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PRELIMINARY REPORT ON PART OF DUVERNY TOWNSHIP, ABITIBI-EAST COUNTY

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PROVINCE OF QUEBEC, CANADA
DEPARTMENT OF MINES
MINERAL DEPOSITS BRANCH

PRELIMINARY REPORT
ON PART OF
DUVERNY TOWNSHIP
ABITIBI - EAST COUNTY

BY

W. W. WEBER



QUEBEC
1947

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
General geology	2
Keewatin-type volcanics	2
Table of formations	2
Post-Keewatin-type intrusives	5
Carbonatization	6
Folding	6
Faulting and shearing	7
Mineral deposits	8
Description of properties	10
Fontana Mines (1945), Limited	10
Claverny Gold Mines, Limited	13
Goldvue Mines, Limited	15
Duvay Gold Mines, Limited	16
Mallich Quebec Gold Mines, Limited	18
Garneau Property	18
Comet Duvernay Gold Mines, Limited	20
Kiska Gold Mines, Limited	21
Dumar Property	22
Newport Gold Mines, Limited	22
Consolidated Mining and Smelting Company of Canada, Limited	23

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ON PART OF
DUVERNY TOWNSHIP
ABITIBI-EAST COUNTY
by W.W. Weber

INTRODUCTION

Duverny township is in the mining district of Western Quebec. Its southwestern corner is five miles and a half east of Amos, which is on the transcontinental line of the Canadian National railway.

The map-area investigated by the geological party during the field-season of 1946 comprises lots 1 to 31, ranges IV to IX, inclusive. Secondary roads provide easy access by automobile to within three miles of any point in the area, but water routes are lacking. Recent staking and original survey-lines are, for the most part, recognizable in the area. Lot-lines and section-lines have been cut on many of the properties and are of great assistance in reaching and locating the areas of outcrop.

The relief of the area is typical of the Laurentian plateau. The highest elevations do not rise in excess of 300 feet above the level of the low-lying swampy tracts. Good rock exposures occupy in all only about five per cent of the area.

Geological mapping, at a scale of one inch to 500 feet, was carried out with the aid of aerial photographs enlarged to the same scale. The general mapping was supplemented by detailed plane-table surveys in the vicinity of the principal sites of mining exploration.

GENERAL GEOLOGY

Keewatin-type Volcanics

All the consolidated rocks of the area are of Precambrian age. The oldest formations are Keewatin-type volcanics, acidic, intermediate and basic flows, breccia, agglomerate and their highly altered equivalents. These are intruded by masses whose composition ranges from granite, containing abundant quartz, to very basic diorite, and possibly diabase. However, identification of the rock-types mentioned in this report is based almost entirely on field study. A detailed petrographical study of specimens collected in the field remains to be done.

Table of Formations

Quaternary		Stream and swamp deposits Sand and gravel
Late-Precambrian	Keewenawan	Diabase
Early-Precambrian	Intrusives	Lamprophyre and aplite dykes Granite, granodiorite diorite and porphyritic granite
	Keewatin-type	Gabbro, diorite, rhyolite porphyry Acidic, intermediate and basic lava flows; breccia, tuff, and agglomerate

The principal exposures of volcanics occur in lots 27 to 31 of range IV, in lots 10 to 22 of the central portion of range VI, and in lots 3 to 20 of the southern portion of range VII, and in lots 7 to 13 of ranges IX and X, in a zone one mile wide.

The acidic members of the flow series are decidedly in the minority and are found chiefly in the southeast portion of the map-area. Here, a distinct and persistent series of fine-grained, massive, olive-green rhyolite flows rich in epidote is interbedded with darker, basic flows and minor tuff and breccia bands. A pinkish rhyolite, resembling felsite, forms a distinct horizon-marker in the extreme southeast corner of the map-area.

The intermediate flows, believed to be dacitic accompanied by trachyte in a minor degree, occur chiefly in the northern sector, where they are widely exposed in lots 10 to 12, range VIII. These rocks, if unaltered, are light green to vitreous-blue, but the carbonatized equivalents are white or grey and distinctively soft and chalky. They are usually amygdaloidal, bun-pillowed or ropy, and frequently accompanied by flow breccia. A highly carbonatized rock, possibly originally trachyte, is characterized by a pebbled surface, owing to the presence of feldspar phenocrysts that have resisted alteration. This rock outcrops along the boundary between the Dumar and Fontana properties in range VI. Elsewhere, replacement of carbonate-filled amygdules by silica has resulted in the formation of a pseudo-rhyolite, starting from a rock believed to have been dacitic. This unusual rock-type was observed in lot 10, range VIII.

In general, the andesite or basalt are deep green to black chloritic rocks which, on weathered surface, are medium green to dark grey and often iron-stained. Original flow characteristics, such as pillows and amygdules, are generally well preserved, despite the wide-spread carbonatization. However, in regions of zones of weakness or of dioritic intrusions, these rocks are altered to a state beyond recognition except for ghost relic structures. Examples of highly altered basic flows may be seen in the central portion of ranges V and VI. Typical pillowed andesites outcrop in the southeastern and northern parts of the map-area.

Two exposures of acidic tuffs and breccia occur in lot 9, range VI, on the Consolidated Mining and Smelting property. Small bands of acidic breccia outcrop in lots 20 and 21, range VI, and in lot 20, range V. Agglomerate, characterized by fragments containing quartz 'eyes' enclosed in a dacitic matrix, is interbedded with the intermediate flows exposed in lots 10, 11, and 12, range VIII. Tuffs, especially the more basic varieties, tend to be schistose and difficult to identify; a good exposure occurs in the extreme southern limits of lot 13, range VII.

The basic sill-like intrusive mass in lots 10 to 13, range VIII, as well as the coarse-grained chloritic schistose rock in lot 6, range VII, appears to be very similar in composition to the basic extrusives. This suggests that they may be approximately contemporaneous. For the same reason, the rhyolite porphyry, which intrudes typical rhyolite in a small exposure on lot 18, range IV, has also been grouped with the Keewatin-type formations.

Post-Keewatin-type Intrusives

A mass of unaltered quartzose granite occupies the greater part of lots 1 to 18, range IV. The granite is a pinkish rock formed chiefly of quartz and alkali feldspar together with smaller amounts of altered hornblende and biotite.

Altered granite, characterized by bluish, opalescent quartz 'eyes' and altered feldspar, forms an aureole on the east and north sides of the granitic body. The rock is mottled bluish-grey to greenish-grey and closely resembles the main granite, except for the strong alteration. It contains residual mafic minerals.

A small mass of granite, low in free silica, outcrops at the southern end of lots 18 to 20, range V. The rock appears to be a transitional phase between the granite to the south and granodiorite to the north.

A large mass of granodiorite is exposed in the eastern portion of the map-area in ranges V and VI. The granodiorite is normally buff-grey to greenish-grey and contains about equal proportions of altered, greyish feldspar and chloritized ferromagnesian minerals, together with a small amount of quartz and brownish specks of carbonate. Gradual transition to a dioritic phase is apparent south and west of the Claverny mill-site in lot 24, range V. Strong carbonatization in the dioritic phases or adjacent to zones of weakness tends to mask the transition. To the north of the Goldvue property, there appears to be a transition from granodiorite to a dioritic phase, bordered on the south by pillowed andesite.

An irregular mass of basic diorite has been outlined on the surface and at depth by diamond

drilling in lots 4 and 5, range VIII, and lots 2 and 13, range IX. This diorite is massive and coarse-grained, consisting almost entirely of altered feldspar and of chloritized mafic minerals.

Lamprophyre dykes cut the granite masses in lot 14, range IV, and in the southern part of lots 18 to 20, range V, and similar dykes cut altered granite in lot 15, range V. A basic dyke, believed to be diabase, cross-cuts the granodiorite mass in a northerly direction across lot 30, range V. Small dykes of pinkish, fine-grained aplite cut the granite in lots 1 to 18, range IV.

Carbonatization

Carbonatization is especially wide-spread in Duvernoy township, and carbonate metacrysts are found in almost all rock-types except the unaltered granite. Intensity of carbonatization appears to be greatest in the vicinity of dioritic intrusions and also adjacent to zones of weakness in the volcanic rocks. The distribution of the carbonatization is most erratic and difficult to explain in detail. In places, completely replaced rocks are surrounded by relatively unaltered phases; elsewhere, the transition between altered and unaltered rock is marked by successive zones of varying intensity of alteration.

Folding

Throughout the map-area, the general strike of the flow series varies from N.75°E. to S.75°E., dips of the flows are usually vertical or nearly so, but overturning was observed in several places. The greatest overturn recorded was about twenty degrees. Within the area, tops of flows, determined for the most part from the shapes of pillows,

face southward. Local distortion of the regional structure is apparent in the vicinity of intrusive masses and zones of movement.

The area thus lies on the northern limb of a syncline, and no major fold axis appears within it. According to L.J. Weeks (1), the axis of this syncline trends east-west across the central portion of range III, i.e., to the south of the present map-area. Observations made near the northern limits of the area suggest that the corresponding major anticlinal axis lies near by.

Faulting and Shearing

Strong shearing in a general northwest-southeast direction occurs on the Fontana and Claverny properties in the east-central part of the southern half of the map-area and on the Duvay and Mallich properties in the western parts of ranges VIII and IX. This movement is believed to be the earliest in the area. From observations, the writer suggests that the displacement along these zones was dominantly horizontal, with the north side moving to the east. Cross-faulting and shearing, trending approximately east-west, are apparent along range-line V-VI, especially in the middle of lots 9 to 18, range VI, and northward to the eastern part of range VII. It is further suggested that the north side moved eastward during the last displacement of these zones. The most recent faulting observed in the area trends from N. to N.20°E., and it is believed to be of a tensional nature. Observations of the slickensided surface of vein No. 1, on the Claverny property, and geophysical data suggest that the west side has been displaced northward along these faults.

(1) Geol. Surv. Can., Map No. 530A, 1937.

MINERAL DEPOSITS

Gold has been found in many of the highly carbonatized areas of Duvernoy township. The deposits show marked variation in mode of occurrence. They may be divided into five groups, the principal characteristics of which are summarized as follows:

(1) Gold occurs in quartz-filled tension fractures trending approximately at right angles to the strike of the adjacent zone of movement. In the case of the northwest-southeast shear zones, the strike of the fractures varies from N.15-35°E., and the dip is nearly vertical. Probably the best examples of this type are the Bunkhouse, Laddie, Toughie, and similar veins exposed on the Fontana property in the vicinity of the camp and shaft in lots 17 and 18, range VI, and lots 20 and 21, range V. A similar system occurs between the shear zones in the vicinity of vein No. 1 on the Claverny property in ranges V and VI, lots 24, with the exception that a change of the direction of shearing to E.25°S. in the granodiorite mass has given rise to a vertical series of fractures normally striking due north.

(2) Warping of the shear zone, possibly the result of an adjustment to an oblique stress or a rotational factor, has, the writer believes, resulted in the superimposition of a flat-lying quartz vein system on the above-mentioned vertical system. The Kiska showing, adjacent to the shear zone in the central part of lot 30, range V, affords an example of this arrangement of veins. In the northern part of lots 10 to 12, range VIII, and on lots 2, 3, and 13, range IX, gold-bearing veinlets occupy a similar system of fractures confined to the shear zone by the incompetency of the volcanic members and differing

from the system of fractures which extends beyond the shear in the more competent intrusive mass to the south. The gold-bearing veinlets trend east-west with a gentle dip to the north and south and also north-south with a steep dip east and west, thus combining to form a conjugate pattern, often exceedingly rich over narrow widths, but rarely spaced sufficiently close to mine the whole zone economically. Chalcopyrite and sphalerite, found mostly in the richer vertical system, are good indicators in this type of deposit.

(3) Gold occurs in quartz bleds or veinlets paralleling the strike of the shears and in or adjacent to them. In such occurrences, the distribution of both the quartz and gold content is extremely erratic. Examples of this type are the D'Amour vein in lot 24, range V, on the Claverny property, and the quartz bleds and veins lying within the shear in lots 20 and 21, range V.

(4) Gold occurs in massive sulphide deposits apparently giving low assays. A deposit on the Consolidated Mining and Smelting property in lot 9, range VI, exemplifies this mode of occurrence. Chalcopyrite and pyrrhotite pyrite make up the bulk of the sulphides. Another massive sulphide zone, with pyrite and chalcopyrite associated with a bluish smoky quartz predominating, occurs near range-line VI-VII, in lot 8, on the Comet Duverny property, but the sample taken by the writer contained no gold.

(5) Gold occurs in tension fractures having a strike of N.15-25°E. and dipping vertically, combined with a flat-lying system striking north and dipping gently to the west. The deposit on the Goldvue property is of this type. The most prominent direction of movement here appears to be E.20°S. The gold is associated with the quartz

in heavily carbonatized and coarsely pyritized horizons.

Samples taken by the writer from carbonatized wall-rock or from the shear zones contained very slight amounts of gold, and it would seem necessary that a quartz content of at least twenty per cent be present before possible ore is found.

In eastern Duvernay, beyond the present limits of the map-area, a discovery was recently made containing a high tenor of gold in highly silicified zones in relatively non-carbonatized country rock. This discovery tends to depreciate the importance of carbonates as an indicator and suggests that quartz of several ages, all later than the carbonate, is responsible for the deposition of the greater part of the gold-bearing mineralization.

DESCRIPTION OF PROPERTIES

During the field-season of 1946, Duvernay township was a centre of activity for mining exploration. On many properties development is proceeding or has been only recently suspended. Shaft-sinking and underground exploration on the properties of Claverny and Goldvue are in progress.

The following are brief notes on the results of exploration on properties within the boundaries of the map-area.

Fontana Mines (1945), Limited

Ref.: Que. Bur. Mines, P.R. No. 135, 1939, p. 34.
Que. Bur. Mines, P.R. No. 161, 1941, p. 16.

The property consists of the north half of lots 12 to 21, range V, and the south half of lots 12 to 21, range VI.

The present Company, under the direction of Dr. J.E. Gill, consultant, and Dr. E.S. Malouf, resident geologist, instituted a diamond-drilling programme to test the surface workings. Approximately 30,000 feet of diamond drilling has been completed apart from large-scale 'bulldozing' and surface trenching in the vicinity of the shear zone in lots 20 and 21, range V, and also adjacent to the Bunkhouse vein in lots 17 and 18, range VI.

The main shear, striking E.35°S., cut across range-line V-VI at the centre-line of lot 20. Three tractor-cleared trenches, parallel to the shear zone, uncovered several parallel veins and numerous veinlets striking N.15-25°E. and varying in width from 2 to 18 inches. These veins, of which the Toughie Nos. 1, 2, and 3 are the most important in size, occupy vertical tension fractures which extend from the main shear for a maximum visible distance of 300 feet. The Toughie No. 1 is exposed in a trench for a distance of 125 feet.

At the northern end of the trench a cross-fault striking N.55°E. offsets the vein, the direction of displacement being west side north. On the surface, the milky quartz is sparingly mineralized with sulphides, mainly pyrite. Three diamond-drill holes (Nos. 58, 44, and 63) drilled east-west explored the possibilities at depth of the vein, whereas diamond-drill hole No. 59 was directed toward the junction with the main shear zone. A surface vein showing, exposed about 600 feet south of the range-line in the centre of lot 21, range V, strikes N.50°W. and averages 12

inches in width for the length of the 80-foot trench. This vein lies entirely within, and parallels, the strike of the main shear. Six diamond-drill holes (Nos. 39, 40, 42, 46, 49, and 57) located in lots 20 and 21, range V, were drilled to intersect the main shear zone and to test possible mineralization.

Two diamond-drill holes (Nos. 36 and 37) were put down in the C zone near an exceedingly high-grade pocket in the southern limits of lot 20, range VI. Nine diamond-drill holes (Nos. 21, 22, 33, 38, 27, 31, 55, 52, and 30) were drilled along the projection of the main shear zone in lot 18, range VI.

Twelve diamond-drill holes (Nos. 25, 32, 35, 34, 58, 60, 41, 43, 45, 47, 50, and 64), all located in the northern half of lot 18, range VI, tested the northern extension of the Bunkhouse vein, as well as the area close to the assumed junction of the vein and the main shear zone.

Four diamond-drill holes (Nos. 18, 19, 20, and 48) put down in the southern part of lot 18, range VI, delineated the southern extension of the Bunkhouse vein. This vein, exposed on the surface for 700 feet, strikes N.15-25°E. and dips vertically. Cross-faulting and shearing, striking N.50°E., offset the vein; the displacement moving the north segment to the west. The average width is about 20 inches, though the vein varies from a few inches to five feet in width. During the summer, a bulk-sample was cut from the vein and approximately 60 tons sent to the Provincial Mining School for testing. According to Dr. Malouf, the sample assayed slightly better than 0.22 oz. in gold per ton.

Four diamond-drill holes (Nos. 23, 24, 25, and 28), put down west of the Bunkhouse vein,

explored at depth surface sulphide mineralization on fractures subsidiary to the main fracture.

The Laddie vein, striking N.13°E. and dipping vertically, is exposed in a trench for 200 feet, about 50 feet south of range-line V-VI in lot 19. The vein averages eight inches in width and is sparingly mineralized with sulphides, mainly pyrite. Two drill holes explored the possibilities at depth of the surface showing.

Four diamond-drill holes (Nos. 71, 72, 68, and 66), located in the northern half of lot 15, range V, form the western arm of this drilling programme. From this area, indications of sulphide replacement in the carbonatized diorite are worthy of note, but as yet have not proven to be of economic importance.

In the fall of 1946, activity on the property was temporarily suspended.

Claverny Gold Mines, Limited

Ref.: Que. Bur. Mines, P.R. No. 135, 1939, p. 35.
Que. Bur. Mines, P.R. No. 161, 1941, p. 16.

This property was previously worked under French interests represented by Dr. Bruet. A full description of the earlier work completed during the 1936-1941 period is available in reports issued by the Department of Mines, Quebec.

The property consists of sixteen claims in one block, comprising lots 22 to 24 and the north half of lots 25 and 26, range V, also lots 22 to 25 and the north half of lot 26 and 27, range VI.

In the fall of 1945, the present operator, by arrangement with the custodian of Enemy Alien

Property, commenced a drilling programme to test the possibilities of mineralization in the Marcotte shear. This shear zone, a continuation of the Fontana shear, enters the property 900 feet south of lot-post 21-22 on range-line V-VI. It strikes E.40°S. and is enclosed within the volcanics about 200 feet south of the granodiorite-andesite contact. Two drill holes, put down about 200 feet north of the shear, tested the presence at depth of the quartz-filled tension fractures known as the Goldie, Tractor, and Twin veins. These veins are in the northern half of lot 22, range V, strike N.10-20°E., and dip vertically. They terminate abruptly at the granodiorite-andesite contact, and the Tractor, the largest, has been exposed for a distance of 300 feet. Tests at the Department of Mines and Resources, Ottawa, reported assays of gold in the three veins, but mineralization was over narrow widths. Cross-faulting, striking N.80°E., has displaced the northern segments of these veins to the west. A diamond-drilling programme of 5,000 feet failed to reveal zones of economic importance.

In the spring of 1946, under the foremanship of Vigo Yensen, an adit was started at the base of the hill due north of shaft No. 2. It was proposed to drive southward to reach vein No. 1 at depth. Milling tests on the highly carbonatized and silicified granodiorite yielded erratic gold mineralization. This was attributed, in part, to various difficulties in effecting complete recovery in the mill and also to the erratic distribution of gold mineralization along chloritized slip-planes, where strong silicification and pyritization were apparent. The average yield per ton was approximately \$1.50, though assays in gold up to \$40 per ton were reported for a 50-pound sample.

In the fall of 1946, T. Goedeke was engaged as resident engineer. Work on the adit was abandoned and underground operations were commenced at shaft No. 2 on vein No. 1 in the southeastern corner of lot 24, range VI. The immediate objective was exploration of the area in the vicinity of vein No. 1 between shear zones, Nos. 1 and 2 which cut across the granodiorite striking E.25°S., approximately 300 feet apart. In this area, a series of quartz veins striking due north and dipping vertically occupies a parallel series of tension fractures between the two shear zones. In the underground operations Mr. Goedeke has reported commercial grade from sections of the workings. A sample taken by the writer from a quartz-filled chloritized and mineralized slip-plane assayed 0.087 oz. of gold per ton.

Goldvue Mines, Limited

This property consists of lots 26 to 28, the north half of lots 21 to 25, and lots 29 and 30, range VII, also lots 20 to 27, the north half of lots 18 and 19, and the south half of lots 28 to 31, range VIII. Part of this ground was formerly held by Central Duvernay Gold Mines, Limited.

The main surface showing on the property is in lot 28, range VII. Here, a series of quartz veins and veinlets occupies tension fractures striking N.15-25°E. and dipping, for the most part, nearly vertically. The veins vary in width from one to 8 inches and are closely spaced in the more promising zones. The wall-rock, highly carbonatized and heavily mineralized with coarse pyrite cubes, has been determined as being dioritic in origin and is reported to carry gold mineralization, though not as pronounced as in the quartz veins. As a result of drilling data,

it was possible to delineate the diorite-andesite contact on the south side of the intrusive. A flat-lying quartz system also occurs, but it is of secondary importance. The author believes that the brittle diorite was locally subjected to stress which gave rise to the distinctive fracture patterns in the intrusive mass. A definite break is visible about 175 feet south of the shaft. This break strikes E.15-20°S. and is probably the point of origin of the subsidiary fractures. The ore-producing sequence is believed to have consisted of fracturing, followed by carbonatization and possibly mineralization, and then a second period of fracturing, followed by quartz-pyrite-gold mineralization. The andesite does not appear to have been affected favourably by this sequence. Following a very extensive drilling programme, the operators, on the advice of Julius Cohen, consultant, decided to sink an exploration shaft which, according to reports, has reached a depth of 400 feet (Jan. 10, 1947).

In the pursuit of the eastern extension of the ore zone, a recent programme of diamond drilling was, at the time of the writer's visit to the property, testing the area to the southeast of the shaft in lots 28 and 29, range VII. Approximately 30,000 feet of drilling has been completed on the property.

G.P. Thoday is resident engineer and mine manager.

Duvay Gold Mines, Limited

This property consists of the west half of lot 2, range IX, and lot A, lots 1 to 7, lot 10, and the north half of lot 11, range VIII.

The main showings are in lots 10 and 11, range VIII. Here, shearing, up to 40 feet in width and trending E. to E.30°S. across the northern part of lots 10 and 11, is exposed in a number of trenches. The shear zone is displaced by faulting, striking N. to N.20°E. and forming an 'en échelon' pattern of the shear. Numerous quartz veins and stringers adjacent to the shear occur in a highly carbonatized zone up to 400 feet in width. The main gold-bearing formation is confined to the shear zone and strikes north-south, dipping steeply east or west. Flat-lying stringers striking east-west also occur, but do not carry the chalcopyrite-sphalerite mineralization of the richer vertical system. In the western showing on lot 10, a single quartz vein, up to 24 inches in width, has an east-west strike and a vertical dip. This vein carries sulphide mineralization with low assays in gold.

In the eastern showing on lot 11, the gold-bearing mineralization occurs in small irregular stringers, normally trending east-west.

During the summer of 1946, a channel bulk-sample, 4 by 4 feet, was cut in sections across approximately 50 feet of the main showing, 200 feet south of range-line VIII-IX, near the centre-line of lot 10. Results of this test are not yet available.

Approximately 20,000 feet of drilling has been completed on the property. This includes the testing, in range VIII, of the conditions at depth under the west and the east showing in lots 10 and 11, the geophysical 'anomalies' in the carbonatized diorite in the northeastern corner of lot 4, the highly carbonatized and sheared horizon in the central part of the northern half of lot 11, and cross-sectional drilling under the

overburden in the western part of lots 4 and 5. Very high assays in gold have been reported from the drilling, but occurrence of the gold in very narrow stringers has made it impossible to correlate the results in order to outline an orebody.

Dave Endler is resident engineer and property manager. Julius Cohen, assisted by Lloyd Aumont, is consultant.

Mallich Quebec Gold Mines, Limited

This property, under the same management as Duvay mines, which it adjoins to the east, comprises lots 12 to 15, the south half of lot 11, and the north half of lots 16 and 17, range VIII, and the east half of lot 2, range IX.

The principal showing is in lot 12, being very similar in type to the eastern showing on the property of the Duvay mines. Free gold occurs in very small stringers in the vicinity of the shear zone which enters the property 550 feet south of lot-post 11-12, on range-line VIII-IX. Approximately 8,000 feet of diamond drilling has been completed on the property. Cross-sectional drilling revealed the presence of shearing and associated massive sulphide replacement in the central part of lot 12, but the gold tenor found was very disappointing.

Both the Duvay and the Mallich mines have suspended drilling operations on their properties in favour of further surface exploration.

Garneau Property

This property comprises lots 3, 4, 5, and 9 to 15, inclusive, range IX, and also the long, narrow claim A-125237 which crosses the road traversing the group.

During the years 1936 to 1939, considerable surface trenching and diamond drilling, under the direction of Dr. Bruet, were done in lots 11, 12, and 13, north of lot-posts 11-12 and 13-14, on range-line VIII-IX, in range IX. With the aid of reports prepared at that time, several old trenches and drill-hole collars were observed. The principal old workings, located north of the eastern showing on the Duvay property, are in highly carbonatized volcanics, in which a diorite intrusion is suggested. About 600 feet east and 250 feet north of lot-post 9-10 on range-line VIII-IX, twin flat-lying veins, 8 to 18 inches in width, occur in a trench 45 feet in length. Other flat-lying quartz veins and associated sulphides occur in a pocket exposed in a trench 250 feet east and 950 feet north of lot-post 10-11. About 200 feet east and 2,400 feet north of lot-post 10-11 on range-line VIII-IX, a flat-lying quartz vein, striking N.65°E. and dipping from 10 to 15° to the south, is exposed in an old trench for a distance of 200 feet.

In the summer of 1946, O'Brien Gold Mines undertook exploration work on the property to test the continuation of the Duvay shear which enters the property 200 feet east of lot-post 9-10 on range-line VIII-IX. The shear trends 'en échelon' fashion across the property in a local breccia member of the volcanics.

With the aid of a tractor and plugger, nine trenches trending northeast-southwest were opened up along a line running N.55°W. In the trench 200 feet north of lot-post 9-10, a series of narrow quartz veins striking N.10-25°E. and dipping vertically, combined with a flat-lying system, was uncovered and sampled. The writer found several specks of visible gold in the vertical stringers north of the shear. Similarly, visible gold

was reported from the trench 100 feet to the east, near the camp buildings. In the vicinity of the junction of the main shear, with a lesser shear striking N.60-80°E., approximately 1,100 feet north of range-line VIII-IX and 250 feet east of the boundary between lots 3 to 12, a series of vertical veins which strike N. to N.45°W. with a secondary flat-lying system combines to form a stock-work structure that is especially apparent in the trench 500 feet east from the road and 1,050 feet north of the range-line in lot 12, range IX.

After the testing programme, which also included diamond drilling in the shear zone and in the vicinity of the old workings previously described, work was likewise abandoned. J.V. Mills acted as consultant during operations, and H. Munroe of the O'Brien staff at Cadillac directed the field-work.

Comet Duverny Gold Mines, Limited

This property, formerly known as the Amos Duverny Gold Mines, comprises lots 6 to 10, range VII, and the north half of lots 3 to 6, range VI.

The main showing is on the western boundary of lot 9, where a number of discontinuous quartz veins occupy fractures parallel to the cross-faulting at N.15°E. This cross-faulting effects a minor displacement on the adjacent shear zone striking N.60-70°W. Eight drill holes have tested at depth the possibilities of the zone. It is reported that the results were disappointing and that the drilling programme was abandoned in favour of further surface exploration.

On range-line VI-VII, at the eastern corner of lot 8, a pocket of massive sulphides, consisting

mostly of pyrite associated with a bluish quartz, occurs in a shear zone striking E.10°S. No gold was found in a sample taken by the writer. Considerable surface stripping has been done on the shear zone exposed on lot-line 10-11, and also in the western portions of lots 7 and 8. Here, a number of small veins are also exposed. The veins are sparingly mineralized and normally strike N.45°W. or parallel to the adjacent shear, but dip at a high angle into the shear.

At the time of writing the property is inactive. René Martin is mining engineer in charge of the property.

Kiska Gold Mines, Limited

Ref.: Que. Bur. Mines, P.R. No. 135, 1939, p. 37.

A portion of this property was formerly held by Duver Creek Gold Mines. Within the map-area, the property comprises the south half of lots 25 and 26 and lots 27 to 31, range V, and also the south half of lot 28, range VI.

The main showing is in lot 30, range V. Here, tension fractures, filled with mineralized quartz, strike N.10-25°E. and dip almost vertically. A vein, averaging about 6 inches in width, is exposed for a distance of 100 feet in a trench 2,000 feet south of range-line V-VI. Two parallel veins of a similar type are exposed in trenches 3,600 feet south of the range-line. Slightly east of the centre-line of lot 30, 2,300 feet south of the range-line, a test pit has exposed a vein system similar to a stock-work. This system consists of milky quartz mineralized mainly with pyrite and minor amounts of chalcopyrite and sphalerite. The entire workings, including the trenching along the extension of the No. 1 Claverny

shear zone, are in highly carbonatized granodiorite. The No. 1 Claverny shear enters the property 900 feet south of range-line V-VI, on lot-line 26-27, and crosses the property north of the showings. The strike of the shear flattens to the east, but averages E.15°S.

A preliminary drilling programme was in progress in the autumn of 1946.

Dumar Property

The Dumar property consists of the south half of lots 13 to 16, range VI, and lots 13 and 14, range VII.

Following a 'geo-electrical' survey, considerable trenching was done in lots 14, 15, and 16 along the survey-lines, especially in the vicinity of the carbonatized intermediate flows and tuffs in the southern part of the property and also in the carbonatized acid flows and tuffs in the more northern part in range VI. Considerable sulphide mineralization was uncovered in the vicinity of numerous small shear zones striking N.80°E. to E.10°S. The gold tenor associated with these occurrences is low. At the time of the writer's departure from this property, it was reported that in the northern workings an anastomosing system of small quartz veins containing large pyrite cubes had given very promising assays in gold.

Mr. Talbot was in charge of the property at the time of the survey.

Newport Gold Mines, Limited

This property comprises lots 11 to 13, lots 15 to 20, lots 22 and 23, and the southern half

of lots 14 and 21, range IV and the southern half of lots 15 to 20, range V. Considerable surface trenching has been done on the property in widely separated areas.

The principal showings are in lots 15, 16, 18, and 20, range V. Here, surface exploration resulted in the exposure of quartz veins normally striking N. to N.35°W. and dipping almost vertically. The most promising exposures of this group occur in the granite mass in lots 18 and 19.

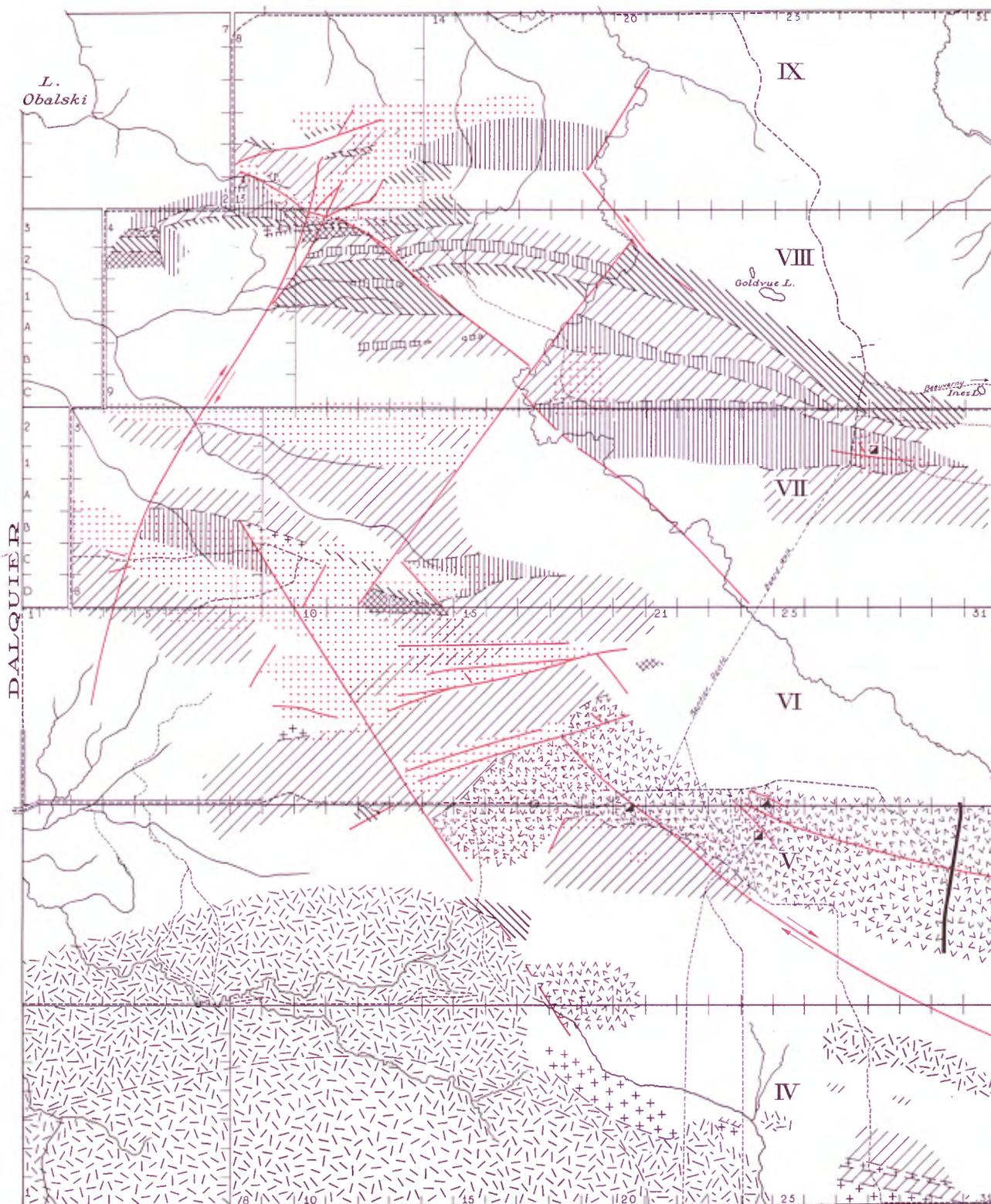
A drilling programme which tested the surface exposures near lot-line 19-20 and lot-line 17-18 yielded one very high assay of \$87.75 in gold per ton in hole No. 1 for one foot of core, but subsequent work failed to indicate commercial values.

East-west drilling in the vicinity of lot-line 15-16, range V, likewise failed to reveal indications of strong mineralization. At the completion of 10,000 feet of diamond drilling, it was decided to abandon the programme in favour of further surface exploration.

Consolidated Mining and Smelting Company of
Canada, Limited

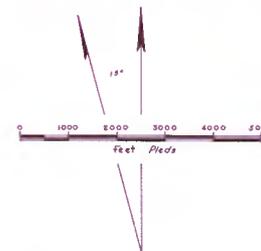
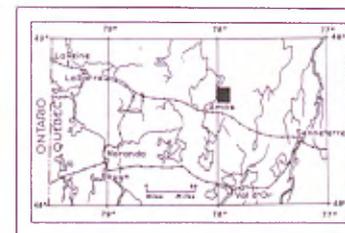
Ref.: Que. Bur. Mines, P.R. No. 150, 1939, p. 27.

No work has been done on this property since the period 1936-1941 which is amply described in a former report. The claim-group covers lots 8 to 11 and the north half of lots 7 and 12, range VI, and also lots 11 and 12, range VII.



- POST KEEWATIN-TYPE POST TYPE-KEEWATIN
- Diabase dyke
Dyke de diabase
 - Granite
Granite
 - Diorite
Diorite
 - Altered granite
Granite altéré
 - Granodiorite
Granodiorite
- KEEWATIN-TYPE TYPE-KEEWATIN
- Tuff, fragmental lava
Tuf, lavé fragmentaire
 - Rhyolite
Rhyolite
 - Dacite, trachyte
Dacite, trachyte
 - Basalt, andesite
Basalt, andésite
 - Carbonatization
Carbonatation
 - Fault or shear (in part assumed)
Faïlle ou laminage (assumés en partie)
 - Geological contacts
Contacts géologiques
 - Shaft
Puits
 - Second class road, trail
Route de seconde classe, sentier

Center Line Ligne Centrale



Geology by W. Weber 1946.
Géologie par W. Weber 1946.

Department of Mines, Québec 1947 N.637
Ministère des Mines, Québec 1947 N.637

PART OF DUVERNY TOWNSHIP
PARTIE DU CANTON DE DUVERNY
COUNTY OF ABITIBI-EAST COMTÉ D'ABITIBI-EST
Preliminary Map *Carte Préliminaire*

