Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

# MEMORANDUM

CONFIDENTIAL

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# 019313

To: All staff

Date: November 24, 1986

Re: MEG TALK - REG (Johnny Mt.) DEPOSIT

Date: November 19, 1986

Speaker: Dr. Ted Grove

Location and Access: Approximately 25 minute flight east from Wrangell, Alaska.

-1035 metre airstrip on Johnny Flats.

Local Geology: Flat-lying Betty Creek(?) mid-Jurassic(?) sediments underlain unconformably by volcanic conglomerates and sandstones with intercalated bands of dirty limestone and argillite. Dykes and sills of feldspar porphyry up to 140 m wide in lower sequence. -'Proto-mylonite' cf. volcaniclastics.

Alteration: Most predominant - Kspar (orthoclase/microcline) with minor sericite, ankerite and quartz.

- Locally, nearly complete replacement by Kspar.

- Kspar alteration guided by steeper dip of host rocks and warps and bends in host rocks (ie. stratabound).

Mineralogy: 'ore' - py, cpy, V.G., PbS, ZnS, sulphosalts.

- no arsenopy; rare po.

- Gangue - microcline, quartz, sericite, ankerite, chlorite.

- Ore is banded cpy and microcline with sulphide remobilization in tension fractures (particularly in HW).

STONEHOUSE AREA - traced over area 1450 metres long and 275 metres wide.

4 Zones: (1) 4 lenses or veins in Cloutier.

- (2) 4 lenses in 16 zone.
- (3) several lenses in Pick Axe zone.
- (4) Gold Rush zone 250 metres strike along vein.

# Types of Mineralization:

(1) Sulphide - quartz - Kspar.

(2) 'Connector' - diffuse alteration with disseminated and vein-like grade gold (between main zones).

#### Mineral Zones:

(a) Cloutier Zone

alteration ilens

-Mineral inventory - 3:1 (drill inferred: drill indicated). -Underground drift - 3x2.74 m with 73 metre back. -Host rock - altered feldspar porphyry with quartz (+cpy) tensional veinlets displaying reticulate textures in hanging wall above more massive sulphides. -Mineralization - Kspar veining is cut by later stage quartz veins with

free gold. - consistent better grades underground than from surface drilling.

### (b) 16 Zone

- 3 major lenses.

-Drifting encountered main lens near western end and tested vein for 52 metres eastward in an area with no previous drill information. Dr. Grove stated assays averaged 65 grams of gold per tonne along the drift and included a 40 per cent dilution factor. The back is approximately 100 metres. 22 different occurrences of free gold were noted in this drift. Grades appear to be 25 to 30 per cent higher in underground workings than in surface diamond drilling.

# (c) Pick Axe Zone

original discovered by Hudson Bay Mining and Smelting in 1960's and subsequently explored by Texasgulf and Cominco.
mineralization consists of 'pods' of massive sulphides (py & cpy) averaging 13.7 grams of gold per tonne and several per cent copper.

(d) Gold Rush Zone

- 250 metres trenched.

- quartz and free gold invading (younger) massive pyrite.

- gangue includes quartz, biotite and pyrite, mainly in the hanging wall. - Pink Kspar alteration pattern cuts across volcanic conglomerate and sandstone, locally 100 per cent replacement. Quartz veins cut the Kspar alteration.

#### (e) Bonanza Zone

- 3.5 km strike length indicated by geochemistry and limited trenching. - 4 stratabound lenses hosted by intercalated sandstone argillite sequence with predominately Pb-Zn-Ag mineralization.

#### (f) Mcfadden Float

- Float at toe of glacier estimated at 30,000 tonnes grading 96 grams of gold per tonne.

#### (g) Zephyr Zone

- One of Ted's new 'Connector' - type zones with disseminated free gold in quartz veins within extensive Kspar alteration zone between the 16 Zone and Pick Axe Zone.

Note: This type of mineralization is what influenced Skyline's stock recently.

- 3 -

Paragenisis: Quote (EWG): "Fracturing  $-\rightarrow$  Kspar alteration (replacement)  $-\rightarrow$ 

cataclasis --→ sulphides --→ cataclasis --→ biotite-carbonate-sericite
alteration --→ quartz-pyrite --→ cataclasis --→ remobilization of
sulphides --→ late quartz with chlorite. "
- I agree (note word - cataclasis)

Longitudinal Section (slide): Series of overlapping mineralized zones ("a la

Precambrian mineralization back East": EWG). - a lot of gaps in data between zones (TGS)

Ore Controls:

1) Feldspar porphyry dykes and sills.

2) Underlying syenitic intrusion (eg. at Inel property to NE).

3) Structure i.e. unconformity, faulting.

- I agree.

Correlation: Silbak Premier, Big Missouri, Sulphurets.

(Note: Harlan Meade with Westmin not impressed).
- Yes, some similarities, but also some differences (TGS).

Target: Silbak Premier gold-type.

- Yes, in part (TGS).

Geological or 'Global' Potential: "At least 4 million tonnes @ 17 grams of

gold per tonne" (EWG) or approximately 68,570,000 grams of gold (i.e. same scale as past producer - Premier). Note: This represents a quantum leap from the Fall 1985 reserve figure of approx. 750,000 tonnes @ 24 grams of gold per tonne. On what basis? Geological intuition I suspect more than anything. New 'reserve' figures have not been calculated using 20 metre square blocks around drill holes multiplied by the true width and using a tonnage factor of approx. 8 cu. ft./ton (cf. normal 12 cu.ft./ton for quartz veins).

were calcu

1986 WORK: 340 metre total adit development on Cloutier and 16 zones.

Comments:

(1) The <u>REG</u> deposit represents a <u>transitional</u> type of mineralization between a syenitic porphyry system at depth and a mesothermal-epithermal vein system at higher elevation. The mineralogy of the alteration and mineralization tends to support this hypothesis. For example, the abundance of Kspar and lack of adularia indicates higher temperatures than normally seen in epithermal environments.

(2) The belt between Alice Arm northwards through to the Iskut River is <u>favourable</u> for this type of deposit (including Premier, Big Missouri, and Sulphurets).

(3) There is a distinct <u>lack</u> of scientific data on this deposit, except for some presumably good thin section work by Grove. What a great situation for thesis - where is UBC? In any event, our Ministry should become involved - eg. DVL. We could dearly use some age dates and fluid inclusion data.

(4) Previous <u>reference</u> - TGS Monthly Report, Aug. 1984 and Aug. 1983., plus Geological Fieldwork write-ups for corresponding years.

(5) Very <u>large attendance</u>, presumably sparked by stock activity. - Reg Davis, Pres. of Skyline, introduced Dr. Grove or more correctly 'introduced' his company and bad-mouthed the Northern Miner (David Duval) for not giving Skyline a more favourable write-up in this week's Northern Miner.

- Bob Anderson (GSC) thanked Dr. Grove. (sorry, Dani - no mention of your excellent work).

(6) Potential? - certainly looks like a small mining situation at the least.

- further development should be watched and studied very carefully - this could turn out to be a dandy.

Vom Schroets

Tom Schroeter Senior Regional Geologist Vancouver

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