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Tom S  
DEBBIE

PRELIMINARY NOTES (FORMAL MINUTES TO FOLLOW)  
MEETING OF VANCOUVER ISLAND REGIONAL RECLAMATION ADVISORY COMMITTEE  
NANAIMO, MARCH 18, 1988  
(AGENDA ATTACHED ALONG WITH MINUTES OF PREVIOUS MEETING)

1. Lara Project - Abermin Resources

- Permit conditions (see attached with my comments) were accepted by company and permit was issued prior to meeting - no further discussion.

2. Debbie/Yellow Project - Westmin Resources

- Rick Walker, Ed Lyons, Bob Hallam represented company.
- Seeking permits for 2 km tunnel through McLaughlin Ridge from portal on Yellows Creek to breakout on Mineral Creek (tunnel slope @ +0.5%).
- (Comprehensive proposal provided by company is attached).
- Conditions recommended include maximum, once-only, bulk sample of 2,000 tonnes (agreed to by Walker), and \$30,000.00 bond to cover re-sloping and re-planting if needed.
- Want permits by March 25 - agencies will try but unlikely.
- Company has not selected contractor yet but still plans to start tunnelling on April 18.
- Total expenditure in 1988 to be \$5 million, including \$3 million for tunnel.

3. New Privateer Mine

- Harvey Cohen, Archie Yorak (?), Elmer Kelland represented company.
- Impassioned plea from Cohen for permission to process bulk sample in mill and store tails beside Zeballos River.
- Plan to mine 10,000 tonnes from No. 3 Vein between 1,000 and 1,100 levels.
- Will carry out only gravity and centrifugal concentration in mill - gold in sulphite concentrate will be shipped off property to refinery - no chemicals - tails will contain less than 10% of original sulphides.

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PROPOSAL FOR UNDERGROUND EXPLORATION PROGRAM

DEBBIE - YELLOW PROJECT

YELLOWS CREEK near PORT ALBERNI, B.C.

Presentation to

Vancouver Island Mine Reclamation Advisory Committee

March 18, 1988

Nanaimo, B.C.

by

Edward Lyons, Project Manager, Westmin Resources Ltd.

Richard Walker, Exploration Manager, Vancouver Island, Westmin Resources Ltd.

Robert Hallam, Associate Biologist, Hatfield Consultants Ltd.

## INTRODUCTION

- Westmin Resources Ltd. has been exploring the property since 1978. In the past 18 months, 242 drill holes have tested parts of the Debbie-Yellow project, most of them in the southern part of the proposed adit.
- The Debbie-Yellow project is two joint ventures:
  - Debbie property (247 units): Westmin Resources Ltd. (50%), Nexus Resources Corp. (25%), Angle Resources Ltd. (25%).
  - Yellow property (6 units): Angle Resources Ltd. (50%) and Reward Resources Ltd. (50%) with Westmin optioning 24.5% in 1988. Westmin acts as operator of both projects.All partners are based in Vancouver, B.C.
- Adit site is 16 km east of Port Alberni, B.C. by paved highway and gravel logging roads.

## PURPOSE

The proposed exploration adit is designed to:

- provide access to the previously drilled Mineral Creek gold zone for detailed drilling and metallurgical bulk sampling, and access to adjacent vein structures for detailed drilling.
- provide efficient exploration drilling of the Mineral Creek structural zone from known mineralization north to Yellow Creek over the 2.0 km tunnel length and between 350 to 1000 m elevation range.
- minimize potential environmental impacts on the China Creek watershed (1) by providing development water drainage with treatment, if necessary, into Yellow Creek-Cameron River watershed and (2) by minimal cutting of old growth timber for surface drill sites and roads.

#### ALTERNATE SITES

- Bulk testing may be done from China Creek valley. Access would require construction of a 4.2 km road with 7-17% grade and extensive rock blasting on the final 0.8 km. The adit would lie within 50 metres of Mineral Creek on a steep (100-125%) slope with no room for equipment, field office or waste rock storage. Waste rock would have to be trucked 8 km outside of the China Creek watershed.
  
- Exploration drilling of the Mineral Creek structure, a major objective of our program, would continue from the surface from the top of McLaughlin Ridge north to Yellow Creek. Rugged terrain severely limits the location of adequate drill sites. These sites require road or helicopter access. Greater depths required to reach favourable economic targets mean less control and increased costs.
  
- The proposed adit is the most cost effective and rational plan to meet all of our objectives in exploration and economic evaluation with minimal impact on the environment.

### TECHNICAL SPECIFICATIONS

- Method: Track mining on 2.5 x 2.75 meter single heading for 2,020 meters to break-through. Three cross-cuts of 60 meters each at 2.5 x 2.75 m. Three raises of 15-20 m each within the ore zone.

- Schedule of Materials:

Phase I - Adit drifting: 97% of Waste and 70% of Low Grade Waste

Phase II - Crosscuts: 3% of Waste, 30% of Low Grade Waste, 20% of Ore (at end of Phase II)

Phase III- Raises: 80% of Ore

- Materials

	<u>Length (meters)</u>	<u>Waste (tonnes)</u>	<u>Low Grade Waste (tonnes)</u>	<u>Ore (tonnes)</u>	<u>Total (tonnes)</u>
Adit	2,020	33,969	5,012	-	38,981
Crosscuts	190	1,086	2,170	271	3,527
Raises	<u>60</u>	<u>-</u>	<u>-</u>	<u>1,114</u>	<u>1,114</u>
	2,270 m	35,055	7,182	1,385	43,622 T

- Total Volume of Rock: 24,336 m<sup>3</sup> (includes 50% volume expansion in blasting)

- All significant construction will be at the portal site. Break-through to surface at the south end of the adit will be a pad 5 meters wide by 4 meters deep with a rock cut of 4 meters high. This is smaller than existing helicopter-serviced drill sites (10.5 x 10.5 m). The break-through entrance will be enclosed with a locked steel mesh door. It will serve as ventilation opening and escape route.

#### ACID-BASE ACCOUNTING

- Three composite samples (4.5 - 7 kg each) of the three sulfide-bearing rock types were analyzed by Chemex Laboratories Ltd. of North Vancouver.

#### - Results

Composite Types (avg of 3 spls)	Total Sulfur (%)	Theoretical Acid kg/tonne	Net Neutraliz'n Potential kg/tonne	% Neutralization over Acid Generation
Waste	0.13	4.2	98.8	2352%
Low Grade Waste	1.62	50.6	165.4	327%
Ore	1.35	42.3	212.7	503%

- Natural drainage across ore and low-grade waste outcrops:

Mineral Creek, which drains south into China Creek, flows across 300 m length of ore-type outcrop within the creek and over 14 hectares of low-grade waste outcrops on the east side of the creek at the head of its watershed. Water testing by Westmin since May, 1987 shows that Mineral Creek consistently has the highest pH (to 7.98) of the five sampling sites in the China Creek watershed. The acid-neutralization potential indicated in the acid-base assaying is confirmed in the natural setting.

#### GEOTECHNICAL DATA AND WATERFLOW

- Drill experience is primarily along the southern 600 m of the proposed adit.
- Out of 150 drill holes in the proposed adit area, one site returned artesian water which subsided to nil flow within 24 hours and was associated with the normal surface fracturing in the top 50 m of outcrop. No other artesian water was encountered.
- Rock mechanics data has been collected systematically on 70% of drill core. Core recovery averages better than 95%.
- Location of the adit was predicated on minimal potential ground control problems. It will penetrate massive basalts ("greenstone").
- No significant groundwater or ground control problems are anticipated.

## RECLAMATION

### Water

- diversion ditches will be dug around the portal site to deflect surface runoff.
- runoff collector ditches will carry water falling onto the site and draining from the adit to a sedimentation control pond where water quality will be monitored. Overflow will be released to Yellow Creek.
- Sedimentation pond will hold 510 m<sup>3</sup>, which would contain a rainfall of 10 cm on the site in 24 hours plus drainage from the adit.

### Waste Rock Disposal

- Topsoil will be stripped and stacked on existing YC100 roadbed
- Waste rock will be sloped for positive drainage. That part of the dump completed by early October will be covered with topsoil seeded with an approved grass mixture and fertilized so that grasses can bind the soil before the autumn rains.
- Waste stored afterwards will be reclaimed in the same way in spring, 1989 to reduce potential turbidity in Yellow Creek in the winter.

### Ore Disposal

- Ore will be the last material hauled from the adit and will weight 1,385 tonnes.
- Waste rock will be cleared from the rail dump and soil packed on the site. A high density polyethylene (HDPE) membrane will be spread.
- Unused ore will be stacked on the membrane and can be covered with an HDPE membrane.
- Water draining this area will be conveyed to the sedimentation pond.



**OTHER TENANTS**

- Surface rights are held in fee simple by MacMillan Bloedel Ltd. (Cameron Division).
- Westmin has both formal and informal agreements with MacMillan Bloedel regarding access, road use and recovery of timber values.

**SCHEDULE**

- Timely approval is essential for this project.
- Westmin desires permission to begin site preparation by March 25th for completion by April 24th.
- Preparation of tunnelling contract bids will be completed by April 6th and the contract will be awarded April 15th.
- Tunnelling would commence April 25 and be completed by December 15, 1988.

