



on the Hopkins-Heintzman Gold Prospect

Sirdar Peninsula, Shoal Lake, near Kenora, Ontario

by Albert Hopkins, geologist, Hopkins Mining Consultants Limited

Introduction

On 17th September 1962 we contracted to perform this survey for Messrs. P.E. Hopkins and J.D. Heintzman, and this report with the attached large geological map is the result.

Property

This survey was performed on the following 11 contiguous unpatented mining claims nos. K.32663 -68 incl., 33007 -09 incl., and 33156 -57 inclusive, on the north part of Sirdar Peninsula. This is the peninsula that separates Bag Bay from the north part of Shoal Lake.

Location

Sirdar peninsula lies in Glass twp., in the north part of Shoal lake, Kenora Mining Division, northwestern Ontario. This is 3 miles northeast of Duport Gold Mine on Cameron Island; 5½ miles due east of Kejick P.O. which is at the Indian Reserve landing at the south end of the Shoal Lake road; 3 airmiles northwest of Barbara Machin's Gold Point Lodge; 2 miles northwest of Olympia Gold Mines Inc., 1½ miles northwest of the Mikado Gold Mine; and ½ mile northwest of the Cedar Island (Cornucopia) Gold Mine which is owned by Kenora Prospectors and Miners Ltd., Toronto. The property lies 7½ miles east of the Manitoba boundary; 15½ miles north of Minnesota's "North-West Angle"; 26 airmiles WSW. of the town of Kenora, Ontario; and 100 airmiles ESE. of Winnipeg.

Access

The property may be reached by flying from Kenora by Parsons or Ontario Central Airways - 26 miles - 26 minutes - \$26. The property may be reached by motoring from Winnipeg or Kenora along Trans-Canada highway No. 17 to the Shoal Lake Road turnoff, which is about 3 miles east of the Manitoba boundary or 39 miles west of Kenora. Thence drive south 11 miles on a gravel road to the Shoal Lake Indian Reserve landing at Kejick P.O. Thence proceed by boat 5½ miles due east to the campsite on the small bay on the west side of Sirdar peninsula, passing just north of Felix Island. This small "Gossan" Bay provides the best harbour and campsite on the peninsula. Boat taxis are available at Kejick P.O., charging \$5 for the trip.

There is also a freight boat, the "Helen M" that plies twice weekly from Kenora to Dominique Island near the property. This boat is owned and operated by Lorne Malmø of Kenora.

Topography

This is similar to most parts of the Canadian Shield. The drainage is probably better and the relief slightly greater than most of the Kenora area. Though the drift and soil are not heavy, the rock knolls and ridges are usually nearly covered with moss. Thus good outcrops are rather scarce except along the lakeshore and along the top of the rocky ridges.

The ridges trend mainly northeast-southwest at an azimuth of about 25 degrees. This reflects both the tectonics, strike of the country rocks, and the latest glaciation, all three of which almost coincide.

General Geology

The oldest rocks in the area are Keewatin lava flows and sediments, including:-
rhyolite
andesite
basalt
pillow lava
iron formation

Secondly, a series of basic intrusives and their metamorphic derivatives include:-

diorite
gabbro
pyroxenite
peridotite
amphibolite

Thirdly, a series of porphyry dykes have intruded all the above-mentioned series, including:-

felsite porphyry
rhyolite porphyry
granite porphyry
diorite porphyry

Finally, pegmatite dykes and quartz and quartz-carbonate stringers and veins have intruded tension cracks, shear- and fault-zones. Subsequently, sulphides have been deposited alone or with the quartz.

Local Geology (see attached large map, scale : 1" to 100'.)

Keewatin lava flows, the oldest rocks present, underlie about a quarter of the 11-claim property. Of these lavas, by far the most common is andesite, comprising three-quarters of the lava outcrops.

The main mass of andesite (symbol 1A on the attached geological map) occurs in a zone 600 feet to 1000 feet wide and 2500 feet long on claim nos. K.32664, -65, -66, and -67, from coordinates 13150'N. to 15500'N. At its north end it appears to be cut off by cross-fault D7-D7. To the south it continues off the property into claim no. S.179. Its strike, as is the case for almost every rock type and contact on the property, is about 22°. In the area of (142N,44E) the andesite appears to grade into basalt. It can also grade into rhyolite, trachyte, or dacite. Cut-off points are often difficult to determine in the field, macroscopically, as no thin- or polished-sections were made for laboratory identification. From a textural standpoint, the andesite sometimes grades into very fine-grained diorite or amphibolite. The andesite is composed mainly of feldspar (plagioclase) and hornblende. Secondary minerals such as chlorite, epidote, and sericite have formed due to alteration.

Basalt (symbol 1B) occurs mainly on claim no. K.32665 from the lakeshore to the northwest corner of K.32664 (from the southwest corner of K.32665 at (132N,3250E) to (14250N,48E).

The basalt grades into andesite as to composition, and into gabbro as to texture.

Rhyolite (1C) was found at only one small outcrop on this property at (112N,5125E), near the southwest corner of K.33008. It is a very fine-grained, hard, grey, flinty-looking rock.

Trachyte (1E) also was found at only one small outcrop on the shore of Clytie Bay on K.33156 at (16550N,5450E). This rock, which might even be called felsite pending a microscopic examination, is light-grey in colour, presumably high in felspar and free of quartz.

Following the above Keewatin lavas, a series of basic intrusives and their metamorphic derivatives are now described. Their geological age is not known, but some of them are probably of Keewatin age and others Algoman(?).

By far the most common of these basic intrusives is diorite (2D), comprising almost half the property. The main mass extends from the south boundary NNE. to the boundary of the Sirdar claim No.SK.618. The diorite is believed by the writer to be of Keewatin age, and is seldom found unaltered, fresh-looking, or coarse-grained. It is generally of a grey colour, fine- to medium-grained, and somewhat altered, sometimes so much so as to be almost unrecognizable. In texture it sometimes appears to be coarse-grained andesite; in composition it sometimes appears to grade into gabbro; and by way of alteration, it grades into amphibolite. There is often no sharp dividing line between these facies.

Peridotite (2E) occurs as a dark, heavy, dense, igneous rock, characterized by its olivine-rich ferro-magnesian constituent. In some cases it may have been confused with pyroxenite. It is often high in magnetite also, and is sometimes magnetic enough to draw the compass needle e.g. at (15875N,5425E).

Pyroxenite (2B) grades from gabbro to peridotite. It appears the same as gabbro except for its lack of plagioclase. It is a black, heavy, augite-rich, iron-rich rock, sometimes magnetic (e.g. as at 13220N,3450E), and may have been confused with gabbro or peridotite by the writer on occasion.

Gabbro (2C) occurs as a dark, heavy igneous rock containing augite and plagioclase. Compositionwise it grades from diorite into pyroxenite, with either of which it may have occasionally been confused in this survey, due to lack of microscopic determinations.

Amphibolite (2A) is believed by the writer to be regionally metamorphosed diorite. It is composed almost entirely of amphibole (hornblende) and is a fine- to medium-grained, dense, heavy, black rock. It sometimes grades into altered diorite.

The porphyritic rocks are believed to be Algoman in age, as they intrude all the other rocks. They appear relatively fresh, although in places they may be altered due to local conditions.

The most striking of these is a giant dyke of diorite-porphry (3D) which strikes about 22° across the property. This dyke varies from 100 feet to 400 feet wide for a length of over a mile. It is medium- to coarse-grained, with plagioclase phenocrysts up to one inch cubes.

Rhyolite-porphyry (30) occurs in only three locations, i.e. at (12570N,6080E), (15745N,47E), and at (16350N,54E).

Tectonic Geology

An aerial photo interpretation study of this property was made by Wilfred Walker, B.A.Sc., geologist of Chew-Walker Associates of Toronto (without visiting the property), and their more salient lineaments are numbered and superimposed on our attached geological map.

The regional tectonic trend is at 22°, and there are 4 additional local structural directions, as follows:-

Series A.	75°	
"	B. 40°	Dips are generally vertical
"	C. 60°	or very steep.
"	D. 110°	

The above suggests local strain ellipsoids caused by regional stresses, and probably accounts for so many intrusives and so much alteration and mineralization. The lineaments are interpreted to represent faults, shears, fractures, and contacts.

The main regional shear strikes about 22° under the surface of Shoal Lake and along the west shore of the property, cutting the rock formations at a very oblique angle. It seems to split going northeast, one section of the shear passing through Alpha and Clarke Bays, and the other continuing between Alpha Island and Alpha Point and northeasterly along the shoreline past the north tip of the property.

Lineament A1-A2 does not appear prominent on the ground, except possibly at the small bay at (11440N,5560E).

Lineament A3-A4 shows evidence of a fault scarp and steep talus slope at (14050N,59E).

A5-A6 did not evidence itself to the writer on the ground. It is interpreted by Walker as a shear zone.

Walker has the B series striking 40°. It is interesting to note here that the Dupont gold-bearing vein system strikes between 40° and 45° from Cameron Island, just north of Island S.171, continuing under Shoal Lake, and its projection would pass just northwest of Island S.186 to our claim no. K.32665.

B1-B2 appears to be the western edge of the giant diorite-porphyry dyke in contact with the diorite host rock.

B3-B4, which is interpreted by Walker as a shear zone, did not show up on the ground, except perhaps along the scarp at (11850N,57E).

B3A-B4A (another shear interpretation) shows up as a scarp and as a shoreline feature near (11350N,5850E).

B5-B6 does pass along the bottom of a very high scarp and talus slope, and if projected, would pass through "E" vein at (15150N,5350E).

B8-B9 shear zone is probably part of the regional shear or fault zone mentioned at the beginning of this section on tectonics and also later in this report under Economic Geology.

C1-C2 did not show up any ground features.

B6-B6 lines up with a straight shoreline of Pitre Bay, and appears to be a fault, displacing various rock formations.

B7-B8 likewise appears to be a fault, displacing several rock types and aligning with a shoreline feature.

D1-D2 did not show up on the ground to the writer.

D3-D4 likewise.

D5-D5 did not show up, but is all overburdened.

D6-D6 could be a fault, as its whole length is in low overburdened ground.

D7-D7 did not show up, but is all overburdened.
D8-D9 ditto.

Economic Geology

Gold, the only economic mineral sought here at present, has widespread occurrence in the Kenora district. It occurs mainly in quartz fissure veins, siliceous shear zones, mineralized sheared and shattered porphyry intrusives, and as an association with massive and disseminated sulphides. The sulphides are commonly arsenopyrite, chalcopyrite, sphalerite, pyrrhotite, pyrite, galena, and molybdenite, in a descending order of importance.

Due to its location immediately west and south of the Hopkins-Heintzman property, a few remarks here on the Duport Mining Co. Ltd. should be in order. This company owns the Duport Gold Mine with shaft, underground workings, and plant on Cameron Island. A summary of the development is as follows:

<u>Level</u>	<u>Drifts</u>	<u>X-cuts</u>	<u>Raises</u>	<u>Underground D. Drilling</u>
1st	75'			
2nd	755	275'	22'	1,947'
3rd sub	65			
3rd	484	365		417
4th	<u>449</u>	<u>372</u>		<u>2,291</u>
Total	1,828'	1,012'	22'	4,655'

Total surface diamond drilling is in the order 25,000'
 Total diamond drilling 29,655'

The Ontario Bureau of Mines' Report for 1898 states that the Cameron Island Mining and Development Company, then operating the property, shipped 200 tons of ore grading 0.60 ounces of gold to the Keewatin Reduction Works (near Kenora). (This was Annual Report No. 7). In 1903 a small mill was erected, which was operated at infrequent intervals up to 1915. The only production reported is for 1915, when a test run of 5 tons of ore yielded gold valued at \$47.81 and 6 oz. in silver. (Gold at \$20.67 per ounce). The present company made small shipments of high-grade ore to the smelter in 1934, 1935, and 1936. The yield is reported as follows:-

	<u>Tons</u>	<u>Oz. Au.</u>	<u>Oz. Ag.</u>
1934	25	64.990	-
1935	475	2,097.666	232
1936	<u>715</u>	<u>2,474.182</u>	<u>911</u>
Total	1,215	4,636.838	1,143
		aver. 3.8 oz.	1 oz. per ton.
		(\$133.00	\$1.00 " " ")

The Bureau of Mines reports the total production from 1898 to 1936 as 1,287 tons ore with a value of \$163,871, or an average of \$12.70 per ton. The average price of gold at that time was somewhere between \$20 and \$35 per ounce. Today the price is about \$38 per ounce in Canadian funds.

The Shoal Lake Duport mine ore zone has been opened up for a length of 1,100 feet, and an additional length of 1,200 feet to the southwest is indicated in diamond drill holes. Although further drilling has been done on strike, neither end of the zone can be considered as closed off, in view of the possibility of offset faulting.

The exposed ore lengths are summarized as follows:-

	<u>Length</u>	<u>Width</u>	<u>oz. Au.</u>
Surface	50'	7.7'	0.44
	55	3.0	0.37
2nd level	175	4.9	0.47
	25	17.5	0.85
3rd level	30	4.5	0.67
	120	5.5	0.34
	15	3.0	0.44
<u>4th level</u>	<u>250</u>	<u>5.3</u>	<u>0.41</u>
Total	720'	5.6'	0.47 oz. or \$16.50 @ \$35 Au.

An electro-magnetic geophysical survey from the ice disclosed a nearly continuous anomaly following the strike of the ore zone for 20,000 feet. There are also a number of lesser sub-parallel anomalies. A small part of the long anomaly coincides with an ore occurrence known in drill holes. Therefore, the long anomaly may represent a series of sulphide-rich lenses in the main zone.

At this stage of development, the Duport property is a promising prospect. The initial work has disclosed several ore shoots, with an average grade of 0.47 ounces gold, about 1 ounce in silver, and a potential of about 250 tons per vertical foot. Additional ore indicated by diamond drilling may on development triple the available tonnage.

The Shoal Lake area is underlain by volcanics and sediments comprising part of the broad belt of older rocks striking across the northern end of the Lake of the Woods district. Stocks and dykes of both acid and basic rocks are of frequent occurrence. The structure of the area has not been mapped in detail, but its complex character has been recognized in local work.

There are two principal granitic stocks, each several miles in diameter. On the east shore of the lake is the Canoe Lake stock. Five miles to the west, centred on Rice Bay of Shoal Lake, is a similar stock, though this may be continuous with a large granite mass further west. A wide zone of shearing and alteration striking about 45° lies between the stocks, and is tangential to each. This is the main regional shearing related to the Duport ore shoots and passing through Alpha and Clarke Bays. The zone is largely concealed beneath the lake, but it has been traced in exploratory drilling by Duport for several miles. Scattered small gold deposits on the islands, including the Duport showings, are probably related to the major shear zone. There are other gold deposits along the western margin of the Canoe Lake Stock, including the Hopkins-Heintzman property. The area is obviously one of promise in which there has not thus far been a comprehensive test of the possibilities.

Former location S.182 included K.618 plus our claims nos. K.32663, -64, -65, -66, -67, -68, 33156, and -57. However K.618 does not belong to the Hopkins-Heintzman group, and thus was not explored or mapped.

Ontario Bureau of Mines annual report 1900, part 1, page 78, by J.A. Bow, Inspector, reads as follows:-

"The shafts on Sirdar Point (S.182) measure as follows: Belt vein shaft No. 1, vertical depth 107 feet, crosscut 20 feet east at depth of 100 feet, and drift 4 ft. at same level. Shaft full of water; suitably fenced. Belt vein shaft No. 2, depth 69 feet, size, 5 by 9 feet, dip about 70° west. Not fenced or covered and full of water. No. 3 shaft on supposed Mikado vein, depth 20 feet, size 4 by 8 feet, continued."

Ont. Bureau of Mines annual report 1899, part 1, page 57, by the same author, reads:-

"At Sirdar Point a 5 by 9-foot vertical shaft has been sunk to a depth of 23 feet, and is being continued to strike an ore body which was located by the diamond drill at a depth of 67 feet. The shaft is neatly and substantially timbered to a depth of 12 feet; hoisting is done by derrick and horse-power hoist; four miners are employed. The diamond drill has been working all summer on different veins on this property with reported good results, and is still in operation. Boarding camps and other necessary buildings, including a manager's dwelling, have been erected, and a dock constructed."

One of these shafts may be the 25' one on Vein B at (152N, 5115E). Another may be the 23' shaft at (15020N, 6075E), 50 feet inside our east border. A 60-year old wagon road was identified by the writer and followed from our E-vein area northerly, crossing a creek by an old timber bridge at (16070N, 5450E), and on into K.618, where it was lost in an area of windfalls. This road probably leads to the No. 1 or 107-foot Sirdar shaft mentioned in the old report quoted above.

However, despite all the old workings on the property, surface samples by the writer all assayed low, except for some sections of veins A and B on K.32067. Here, the andesite host rock is intruded by granite porphyry, and north-south fractures and quartz veins in the vicinity are mineralized sporadically with pyrrhotite, arsenopyrite, pyrite, galena, sphalerite, chalcopyrite, and gold. The veins without sulphides however are too low-grade and erratic to bother with. A carbonate zone carrying interesting gold values over possibly good widths is described in a separate report.

The various more-or-less parallel showings will now be very briefly described:-

A Vein, striking 5°30' has been traced 250' by stripping and trenching. There is a 10-ft. test pit about midway along this length. In places it is a quartz vein up to 2 feet wide, in others it is mainly a replacement zone of massive sulphides, or sulphides and quartz for widths up to 4 or 5 feet. Its north end is lost in a spruce swamp, its south end likewise, but also cut off by a granite-porphry dyke. Gold assays were obtained from this vein up to 0.72 ounces (\$25.20) per ton. Limited shallow subsequent diamond drilling of this zone by holes nos. E-1, E-4, and E-5 failed to intersect anything of importance. However, the zone is open to the north under low ground for 450' and overburdened for 230' to the south, and in hole E-4 the vein was cut off by the porphyry. In the writer's opinion this vein should be further explored.

B Vein strikes 14° and has been traced for about 150' by pits and trenches. Both this and A Vein dip almost vertically. B is a quartz vein system, well mineralized in sections by pyrrhotite, pyrite, also occasional arsenopyrite, chalcopyrite, galena,

and zincblende. It is open for 460' to the south, and 500' to the north. It has a 25' shaft as well as several test-pits on it, with mineralization up to three feet in width. From it we obtained assays up to 0.48 oz. Au. per ton (\$16.80 @ \$35 Au.) Drill hole E-5, if deepened another 316 feet, would intersect this vein at depth. It is believed that this would be a worthwhile exploration bet, both at depth and the overburdened extensions.

C Vein strikes about 15°, and has been traced only about 50' by test pits. The highest assay we obtained here was 0.04 oz. Au. (\$1.40).

D Vein was traced for 60 feet by test pits, and strikes about 20°. Only very low gold assays were obtained here.

E Vein, striking about 40°, was traced by pits and trenches for about 170 feet. Only very low gold assays were obtained.

The following old workings were also checked over and sampled, but no interesting assays were obtained. They are mainly mentioned so no one will waste their time or money on them again in duplicating the same tests:-

23' shaft at (15020N,6075E) - barren quartz-vein.

10' 1ft test pit at (15209N,5630E) - barren quartz vein.

2-ft. earth trench and shear at (14134N,6299E). This continues east under Bag Bay.

"Gopher-hole" shear at (11258N,5390E). This appears like a rabbit's or groundhog's burrow into solid but sheared diorite, and must have been excavated by man or gremlin!

2 sulphide pits about (142N,3870E) - barren pyrrhotite. This zone has been traced for 700' through Gossan Bay to a 7' x 10' shaft at (14678N,4139E).

7' wide rusty mineralized shear zone from Shoal Lake shore at (14995N,4090E) 190 feet to a 3-ft. pit at (151N,4239E).

Old Caved-in earth trenches about (15060N,55E) - Bedrock not seen here.

Assessment work

Besides the 27 man-days per claim on 11 mining claims being claimed by virtue of this survey, there was performed and recorded by us 46 man-days assessment work by rock drilling, blasting, trenching, and stripping on mining claim no. K.32667 to be applied to claims K33008 and 33009. A schedule of the geological survey assessment work details will be found at the end of this report.

Diamond Drilling Completed

The following EXT-core drilling was performed on the "A" Vein in 1961:-

<u>Hole No.</u>	<u>Length feet</u>	<u>dip</u>	<u>strike</u>	<u>collar north</u>	<u>location east</u>	<u>Remarks</u>
E-1	204	-39°	287°	15242'	4942'	This hole also tested the low ground W. of A Vein.
E-4	101	-60°	287°	15195	4951	The expected A vein was cut off by porphyry which is probably the source of the sulphides and gold values.
E-5	108	-45°	107°	15162	4854	This hole should be deepened to cut B Vein.

Total 473 feet.

References

Ont. Bureau of Mines, Annual Report 1898, part 1. pp.49-54.

Ont. Bureau of Mines, Annual Report 1899, part 1, page 57.

Ont. Bureau of Mines, Annual Report 1900, part 1, page 78.

Ont. Dept. of Mines Annual Report, 1930 part 3, by W.L. Greer, with geological map "Shoal Lake Area" No.39e.

Annual Report of Duport Mining Co. Ltd., 1937.

Geological Report on Duport Gold Mine by Richard Murphy 10 May 1951.

Kenora Sheet, topographical map 52E, 1" : 4 miles. Dept. Mines & Technical Surveys, Ottawa.

Report & maps on Air Photo Interpretation of Hopkins-Heintzman property, Shoal Lake by Wilfred Walker, geologist, of Chew-Walker Associates, Toronto, 21 May 1961.

Report on Hopkins-Heintzman gold prospect, Glass twp., Shoal Lake by Albert Hopkins, 18 Sept. 1961.

Ont. Dept. of Mines Claim Whiteprint, "Shoal Lake Area" M.2339 Feb. '60.

Ont. Dept. Mines Claim Whiteprint "Glass Twp.", M.2127.

Hydrographic Map of whole area of Lake of the woods, No. 6201 by the Surveys and Mapping Branch, Dept. of Mines, Ottawa, 1960.

Hydrographic Map of the NW. portion of Lake of the woods, "Shoal Lake", No. 6204, by Surveys & Mapping Branch, Dept. of Mines, Ottawa, 1960.

Forest Resources Inventory Base Maps No. 495944 and 495951, Ontario Dept. of Lands and Forests, scale 1" : $\frac{1}{2}$ mile, and their following vertical air photos at the same scale:-

49-4926-21-50

51 The property is at 49°30'45" N. lat. and
52 95°00'00" W. long.

49-4927-20-171, 172,

173 and 174.

Conclusions

1. The lake of the Woods section of Kenora district in general, and Shoal Lake in particular, are known to contain many gold deposits. Although some geologists believe that erosion in this area has been so extensive as to have left only the roots of former large gold lodes in the Precambrian hostrocks, this writer believes that this is not so, and that the best place to seek gold orebodies is in an area where gold deposition is widespread.
2. Duport Mining Co. Ltd. holds a large water property in Shoal Lake just southwest of this Hopkins-Heintzman property. Diamond drilling from the ice and limited underground work from a shaft on the small Cameron island on three levels, has already indicated a quarter million tons of arsenical sulphide-type ore averaging 0.41 ounces gold per ton. The ore occurs in lenses that are mineable, but metallurgical problems as well as the danger of poisoning Winnipeg's water supply with arsenical tailings have delayed production to date.
3. The strike of the Duport ore zone is about 45°, and its projection would cross H-H claim no. K.32665. From the shaft to this claim would be about 3 1/2 miles.
4. Already gold associated with sulphides has been found on the H-H property in interesting quantities in Sirdar Veins A and B on claim no. K.32667.
5. These parallel zones may be most easily traced, explored, and sampled by diamond drilling, along with geophysics and stripping.
6. An additional one thousand feet of diamond drilling is warranted.

Recommendations

It is recommended by the writer that:-

1. A magnetometer and S.P. geophysical survey be performed over the existing Picket Line grid on the property. (about 10 line-miles including detailed work around anomalies and showings).
2. One thousand feet of Diamond drilling (KAT core size) be contracted for (E.G. with Jack Edwards Drilling Ltd. of Kenora):-

(a) Deepening hole no. E-5 to intersect B zone	350 ft.
(b) Drill hole E-6 collar at (15054N, 4865E), dip -45°, strike 107°, horizontal coverage 210°	300 ft.
(c) Drill hole E-7, collar at (15310N, 4905E), dip -45°, strike 107°, horizontal coverage 250°	350
Total	1000 ft.
3. Further drilling would depend on the results of the above geophysical surveys, stripping, and preliminary drilling.

Respectfully submitted,

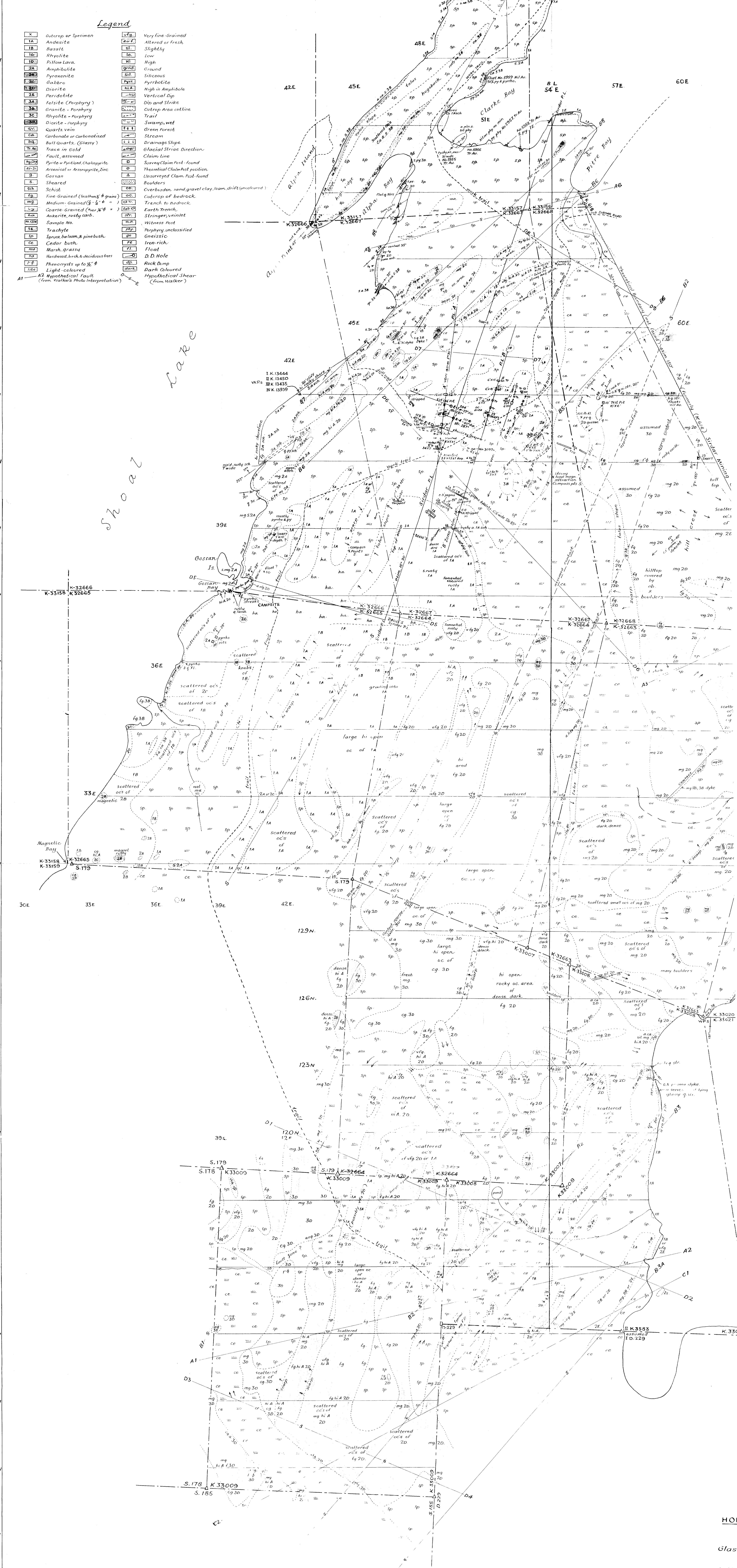
Albert Hopkins
 Albert Hopkins, B.A.Sc.
 Mining Engineer and Geologist.

Toronto, Canada.
 25 January 1963.

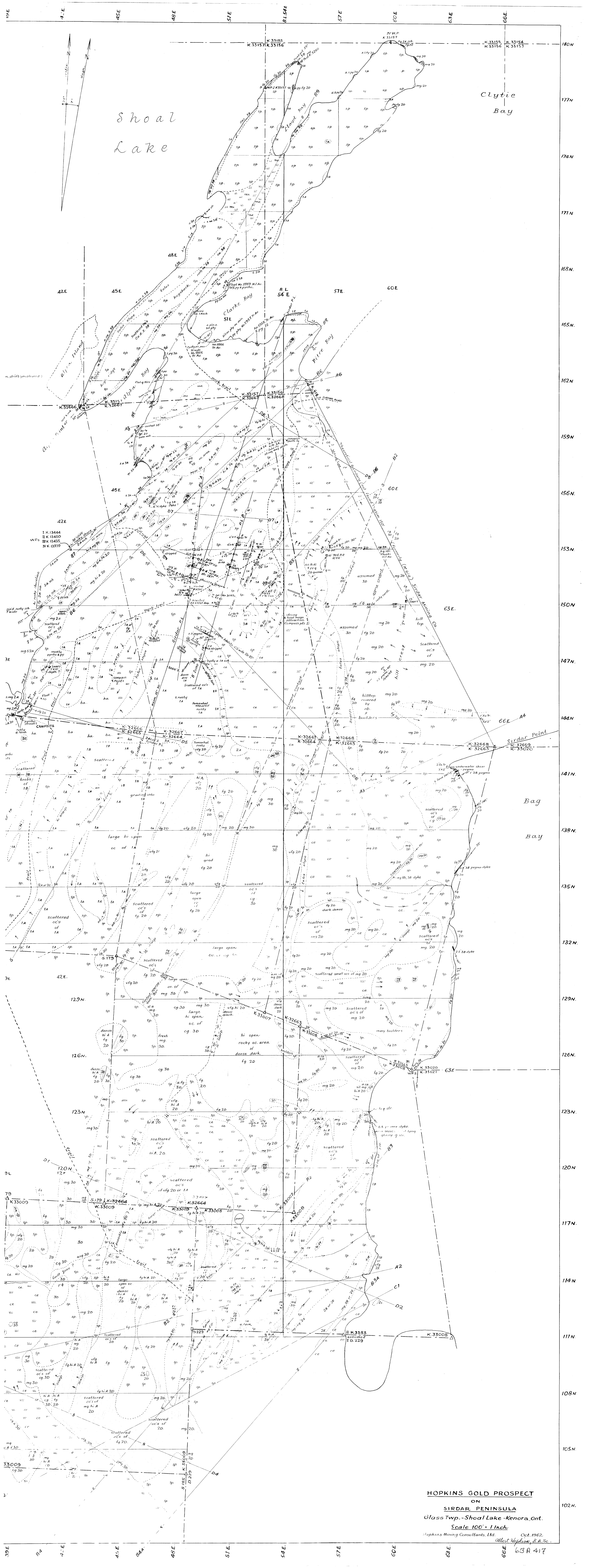


Legend

- | | | | |
|----|---|------|---|
| X | Outcrop or Specimen | vfg | Very fine Grained |
| 1A | Andesite | af | Altered or fresh |
| 1B | Basalt | sl | Slightly |
| 1C | Rhyolite | lo | Low |
| 1D | Pillow Lava | hi | High |
| 2A | Amphibolite | grnd | Ground |
| 2B | Pyroxenite | sil | Siliceous |
| 2C | Gabbro | pyr | Pyrrholite |
| 2D | Diorite | nia | High in Amphibole |
| 2E | Peridotite | vd | Vertical Dip |
| 3A | Felsite (Porphyry) | ds | Dip and Strike |
| 3B | Granite - Porphyry | ca | Contour Area outline |
| 3C | Rhyolite - Porphyry | tr | Trail |
| 3D | Diorite - Porphyry | sw | Swamp, wet |
| 3E | Quartz vein | gf | Green Forest |
| 4A | Carbonate or carbonatized | st | Stream |
| 4B | Bull Quartz (Glassy) | ds | Drainage Slope |
| 4C | Trace in Gold | gs | Glacial Striae Direction |
| 4D | Fault, assumed | cl | Claim line |
| 4E | Dyke or dykes, Chloragrite | df | Survey Claim Post - found |
| 4F | Arsenical or Arsenopyrite, Zinc | th | Theoretical Claim Post position |
| 4G | Corsan | un | Unsurveyed Claim Post - found |
| 4H | Sheared | bu | Boulders |
| 4I | Schist | cb | Overburden sand gravel clay loam drift (uncoloured) |
| 4J | Time Grained (leathery & gran) | oc | Cutcrop of bedrock |
| 4K | Medium grained (3" - 4") | tr | Trench to bedrock |
| 4L | Coarse Grained (over 4") | et | Earth Trench |
| 4M | Ankerite, rusty carb. | st | Stringer, veinlet |
| 4N | Sample No. | wp | Witness Post |
| 4O | Trachyte | ph | Porphyry unclassified |
| 4P | Sp. balsam, & pine bush | gn | Gneissic |
| 4Q | Cedar bush | fr | Iron rich |
| 4R | Marsh, grassy | fl | Flood |
| 4S | Hardwood, birch & deciduous trees | dh | D.D. Hole |
| 4T | Phonophyls up to 1/2" | rd | Rock Dump |
| 4U | Light coloured | dc | Dark Coloured |
| 4V | Hypothetical Fault (from Walker's Photo Interpretation) | hs | Hypothetical Shear (from Walker) |



HOP
Glass
Hopkins A



HOPKINS GOLD PROSPECT
ON
SIRDAR PENINSULA
Glass Twp. - Shoal Lake, Ont.
Scale 100' = 1 inch

Hopkins Mining Consultants, Ltd. Oct. 1962.
Albert Hopkins, B.A.Sc.

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