

# ASSESSMENT REPORTS

**- MAP No.** 105-D-2 **TYPE OF WORK:** Geological

REPORT FILED UNDER	Venus Mines Ltd. (N.P.L.)		
DATE PERFORMED	May-November 1966	DATE FILED: November 10, 1967	
LOCATION -	LAT.	Lat. 60° 05' N	Carcross Area, Y.T.
	LONG.	134° 34' W	
CLAIM Nos.	in report		
WORK DONE BY	Macdonald Consultants Ltd.		
WORK DONE FOR	Venus Mines Ltd. (N.P.L.)		
REMARKS	Quartz breccia veins in volcanic flows and tuffs which are intruded by granodiorite and/or diorite. Sulphide minerals are galena, pyrite, arsenopyrite, and minor sphalerite, pyragarite, tetrahedrite and chalcopyrite. History of mining on claim group. Report on drifting program with assays. Total reserves		
			OVER

of 150,500 tons with gross metal value of \$39.61 per ton.  
Future work includes more drifting, crosscutting and  
geological mapping.

MACDONALD CONSULTANTS LTD.  
SUITE 12 - 425 HOWE STREET, VANCOUVER 1, B.C.

REPORT ON

VENUS MINES LTD. (N.P.L.)  
(Carcross Y.T. Property)

440 - 890 West Pender Street,  
Vancouver 1, B.C.

by

MACDONALD CONSULTANTS LTD.,  
12 - 425 Howe Street,  
Vancouver 1, B.C.

A.J. MacDonald, P.Eng.

Mr. James M. O'Brien, Pres.,  
Venus Mines Ltd. (N.P.L.).

November 10, 1967.

TABLE OF CONTENTS

Title Page	
Table of Contents	
Introduction	Page 1
Location of Claims	Page 2
Geology	Page 2
History	Page 4
Progress Report of April 17th, 1967	Page 5
Progress Report of May 30, 1967	Page 6
Recent Developments	Page 8
Reserves	Page 9
Costs	Page 9
Summary	Page 10

MAPS (in folder)

### LOCATION

The Venus Group of claims is located on the west shore of the Windy Arm of Tagish Lake, Yukon Territory. It is approximately seventeen miles from Carcross, a small station (100 persons) on the White Pass and Yukon Railway some forty miles south of Whitehorse, Yukon Territory. The property is accessible from Carcross by water along Nares Lake and Tagish Lake. There was an old wagon road established between Carcross and the property in 1910 that was not passable due to disuse but has been repaired and extended to the property and is now used by all traffic. Carcross is fifty-seven miles by railroad from the ice-free port of Skagway in the Alaska Panhandle.

### GEOLOGY

The veins occur in a formation known as the Tushi Group consisting largely of green andesites and tuffs which is underlain and intruded by the younger Coast Range batholith made up of granodiorite and diorite. The Tushi group is quite extensive and, in the immediate area of the Venus claims, measures approximately 2.3 miles in width.

The veins are all very similar in character and are mineralized quartz veins in true fault fissures. The veins on the Venus group all dip into the hill averaging thirty-five to forty degrees and the gold values seem to increase with depth. The Venus vein has been traced for over 5,000 feet but only a relatively small part of it has been explored. The ore minerals are irregularly distributed within the veins and consist of galena, pyrite and arsenopyrite as the most abundant sulphides. Minor sulphides are sphalerite, pyargarite (ruby silver), tetrahedrite and chalcopyrite.

### CLAIMS

The Venus group of claims is comprised of several crown granted claims and several claims restaked recently. The ownership is as follows:

<u>Claims</u>		<u>Record No.</u>	<u>Expiry Date</u>	<u>Vendor</u>
Ruby Silver	Lot 23, Group 6	Crown Grant	Crown Grant	J.L.Phelps & J.D. Scott
Venus	Lot 20, Group 6	Crown Grant	Crown Grant	"
Venus #2	Lot 21, Group 6	Crown Grant	Crown Grant	"
Vault	Lot 26, Group Y	Crown Grant	Crown Grant	"
Klaune		No. 73240	Aug. 2, 1971	"
Venus #5		No. 74717	Aug. 25, 1971	"
Venus #6		No. 74718	Aug. 25, 1971	"
Venus #7		No. 74719	Aug. 25, 1971	"

Venus #8	2	No. 74720	Aug.25, 1971	J.L.Phelps &
Windy #2 Fr.	6	No. 98931	Feb. 9, 1972	J.D. Scott
Venus #9	7	No. 75097	July 28, 1971	"
Venus #10	8	No. 75098	July 28, 1971	"
Venus #12	9	No. 75100	Aug. 25, 1971	"
Maybelle Fr. Lot 78, Gp.6.		Crown Grant	Crown Grant	D.H.Stewart & D.N.Pooley
Humper #2	Lot145,Gp.754	Crown Grant	Crown Grant	M. Watson
Beach #5	Lot 142,Gp.754	Crown Grant	Crown Grant	M. Watson
Nipper #2	Lot 143,Gp.754	Crown Grant	Crown Grant	M. Watson
Big Tree	10	No. 81769	Sept. 6, 1971	C. Emminger
Windy #5	11	Y5674	Aug. 25, 1968	C. Emminger
Windy #6	12	Y5675	Aug. 25, 1968	C. Emminger
Windy #7	13	Y5676	Aug. 25, 1968	C. Emminger
Windy #8	14	Y5677	Aug. 25, 1968	C. Emminger
Ann #1 Fr.	15	Y5508	May 10, 1968	J.M.O'Brien, F.M.P.Warren & W.F. Christensen
Venus #16	16	Y18237	May 26, 1968 )	
Venus #17	17	Y18238	May 26, 1968 )	
Venus #18	18	Y18239	May 26, 1968 )	Staked ; by
Venus #19	19	Y18240	May 26, 1968 )	A.J.MacDonald
Venus #20	20	Y18241	May 26, 1968 )	on behalf of
Venus #21	21	Y18242	May 26, 1968 )	Venus Mines Ltd.
Venus #22	22	Y18243	May 26, 1968 )	
Venus #23	23	Y18244	May 26, 1968 )	
Venus #24	24	Y18245	May 26, 1968	Staked by J.M. O'Brien on behalf of Venus Mines Ltd.
Venus #25	25	Y18246	May 26, 1968 )	

Venus #26	Y18247	May 26, 1968	)	
			)	
Venus #27	Y18248	May 26, 1968	)	
			)	Staked by F.M.P.
Venus #28	Y18249	May 26, 1968	)	Warren on behalf
			)	of Venus Mines Ltd.
Venus #29	Y18250	May 26, 1968	)	
			)	
Venus #30	Y18251	May 26, 1968	)	
			)	
Venus #31	Y18252	May 26, 1968	)	
			)	
Venus #32	Y18253	May 26, 1968	)	

The claims are all well located and location of posts is relatively simple. The writer has personally inspected the Klauke claims, the Ann #1, The Windy 5 - 8, the Venus 17-32 and the Venus #2 and found them to be staking in accordance with the requirements of the Yukon Quartz Mining Act.

The addresses of the Vendors of the claims are as follows:

John Livingstone Phelps of 4784 Paton Street, Vancouver, B.C.  
John Delbert Scott of P.O. Box 1147, Whitehorse, Yukon Territory.  
James Melbourne O'Brien of 6370 Carnarvon Street, Vancouver, B.C.  
Frederic Michael Patrick Warren of 1632 West 40th Avenue, Vancouver, B.C.  
Matthew Watson of 455 West 59th Avenue, Vancouver, B.C.  
Clem Emminger of Whitehorse, Yukon Territory.  
Delbert Harold Stewart, Box 864, Walnut Creek, California, U.S.A.  
Drucilla M. Pooley, c/o Box 864, Walnut Creek, California, U.S.A.  
William Frederick Christensen of 2047 West 35th Avenue, Vancouver, B.C.

## HISTORY

### (a) Chronological

The first discovery in the area was made by W.R. Young in 1899 and subsequent prospecting led to the discovery of the Venus vein in 1901 by J.M. Pooley. In 1904, Conrad Consolidated Mines was organized to acquire and develop the more important properties in the district. Considerable development work with very encouraging results was done in 1905 and early in 1906 senior financing was arranged that resulted in the formation of the Yukon District Gold Mining Company Limited.

Further encouraging work from 1906 to 1908 resulted in the construction of a 100 ton mill on the Venus property in 1909. By that time there was almost 3,000 feet of development on the Venus property including the first and second levels on the Venus and the Venus extension adit. At the same time as the Venus was being developed the same Company was developing other properties in the area and by the end of 1909 the funds were exhausted. This, coupled with lowering prices for silver, resulted in suspension of operations.

In 1912 T.A. McLean reported that Conrad and his associates had spent

three quarters of a million dollars on the various properties.

In 1916 the Canadian Harper Mines Corporation leased the Venus for a period of two years. This group concentrated on mining the available ore and apparently made very little attempt to develop new ore.

In 1920 Livingston Werneke, well known manager for the Bradley interests, reported on the property and recommended that it be acquired. However, the leases were still in force and by the time they expired the Alaska Treadwell Mining Company (Bradley) was interested in the successful silver-lead mines north of Mayo.

Other reports were made in 1922 by A.A. MacKay for Hollinger, in 1927 by E. Lovitt for Pioneer Gold Mines, and in 1947 by W.P. Irwin for Transcontinental Resources. It is worthy of note that the property was considered by all who examined it to have merit and further exploration work was recommended in all cases. The recommendations were not acted on presumably because silver had receded in price to \$0.67½ in 1922 and further to a low of \$0.28 in 1932.

(b) Production in History

No record exists for the period 1906-1909 but Carnes reports the sacking of ore at the Venus in 1906. The same writer reports in 1916 that Conrad mined about 6,000 tons of ore which was shipped to the smelters at Ladysmith, B.C., and at Tacoma, Washington. Two recorded shipments of gravity concentrates in 1919 averaged 0.90 oz. Au., 62.2 oz. Ag. and 15% lead per ton. At present day prices and making due allowance for smelter settlements this works out to \$142.60 per ton before smelting charges and freight.

An incomplete record of shipments from the Venus Mine to the smelter from 1910 to 1920 totals 2,693 tons grading 0.639 oz. Au. and 68.20 oz. Ag. per ton.

SUMMARY OF 1966 PROGRAM

Venus Mines Ltd. initiated a program of underground development starting in May 1966, and by November 1966 had constructed a road to the property, established a camp to accommodate eighteen personnel, drilled 995.5 feet of AX diamond drilling and driven 1614 feet of drifting and crosscutting.

The 1966 program was encouraging in that the veins followed were well mineralized and assays of ore grade were obtained, but the vein was generally narrow. However, near the end of 1966, a strong, well mineralized vein was intersected and it is on this vein that the 1967 program was carried out.

1967 EXPLORATION PROGRAM

The underground exploration was resumed in late March of 1967 with a diamond drill program to outline the "A" vein intersected near the end of the 1966 program. This diamond drill program was successful in that it outlined the structure in order to guide the drifting program.



The drifting program was resumed on April 18, 1967, and by November a total of fifteen ore grade sections of drift had been located by drifting and raising.

STATISTICS

Year	Drift & X-Cut	Raise	Diamond Drilling	Subdrift
1966	1614 ft.	-	995.5 ft.	-
1967	2363 ft.	313 ft.	903.0 ft.	19 ft.
Total	3977 ft.	313 ft.	1898.5 ft.	19 ft.

ORE SECTIONS

A. DRIFTING (See attached map).

No. 1-2A N. Drift advanced a total of 1160 feet to September 30 and intersected the following mineralized zones of ore tenure. All values have been diluted to a minimum mining width of 4.0 ft.

Zone 1

0.32 oz. Au, 7.20 oz. Ag, 2.8% Pb, 0.9% Zn,  
average width 4.0 ft., length 72.5 ft.  
gross metal value - \$35.10 per ton.

Zone 2 (recalculated with resampling)

0.21 oz. Au, 3.28 oz. Ag, 0.66% Pb, 0.61% Zn,  
average width 4.6 ft., length 56.5 ft.  
gross metal value - \$17.27 per ton.

Zone 3

0.369 oz. Au, 23.06 oz. Ag, 6.4% Pb, 2.6% Zn,  
average width 4.5 ft., length 77 ft.  
gross metal value - \$79.59 per ton.

Zone 4

0.728 oz. Au, 1.84 oz. Ag, 0.28% Pb, 0.21% Zn,  
average width 4.0 ft., length 58 ft.  
gross metal value - \$31.66 per ton.

Zone 5

0.30 oz. Au, 3.62 oz. Ag, 0.79% Pb,  
average width 4.6 ft., length 17 ft.  
gross metal value - \$19.51 per ton.

Zone 6

0.326 oz. Au, 9.56 oz. Ag, 2.61% Pb., 1.42% Zn.  
average width 4.0 ft., length 21 ft.  
gross metal value - \$40.39 per ton.

Zone 7

0.249 oz. Au, 7.78 oz. Ag, 1.42% Pb, 1.0% Zn,  
average width 4.2 ft., length 65 ft.  
gross metal value \$29.86 per ton.

Zone 8

0.329 oz. Au, 10.36 oz. Ag, 2.12% Pb, 1.92% Zn,  
average width 5.4 ft., length 105 ft.  
gross metal value - \$41.94 per ton.

Zone 9

0.59 oz. Au, 2.04 oz. Ag., 0.36% Pb,  
average width 5.2 ft., length 25 ft.  
gross metal value \$27.28 per ton.

The No. 2-1A W. Drift advanced a total of 490 feet and three zones in this heading are shown on the attached map as follows:

Zone 12

0.185 oz. Au, 22.0 oz. Ag, 0.05% Pb,  
average width 5.4 ft., length 15 ft.  
gross metal value - \$45.53 per ton.

Zone 13

0.35 oz. Au, 2.28 oz. Ag, 0.6% Pb, 0.32% Zn,  
average width 5.0 ft., length 27 ft.  
gross metal value - \$19.16 per ton.

Zone 14 (assays for first 70 ft. only)

0.30 oz. Au, 8.0 oz. Ag, 2.2% Pb, 1.3% Zn,  
average width 4.0 ft., length 70 ft.  
gross metal value - \$35.20 per ton.

B. RAISING

Three raises were driven to determine the up-dip continuity of the mineralization and in one of them located at station 2725 the vein was faulted off five feet above the drift. 28 feet of raise was driven here through three parallel faults and the vein diverged into a series of parallel stringers.

27-109 Raise advanced 150 feet in a well mineralized vein; averaged at least 6 feet in width. In places the full width of the vein has not been opened up. The assays for the first 69 feet were:

Gold: 0.48 oz. Silver: 6.07 oz. Lead: Zinc: Width: 6.0 ft.

The assays have not been received on the remaining 81 feet but it is visually estimated to be of similar grade. The vein at the face is still of the same width and tenure.

27-117 Raise advanced 134 feet and the first 110 feet assayed:

Gold: 0.51 oz. Silver: 6.82 oz. Lead 1.60% Zinc: 1.36% Width: 4.5 feet.

The remaining 26 feet assayed:

Gold: 0.47 oz. Silver: 6.20 oz. Lead: 1.46% Zinc: 1.26% Width: 4.5 ft.

In addition, two short subdrifts were driven 11 ft. north and 9 ft. south at the 100 foot elevation, which will be the elevation of an upper level. These assayed as follows:

North sub-drift

Gold: 0.30 oz. Silver: 3.76 oz. Lead: 0.70% Zinc: Width: 5.1 ft.

South sub-drift

Gold: 0.461 oz. Silver: 12.9 oz. Lead: 2.92% Zinc: 1.80% Width: 4.7 ft.

GROUND CONDITIONS

The hanging wall and the foot wall of the vein zone are both strong competent andesite and require little or no support. Some timbering has been required in local areas where faulting occurred but, in general, there is no support required even in the areas opened fairly wide at drift intersections. There is, as a result, a reasonable expectation that the calculated grades on the sections diluted to 4 feet can be improved by careful mining during stopping operations.

METALLURGY

The sample rejects from all of the ore sections have been obtained from the assay office and are being grouped according to their respective ore section. These samples will constitute a small bulk sample and will be forwarded to a recognized testing laboratory for preliminary metallurgical tests.

RECENT DEVELOPMENTS

The No. 1-2A North Drift advanced to a point where it is now under the south end of the old Venus workings. The last 357 ft. of the drift was all on a well-mineralized vein, most of which should return assays of ore

grade. All the results have not been received as of this date, but the initial thirty feet is ore grade.

ORE RESERVES

Based on the continuity of the ore in the drifts and the fact that two raises are up 150 feet and 134 feet respectively as well as on the extension of the north drift under the old workings the ore reserve is calculated as follows:

Probable Ore	54,500 Tons
Inferred Ore	96,000 Tons
	<hr/>
Total Reserve	150,500 Tons

The probable reserves have a gross metal value of \$39.61 per ton. The inferred ore is calculated on a consideration of the percentage of ore-grade mineralization in the new workings, on the records of the old workings, and on the continuity of the ore in the raises. No consideration is given to the proposed lower adit nor to the 1300 feet of vein ahead of the new workings. As stated in the report dated October 2, 1967, if the lower adit proves to have the same frequency of ore sections as the present adit, then the probable reserves will be in excess of 150,000 tons over the present section of the veins opened to date only. As the No. 1-2A North Drift advances to the north the probability of developing a reasonable tonnage producer increases considerably.

The silver-lead ratios on this horizon have been generally better than those obtained near surface but there is still a high degree of oxidation in the vein. In two instances, very high silver-lead ratios in the order of 70:1 have been obtained over short sections and there is a possibility of a zone of secondary enrichment at lower levels. The gold values have also been generally higher on this horizon than in the old workings.

FUTURE PROGRAM

1. Extend the north heading 500 feet	\$40,000
2. Extend the present raises to end of ore	5,000
3. Drive two additional raises on the 2750 level	10,000
4. Prepare a new adit site	6,000
5. Drive a lower crosscut 900 ft.	72,000
6. Drive 1000 ft. of drift in the lower adit	80,000
Contingencies	17,000
Engineering, Geological	15,000
	<hr/>
TOTAL COST	\$245,000

Note: The new adit will be designed as the main haulage level and is placed so that two intermediate levels can be driven between it and the 2750 level.

Other Items


1. The assessment work in the form of geological mapping and geophysics was completed on the Windy 5-8 claims. This work is presently being compiled.

2. The road to the camp was improved and a new section was constructed in one area.
3. The new adit location has been transit surveyed and the elevations checked by an independent level survey. The adit location has been staked out and bulldozed so that it is ready for collaring.

SUMMARY

1. The frequency of ore grade sections in the drift and the continuity of the ore up-dip in the raises enables a calculation of probable ore reserves of 54,500 tons with a gross metal value of \$39.61 per ton, plus inferred tonnage of 96,000 tons for a total reserve of 150,500 tons.
2. The proposed lower adit will be the main production and haulage level and if the same frequency of ore is intersected on it as on the 2750 level there will be sufficient reserves to support a mill of approximately 300 tons per day over a three year period.
3. Initial metallurgical tests will be underway soon and will give information for a calculation of recovered values.
4. Present indications are favourable for an eventual profitable producing property.

Respectfully submitted,  
MacDONALD CONSULTANTS LTD.

  
A.J. MacDonald, P.Eng.  
