GM 25946

GEOLOGIST'S REPORT

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Énergie et Ressources naturelles
Québec

GEOLOGIST'S REPORT

Pour le Sondage

LARANDONA MINES LIMITED

DUFRESNOY TOWNSHIP, QUEBEC

PROJECT 545

Ministère des Richesses Naturelles, Québec
14 MAI 1970
SERVICE DES GITES MINERAUX
No GM- 25946

Toronto, Ontario
March 20, 1970

B. B. Brown, B.Sc.
Geologist

I N D E X

GEOLOGIST'S REPORT

LARANDONA MINES LIMITED

DUFRESNOY TOWNSHIP, QUEBEC

PROJECT 545

INTRODUCTION

Because of recent discoveries of base metal deposits at depth on the property of Lake Default Mines, the potential of the Larandona Mines ground, which adjoins Lake Dufault Mines to the east, has been greatly enhanced. All the ore bodies of the area including those of Lake Dufault Mines have been found at or adjacent to the favorable Amulet andesite contact. This favorable contact is known to dip east under the Larandona Mines property. Mr. A. G. Darling, a senior geologist who has had much experience in the area, was engaged early in 1966 to evaluate the economic prospects of the property by making a study of all previous work with regard to geology, structure, alteration and mineralization.

PROPERTIES

The property consists of the following claims, all of which are held in good standing:

License No. 6502, Claims 1-4 inclusive, comprising an area of approximately 172 acres.

License No. 6503, Claims 1-3 inclusive, comprising an area of approximately 108 acres.

All the above claims are situated in Dufresnoy Township, in the Province of Quebec.

LOCATION, ACCESS, TOPOGRAPHY

The property extends north from the south boundary of Dufresnoy Township and lies between the Macamic Highway and the south end of Lake Dufault.

The Macamic Highway is about 300 feet to the west of the property and the Canadian National Railways cross the property near the east boundary. A good east-west gravel road from the Macamic Highway to Lake Dufault beach crosses the central portion of the property.

Hydro facilities are available within 500 feet of the west boundary.

The ground is gently rolling and most of it consists of open fields with some patches of light tree growth of willow and poplar. There are a few rock outcrops which extend to heights of 30 to 100 feet above the general level.

GENERAL GEOLOGY

The region is underlain by a series of volcanic flows and their fragmental equivalents which have been intruded by sills and masses of basic intrusive, granodiorite and intrusive equivalents of the flows. The flows consist of andesite, rhyolite and minor dacite

and have an average dip of about 30 degrees to the east but this dip is interrupted by faulting and gentle folding. Extrusion of the lavas is believed to have occurred from vents in the vicinity of Lake Duprat which is to the northwest of the property. Regional faults concentric to the point of extrusion have developed as a result of subsidence of the large volume of extruded magma. A second series of regional faults appear to radiate outward from the centre of extrusion. All the known sulphide ore bodies of the area occur at the andesite and underlying rhyolite contact of the Amulet series and on one of the radial type faults in close proximity to its intersection with a concentric type fault.

1966 WORK PROGRAM

After a study of all the data and reports of previous work done on the property, Darling carried out a diamond drilling program of six shallow vertical holes totalling 3,054 feet. This was done in an attempt to locate one of the north to northwest trending radial type faults which had been indicated by surface mapping to occur in the east central portion of the property. Such a fault would intersect the Area Creek fault which is of the concentric type. The Area Creek fault strikes northeast, dips to the southeast and cuts across the northwest corner of the property. The six holes were all drilled on the same line striking northeast or parallel to the strike of the Area Creek fault.

The presence of a strong flexure in the lavas or a northwest trending radial type fault was confirmed by three of the six vertical holes. The structure is manifested by intense fracturing in the holes and has a width of 1,000 feet or more.

1969-1970 WORK PROGRAM

It was decided in November of 1969 to carry out Darling's recommendation to drill a deep vertical hole down the newly discovered fracture zone to where it would intersect the favorable Amulet rhyolite-andesite contact. The hole was started December 2, 1969 and drilled to a depth of 3,601 feet by March 2, 1970. It confirmed Darling's findings in that it encountered fracturing and brecciation of varying degrees throughout its entire length but it did not reach the all important Amulet andesite-rhyolite contact. It did cut an intersection of 1.1 feet grading 0.47% copper.

CONCLUSIONS AND RECOMMENDATIONS

The presence of a fractured zone or radial type fault 1,000 feet or more in width which was found by Darling has been confirmed to extend to a depth of 3,601 feet by the recent drilling program. This type of fracture is believed to be a possible channelway similar to those which supplied metals for the other base metal deposits of the area.

The intersection of 1.1 feet grading 0.47% copper is considered in the area to be a favorable indicator for possible underlying sulphide ore bodies.

The Amulet andesite-rhyolite contact is believed to underlie the property at a depth of from 5,000 to 5,500 feet. If however the Area Creek fault is an overthrust, which is believed to be the case by some people, this would have the effect of bringing the Amulet contact nearer to the surface.

Favorable basic conditions of geology, structure and mineralization occur on the property and it remains only to reach the Amulet andesite-rhyolite contact. It is therefore recommended that the recently completed hole be deepened to reach this contact but not to a depth exceeding 6,000 feet.

Costs for this work may be estimated as follows:

Drilling from 3,601' to 5,500' (Quotation)	$51,855.00
Miscellaneous expenses, wedging, cementing, supervision	6,000.00
	$ 57,855.00

OR

Drilling from 3,601' to 6,000' (Quotation)	$ 73,140.00
Miscellaneous expenses, weding, cementing, supervision	7,500.00
	$ 80,640.00

Respectfully submitted,

B B. Brown

B. B. Brown, B.Sc.
Geologist

Toronto, Ontario
March 20, 1970

C E R T I F I C A T E

I, BENJAMIN BRITTAIN BROWN, of the City of Toronto in the County of York in the Province of Ontario, do hereby certify as follows:

(1) THAT I am a Mining Geologist and reside in the City of Toronto in the Province of Ontario.

(2) THAT I am a graduate of the University of Manitoba, a Bachelor of Science in geology and have been practising my profession since 1948.

(3) THAT I have no personal interest, direct or indirect in the property described in this report and do not expect to receive any interest therein.

(4) THAT my report dated the 20th day of March, 1970 on the Dufresnoy Township property, Quebec is based on personal examination.

(5) THAT the said examination of the property was made by me from December 2, 1969 to March 2, 1970 as geologist in charge of the work.

B. B. Brown

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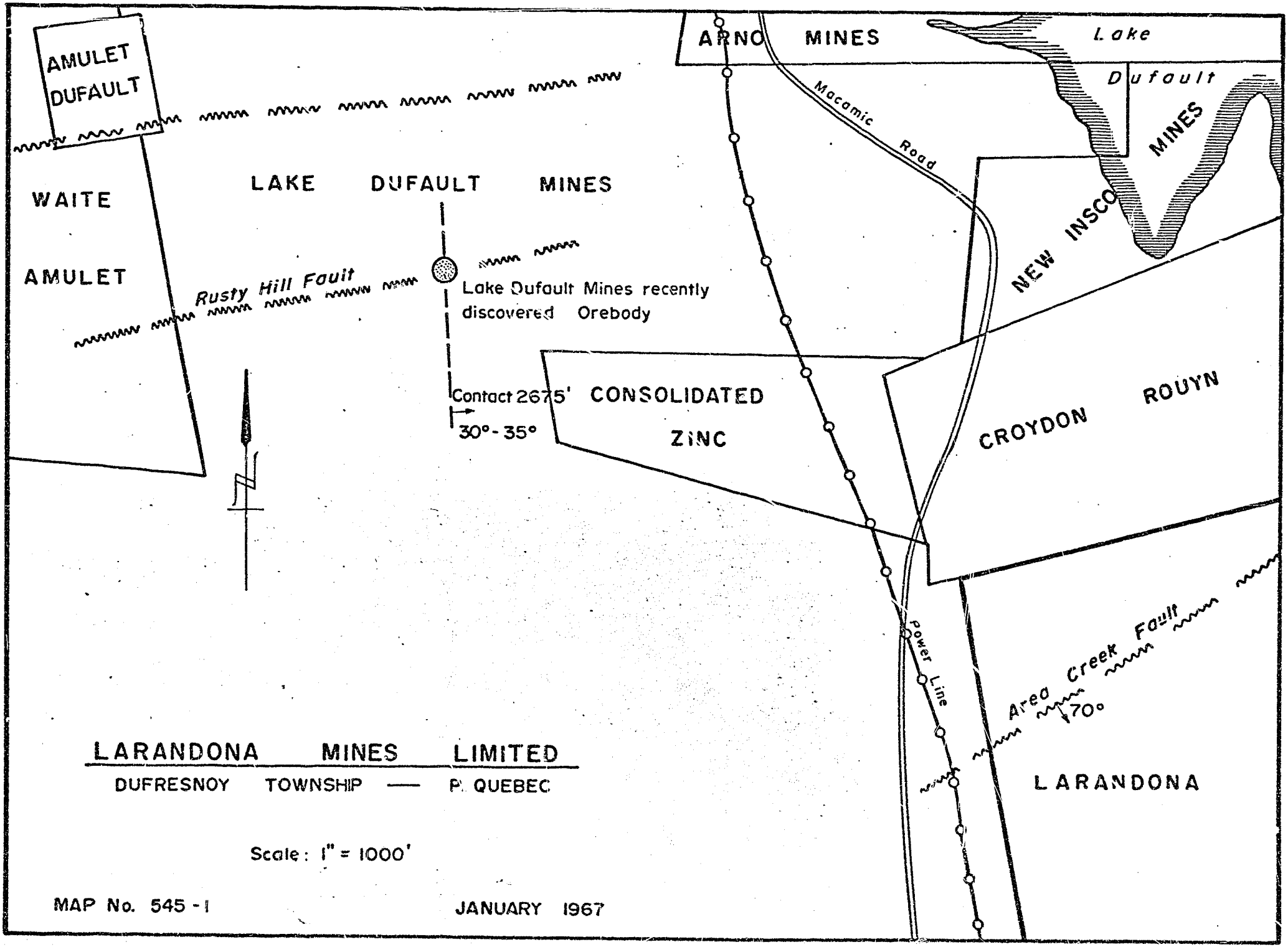
B. B. Brown, B.Sc.

Dated at Toronto, Ontario
this 20th day of March, 1970



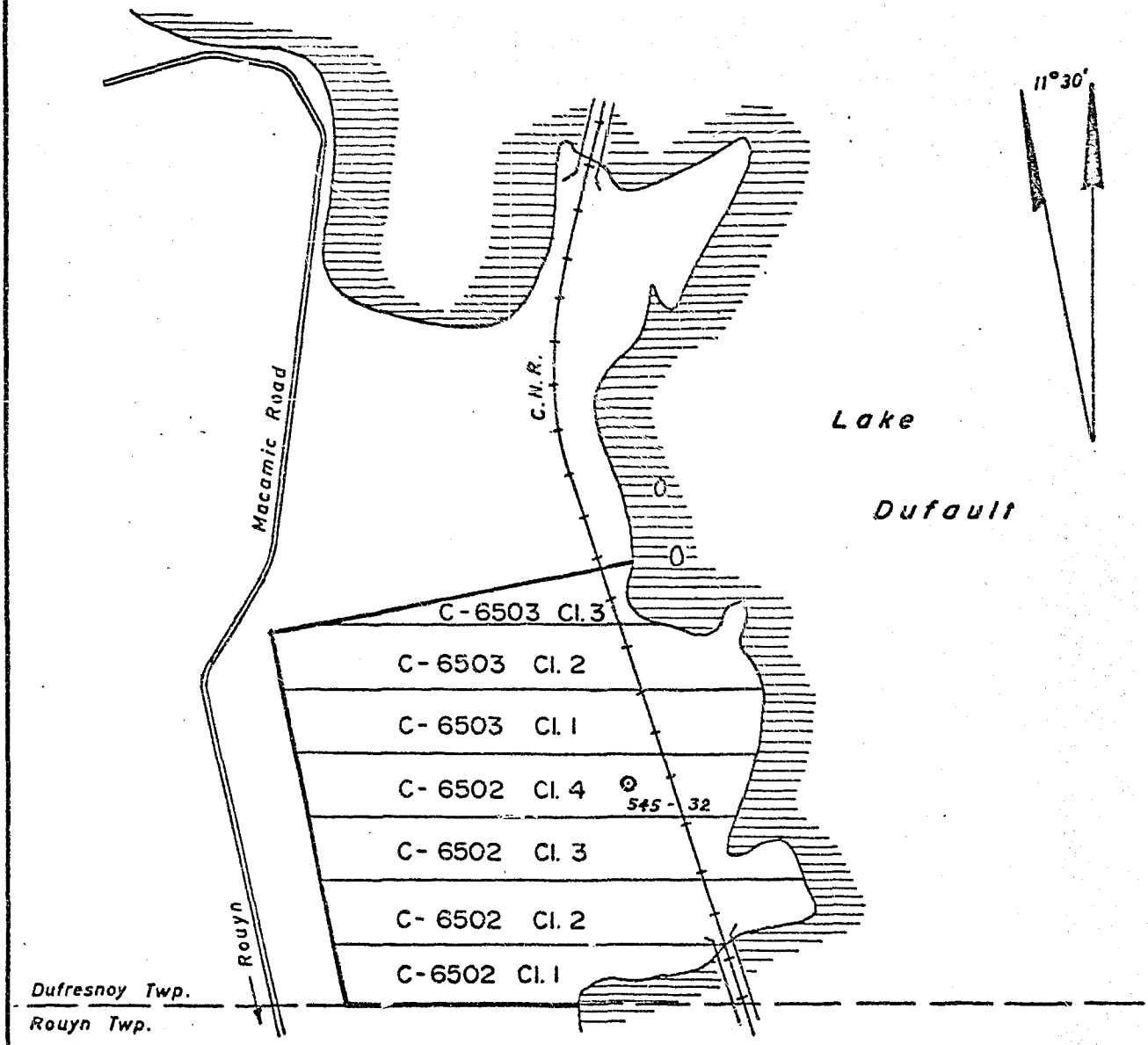
LARANDONA MINES LIMITED

DUFRESNOY TOWNSHIP — P. QUEBEC

Scale: 1" = 1000'

MAP No. 545-1

JANUARY 1967



CLAIM MAP

LARANDONA MINES LTD.

Dufresnoy Twp., P.Q.

Scale
1" : 1320'

G.F. May 1969 C.T. Ritchie after Quebec Dept. of National Resources

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 1
Project 545

LOCATION 10,002 N, 12402 E (Ref. grid used by A. G. Darling, report dated Jan. 24/67). BEARING _____ HOLE NO. 545-32

LOGGED BY B. B. Brown ELEVATION _____ DIP 90° FINAL DEPTH 3,601'

STARTED December 2, 1969 TESTS (CORRECTED)

FINISHED March 2, 1970 See attached sheet

CASING 36', drilled 5' into bedrock, left in hole

CORE SIZE AXT

FROM	TO	DESCRIPTION
0.0	31.0	OVERBURDEN, Sand with occasional boulder.
31.0	73.0	ANDESITE - Fine grained, pale to dark green, hard-medium hard, minor local shearing at 15-20° to core axis, fairly numerous quartz and carbonate filled amygdules up to 1/4", carbonate and quartz stringers up to 1/4" in at 70-90° to core axis. 58.5 - 62.0 - Sheared at 0-10° to core axis, chloritized and silicified, splashes of hematite in shear planes. 50-52; 62-64 - Ground core.
73.0	75.0	DYKE - Aphanitic, rhyolitic, brecciated, sharp upper contact at 20° to core axis, lower ground.
75.0	89.5	ANDESITE - Fine grained, weakly brecciated, irregular veinlets and lenses of quartz and carbonate up to 1", epidote alteration along margins of narrow irregular dacitic sections.
89.5	94.7	DYKE - Aphanitic, rhyolitic, pale greenish grey, very hard, sharp but irregular contacts, weakly brecciated, fine quartz filled fractures with splashes of chlorite.
94.7	105.0	ANDESITE - Fine grained, medium-dark green, weakly chloritized, obscure amygdules .
105.0	137.5	RHYOLITE - Aphanitic, grey, very hard, fine network of quartz filled fractures, pale greenish color and becoming weakly chloritized in bottom 8' of section, upper contact at 15° to core axis.
137.5	158.0	DYKE - Fine-medium grained and massive, 50% quartz and grey feldspar, remainder dark green mafics, scattered irregular stringers and lenses of carbonate with minor quartz, sharp but irregular lower contact, upper ground, contains from 0-1% finely disseminated magnetite.

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PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp.,Que. PAGE 2
Project 545

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
158.0	182.0	ANDESITE - Altered, silicified, highly fractured, much of core in fragments, few and obscure amygdules, chloritized and sheared at 5-15° to core axis. GROUND CORE - 168.0 - 169.8; 170.5-172.0'.
182.0	206.8	QUARTZ PORPHYRY - Aphanitic, distinctive pale bluish tinge, very hard, comparatively few and poorly developed quartz phenocrysts, several inclusions of sheared and chloritized andesite with numerous amygdules and shearing at 20° to core axis.
206.8	216.0	ANDESITE - Fine grained, comparatively few amygdules, several 8" sections quartz porphyry.
216.0	230.2	QUARTZ PORPHYRY - Aphanitic, pale greenish grey, very hard, few poorly developed quartz phenocrysts, inclusions of sheared and chloritized andesite with sharp contacts generally at 10-15° to core axis, 223.2-224.7; 227.5-228.1'.
230.2	244.1	ANDESITIC AGGLOMERATE - Fairly numerous rhyolitic fragments and bombs up to 1", numerous quartz and carbonate filled amygdules, carbonatized and chloritized.
244.1	267.0	QUARTZ PORPHYRY - As from 182-206.8' with distinctive bluish tinge, sharp irregular upper contact, lower contact gradational over 1 foot, several inclusions of andesite up to 2", weakly fractured at from 5-15° to core axis with epidote alteration along fractures.
267.0	273.7	ANDESITE - Fine grained, fairly numerous quartz and carbonate filled amygdules.
273.7	323.7	DACITE - Fine grained, aphanitic, pale greenish grey, medium hard, scattered quartz carbonate stringersup to 1/4" generally in at 70° to core axis, composition variable locally approaching that of andesite or rhyolite, several specks chalcopyrite noted, scattered quartz and chlorite filled amygdules.

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 3
Project 545

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
323.7	604.5	ANDESITE - Fine-medium grained, massive, fairly numerous quartz and carbonate filled amygdules and scattered quartz carbonate stringers up to 1/4", decreasing number of amygdules from 359' towards bottom of section. 364.0 - 370.0 - Weakly brecciated with dark green andesite fragments cemented with lighter green siliceous material. 391.0 - 417.1 - Fairly high degree of fracturing with fine network of carbonate quartz filled fractures, later fracturing indicated by fairly numerous carbonate quartz stringers averaging 1/4" generally in at 50° to core axis. 417.1 - 462.0 - Slightly more acid composition and slightly finer grained, scattered carbonate and quartz filled amygdules, several pillow rims noted. 462.0 - 485.4 - As above but with much lesser degree of fracturing. 485.4 - 487.0 - Brecciated, angular fragments andesite cemented with carbonate and minor quartz, scattered specks and cubes pyrite. 487.0 - 502.5 - Fine -medium grained, massive, low degree of fracturing, slightly more basic than from 391-417.1', scattered specks and cubes pyrite, traces chalcopyrite. 502.5 - 595.0 - Finer grained and slightly more acid composition than above, fairly numerous quartz and carbonate filled amygdules, medium degree of fracturing, very sparsely disseminated specks pyrite.

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 4

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		595.0 - 597.0 - Brecciated with fragments dark colored dyke material, several irregular lenses quartz up to 1/2" with 35% pyrite.
		597.0 - 604.5 - As from 502.5-595.0'.
604.5	610.3	DYKE - Medium grained, massive, andesitic, scattered cubes pyrite up to 1/4", sharp contacts with lower at 10° to core axis, contains from 3-4% finely disseminated magnetite.
610.3	620.0	ANDESITE - Fine grained amd massive, fairly numerous carbonate and quartz filled fractures and amygdules.
620.0	624.5	QUARTZ PORPHYRY - Aphanitic, pale yellowish brown, very hard, fairly numerous quartz eyes ranging in size from minute to 1/4", medium-high degree of fracturing, both contacts silicified over 1', upper at 30°.
624.5	688.5	ANDESITE - Fine grained, massive, scattered pyrite and carbonate filled amygdules and stringers averaging 1/4" generally in at 40° to core axis, minor hairlike carbonate filled fractures, 0-1% finely disseminated magnetite.
		639.0 - 647.2 - Brecciated, minor local shearing at 20° to core axis, fairly numerous irregular carbonate and quartz stringers and lenses up to 1", scattered blebs and cubes pyrite up to 1/4"
		647.2 - 688.5 - As from 624.5 - 639.0', scattered specks and cubes pyrite up to 1/4", no magnetite.
		685.5 - 686.6 - Quartz porphyry, aphanitic, pale brown, tiny quartz eyes, contacts at 50° to core axis.
688.5	693.5	DYKE - Medium grained and massive, dioritic, sharp contacts at 40° to core axis, chilled over 3".

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HOLE NO. 545-32 page 4

PROPERTY ARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 5

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
693.5	880.5	ANDESITE - Fine grained and massive, comparatively low degree of fracturing, numerous quartz and carbonate filled amygdules from 699-719' averaging 1/16", scattered amygdules averaging 1/4" in remainder of section, slightly coarser grained in centreof section, splashes hematite in fractures, very sparsely disseminated specks pyrite. 781.0 - 782.7 - Quartz porphyry, aphanitic, pale yellow, sharp upper contact at 20° to core axis, several inclusions andesite, minor pyrite and traces chalcopyrite at contacts and on margins of inclusions. 845.0 - 880.5 - Locally brecciated, sheared and carbonatized, several pillow rims.
880.5	910.0	ANDESITE - Weakly brecciated, patches and streaks epidote alteration, carbonate filled amygdules with epidote rims. 900.5 - 910.0 - Fine grained and massive, splashes hematite in fractures.
910.0	913.4	DYKE - Fine grained and massive, dioritic, contacts marked by 2" quartz carbonate stringers.
913.4	1032.0	ANDESITE - Weakly brecciated, scattered blebs and cubes pyrite up to 1/4". 919.0 - 972.0 - Fine grained and massive, weakly fractured, scattered carbonate and quartz filled amygdules averaging 1/4" and stringers up to 1" generally in at 65° to core axis, sparse blebs and specks pyrite, becoming a little coarser grained towards bottom of section with very few amygdules. 972.0 - 973.5 - Quartz porphyry, strongly brecciated. 1019.0 -1032.0 - Highly fractured with much of core in fragments.

HOLE NO. 545-32

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PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 6

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		GROUND CORE - 991-996'; 997.5-1000.0'; 1001.0-1003.0'; 1004-1006'; 1023-1026'.
1032.0	1077.0	DYKE - Medium grained and massive, chloritic, highly fractured with much of core in fragments, sparsely disseminated specks pyrite, splashes carbonate and minor hematite in fractures, contacts ground.
1077.0	1597.5	ANDESITE - Fine-medium grained and massive, comparatively low degree of fracturing, angular fragments dyke material up to 3", scattered carbonate and quartz filled amygdules up to 1/4", some ringed with chlorite, scattered fine specks pyrite and traces chalcopyrite, mainly associated with amygdules.
		1113.0 - 1133.0 - Coarser grained becoming finer grained towards bottom of section, amybdaloidal, contains fragments dyke material.
		1133.0 - 1181.0 - Finer grained than above and slightly more acid composition, no amygdules or fragments; scattered fine specks pyrite, traces chalcopyrite.
		1181.0 - 1201.0 - Highly fractured, local brecciated zones up to 3", numerous fine irregular carbonate and quartz stringers, silicified, sparsely disseminated specks pyrite.
		1201.0 - 1211.5 - Brecciated, angular fragments up to 1/2", silicified, minor chloritization, sparsely disseminated specks pyrite.
		1211.5 - 1220.4 - Fine grained, minor local brecciation.
		1220.4 - 1221.9 - Quartz porphyry, pale greenish grey, very hard, highly fractured, sharp irregular contacts.

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HOLE NO. 545-32 Page 6

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 7

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		1221.9 - 1323.0 - Fine grained and massive, scattered fragments and stringers quartz porphyry, low degree of fracturing, very sparsely disseminated specks pyrite, traces chalcopyrite.
		1323.0 - 1329.0 - As above but slightly coarser grained, 2" usually brecciated material with several coarse blebs pyrite and traces chalcopyrite at 1323.0'.
		1329.0 - 1340.6 - Finer grained than above, harder, more acid composition approaching that of dacite, dark grey.
		1340.6 - 1347.6 - More typical andesite but highly fractured, minor pyrite, traces chalcopyrite associated with carbonate quartz filled fractures.
		1347.6 - 1369.0 - Fine grained, massive, low degree of fracturing.
		1369.0 - 1394.5 - Medium-high degree of brecciation and fracturing, fine network carbonate and quartz filled fractures.
		1394.5 - 1398.0 - Epidotized and carbonatized, pale yellowish green, traces chalcopyrite, scattered tiny spots hematite.
		1398.0 - 1403.0 - Silicified, minor local brecciation, minor pyrite in fine specks and in cubes and blebs up to 1/4", traces chalcopyrite.
		1403.0 - 1421.3 - Fine-medium grained, massive, low degree of fracturing.
		1421.3 - 1453.0 - Fine grained, high degree of fracturing, much of core in fragments, siliceous, composition approaches that of dacite, relatively hard, local zones brecciation up to 2".
		1453.0 - 1463.0 - Low degree of fracturing.
		1463.0 - 1478.0 - Brecciated, dark green chloritized fragments andesite up to 1/2" in lighter coloredcarbonatized material.
		1478.0 - 1563.0 - Fine-medium grained and massive, comparatively low degree of fracturing, several vugs lineal with carbonate and quartz.

PROPERTY LARANDONA MINES LIMITED, DufresnoyTwp.,Que. PAGE 8

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		1563.0 - 1570.5 - Strongly brecciated, numerous pale-dark green chloritized fragments andesite, numerous irregular veinlets and lenses cream colored carbonate with minor quartz, sparsely disseminated specks pyrite, traces chalcopyrite. 1570.5 - 1597.5 - Fine-medium grained, medium-high degree of fracturing, numerous irregular veinlets and lenses carbonate with minor quartz comprise 15% of core with content decreasing towards bottom of section. GROUND CORE - 1038-1039'; 1040-1041'; 1044-1046'; 1053-1056'; 1069.5-1071'; 1075-1077';1185-1187'; 1442-1444'; 1449-1451'.
1597.5	1603.0	DYKE - Fine grained, aphanitic, massive, dacitic, pale greenish grey, chilled contacts, upper ground, lower at 25° to core axis.
1603.0	1700.0	ANDESITE - Fine-medium grained, massive, typical andesitic composition, minor local brecciation. 1624.7 - 1634.0 - More acid composition, sparsely disseminated very few specks pyrite. 1634.0 - 1700.0 - As from 1603-1624.7' with addition of quartz and/or calcite filled amygdules which become more numerous towards bottom of section.
1700.0	1702.0	TUFF - Brecciated, hematized and siliceous, some good bedding at 40° to core axis, 3-4% very fine grained pyrite.
1702.0	1943.0	ANDESITE - Fine-medium grained and massive, fairly numerous quartz and carbonated filled amygdules averaging 1/4" and up to 1/2", scattered 2-6" zones weak brecciation consisting of dark chloritized fragments andesite in siliceous and carbonatized matrix.

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp., Que. PAGE 9

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		1755.5 - 1766.5 - Fairly strong but localized brecciation, 1-2% coarse grained pyrite. 1766.5 - 1813.0 - Fine-medium grained and massive, fairly numerous quartz and carbonate filled amygdules up to 1/4". 1813.0 - 1837.5 - Becoming finer grained with slightly higher degree of fracturing. 1837.5 - 1943.0 - Distinctive localized mottled appearance from subhedral phenocrysts of pale green feldspar, medium degree of fracturing, minor splashes hematite in fractures, comparatively few quartz and carbonate filled amygdules.
1943.0	1956.5	ANDESITIC AGGLOMERATE - Fairly numerous angular to slightly roundedvery hard pale green rhyolite fragments up to 3", matrix fairly typical andesite with minor local brecciation.
1956.5	1969.0	ANDESITE - Fine-medium grained, slightly more acid composition than usual, scattered quartz and carbonate filled amygdules averaging 1/8".
1969.0	1985.5	ANDESITIC AGGLOMERATE - As from 1943.0 - 1956.5'.
1985.5	2050.0	ANDESITE - Fine--medium grained, comparatively low degree of fracturing, sparse quartz filled amygdules. 2012.4 - 2030.0 - Medium-strong degree of brecciation, dark green chloritized fragments, fairly numerous quartz and carbonated filled amygd-ules up to 1/4". 2030.0 - 2039.0 - Fine-medium grained and massive, numerous distinctive brownish carbonate and/or quartz stringers averaging 1/4" generally in at 70-80° to core axis, scattered quartz and carbonate filled amygdules. 2039.0 - 2050.0 - Contains from 1-2% finely disseminated magnetite.

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PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp.,Quebec PAGE 10

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
2050.0	2068.0	DYKE - Fine grained, pale green, dacitic composition, highly fractured and brecciated, numerous irregular quartz and carbonate lenses and inclusions andesite, contacts ground.
2068.0	2215.1	ANDESITE - As from 2030-2039'.
		2194.8 - 2215.1 - Becoming finer grained and comparatively hard, composition approaches that of dacite, scattered carbonate and quartz filled amygdules up to 1/4" with traces chalcopyrite.
2215.1	2221.7	DYKE - Medium grained and massive, granodioritic, irregular upper contact, sharp lower contact at 50° to core axis, contains up to 1% finely disseminated magnetite, scattered cubes and specks pyrite with traces chalcopyrite.
2221.7	2223.3	QUARTZ VEIN - Milky white with inclusions of altered dyke material, sparsely disseminated specks pyrite.
2223.3	2476.0	ANDESITE - Fine-medium grained and massive, fairly numerous carbonate and quartz filled amygdules averaging 1/4".
		2248.0 - 2276.0 - As above but with very few amygdules, becoming finer grained with more acid composition towards bottom of section, scattered greenish euhedral feldspar phenocrysts.
		2276.0 - 2294.0 - Becoming finer grained with composition approaching that of dacite, top 2" of section brecciated, probably representing a flow top, scattered amygdules up to 1/4", several chloritized pillow rims.
		2294.0 - 2377.3 - Becoming coarser grained with more typical andesitic composition, fairly numerous quartz and carbonate filled amygdules up to 1/4".

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Twp.,Que. PAGE 11

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		2377.3 - 2387.0 - As from 2,276-2,294', with top 4" of section brecciated flow top material, fairly numerous amygdules up to 1/2" filled with epidote and carbonate with outer rims of quartz, minor pyrite and traces chalcopyrite associated with amygdules.
		2387.0 - 2403.0 - Gradational from above to more typical andesite, fine-medium grained and massive, scattered carbonate and quartz filled amygdules.
		2403.0 - 2447.5 - As above with higher degree of fracturing, locally approaches dacitic composition, splashes hematite in some fractures, sparse cubes and blebs pyrite.
		2447.5 - 2476.0 - Dacitic, fine grained, aphanitic, 1/4" quartz veinlet and 1" brecciation at top of section, locally composition approaches that of more typical andesite.
2476.0	2485.6	AGGLOMERATE - Numerous angular to rounded fragments pale green rhyolite material up to 1" containing quartz eyes, matrix is fine grained, weakly brecciated dacitic material.
		2476.0 - 2480.8 - 5% pyrite in coarse blebs and cubes, traces chalcopyrite, weakly chloritized and silicified.
2485.6	2628.1	ANDESITE - Dacitic, 1-2% coarse grained pyrite.
		2492.7 - 2506.0 - More typical andesite, fine-medium grained, and massive, comparatively few quartz filled amygdules.
		2505.0 - 2508.2 - Brecciated and silicified, scattered blebs and cubes pyrite.

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LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		2508.2 - 2551.3 - As from 2492.7-2506' with slightly more acid composition, more numerous carbonate and quartz filled amygdules with minor associated pyrite. 2551.3 - 2552.3 - Silicified and sheared at 45° to core axis, minor pyrite. 2552.3 - 2621.2 - Fine-medium grained and massive, locally epidotized, locally composition approaches that of dacite. 2621.2 - 2621.7 - Strongly brecciated and sheared at 15° to core axis. 2621.7 - 2628.1 - Fine grained and massive, tiny subhedral feldspar phenocrysts, composition approaches that of dacite.
2628.1	2629.8	DYKE - Fine grained , aphanitic, dacitic.
2629.0	2635.0	ANDESITE - As from 2621.7-2628.1'
2635.0	2636.0	DYKE - As from 2628.1-2629.8'.
2636.0	3012.4	ANDESITE - Fine grained and massive, locally numerous tiny quartz filled amygdules with associated specks chalcopyrite. 2681.5 - 2692.5 - Strongly fractured with much of core in fragments, scattered cubes pyrite. 2692.5 - 2830.0 - Fine-medium grained and massive, scattered carbonate quartz stringers averaging 1/4" generally in at 70-80° to core axis, scattered splashes hematite in fractures, typical andesitic composition, very few amygdules, several 1-2' dacitic dykelets with sharp contacts generally at 45° to core axis. 2830.0 - 2836.0 - Becoming finer grained with slightly more acid composition.

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LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		2836.0 - 2910.0 - Fine-medium grained and massive, more typical andesitic composition, sparse quartz and carbonate filled amygdules, scattered fine irregular quartz and carbonate filled fractures, very minor pyrite, traces chalcopyrite. 2910.0 - 3012.4 - As above with slightly higher degree of fracturing, splashes of hematite in fractures, scattered narrow fine grained pale green dacitic dykelets with sharp but irregular contacts as from 2915.2-2915.7; 2919.7-2919.9; 2929-2930; 2957.8-2958'. GROUND CORE - 3006.5-3010.0; 2010.5-3012.0'.
3012.4	3029.5	DYKE - Fine-medium grained and massive, pale greenish grey, granodioritic composition, medium-high degree of fracturing, comparatively hard, scattered cubes pyrite, sharp contacts at 65° to core axis, lower contact chilled over 6". GROUND CORE - 3014.0 - 2015.0'; 3027.5-3029.0'.
3029.5	3234.0	ANDESITE - Fine-medium grained, medium degree of fracturing, scattered carbonate and/or quartz stringers averaging 1/4" generally in at 60-70° to core axis, several pillow rims, distinctive dark green clots of chlorite in top 10' of section. 3069.5 - 3136.0 - Becoming finer grained with slightly more acid composition, fairly numerous amygdules averaging 1/4" filled mainly with white-brownish carbonate with minor quartz and epidote, some filled with epidote and quartz rimmed with carbonate, minor pyrite and traces chalcopyrite associated with amygdules.

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Project 545

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		3136.0 - 3161.0 - Becoming more highly fractured with minor local brecciation, irregular veinlets and lenses pale green siliceous material containing fragments andesite with associated pyrite and chalcopyrite.
		3161.0 - 3226.0 - As above but with lesser degree of fracturing and brecciation, fairly numerous carbonate and quartz filled amygdules.
		3226.0 - 3234.0 - Fine grained - aphanitic, altered, highly fractured, silicified.
		GROUND CORE - 3228.5-3231.0'; 3232.0-3233.0'.
3234.0	3236.0	GROUND CORE
3236.0	3250.5	ANDESITIC AGGLOMERATE - Numerous dark green angular-sub angular fragments in a fine-medium grained silicified andesitic matrix, 1-2% disseminated pyrite, traces chalcopyrite, both contacts ground.
3250.5	3403.0	ANDESITE - Altered as from 3226-3234'.
		3264.0 - 3275.0 - Fine-medium grained and massive, more typical andesitic composition, several quartz stringers up to 1/2" generally in at 70-80° to core axis, fairly numerous quartz and carbonate filled amygdules with minor chlorite and pyrite.
		3275.0 - 3385.0 - Fine grained, aphanitic, composition approaches that of dacite, sharp upper contact marked by 1/2" pyrite stringer and 2" brecciated material, locally brecciated, fairly numerous amygdules averaging 1/4" filled with carbonate and quartz with minor chlorite and pyrite; several fine grained - aphanitic pale green rhyolitic dykelets averaging 4" with sharp but irregular contacts.

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LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		3385.0 - 3403.0 - As above but becoming more highly fractured.
		GROUND CORE - 3251.5-3253.0; 3355-3375'.
3403.0	3405.0	GROUND CORE
3405.0	3442.5	DYKE - Fine grained - aphanitic, massive, granodioritic composition, 75% white feldspar and quartz, remainder dark green mafics, locally spotted with tiny white euhedral-subhedral feldspar phenocrysts, 1-2% finely disseminated pyrite with traces chalcopyrite in top 5' of section with sulphide content decreasing to zero towards bottom of section.
		GROUND CORE - 3423-3427'.
3442.5	3498.0	ANDESITE - Fine grained - aphanitic, pale green, very hard, could be classed as dacite, top 2' of section brecciated, scattered quartz and chlorite filled amygdules.
		3457.5 - 3498.0 - Becoming a little coarser grained with composition approaching that of more normal andesite, scattered carbonate and quartz filled amygdules, locally bleached, brecciated from 3472-3472.5' and 3496.9-3498', sparsely disseminated specks pyrite.
3498.0	3505.3	DYKE - Fine grained, massive, wuartz diorite composition, spotted with tiny white euhedral-subhedral feldspar phenocrysts, sharp contacts at 65° to core axis.
3505.3	3601.0	ANDESITE - Fine grained, massive, composition approaching that of dacite, fairly numerous amygdules filled with carbonate, quartz and minor chlorite, medium degree of fracturing.
		3520.6 - 3523.0 - Fine grained - aphanitic, very hard, definite dacite composition.

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Project 545

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH 3,601'

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		3523.0 - 3563.0 - As from 3505.3-3520.6, comparatively few amygdules, several aphanitic pale yellowish green rhyolite dykelets from 2-6", brecciated contacts.
		3563.0 - 3564.3 - Brecciated, with numerous quartz and carbonate filled amygdules, minor pyrrhotite, traces chalcopyrite.
		3564.3 - 3573.2 - Finer grained with more acid composition, but becoming coarser grained with more basic composition towards bottom of section, carbonate and quartz filled amygdules.
		3573.1 - 3574.2 - Brecciated as from 3563-3564.3, silicified and contains approximately 1.5% chalcopyrite, minor pyrrhotite.
		3574.2 - 3601.0 - As from 3564.3 - 3573.2', becoming more basic towards bottom of section, fairly numerous amygdules filled with carbonate, quartz and pyrrhotite.
	3601.0	END OF HOLE

(1) Five wedges were placed in the hole at 1564', 1918', 2073', 2304' and 2667'.

(2) After completion of the drilling the hole was cemented at 50' to keep it clean, the casing was left in and a steel cap was welded to the top of it.

(3) The core is stored at the Quebec Department of Natural Resources in Rouyn..

(4) The hole was drilled by Bradley Bros., Ltd. of Noranda, Quebec

See following page for Dip Tests

B. B. Brown

HOLE NO. 545-32

DOCKET NO. 8608

PROPERTY LARANDONA MINES LIMITED, Dufresnoy Township, Que.
Project 545

LOCATION _____ BEARING _____ HOLE NO. 545-32

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED)

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION

D I P T E S T S

45'	- 90°00'	2600'	- 87°15'
100'	- 90°00'	2667'	- 87°00' (Wedge)
200'	- 89°30'	2687'	- 88°30'
300'	- 90°00'	2900'	- 88°00'
400'	- 90°00'	3000'	- 88°00'
500'	- 90°00'	3100'	- 87°45'
600'	- 90°00'	3200'	- 88°00'
700'	- 89°15'	3300'	- 87°45'
800'	- 89°00'	3400'	- 87°45'
900'	- 88°30'	3563'	- 87° 30' (Poor test)
1000'	- 88°30'		
1100'	- 88°00'		
1200'	- 87°30'		
1300'	- 88°00'		
1400'	- 87°30'		
1500'	- 87°00'		
1564'	- 87°00' (Wedge)		
1590'	- 88°00'		
1700'	- 87°30'		
1800'	- 87°00'		
1918'	- 87°00' (Wedge)		
1940'	- 88°00'		
2000'	- 87°00'		
2073'	- 87°30' (Wedge)		
2100'	- 87°30'		
2200'	- 87°00'		
2304'	- 87°00' (Wedge)		
2320'	- 88°00'		
2400'	- 87°45'		
2500'	- 87°45'		

HOLE NO. 545-32

DOCKET NO. 8608

SAMPLE RECORD SHEET

545-32 -HOLE NO
1 -PAGE

PROPERTY- LARANDONA MINES LIMITED, Dufresnoy Township, Quebec

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					DESCRIPTIONS
				Oz.Au	Oz.Ag	% Cu			
545-32-1	1398.0	1403.0	5.0'	Trace	Trace	0.13			Andesite, silicified, weakly brecciated, minor pyrite, traces chalcopyrite.
545-32-2	2476.0	2480.8	4.8	Nil	Nil	0.05			Agglomerate, 5% pyrite in coarse blebs and cubes, traces chalcopyrite.
545-32-3	2506.0	2508.2	2.2'	Nil	Nil	0.02			Andesite, brecciated and silicified, scattered blebs and cubes pyrite, traces chalco.
545-32-4	2637.5	2642.5	5.0'	Nil	Nil	0.05			Andesite, numerous tiny quartz filled amygdules with associated specks pyrite.
545-32-5	3143.0	3148.0	5.0'	Trace	Trace	0.05			Andesite, brecciated, minor pyrite and chalcopyrite, associated with fragments.
545-32-6	3240.0	3245.0	5.0'	Nil	Trace	0.04			Agglomerate, 1-2% pyrite, traces chalcopyrit
545-32-7	3405.0	3410.5	5.0'	Trace	Trace	0.02			Dyke, granodioritic, 1-2% pyrite, traces chalcopyrite.
545-32-8	3573.1	3574.2	1.1'	0.005	0.17	0.17			Andesite, brecciated and silicified, 1-5% chalcopyrite, minor pyrrhotite.

FORM 8609