

880794

FRI. Aug. 11/78

BIG MISSOURI

- ① Adit - "Showem" Tunnel" by camp.
- ② Camp
- ③ Big Missouri tunnel (west side of ch)
- ④ Looking west across DAGO shaft, towards UNICORN working → cleaning out No. 3 adit (big compressor)
- ⑤ Dam - Long Lk.
- ⑥ Looking north? up Long Lk.
- ⑦ Looking west across Big Missouri
- ⑧ Looking south towards dam Long Lk.

John Hembling

Bill Smitheringale Sr. }
BIN " " sr. }

Down Dago shaft 60 ft.

to sampling level.

Pics- 16 ^{all time} sacks of high-grade ore

- sampling grids

Cip. 13" squares total 2' x 2'

→ 1/2 oz Au

- real good, new ladders

good tetra? (silver grey min)

No. 3 tunnel - Unicorn cl.

(Unity 'system')

→ trying to clean out caved portal → neat system

- good grade ore reportedly
eg. .2 to .3 g/ton Au
+ 50 to 75 g/ton Ag

- approx. 20 men in camp!

- Peter Read mapping at 1:5000 (1" = 40'?) - started by looking at Hazelton-Bowser contact (N-S) - Bowser consists of slates + metacgl.

- Hazelton = tufts, flows + maroon sands.

i.e. not 'cataclastite' (Peter Read)

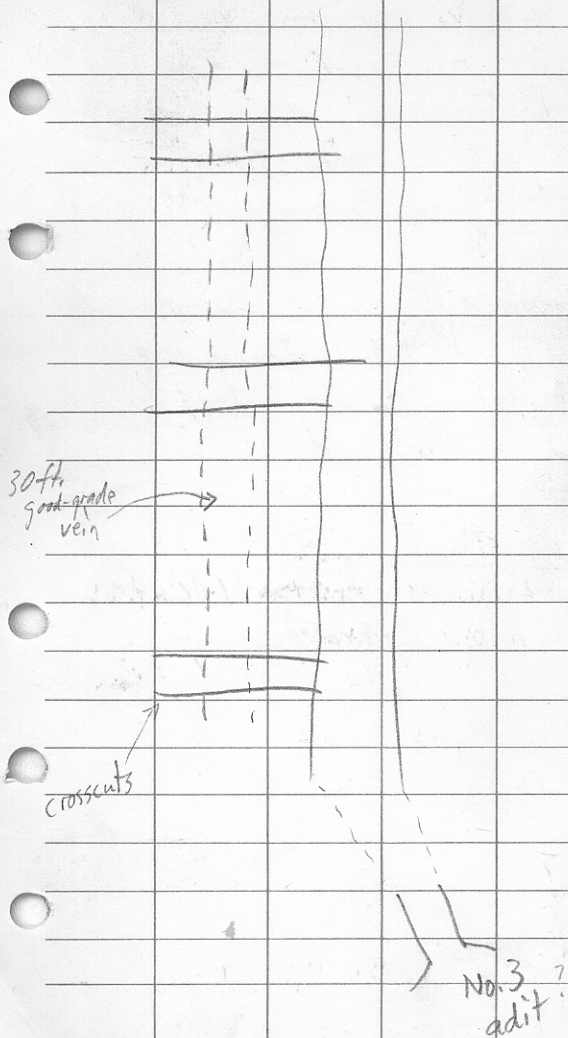
- small, tight, isoclinal folding, esp. in Bowser.

→ Looks good!

→ Blasting in area of Province shonage

BIG MISSOURI Aug. 11/28

'Unity System' - Unicorn Claim



30 ft.
good-grade
vein

crosscuts

No. 3
adit.

Sat. Aug. 12/78

Stewart → Cassiar

- meet Peter Christopher at Bob Quinn airstrip + fix his wheel
- flat just before Dease Lt.
- visit Noranda camp in Dease
- Falco just returned to Stewart
- OSC (Stan Leming + Jim Manger) - Dease
- Cassiar - Letain - doing well
- Imperial - doing well
- Sumac - finished⁽¹³⁾
-

Cassiar mine

- new tunnel in > 1600 ft.
- cpy in Sylvester Gp.

⑥ BIG MISSOURI

Aug 10/29

Harlan Meade
Shaughin Dykas

Pic. - 'Creek zone'

~~Bleached
andesite~~

revised cherty horizon = gtz

M.S. (PbS-ZnS-cpy-py)

adit

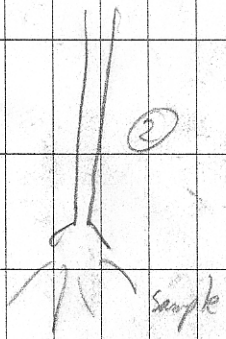
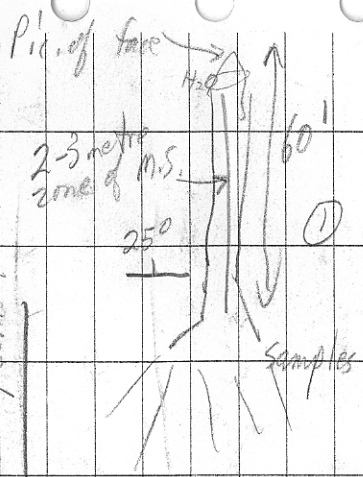
5'

30°

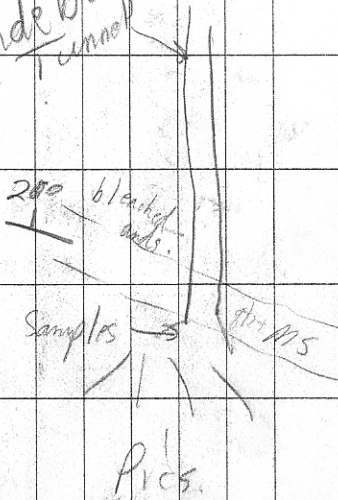
S-1

M.S. (ZnS-PbS)
No km

North Star Tunnels



Lindborg Tunnel



BIG MISSOURI

Pic Chert frags in rhy
horizon near Lindberg tunnel

Pic Hangingwall gl^{tz} remaining
(looking westerly)

Pic looking N up Salmon
glacier

Pic Looking S along Province
ridge from Buena Vista cl.

Al Galley - doing thesis on
Big Missouri under Bob
Haller at UNW

→ BMM sponsor?
eg. 1-2000

Pic "D shaft" - 12' - looking
Province East (25m thick) Province cl. W

Pic Re-XII'd chert horiz with
gl^{tz} streak

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N/6 - Big Missouri adit
(East side)
Pic - slopes (2)

Pic = vein ZnS + Qtz

Sample: marked 1 + 2 on map.

- sequence of exhalative
ands. + rhy dipping
~ 25° West

- up to 4 units (beds) of
rhyolite to rhyolite bx.

- chert horizon (on top of ore)
has been bx. + recrystallized
only few inches thick

- Province zone on surface
looks ~ 50' thick

- Strike length $\geq 3000'$

- Footwall ands = chloritic + little

- Hangingwall ands = ^{veining} bleached + highly
veined.

8

- open pit potential good
eg. cut off @ 0.05 oz/ton Au
+ stripping ratio 10:1 or less

Gold values pick up with ZnS.

- talk with John Hambro
+ John Deane / Tournigan

- ruby silver on Oxidental ch.

→ just staked out land silver
property (dyke swarm)

- Pic - setting off from Big M.

- Tournigan working on prop.
at head of American Cr.
→ old Moonlight prop. (19,139)

E+B expl. into Sulphurettes Cr.
(Ed Kruckowski)

Granges working just east of Snippaker Cr.

- Tournigan has had chopper flying almost all month

Nick Benkovich high grading
- Premier
- looking at Porter-Idaho

visit Premier after supper

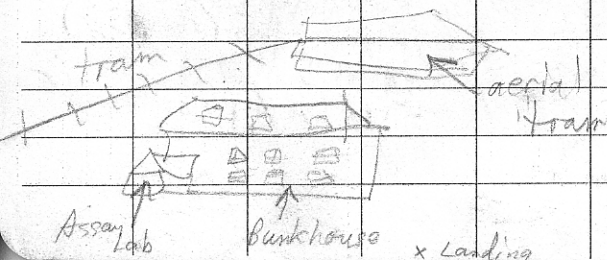
Met Paul Wilson - working
for Don Cochrane on Tommy
McKay's ~~Cars~~ ^{SILVER} ~~hutte~~ ^{PROP.}
_{adj. to Big Mica}

Aug. 11/79

PORTER - IDAHO

- adv. @ 4680' elev. still
Snow covered (patch)
→ "D" Junne)

→ aerial tram cut down
this yr. by Van Is. Hel. (John)



BIG MISSOURI

Jan. 24/80

- chat with Harken Meade in Van.

- Hazelton Gr. is mainly, consisting of andesitic pyroclastics + flows (green variety more important for economics vs maroon)

- interbedded are siliceous or recrystallized cherty units - not continuous laterally.

- 1979 DDH tested 'zones' on Province Ridge incl. North Star Tunnel + 51 (road) shows
→ did not test Creek zone on Dago zone.
→ + tested Unity System.

- Al Galley (U.W.O.) doing chemical studies.

→ Trouble about Long Lk. Dam → Water Right wants to

OVER!

tear down etc.
- trouble with bridge on Cascade Ck.

W

Province Ridge Area

E

51

with Star

Siliceous
horizons

Unity?

Green
Andesite

Dago Cone
Creek Cone

Rhyolite

Maroon
Pyroclastics



BIG MISSOURI

Wed. Sept. 1/82

Legend - Spruce Dykes

Heavy rain overnight

7 Portland Cement Dykes (1)

6 Basalt)

5b Bleached andes - cherty tuff

5a Andesite

4 Maroon andesite

3 Rhyolite

2 Ash flow andesite

1 Grey andesite

Notes Rhyolite at base of section in NE

Spring 42 - Camino shut down due to drop of grade + powerline problems

Final Production 858,000 tons of 0.072 g/t METRIC

Property

8 miles X 9 miles

dip SW tops west

150-160° swing up to 110-130°

Units dip 20-30° (south) up to 70° (north)

1. Grey Ands. (in south)

2. → Ash flow and.

- ind. carbonaceous matrix in centre (less to north)
- basin - possible ore control

- 1st in base of Hazelton (just above Bowser fault contact)

3. → Pillsworth rhyolite (possible vent to north)

= Lower Sequence

- locally subaerial to shallow submarine

4. Maroon Andesite

- volcaniclastic
- fine transgressive (i.e. not a good marker)
- good facies change with

5. Andesite - flows tuff, etc.

- hosts ore deposits
- no 'Premier' porphyry
- approx. 1500 ft thick?

56 Bleached shales - cherty, buff
specimens exfoliate units at
contacts of various ands. units
1-2 m thick
(upper one - 6 m thick)

3 Horizons

i) Lower - Main zone - ^{gta. carb. zone} ~~gta. carb. zone~~
- ab. carbon ^{etc - sericite matrix}
- 6-8 metres apart cherty buff

ii) Middle presence of gta - carb. bx.
in football
- distinctive red-brown ZnS
- 2-3 bands (15-20m apart)

²⁰⁰⁵ Traced Terminus to Martha Stn

iii) Upper - Province zone
6-7 m thick
- only zone recognized this high up.

6. Basalt - dk. green

~~7~~ Above - Siltstone marker

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Basal contact = gtz, pebble cgl.
i.e. base - w/c

- also fault contact

"Hint that whole Big Missouri block may be ex o.c." i.e. that

Limestone both within ash flow, tuff + rhyolite
i.e. added evidence to basin concept

DABO - 3 zones (D, E, F)

dip 20° SW

Main zone - D } 6-8m
upper cherty tuff
lower cherty tuff

i.e. quick volcanism + then quiescence

- distinctive carbon in both
bleached sands + cherty tuff
i.e. variations in depth of water (basin)

- block faulting (up + down)

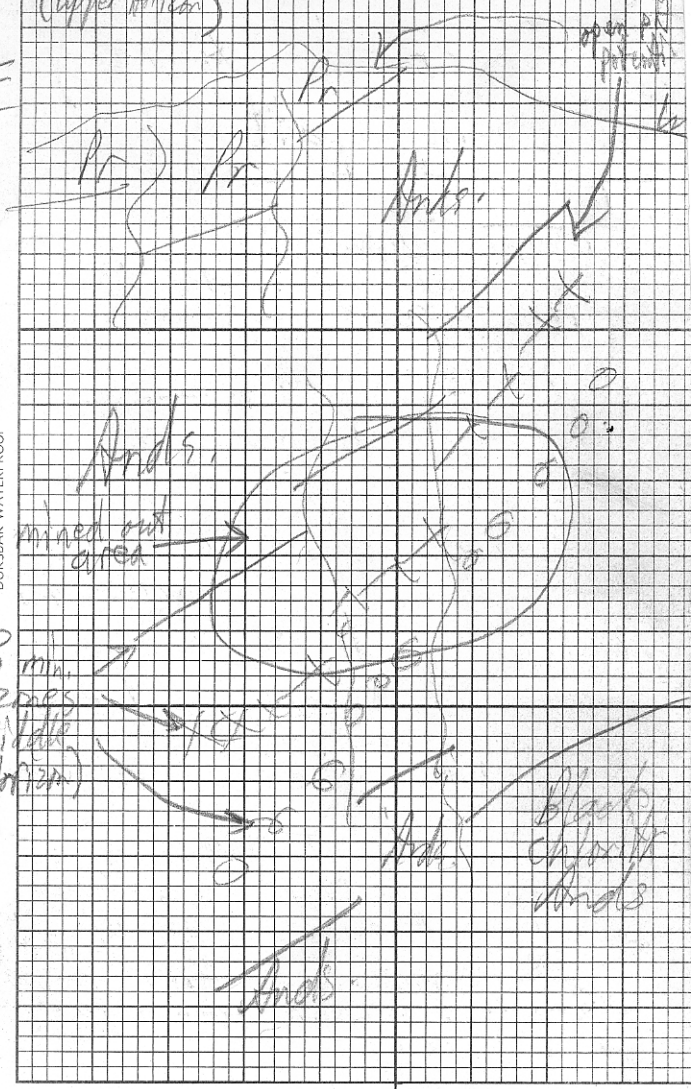
- vertical + lateral movement

- best stratigraphic marker is
ore itself - tensional faults

3

Province - E-W x-section
(Upper Horizon)

E



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3 min. zones
(middle horizon)

METRIC

Massive sul. lenses + pods - in top
lows + peripheral to precious
metal min.
(eg. Ck. zone, A vein)
i.e. Zoning pattern!

Field Stops

① Martha Ellen
- breccia with sulphide matrix
PbS - ZnS - Cu - Py
- cut by young 1 ft. wide and. dyke

② S 1
- 50 ft. wide zone
i.e. part of Calcite cuts - Unicorn system

③ Calcite Cuts

cherty tubb
+ calcite

200

stringer

Bleached sands

av. 1 g/t Au

old assay
at tunnel

70 g/t Au

700 g/t Ag

~ 8500 ft. min. ddh - 1982

47 + 27 = 74 holes

~ 160 ddh on Dago zone