H. C

JUN 22 1967



| DEPTH From | DEPTH To | DEPTH Interval | % COPPER N.S. | % COPPER Total | % COPPER Weighted Average | ROCK TYPE | MINERALIZATION Depth | MINERALIZATION Description | STRUCTURES Depth | STRUCTURES Dip | STRUCTURES Description | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 300.0 | 300.0 | | | | Alluv | | Tan C.Cgl 225-280 | | | | Unconsol Gravel |
| | 309.8 | 9.8 | | | | Col Cgl | Run | Col. cemented Cgl. | Run | 40-90 | wk-loc mod fracs | Bleached gray mp Cgl |
| | | | | | | | | | | | | without frags Bio Rhy |
| | | | | | | | | | | | | while bot 3.0' Top Brc? |
| | | | | | | | | | | | | @ 309.8 |
| | 323.6 | 13.8 | | .02 | | Fangl | Run | sh hem, Tr. chlor sh at bio, | Run | 30-60 | mod-loc sh fracs with loc mod bx ±66 zones | Pale gray Lp Bio Rhy boulder to 510.0 |
| | | | | | | | | | 313.0 | 3.0 | sh hem stained 66° bx ft. | hem stained Bio Rhy Fangl. |
| | 335.6 | 12.0 | | | | Fangl | Run | As above | Run | 20± | As above, Run occas hem stained | Pale gray occas hem stained cg Fangl, occa |
| | | | | | | | | | | | | Bleach frags mod |
| | | | | | | | | | | | | indurated |
| | 348.5 | 12.9 | | Tr | | Fangl | Run | As above | Run | 10-30 | As above | As above |
| | 358.2 | 9.7 | | | | Fangl | Run | Tr. hem, chlor sh. mod bio | Run | 10-60 | mod fracs | Bleached gray gen cg Bio Rhy Fangl |
| | 368.9 | 10.7 | | | | Fangl | Run | wk hem, tr as above | Run | 10-60 | As above, occas hem stained | As above |
| | 378.4 | 9.5 | | Tr | | Fangl | Run | tr sh hem, occas bio | Run | 10-40 | mod-loc sh fracs. loc mod bx ±66 | As above with occas zones of Bleach frags |
| | | | | | | | | | | | | last 60' all hem stained |
| | 388.3 | 9.9 | | | | Fangl | Run | sh hem mod bio | Run | 10-60 | mod hem stained sand fracs | Hem stained Fangl with large (0.3') Bleach |
| | | | | | | | | | | | | frags. Well indurated |
| | 400.0 | 11.7 | | | | Fangl | Run | sh hem | Run | 10-60 | As above | As above |
| | 408.6 | 8.6 | | | | Fangl | Run | As above | Run | 10-30 | As above | As above |
| | 418.6 | 10.0 | | | | Fangl | Run | As above | Run | 10-30 | As above | As above |
| | 432.3 | 13.7 | | Nil | | Fangl | Run | As above | Run | 10-30 | As above | As above |
| | 442.4 | 10.1 | | | | Fangl | To 439.6 | As above, Tr. chlor | Run | 10-35 | As above | As above & Pale gray |
| | | | | | | Ark | To 442.4 | mod hem, Tr. bio, chlor alt. | 439.6 | 40± | wk hem sand ±66 | Occas hem stained |
| | | | | | | | | | | | Alt Cnt Ark below | Ark. with wk weathering |
| | | | | | | | | | Run | 20-40 | mod-bad occas bx | from old erosion surface |
| | | | | | | | | | | | Alt, hem stained | San Xavier Surface at |
| | | | | | | | | | | | | base helmet Conglomerate |

MIS-807-A 75