## MEMORANDUM

COMPANY: Teck Corporation

DATE:

March 23rd, 1987

TO:

W. Meyer

COPIES: C.V. Sibbald

FROM:

T.M. Siew

PROSPERITY, PORTER IDAHO AND SILVERADO MINES STEWART, B.C. (PACIFIC CASSIAR LTD.)

The 1985 drilling program has shown that the D vein zone indicated reserves of 59,325 tons grading 42.9 oz/T Ag, plus an additional geological potential of 89,900 tons grading 27.5 oz/T Ag. calculated by P.G. Folk. The known ore reserves for the property are relatively small, but the potential for more reserves around the area appears to be excellent.

A sensitivity analysis of the property to justify the possibility of building a mine access (road and tunnel) for further exploitationis shown as follows.

## Economic Analysis for Mining Potential

This is a review to my memo dated January 29th, 1987, that assumes the mine will produce 500 tons of ore per day or 175,000 tons of ore per year, the mining method to be adopted is underground cut and fill mining with trackless haulage operation, and the concentrate will be trucked via tunnel road system to Stewart. The evaluation of the property is based on the following assumptions and expectations:

Ore reserves:

Assume 1,050,000 tons at 18 oz/T Ag (from further exploration), lead and other by-products credit will cover the cost of freight and treatment of concentrates.

Assume silver recovery rate: 90%

Production rate:

500 Tpd or 175,000 Tpy

Operating cost:

Mining \$47/T milled Milling 18 Plant & services 9 Administrative, etc. 11

Total

\$85/T milled

 Capital cost:
 Mine access
 \$ 7,500,000

 Mine
 3,000,000

 Mill
 8,000,000

 Ancillary services
 4,000,000

 Engineering/overhead
 8,500,000

Total

\$31,000,000

Working capital:

\$1,000,000

Interest rate:

10%

Taxes (FST & PST):

48%

The property is evaluated for debt financing.

## <u>Sensitivity Analysis</u>

1. Sensitivity on silver price (CAN\$): \$7.20/oz, +15% \$8.28/oz and +30% \$9.36/oz.

Silver price (CAN\$/oz):	Capital Cost Including Mine Access			Capital Cost Without Mine Access		
	\$7.20	\$8.28	\$9.36	\$7.20	<u>\$8.28</u>	\$9.36
(CAN\$000) Net cashflow 15% disc. NPV Payback (years)	(24,071) (5,950) n/a	3,989 1,725 5.5	15,143 7,288 3.8	(2,967) (733) n/a	10,580 5,020 3.9	20,931 10,788 2.8

2. Sensitivity on ore grade: 18 oz/T Ag, +10% 19.8 oz/T Ag and +20% 21.6 oz/T Ag.

Ore grade (oz/ton Ag):	Capital Cost Including Mine Access			Capital Cost Without Mine Access		
	18.3	<u>19.8</u>	21.6	18.0	19.8	21.6
(CAN\$000) Net cashflow 15% disc. NPV Payback (years)	(24,071) (5,950) n/a	(307) (76) 6.0	7,851 3,545 4,7	(2.967) (733) n/a	6,921 3,152 4.7	14,105 6,921 3.6

3. Sensitivity on operating cost: \$85/T, -10% \$76.50/T and -20% \$68/T.

Coerating cost:		Capital Cost Including Mine Access			Capital Cost Without Mine Access		
	0%	-10%	-20%	0%	-10%	-20%	
CAN\$000) Net cashflow	(24,071)	(6,753)	3,641	(2,967)	4,875	10,280	
15% disc. NPV Payback (years)	(5,950) n/a	(1,669) n/a	1,574 5.6	(7 <b>33</b> ) n/a	2,153 4.9	4,858 3.9	

4. Sensitivity on capital cost:

		apital Cos <u>ling Mine A</u>	Capital Cost		
(CAN\$000)	0%	-10%	-20%	Without Mine Access	
Net cashflow 15% disc. NPV	, , , , , , , , , , , , , , , , , , , ,	(15,348) (3,794)		(2,967) (733)	
Payback (years)	n/a	n/a	n/a	n/a	

For more details see attached computer printout.

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TMS-041/law Attachment