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REPORT ON THE MT. VICTOR GOLD PROSPECT, NEAR KAINANTU TERRITORY OF PAPUA AND NEW GUINEA.

by

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REPORT ON THE MT. VICTOR GOLD PROSPECT, NEAR KAINANTU

TERRITORY OF PAPUA AND NEW GUINEA

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SUMMARY

The testing of a replacement gold lode, at Mt. Victor, 10 miles south-east of Kainantu, Territory of Papua and New Guinea, by percussion drilling and several adits, proved that gold values were not economic. The lode occurs on a contact between Pliocene andesite porphyry and probable Cretaceous granodiorite. The lode was deposited from late stage emanations from the porphyry.

A similar lode at Clarke Ridge, 1200 feet to the north-east, is regarded as an erosion remnant of the Mt. Victor lode. At Mt. Ubank, two miles west of Mt. Victor, similar small discontinuous gold lodes on the porphyry contact were examined and are considered too small for mining.

Gold mineralisation may occur elsewhere along the porphyry contact but the prospects of finding economic lodes are not good.

INTRODUCTION

This report summarises information obtained from developmental work done from 1958 to 1960 by Australian Gold Development N.L. and King Island Scheelite Ltd. on gold lodes in the Mt. Victor area.

Location and Access :

The Mt. Victor Prospect is 10 miles south-east of Kainantu in the Eastern Highlands District of New Guinea. Access is by unsurfaced motor road which, after heavy rain, is negotiable only by four-wheel-drive vehicles. The prospect is situated on a steep, north-east trending ridge at an elevation of about 6,000 feet above sea level.

Air transport is the main means of supply for Kainantu; the airfreight rate is fourpence per pound from Lae. The airstrip will accommodate aircraft up to DC3 size. Kainantu is connected by motor road to Lae but, as the Umi and Leron Rivers are not bridged, it is not possible to ensure a regular freight service by road.

Timber and Water :

The area is covered by dense rain forest and there is an ample supply of timber suitable for mining purposes in the immediate vicinity of the prospect. The nearest permanent water supply to the prospect is about half a mile away.

Figure 1. Photograph taken from near Arona Agricultural Station looking south-east. Mt. Elendora is the prominent peak on the skyline. Mt. Victor Prospect is in the bush-covered saddle on the right background.

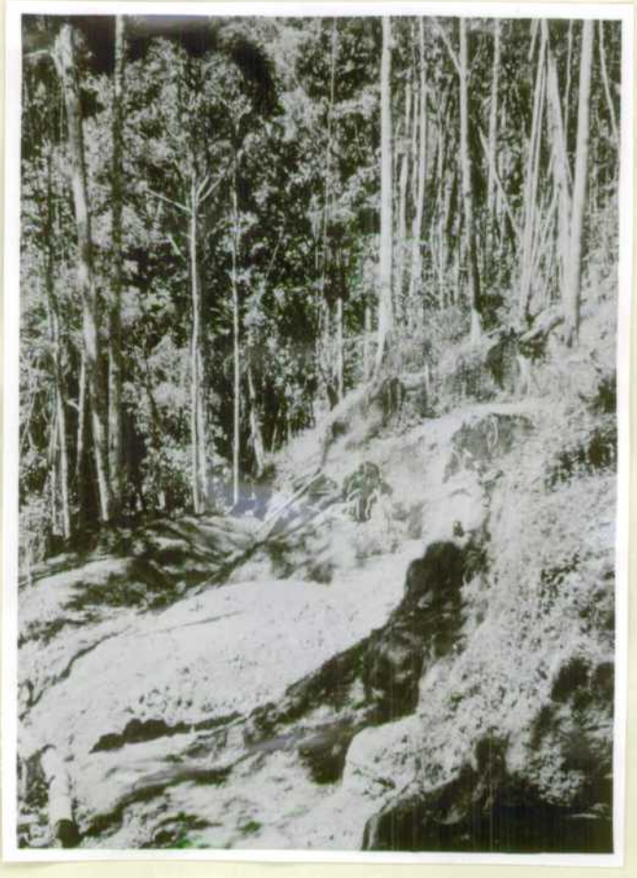

Figure 2. Open Cut at Mt. Victor Prospect

History and Tenures :

Mt. Victor and Clarke Ridge Prospects were discovered in March 1957 by Mr. N. Stagg of Kainantu who was granted Exclusive Prospecting Licence No.37 over the prospective area in January 1958. Australian Gold Development N.L. took an option over the Licence area early in 1958 which they relinquished to King Island Scheelite Ltd. in April 1959. Work on the prospects ceased in January 1960.

Development :

Development at Mt. Victor in the early stages consisted of pitting, costeaning and open cutting, which delineated the outcrop of the lode. Later the following underground exploration was done:-

No.1 Level : A crosscut (reduced level 5975 feet) was driven from the south-east side of the ridge for 90 feet in lode at which point an internal shaft 24 feet deep was sunk. Short drives to the south-west and to the north-east were made.

No.2 Level : A crosscut (reduced level 5926 feet) was started from the north-west side of the ridge and a total of about 600 feet of crosscutting and driving was done, finally connecting with the shaft from No.1 level. A crosscut below the portal of No.1 level was also connected with the shaft.

No.3 Level : A crosscut (reduced level 5872 feet) was put in 150 feet to test the downward extension of the lode. (See figure 3).

Several other small prospecting tunnels were driven on small patches of lode in porphyry elsewhere in the Mt.Victor area.

Seven percussion drill holes located along the strike of the Mt. Victor lode were drilled by the Mines Division of the Papua and New Guinea Administration for King Island Scheelite Ltd. as an aid to mining under the Mining Development Ordinance. This drilling was not completely satisfactory because in the oxidised lode, the hard "ironstone" contains many joints and cavities, and water and sample losses were high; and it was difficult to keep the casing closely behind the bit, particularly in the unoxidised lode, with the result that the last three holes had to be abandoned before the target depth was reached because of caving from below the casing.

All underground workings and the percussion drillholes were sampled at 5 feet intervals and assayed for gold and silver by New Guinea Goldfields Ltd., Wau.

Figure 3. Portal of No.3 Level. The dump is composed of white hydrothermally altered porphyry.

REGIONAL GEOLOGY

The three prospects are situated on the northern margin of a body of andesite porphyry, part of a large intrusive of intermediate composition which is here called the Elendora Porphyry. This intrusion is probably Pliocene. Both Clarke Ridge and Mt. Victor are on a north-east trending zone of hydrothermal alteration in porphyry along a contact between the porphyry and a much older granodiorite. This contact which is remarkably straight for over a mile, is probably fault controlled. Mt. Ubank Prospect is on the contact of the porphyry with silicified siltstone and chert.

The granodiorite, here called the Mt. Victor Granodiorite, ranges in composition from granodiorite to quartz diorite. A sequence consisting of a basal arkose overlain by conglomerate, siltstone and greywacke exposed about half a mile north of Clarke Ridge are here grouped as the Omaura Beds. Near Mt. Ubank, the sediments of this sequence have been indurated by the porphyry to silicified siltstone and chert.

North and west of the prospect area is a large basic intrusion called here the Akuna Intrusive. It was probably emplaced after the Mt. Victor Granodiorite and before the Elendora Porphyry, but it played no part in the gold mineralisation.

In the prospect area the Elendora Porphyry is essentially a hornblende andesite porphyry which, at Mt.Victor and Clarke Ridge, is intensely hydrothermally altered. To the south-east the outcrop of the intrusion widens and the rock changes to a medium-grained holocrystalline diorite. Here it intrudes a Lower Miocene conglomerate. The Elendora Porphyry is very similar petrologically to some of the Aifunka Volcanics and associated intrusives about 3 miles west of Kainantu which were regarded by McMillan and Malone (1960)* as Pliocene.

All the gold in this south-eastern part of the Eastern Highlands District is associated with the Elendora Porphyry and almost all the creeks draining this intrusion carry some alluvial gold. However, the three prospects considered in this report are the only lodes which have so far been located.

MT. VICTOR PROSPECT

General Description

Outcrop : The lode outcrop is lenticular, about 800 feet long and up to 180 feet wide. The lode strikes north-east, parallel with the trend of the ridge, and dips north-west at about 15° (see Plate 3). It is pod-shaped in cross-section and is up to 50 feet thick.

No.1 Level (R.L. 5975 feet) : No.1 Level North Crosscut was started at the granodiorite footwall on the south-eastern side of the ridge and penetrated lode composed of massive limonite and limonite-stained porphyry with occasional lenses of banded sugary quartz. Over the last 30 feet, bulges of hangingwall porphyry appeared in the roof and at 90 feet the hangingwall dipped underfoot at about 20° to the north-west. At this point an internal shaft was sunk for 30 feet through banded sugary quartz and some massive limonite until water prevented further progress. At 53 feet, a south-westerly drive for 55 feet passed through lode with bulges of porphyry again appearing in the roof. At 55 feet, the hangingwall dipped underfoot to the west at 15°. A 15 foot shaft was sunk at this point but once again water was encountered before the footwall was reached.

No.2 Level (R.L. 5926 feet) : This level was designed to cut the lode 50 feet lower than No.1 Level and was started from the north-western side of the ridge in the hangingwall porphyry. At 62 feet from the portal the hangingwall was encountered, dipping to the north-west at 65°. Veins and masses of pyrite were seen within two feet of the hangingwall but these gave way to oxidised lode containing limonite masses and minor sugary quartz lenses. From 130 feet to 222 feet, where the granite footwall was intersected, the lode was mainly sugary quartz with small limonite masses.

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* McMillan N.J. and Malone E.M., 1960 The Geology of the Eastern Central Highlands of New Guinea. Bur.Min.Resour.Aust. Rep. 48.

A small drive to the east at 166 feet located the footwall at 45 feet. At 126 feet from the portal a south-westerly drive 195 feet long connected with the shaft from No.1 level; the last 80 feet was mainly in pyritic porphyry. A south-easterly crosscut from this drive, about 70 feet from the main drive, cut the granite footwall at 85 feet. Near the end of the drive small prospecting tunnels traced the porphyry hangingwall which again contained masses of unoxidised pyrite. A crosscut from the south-eastern side of the ridge in granite connected with the internal shaft from No.1 Level.

No.3 Level (R.L. 5872 feet) : No.3 Level South Crosscut sought the extension of the lode at depth but cut the granite/porphyry contact at 148 feet without intersecting lode. Only small pyritic quartz stringers with green stains were seen on the contact. Up to this point the porphyry contained rare large crystals of sphalerite up to 3 inches across, and thin pyrite-sphalerite veins. At 142 feet, a 22 foot rise encountered massive pyrite and mineralised porphyry at 12 feet.

Percussion Drilling : Seven percussion holes were sited along the strike of the lode. The results of this drilling are summarised below and detailed logs are included in Appendix I :-

P.D.H. No.1 (69 feet) : Hangingwall of oxidised lode at 30 feet and granodiorite footwall at 65 feet.

P.D.H. No.2 (83 feet) : Hangingwall of oxidised lode 25 feet and the granodiorite footwall at 75 feet.

P.D.H. No.3 (105 feet) : Hangingwall of oxidised lode at 55 feet and the granodiorite footwall at 95 feet.

P.D.H. No.4 (123 feet) : Hangingwall of oxidised lode at 45 feet and the granodiorite footwall at 105 feet.

P.D.H. No.5 : Not drilled.

P.D.H. No.6 (125 feet) : The sinker bar was lost and the hole was abandoned at 125 feet before reaching the granodiorite footwall. The hole penetrated hydrothermally altered porphyry containing abundant pyrite; samples between 30 feet and 110 feet contained over 50% pyrite.

P.D.H. No.7 (183 feet) : Penetrated unoxidised mineralised porphyry which contained over 50% pyrite between 70 feet and 183 feet. The hole was abandoned at 183 feet because of caving below stuck casing. It is possible that this hole just reached the granodiorite footwall.

P.D.H. No.8 (175 feet) : Abandoned because of caving at 175 feet before reaching the footwall. Between 72 feet and 175 feet the sample contained at least 50% pyrite.

Lode Geology :

The oxidised lode is colour-banded, sugary and commonly friable quartz, which ranges in colour from white to brown and green. The colour banding is mostly parallel to the walls of the lode and is probably due to iron-staining. Large irregular masses of limonite with some magnetite are common in the lode and in places specularite occurs as disseminations and patches in the sugary quartz. The limonite masses are irregularly jointed and contain large cavities. These masses, which are irregular both in shape and size, are due to the oxidation of massive pyrite segregations which were seen in the unoxidised portions of the lode. Magnetite is disseminated through the limonite in a few places but was not seen in the unoxidised lode.

Gold of fineness between 780 and 810 occurs free in the oxidised zone and ranges in size from fine colours to fine wire gold. It was seen in a few places as small quartz-gold specimens up to $\frac{1}{4}$ inch across. The highest gold values are in the sugary quartz. The limonite contains fine gold but the grade is consistently poor. Some limonite-gold specimens up to several pennyweights have been found in the creeks draining the prospect area but their source is not known.

Near the western end of the underground workings, the lode changes in character and contains no sugary quartz. Here it consists of massive limonite grading into limonitic clay, obviously derived from the oxidation of highly mineralised porphyry. The grade in this part of the lode is much lower than elsewhere.

The limit of oxidation of the lode roughly corresponds to the limit of the sugary quartz which may have allowed free circulation of the underground waters thus facilitating oxidation.

The unoxidised lode, as seen at the extreme western end of No.2 Level and in drill holes 6, 7 and 8, consists of hydrothermally altered pyritized porphyry. The pyrite in the porphyry occurs as fine to medium-grained disseminations, patches and veins. Thin quartz stringers and patches of quartz crystals are common. In the underground workings, the unoxidised lode, (which here contains at least 95% pyrite), was seen only near the hangingwall. Drill holes 6, 7 and 8, penetrated mineralised porphyry throughout their length, and all three holes penetrated over 100 feet of porphyry with more than 50% pyrite. The grade in the unoxidised lode is uniformly low. Slight green staining in pyrite-quartz veins in No.3 Level suggested copper in the lode. However, this was not confirmed by the assay of two samples from P.D.H. No.7 which gave the following results:

Interval	Fe	Ni	Co	As	Cu	S
95-100'	35.8%	0.06%	Nil	tr.	Nil	25.2%
100-105'	40.6%	0.08%	Nil	tr.	Nil	27.3%

Secondary Enrichment :

The oxidised lode has an average value of 4.4 dwts gold per ton and the unoxidised lode 0.5 dwts gold per ton. This contrast is due partly to differences in the primary lode and partly to secondary enrichment.

The oxidised lode is predominantly sugary quartz which probably had a higher primary gold content than the pyritic porphyry which was not so readily oxidised. The limonite masses and the limonitic porphyry have higher gold content than their unoxidised, pyritic counterparts. This is attributed to secondary enrichment.

Reserves :

It is estimated that there are 100,000 tons, averaging 4.4 dwts of gold per ton, in the oxidised part of the lode tested.

The average of the assays of all samples taken from underground workings in the oxidised zone indicates a grade of 4.4 dwts gold per ton. The average of assays of the drill samples from the oxidised lode was 3.6 dwts gold per ton. This discrepancy may be due to irregular values within the lode but, more likely, it reflects the limitations of the percussion drill as a sampling tool under the conditions encountered.

The assays of drilling samples from the heavily mineralised porphyry averaged only 0.5 dwts gold per ton.

At the present (1960) price of gold, not even the oxidised lode could be economically mined.

CLARKE RIDGE PROSPECT (See Plate 5)

General Description :

The Clarke Ridge prospect is approximately 1200 feet north-east of Mt. Victor prospect and is within E.P.L.37.

The lode crops out near the top of a ridge on the contact between the Mt. Victor Granodiorite and the Elendora Porphyry.

Early work consisted of pitting and costeaning to delineate the outcrop of the lode. It included:-

No.1 Crosscut, (R.L. 5696 feet), which was driven from the east side of the prospect ridge for 125 feet in granodiorite without encountering the lode.

No.2 Crosscut, (R.L. 5685 feet), which consists of two short crosscuts with a connecting drive. Both crosscuts passed through a mantle of slipped lode material for about 15 to 20 feet, then through 20 to 25 feet of lode, finally penetrating the granodiorite footwall. A total of 105 feet of driving along the lode was done on this level.

To the north, down the flank of the prospect ridge, six short tunnels were also driven to test the downward extension of the lode. Three of these entered the granodiorite without locating the lode; the others encountered lode near the granodiorite contact.

Lode Geology :

The lode at Clarke Ridge is almost certainly a remnant of the Mt. Victor Lode separated from it by downcutting of the intervening creek.

The lode outcrop is oxidised to masses of limonite and limonitic porphyry. Oxidation of the lode extends to a depth of 80 to 100 feet. Most gold occurs in lenses of banded sugary quartz within the oxidised zone.

Below the limit of oxidation the lode is a highly pyritic porphyry containing veins and small masses of pyrite, and a few quartz-pyrite stringers. No sugary quartz lenses were seen in the unoxidised zone. The granodiorite footwall is sharp but the porphyry hangingwall is indistinct. For the purposes of ore estimation and illustration on the attached plans, the hangingwall is arbitrarily positioned where the porphyry contains more than 50% pyrite.

The lode strikes 040°, dips north-west at 30° to 35° and has an average width of about 20 feet. The average of sample assays from the oxidised lode was 4.03 dwts of gold per ton. This average includes three anomalous assays of 48.4, 20.4 and 27.4 dwts of gold per ton. The average of assays from the unoxidised lode was 1.5 dwts of gold per ton.

Reserves

On the information available it is impossible to give a reliable estimate of reserves but there may be 40,000 to 60,000 tons averaging about 2-3 dwts of gold per ton.

MT. UBANK PROSPECT (See Plate 6)

General Description :

Mt. Ubank Prospect is about 9 miles south-south-east of Kainantu and 2 miles west of Mt. Victor and may be reached from Kainantu by unsurfaced motor road to Norei-Korei Village thence by 2 miles of walking track. It was discovered in 1957 by Mr. N. Stagg while prospecting for Australian Gold Development N.L. who were granted an Extended Prospecting Lease (No.47) over the area. Later prospecting was done by King Island Scheelite Ltd.

There are two main areas of gold mineralisation and development was confined to these. In the north-western area a shaft was sunk 30 feet on the main exposure but intersected only small mineralized patches. Several short drives were put in on other mineralized showings and one crosscut 120 feet long passed 40 feet below the shaft without striking lode.

In the south-eastern corner of the lease, open-cutting and pitting revealed mainly scree. Four small prospecting tunnels were driven but only one struck lode, which proved small. This prospect was not drilled.

Lode Geology :

The lodes occur on or near the margins of a hornblende andesite porphyry dyke which is an apophysis of the Elendora Porphyry. The dyke intrudes siltstone and marl of the Omaura Beds, which it has silicified to chert and cherty siltstone. The Omaura Beds strike between 280° and 290° and dip north at 45° to 50°. The intrusion is aligned with the regional strike in the prospect area.

The porphyry is mostly fresh and does not show the extensive hydrothermal alteration seen at Mt. Victor. No structural control of mineralization was recognised. The lodes are discontinuous small patches, commonly not more than 20 feet long and 18 inches wide, and do not appear to extend more than 30 feet below the present ground level.

The gold occurs as irregular but in places rich patches in limonite masses, limonitic rubbly quartz and limonitic porphyry. Straw-coloured garnet (probably andradite), a prominent component of dish concentrates, is probably derived from contact with metamorphosed calcareous sediments of the Omaura Beds.

GENESIS OF THE LODES

The gold was deposited as late-stage emanations from the cooling magma of the Elendora Porphyry. The Mt. Victor lode and the Clarke Ridge lode occur where the porphyry-granodiorite contact is sub-horizontal. Where the contact is steep, as in No.3 Level at Mt. Victor, gold mineralisation is weak or absent. The ascending mineralising solutions may have been entrapped or, at least retarded, on the sub-horizontal contacts permitting lode deposition and replacement.

North of the Mt. Victor prospect area, the granodiorite-porphyry contact is remarkably straight for more than a mile, but there are clear intrusive relationships. It is suggested that the porphyry intruded into a major fault zone. Gold-pyrite-quartz mineralisation and hydrothermal alteration of the porphyry have been localised along the granodiorite-porphyry intrusive contact.

CONCLUSIONS AND RECOMMENDATIONS

Percussion drilling and some underground exploration at the Mt. Victor lodes has indicated about 100,000 tons of oxidised lode averaging about 4.4 dwt gold per ton and a much larger tonnage of unoxidised pyritised porphyry averaging about 0.5 dwts per ton. The limits of the Mt. Victor mineralisation are fairly well established and there seems little prospect of economically mining this lode under present access, labour and economic conditions.

The Clarke Ridge prospect, a detached portion of the Mt. Victor lode, contains about 50,000 tons of limonitic porphyry averaging 2 to 3 dwts gold per ton and a larger volume of unoxidised pyritic porphyry containing about 1.5 dwts gold per ton.

In the Mt. Ubank prospect, gold occurs with limonite and in patches of quartz distributed erratically on or near the margin of a hornblende andesite porphyry dyke. Available tonnage is very small and average grade is low despite some locally high assays.

Further gold lodes may be found along the margin of the andesite porphyry but it is unlikely that their dimensions and grade will exceed those of the prospects tested which are not economic under present conditions.

APPENDIX 1

RESULTS OF PERCUSSION DRILLING

MOUNT VICTOR PROSPECT

Depth Ft.	Core (Driller's description)	Sample Depth Ft.	Pyrite %	Sample No.	Assay Dwts Gold/ ton
		HOLE NO.1 (R.L. 5999')			
0 - 12½	Yellow Clay	0 - 10		7701	0.4
12½- 30	Soft brown clay	10 - 15		7702	1.0
	and some iron-	15 - 20		7703	0.8
	stone	20 - 25		7704	0.4
		25 - 30		7705	2.2
30 - 45	Hard "ironstone"	30 - 35		7706	1.0
		35 - 40		No sample	
		40 - 45		7707	3.8
45 - 55	Brown clay with	45 - 50		7708	2.4
	some "ironstone"	50 - 55		7709	0.4
	and quartz				
55 - 66	Soft yellow clay	55 - 60		7710	0.4
	and "granite"	60 - 65		7711	0.4
	"sand"				
66 - 69	Granite	65 - 69		7712	Tr.
		HOLE NO. 2 (R.L. 6005')			
0 - 16	Yellow clay	0 - 10		7713	0.6
16 - 25	Brown clay some	10 - 15		7714	0.2
	pyrites				
		15 - 20		7715	tr.
		20 - 25		7716	4.6
25 - 40	"Ironstone"	25 - 30		7717	7.8
		30 - 35		7718	2.4
		35 - 40		7719	1.6
40 - 75	Very hard	40 - 45		7720	1.6
	"ironstone"	45 - 50		7721	0.6
		50 - 55		7722	0.2
		55 - 60		7723	1.4
		60 - 65		7724	1.2
		65 - 70		7725	0.6
		70 - 75		7726	0.2
75 - 82	Hard brown clay	75 - 80		7727	tr.
	and granite				
	"sand"				
82 - 82½	Hard granite	80 - 82½		7728	tr.
		HOLE NO. 3(R.L. 6022')			
0 - 10	Yellow clay	0 - 10		7729	Tr.
10 - 25	Red & yellow	10 - 20		7730	0.2
	clay	20 - 25		7731	0.2
25 - 30	Red sandy clay	25 - 30		7732	Tr.
30 - 54½	White sandy	30 - 35		7733	0.2
	clay and	35 - 40		7734	0.2
	pyrite.	40 - 45		7735	0.2
		45 - 50		7736	0.2
54½- 57	Brown sandy	50 - 55		7737	0.4
	clay				
57 - 61	Hard "ironstone"	55 - 60		7738	0.6
61 - 82	"Ironstone"	60 - 65		7739	3.6
		65 - 70		7740	4.4
		70 - 75		7741	4.4
		75 - 80		7742	1.2
82 - 86	Soft brown clay	80 - 85		7743	0.2
	and quartz sand	85 - 90		7744	0.2
86 -103	Brown sandy clay	90 - 95		7745	0.2
		95 -100		7746	0.2
103 -105	Granite	100 -105		7747	0.2

Depth Ft.	Core (Driller's description)	Sample Depth Ft.	Pyrite %	Sample No.	Assay Dwts Gold/ ton
	HOLE NO.4 (R.L. 6027')				
0 - 30	Yellow clay	0 - 10		7748	0.2
		10 - 20		7749	0.2
		20 - 30		7750	Tr.
30 - 40	Reddish clay	30 - 40		7751	Tr.
40 - 45	White sandy clay much pyrite	40 - 45		7752	0.2
		45 - 50		7753	2.2
45 - 54	"Ironstone"	50 - 55		7754	0.2
54 - 58	Hard "ironstone"				
58 - 59	"Ironstone"				
59 - 60	Dark grey pyritic sandy clay	55 - 60		7755	Tr.
60 - 65	Hard greenish pyritic porphyry	60 - 65		7756	0.4
65 - 70	Brown clay	65 - 70		7757	Tr.
70 - 95	Hard "ironstone"	70 - 75		7758	0.6
		75 - 80		7759	Tr.
		80 - 85		7760	0.4
		85 - 90		7761	0.6
		90 - 95		7762	1.8
95 -101	"Ironstone"	95 -100		7763	1.8
101 -105	Brown sandy clay	100 - 105		7764	1.6
105 -123	Soft granite	105 - 110		7765	0.2
		110 - 115		7766	Tr.
		115 - 123		7767	0.2
	HOLE NO.5 NOT DRILLED				
	HOLE NO. 6 (R.L. 6032')				
0 - 25	Yellow clay	0 - 10		7768	Tr.
		10 - 20		7769	0.4
25 - 30	Soft white porphyry	20 - 30	Tr	7770	0.2
30 - 50	Soft grey porphyry	30 - 40	25	7771	1.2
		40 - 45	50	7772	0.4
		45 - 50	50	7773	Tr.
50 - 73	Hard grey mineralised porphyry	50 - 55	75	7774	0.6
		55 - 60	75	7775	1.6
		60 - 65	75	7776	1.8
		65 - 70	75	7777	1.8
73 - 73¼	Hard siliceous porphyry	70 - 75	75	7778	0.8
73¼- 90	Heavily mineralised porphyry & quartz chips	75 - 80	75	7779	0.8
		80 - 85	75	7780	1.0
		85 - 90	75	7781	1.2
90 - 110	Heavily mineralised soft porphyry	90 - 95	60	7782	0.8
		95 -100	60	7783	0.4
		100 -105	60	7784	0.4
		105 -110	60	7785	0.2
110 -115	Mineralised sandy porphyry	110 -115	50	7786	0.2
115 -125	Soft coarse sand, no mica	115 -120	20	7787	0.2
		120 -125	10	7788	0.2

Lost sinker bar at 125'; abandoned.

Depth Ft.	Core (Driller's description)	Sample Depth Ft.	Pyrite %	Sample No.	Assay Dwts. Gold ton
	HOLE NO. 7 (R.L. 6058')				
0 - 30	Yellow clay	0 - 10		Nil	not assayed
		10 - 20		"	" "
		20 - 30		"	" "
30 - 40	Yellow clay	30 - 40	Tr	"	" "
40 - 50	Oxidised porphyry	40 - 50	5	7789	0.2
50 - 75	Mineralised porphyry	50 - 60	20	7790	0.2
		60 - 70	30	7791	Tr.
		70 - 75	50	7792	Tr.
75 - 92	Soft brown mineralised porphyry	75 - 80	50	7793	0.2
		80 - 85	50	7794	
		85 - 90	50	7795	
92 -100	Heavily mineralised porphyry	90 - 95	75	7796	
		95 - 100	75	7797	
100 -183	Heavily mineralised puggy porphyry	100 - 105	60	7798	
		105 - 110	60	7799	
		110 - 115	60	7800	
		115 - 120	60	7801	
		120 - 125	60	7802	
		125 - 130	60	7803	
		130 - 135	60	7804	
		135 - 140	60	7805	
		140 - 145	60	7806	
		145 - 150	60	7807	
		150 - 155	60	7808	
		155 - 160	60	7809	0.4
		160 - 165	50	7810	0.2
		165 - 170	50	7811	0.2
		170 - 175	50	7812	0.4
		175 - 180	50	7813	0.4
		180 - 183	50	7814	0.2
	Casing stuck and hole collapsing on tools; abandoned at 183'				
	HOLE NO. 8 (R.L. 6082')				
0 - 10	Yellow clay	0 - 10		Nil	not assayed
10 - 46	Oxidised porphyry	10 - 20		"	" "
		20 - 30		"	" "
		30 - 40		"	" "
46 - 50	Partly oxidised porphyry	40 - 50	15	7815	
50 - 56	Mineralised porphyry	50 - 60	15	7816	
56 - 61	Oxidised porphyry				
61 - 72	Mineralised porphyry	60 - 70	20	7817	
72 -113	Heavily mineralised porphyry	70 - 75	60	7818	
		75 - 80	60	7819	
		80 - 85	60	7820	
		85 - 90	60	7821	
		90 - 95	60	7822	
		95 - 100	60	7823	
		100 - 105	60	7824	
		105 - 110	60	7825	
113 -119	Very heavily mineralised porphyry	110 - 115	75	7826	
		115 - 120	80	7827	
119 -150	Heavily mineralised porphyry	120 - 125	60	7828	
		125 - 130	60	7829	
		130 - 135	50	7830	
		135 - 140	70	7831	
		140 - 145	70	7832	
		145 - 150	70	7833	
150 -175	Heavily mineralised porphyry and quartz chips	150 - 155	30	7834	
		155 - 160	50	7835	
		160 - 165	50	7836	
		165 - 170	50	7837	
		170 - 175	50	7838	
	Casing stuck and hole collapsing on tools; abandoned at 175'.				

PLATE 1

GEOLOGICAL MAP
KAINANTU AREA

Scale
1 Mile to 1 inch

0 1 2 3

KAINANTU

Lake Beds

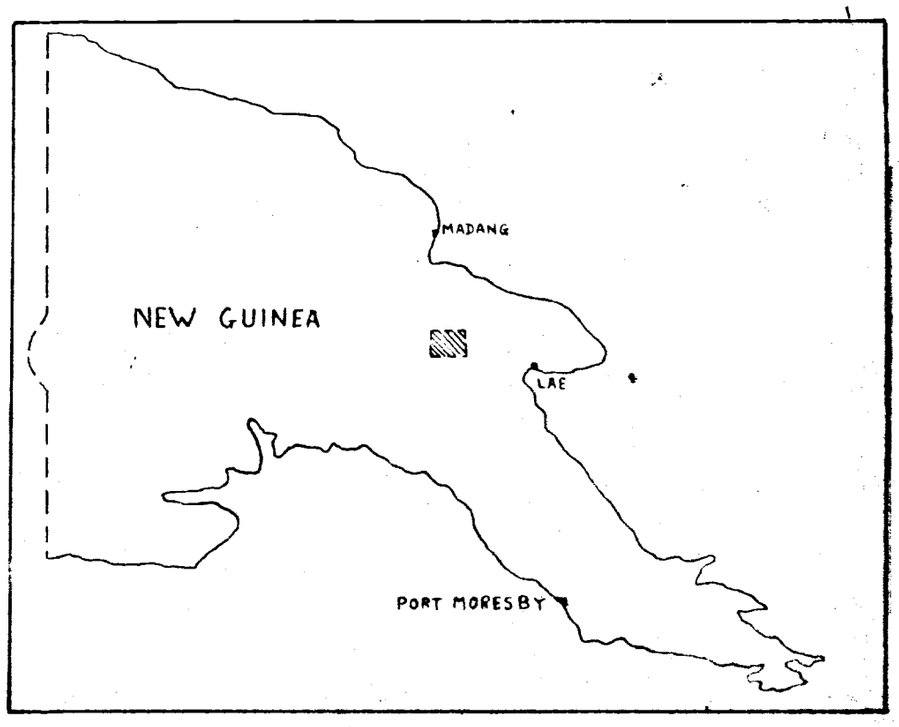
Lake Beds

MT USANK

CLARKE RIDGE

MT VICTOR

NORTH
5°30'
TRUE
MAGNETIC NORTH



REFERENCE

QUATERNARY — Alluvium, including lake beds

TERTIARY

PLIOCENE?
- Elemdora Porphyry — Andesite Porphyry, Dacite

MIOCENE
- f Stage
  - Conglomerate — Igneous components
  - Akuna Porphyry — Diorite, Gabbro
- e Stage
  - Omaura Beds — Calc. Siltstone, Arkose, Greywacke

MESOZOIC — CRETACEOUS?
- Mt Victor Granodiorite — Granodiorite

GEOLOGICAL PLAN

MT VICTOR PROSPECT

Scale
40 Feet to 1 inch

20 0 40 80 100

See Plate 3 for cross sections

TRUE NORTH
MAGNETIC NORTH
5° 30'

5760 5780 5800 5820 5840 5860 5880 5900 5920 5940 5960 5980 6000 6020 6040 6060

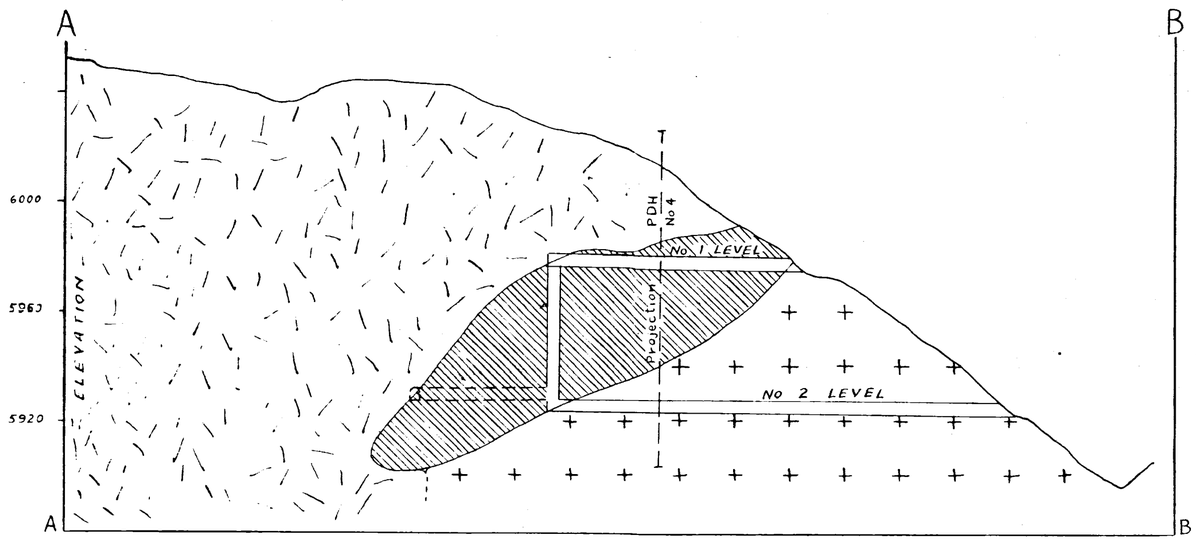
No. 3 Level
South X-cut
Magazine X-cut
No. 2 Level
North X-cut
West Drive
No. 1 Level
No. 2 Level
OPEN CUT

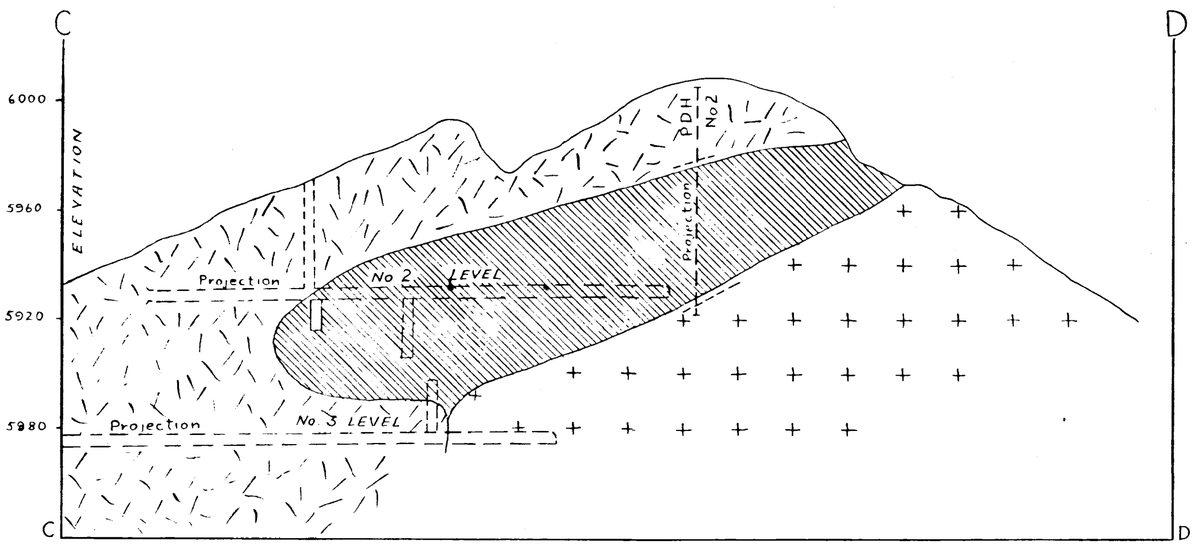
P.D.H. No. 1
P.D.H. No. 2
P.D.H. No. 3
P.D.H. No. 4
P.D.H. No. 6
P.D.H. No. 7
P.D.H. No. 8

A B C D E F

LEGEND

- Lode : Limonite and Sugary Quartz
- ELENDORA PORPHYRY — Andesite Porphyry
- MT VICTOR GRANODIORITE — Granodiorite
- Geological boundary pos^n approx
- Geological boundary inferred
- 5600 — Contour
- ·5615' — Spot height from plane table survey Arbitrary local datum
- Portal and underground workings
- Shaft
- Rise
- Pit
- A — B — Line of section
- P.D.H. — Percussion Drill Hole





GEOLOGICAL SECTIONS

(See Plate 2 for section lines)

MT VICTOR PROSPECT

Vertical and Horizontal Scale
40 Feet to 1 inch

20 0 40 80 100

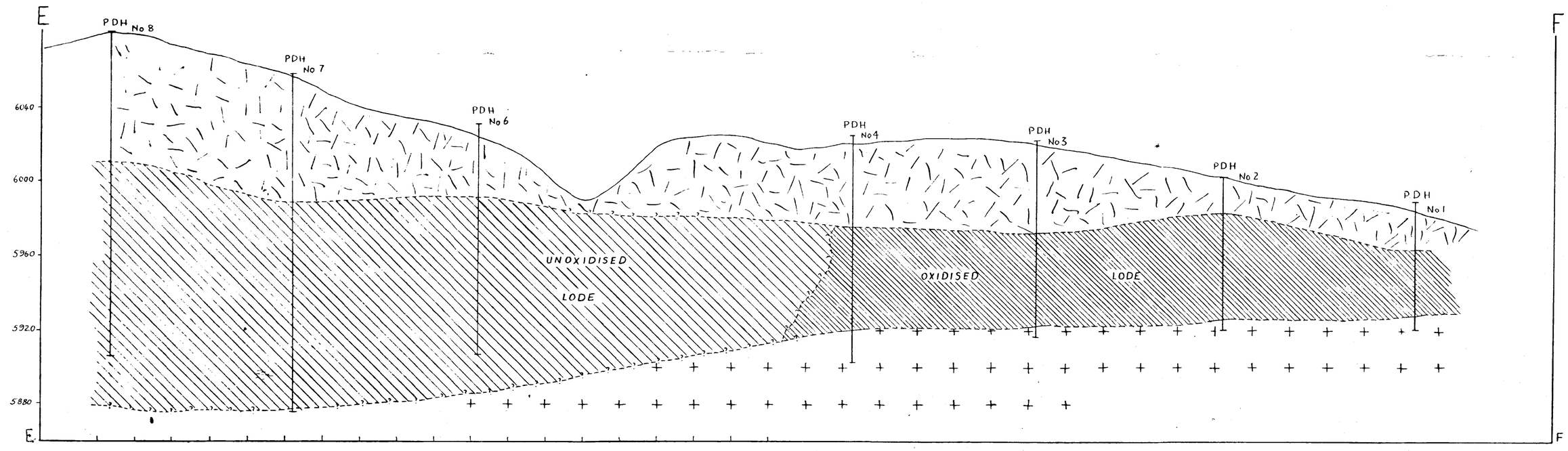
REFERENCE

Lode, oxidised, unoxidised

Mt Victor Granite — Granodiorite

Elendora Porphyry — Andesite Porphyry

P. D. H. • Percussion Drill Hole



ASSAY PLAN

MT VICTOR PROSPECT

Scale
40 Feet to 1 inch

20 0 40 80 100

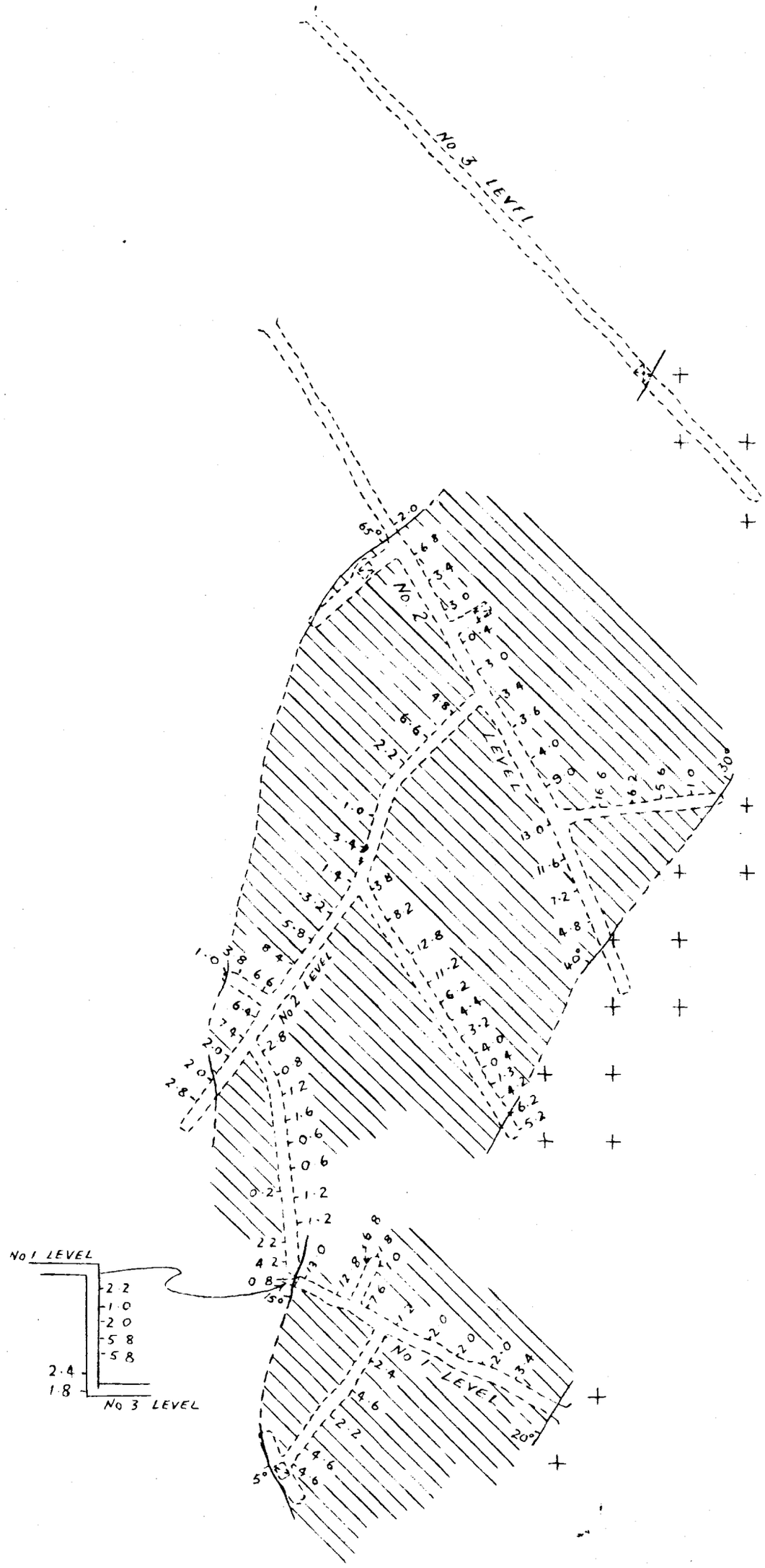
Assays given as dwts gold per ton

REFERENCE

Lode

Granodiorite

MAGNETIC NORTH



GEOLOGICAL PLAN

CLARKE RIDGE PROSPECT

Scale
40 Feet to 1 inch

20 0 40 80 120

R.L. 5520'
5540
R.L. 5537'
5560
5580
R.L. 5585'
R.L. 5558'
5600
5620
R.L. 5620'
R.L. 5650'
No 2.
R.L. 5685'
R.L. 5755'
No. 1. R.L. 5695'

NORTH MAGNETIC NORTH 5°30'

REFERENCE

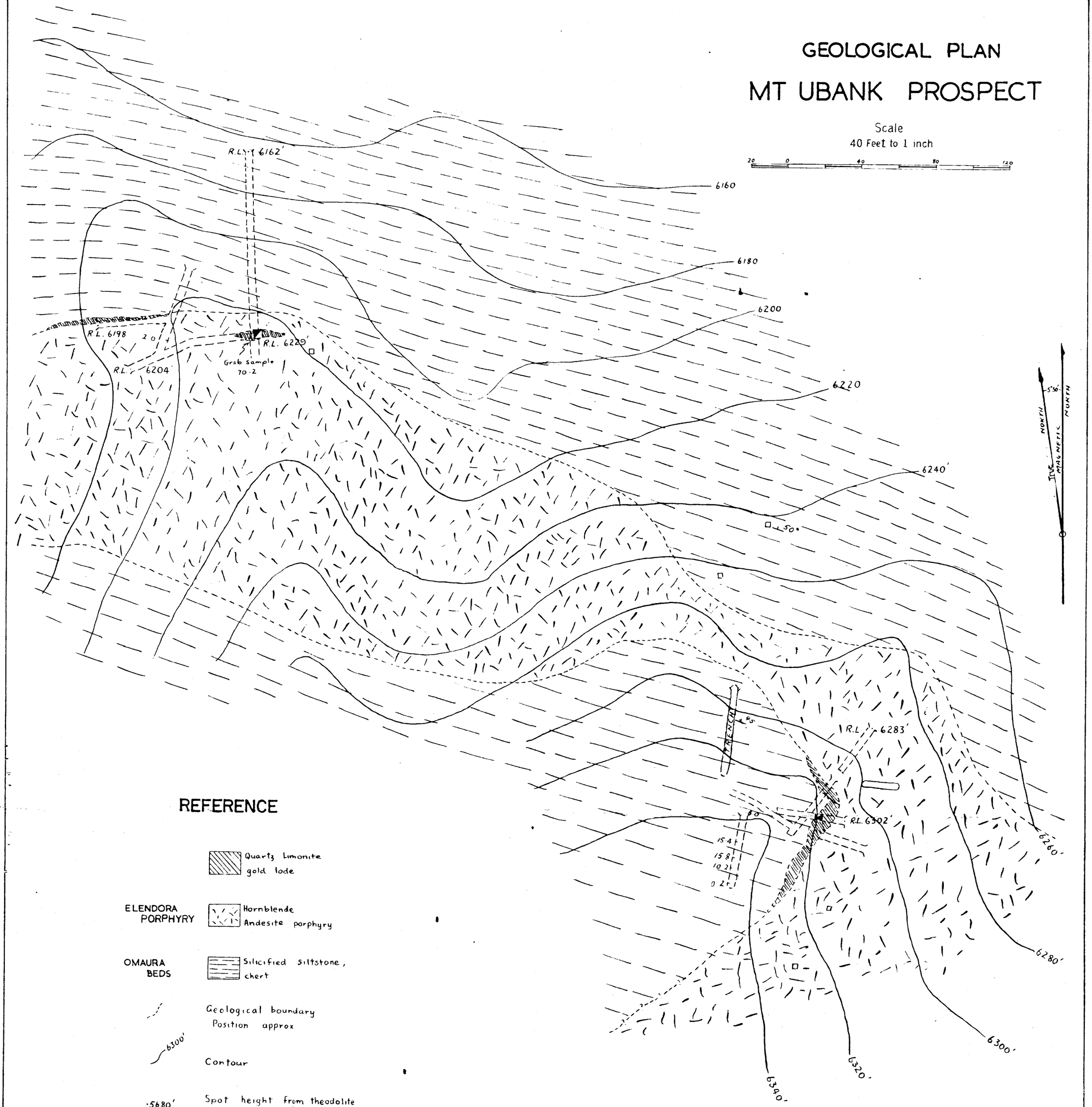
- Limonitic Sugary Quartz Lode
- ELENDORA PORPHYRY — Andesite Porphyry
- MT VICTOR GRANODIORITE — Granodiorite
- Geological boundary Position approx.
- 5620' — Contour
- .5615' — Spot height. from theodolite survey. Arbitrary local datum
- Underground working with assay values in dwts gold per ton.

GEOLOGICAL PLAN

MT UBANK PROSPECT

Scale
40 Feet to 1 inch

20 0 40 80 120



REFERENCE

		Quartz Limonite gold lode
ELENDORA PORPHYRY		Hornblende Andesite porphyry
OMAURA BEDS		Silicified siltstone, chert
		Geological boundary Position approx
	6300'	Contour
	·5680'	Spot height from theodolite survey, Arbitrary local datum
	4	Underground working with assay value in dwts. per ton