

007493

Fair Mine
Bar
Tealys August
Meeting Notes

Dam kettle → Jack Bowers

Table IDamStorage capacity

Storage curve - elevation of Put Dam 3420/1076

in mid 1991 will have solids to a ~~the~~ level which is 1.5 in short of Dam top

Next raise in ~~tailings~~ to 1089.5 is mainly water cover

this implies in mid 1991 need the pit for storage

Pit

3310 → partial 3485
the volume here is
9 mo settled tailings
with 80% solids

open pit mining ^{continues} to Oct 1991

Dam Valley

To get more time can get solids high in DV area i.e. take solids to alt water level behind least lift on ID (5m lift gives ~ 1 year volume) - this takes through 1992 but no water cover then on tails behind ID.

Pit

3310 → 3811 elevation in pit

991×10^6 cu ft = 37×10^6 cu yd. space available

options

tails behind x valley dam
but have to watch out to keep water cover on ID pond.

Summary

in 1991 DV is full in that another lift can go to 1992 with a lift
then go to Pit - have 9mo capacity
option to go behind x valley dam

uncertainties

- when pit mined out at 1991?
- when DV " " " " by 1993?

Recycle Limbs

- next March is too early
- need to know tails disposal plan
 - early summer '90
- need to know one source & treatment
chem
- need to know source of reclaim
 - take fall next year end 1990
- pit in 93
- X Valley Road - sooner but big \$
 - doesn't make sense if going to pit in 93

Fees independent
feasibility to
go to certain
levels.

July 1990 - schedule for tailings disposal ^{at line} ~~and de~~ ^{for recycle fees study}

July 1991 - Recycle fees study

Test work to Date

Dumbray did a few tests in our lab - showed things OK

CAME did study on reclaim
AUG 1980 date on a ^{map in} report ^{hardware report} is

Bohden is looking at the CAME report and examining options

Mill modification report 1984 - Dave Amos trying to enhance value of property -
- were going to reclaim groundwater from groundwater seepage from X valley dam.

Chemistry is OK for 50% of water demand - problem is economics

Tailings Management MABg

Fans Mine
Env
Tailings

24 Oct 90
Fan

- March 31 91 tailings closure plan - with schedule/costs
- July 31 91 reclaim feasibility study w schedule & final Plan
- July 31 91 ~~debris~~ ^{Final} tailings disposal ~~study~~ plan & sched.
- July 31 93 implement reclaim
- July 31 91 x valley down to be done

- Meet next week scope of work for
tailings closure. 8AM

- Gerry to do scope of work by next week

SCB

Tailings Abandonment Options Study

- 1 Gary Webster recommends that Steffen, Peterson + Kirsten be awarded the study.
- 2 Gary recommends Alternative a slightly scaled down alternative # 2 be chosen.
cost = \$67,000
- 3 Consultants estimate that study will take 3 months to complete (ie April May June.)
- 4 The study is necessary to meet our commitment to develop an alternative abandonment plan by the end of 1986.
- 5 Awarding the contract should be done fairly soon so that adequate time remains to review the results and prepare an abandonment plan.
- 6 Proceeding now would be a indication of our good intentions to be environmentally responsible and will maintain Gary's involvement.
- 7 Gary is available tomorrow to discuss tel# 1-2318079.

Robert

Chapter 8 Review of Abandonment Alternatives

- 8.1 Design Considerations
- means to control O_2 diffusion + acid generation
 - oxygen transport
 - unsaturated soil cover
 - saturated soil cover
 - effect of cemented cover
 - other cover
 - effect of temperature
 - Erosion Control
 - normal flow
 - peak flow
 - glaciation
 - windborne

- 8.2 Methods to control infiltration and erosion
- slope/contouring
 - permeability control
 - cover - till/coarse material/vegetation
- comparison as in current Section 8.3.3

8.3 Data Gaps + Approach to Generate Necessary Data

8.4 Abandonment Scheduling

- Operating Phase Construction
- Designing for Abandonment at any time
- Environmental Impact Advantage of Staging Reclamation

8.5 ~~Abandonment~~ Abandonment Plan Alternatives

- Non-Flooded case
- Flooded case
- perched water table case
- treatment plant
- others

Tailings Project

- ✓ 1) Robert could use more support labor for the next 3 to 4 weeks
- ✓ 2) equipment is needed on an occasional basis.
this includes 1) dozer and operator
2) loader and operator
3) big backhoe for tailings cover placement
- ✓ 3) It is emphasized that this project is crucial to our dealings with the WaterBoard and if it fails we will be in a difficult position regarding any extensions

Robert -

- ✓ Please Convene a meeting of The T. Review Comm for Aug - this is essential
- ✓ AFE - extended afe for Tailings program?

Robert

- ✓ 6 month report for Tech Review com
Copy of detail Ann Rept.

bolides Tailings and Waste dump covers?

Long Term Abandonment - BC Mines

leads from Andy Robertson

1) Equity Silver, Bob Patterson Smithers
Placer Dev. 845-7799

2) Island Copper * Ron Hillis - Env. person (on leave for 6 mos)
John Hanna - Mine Manager

604-949-6326

no fund - small bond from permitting process in 70's

3) Kitsault - CanAmex
Wayne Linton

689-0541

4) Brenda Mines John Kalamant - Abandonment Env. man
Ron Brown on site
Tech gather

604-684-9246

5) Westmin Gordon MontGomery
V.P. in charge
Environ Coordinator Harkin Meade

604-681-2253

— Tom Waterland - Mining Association

Circle prepared to put Bond in Place.

— Standard procedure in US is Bonding

→ weakness is control is by Op Company
if Co fails bond fails

Bob Patterson
Equity Silver

Abandonment plan - Fund to cover

Treatment Costs -

Annual costs \$850,000 - 1.25×10^6 ^{avg amount take but incels lots of cap}

His best est is 1,000,000/yr

say 1,000,000 is big sinking fund at 8% - 25×10^6 needed with 4.5

heavy pressure from mines branch + public etc. to do this - govt may look at lower bonding from Placer Dome but only 65% owner

4yr mine life left

3×10^6 being put away per year - mine assets at end of life as contribution

\$500,000 lime only - most Fe in Fe⁺³ - settling ponds - in summer mixed with tailings for disposal
800,000 cum/yr - 1.8 km² shed

if PH ↑ & can get Zn out
.2 ppm Zn eff limit
.05 Cu

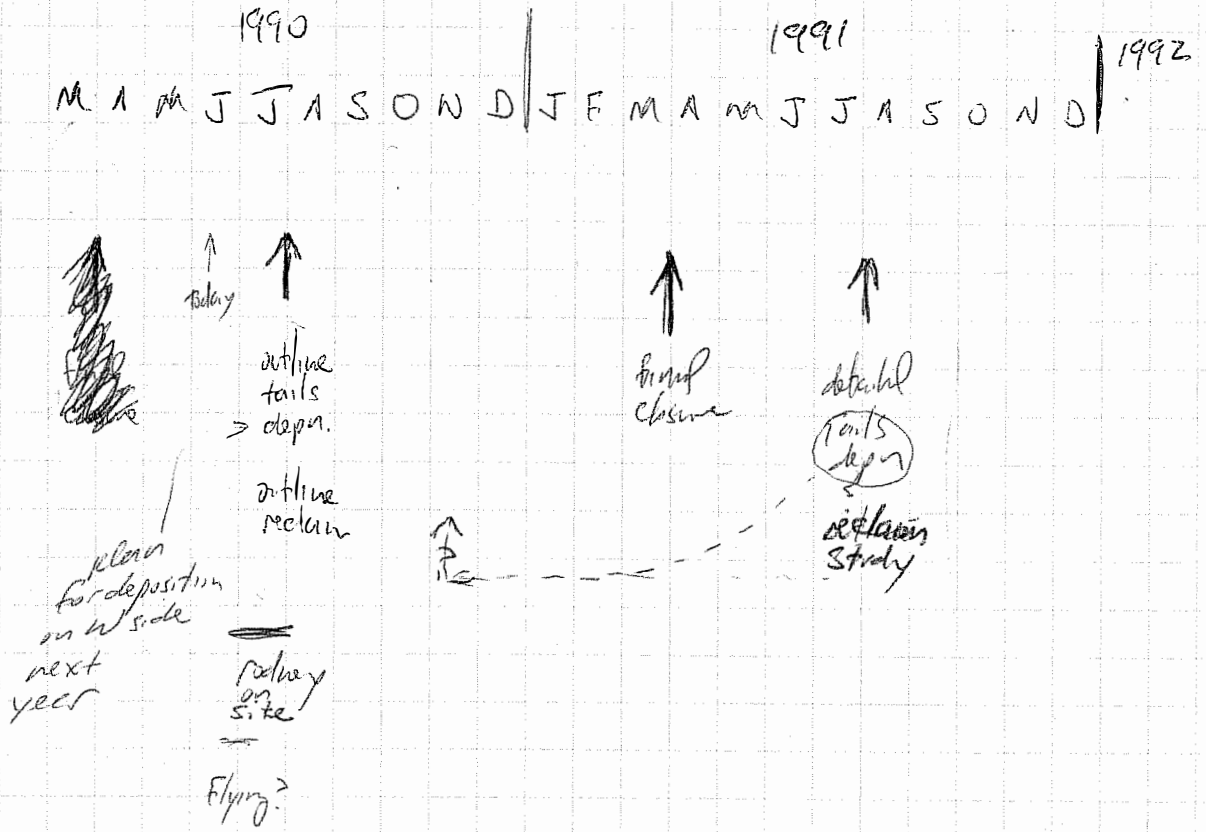
looking at heavy density plant

200 / ha reveg costs

till covers - 150-200k/yr
3/4m - 1 lift comp by dowers

dumps in 10 m lifts -

Fao Mine
Env
Planning for
Closure plan



- fish impact
of trinal
water in
Lower
Rose
ck.