

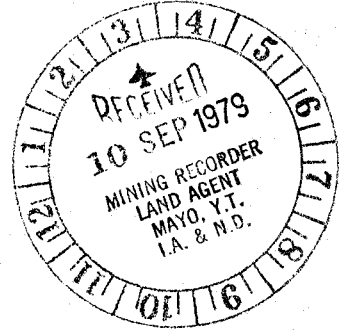


COMINCO LTD.,

EXPLORATION  
NTS: 115 P/15

WESTERN DISTRICT  
August 30, 1979

DIAMOND DRILL ASSESSMENT REPORT



ON THE

BIX, A and SP GROUP OF MINERAL CLAIMS

Sunshine Creek Area

Yukon Territory

Mayo M.D.

63<sup>0</sup>50'N Latitude  
136<sup>0</sup>35'W Longitude

Period of Work: June 1, 1979 to August 15, 1979

Vancouver, B.C.

STEPHEN B. BUTRENCHUK

081357

DIAMOND DRILL LOGS

CLAIM SHEET 115-P-15 YEAR 1979

AREA Sunshine Ck Area

COMPANY Cominco Ltd.

NO. OF HOLES 1 FOOTAGE 417 ft.

CLAIM DRILLED A No. 25

CORE STORAGE 4200 ft elevation on bank of Sunshine Ck.

NOTES AND REMARKS:

COMINCO LTD.

EXPLORATION  
NTS: 115 P/15

WESTERN DISTRICT  
August 30, 1979

DIAMOND DRILLING - 1979

ASSESSMENT REPORT

BIX, A and SP GROUP OF MINERAL CLAIMS

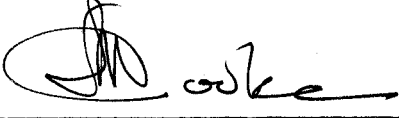
This report is submitted in order to fulfill the requirements for assessment work on the following mineral claims: A 23, 25, 27, 51, 54, BIX 1-24, SP 28, 29, 33-40, 42, 53, 55-62, 64.

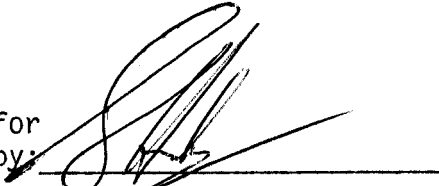
Using a Longyear 34 drill taking NQ core a single diamond drill hole totaling 417 feet was drilled on mineral claim A 25. This drilling was completed during the period July 9, 1979 to July 19, 1979. All core including the remainder of those sections split for assay is stored on the property at the 4200 foot elevation on the bank of Sunshine Creek.

The accompanying diamond drill log includes a geological description of the rocks intersected and is updated with geochemical analyses where these were deemed warranted. All rocks intersected are quartzites, quartz-mica schists of Proterozoic age that have been intruded by younger fine-grained intrusive rocks.

Attached to this report is a Statement of Expenditures incurred during the period June 1, 1979 to August 15, 1979 supported by invoices and an Affidavit.

Report by: Stephen B. Butrenchuk  
Stephen B. Butrenchuk  
Geologist

Endorsed by:   
D.L. Cooke  
Senior Geologist

Approved for  
Release by:   
G. Harden  
Manager, Exploration  
Western District

SBB/pc1

## Drill Hole Record



Property Sunshine Creek District Mayo Hole No. SC 79-1  
 Commenced July 15/79 Location Tests at Hor. Comp.  
 Completed July 18/79 Core Size NQ Corr. Dip  $-50^{\circ}$  Vert. Comp.  
 Co-ordinates 1155N and 50E True Brg.  $310^{\circ}$  Logged by SBB  
 Objective To test a breccia zone at depth for tin mineralization. % Recov. 96.6 Date July 26/79

Claim A 25

T Brg. 310

Collar Dip  $-50^{\circ}$ 

Elev. 4580'

Length 417

Hole No. SC79-1 Sheet

Footage		Description	Sample No.	Length	Analysis in ppm					
From	To				Sn	Cu	Pb	Zn	Ag	
0	22	Overburden								
22	50	Quartzite: buff-brown, in part rusty, dark coloured bands containing biotite and possible hornblende present throughout, vary in thickness from thin laminations to 0.2 inch thick bands, possible tourmaline present in some of the dark bands, core is broken, thin bands of biotite schist (speckled) present at 38-39 feet and 46-47 feet, small biotite knots constitute up to 10% of the rock, occasional 0.1 inch thick layer. Assays parallel to foliation present.								
		Assays 22-30	18641E	8.0	<20	40	11	97	<0.4	
		30-40	18642E	10.0	<20	51	9	151	<0.4	
		40-50	18643E	10.0	<20	40	17	84	<0.4	
50	114	Quartz-biotite schist: occasional thin quartzite band and speckled schist band present. - dark grey, foliation, occasional quartz bleb present, at 50 feet - hairline fault perpendicular to core axis 53-55 broken core. - foliation at $30^{\circ}$ to core axis. - 73-74 speckled schist - 94 - 6 inch thick breccia zone - possible fault.								
		Assays 50-60	18644E	10.0	<20	45	17	80	<0.4	
		60-70	18645E	10.0	<20	28	12	77	<0.4	
		70-80	18646E	10.0	<20	35	<4	72	<0.4	

## Drill Hole Record



Property	Sunshine Creek	District		Hole No.	SC 79-1	Claim		T Brg.		Collar Dip		Elev.		Length	
Commenced		Location		Tests at		Hor. Comp.									
Completed		Core Size		Corr. Dip		Vert. Comp.									
Co-ordinates				True Brg.		Logged by									
Objective				% Recov.		Date									
Footage	Description	Sample No.	Length	Analysis											
From	To			Sn	Cu	Pb	Zn	Ag							
	Assays 80-90	18647E	10.0	<20	74	4	75	<0.4							
	90-100	18648E	10.0	21	59	<4	82	<0.4							
	100-110	18649E	10.0	<20	54	5	90	<0.4							
	110-114	18650E	14.0	<20	53	<4	84	<0.4							
114 - 147	Quartzite: rusty brown, thinly layered although the layering is not well developed, occasional tourmaline lense or bleb present; rock is weakly foliated due to the presence of muscovite. 114-115 sand Assays 114-120 120-130 130-140 140-147 132-133 highly oxidized, rock is severely broken 133-137 quartz-biotite schist, in part speckled at 140 4 inch thick chlorite rich quartzite band at 146 layering at 30° to core axis.														
		3152I	6.0	26	37	21	133	<0.4							
		3154I	10.0	40	70	17	223	<0.4							
		3155I	10.0	32	50	13	200	<0.4							
		3156I	7.0	52	96	13	209	<0.4							
147 - 158	Quartz-feldspar porphyry: light grey, aphanitic with a quartz-feldspar matrix, phenocrysts of quartz and feldspar; feldspar phenocrysts severely altered to kaolinite, phenocrysts 3-5 mm; rock is partially oxidized and weakly fractured.														

## Drill Hole Record



Property	Sunshine Creek	District		Hole No.	SC 79-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length
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Hole No. SC79-1 Sheet

Footage From To	Description	Sample No.	Length	Analysis						
				Sn	Cu	Pb	Zn	Ag		
	- also present are limonitic "phenocrysts" probably an original sulphide assemblage or mineral									
	Assay 147-158	3157I	11.0	<20	69	37	147	<0.4		
158 - 222	Quartzite: buff to brown, mainly quartz with minor feldspar and muscovite, weak to moderate hairline fracturing present, occasional manganese staining along fracture surfaces. 177-180 feldspar phenocrysts present (1-2 mm), a few quartz phenocrysts also present; rock may be rhyolite tuff at 197 increase in the intensity of fracturing, at least 2 sets of fractures present, characterized by the presence of a limonitic coating along fracture surfaces. 214-215 pyrite present along fractures (up to 2mm thick), minor tourmaline also present.									
	Assays 158-170	3158I	12.0	156	96	11	167	<0.4		
	170-180	3160I	10.0	103	65	11	5	0.4		
	180-190	3161I	10.0	141	86	17	92	0.4		
	190-200	3162I	10.0	77	128	17	117	<0.4		
	200-210	3163I	10.0	96	150	21	150	0.4		
	210-215	3164I	5.0	65	193	16	121	<0.4		
	215-220	3165I	5.0	25	121	5	115	<0.4		
	220-224	3166I	4.0	43	56	<4	167	<0.4		

## Drill Hole Record



Property SUNSHINE CREEK District MAYO Hole No. SC79-1

Commenced Location Tests at Hor. Comp.

Completed Core Size Corr. Dip Vert. Comp.

Co-ordinates True Brg. Logged by

Objective % Recov. Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. SC79-1 Sheet 1

Footage		Description	Sample No.	Length	Analysis					
From	To				Sn	Cu	Pb	Zn	Ag	
222	- 254	Quartz-biotite-chlorite schist: dark grey to dark green, foliation is weak to moderately developed, rare cross-cutting quartz stringer, locally the rock contains a fine garnetiferous? mass giving the rock a mauve colouration. at 235 - 2 inch thick band containing disseminated pyrite. at 236 foliation at 55° to core axis. 237-254 0-2% disseminated pyrite throughout section.								
		Assays 224-230	3167I	6.0	<20	42	<4	215	<0.4	
		230-235	3169I	5.0	44	90	14	113	<0.4	
		235-240	3170I	5.0	44	56	4	93	<0.4	
		240-245	3171I	5.0	<20	60	8	200	<0.4	
		245-250	3172I	5.0	155	150	<4	117	<0.4	
		250-255	3173I	5.0	47	39	6	158	<0.4	
254	- 258	Quartzite: rusty brown, weakly foliated, weakly fractured. 255.6-256 sand								
		Assays 255-260	18637E	5.0	78	97	5	239	<0.4	
258	- 265	Quartz-biotite-chlorite schist: pyrite present along occasional fracture and disseminated throughout rock.								
		Assay 260-265	18638E	5.0	92	272	9	374	0.8	

## Drill Hole Record



Property SUNSHINE CREEK . District MAYO Hole No. SC 79-1  
 Commenced Location Tests at Hor. Comp.  
 Completed Core Size Corr. Dip Vert. Comp.  
 Co-ordinates True Brg. Logged by  
 Objective % Recov. Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. SC79-1 Sheet 5

Footage From To	Description	Sample No.	Length	Analysis						
				Sn	Cu	Pb	Zn	Ag		
265 - 277	Quartzite: weak to moderately fractured, in part weakly chloritic, pyrite present along hairline fractures.									
	Assays 265-270	18639E	5.0	104	155	15	600	0.6		
	270-275	18640E	5.0	56	178	10	190	0.6		
277 - 285	Quartz-biotite schist: speckled and chloritic									
	Assays 275-280	3153I	5.0	<20	150	8	102	<0.4		
	280-285	3159I	5.0	<20	66	4	30	316		
285 - 289	Aplite: highly weathered, 50% of core in sand, tourmaline blebs present but rare									
	Assay 285-289	3168I	4.0	<20	86	15	189	<0.4		
289 - 315	Quartz-biotite schist: dark grey, laminated, occasional quartz veinlet, few hair-line fractures - some are filled with pyrite.									
	293-295 rock is brecciated and has a rusty appearance									
	308-309 quartz vein containing pyrite									
	309-310 rock is moderately brecciated, pyrite and tourmaline present									
	313-314 rock is moderately brecciated, pyrite and tourmaline present.									

## Drill Hole Record



Property SUNSHINE CREEK District MAYO Hole No. SC 79-1

Commenced Location Tests at Hor. Comp.

Completed Core Size Corr. Dip Vert. Comp.

Co-ordinates True Brg. Logged by

Objective % Recov. Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. SC79-1 Sheet 6

Footage From To	Description	Sample No.	Length	Analysis				
				Sn	Cu	Pb	Zn	Ag
	Assays 289-295	3174I	6.0	41	124	30	450	0.4
	295-300	3175I	5.0	<20	90	7	284	<0.4
	300-305	3176I	5.0	57	130	37	220	1.0
	305-310	3177I	5.0	45	167	30	240	0.7
	310-315	3178I	5.0	33	98	11	180	<0.4
315 - 315.5	Breccia zone in quartz-biotite schist.							
315.5- 417	Quartz-biotite schist: dark grey to black, laminated; laminations in part are weakly crenulated, occasional quartz stringer present, very weakly fractured, locally chloritic. - laminations at 45° to core axis. 331-337 quartz veining relatively abundant 331.5 minor brecciation at 334 laminations highly contorted at 362 laminations at 35° to core axis. 372-374 quartz vein at 386 minor chalcopyrite and tourmaline in 1 inch quartz stringer at 387 6 inch quartz veinlet - minor tourmaline and pyrite 388-389 disseminated pyrite in quartz stringer (1-2%) at 404 minor chalcopyrite and tourmaline in 3 inch quartz							



COMINCO LTD.

EXPLORATION  
NTS: 115P/15

WESTERN DISTRICT  
29 AUGUST 1979

STATEMENT OF QUALIFICATIONS

I, Stephen B. Butrenchuk, with business address at 409 Granville Street, 7th Floor, Vancouver, British Columbia, do hereby certify that I have supervised the field work and have assessed and interpreted the data resulting from the diamond drilling on the Bix, A and SP mineral claims.

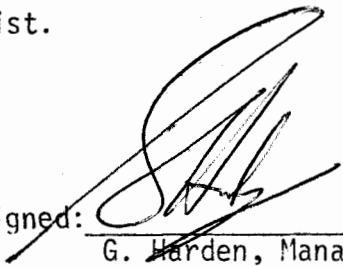
I also certify that:

1. I am a graduate of the University of Manitoba, B.Sc. 1966 and M.Sc. 1970;
2. I have engaged in mineral exploration since graduation.

Respectfully Submitted:

Stephen B. Butrenchuk.  
Stephen B. Butrenchuk, Geologist

Stephen B. Butrenchuk was responsible for supervising the diamond drilling described herein. Mr. Butrenchuk received his B.Sc. and M.Sc. from the University of Manitoba in the years 1966 and 1970 respectively. He has worked for Cominco as a permanent employee since January 23, 1970. I consider him to be a competent geologist.

Signed: 

G. Harden, Manager  
Exploration  
Western District

IN THE MATTER OF THE YUKON QUARTZ MINING ACT AND  
IN THE MATTER OF A DIAMOND DRILLING SURVEY  
CARRIED OUT ON MINERAL CLAIMS A 23, 25, 27, 51,  
54, BIX 1-24, SP 28, 29, 33-40, 42, 53, 55-62, 64  
LOCATED IN THE MAYO MINING DISTRICT OF THE YUKON TERRITORY  
MORE PARTICULARLY, NTS: 115 P/15

A F F I D A V I T

I, STEPHEN B. BUTRENCHUK, of the City of Port Coquitlam, in the Province of British Columbia, geologist, make oath and say:

1. THAT I am employed as a geologist by Cominco Ltd. and, as such, have a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto and marked as "Exhibit A" to this my affidavit is a true copy of expenditures on the diamond drilling carried out on mineral claims A 23, 25, 27, 51, 54, BIX 1-24, SP 28, 29, 33-40, 42, 53, 55-62, 64;
3. THAT the said expenditures were incurred between the 1st day of June 1979 and the 15th day of August 1979, for the purpose of mineral exploration on the above noted claim group.

Sworn Before Me at the City  
of Vancouver in the Province  
of British Columbia this 4<sup>th</sup>  
day of September 1979.

Catherine A. Hloc  
A Notary Public In and For  
the Province of British  
Columbia.

Stephen B. Butrenchuk.  
STEPHEN B. BUTRENCHUK

EXHIBIT "A"

DIAMOND DRILLING REPORT

ON THE A, BIX AND SP MINERAL CLAIMS

SITUATED AT: 63°50'N LATITUDE; 136°35'W LONGITUDE

NTS: 115 P/15

DIAMOND DRILLING: \$15,138.23

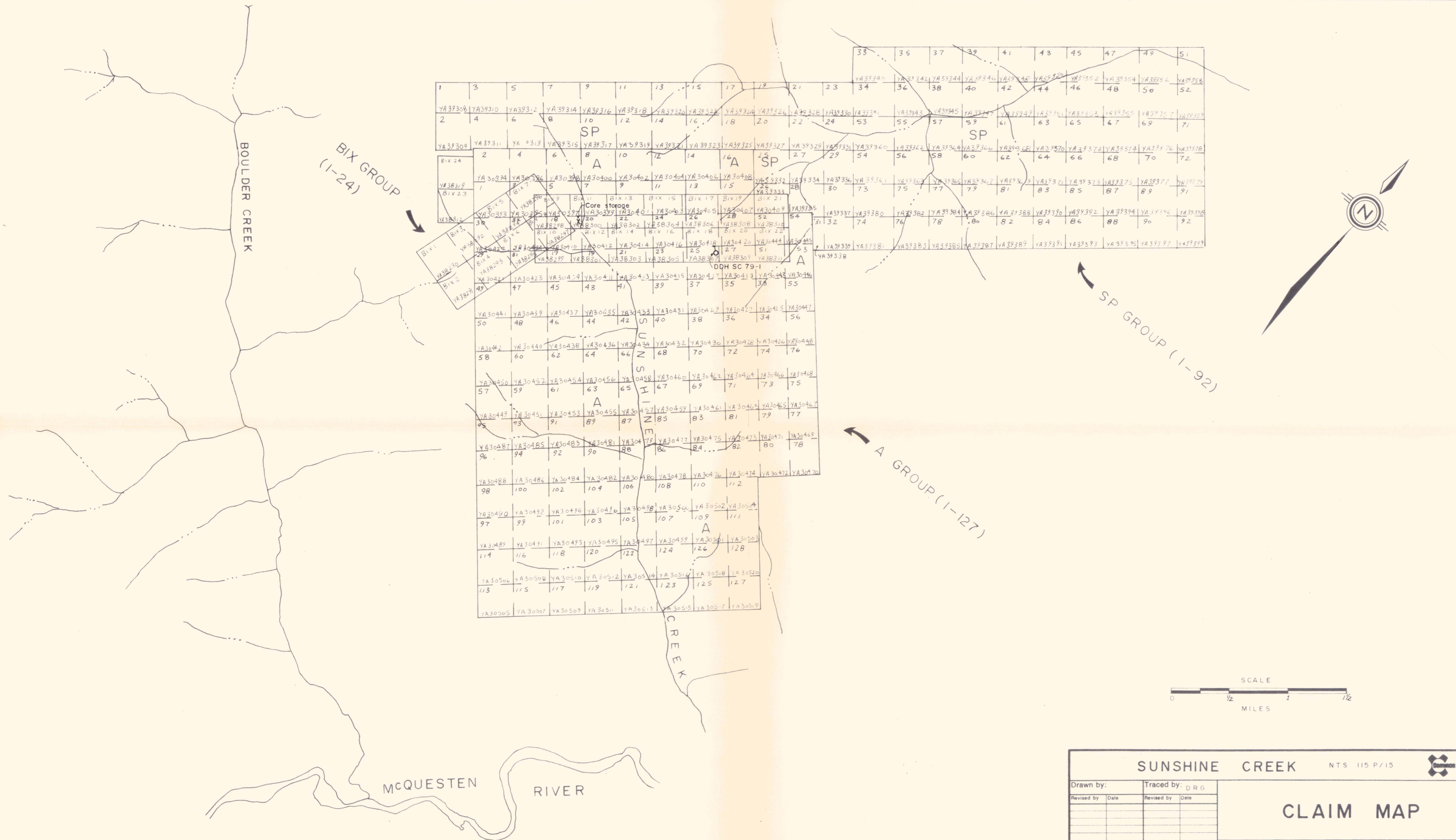
TOTAL: \$15,138.23

Signed: Stephen B. Butrenchuk.  
STEPHEN B. BUTRENCHUK

*affidavit*  
This is Exhibit "A" to the ~~Statutory Declaration~~ of Expenditures relating to the Diamond Drilling Survey declared before me the 4<sup>th</sup> day of September, 1979 A.D.

Catherine A. Alos  
A Notary Public in and for  
the Province of British Columbia





<b>SUNSHINE CREEK</b>				NTS 115 P/15			
Drawn by:		Traced by: DRG		<h1>CLAIM MAP</h1>			
Revised by	Date	Revised by	Date				
Scale: 1" = 1/2 MI.		Date: AUG., 1979		Plate:			