Assessment Results of Geologic Mapping, Geophysical Surveying and Diamond Drilling of the

SusanClaims NTS 105-H-8

Located at 61°26'N Latitude, 128°20'W Longitude

by R.M. Kuehnbaum, Geologist
under the supervision of R. D. Westervelt, P. Eng.,

September 4, 1975 to September 25, 1975.

Union Carbide Canada Mining Ltd.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$10,353.25 + 2,839.30
$20,172.55

L. B. Craig

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

B.R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

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Introduction

The Flood Creek valley occupies an area of poor exposure, roughly along a contact between quartz-monzonite and a metasedimentary sequence including a considerable thickness of limestone and silicated marbles. In order to test for the presence of sulphide-rich (Cantung and Mactung type) scheelite skarns, a preliminary geophysical study was run. On the basis of geophysical (magnetometer and EM) anomalies, the area was staked and subsequently mapped and the diamond drill holes were put down in an attempt to intersect the electromagnetic conductors.

For the purpose of assessment, this report discusses all work done on the claims and account for all expenses incurred during the investigation.

Location

The Susan claims (Fig. 1) are located on NTS claim sheets 105-H-8 (Frances Lake), straddling Flood Creek 5 miles west of Mile 61 on the Cantung Road. Geographic co-ordinates are 61°26'N Latitude and 128°20'W Longitude. There are no adjoining claims.

Claim Recording

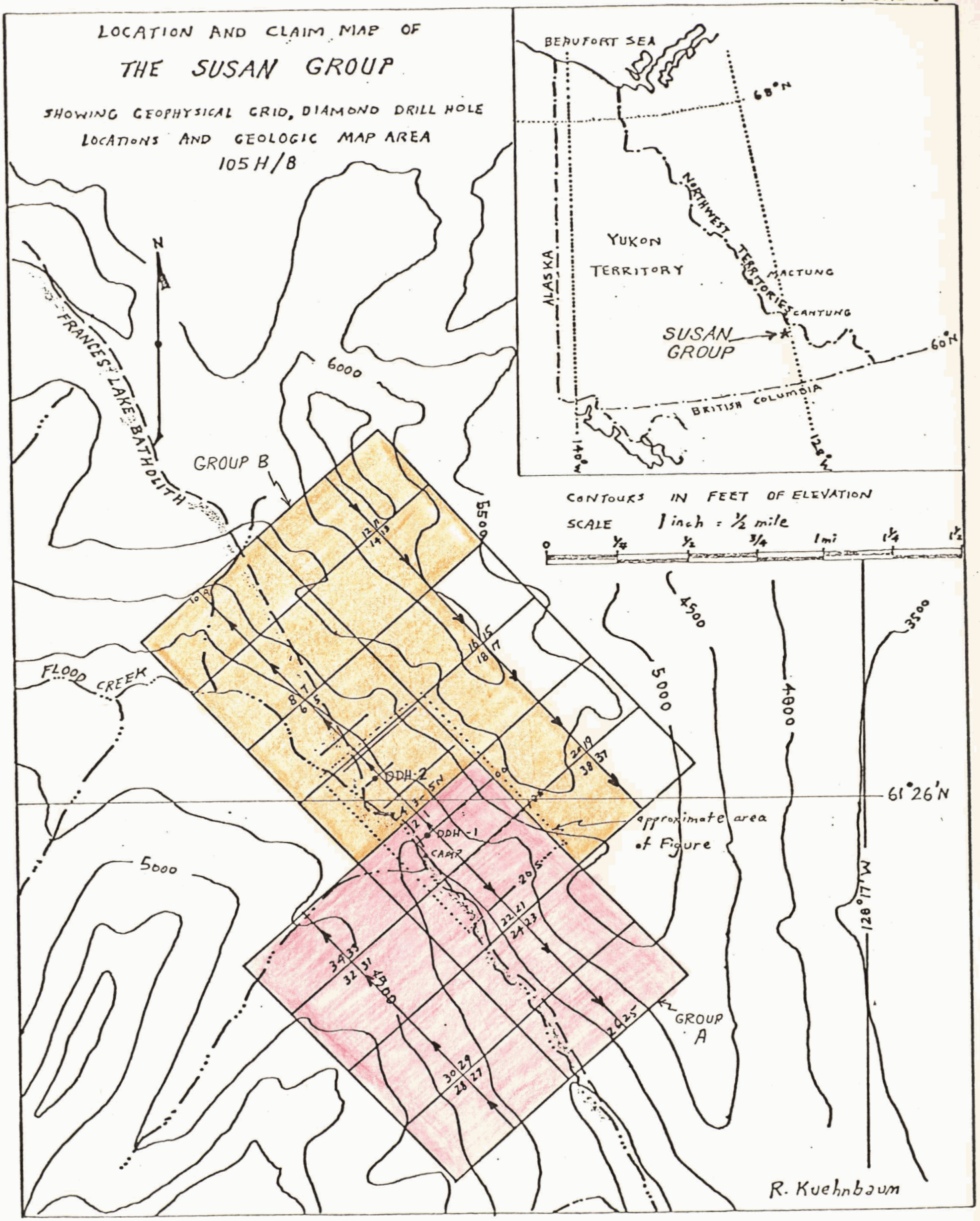
For the purpose of assessment in this report, the Susan Claims have been divided into two groups of sixteen; four claims are not included here. The following table lists the claim groupings with staking and transferral data. All claims were transferred to, and all subsequent work was done for:

Union Carbide Canada Mining Ltd.,
#404-1112 West Pender St.
Vancouver, B.C. V6E 2S1

Group A:

Claim No.	Name	Locator	Date Located	Date Recorded	Date Transferred
Y84213	Susan 1	J. Wilkins	29 June 75	2 July 75	2 July 75
Y84214	Susan 2	"	"	"	"
Y93591	Susan 21	B. Barclay	22 Aug 75	28 Aug 75	17 Sept 75
Y93592	Susan 22	"	"	"	"
Y93593	Susan 23	"	"	"	"
Y93594	Susan 24	"	"	"	"
Y93644	Susan 25	C. Forster	"	9 Sept 75	16 Dec 75
Y93645	Susan 26	"	"	"	"
Y93646	Susan 27	"	"	"	"
Y93647	Susan 28	"	"	"	"
Y93648	Susan 29	"	"	"	"
Y93649	Susan 30	"	"	"	"
Y93650	Susan 31	"	"	"	"
Y93651	Susan 32	"	"	"	"

FIGURE 1



Union Carbide Canada Mining Ltd.

Group A: (cont'd)

Claim No.	Name	Locator	Date Located	Date Recorded	Date Transferred
Y93652	Susan 33	W. Rondeau	22 Aug 75	10 Sept 75	10 Dec 75
Y93653	Susan 34	"	"	"	"
Group B:					
Y84215	Susan 3	J. Wilkins	29 June 75	2 July 75	2 July 75
Y84216	Susan 4	"	"	"	"
Y84217	Susan 5	"	"	"	"
Y84218	Susan 6	"	"	"	"
Y93585	Susan 7	"	22 Aug 75	28 Aug 75	17 Sept 75
Y93586	Susan 8	"	"	"	"
Y93658	Susan 9	R. Moore	"	11 Sept 75	10 Dec 75
Y93659	Susan 10	"	"	"	"
Y93660	Susan 11	"	24 Aug 75	"	"
Y93661	Susan 12	"	"	"	"
Y93662	Susan 13	"	"	"	"
Y93663	Susan 14	"	"	"	"
Y93665	Susan 16	"	"	"	"
Y93588	Susan 18	W. Barclay	"	28 Aug 75	17 Sept 75
Y93590	Susan 20	"	"	"	"
Y93657	Susan 38	W. Rondeau	"	10 Sept 75	10 Dec 75

Logistics

The area was investigated from a 4-man fly camp situated on Flood Creek (Fig. 2). Equipment was trucked in from Watson Lake to Mile 61 on the Cantung Highway and flown by a Frontier Helicopter's Jet Ranger 206B into the campsite. Groceries and additional equipment were brought, as needed, by helicopter from Watson Lake. Drill equipment was also moved by helicopter.

Work Accomplished, and Results for the 1975 Field Season

1. Geophysical Survey

Almost 12,000' of EM-16 (VLP) and magnetometer reconnaissance surveys were run on 500' to 1000' spaced lines from a flagged base line (bearing 142° and Fig. 2) coincident with the Susan claim line immediately to the northeast of Flood Ck. Stations on traverse lines were located 100' apart. Although this work was done prior to the locating of the Susan claims, the results of geophysics were essential in the locating of the property. Costs, however, are not included in the statement of expenses.

Overlapping magnetic and electromagnetic (VLF) anomalies are situated subparallel to a hidden contact between intrusive rock and a metasedimentary sequence including thick limestone and marble units. The results warranted mapping and drilling. The feature, striking more or less parallel to the baseline and lying just west of it, produces a very strong, and significant response in the VLF-EM. The in-phase is strong on line 20N. EM-17 was run on two lines to check the anomaly.

2. Geologic Mapping

Mapping was done using the geophysical grid as a base, with additional extensions where necessary, on the scale of 1" = 100', reduced for the final report to 1" = 200' (Fig. 3). Because no good topographic maps were available in 1975, the geologic map is uncorrected for elevation differences.

Flood Creek roughly follows the contact between metasedimentary units and intrusive rock lying to the west and representing the main body of the 'Frances Lake Batholith' of largely biotite quartz monzonite composition.

The metasedimentary sequence is comprised of recrystallized limestone with intercalations of pyrrhotite-rich micaceous quartzite, calc-silicate (diopside and quartz ± garnet) rock or calc-silicate-bearing mica schist, as well as a series of schist and quartzites which show complete gradation between each other.

Contacts between calc-silicate rock/limestone and quartz monzonite are exposed in the gorge of Flood Creek (Fig. 3); there is, however, no scheelite-sulphide mineralization. It was decided to drill the contact zone primarily on the basis of the geophysical anomalies.

3. Diamond Drilling

Two 'Winkie' diamond drill holes were done to depths of 257' (DDH-1) and 235' (DDH-2) in order to attempt intersections of the EM-16 (VLF) conductor. The attitude of both holes was 232°/-60°. Core (mostly IAX with some IEX), labelled and racked, was stored at the respective drill sites.

Both holes intersect low-grade sulphide (Fe -Zn-Pb) mineralization and graphite of sufficient concentration to account for the magnetic and electromagnetic anomalies of the Susan claims. The drill logs and assay results are given in Tables 1, 2 and 3. Very low-grade mineralization of scheelite, the mineral of interest to Union Carbide, was encountered only near the bottom of DDH-2. The principle sulphide mineral in both holes is pyrrhotite but pyrite sphalerite, and rare galena also occur, the latter two only in DDH-2; sulphide generally occupys fractures or the matrix of breccia.

Projected Work for the 1976 Program

Although geologic mapping and diamond drilling revealed no significant scheelite mineralization, Union Carbide intends to proceed with further work on the Susan claims in 1976. This includes:

1. Continuation of the geophysical grid to the northwest where the EM-16 VLF anomaly is open. EM-16 (VLF), EM-17 and magnetometer surveys will be run.

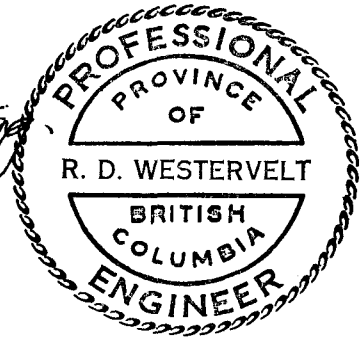
2. Soil sampling with existing grid to pan for scheelite and geochemically assay and panning of all drainages flowing into Flood Creek.

3. Geologic mapping (1" = 400') of the entire claim block, using prepared topographic maps and air-photograph blow-ups.

4. 'Winkie' diamond drilling, pending the results of the above work.

R. M. Kuehnbaum.
Geologist

R. D. Westervelt, P. Eng.



APPENDICES

Table 1. Drill log of Diamond Drill Hole 1, Susan Claims

Diamond Drill Log

UNION CARBIDE EXPLORATION CORPORATION

Location: Susan Claim Group; Highland Valley; NTS 105H/8; Line 00, 2+00 W — Hole No. DDH-1

Direction/Inclination: Grid West (232°); -60° — Sheet No. 1 of 4

Core Size: AX throughout — Examined by: R. Kuehnbaum

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay
					overburden: boulders & pebbles of granitoid rocks Casing	
		31.0	31.0			
	3.5		33.5		pale grey-buff, massive, m.g. intrusive with altered oxides/mafic minerals; rare 1-2mm quartz-calcite-filled fractures	
		35.0	35.0		dense, siliceous or amphibole-(pyroxene?)-rich metased. minor intrusive; pyrrhotite-filled and calcite-quartz-filled fractures 5KS-2	
1	2.7				fractured, rusty-weathering leucocratic intrusive; highly altered.	
		38.5	38.7½		massive amphibole-pyroxene rock with traces pyrite/pyrrhotite - minor intrusive	
	2.5				pinkish to greenish intrusive (altered) with abundant intersecting quartz-calcite veinlets; some minor (0.5") offsets.	
	6.8	41.0			partly silicified, in part, and resembles quartzite	
		41.8	41.8			
	none				"seam" - fault zone	
	1.2	43.8	43.8			
		45.0			includes cave from "seam" above; core indistinguishable from caved material; greyish to pink-grey quartz monzonite	
	- - - -	46.0			with minor biotite and/or muscovite - many minor faults and fractures occasionally filled with calcite and	
2	4.5				quartz. Locally small amounts of pyrite in fractures: as 5KS-3 at 55.5 ft.	
		50.0				
	1.5					
		53.0				
	1.9					

SUSAN DDH-1

Box No.	Recovery	Footage	Graphic	Description/Remarks	Assay Au oz/ton	Ag oz/ton	Cu %	Zn %
	1.0	56.0						
	2.8							
		59.0						
	1.0	60.0						
	4.1							
		64.0		silicified and carbonated pinkish intrusive rock with veinlets and blebs of calcite/quartz; also minor fractures/shear planes partially filled by chlorite.				
	2.5	65.0						
		67.5						
	1.5	69.0						
		68.3						
3	1.8	69.0						
		70.8						
	1.1	72.5		grey intrusive-quartz monzonite (?). Local minor shear zones and quartz-calcite filled fractures // to core. Traces of pyrite disseminated throughout. Feldspars highly altered to clays or sericite				
	3.9							
	1.5	76.5						
		78.0						
	2.5							
		81.0						
		83.2		intermixed hybridized intrusive and biotite-chlorite schist with diopside-amphibole-rich zones; disseminated pyrite/pyrrhotite 5KS. 4				
	7.5	84.4						
		88.5						
		89.3						
4	4.5			siliceous wollastonite (?) marble, cut by infrequent intrusive veins and siliceous veinlets (at times, highly intermixed). Intrusive in part hybridized (greenish). At 103', 6" quartz pod/vein; no scheelite nor sulphides				
		93.0		5KS.5 shows marble/intrusive contact at 104.7'				
	4.9							
		98.0						
	4.9							
		103.0						
	4.9							
		104.7		medium-grained grey biotite quartz monzonite with small chlorite-filled fractures; contains 2 small inclusions (?) of slightly micaceous schistose quartzite				
		108.0						
	1.5	109.5						
	4.8	112.7						
		112.3						
5		114.5		Siliceous muscovite-biotite-chlorite schists with small dykelets (3") of calcite-bearing hybridized intrusive. Pyrite and pyrrhotite disseminated along foliation planes or within small fractures, especially where schist is intensely silicified. Split samples 112.3-117.3; 117.3-122.3; 122.3-127.3 ∠ @ 138.3 = 50°	tr	0.03	0.03	<0.05
	4.5	117.3						
		119.5			tr	tr	0.02	<0.05
	2.0	121.5						
		122.3			tr	0.02	0.01	<0.05
	4.5							

SUSAN DDH-1

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay Au oz/ton	Ag oz/ton	Cu %	Zn %
		126.0	127.3						
	6.9		129.5		pale green diopsidic rock with veinlets of calcite, quartz and pyrite/pyrrhotite	tr	0.02	0.01	<0.05
		134.5			biotite-muscovite-chlorite schist ± 1" quartz stringers & intrusive veinlets; abundant 1-2mm fractures filled with chlorite, quartz, pyrite/pyrrhotite				
	------	135.8							
6	5.4		138.2						
			139.8		massive grey-green chloritized intrusive				
		140.0							
	4.9				biotite-muscovite-rich schist; in some zones (especially 148'-149') greenish colour due to abundant diopside abundant calcite-quartz-filled veinlets; pyrite and pyrrhotite (minor) disseminated throughout, but are concentrated in abundant annealed fractures. 5KS-6 at 148'. Split sample (150.8-155.8) of high-grade pyritic material				
		145.0							
	4.9								
		150.0	150.8			tr	tr	0.01	<0.05
	4.9								
		155.0			∠@ 142' = 50°				
	3.2		155.8						
			157.0		banded greenish intrusive; partially hybridized with 1-2" zones of digested schist. 1mm fractures contain chlorite & minor pyrite				
		159.5	159.4						
	--1.1--	160.3							
7		161.0	162.0						
	4.1					tr	0.04	0.01	<0.05
		166.0	164.5						
	3.3				chlorite-biotite-quartz-feldspar-calcite schist: gneissic, in part, with bands of quartz and/or calcite; occasionally, rock highly carbonatized (up to 10% calcite). Pyrite (and very minor pyrrhotite) disseminated throughout within foliation planes and in 2-mm-wide calcite-quartz-filled fractures; foliation irregular (undulating) and in places rock is highly brecciated especially where fractures with sulphides are abundant. 5KS-7 (172.5') is typical				
		169.5							
	5.0				∠@ 163.0 = 50°				
		174.5			∠@ 181.0 = 30°				
	3.3				Split sample 162.0-164.5 of pyritic rock.				
		178.0							
	1.3								
		179.5							
	4.9								
		184.2							
	------	184.5							
8			184.7		massive to slightly foliated sericitic quartzite; minor calcite-chlorite-filled fractures.				
	4.8		186.5		chlorite-biotite schist ± minor 1-2mm calcite-pyrite veinlets				
		189.5	189.0		greenish foliated sericitic quartzite; minor chlorite-biotite schist				
			190.8		silicate-rich marble, in part calcite-bearing 5KS-8; thin (¼"-½") diopside-amphibole zones at contacts above and below				
	11.4		192.0		massive, medium-grained, greyish-green intrusive (5KS-9); minor 1-2mm fractures (some sheared) with pale				

SUSAN DDH-1

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay Au oz/ton	Ag oz/ton	Cu %	Zn %
					pyrite along fracture/shear planes.				
			198.7		biotite-chlorite schist ± 1-2mm veinlets and pods of calcite. Some pyrite where brecciation intense. 0.3 ft zone where intrusive and calcic schist are intermixed, with diopside-amphibole rock ± small amounts of pyrrhotite				
		201.0	201.0		massive chloritized intrusive. 207.0-209.5, highly fractured & sheared - filled with (1-2mm) calcite and chlorite with small amounts of pyrite				
	7.0								
		206.0							
9		208.0							
			209.5		partially digested schist/hybridized intrusive: brecciated, with calcite veins (locally diopsidic); disseminated po (<5%), minor pyrite; sample 209.5-211.0	tr	0.09	0.01	<0.05
	4.8		211.0		thinly banded, dense, very fine-grained grey limestone. sporadic knot of silicate (diopside/garnet ?). Some patches of intrusive. see SKS-10				
		213.0			contact with intrusive below-conformable (marked by small off-set). Thin conformable veinlets (1mm) of very fine-grained pyrrhotite over 0.5'				
			214.0		lightly sheared & schistose mafic intrusive - shear planes sericitic. Fine-grained calcite-quartz-pyrite fracture fillings (esp. 218.0-218.5). Lower contact with limestone conformable. ∠@212.0-45°				
	4.6								
		218.0							
			218.9		dense, grey, finely-banded limestone with rare pyritic graphite zones (1mm thick) - gradational to medium-grained recrystallized limestone with traces of disseminated pyrite. Lower contact with schists marked by 0.3' zone of brecciated diopside-amphibole-pyrite-pyrrhotite skarn. SKS-12. Some siliceous lenses and very minor fracturing				
	4.7								
		223.0							
	4.8								
		228.0	228.0		∠@227' = 35°				
		229.8			chloritic biotite-quartz-feldspar schists				
10	4.8				local intrusive (0.2' at 223') and calcite pods				
		233.0			well-banded, locally diopsidic (?);				
					calcite-quartz fracture filling subparallel to core				
	7.0		237.0		split sample 237.0-238.9 · brecciated diopsidic (?) rock, calcite-veined with pyrrhotite and pyrite disseminated and in fractures.	tr	0.02	0.02	<0.05
			238.9						
		240.0			∠@243.7 = 52°				
			243.7		lightly foliated medium-grained biotite quartz monzonite with partly digested schist xenoliths				
	9.3				conformable contact above/below				
			247.2		biotite-chlorite-quartz-feldspar-quartz schists. Local minor				
		250.0			calcite-veinlet filling, with minor pyrite (overall traces)				
11	6.0	252.8			∠@ 254 = 47°				
END	HOLE	257.0	257.0						

Table 2. Drill log of Diamond Drill Hole 2, Susan Claims

Diamond Drill Log

UNION CARBIDE EXPLORATION CORPORATION

Location: Susan Claim Group, Highland Valley, NTS 105H/8, Line 15+00N, 1+00 W Hole No. DDH-2

Direction/Inclination: Grid West (232°); -60° Sheet No. 1 of 4

Core Size: AX to 214.0, EX to 235.0 Examined by: R. Kuehnbaum

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay
					overburden - mostly sand with boulders of mafic to felsic intrusive rock and recrystallized silicate-bearing limestone	
		18.0	18.0			
1	4.2					
		23.0			Vaguely to well-banded intercalated medium-grained grey recrystallized limestone and slightly siliceous marbles bearing diopside, garnet knots and minor tremolite (?) - possibly slightly serpentinous. Outside of sulphide-rich zones, traces of pyrite, pyrrhotite and sphalerite occur in marble and (rarely) limestone, usually as irregular blebs in the bedding planes. In two major zones (56.9-58.3; 62.7-66.9) are interlayered marbles zones (uniform) and brecciated sulphide zones with up to 60% combined pyrrhotite and sphalerite with minor pyrite and rare galena over a maximum of 0.5 FT. Sulphide zones are generally more siliceous (cherty) and are spotted with quartz eyes. Sulphides are very fine-grained and highly intermixed. In zones with minor sulphides, fill brecciation veinlets with calcite-veins not in preferred orientation. Some chlorite in veins.	
	9.1					
		33.0				
	9.7					
		41.6				
2		43.0				
	9.9				SRS-13 @ 34'	
					Sampling intervals: 54.0-56.9 traces sulphides; 56.9-58.3 overall >25% sulphides; 58.3-62.7 diopside-garnet marble ± traces sulphides; 62.7-66.9 sporadic breccia sulphide zones; average 5-10% sulphides; 66.9-69.9 minor sulphide in quartzitic rock (See below)	
					∠ @ 23' = 55°; 41' = 58°; 52' = 47°	
		53.0	54.0			

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay Au oz/Ton	Ag oz/Ton	Cu %	Zn %	Pb %
	9.8		56.9			tr	tr	0.01	<0.05	<0.05
			58.3			tr	0.04	0.03	1.15	0.05
		63.0	62.7			tr	0.06	0.01	<0.05	<0.05
		65.8	66.9			tr	4.0	0.03	1.65	0.75
3	9.8		68.5		micaceous quartzite and diopsidic dolomitic marble ± small random calcite veinlets (1mm) ± 0.5-2.0mm galena-py-po veinlets	tr	tr	0.01	0.05	0.05
			69.9		biotite-chlorite schists, gradational into quartzite above & below; serpentinous in part. Microscopic to 4mm calcite veinlets, random; pyrrhotite disseminated throughout (especially to 73.0). 0.2 ft zone of massive siliceous rock (72.8-73.0) with ~1% coarse pyrrhotite 5KS-14					
		73.0								
	9.7		75.3		dense, fine-grained dolomitic micaceous quartzite/siliceous dolomitic marble (?) with a few intercalations of phlogopite schist (a few inches) and sporadic 3mm calcite veinlets. Fine-grained garnet not uncommon, in bands. 5KS-15 at 78.0' Disseminated pyrrhotite in minute grains throughout (traces). Pyrrhotite, pyrite and galena on sulphide-filled fracture planes (very minor) ∠ @ 78.5 = 65°					
		83.0								
	9.3		86.8		biotite-chlorite schist with talc(?); intercalated on 2-3 mm scale with calcitic bands and lenses. Very siliceous patches and some calcite veinlets; traces of fine-grained disseminated pyrrhotite. 5KS-16 at 88.0					
		90.0	89.8							
4					dense, finely banded, slightly schistose siliceous dolomitic marble (?) and/or quartzite; greenish colour due, at least in part, to very fine-grained diopside and/or talc(?). Pale green chlorite also present. Also very minor brownish fine-grained garnet. Locally, pyrrhotite; minor pyrite scattered along bedding planes and along minute (<1mm) calcite-filled fracture planes. 5KS-17 (92.0) is unusually rich in sulphides ∠ @ 92.0 = 65°					
		93.0								
	7.2		94.5		soft, pinkish biotite schist; largely replaced by calcite in lenses (up to 0.4"), veinlets and along bedding/foliation planes; locally garnetiferous; calcite veins bear traces of galena ± pyrrhotite.					
		100.5	99.8							
	6.0				dolomitic, silicate-bearing quartzite (as above?) intercalated with minor phogopite-diopside schists, also limey. to 115.8, sporadic zones where sulphides (pyrrhotite, minor sphalerite?) fill calcitic fracture planes and some bedding/foliation planes (overall sulphide content <1%). 5KS-18 (112.0) is of typical rock with a high proportion of pyrrhotite. 115.8-116.8; 119.3-123.3 - fracture-filling sulphides with 3" to 4" zones of highly brecciated marble with very abundant sphalerite, pyrite and galena (up to 30% of the rock over a 4" zone - e.g 5KS-19 at 116.2) In breccia zones, marble and calcite comprise fragments, sulphides the matrix.					
		107.5								
	1.5									
		110.0								
	3.5									
		113.5								
		113.8	113.5							
5			115.8			tr	0.04	0.01	<0.05	<0.05
			116.8			tr	0.17	0.02	0.65	0.10
	9.2					tr	0.04	0.01	0.10	0.05
			119.3			tr	0.80	0.03	1.25	.55
		123.0	123.3							

Sampling intervals
- 113.5-115.8 vein sulphides
- 115.8-116.8 breccia and vein sulphides
- 116.8-119.3 vein sulphides
- 119.3-123.3 2 breccia zones and vein sulphides
- 123.3-126.0 minor vein sulphides (see below)

∠ @ 112.0 = 56°

Box No.	Recovery	Footage	Graphic	Description/Remarks	Assay Au oz/ton	Ag oz/ton	Cu %	Zn %	Pb %	W %
	9.7	126.0 – 133.0		interealated limey quartzitic biotite schists (with sporadic garnet and diopside) and minor limey quartzite. Pyrrhotite vein-fillings throughout, but these are concentrated in 2 zones: 123.3-125.7 (included in above split sample) and 132.9-133.6, where pyrrhotit, sphalerite and pyrite occur in coarser vein-fillings - samples 5KS-20 (124.9) and 5KS-21 (133.2) show sulphide mineralization over short distances (maximum 1% ?) ∠ @ 135.5 = 80°						
	7.0	133.0 – 137.7		dense, massive pale green, silicate-rich (with diopside and talc?) marble; disseminated pyrrhotit/pyrite (1% max) and along fine (partially calcite-filled) fracture planes (see 5KS-22). 140.0-144.5, mixed intrusive material (minor) with a strong greenish colour (contaminated?). Traces of scheelite (total of 30 grains), mostly along calcite-filled fractures and fine- to medium-grained disseminated - associated with sulphides (5KS-22).						
6	9.6	137.7 – 150.0		massive, grey medium-grained quartz monzonite; minor small (2"-3") greenish zones of above rocks - contacts are very vague.						
	9.8	150.0 – 161.7		mixed greenish, diopsidic massive skarn (?) and intrusive; sulphides (pyrrhotite, pyrite, sphalerite) scattered along fracture planes and disseminated (in zones up to 5mm in width). 5KS-23 at 153.5. Traces of scheelite (medium-grained, blue) occur in rare chlorite-sulphide shear zones.						
	1.0	160.0 – 161.0		Greenish (altered) biotite-quartz monzonite; medium-grained, massive; minor xenoliths (1"-3") of dense, green, siliceous marble with < 0.5% pyrrhotit and very minor sphalerite. 5KS-24						
7	8.9	161.7 – 170.0								
	9.6	170.0 – 180.0		massive, green calc-silicate rock, with diopside, talc and serpentine (?) 5KS-25 is typical; infrequent dense pale green siliceous zones. pyrrhotite, pyrite and sphalerite (generally traces) in disseminated clots and along calcite-filled fracture zones. Three thin, highly fractured zones (174.2-174.7; 185.2-185.7; 186.4-187.0) where sulphide replacement extreme - sulphides (associated with dark green chlorite) are sphalerite, pyrite and galena (?), and are maximum .20% over these zones. 5KS-26 shows a brown sphalerite-rich section over 2" (171.7) Split sample 185.2-187.0 174.2-174.7 (5KS-26) contains 2% medium- to coarse-grained blue scheelite, often platey - associated with sulphides. 185.2-185.7 & 186.4-187.0 contain traces of medium- to fine-grained disseminated blue-white scheelite.						
	9.9	180.0 – 185.5								
8	11.3	185.5 – 190.0		massive fine- to medium-grained diopside-garnet-calcite-scheelite skarn with disseminated sulphides (pyrrhotite, minor pyrite and black sphalerite ? - combined, maximum 1-2%) and in calcite-chlorite-filled fracture/shear planes. Scheelite is fine- to medium-grained, blue-fluoresceing - disseminated in traces throughout. within 3" of contact ~ 0.5 WO_3 but overall maximum ~ 0.1%. Split sample 187.0-189.2; 5KS-27 of scheelite skarn	tr	0.04	0.02	0.10	.05	
					tr	tr	0.01	<0.05		<.01

Box No.	Recovery	Footage		Graphic	Description/Remarks	Assay Au oz/ton	Ag oz/ton	Cu %	Zn %	W%
					massive to slightly foliated grey (-green) biotite quartz monzonite; traces of disseminated pyrrhotite (in clots up to 2mm). A few xenoliths of partially digested schist and diopsidic skarn (up to 1.0'), skarn is pyrrhotite-rich (1-2%) with traces of scheelite					
	5.9	202.0								
		208.0								
			209.5							
9	6.0		211.0							
		214.0								
	4.8		215.0		gneissified biotite schist with a few thin (1-2mm) calcite veinlets. 5KS-28 ∠@ 217.5 = 55°					
		219.0	218.7							
	2.5				quartz monzonite with 3" xenolith of biotite schist					
		222.0	223.1							
	5.3				gneissified biotite schist, in part diopsidic, with 5" intrusive dyke at 226'					
		228.0								
			229.4		banded diopside-quartz(-biotite) skarn. 0.4 ft dyke at 229.9. Scheelite (medium- to fine-grained) blue occurs disseminated or along 1-2mm wide bands. maximum content ~0.1% WO_3. Pyrrhotite i spheleritic (max 5%); split sample 229.4-231.6, 5KS-29	tr	0.02	0.01		0.02
	6.7		231.6		biotite schist with narrow calcite veinlets; traces of pyrrhotite					
		239.0	235.0							

13a

Table 3. Cerificate of Assay of core from DDH-1 and DDH-2,

Susan Claims

To: Union Carbide Corp.

REPORT No A25 - 798

PAGE No. 1

DATE: October 9, 1975

BONDAR-CLEGG & COMPANY LTD.

601 - 1112 West Pender Street
Vancouver, B.C.

CERTIFICATE OF ASSAY

Samples submitted: October 3, 1975
Results completed: October 9, 1975

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	GOLD		SILVER	Cu	Pb	Zn	W				TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
DDH 1											
112.3 - 117.3	trace		0.03	0.03	-	L0.05	-				
117.3 - 122.3	trace		trace	0.02	-	L0.05	-				
122.3 - 127.3	trace		0.02	0.01	-	L0.05	-				
127.3 - 129.3	trace		0.02	0.01	-	L0.05	-				
150.8 - 155.8	trace		trace	0.01	-	L0.05	-				
162.0 - 164.5	trace		0.04	0.01	-	L0.05	-				
209.5 - 211.0	trace		0.04	0.01	-	L0.05	-				
237.0 - 238.9	trace		0.02	0.02	-	L0.05	-				
DDH 2											
54.0 - 56.9	trace		trace	0.01	L0.05	L0.05	-				
56.9 - 58.3	trace		0.04	0.03	0.05	1.15	-				
58.3 - 62.7	trace		0.06	0.01	L0.05	L0.05	-				
62.7 - 66.9	trace		4.0	0.03	0.75	1.65	-				
66.9 - 69.9	trace		trace	0.01	0.05	0.05	-				
113.5 - 115.8	trace		0.04	0.01	L0.05	L0.05	-				
115.8 - 116.8	trace		0.17	0.02	0.10	0.65	-				
116.8 - 119.3	trace		0.04	0.01	0.05	0.10	-				
119.3 - 123.3	trace		0.80	0.03	0.55	1.25	-				
123.3 - 126.0	trace		0.06	0.01	0.05	0.10	-				
185.2 - 187.0	trace		0.04	0.02	0.05	0.10	-				
187.0 - 189.2	trace		trace	0.01	-	L0.05	L0.01				
229.0 - 231.6	trace		0.02	0.01	-	-	0.02				
5KS - 71	trace		trace	-	-	-	-				

L denotes 'less than'

Rec'd 14.10.75

Rec'd

File

14

Figure 2

TOPOGRAPHIC MAP OF THE SUSAN CLAIMS

WITH GEOPHYSICAL GRID & DIAMOND DRILL HOLE LOCATIONS

Group B

Group A

Scale and elevation datum based on limited ground control resulting in good relative, but uncertain absolute map accuracy.
Compiled from aerial photography at an approximate scale of 1 inch equals 5000 feet flown in 1960

UNION CARBIDE EXPLORATION CORP.

SUSAN CLAIM

PRELIMINARY RECONNAISSANCE TYPE MAPPING

McElhanney Surveying & Engineering Ltd.
1200 West Pender Street, Vancouver B.C. Canada

Scale	1" = 400'
Contour Interval	50'
Date	APRIL 76
Job No.	05745 - 2
Sheet No.	1 of 1

FIGURE 3

UNION CARBIDE EXPLORATION CORPORATION

GEOLOGIC MAP OF

THE SUSAN CLAIMS

IN THE VICINITY OF DDH-1 AND DDH-2

HYLAND VALLEY

YUKON TERRITORY

scale 1 inch = 200 feet

0 100 200 400 600 feet

N

not mapped

SUSAN 4 SUSAN 3

SUSAN 2 SUSAN 1

CLAIM POSTS

SUSAN 22 SUSAN 21

CAMP

CHOPPER PAD

FLOOD CREEK

DDH-1 -60°

DDH-2 -60°

A A' B B' C C'

L5N L0N L5S L10S L15S L20S

5W 5E 10E 15E 20E

LEGEND

4 undifferentiated felsic intrusive rock
4a highly sheared, medium-grained, pink quartz monzonite
4b massive, medium-grained, grey biotite quartz monzonite

3 diopside-garnet-pyrrhotite-calcite-scheelite skarn; diopside-actinolite-pyrrhotite skarn; diopside-quartz (-phlogopite) skarn; wollastonite marble.

2a grey to white medium-grained recrystallized limestone
2b intercalated 2a and siliceous calc-silicate rocks (diopsidic quartzites with rare garnet) and diopside-bearing micaceous schists
2c intercalations of pyrrhotite-rich micaceous quartzite in 2a

1 undifferentiated mica schists and micaceous quartzites
1a biotite (-muscovite)-bearing quartzite with minor intercalations of mica schists; feldspathic quartzite
1b biotite (-muscovite-chlorite)-feldspar-quartz-(pyrrhotite) schist with minor quartz pods and stringers; minor intercalated diopsidic mica schist and quartzite

KEY

strike/dip of bedding
strike/dip of foliation
minor fold axis, with plunge
fault
geologic contact; observed
assumed
outcrop
diamond drill hole, with inclination
geologic cross-section
grid system, with coordinates
trail
stream
gulley
creek

chained lines are not corrected for topography

geology and cartography: R. Kuehnbaum, September, 1975