| **DISTRICT** | Rosebud |
| **DIST_NO** | 4010 |
| **COUNTY** | Pershing |
| **TITLE** | Rosebud Field Notebook |
| **AUTHOR** | Mitchell P |
| **DATE_OF_DOC(S)** | 1998 |
| **P_M_C_NAME** | Rosebud Mine |
| **COMMODITY** | Gold, Silver |
| **QUAD_NAME** | Sulphur 73' |
| **NOTES** | Field notebook: geology |

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)
CURVE FORMULAS

\[ T = \frac{R \tan \frac{1}{2} I}{\sin \frac{1}{2} D} \quad R = \frac{T \cot \frac{1}{2} I}{\sin \frac{1}{2} D} \quad \text{Chord def.} = \frac{\text{chord}^2}{R} \]

<table>
<thead>
<tr>
<th>Chord def. =</th>
<th>No. chords =</th>
<th>Tan. def. =</th>
<th>chord def.</th>
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</thead>
</table>

The square of any distance, divided by twice the radius, will equal the distance from the given point to the curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (e.g., for 1" for 1 ft.) and divide the given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. 10.10^2 + 200 = 5. 100 + 5 = 105.5 hyp.

Given Hyp. 100, Alt. 25.25^2 + 200 = 3.125. 100 = 3.125 = 96.875 = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to \(0.5742\times d\), where \(d\) is the distance in miles. The correction for curvature alone is closely \(\frac{d^2}{26.4}\). The combined correction is negative.

PROBABLY ERROR. If \(d_1, d_2, d_3, \ldots\), etc. are the discrepancies of various results from the mean, and if \(\sum d^2\) is the sum of the squares of these differences and \(n\) is the number of observations, then the probable error of the mean is:

\[ \pm 0.6745 \sqrt{\frac{\sum d^2}{n(n-1)}} \]

MINUTES IN DECIMALS OF A DEGREE

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<th>0.1</th>
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INCHES IN DECIMALS OF A FOOT

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<th>4</th>
<th>5</th>
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<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
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<td>0.883</td>
<td>0.908</td>
<td>0.933</td>
<td>0.958</td>
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<td>1.033</td>
<td>1.058</td>
<td>1.083</td>
<td>1.108</td>
<td>1.133</td>
</tr>
</tbody>
</table>

[Table content continues...]

[Diagram content continues...]
2 = pths/ft² = filled boxes = ash-tuff w/ 5-10% clasts [angular] of very argillitic rock w/ 2-3% K-f & no garnet
no flow banding in ash-tuff unit

3 = Hbn-Kf, ash-tuff
  (11.5%) (8.5%) = blocky + rockclast
  Some late hydrothermal silica
  (1-2 cm x 1 cm) occurring w/ 1.3 mm thick
  = mix supported > = rtx to 2° but
  ? silica = 19.45
  at φ = 43°

4 = pths/ft² Chocolate (maroon color = weak
  mesh)
  = rock w/ 3.5 & 2°

5 = 015, 48°E (flow banding) = plane
  bedded beds: 2-4 cm in
  Joint = movement (w. minor faults) or
  b) or (a?) probably later by data
  = 0.79, 64°W = Joint = 0.1°

1/10 cm

Location
2 = N30°W ±10°
From 2,204, 4,004
482,000 E
Truck: 31° 48.26' 118° 38.78''
Office: 0.55 miles @ 226°
q 53731 \rightarrow 54481'
lap = 1615'-1620'

Oscar Andesite (705)

\[ R = 540 \times 10 - 555 (470 - 570) \]

"Dolerite" thin dikes up to 220
near mineral contact DR - Acin g
some type? or chilled/dragged effect?

- 064.5'W = "Dolerite" Dike
10' vertically above = "Dolerite" Dike
- 138.78'E = plane laminated
8mm mm scale

Above = 1681 (13%) - Sandstone (2-4%)
Lithology: thick lithofacies: tuff - glass

- 200' east = plane laminated
sandstone? bearing adjustment??
- 4" different rock

\( X = 400 \)
5.1-98  Dozer Hole = 070° to pot
        22' PM  (400') Stake = SE Corner
        48' E 400' = 500' Outer

290° 6' 40 Rd + 15' wide
071° 6' 40 ft of event
5' /1  13' 1/2'

P% = 1/2.55'E = Fe (measuring local "bed")
020, 53'E = IF
K = 1/55 E = 0
033, 72° E = low 14" (11' + 14")

Flattened; 10'6" x 10'6" near lift (14")
Plants burned due to fuel smoldering
bin x 24", same sign 18 4/2", bin to 1 1/2"

rv = local 1", not 2 pole beam = 15'
white area Ap = white with

out. 793 = 57' = PP - mean
055 = 20" = 60 kord

Dozer Pit = 40° 14'.1' N
18° 38'.9' W  1660'm

K = 55° = 5.69'  1657 - 1667
X = 1662

Actual = 1661 + 15 = 16665

Future = 1667 Actual = 1663

200 400 = 6' 40 10' - 50 cm wide
b = 020, 52'E
10'5' 4'5" = 054, 50'E (one)

K = 1/2

from EPICLASSIC 0' E to Gp = 200°
Gp: 2200 Wooloom
4820000E

Epiclastic failures

- first problem west = green white crust
  pink

his possible coll. = green white crust
  pink, built at some green fabrics
  coarse toes
  pink
  built

b = ? 00°, 60'E EPICLASSIC T6X
b = ? = 020, 57'E wanted help? try (ask)

bic ? = hbn??
Dike Hill
Lava tuff (Chocolate)

2+ ash to W = 160:60:50% sanidine x 1-ash tuff
60% (50-65) fsp (sanidine?)
Massive

Aberoard = poor to poor san +
"Big" sanidine
5 mm long dimension
≈ 5% sanidine
≈ 2-5% biotite
≈ 6 biotite

Rosebud Review
- Simple shear may be important G.M.
- Negotiations on Rosebud = Bruce Hansen G.M.
- 'Peter Sky' taken out - Kind of ore bodies:
  1. More of the same - High grade free milling sulfides.
  2. What is Rosebud and what are the structural controls?
  3. How does Nygma fit in to the model?
  4. Scoria = a lot of 0.01 opt Ag
  Old < CCAg ?? Volc. ?
Satin Rosebud Nygma
  5. Purple-ole gravels?

- Roots
- Acid Lava Site
- Missing section - Major?
- Geophysics = major hope
- 1. Attraction and a broad sense
- 2. Stratigraphy
- 3. Structural Control

Randy:
- all good intercept = no solution
- which is go to locale
- There may be an elevation from control

E: 15°, Dream Land 3500'

Kamme Mt. Volcanics - Kamme F + Nap

Oscar = hosted by Pense le granite

Why is the strike about 90°?
One = steep fractures in hanging wall about the South Ridge Fault.

Veins in ore body don't cut the South Ridge fault.

Corr - Rheology may be the best or most important control on localization of mineralization.

East zone = clay + sulphide (blackmore)

West zone = silicification + sulphide (blackmore)

Host rock control or ore fluid control? ?

South Ridge Fault = epiclastic horizon? P.R.

Wildrose = exclusive silicification

Pete Rosowsi = sick - Flu = probably not.

(Fault Analogy)

1. Fault direction of ore zone
   1. Structural reconstruction
   2. alteration + mineralization
   3. rock type

We need to do this as soon as possible.

Yerington type extension along North-striking normal (listric) fault.

What is fault's control? - Angle?

"Driving" Structures

"Simple Shear" = linked Structures

Kamna fault may be a linked structure

Kamna Fault

North striking

Normal fault

Oblique to strike-slip fault
Paleo Topography?

Drainage Valley = NE-SW G.M.

Regional Map Ts = sandstone = Pauzie
Leo Conglomerate

Gneiss cuesta = quartzite - rich
out of E & NE (no local
source) = Kockum age valley

+ Things to do
1. K/Mg
2. K/Th

Banded Springs = Pauzie lac.
Follow 100' 200-300' 450-0' 600-1' 700-2' 800-3' 900-3'
B = 345.38E
g = 68.54N, 118.95 W3
E1 = 1664 M of 3
6 = 350.32E
gravel - 5 ft/road

Sample 1 = Fe Carbonate Crust
2 = alite? barite

Loc 2

b = 341.30E = pebble gravel w/ Fe ox 50%
Cement
b = 335.14E = 1 m & 2 weak Fe ox cement

40° 48.44'N 118° 42.95'W d1 = 1526-1541
= 1534m

Log = fl & fine Upper Sandstone - quartzite
C not lap breccia w/ = 40%

Nothing = 1° sp. 
Easting = ok

GPS

-1.0 = ok

Topo graphy

40° 44.83'N 118° 44.63'W
D. 15.90 - 14.55 m

Repeat to 14.61 m

E1 = 1481 m = Rivenite ash = minor rock
17 km = possible sandstone =
broken = gritty
1.  $b = 337,435 \text{ E} = \text{ welded pyroclastic}
   \text{ (unit 0) ALS fracs + matrix/fusion}
   + Fe/Si rich frogs = V. Near vent
   "tuff-like" tuff

   welded (lax dam)
   welded at margins
   welded pyroclastic (lax dam)

2.  $b = 315,435 \text{ E} = \text{ unit to above}
   $315,435 \text{ E} = "\text{ with}
   Pebble E
   ALS cough (lax)
   Cr = 340,435

3.  $b = 335,375 \text{ E} = \text{ bedded ash + and " + SS}
   beds = 1 to 10 cm

---

Mine Tour - Chris Raspa

1. Cave fault = Rosedale shear
   "Foust fault"
   (prophyllite) 98% (Biotite)
   (TGS)
   Cave fault = removed

2. Dozer cut 500' thick (shale) = ash tuff
   (shale or phyllo-tuff)
   2 phases = 61/2" more
   2.3 mm x 1 mm (lax)

   probably too closely welded
   (ash flow or tuff-like tuff)

   to my guess = Thick ash flow tuff
   probably proximal (0.5 km to the vent)
   Lithopirite jointing = 3" welding, - look up.

---

Thickening

500' Dozer tuff

3' Barred Spring) epiclastic + pyroclastic

Aico Lane Spring
Pink Matrix \( Bx = \text{pyroclastic fall deposit} \)
= angular,不受 \( Bx \) impacted

South Ridge fault \( \text{looks} \) pyroclastic ('tuff')

By def. \( Tos \) must have ALS fangs/
clasts

Red rock = unaltered ash tuff
= Eq massive ('plane face')

\( Bx = 4 = \text{'solution'} \) Chris = looks like
\( = \text{brecia (=} Bx \)
\( \text{in} \) Tos? = Fine grained massive

End of tour = Scope 25

2 South Ridge fault?

gauge (up 5'-clay)

\( F = 2 \)
\( N = 0, 0, 36 \)

Chris = reverse如何看待 based on CaCO

\text{last movement} = \text{post mineral}
@ least post calcite

\text{great zone}

\text{Mine Sequence}

\text{LEHD}

\text{plt}

\text{plt by}

\text{plt by}

\text{plt by}

Tos
12. 065, 54E
   Rock is very welded
   Previous tepolite e.g. x1 bit of
   breccia. 75%, quartzite 1cm (5-8%)
   Ash? 10%, tuff - local setting
   Rhyolite, pumice agglomerate but I doubt it.

Sample = (P)
   Over lap bag vfg ash = platy
   thin breccia

13. Ol, Thg?
   Thin bedded different colors
   Pale, platy, grey,
   possible fossils
   pale = accretionary lapilli

14. = 1 angular flag, nicely exposed, 300cm,
   = The only one seen (2 seen)
   = One rich - x1 tuff = tepolite to alkali
   granitic, 200cm 5cm x 6cm x 6cm

Contact
   Ardlie River, Elders Creek
   Quartzite + calcarenite silt + flags

Valley

15. Hydrothermal by q1 Syl., mix + bleaching
   = welded Syl. bit. 5cm x 0.5cm +
   > 3% horn blende to 8cm long + 1-2% Bo.
   Some austinite xenoliths? / cherts
   Rhyolite (olivine?) tuff - Nth bord.75°W
   * Should sample here well

   Welded pyroclastite = green ash/10 ft.
   best guess: 347, 463°

Below PK, 010, 75E
   Sample = 16
Sample 16 + Gooden

Sharp, equant splinters = waves

bn = 2.8 = 4.1%, boids are 1.2%

boids, 1.2%

Frank 065, 86 w = 5.9 = 8.6 = 0.94

\[ b = 347,625 = \text{apparent} \]

\[ b = 347,625 \]

\[ p = 8 \]

5-11-98

\[ = \text{tuffaceous slate}\]

\[ \text{and} \] = 0.072

\[ b = 0.072, 625 \]

\[ 0.072, 625 \]

\[ \text{CL102} \]

\[ \text{inner} \] = 0.02

\[ 0.02 \]

\[ 0.02, 625 \]

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\[ 0.02, 625 \]
1. 44° 04.83' N, 118° 24.65' W, base of bedrock

2. "prop" = propylitic breccia

3. "above" = propylitic breccia? 1200 - 11,000 ft
   1 - 2% pl. planes to 5 mm

4. Smaller dikes/feeder dikes

5. $K = 580 \times 10^{-55}$
   - prop. pyr. basalt = 244 but use large plaits

6. basalt to 6 cm = scoria (scatter)

7. = top of hill = seasonally basalt to breccia and
   generally 3% pl. planes (12,000 ft) to 1 in. long
   - pi planes + pi brec high

8. = top of hill = vuggy basalt
   $K = 400 \times 10^{-55}$
   - possible autobreccia = flow
   - pi planes to 1 in. long

9. $K = 800 \times 10^{-55}$
   - pi plane plus to 1 in.
9) Most reddish brown = Sample (?) Volc. ex. basalt
at prospect = assessment work pit
chalking front from w1 x-cutting QV

10) J? = 020.84E
45 44 52.8 N 1501 m
11 37 6 28 E
prospect pit = 350° trend
possible shear/cut zone in basalt (?) → shejiastic?
W clay (Hart?) gouge. Rounded fragments in zone

Sample = NWRA-0035 = 3.6 m chip-clay incl
access (?) zone/structure?
original ex? ?

11) 45 42 53E J = 315.72E
11 37 57 20 E
x-cutting 30-50
RC Sample NWRA-36 1 Tr S = 0
10 x 9 m
K = 600 x 10^-3 SF AND
K = 800 = CSS and above eF

12) 1/6 = 528, 474E = 4105 / 24 = 0.110
J = 341 82E
K = 220 x 10^-3 SF
45 43 57.2 N
11 37 6 24 E > 4.5 47
0.70 m
RC Sample NWRA-0037 = porphyritic rhyolite?
10 x 4 m

13) Sample = NWRA-0038 = RC
275 65E = 2 (565%) vs + silica fume
67,892
Re = ?? glaucity?
totally sheared wall

45 44 172 N
11 37 7 140 E
44
50
0/4 = 10 x 5 m = part continuous
14 \[ b = \frac{335}{3} \text{ m} = 355 \text{ m} = \text{ at the middle} \]

Some photo 250 m² = 250 m x 10 m

Total 600 m² = 250 m x 5 m x 10 m

Some rocks (> 90%) pebbles 11 m

from the river other 11 m

pockets + 9 sand

15. \[ K = 0 \]

J = \[ \frac{355,570}{10} = 35,570 \text{ m} \]

gravel bed = top up

b = \[ \frac{355,570}{10} + 250 \text{ m} \]

\[ K = \frac{35,570}{355,570} \times 10^{-5} \text{ m} \]

454.2 m N

\[ 37.54 \text{ m} \]

4 m

15. For hydro b in vitreous sand 9 c

along the side of the gallery

Sample: \[ K = \frac{355,570}{10} \times 10^{-5} \text{ m} \]

\[ 0.005 \times 5 \text{ m} / 3 \text{ a} \]

45.44 N

\[ 37.54 \text{ m} \]

4.54 m N

0.905 m

17 + 18 = rock to 16 + 15 = vitreous tuff

bx = \[ K = 50 \times 10^{-5} \text{ m} \]

Tuff = \[ K = 0 \times 0.5 \text{ m} \]
May 9th, 1998

White Alps, Switzerland

Know
1. Re= plagioclase phric

Don't Know
1. Origins of breccias
   Glossy surface (Abundant)
   Broken pl phenocrysts
   +460 needles f=58 (mm)
2. Origin of primary lithology
3. Breccias are common
   to dominant
   a. matrix-supported
   b. matrix-supported
   c. matrix-supported
   Fluidized (?) so relatively
   Angular to rounded
   cherts
   3. Clast -supported, (more)
   4. Open space
   (voids)

3.0° trends 030° Which
Is a bedding strike

4. Away from the escarpment
   Very thin breccia
   is lost! Maybe be = HT?
   4a. Not always!
J = 050, 51W

Northwest margin of Jasperoid 030, 54E
040, 57E
048, 57E
01° trace ~ 027°
023, 50E

J = 085, 83W to 285, 70W = Y. strong Set

Rock Description
- 10% primarily a devitrified glass containing
- + tr Quartz microphenocrysts (~ 0.5 to 1.0 mm)
- 5-8 plagioclase phenocrysts 1X1 to 2X1
- ~ 1X1mm, locally foliated, t. common, broken
- + tr. Hornblende needles 0.1 to 0.2 x 5.0 to 10.0 mm

Rock texture: Common = breccia (characteristic)
- Apparently = Holeclastite overprinted locally
by HT probably associated with Jasperoid intergradation

Guess = New Ardent deposit is a shallow
18 ka.
This is a strongly developed by texture that looks primary. The main difference is that here the mix is visibly not glossy. The bx is matrix supported, poorly sorted, and dominantly. Silt-sized clasts, rounded clasts are common, or at least, rounded clasts, but angular clasts are uncommon. Folds appear to be equal to mix?

Class: >1 mm to >20 cm.

J = 067, 83W 61m, same dip E of 65-75°

This is a distinct, larger clast bx zone = should be noted on the map.

J = 070-275°, 83-90° W dominant, but some W

Weak set = 035, 92W

Rb + Artr = (13) exactly! = mx supported bx!

= Section line!

8 W J = 073, 60-80 W = dominant

(13) = New mx type = semi-clastic + q1 rock = to (6)!

This rock may be a dike.

13 A Fine-grained, matrix-like clasts (13) = semi-clastic!

J3 = 350, 35° possible start block?

13 Zone N 3.5 m wide = "pea-gravel" no material looks cemented but not cemented (only matrix)

trend = 050° = connects to zone on upper road = ?? possible fault zone!

then more white zone 120 m ending on small ravinie trending 295°.

On "upper" road

13 Trend of small valley + juncion = 065° (100-076°)

15-20 m of "pea-gravel" again = very distinctive.

Possible fault/crash zone different rocks on either side.

Most fresh = bx by plagioclase plates + a few clay prisms reconstituion bx to E

7 Two zones w/o bx surrounded by bx

= use bx + joints = 035, 88W; 205, 57E;

074, 84W = bx plagioclase.

13 = bx to 17-16 J = 275, 08W
10 June 1996

1N 221215N, 46°7'06" E -> 220°56'00" E, 49°08'00" E
1N 220°4'100N, 46°7'06" E -> 219°67'52" E, 49°08'00" E

Start = 20°8'6", 48°16'5"

1. c. 30°6'38" E, 67°6'38" W, 34°57'6" N, 35°63'3" N, 35°58'1" W

J = 303.8° E - 90° / 2 = 9° 41' / 10°

R = 0.05 m / 0.16 m = 0.3125 m

K: 2.4 / 10 = 0.24

K / 10 = 0.24 m

2.3° = 0.24 m x 1.5 m = 357.6 m

3° / 0.24 m x 1.5 m = 113.6 m

-1.1° = 0.24 m x 1.5 m

-1.1° = 0.24 m x 1.5 m

Possible solutions:

1. J = possible bedding = 0°30', 50°W = above 6x unit

2. J = possible bedding = 0°30', 50°W = above 6x unit

N beach = large sand-filled eskers to 0.4x / 0.3 m

Next steps:

Attic = hyaloclastite + chlorite?
(21) 1 = 278, 30°E = nx to bx?? bx + hir ground
w/o biz (obvious)

(22) = Hydroclastid Fauhak, F. towered 1 x 75°
1 x 75°

(23) Fau. Sandstone 28°, 49°E in Hydroclastid Fauhak
Sedimento - bentonict mud

(24) = 8x @ 21 w/o bx b(? = 279, 18°E

(25) = 187 h Perk 7°6' Main Stream fault

(26) = 20°22' E 48°08'E

(27) 20°22' W 48°08'E

(28) = 075, 20W 277, 48°E 272, 40°E 2 Perk - bentonict mud
Thickness:

> 1400'

Clastic conglomerate looks like a tuff conglomerate mostly angular fragments, poorly sorted, muddy possibly, some flat ca. 3-4m thick off Kamna

Abis & deeper Carmel Congl. contains A-1S cherts some clast-rich zones = channell?

Sheep (not mineralization) = mineral.

mining cost = 40.60/ton

metal string strike Cuahat Fault for 240.5

miles

intermediate clay = blue-green

backspoil = 12" Caupacal clay.

Everything filled L-Z (Albert F. Range Fault).

Pre-ore - post mineral movement.

1st fault 3/4 mile 150m = 411m

2nd around structure veins from 10m down to 51m (tilted structure)

on ARTHU: E? [where] says = 6.3

These are mostly veins. All on main F = karst fault mostly perpendicular

The vein fault structures are separated over long distances (> 300m) even though they are only about 10m apart on average.

took samples of cut-off vein + So=shale vein for assay from another pit.
Brinestone pit

Widespread 23000m horizontal along the E-W fault and 2500 m wide

0.02x Au, Ag, Sb, Cu

0.6 - 0.8 ppm Ag

Lake Lahontan fluctuations

0.007 Cu, Sb, Hg, Bi = cut-off

New West Edge of Brinestone pit = 4

Cu cut-off 94 = Kamloops Mine/AEC contact
KV = clay (il-mt?) art. w/ disseminated
Muscovite 6-1% = Art. in Alb

94 @ 785.3 -> 6x rock (volc) w/ low Ti? Chrysocolla showing w/ banded
Epithermal veins = veins 1-2 cm wide
350 - 400'C = 1g/ft, with arsenic in levels, 0.3 opt. = high silver
+ banded chalcopyrite = quote w/ xls
+ 8 cm!

The banded veins = higher grade

There are two holes w/ 1 milte strike length.

Then holes are away from any known fault

* Epithermal = banded silica + muscovite + pyrite

This looks really good!!
Wednesday, 9/26
Ex. 2, Exercise 4.7
Book of the Year + faculty.

1. Re, Zec 3.11-17
2. Explanation of 
   Military + Sampling
3. Approximate value + AP + Path to learning

4. Per = 0.038, opt

---

possible peppermint?

---

R = 0.11
W = 0.12
H = 0.06

No = 0.76

---

*possible Roman*
1710 - RAIN - 'END
From 2076 to 012 to prospect pit.

30°

Non-vertical prograde flows

No trachyte = 30° but also 45°

\( f = 60° \phi = 45° \)

\( \text{green tuff + clay} \)

Strong humus + myrt

T1 > 20

31°

Some 5° to 50° to 50° slope dump.

45° VA 24°

055° VA 24°

40° = 120°

346°

02°

4°

15°

09°

15°

50°

50°

This is a chat rem.

1. Close to 100% trachyte
2. Plenty of 0°

Supported by a sandy, humic red layer,

Poorly sorted gravel (well sorted on a local scale)

Chert + tuffs + slate + 0°

3. Looks like a mix of (60% to 100%) chert + flow-banded trachyte + (50%)

No magnum volcanics, but 6th pipe.

To first look like Tertiary! It is possible

That these 0° clays + angular represt a chat rem.

The issue is, looks just like the chatre.

By chares on Gold Hill near the Horse Whale.

A chatre origin would allow for

1. Graded + bedded horizon
2. Large + locally irregular distribution
3. Variably clast content, locally mimicing lithologic contacts
4. Rounded to angular clasts
5. Mix of clast-supported texture.
57 = mud mix (x, w, 4) drafting

57 = x to 20

54: non vascular plywood

\[ \Delta \quad \text{material for "diorama"} \quad \Phi \]

\[ 250, 85 \text{W} \quad \text{Sedimentary} \]

104° west

Prosper

104° north

103°

185°

183° N

57

087, 24E = Vi via mud mix

slicks = 267, 73

\( V_{10} = \text{absolute} \quad 8 \quad 3 \quad 2 \quad 1 \quad 15 \text{cm wide} \)

\( 130° \text{ to pass, 184° to rock} \)

174

\( \text{stratification zone: } \text{w} = 0.2 \text{m wide} \quad \text{tool = mud mix} \)

57 = N60°E, 17.5°

052°

\[ T_c = \text{chocolate from Peru to Auto by} \]

6/18/78

Note: Zone on the "Trench" where it is

54% sandstone, 46% chert.
glaucescence, albite, k-feldspar, andesite
pH = 5.95, pK = 4.6 (9) + calcite
clinopyroxene, green andesite
gr + mkt = hvn
Incipient brecciation = autocrystic
@ b = composite layering = 335, 735
+ incipient brecciation
a trend to be about 20 cm wide
= HT b x or autocrystic? can't tell
but only HT
@ c = autocrystic b x + strong flow-banding
f6 = 0.23, 0.25 = alginite + phyllos +
catenary ? growth
pH


c [introduced]

1. Looks like an AVI trap, but local
 autoclastic + wavy + flow + drill
more
DC = 4.5, a plagioclase + K-feldspar +
162 = 0.65, 0.7 =
47.57 = 1.96 =
146.1 = 16.58 =
35.2 = 25.2 =
97.57 =
Sample + pH

sample + cm

2.35
Gorilla = Non-Sensical + troctolite
blocks b x + cleat + syncrystal lattice +
autocrystic?