180-#388-#8165

FRENCH PEAK SILVER PROPERTY

METALLURGICAL STUDY

ON

UTE VEIN SYSTEM

Claims: SILVER GROUP - Silverado, Eldorado, Silver Iron, Mag Hi, Ute 5 - 8

OMINECA MINING DIVISION

93M/7W

55° 21' N 126° 48' W

OWNER : SILVERADO MINES LTD.

OPERATOR : MOHAWK OIL COMPANY LTD.

WRITER : A.M. Homenuke, P. Eng. (Geol.)

Submitted: July 8, 1980

C O N T E N T S

F I G U R E S

T A B L E S

I. INTRODUCTORY NOTES

LOCATION AND ACCESS

The Silver Group of mineral claims is located on the south-east slope of French Peak (FIG. 1) 10 km. west of the north end of Babine Lake and 65 km. northeast of Smithers.

Access is by gravel road from Smithers along the route to Smithers Landing, the Nilkitkwa Forest Access Road and a 4-wheel drive road constructed in 1976, a total distance of 120 km.

PHYSICAL FEATURES

Elevation on the property ranges between 1000 m and 1500 m. Relief is gentle to the north and more abrupt to the south as Tsezakwa Creek, the major drainage in the area, is approached.

Outcrop is generally scarce, with the major exposures being in creek banks and topographic highs. Further exposures have been provided by trenches.

Rainfall is relatively low, but snowfall exceeds 1.5 metres most years and lasts from late October to May or June.

Vegetation consists mainly of subalpine fir with spruce in flatter areas and poplar and alder to the south. Old burnt areas are presently covered with a dense regrowth. Flat areas tend to be swampy.

CLAIMS AND OWNERSHIP

The Silver Group consists of the following mineral claims totalling 34 units (FIG. 1).

Name		Record No.	Record Date
UTE 5 - 8	(4)	104288-91	September 17
Silverado	(9)	298	May 26
Eldorado	(9)	299	May 26
Mag Hi	(6)	348	July 9
Silver Iron	(6)	349	July 9

The claims are presently under option to Mohawk Oil Company with a retained interest by Silverado Mines Ltd. (Silverado holds title)

0 200 400 600 800 1000
metres

Prepared from 93M/7 N.T.S. map
contour interval 100 ft. (30.5 m)

claim boundary & legal corner post or initial post

---- access roads & trails

5200
5000
4600
4000
3500
3500
4000
4500

UTE 5
UTE 7
UTE 8
UTE 6
PROJECT AREA
SEE FIG. 2
ELDORADO
SILVERADO
MAG NI
SILVER IRON
To Southern
Tsesaut
Creek

MOHAWK OIL CO. LTD.
FRENCH PEAK SILVER PROJECT
Omineca Mining Division

REGIONAL TOPOGRAPHIC PLAN
Showing Mineral Claims

Prepared by: A.M. Homenuke, P. Eng.
TRI-CON MINING LTD. May 29, 1980

FIG. 1

HISTORY

The following list summarizes the history of the property.

1955 - "High-grade" silver mineralization discovered by Rio Tinto Canadian Exploration Ltd.

1956 - Rio Tinto carried out mapping, trenching, sampling, a self potential survey and 1737 feet of diamond drilling in 11 holes.

1964-5 - S. Homenuke and H. Gilleland leased the property and shipped 22 tons of hand-sorted ore yielding over 6,000 oz. of silver and over 7,000 lbs. of lead.

1974 - S. Homenuke and J. Sargent, now owners of the property, shipped 28 tons of hand-sorted ore. This shipment yielded 3423 oz. of silver, 2 oz. of gold, 8010 lbs. of lead, 2755 lbs. of copper and 1023 lbs. of zinc.

- In July, the writer visited the property and did some preliminary geological and geophysical investigations. This work resulted in Can-ex Resources Ltd. (a private company) optioning the property.

- In the fall, Rennicks Resources Ltd. (N.P.L.) optioned the property from Can-ex and through Tri-Con Exploration Surveys Ltd. carried out a program of mapping, sampling and EM-16 surveying. Some backhoe trenching was also done. Rennicks allowed the option to lapse due to commitments elsewhere.

1976 - Aalenian Resources Ltd. (now Silverado Mines Ltd.) optioned the property and commenced a major diamond drill program. 30 holes were drilled totalling 2646 feet. Detailed mapping and magnetometer surveying were done on the main zone of interest. The main vein was indicated to be over 1500 feet long and silver mineralization was traced to a depth of over 200 feet. A small high-grade zone was detailed. Copper-silver mineralization was also discovered a mile to the south.

1977 - The property was optioned to Mohawk Oil Co. Ltd.

1979 - A petrographic study was done on drill core samples to attempt to unravel the relationship between lithology, structure and mineralization.

- Late in the fall, an extensive line cutting program was started.

1980 - A preliminary feasibility study was commenced to determine the viability of a smale scale mining operation. The metallurgical tests descrived in this report were part of that study.

ECONOMIC ASSESSMENT

The production record and drilling results indicated that the French Peak Silver Property might have potential as a high-grade silver producer. Further studies have shown that a small scale mining operation (20-40 ton per day) should be economically viable.

PRESENT WORK AND DISTRIBUTION

A feasibility study on the French Peak Property was commenced in February, 1980. Due to the complex nature of the ore, (tetrahedrite-galena-chalcopyrite-sphalerite) it was decided to proceed on the basis of a bulk sulphide concentrate. The only sample immediately available was of high grade ore from the Ute Vein. However, as there was a pressing need for results, this sample (about 20 kg) was delivered to B.C. Research for extensive preliminary flotation tests. The results were very excouraging with over 97% recovery of silver values. The location of this sample is shown on Fig. 2.

As it was necessary to confirm these results, a crew was sent into the property to obtain a sample more nearly representative of anticipated mine ore. This sample (about 40 kg) was sent to Dawson Metallurgical Laboratories in Utah. The sample was taken from a pile of reject material from previous hand-cobbing operations. The area where the ore was mined is shown on Fig. 2.

The B.C. Research test results comprise Section II of this report and Dawson Metallurgical Laboratories' results Section III.

REFERENCES

Homenuke, A.M., 1977, French Peak Silver Property, compilation Report (private report to Aalenian Resources Ltd.)

Homenuke, A.M., 1980, French Peak Silver Project, Proposed Operating Plan (report prepared for Mohawk Oil Co. Ltd. and submitted to Ministry of Energy, Mines and Petroleum Resources for production approval)

COST STATEMENT

B.C. Research - Test and Report Sample submitted Feb. 27/80 Report received May 22/80		$3,207.38
3 samples assayed for total content		219.00
Dawson Metallurgical Laboratories		
	Fees	428.00
	Assaying	360.00
Sample submitted April 9/80 Report received May 6/80		
Sample obtained for Dawson Test April 6, 1980		
2 men @ 1 day @ $150/day each		300.00
4x4 Truck 1 day @ $35.00/day		35.00
2 Snowmobiles @ $20/day		40.00
A. Homenuke, P. Eng., fees		
Discussion with testing labs	Feb. 27, April 9	
Sample preparation	April 9	
Report preparation	July 4 and 7, 1980	
	Total 2 days @ $350/day	700.00
Copying, maps, secretarial		65.00
	TOTAL COST	$5,355.18

CERTIFICATE OF QUALIFICATION

I, ALEXANDER M. HOMENUKE, DO HEREBY CERTIFY:

1. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.

2. THAT I received the Degree of Bachelor of Science in Geological Engineering from the Colorado School of Mines in 1974.

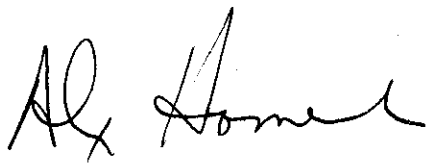
3. THAT I received a Diploma of Technology in Mining from the B.C. Institute of Technology in 1969.

4. THAT I have been employed in various aspects of mining exploration for 11 years and am presently employed by Tri-Con Mining Ltd., of Suite 2580 - 1066 West Hastings Street, Vancouver, B. C.

5. THAT I presently reside at 29825 Harris Road, Mt. Lehman, British Columbia.

6. THAT this report is based on work supervised or conducted by myself and on independent testing.

Dated at Vancouver, B.C. this 7th day of July, 1980.



A.M. Homenuke, P. Eng.
Geological Engineer

Project Report No. 204-499

FLOTATION TESTS ON A SAMPLE OF "FRENCH PEAK" SILVER ORE

Prepared for:

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Prepared by:

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May, 1980

SUMMARY

Initial flotation tests on "French Peak" silver ore indicate that grinding to 82% -65 mesh followed by conventional xanthate flotation produced silver recoveries in the range of 80 - >95% with silver grades in the 300 - 400 oz/ton range.

A test of unit cell operation on the -8 mesh fraction of crushed (-3/8") ore indicated unit cell recovery of ∿27% of contained silver in a concentrate grading 313.8 oz/ton.

With or without a unit cell prefloat, a minimum of 12 minutes flotation time is required to obtain 80% silver recovery. In general, significantly increased recovery was obtained by up to 18 minutes of flotation time.

Laboratory reagent requirements (lb reagent/short dry ton of ore) were:

collector:	(sodium isopropyl xanthate (Dow Z-3))	0.7 lb/ton
frother:	(MIBC)	0.03 lb/ton
promoter:	(Cyanamid Aerofloat 31)	0.006 lb/ton

Adjustment of pulp pH to 11.5 required 3.6 lb/ton of lime ($Ca(OH)_2$) and resulted in a slight decrease in concentrate iron content.

Use of sodium cyanide at 0.2 lb/ton reduced concentrate iron content to ∿4% but slowed down flotation so that a minimum of 18 minutes flotation time was required.

The ore sample tested did not present any unusual problems.

INTRODUCTION

BACKGROUND

Tri-con Mining Ltd. is developing a high grade silver deposit ("French Peak Silver") located in the Babine Lake area of Northern B.C. The primary silver bearing mineral is tetrahedrite with secondary values in argentiferous galena. Auxiliary sulphide minerals include sphalerite, chalcopyrite, and pyrite.

On February 27, 1980, Mr. Alex Homenuke of Tri-con visited B.C. Research to discuss an initial program of flotation test work to establish conditions for recovery of argentiferous minerals. As a basis for testing, Mr. Homenuke provided a preliminary flow sheet involving primary (unit cell) flotation of the -8 mesh portion of crushed ore followed by closed circuit ball milling (to an unspecified top size) and secondary rougher-scavenger flotation.

OBJECTIVES

Objectives of this test program are:

- to establish suitable conditions for recovery of argentiferous minerals (minimum 80% silver recovery) with maximum rejection of pyrite and non-sulphide gangue.
- to document the quality of initial (unit cell) and rougher-scavenger flotation products under specified conditions.

EXPERIMENTAL PROCEDURES

TEST MATERIALS

The ore sample supplied for test work was described as "...rejects from hand picking of a bulk sample...".

Flotation reagents (collectors, frothers) used were manufacturers' samples prepared as noted. Other chemicals used for pH adjustment and analysis were reagent grade. Vancouver city tap water (hardness ∿5 ppm, pH 6.5) was used in all flotation tests.

COMMINUTION

The raw ore sample was passed through a jaw crusher for reduction to -3/8 inch. At this point, test samples of ∿1 Kg were prepared by multiple splitting of the whole sample on a riffle. Individual test samples were screened on 8 mesh; oversize was ground for two minutes in a 12 inch diameter mill containing a mixed charge of 2 inch x 3/8 inch balls at 80 weight % pulp density before addition of -8 mesh material, and adjustment of pulp to 70 wt % solids. This combined charge was ground for a further eight minutes, discharged from the mill and transferred to the flotation cell.

FLOTATION

Flotation tests were conducted using a Denver D-2 lab flotation unit with a 2 ℓ cell. In the cell, pulp density was initially adjusted to ∿38% with tap water, then - as noted for specific tests - pH was adjusted with weighed amounts of powdered lime ($Ca(OH)_2$). Potassium ethyl xanthate collector(Dow Z-3) and sodium cyanide were added as freshly prepared 10 g/ℓ solutions. Frother (methyl isobutyl alcohol, MIBC) and promoter (Cyanamid Aerofloat 31) were with a microliter syringe; Aerophine 3418A collector (Test 6) was weighed into a watch glass and washed directly into the pulp.

Stage flotation time and reagent additions are noted in the results and discussion section.

Froth control was obtained by adjusting airflow rate at a rotor speed of 1,800 rpm.

Concentrate and tailing samples were vacuum filtered, oven dried at 105°C, weighed, and pulverized with a mortar and pestle before sampling and analysis.

ANALYTICAL PROCEDURES

For test control purposes, initial silver analyses were done on selected pulp samples by nitric acid digestion and background corrected atomic absorption-spectroscopy.

Samples selected for detailed analysis were submitted to Chemex Laboratories Ltd.

RESULTS AND DISCUSSION

GRINDING

Average particle size analyses of tests 2, 4 and 6 were as follows:

Mesh	Microns	Wt % retained (interval)	Wt % retained (cumulative)	Wt % passing (cumulative)
32	500	4.2	4.2	95.8
65	210	13.7	17.9	82.1
100	147	10.7	28.6	71.4
200	74	16.6	45.2	54.8
325	44	12.4	57.6	42.4
pan	-	42.4	100	-

The indicated desired grind was 100% -48 mesh, but single stage grinding to this fineness would have resulted in excessive production of slimes.

Grinding in closed circuit with a classifier would be expected to produce marginally better concentration results due to reduced losses of sulphide locked in coarse particles.

FLOTATION

Test conditions for the six flotations are presented in Tables 1A - 6A; interim analytical results and recovery data are presented in Tables 1B - 6B. Results of Chemex analyses on concentrates from Tests 2 and 3 are presented in Appendix 1.

Test 1

In this test, no pH adjustment was made and the first concentrate was drawn with only frother and promoter added to the cell. Concentrate grade (178 oz/ton) and weight recovery (4.9%) were low, indicating that silver minerals present are not the most susceptible minerals to flotation. The second concentrate (23.8 wt % of ore at 338 oz/ton) contained the largest portion of recovered silver.

Overall recovery (by interim analyses) was 90.0% in a concentrate grading 263 oz/ton Ag. Iron content of the total concentrate was ~8%.

Test 2

In this test, -8 mesh crushed ore was slurried in the 2 ℓ cell and floated to model the proposed unit cell operation. The unit cell concentrate (Chemex Sample No. 2, Appendix 1) graded 313.8 oz/ton Ag with an iron content of 2.95%. Thus the unit cell recovery appears to be ~27% of contained silver at a grade of about 300 oz/ton based on the Chemex assays.

Note that recoveries and grades presented in Tables 1B - 6B are uniformly calculated from the interim analyses, since it is not possible to do a complete material balance based on the Chemex concentrate analyses.

At high silver levels, the interim results appear to be somewhat erratic compared to fire assays:

Sample	Silver BCR Interim	Silver Chemex fire assay
Test 2 C-1 (Unit Cell)	362	313
Test 2 blended concentrate	281	278
Test 3 blended concentrate (C-1, 2, 3)	257	404

However, in the absence of more extensive fire assay data, it is necessary to discuss most of the results in terms of the interim assays.

Overall recovery in Test 2 was 97.5% in a concentrate containing 281 oz/ton of silver and 8.1% iron. However after the second stage, cumulative silver recovery was 94.4% at a grade of 315 oz/ton.

Flotation of -8 mesh material resulted in some operating problems with the bench cell due to jamming of coarse material in the rotor.

Test 3

Tests 3 - 6 were done on ground pulp without pre-flotation of (fine) crushed ore - i.e. without modelling the unit cell portion of the proposed circuit. Four stages of flotation were used in Test 3 to determine limits on recovery under test conditions. The first stage resulted in 85.6% silver recovery at a grade of 292 oz/ton with 7% iron. The second stage produced a further 10% recovery with increased iron content, but the third and fourth stages produced minimal increments of recovery.

Test 4

Test 4 was procedurally the same as Test 3, but was done by a laboratory technician to check on effects of individual technique. Stage recoveries were lower (see Table 4B), but overall silver recovery in 3 stages was 92.9% at a grade of 244 oz/ton with 8.1% iron content.

Test 5

Test 5 was procedurally the same as Tests 3 and 4 except that sodium cyanide (0.2 lb/ton) was added initially to depress pyrite. Recoveries in stages 1 and 2 (see Table 5B) were appreciably lower than for Tests 3 and 4, but the cumulative 3 stage flotation resulted in 90.7% silver recovery at 227 oz/ton with an iron content of 3.9% - i.e. appreciably lower than for tests without added cyanide.

Test 6

Test 6 utilized a new commercial collector (Cyanamid Aerophine 3418A) which is claimed to be highly selective against pyrite. Satisfactory recoveries (see Table 6B) were obtained at iron levels between those obtained with Z-3 only and with Z-3 plus cyanide. Poor froth was observed throughout this test despite increased frother and promoter dosage. Response to a letter to the manufacturer indicated that glycol type frothers are required with this reagent.

CONCLUSIONS AND RECOMMENDATIONS

Test work clearly indicates that - for the sample tested - silver minerals are readily floated at a grind of 82% -65 mesh using potassium isopropyl xanthate (total dose 0.7 lb/ton of ore), MIBC (0.03 lb/ton) lime (3.6 lb/ton) and Aerofloat 31 (0.006 lb/ton). Indicated recoveries range from ∿80% for six minutes flotation time to 90 - 95% for 12 minutes flotation time.

Use of sodium cyanide at a dosage of 0.2 lb/ton improves iron rejection, but appears to cause slower flotation. Thus, use of cyanide would only be recommended if iron rejection is critical and a flotation time of ∿18 minutes is practicable.

Use of Aerophine 3418A cannot be recommended on the basis of current test work due to poor froth properties with MIBC frother.

R. O. McElroy
Extractive Metallurgist
Division of Applied Chemistry

TABLE 1A

CONDITIONS FOR FLOTATION TEST NO. 1

pH: initial 6.5
adjusted ---
final 6.5

(0 lb $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC	0 0.002 0.01	1	5	5
2	Z-3 Aerofloat 31 MIBC	0.4 0.002 0.01	1	8	13
3	Z-3 Aerofloat 31 MIBC	0.2 0.002 0.01		6	19
4	Z-3 Aerofloat 31 MIBC	---- ----	---- ----	---- ----	---- ----

TABLE 2A

CONDITIONS FOR FLOTATION TEST NO. 2

pH: initial 6.5
adjusted 11.5
final 10.1

(3.61b $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC	0.3 0.002 0.01	1	6	6
2	Z-3 Aerofloat 31 MIBC	0.3 0.002 0.01	1	6	12
3	Z-3 Aerofloat 31 MIBC	0.2 0.002 0.01	1	6	18
4	Z-3 Aerofloat 31 MIBC				

TABLE 3A

CONDITIONS FOR FLOTATION TEST NO. 3

pH: initial 6.5
adjusted 11.5
final 10.6

(3.6 lb $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC	0.4 0.002 0.01	1	6	6
2	Z-3 Aerofloat 31 MIBC	0.2 0.002 0.01	1	6	12
3	Z-3 Aerofloat 31 MIBC	0.1 0.002 0.01	1	6	18
4	Z-3 Aerofloat 31 MIBC	0.1 0.002 0.01	1	6	4

TABLE 4A

CONDITIONS FOR FLOTATION TEST NO. 4

pH: initial 6.5
adjusted 11.6
final 10.5

(3.6 lb $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC	0.4 0.002 0.01	1	6	6
2	Z-3 Aerofloat 31 MIBC	0.2 0.002 0.01	1	6	12
3	Z-3 Aerofloat 31 MIBC	0.1 0.002 0.01	1	6	18
4	Z-3 Aerofloat 31 MIBC				

TABLE 5A

CONDITIONS FOR FLOTATION TEST NO. 5

pH: initial 6.5
adjusted 11.5
final 11.3

(3.6 lb $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC NaCW	0.4 0.002 0.01 0.2	1	6	6
2	Z-3 Aerofloat 31 MIBC	0.3 0.002 0.01	1	6	12
3	Z-3 Aerofloat 31 MIBC	0.3 0.002 0.01	1	6	18
4	Z-3 Aerofloat 31 MIBC				

TABLE 6A

CONDITIONS FOR FLOTATION TEST NO. 6

pH: initial 6.5
adjusted 11.5
final 10.2

(3.6 lb $Ca(OH)_2$/dry short ton ore)

Stage		Reagents (lb/dry ton of ore)	Conditioning Time (min)	Flotation Time (min)	
				interval	cumulative
1	Z-3 Aerofloat 31 MIBC Aerophine 3418A	0 0.006 0.02 0.3	1	8	8
2	Z-3 Aerofloat 31 MIBC Aerophine 3418A	0 0.006 0.02 0.2	1	6	14
3	Z-3 Aerofloat 31 MIBC Aerophine 3418A	0 0.006 0.02 0.1	1	6	20
4	Z-3 Aerofloat 31 MIBC				

TABLE 1 B

TRI-CON FRENCH PEAK FLOTATION TEST # 1

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	47.1 (47.1)	4.9 (4.9)	6.1 (178)	9.5	9.5	6.1	178	1.2	---
C-2	181.3 (228.4)	18.9 (23.8)	11.6 (338)	69.6	79.1	10.5	305	6	---
C-3	72.9 (301.3)	7.6 (31.4)	4.5 (131)	10.9	90*	9.0	263	16.5	7.8
C-4									
Tail	657	68.6 (100)	0.46 (13.4)	9.9	99.9	3.15	91.9	10.4	
Total	958.3	100 (100)	------		99.9				
Head**			(92)						

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

TABLE 2 B

TRI-CON FRENCH PEAK FLOTATION TEST # 2

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	75.9 (75.9)	8.5 (8.5)	12.4 (362)	31.3	31.3	12.4	362	2.5	---
C-2	186.3 (262.2)	20.7 (29.2)	10.2 (297)	63.1	94.4	10.8	315	8.6	---
C-3	42 (304.2)	4.7 (33.9)	2.3 (67)	3.1	97.5	9.65	281	15	8.1
C-4	---	---	---	---	---	---	---	---	---
Tail	594 (898.2)	66.1 (100)	0.1 (2.9)	2.5	100			9.7	
Total	898.2								
Head**			3.35 (98)						

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

TABLE 3B

TRI-CON FRENCH PEAK FLOTATION TEST #3

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	252.8 (252.8)	27.0 (27.0)	10.0	85.6	85.6	10	292	7	--
C-2	57.6 (310.4)	6.2 (33.2)	5.45	10.6	96.2	9.2	268	15.2	--
C-3	16.2 (326.6)	1.7 (34.9)	2.2	1.2	97.4	8.8	257	13.2	--
C-4	32.3 (358.9)	3.5 (38.4)	0.43	0.5	97.9	8.1	236	11.8	--
Tail	576	61.6	0.11	2.1	100	--	--	8.7	--
Total	(934.9)	(100)							
Head**			3.2 (92.2)						

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

TABLE 4B

TRI-CON FRENCH PEAK FLOTATION TEST #4

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	197.0 (197)	20.9 (20.9)	10.55 (308)	72.3	72.3	10.55	308	5.6	5.6
C-2	95.5 (292.5)	10.1 (31)	5.6 (163)	18.6	90.9	8.93	260	14.8	8.6
C-3	26.4 (318.9)	2.8 (33.8)	2.2 (64)	2.0	92.9	8.38	244	12.9	8.1
C-4	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Tail	622.7	66.1 (99.9)	0.325 (9.5)	7.0	--	--	--	--	--
Total	941.6	--	--	--	--	--	--	--	--
Head**	--	--	3.05 (89)						

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

TABLE 5 B

TRI-CON FRENCH PEAK FLOTATION TEST # 5

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	176 (176)	16.7 (16.7)	7.4 (216)	48.8	48.8	7.4	216	2.4	2.4
C-2	76.7 (252.7)	7.3 (24)	10.0 (292)	28.8	77.6	8.2	239	4.4	3.0
C-3	58.1 (310.8)	5.5 (29.5)	6 (175)	13.1	90.7	7.8	227	8.6	3.9
C-4	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---
Tail	741.5	70.5 (100)	0.335 (9.8)	9.3	---	---	---	11.2	---
Total	1052.3	---	---	---	---	---	---	---	---
Head**	---	---	2.5 (74)	---	---	---	---	9.0	---

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

TABLE 6 B

TRI-CON FRENCH PEAK FLOTATION TEST # 6

(Interim Analyses*)

Sample	Wt. (g) (Cumulative wt. (g))	Wt. (%) (Cumulative wt. (%))	Silver			Cumulative Concentrate Grade		Iron	
			mg/g (oz/ton)	% of total Ag	Cumulative % of Total Ag	mg/g	oz/t	%	Cumulative %
C-1	184.6 (184.6)	19.4 (19.4)	10.5 (306)	67.0	67.0	10.5	306	2.8	
C-2	88 (272.6)	9.1 (28.5)	8.0 (233)	24.3	91.3	9.7	283	6.8	
C-3	31.4 (304)	3.3 (31.8)	3.8 (111)	4.1	95.4	9.1	265	17.4	
C-4	------								
Tail	658.2	68.4	0.2 (5.8)	4.6	----	----	---		
Total	962.2	100.2	----	----	----	----	---		
Head**			3.01 (88)	----	----	----	---		

*Nitric acid digestion; background corrected AA; estimated accuracy ± 10%
**forced balance

APPENDIX 1

CHEMEX ASSAY RESULTS

Chemex Sample No.	Description
1	Test 3 - blended concentrate
2	Test 2 - unit cell concentrate
3	Test 2 - blended concentrate

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0643
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 67606

INVOICE NO. 35324

RECEIVED March 6/80

ANALYSED April 9/80

TO: Tri-Con Mining Ltd.
Box 12542, Suite 2580
1066 W. Hastings St.
Vancouver, B.C.
V6E 3X2

ATTN: A.Homewuke C.C. R.O. McElroy, B.C. Research

SAMPLE NO. :	% Cu	% Pb	% Zn	% (NA) As	% (NA) Sb
1 French Peak Test #3	10.2	35.4	3.03	0.958	5.520
2 French Peak Test #2	12.8	48.1	2.97	0.882	7.070
3 French Peak Test #2	11.3	32.1	3.06	1.111	6.110

	% Fe	% SiO2	% CaO	% S	oz/ton Ag	oz/ton Au
1 French Peak Test #3	8.98	5.62	1.42	19.1	404.28	0.116
2 French Peak Test #2	2.95	0.98	0.44	18.4	313.80	0.124
3 French Peak Test #2	8.40	6.72	1.54	18.8	278.52	0.094

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

III. DAWSON METALLURGICAL LABORATORIES TEST REPORT

DAWSON METALLURGICAL LABORATORIES, INC.

P. O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

May 6, 1980

Mr. A.M. Homenuke
Vice President, Exploration & Development
Tri-Con Mining LTD.
Box No. 12542
Suite 2580-1066 West Hosting Street
Vancouver, B.C. Canada
V6E3x2

Subject: Results of Laboratory Bulk Sulfide Flotation Tests on French Peak Silver Ore Sample.

Dear Mr. Homenuke:

In accordance with our phone discussion and your letter of April 11, 1980, laboratory testing was conducted to develop a simple flow scheme for obtaining a bulk sulfide concentrate from the French Peak Silver Ore.

The following analyses were obtained on the sample received:

oz/T.		%		
Gold	Silver	Lead	Copper	Zinc
0.017	47.9	5.4	1.834	0.95

The results of the testing demonstrates that a high recovery of silver, lead and copper can be readily obtained with a straight forward circuit. After ball mill grinding the bulk concentrate was obtained with one stage of cleaning. The ultimate silver concentrate grade will be dependant on the total sulfide mineral relative to the silver content.

The results obtained in Test No. 1 are probably indicative of the results that could be anticipated and are summarized as follows:

Product	% Wt	Assay			Distribution		
		oz/T	%		%		
		Ag	Pb	Cu	Ag	Pb	Cu
Clean Conc	22.9	202.5	23.8	7.98	98.1	95.8	98.4
Rough Conc	30.0	155.84	18.47	6.14	98.9	97.4	99.2
Rough Tail	70.0	0.76	0.21	0.021	1.1	2.6	0.8
Head (calc)	100.0	47.28	5.7	1.859	100.0	100.0	100.0

May 6, 1980
Tri-Con Mining LTD.
Page -2-

The procedure used is outlined as follows:

	Pounds per Ton
1. Ball Mill Grind - 61% minus 200 mesh	
add - A 208 (American Cyanamid)	0.06
2. Condition 5 minutes *	
add - NaIPX (Sodium Isopropyl Xanthate)	0.10
Frother Mix	0.10
3 parts MIBC (methyl isobutyl carbinol)	
1 part F65 (polypropylene glycol)	
3. Rougher Flotation 12 minutes	
Stage add - NaIPX	0.10
Frother Mix	0.10
4. Cleaner Flotation 7 minutes	
Stage add - NaIPX	0.03

* Would not be needed in operation - xanthate can be added to ball mill with A 208.

Based on the size of the ball mill (3'x3' Denver) and a bank of 8 - No.8 Denver Sub - A Flotation Machine (2.75 ft^3/cell) it appears that your plant will be limited to 20 tons/day. Testing indicates a grind work index of 11 kwhr per ton which relates to 13 hp per ton with an 80% minus 150 mesh grind. With 10 hp required to run the mill this gives 19 ton/24 hrs. At 30 per cent solids to rougher flotation a flow of 9 gpm would be obtained at 20 tons/day. A balance of five cells for rougher flotation and three cells for cleaner flotation would give about the required time at this feed rate.

A coarser grind coupled with shorter flotation time would allow for an increased throughput. An optimum balance of recovery and feed tonnage will have to be established during operation of the plant.

If there are any questions or we can be of further service, please contact us.

Very truly yours,
DAWSON METALLURGICAL LABORATORIES, INC.

Harmel Dawson,
President

enclosures

HAD-cac

DAWSON
METALLURGICAL
LABORATORIES, INC.

P. O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-432
DATE 4/23/80
BY HAD

TEST NO. 1 **NAME** Tri Con Mining Company

Preliminary bulk sulfide flotation.

PRODUCT	Weight	PERCENT WEIGHT	ASSAY					UNITS			DISTRIBUTION				
			Au	Ag	Pb	Cu		Ag	Pb	Cu	Ag	Pb	Cu		
Cl Conc	229.2	22.9	.050	202.50	23.8	7.98		46.373	5.45	1.827	98.1	95.8	98.4		
Cl Tail	70.7	7.1		5.33	1.2	0.214		.378	.09	.015	0.8	1.6	0.8		
Ro Tail Sand	415.3	41.5		0.70	0.1	0.025		.291	.04	.010	0.6	0.7	0.5		
Ro Tail Slime	289.9	28.5		0.84	0.4	0.018		.239	.11	.005	0.5	1.9	0.3		
Head (calc)	1000.1	100.0		47.28	5.7	1.857		47.281	5.69	1.857	100.0	100.0	100.0		
Ro Conc		30.0		155.84	18.47	6.14		46.751	5.54	1.842	98.9	97.4	99.2		
Comb Tail		70.0		0.76	.21	0.021		.530	.15	.015	1.1	2.6	0.8		

OPERATION	BM	Cond	Ro	Ro	Ro		Cl	Cl		Deslime			GRINDING PRODUCT	
TIME	10	5	4	4	4		3	4		Ro Tail			Flot	
REAGENTS - LBS. PER TON										over			Feed	
Ore	1000									200M		MESH	%	%
Water	1000											+10		
A-208	0.06											+14		
NaIPX		0.10		0.05	0.05			0.03				+20		
MIBC-F65(3-1)		0.10	0.05	0.05	0.05							+28		
												+35		
												+48		
												+65	3.0	
												+100	7.3	
												+150	11.8	
MACHINE		1000					1000					+200	17.0	
R.P.M.		800					800					+325	16.5	
pH	7.6											-325	44.4	
% SOLIDS													100.0	
TEMPERATURE														

REMARKS:

Some mineral locking.

DAWSON
METALLURGICAL
LABORATORIES, INC.

P. O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-432
DATE 4/23/80
BY HAD

TEST NO. 2 **NAME** Tri Con Mining Company

Repeat Test No. 1 Except with finer grind.

PRODUCT	Weight	PERCENT WEIGHT	ASSAY				UNITS			DISTRIBUTION			
			Au	Ag	Pb	Cu	Ag	Pb	Cu	Ag	Pb	Cu	
Cl Conc	204.6	20.6	Tr.	232.2	27.6	8.69	47.833	5.686	1.790	97.1	92.6	97.0	
Cl Tail	70.7	7.1		8.54	1.8	0.362	.606	.128	.026	1.2	2.1	1.4	
Ro Tail Sand	346.3	34.8		0.90	0.4	0.041	.313	.139	.014	0.6	2.3	0.8	
Ro Tail Slime	372.2	37.5		1.32	0.5	0.041	.495	.188	.015	1.1	3.0	0.8	
Head (calc)	993.8	100.0		49.25	6.1	1.845	49.247	6.141	1.845	100.0	100.0	100.0	
Ro Conc		27.7		174.87	21.0	6.556	48.439	5.814	1.816	98.3	94.7	98.5	
Comb Tail		72.3		1.12	0.45	0.041	.808	.327	.029	1.7	5.3	1.6	

OPERATION	BM	Cond	Ro	Ro	Ro	Cl	Cl
TIME	15	5	4	3	4	3	4
REAGENTS - LBS. PER TON							
Ore	1000						
Water	1000						
A-208	0.06						
NaIPX		0.05		0.05	0.05		0.03
MIBC-F65(3-1)		0.10	0.10				0.05
MACHINE		1000				1000	
R.P.M.		800				800	
pH		7.5					
% SOLIDS							
TEMPERATURE							

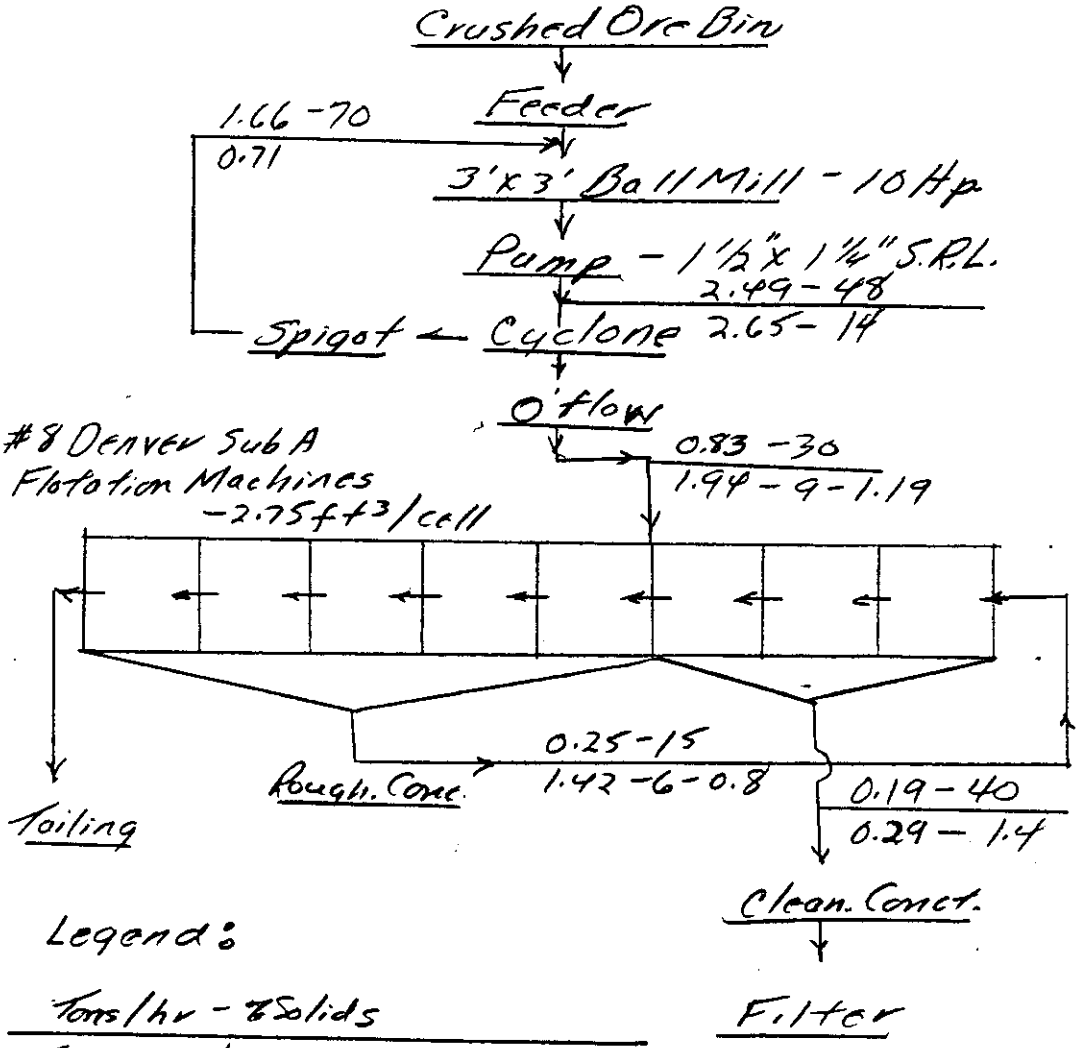
GRINDING PRODUCT	
Flot	
Feed	
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	
+65	0.5
+100	3.1
+150	7.8
+200	15.5
+325	54.6
-325	100.0

REMARKS: Appreciable Sulfide locking in Cl. Tl.

Project No. P-432 Tri-con Mining Ltd.

French Peak Silver Ore

Projected Flow Scheme 20 Tons/Day



Legend:

Tons/hr - %Solids
Tons Water/hr - gpm - ft³/min

Dawson Met. Labs Inc.
5/5/80
D.O. Dawson

Telephone 363-3302

Ha *Sample Serial* 1327

ASSAY REPORT

U ION ASSAY OFFICE, Inc.
BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

Mine Tr Conc Mining

P-432

RESULTS PER TON OF 2000 POUNDS

Apr 18, 1980

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. Per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Head Sample Original	0.017	47.9	5.4	1.834		0.95					

Remarks

Charges $

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

Telephone 363-3302

Hand Sample Serial 1462-1469

Mine Tri Con Mining
P-43a

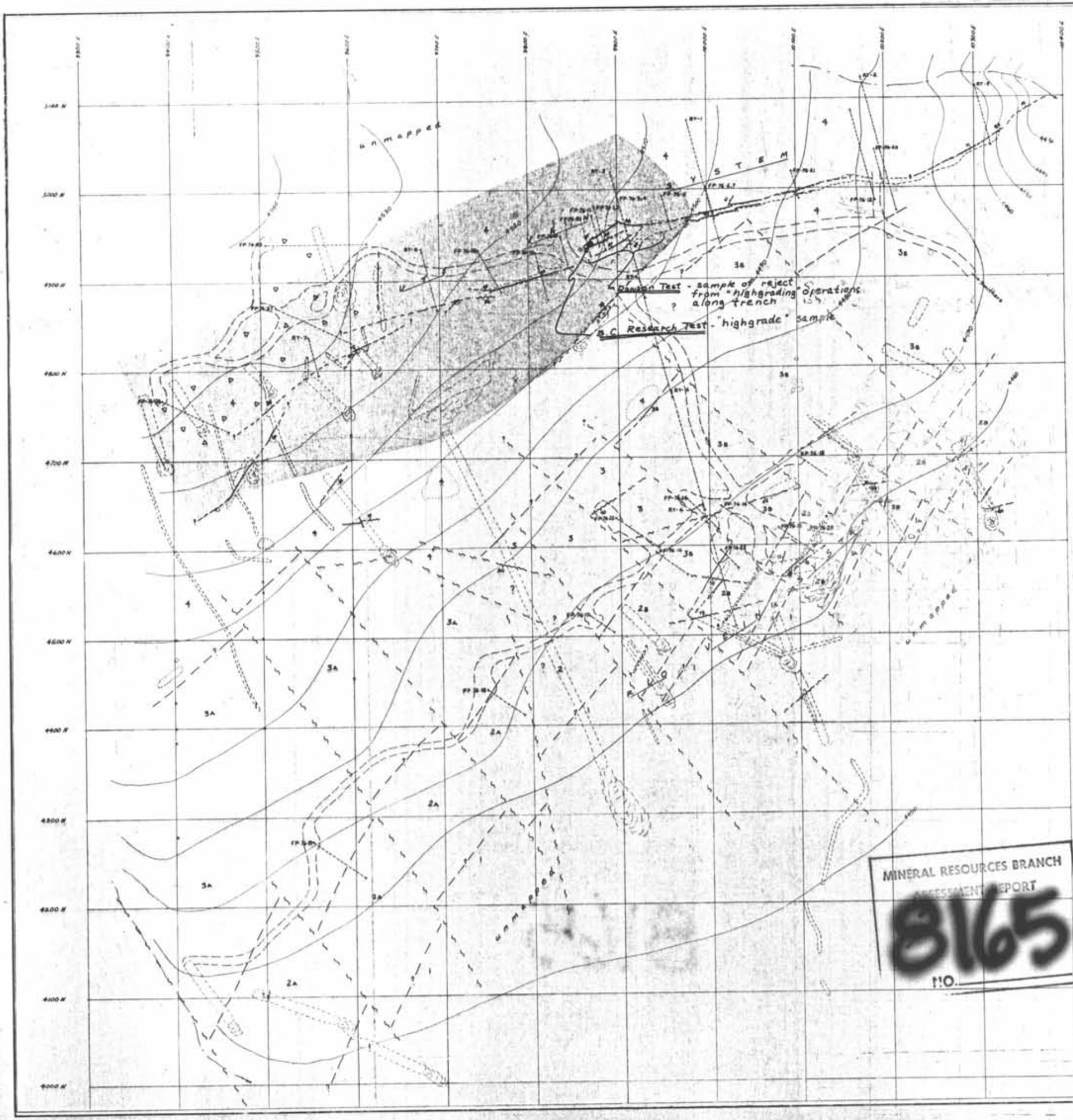
RESULTS PER TON OF 2000 POUNDS

Apr 28, 1980

NUMBER	GOLD Ozs. Per Ton	SILVER Ozs. Per Ton	Au Ozs per Ton	Ag per Ton	INSOL. Per Cent	Pb Per Cent	Cu Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Ce
Test 1 Cln Conc			0.050	202.50		23.8	7.98				
Test 1 Cln Tail				5.33		1.2	0.214				
Test 1 Ro Tail Slimes				0.84		0.4	0.018				
Test 1 Ro Tail Sand				0.70		0.1	0.025				
Test 2 Sulf Cln Conc			Trace	232.3		27.6	8.69				
Test 2 Cln Tail				8.54		1.8	0.362				
Test 2 Ro Tail Slimes				1.32		0.5	0.041				
Test 2 Ro Tail Sand				0.90		0.4	0.041				

Remarks

Charges $



LEGEND

ACCESS ROADS & CAT TRAILS

CAT TRENCH

BACKHOE TRENCH

OUTCROP

SUB-OUTCROP

DIAMOND DRILL HOLE
RT- RIO TINTO - 1956
FP-76- RALEIGH - 1976

TOPOGRAPHIC CONTOUR (APPROX.) INTERVAL - 10 m.

CREEK

GEOLOGY

FAULT (DEFINED, INFERRED)

CONTACTS

BEDDING IN TUFFS

VOLCANIC ROCKS

4 UPPER TUFFS

3 MIDDLE ANDESITE

2B MIDDLE TUFFS - BEDDED

2,2A MAINLY NON-BEDDED

1B TUFFS ?

1 LOWER FLOWS

INTRUSIVE ROCKS

FELSITE DYKE

MINERALIZATION

UTE VEIN SYSTEM

RIO VEIN SYSTEM

BRECCIA

MAJOR ALTERATION

100 0 100 200
FEET
30 0 30 60 90
METERS

Base map from private report to show metallurgical sample locations July, 1980

FRENCH PEAK SILVER PROPERTY
GEOLOGY of the UTE & RIO VEIN SYSTEMS

Prepared by - A. M. Hamonic, P.Eng Nov. 1976
TRI-CON Exploration Services Ltd