

AFRO

DOCUMENT No.
W 9380 · 00184

DOCUMENT No.
W 9380 · 00185

N.T.S.: -31 M/13

RPT. NO. S-91-4

Latitude: 47 59

Longitude: 79 55



32D04SW0166 W9380.00184 CATHARINE

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REPORT ON
THE 1991 DIAMOND DRILL PROGRAM
CATHARINE TOWNSHIP PROPERTY
BLOCK I AND IV
CATHARINE AND PACAUD TOWNSHIPS
LARDER LAKE MINING DIVISION
ONTARIO
FOR
ATAPA MINERALS LIMITED

F.J. SHARPLEY

OCTOBER 1991



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SUMMARY

The Catharine Township Property consists of 45 non-patented mining claims in four blocks located 15 miles southeast of Kirkland Lake, Ontario in Catharine and Pacaud Townships.

Atapa Minerals Limited drilled a total of 2150 feet in six diamond drill holes during August and September 1991. One hole on Block I explored the down-dip extension of the Terri Vein (2.044 oz. Au per ton over 2 feet in a surface chip sample) discovered in 1990 near the Pacaud Fault. One hole on Block IV investigated the Hilltop Vein at depth in the area of the Catharine Fault.

A significant auriferous quartz vein with 5-10 percent finely disseminated pyrite assaying 1.146 oz. Au per ton over a core length of 3.5 feet was intersected in hole No. A-1-91 at a vertical depth of 105 feet below surface on Section 24+00N.

The Terri Vein on surface and the intersection in hole No. A-1-91 probably correlates over a down-dip length of 250 feet using a 23 degree dip.

Hole Nos. A-3,4,5 and 6 were drilled at 25 foot intervals to follow-up the intersection in hole A-1-91. All five drill holes intersected the pyritic, auriferous quartz vein that correlates using a dip of 15 degrees east and a northerly strike. These intersections have an area of influence of 100 x 150 feet.

The average grade of the pyritic, quartz vein encountered in hole Nos. A-1,3,4,5 and 6 is 0.867 oz. Au per ton over a width of 4.4 feet or 0.525 oz. Au per ton if all assays are cut to one ounce. The average grade for a mining width is 0.555 oz. Au per ton over a width of 6.9 feet or 0.336 oz. Au per ton (cut) over a width of 6.9 feet.

The Terri Vein has the potential for a small high-grade economic gold deposit if the present area of mineralization is expanded to an area in excess of 300 x 300 feet.

These shallow dipping auriferous quartz veins are related to the Pacaud Fault. The area has the potential for finding other shallow dipping auriferous veins or steeply dipping gold deposits associated with the Pacaud or Catharine Fault.

A drilling program of 25 vertical holes totalling 5,000 feet is recommended in Phase III to expand the area of known mineralization on the Terri Vein at a cost of \$ 125,000.

1.0 INTRODUCTION

Atapa Minerals Limited during August and September 1991 drilled five diamond drill holes on Block I in Pacaud Township and one drill hole on Block IV in Catharine Township, Ontario.

The drilling on Block I, claim No. L-733674, was intended to explore the Terri Vein on Section 24N, discovered in 1990.

The drilling on Block IV investigated the Hilltop Vein at depth in the area of the Catharine Fault.

Hole No. A-1-91 on Block I was partially financed by Terry Patrick and Leo Kosowan under the Ontario Prospector's Assistance Program (OPAP). Hole Nos. A-3,4,5,6-91 on Block I and A-2-91 on Block IV were financed by the Ontario Mineral Incentive Program (OMIP).

The writer visited Block I and IV drill sites after Hole Nos. A-1,2-91 were completed.

The drilling of hole No. A-1-91 was covered in a report (Sharpley 1991) Report On The 1991 Diamond Drilling Program On Block I.

2.0 PROPERTY

2.1 Claims

The Catharine Township property consists of 45 non-patented claims in four blocks registered in the name of Frank Palmay. The four blocks are as follows:

Block IA	4 claims	Catharine Township, Ontario
Block I	4 claims	Pacaud Township, Ontario
Block II	24 claims	Catharine Township, Ontario
Block III	8 claims	Catharine Township, Ontario
Block IV	5 claims	Catharine Township, Ontario

The claims appear on Ontario Government claim map G-3615 of Catharine Township and claim map G-3697 of Pacaud Township in the Larder Lake Mining Division of Ontario. The claims are shown on Figure 1, Property Map of the Catharine Township Property.

The claims total 1800 acres or 728.46 hectares. A list of the claims appear in Appendix IV.

Atapa Minerals Limited has entered into an option agreement with Teck Corporation under which Atapa may earn a 50% interest in Teck's Catharine Township property by incurring exploration expenditures to a total of \$500,000 before June 30, 1993.

2.2 Location and Access

The Catharine Township Property is comprised of four separate claim blocks located 15 miles southeast of Kirkland Lake, Ontario in the Townships of Catharine and Pacaud.

Block I, IA, II and IV are located west of the Misema River and are accessible from highway 564 via Boston Creek. Block III is east of the Misema River and is accessible from highway 624 via Englehart (Figure 2).

2.3 Topography

The topography on the the Catharine Township property is gently rolling with outcrop knolls forming ridges less than 15 m (50 ft). The Misema River valley with relief of 200 feet cuts northerly through the area. The outcrop areas are abundant in the western part of Catharine Township. The abundant outcrop areas are composed mainly of mafic to ultramafic volcanics while felsic volcanic outcrops are less abundant.

Vegetation is generally second growth spruce, balsam, poplar and birch with alder and maple undergrowth. Outcrop on Block I, II and IV is estimated at 10% while Block III is estimated at 5%.

The climate is typical of northern Ontario with snow cover and cold weather from mid November until May.

3.0 EXPLORATION HISTORY

3.1 Regional History

The first claims were staked for gold in the area in 1906 and 1907 during the Larder Lake gold rush and again in 1913 during the Kirkland Lake gold rush.

A small amount of gold has been produced from 294,638 tons resulting in gold bullion of 73,836 oz. Au. This production occurred from two mines, Barry-Hollinger and Cathroy-Larder, and two prospect shafts, Miller-Independence Prospect and Gold Hill Mine between 1918 and 1944.

Three high grade copper deposits, the Amity, the Patterson and the Tretheway-Ossian are located in the Pacaud Group iron formations. The Amity and Patterson both shipped limited amounts of high grade copper-silver ore to Noranda periodically from 1926 to 1955. A shaft was sunk on the Tretheway-Ossian occurrence on a high grade vein but no production was recorded.

The area was first mapped geologically in 1922 by Burrows and Hopkins for the O.D.M. (Map No. 30d, scale 1"= 3/4 mile)

The area was mapped geologically by L.V. Bell of the O.D.M. in 1930 on a scale of 1"=800'. (Map No. 30d)

The area was mapped again in 1963 by James A. Grant of the O.D.M. on Map 2043; Catharine and Marter Townships; at a scale of 1"= 1/2 mile.

All the gold deposits for the area were compiled by J.B. Gorden, H.L. Lovell, Jan de Grijs and R.F. Davie in 1979. (O.G.S. Mineral Deposits Circular 18)

The airborne magnetic map 7075 G by the G.S.C.-O.D.M. covers the area on a scale of 1:250,000.

The airborne electromagnetic and total intensity magnetic survey of the Kirkland Lake area, Catharine Township was carried out by the Ontario Geological Survey in 1979, scale 1:20,000.

3.2 Property History

The majority of the Catharine Township claim Blocks I, II, III and IV were staked by Teck Corporation in late 1983 and early 1984.

The 1984 exploration program by Teck Corporation on Blocks I, II, III and IV included line cutting at 400 foot line spacing and stations at 100 feet. These claim groups were covered with geological, magnetic, VLF-EM surveys and some limited rock

geochemistry.

The 1988 exploration program by Teck Corporation included line cutting, surveying, geological, magnetic and VLF-EM surveys on Blocks I, Ia, II, III and IV. A total of seventeen diamond drill holes for 5,137 feet tested sixteen VLF-EM anomalies on Blocks I, IA, II, III and IV.

Atapa Minerals Limited in 1990 carried out a limited amount of line cutting, induced polarization surveys and power stripping on Blocks I and IV.

The Hilltop shaft is situated in N 1/2, Lot 10, Concession V, just across the boundary of Block IV on the Fairhurst property. (Compilation Map - Block IV). In 1926-28 a three compartment shaft was sunk by Hilltop Gold Mines Limited to a depth of 688 feet with levels at 140 and 265 feet. A series of narrow lenticular quartz veins strike N60W for over 3000 feet across the property. The mineralization consists of pyrite, chalcopyrite, and minor sphalerite. Assays of diamond drill core samples ranged from trace to 0.44 oz/ton Au; a 6 inch intersection from one hole assayed 13.39 oz/ton Au. In 1960 Turzone Explorations Limited carried out a geological survey, trenching and 14 diamond drill holes totalling 1435 feet. (OGS - MRC 18)

3.3 Recent Regional Activity

During the period from May 1989 to February 1990 Callahan Mining Corporation and Shenandoah Resources Limited drilled 40 diamond drill holes on the Miller-Independence No.1 quartz vein in Catharine and Pacaud Townships. The property was optioned from Shenandoah and Nortek Exploration Ltd. Most of the holes were vertical and on a rough 200 foot grid plan to determine the thickness and grade of the 20 degree dipping gold quartz vein. Grades of 0.25 oz. Au per ton over widths of 5 feet were common within an area 600' x 600' and to a depth of 175 feet. The quartz vein is probably related to the Catharine Fault.

Gold Fields Canada Mining Ltd. has carried out extensive exploration on the Daley showing on Lot 6 & 7 Concession IV within Catharine Township. An extensive alteration zone over a strike length of 2000 feet and width of 100 feet has been encountered in a northwestern direction. A gold in soil geochemical anomaly has outlined the zone over a strike length of 7000 feet and a width of 1200 feet. Grab samples of 0.424, 0.821 and 1.407 oz. Au per ton were encountered within the zone. Three diamond drill holes six hundred feet apart tested the zone at depth. The drilling indicated an alteration zone of silicification, sericitization, 1-2% disseminated pyrite with some quartz veining over a width of 500 feet. (Ontario Assessment Files 1990)

Gold Fields Canada Mining Ltd. optioned their two properties in Catharine and Marter Townships to Akiko-Lori Gold Resources Ltd. (NM May 21,1990)

The article states the one property comprises 5,000 acres. The claims host 13 surface gold showings located along a fault structure which has an interpreted strike length of up to two miles and is characterized by shearing, hydrothermal alteration and gold mineralization, says Akiko (NM May 21,1990). Channel samples from several showings on the property yielded results such as 0.53 oz. gold per ton over 3 ft., 0.49 oz over 2 ft. and 0.21 oz over 2 ft.(NM May 21,1990)

Situated 1.75 miles to the northwest, the second property comprises two patented claims and is thought to lie along the extension to the interpreted fault structure. Grab samples on that property have yielded up to 7.5 oz. (NM May 21,1990)

4.0 GEOLOGY

4.1 REGIONAL GEOLOGY

The Catharine Township Property is situated in the Boston-Skead area southeast of Kirkland Lake which forms part of the Abitibi Subprovince of the Superior Province of the Precambrian Shield.

The greenstone belt southeast of Kirkland Lake is part of the Lower SuperGroup II (Jensen 1985). This group is composed of the Pacaud Tuffs, Wawbewawa Group, Catharine Group and the Skead Group. The Skead Group is equivalent in age to the Kidd Creek Rhyolite (2708 my) (OGS Map 2484 - Lithostratigraphic Map of the Abitibi Subprovince)(Figure 3).

Ridler called the volcanics Skead Group and subdivided the group into Skead pyroclastics, Catharine basalts and Pacaud tuffs. Jackson has subdivided the Catharine Group into Wawbewawa Formation (magnesian basalt) and Depression Complex/Boston Creek Komatiite; Catharine Formation (iron-rich and magnesium-rich basalt); Basalt Formation A'(magnesian basalt); Misema Komatiite; and Basalt Formation A (magnesian basalt) (Jackson 1989) (Figure 3).

Lawton (ODM Map No. 1957-4) and Teck Corporation mapping place a komatiite between the Pacaud and the Wawbewawa.

The Pacaud Structural Complex (Jackson 1989) surrounds the Round Lake Batholith. Principal lithologies within the complex include compositionally banded mafic to intermediate rocks, foliated to massive flows, moderately to strongly foliated pillow basalts, felsic to siliceous banded rocks and a persistent lens of sulphide facies iron formation within 200 feet of the batholith (Jackson 1989).

The Catharine Group consists mainly of mafic to ultramafic volcanic flows.

The Wawbewawa Formation is the mafic volcanic sequence between the Pacaud Structural Complex, the Boston Creek Komatiite and the Depression Complex.

The Boston Creek Komatiite, the Depression Complex and the Misema Komatiite are ultramafic flows that exhibit pyroxene-spinifex texture.

The Skead Group consists predominately of intermediate to felsic metavolcaniclastic rocks (Jensen 1985). The main rock types are bedded tuffs, heterolithic to monolithic fragmental rocks, massive feldspar, quartz-bearing units, and minor greywacke and conglomerate.

The most prominent faults and shear zones within the region are

as follows:

- 1) faults radial to the Round Lake Batholith.
- 2) northwest trending Pacaud and Catharine Faults.
- 3) northeast trending fault that displace the Boston Creek Komatiites.
- 4) east-west faults that displace the Pacaud Komatiite.

The volcanic formations in general strike in a northwest direction and dip toward the northeast.

4.2 Property Geology

Block I & IA

The geological sequence on this claim group is Pacaud Tuffs, Pacaud Komatiite, Pacaud Fault, Wawbewawa Formation, Boston Creek Komatiite and the Catharine Formation.

Block IV

The geological sequence on this claim block is Catharine Formation (iron-rich basalt), Catharine Fault, Catharine Formation (magnesium-rich basalt) and Skead Group.

5.0 MINERALIZATION

5.1 Regional Mineralization

Base metal mineralization in the form of copper, zinc and lead is primarily restricted to the Pacaud sulphide facies iron formation associated with cherty felsic tuff around the Round Lake Batholith. Examples of this type are the Amity, Patterson and the Tretheway-Ossian in Pacaud Township. All these properties had shafts with limited high grade production in the form of chalcopyrite and bornite.

Gold mineralization in the area is generally restricted to the northwest-trending corridor near the Catharine Fault (Jackson 1989). Examples of this type are the Miller-Independence, Kennedy-Boston, Hilltop, Gold Hill and the Daley. The fault is characterized by intense fracturing, shearing, quartz and locally quartz-tourmaline and tourmaline veins, carbonate green mica alteration and gold mineralization (Jackson 1989).

Other types of geological environment with potential for gold mineralization are the Pacaud Fault, the base of the Misema and the Depression Complex Komatiites especially in the area of thickening of the Catharine Formations (Figure 3). An example associated with the Pacaud Fault is the Barry-Hollinger.

5.2 Property Mineralization

Gold mineralization on the Catharine Township Property is primarily associated with the following geological environment:

1) quartz veins, hydrothermal alteration such as silicification, sericitization and hematization, pyritization and quartz-feldspar porphyries associated with the Catharine Fault.

(eg. Block III and IV)(Note: this type of mineralization is not found on Block III & IV but has that potential; but is found immediately on strike to the southeast of Block III along the Catharine Fault)

2) quartz veins and pyritization associated with the Pacaud Fault. (eg. Block I)

3) quartz veins and pyritization associated with the warp zone; thickening and truncation of Basalt Formation A and A'. (eg. Block II)

Block I

Shallow dipping quartz veins related to the Pacaud Fault in diamond drill hole No. 1533-3 returned an assay of 6978 ppb Au (0.20 oz/ton Au)(6.97 g/ton) over a width of 2.5 feet on section 24+00N at 1+80E. (Section 24+00N - Map No. S-91-4-08)

Shallow dipping quartz veins related to the Pacaud Fault in Trench No. 1 returned a peak assay of 2.044 oz/ton (70 g/ton) over a width of 2 feet on section 24+00N at 4+00E. (Section 24+00N - 1"= 100")

Block IV

The Hilltop showing occurs on this claim block over a strike length of 800 feet. The quartz vein is 6 inches wide with values up to 13.39 oz/ton Au reported (OGS-MDC-18). The gold zone was explored via a shaft to a depth of 688 feet in 1926-28. This gold zone is probably related to the Catharine Fault. Grab samples taken by Atapa of the Hilltop vein returned values of 0.005, 0.269, 2.320, 0.188 and 0.012 oz/ton Au.

6.0 CURRENT WORK CARRIED OUT

6.1 Diamond Drilling Program

During August and September 1991 Kosy Drilling of Swastika, Ontario drilled a total of 2150 feet in Phase I and II of the program. A total of 1492 feet was drilled in Phase I. One hole was drilled on Block I and one hole on Block IV. In Phase II of the drilling four holes totalling 658 feet was drilled on Block I.

Block I

During the period from August 26 to September 2, 1991 Kosy Drilling of Swastika, Ontario drilled one hole to a depth of 475 feet on Block I in Phase I of the drilling. This hole was drilled to explore the down-dip extension of the Terri Vein, discovered on surface in 1990 (2.044 opt Au over 2 foot chip sample). The collar of hole No. A-1-91 is located on Section 24+00N at 7+28E with a dip of 50 degrees and an azimuth of 220 degrees (See Section 24+00N-1"=100'-Map No. S-91-4-08:Appendix III). A plan of the drill hole is shown on the Compilation Map of Block I and IA (Map No. S-91-4-01).

During the period from September 21-25, 1991 Kosy Drilling of Swastika, Ontario drilled four holes at 25 foot intervals to follow-up the discovery of the down-dip extension of the Terri Vein in hole No. A-1-91 (1.146 opt Au over 3.5 feet or 0.525 opt

Au over 3.5 feet: cut). Hole Nos. A-3-91 and A-4-91 are located on Section 24+00N at 7+03E and 7+13E (Section 24+00N - Map No. S-91-4-06). Hole No. A-5-91 is located on Section 23+75N at 7+28E (Section 23+75N - Map No. S-91-4-07). Hole No. A-6-91 is located on Section 24+25N at 7+28E (Section 24+25N - Map No. S-91-4-05). (Detailed Plan of DDH'S - Map No. S-91-4-04).

Block IV

During the period from September 4-12, 1991, Kosy Drilling of Swastika, Ontario drilled one hole to a depth of 1017 feet to investigate the Hilltop Vein (Turzone hole No. 4 assayed 13.39 opt over 6 inches in a short surface drill hole) at depth in the area of the Catharine Fault. The collar of hole No. A-2-91 is located at 8+00N - 3+00W with an azimuth of 220 and a dip of 53 degrees.

The drill core from hole Nos. A-1, 2, 3, 4, 5, and 6 was logged and sampled by Dr. C.G. Cheriton from September 16-26, 1991 (Diamond Drill Logs enclosed in Appendix: II). A total of 46 samples of the split core were assayed at Bell-White Analytical Laboratories Limited in Haileybury, Ontario using the fire assay method (Certificate of Analysis is enclosed in Appendix: V).

Detailed plans and sections of the Terri Vein are drawn on a scale of 1" = 20 feet. The core from hole Nos. A-1, 2, 3, 4, 5 and 6 is stored at Boston Creek (Shenandoah).

7.0 RESULTS

7.1 Diamond Drilling

Block I

Hole No. A-1-91 on Section 24+00N at 7+28E intersected a quartz vein from 133.5 to 137.0 feet with finely disseminated pyrite and two vugs containing visible gold assaying 1.146 oz. Au per ton over a core length of 3.5 feet at a vertical depth of 105 feet below surface (Section 24+00N - Map No. S-91-4-06). The quartz vein cuts the core at an angle of 60 degrees to core axis. The rock-type of the core is a magnesium-rich tholiitic basalt. By cutting all the assays to 1.0 ounce Au the average assay is 0.525 oz. Au per ton over a width of 3.5 feet. The average assay over a mining width from 131.4 to 137.0 feet is 0.718 oz. Au per ton over a width of 5.6 feet or 0.330 oz. Au per ton (cut) over 5.6 feet (See Table No. 1: Appendix IV).

Hole No. A-3-91 on Section 24+00N at 7+03E returned an assay of 2.996 oz. Au per ton over a core length of 2.7 feet from 127.0 to 129.7 feet at a vertical depth of 100 feet below surface. The cut grade is 1.00 oz. Au per ton over 2.7 feet. The mining grade is 1.158 oz. Au per ton over 7.0 feet or 0.388 oz. Au per ton (cut) over 7.0 feet.

Hole No. A-4-91 drilled at 90 degrees on Section 24+00N at 7+13E assayed 0.662 oz. Au per ton over a width of 2.4 feet from 123.6

to 126.0 feet at a vertical depth of 127 feet below surface. The mining grade is 0.231 oz. Au per ton over 8.9 feet.

Hole No. A-5-91 on Section 23+75N at 7+28E returned an assay of 0.632 oz. Au per ton over a width of 2.5 feet from 140.0 to 142.5 feet at a vertical depth of 110 feet below surface. The mining grade is 0.317 oz. Au per ton over a width of 5.0 feet.

Hole No. A-6-91 on Section 24+25N at 7+28E returned an assay of 0.762 oz. Au per ton over a width of 4.5 feet from 142.5 to 147.0 feet at a vertical depth of 113 feet below surface. The mining grade over a width of 8.1 feet is 0.424 oz. Au per ton.

Block IV

Hole No. A-2-91 was drilled from line 8+00N at 3+00W with an azimuth of 220 degrees and a dip of 52 degrees to a depth of 1017 feet. The hole encountered a 0.50 foot quartz vein from 492.0 to 492.5 feet assaying 0.742 oz. Au per ton at a vertical depth of 344 feet below surface. The quartz vein cuts the core at an angle of 45 degrees to core axis. The quartz vein marks the contact between the magnesium-rich tholiitic basalt to the northeast and the iron-rich tholiitic basalt to the southwest. On the footwall of the quartz vein is a 35 foot mafic sill and a 20 foot wide syenite intrusive. The Catharine Fault occurs within the mafic sill. The Hilltop Vein appears to correlate with this quartz vein in hole No. A-2-91.

8.0 CONCLUSIONS AND RECOMMENDATIONS

A significant auriferous quartz vein with 5-10 percent finely disseminated pyrite assaying 1.146 oz. Au per ton over a core length of 3.5 feet was intersected in hole No. A-1-91 at a vertical depth of 105 feet below surface on Section 24+00E at 7+28E. This probably correlates with the Terri Vein on surface assaying 2.044 oz. Au per ton over 2 feet in a chip sample taken in 1990. The Terri Vein on surface and the intersection in hole No. A-1-91 probably correlates over a down-dip length of 250 feet using a 23 degree dip to the east.

Hole Nos. A-3,4,5 and 6 were drilled at 25 foot intervals around hole No. A-1-91. All five drill holes intersected pyritic, auriferous quartz veins that correlate using a dip of 15 degrees east and a northerly strike. These intersections have an area of influence of 100 x 150 feet.

The average grade of the pyritic, quartz vein encountered in hole Nos. A-1,3,4,5 and 6 is 0.867 oz. Au per ton over a width of 4.4 feet or 0.525 oz. Au per ton over 4.4 feet if all assays are cut to one ounce. The average grade for a mining width is 0.555 oz. Au per ton over a width of 6.9 feet or 0.336 oz. Au per ton (cut) over 6.9 feet.

The average grade of gold from this quartz vein-type deposit

with a nugget effect could range from 0.336 to 0.555 oz. Au per ton over a mining width of 6.9 feet.

The Terri Vein has the potential for a small high-grade economic gold deposit if the present area of mineralization can be expanded to in excess of 300 x 300 feet.

These shallow dipping auriferous quartz veins are related to the Pacaud Fault. The area has the potential for finding other shallow dipping auriferous quartz veins or steeply dipping gold deposits associated with the Pacaud or the Catharine Faults.

A drilling program of 25 vertical holes totalling 5,000 feet is recommended in Phase III to expand the area of known mineralization on the Terri Vein at a cost of \$ 125,000.

Respectfully submitted,



F.J. Sharpley

Burlington Ontario

October 8, 1991



REFERENCES

- Anderson, S.
(1990) Geophysical Report on the Catharine and Pacaud Township Properties for Atapa Minerals Limited by Exsics Exploration Ltd.; May 1990.
- Bell, L.V.
(1930) Boston-Skead gold-copper area, District of Timiskaming; Ontario Dept. Mines, Vol. XXXVIII, 1929, pt. 6, pp. 86-113, includes Map No. 38d, scale 1" = 800'.
- Burrows, A.G. and Hopkins P.E.:
(1922) Boston-Skead gold area; Ontario Dept. Mines, Vol. XXX, 1921, pt. 6, pp. 1-26, includes Map No. 30d, scale 1" = 3/4 mile.
- Gorden, J.B., Lovell, H.L., de Grijs, Jan and Davie, R.F.,
(1979) Gold Deposits of Ontario, Part 2: Part of District of Cochrane, Districts of Muskoka, Nipissing, Parry Soud, Sudbury, Temiskaming and Counties of Southern Ontario; Ontario Geological Survey, Mineral Deposits Circular 18, 253p.
- Grant, James A.:
(1963) Geology of Catherine and Marter Townships, District of Temiskaming, Ontario Department of Mines, Geological Report No. 18, 20p.
- Hodgson, C.J.:
(1983) Preliminary Report on the Timmins-Kirkland Lake Area Gold Deposits File, Ontario Geological Survey, Open File Report 5467, 434p.
- Jackson, S.L.
Harrap, R.M.
(1989) 21. Project Unit 88-33. Geology of Parts of Pacaud, Catharine, and Southernmost Boston and McElroy Townships; Summary of Field Work and Other Activities 1989; OGS Miscellaneous Paper 146
- Jensen, L.S.:
(1978) Regional Stratigraphy and Structures of the Timmins-Kirkland Lake Area, District of Cochrane and Timiskaming and the Kirkland-Larder Lake Area, District of Timiskaming; p.67-72 in Summary of Field Work, 1978, edited by V.G. Milne, O.L. White, R.B. Barlow and J.A. Robertson, Ontario Geological Survey, Miscellaneous Paper 82, 235p.

- Jensen, L.S.: Kirkland Lake-Larder Lake synoptic mapping
(1980) project, District of Cochrane and Timiskaming;
p. 55-60 in Summary of Field Work, 1980, edited
by V.G. Milne, O.L. White, R.B. Barlow, J.A.
Robertson and A.C. Colvine, Ontario Geological
Survey, Miscellaneous Paper 96, 20lp.
- Jensen, L.S. Geology and Petrogenesis of the Archean Abitibi
Langford F.F. Belt in the Kirkland Lake Area, Ontario
(1985) Ontario Geological Survey
Miscellaneous Paper 123
- O.G.S.: Airborne Electromagnetic and Total Intensity
(1979) Magnetic Survey, Kirkland Lake Area, Catharine
Township, District of Temiskaming, by Questor
Surveys Limited for the Ontario Geological
Survey, Preliminary Map 2274A Geophysical
Survey, Scale 1:20,000. Survey and Compilation
February and March, 1979.
- O.G.S.: Airborne Electromagnetic and Total Intensity
(1979) Magnetic Survey, Kirkland Lake Area, Pacaud
Township, District of Temiskaming, by Questor
Surveys Limited for the Ontario Geological
Survey, Preliminary Map 2273 Geophysical
Survey, Scale 1:20,000. Survey and Compilation
February and March, 1979.
- O.G.S.: Kirkland Lake Data Series
(1979) Catharine Township
Preliminary Map P.2283
Scale 1:15,840 or 1" = 1/4 mile. Data compiled
1978 by Ploeger, F. and Grabowski, G.
- O.G.S. Lithostratigraphic Map of the Abitibi
(1984) Subprovince; Map 2484
- (1990) Claim Map: G.3615
Catharine Township
1"= 1/2 mile
- (1990) Claim Map: G.3619
Pacaud Township
1:20,000
- Page, R.O. Assessment Report On Geological Mapping On the
(1986) Catharine Claims, Block II and III,
Catharine Township Ontario; Report No. 1055NB
N.T.S. 31 M/12

- Thorsen, K.R.
(1985) Report on VLF-EM Surveys on the Catharine Claims in Catharine and Pacaud Townships, Northeastern Ontario, Report No. 1017NB (Company report for Teck Explorations Limited) 14p.
- Thorsen, K.R.
(1986a) Assessment Report on Block II, Catharine Township, Ontario; Teck Explorations Limited Report No. 1044NB, 3p
- Thorsen, K.R.
(1986a) Assessment Report on Block III, Catharine Township, Ontario; Teck Explorations Limited Report No. 1045NB, 3p.
- Thorsen, K.R.
(1986c) Assessment Report on Claim L789002, Catharine Township, Ontario; Teck Exploration Limited, Report No. 1054NB, 4p.
- Thorsen, K.R.
(1988) Report on The 1988 Exploration Program on the Catharine Township Claims for Vandorex Energy Corporation Report No. 1084NB, 23p.
- Thorsen, K.R.
(1988) Progress Report and Proposed Drilling on Catharine Claims for Vandorex Energy Corporation, Report No. 1079NB, 4p.
- Sharpley, F.J.
(1990) Report on the 1990 Exporation Program Catharine Township Property Catharine and Pacaud Townships Larder Lake Mining Division Ontario
For
Atapa Minerals Limited
- Sharpley, F.J.
(1991) Report On The 1991 Diamond Drilling Program Catharine Township Property Block I, Pacaud Township Larder Lake Mining Division Ontario, For
Atapa Minerals Limited.
- Sharpley, F.J.
(1991) Report On The 1991 Diamond Drilling Program Catharine Township Property Block I and IV, Catharine and Pacaud Townships Larder Lake Mining Division Ontario, For
Atapa Minerals Limited

CERTIFICATE OF QUALIFICATION

I, Frederick James Sharpley of the City of Burlington, Province of Ontario, do hereby certify:

- 1) That I am a consulting geologist and reside at 2372 Sinclair Circle, Burlington, Ontario, L7P 3C3.
- 2) That I graduated from the University of Saskatchewan, Saskatoon, Saskatchewan, holding a degree of Bachelor of Arts, Geology (1959).
- 3) That I am a Fellow of the Geological Association of Canada.
- 4) That I have practised my profession as a mineral exploration geologist for a period of 32 years.
- 5) This report is based on a visit to the Catharine Township Property, Block I & IV on September 16, 1991 and a review of the data
- 6) That I have no financial interest in either the Catharine Township Property or Atapa Minerals Limited nor do I expect to receive any interest.

Burlington Ontario.

October 8, 1991



F. Sharpley

F.J. Sharpley

APPENDIX I:
LIST OF FIGURES

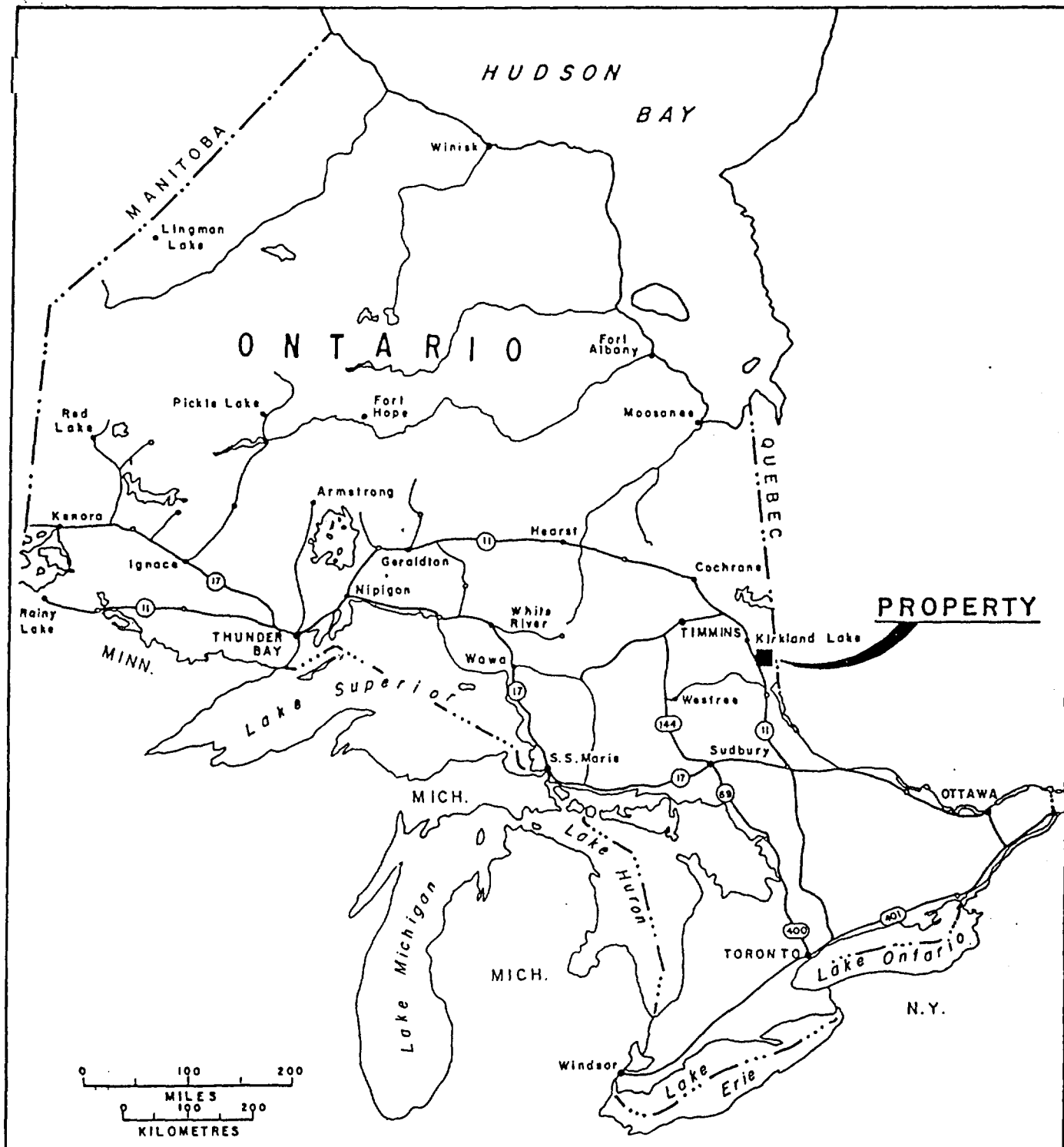
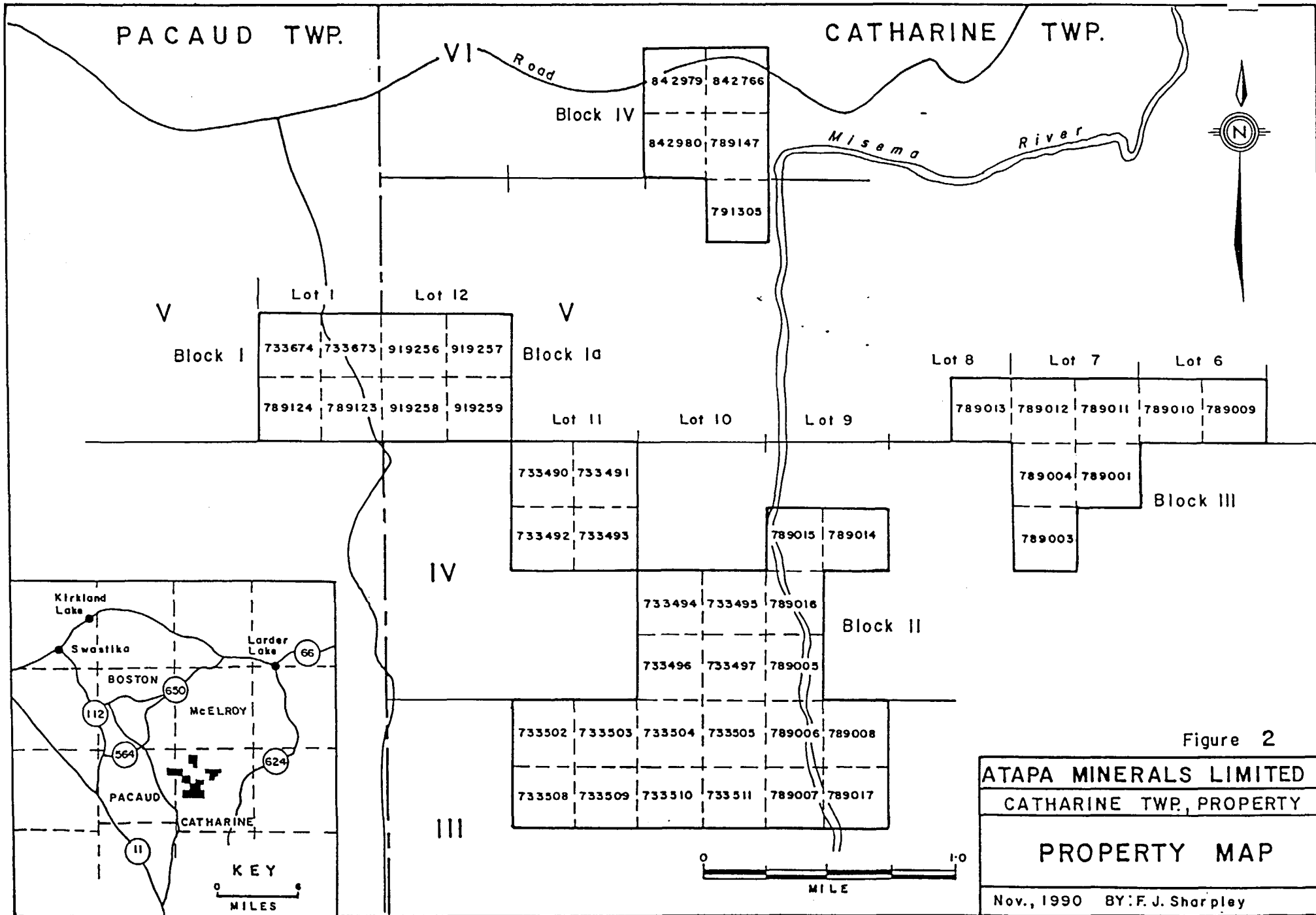


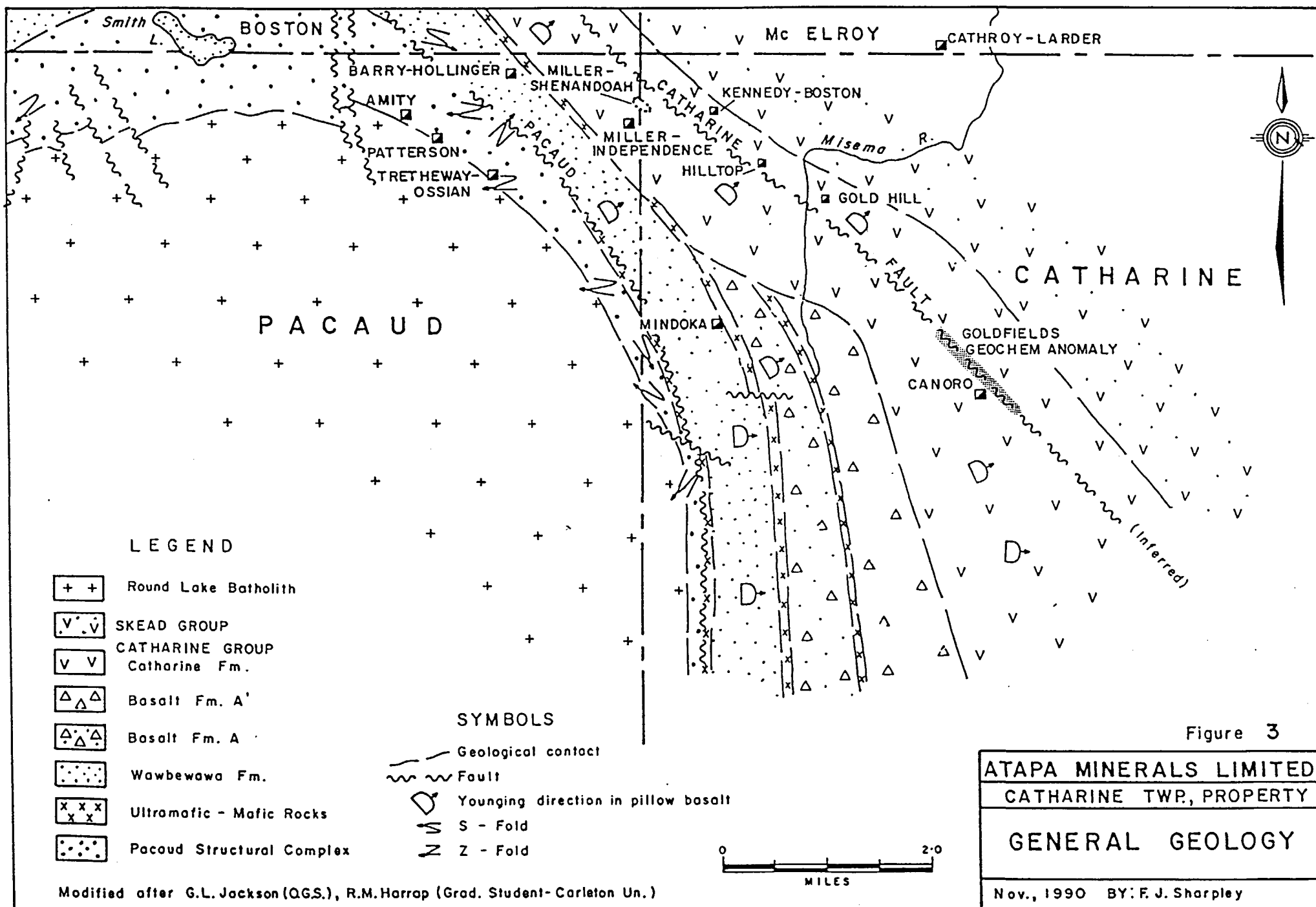
Figure 1

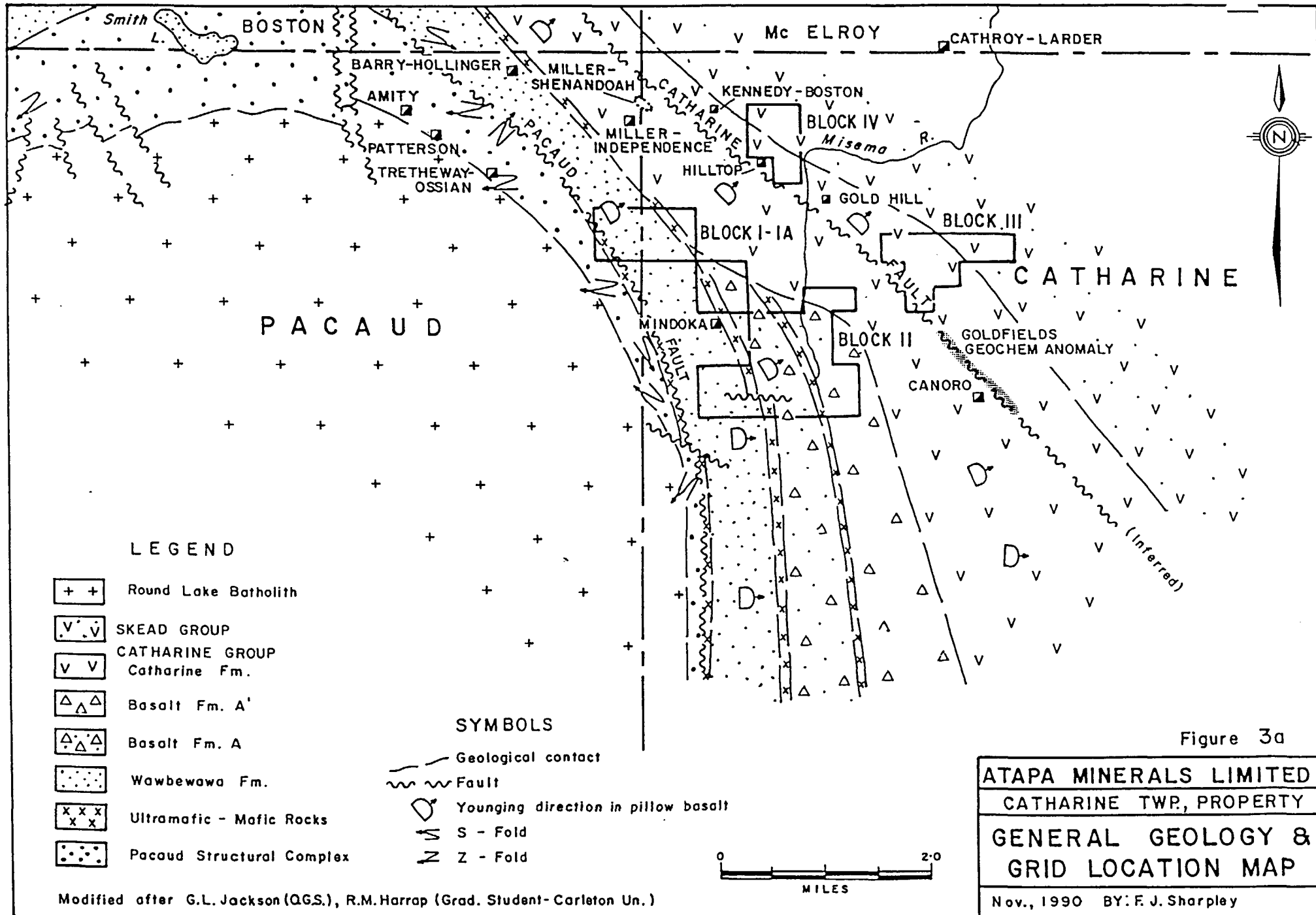
ATAPA MINERALS LIMITED
 CATHARINE TWR, PROPERTY

LOCATION MAP

Nov., 1990 BY: F.J. Sharpley







LEGEND & SYMBOLS

ABBREVIATIONS



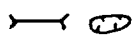
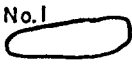




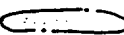
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">5</div>	Round Lake Batholith Granite	cp chalcopyrite
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">4</div>	SKEAD GROUP Felsic Pyroclastics CATHARINE GROUP	h chlorite hem hematite
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">3</div>	Catharine Fm. a Iron-Rich Basalt b Magnesium-Rich Basalt	l carbonatized l flow banding
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">2c</div>	Basalt Fm. A' Magnesium-Rich Basalt	m flow breccia
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">2b</div>	Basalt Fm. A Magnesium-Rich Basalt	mag magnetite
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">2a</div>	Wawabewawa Fm. Magnesium-Rich Basalt	n lapilla o agglomerate
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">2</div>	Ultramafic - Mafic Rocks Komatiite 2A Misema Komatiite 2B Depression Complex/ Boston Creek Komatiite 2C Pacaud Komatiite	p lamprophyre po pyrrhotite py pyrite
<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">1</div>	Pacaud Structural Complex Mafic to Felsic Tuffs Iron Fm. - sulphide facies	qcv quartz carbonate vein qv quartz vein Q felsic r rubble sh sheared sil siliceous S.Z. shear zone t tuffaceous w. water
————	Geological Contact	
~~~~~~	Fault	
xxxxxxxx	Beaver Dam	
	Schistosity	
	Bedding	
	Trench or Pit	
No. 1 	Stripped Area - Trench and No.	
⊕	Sample Location (rock)	
140	Au ppb	
1.   6. ● 2.	Sample Location and No. in Trench	
	D.D. Hole and No.	
	Au oz. / ton / length	
14 	Teck D.D. Holes have prefix 1533 (omitted)	
	Au ppb / length	
————	Crone Radem V.L.F. E.M. Conductor Axis	
————	I.P. Anomaly - Dipole - Dipole N = 1103, a = 100'	
————	Strong	
- - - -	Medium	
- - - -	Weak	
	Magnetic High ≥ 1000 gammas	

Figure 4

APPENDIX II:  
DIAMOND DRILL HOLE LOGS

DIAMOND DRILL RECORD

NAME OF PROPERTY: ATAPA MINERALS LIMITED	FOOTAGE: 5	DIP: 52	AZ: 220	FOOTAGE: 167.7	DIP: 168.8	AZ: 220	HOLE NO. A-1-91 SHEET NO. 1
HOLE NO: A-1-91	LENGTH: 475.0'						REMARKS:
LOCATION: CATHARINE TWP. PROPERTY-GRP I-PACAUD TWP.,-ONTARIO							CLAIM NO. L-733674
LATITUDE: 24+00N	DEPARTURE: 7+28E						DRILL CONTRACTOR:
							Kosy Drilling
ELEVATION: ROAD LEVEL	AZIMUTH: 220	DIP: -50					CORE SIZE: BQ
STARTED: AUGUST 26/91	FINISHED: SEPTEMBER 2/91						LOGGED BY: C.G. CHERITON
							9/16/91-9/18/91

FOOTAGE		DESCRIPTION	SAMPLE			ASSAYS				
FROM	TO		NO.	FOOTAGE		AU	AG	CU	AU	
			XS	FROM	TO	TOTAL	PPB	PPM	PPM	OZ/T
0.0	45.0	OVERBURDEN: Glacial till, boulders and gravel								
45.0	133.5	BASALT: CATHARINE BASALT								
		light green, fine to medium-grained, with local pillow contacts, many rusty gossanous, pyritic fracture seams some vuggy at 65 feet to 80 feet; also at 87 feet; patches of pyrite and pyrrhotite at 106 feet with red hematite and silica seams; quartz-epidote at 111'-112'.	F9854	76.0	78.0	2.0				0.002
			F9855	86.0	87.5	1.5				0.002
			F9856	111.0	112.0	1.0				TR
133.5	137.0	QUARTZ VEIN:								
		mainly white to dark yellow quartz vein at 60 degrees to core axis, containing 20% bands of medium-grained FeS2 from 1/4" to 1/2" wide at roughly 60 degrees to core axis; these pyrite veins are cut by irregular seams of darker finer-grained sulphides which transect the pyrite usually at right angles;	F9857	131.4	133.5	2.1				0.004
			F9851	133.5	135.0	1.5	ND			0.468
			F9852	135.0	136.0	1.0	4.0			3.172
			F9853	136.0	137.0	1.0	ND			0.138
			F9858	137.0	139.4	2.4				0.002
			F9859	139.4	142.0	2.6				0.006
			F9860	142.0	144.0	2.0				TR
			F9861	144.0	146.3	2.3				0.016
		some bands are vuggy with quartz crystals and two vugs contain blebs of gold at 135.8 feet.								
137.0	142.0	GOSSANOUS SILICIFIED BASALT:								
142.0	144.0	QUARTZ VEIN:								
		white quartz with banding at 80 degrees to core axis (Lower Quartz Vein)								
144.0	352.0	BASALT:								
		mainly light green, massive, fine to medium-grained basalt with minor quartz and carbonate banding.	F9862	167.7	168.8	1.1				0.004





DIAMOND DRILL RECORD

NAME OF PROPERTY: ATAPA MINERALS LIMITED

HOLE NO: A-2-91 LENGTH: 1017.0'

LOCATION: CATHARINE TWP. PROPERTY-GRP IV-CATHARINE TWP. ON

LATITUDE: 8+00N DEPARTURE: 3+00W

ELEVATION: AZIMUTH: 220 DIP: -50

STARTED: SEPT. 4/91 FINISHED: Sept. 12/91

FOOTAGE	DIP	AZ.	FOOTAGE	DIP	AZ.
	53				
500	51				
975	49				

HOLE NO. A-2-91 SHEET NO. 1

REMARKS:

CLAIM NO. L-842980

DRILL CONTRACTOR:  
Kosy Drilling

CORE SIZE: BQ

LOGGED BY: C.G. CHERITON  
9/17/91-9/18/91

FOOTAGE		DESCRIPTION	SAMPLE			ASSAYS			
FROM	TO		NO.	FOOTAGE		AU	AG	CU	AU
				FROM	TO				
0.0	27.5	OVERBURDEN:							
27.5	492.0	BASALT:							
		light green, fine to medium-grained, magnesium-rich, tholiitic basalt;							
		161.0 - 162.8 5-10% FeS2.	F9868	161.0	162.8	1.8			TR
		222.0 - 225.0 quartz-carbonate breccia.							
		409.0 - 410.0 quartz-carbonate vein; no sulphides.							
492.0	492.5	QUARTZ VEIN:							
		6" tight, clean, banded quartz vein with visible gold (V.G.) at 45 degrees to core axis; 5-10% FeS2 and CuFeS2; probably the Hilltop Vein; no gold in wallrock; no FeS2 in wallrock;	F87851	491.0	492.0	1.0			TR
			F9869	492.0	492.5	0.5	ND	6460	0.742
			F87852	492.5	493.5	1.0			TR
492.5	527.0	MAFIC INTRUSIVE:							
		black and green serpentized intrusive with fault zone at 524.0 to 527 feet; broken ground and mud seams at 45 degrees to core axis.							
527.0	546.0	PINK SYENITE:							
		pinkish, fine-grained, syenite dyke or sill; minor FeS2 with contacts parallel to schistosity.							
546.0	1017.0	BASALT:							
		dark green, banded and streaky iron-rich tholiitic Catharine basalt; banded at 50 degrees to core axis; locally 60 degrees to core axis.							



DIAMOND DRILL RECORD

NAME OF PROPERTY: ATAPA MINERALS LIMITED	FOOTAGE: 157.0	DIP: 0	AZ: 0	FOOTAGE: 157.0	DIP: 0	AZ: 0	HOLE NO. A-3-91 SHEET NO. 1
HOLE NO: A-3-91	LENGTH: 157.0'						REMARKS:
LOCATION: CATHARINE TWP. PROPERTY-GRP I--PACAUD TWP.--ONTARIO							CLAIM NO. L-733674
LATITUDE: 24+00N	DEPARTURE: 7+03E						DRILL CONTRACTOR:
							Kosy Drilling
ELEVATION:	AZIMUTH: 220	DIP: -50					CORE SIZE: BQ
STARTED: SEPT. 21/91	FINISHED: Sept. 21/91						LOGGED BY: C.G. CHERITON
							9/22/91

FOOTAGE		DESCRIPTION	SAMPLE		ASSAYS				
FROM	TO		NO.	FOOTAGE	AU	AG	CU	AU	
			NO.	FROM	TO	TOTAL	PPB.	PPM.	LOZ/T
0.0	35.0	OVERBURDEN:							
35.0	127.0	BASALT:							
		light green, fine-grained Catharine Basalt;							
		42.0 - 45.0 pillow salvages and breccia.	F9870	42.8	45.0	2.2		10.004	
127.0	141.0	QUARTZ VEIN:							
		mainly white quartz from 127.0 to 129.0; banded	B7853	126.0	127.0	1.0		10.006	
		schist and pyrite seams at 70-75 degrees to core	F9871	127.0	129.7	2.7		12.996	
		axis; some vugs and rusty fracturing.	F9872	129.7	134.0	4.3		10.004	
			F9873	134.0	136.5	2.5		10.020	
			F9874	136.5	139.0	2.5		10.002	
		lower quartz vein from 139.0 to 140.5; minor	F9875	139.0	141.2	2.2		10.004	
		sulphides intervening, 5-10% quartz-carbonate							
		veins; minor FeS2.							
141.0	157.0	BASALT:							
		light green, quartz-carbonate veinlets.							
157.0		END OF HOLE:							
		Note: core stored at Boston Creek (Shenandoah)							



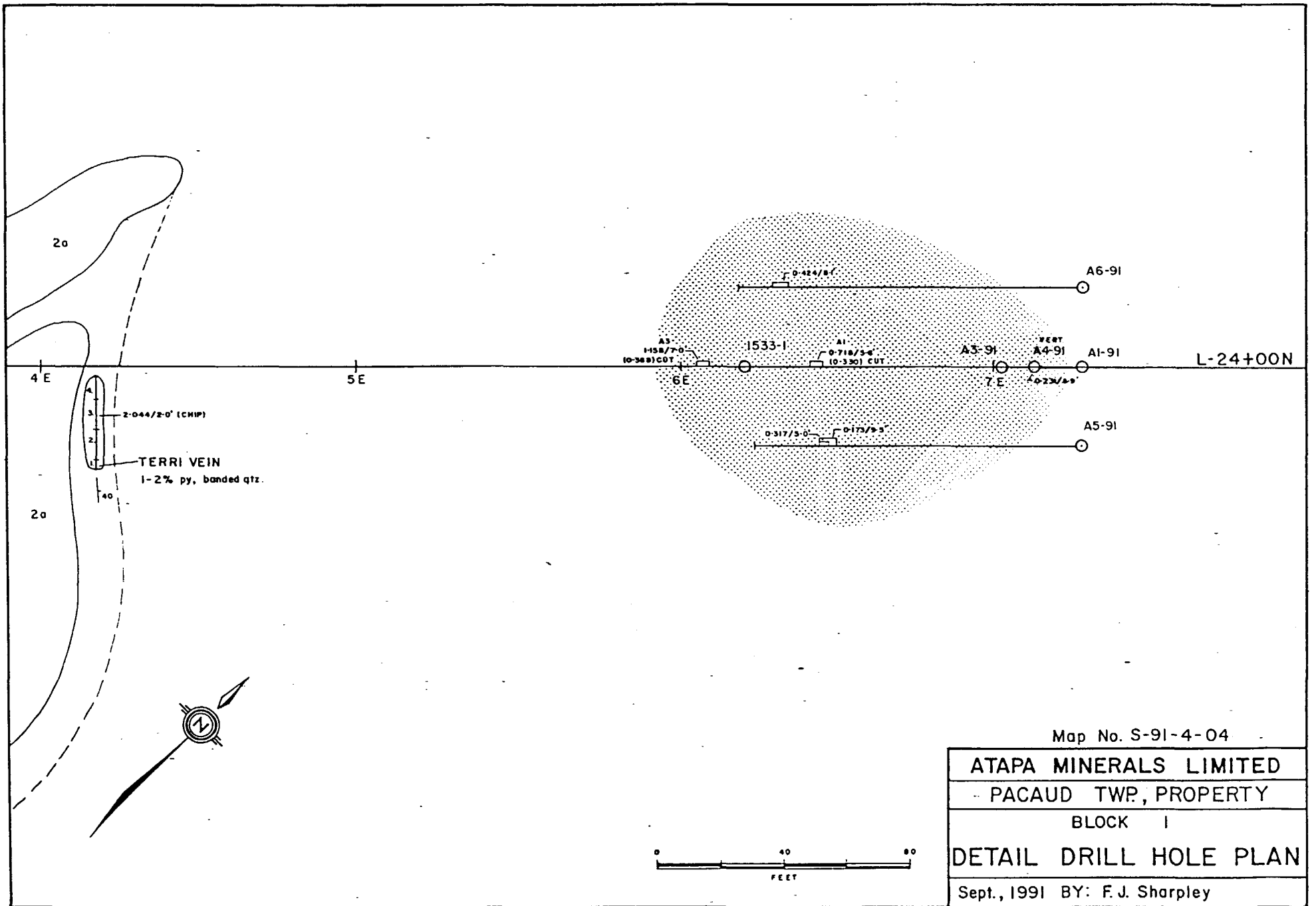


DIAMOND DRILL RECORD

NAME OF PROPERTY: ATAPA MINERALS LIMITED	FOOTAGE: DIP: AZ.	FOOTAGE: DIP: AZ.	HOLE NO. A-6-91 SHEET NO. 1
HOLE NO: A-6-91      LENGTH: 167.0'			REMARKS:
LOCATION: CATHARINE TWP. PROPERTY-GRP 1-PACAUD TWP.-ONTARIO			CLAIM NO. L-733674
LATITUDE: 24+25N      DEPARTURE: 7+28E			DRILL CONTRACTOR:
ELEVATION: road      AZIMUTH: 220      DIP: -50			Kosy Drilling
			CORE SIZE: BQ
STARTED: SEPT. 24/91      FINISHED: Sept. 25/91			LOGGED BY: C.G. CHERITON
			9/26/91

FOOTAGE		DESCRIPTION	SAMPLE		ASSAYS				
FROM	TO		NO.	FOOTAGE	AU	AG	CU	AU	
			1/2S	FROM	TO	TOTAL	PPB.	PPM.	10Z/T
0.0	56.0	DYERBURDEN:							
56.0	142.5	MAFIC BASALT:							
		dark green to black schistose-talc carbonate; schistosity and banding ranges from 45-60 degrees to core axis.							
		100.0 leached carbonate and vuggy quartz-carbonate veins.							
		105.0 - 107.0 5-10% disseminated FeS2.	F9886: 10	105.0	107.0	2.0		0.002	
			B7856:	141.5	142.5	1.0		TR	
142.5	153.8	QUARTZ VEIN:	F9887: 5	142.5	147.0	4.5		0.762	
			F9888: 5	147.0	150.6	3.6		0.002	
		mainly white quartz at 60 degrees to core axis; composite veins intersecting; averaging up to 5% FeS2; some large cubic FeS2.	F9889: 5	150.6	153.8	3.2		0.014	
			F9890:	153.8	157.0	3.2		0.024	
		150.6 - 153.8 Main Quartz Vein: with narrow pyrite seams at 60-70 degrees to core axis; narrow FeS2 seams; no tellurides.							
153.8	167.0	BASALT:							
		light green basalt cut by irregular white and grey quartz-carbonate veinlets at 45-60 degrees to core axis; disseminated pyrite cubes (3-5%) below Quartz Vein at 153.8 - 157.0							
167.0		END OF HOLE:							
		Note: core stored at Boston Creek (Shenandoah).							

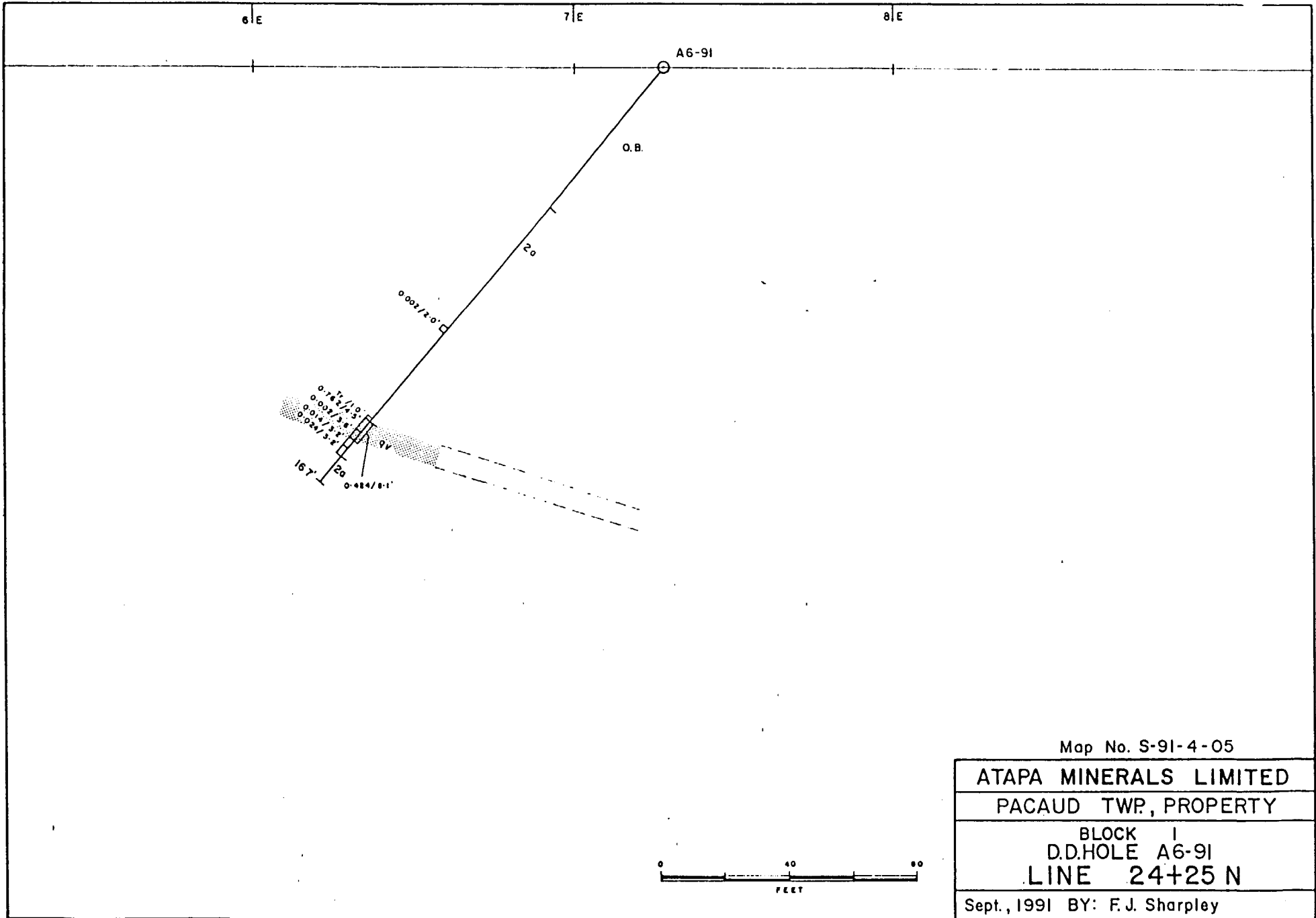
APPENDIX III:  
PLANS AND SECTIONS



Map No. S-91-4-04

ATAPA MINERALS LIMITED
PACAUD TWP., PROPERTY
BLOCK I
DETAIL DRILL HOLE PLAN
Sept., 1991 BY: F.J. Sharpley





Map No. S-91-4-05

ATAPA MINERALS LIMITED

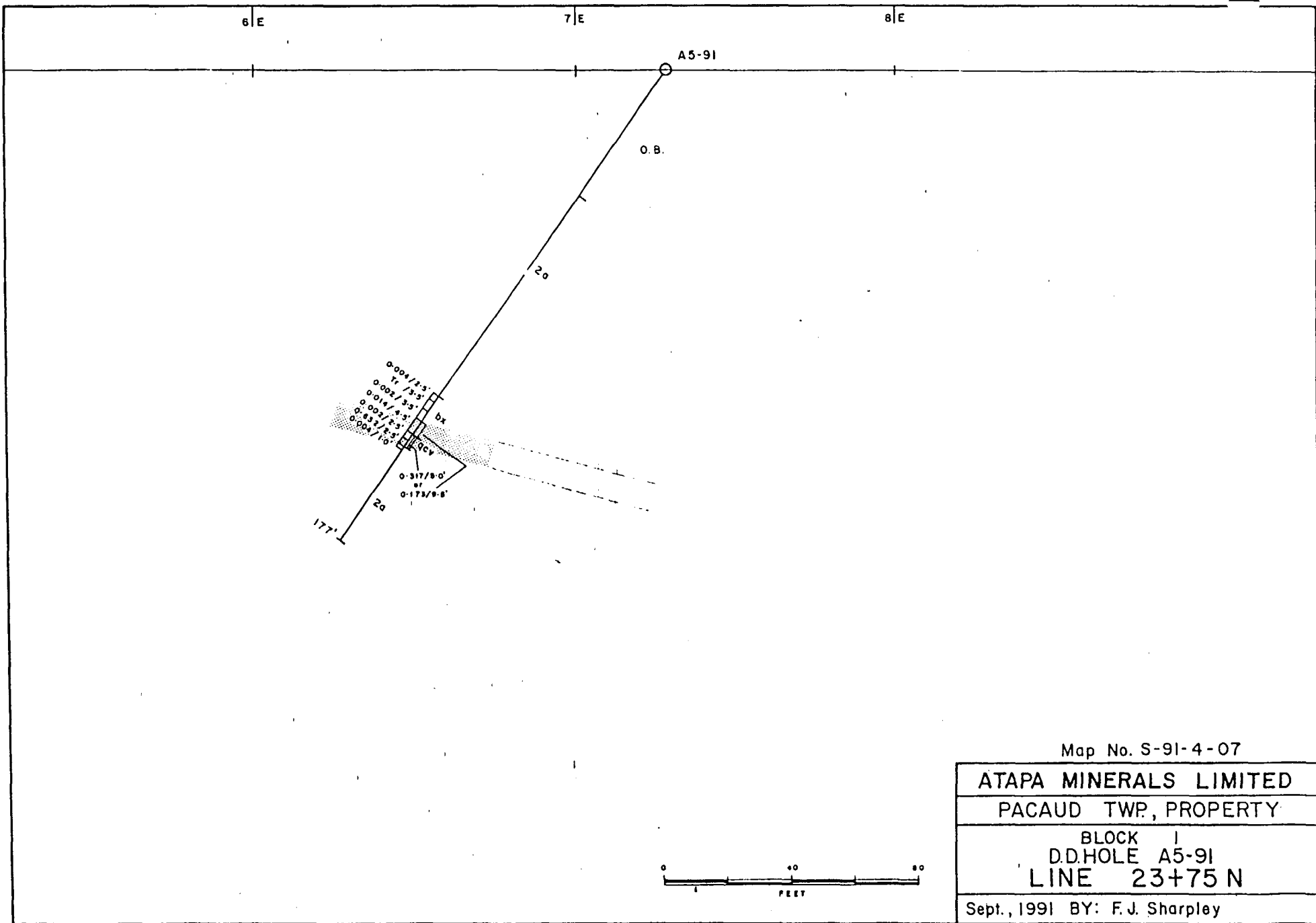
PACAUD TWP, PROPERTY

BLOCK I  
 D.D.HOLE A6-91  
 LINE 24+25 N

Sept., 1991 BY: F.J. Sharpley

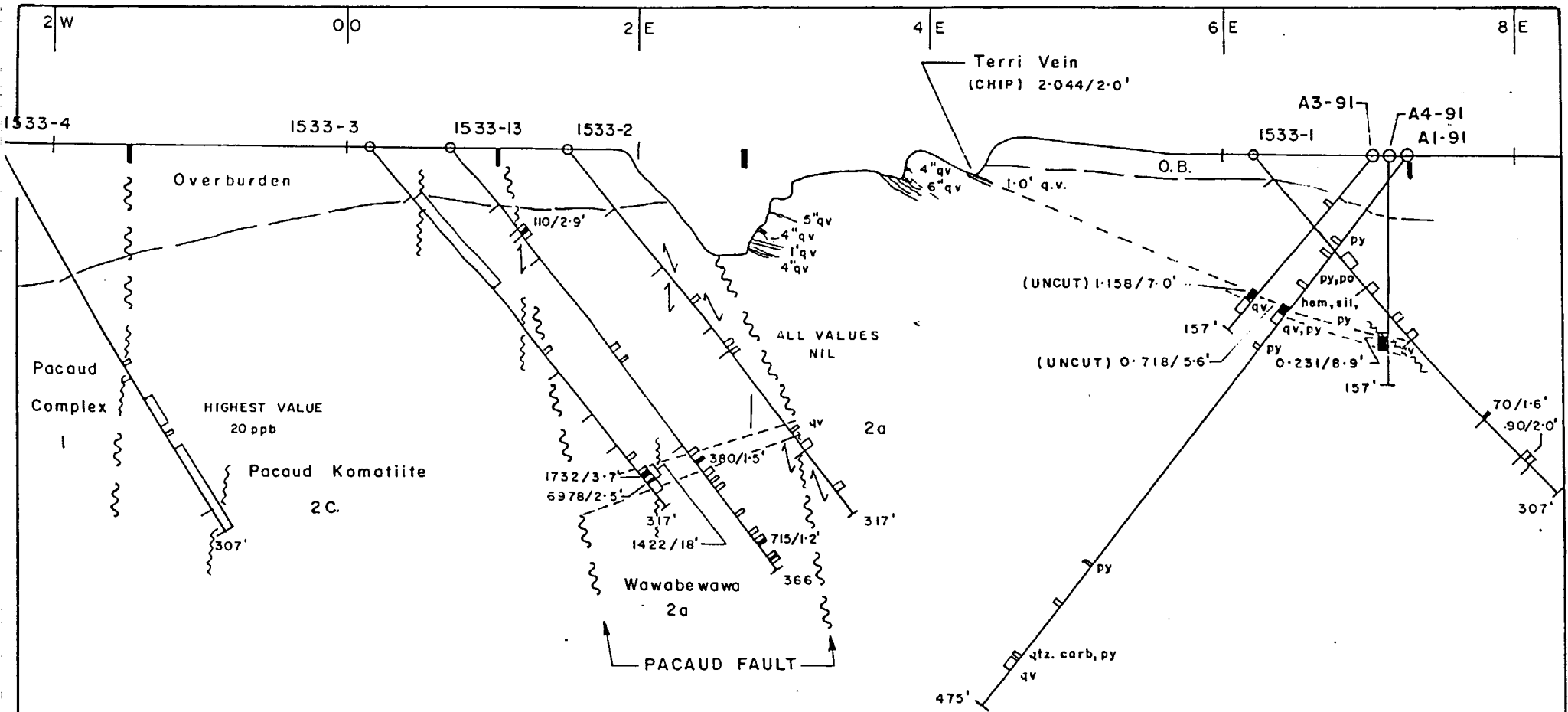






Map No. S-91-4-07

ATAPA MINERALS LIMITED
PACAUD TWP, PROPERTY
BLOCK 1 D.D.HOLE A5-91 LINE 23+75 N
Sept., 1991 BY: F.J. Sharpley



**LEGEND**

1533-3 Hole Number  
 Assayed Section  
 6978/2.5' Au ppb/Length (ft.)

- Fault
- Bedding
- Foliation
- V.L.F. - E.M. Conductor

Modified after Teck Expl. Ltd. Section, Sept, 1988



Map No. S-91-4-08

**ATAPA MINERALS LIMITED**

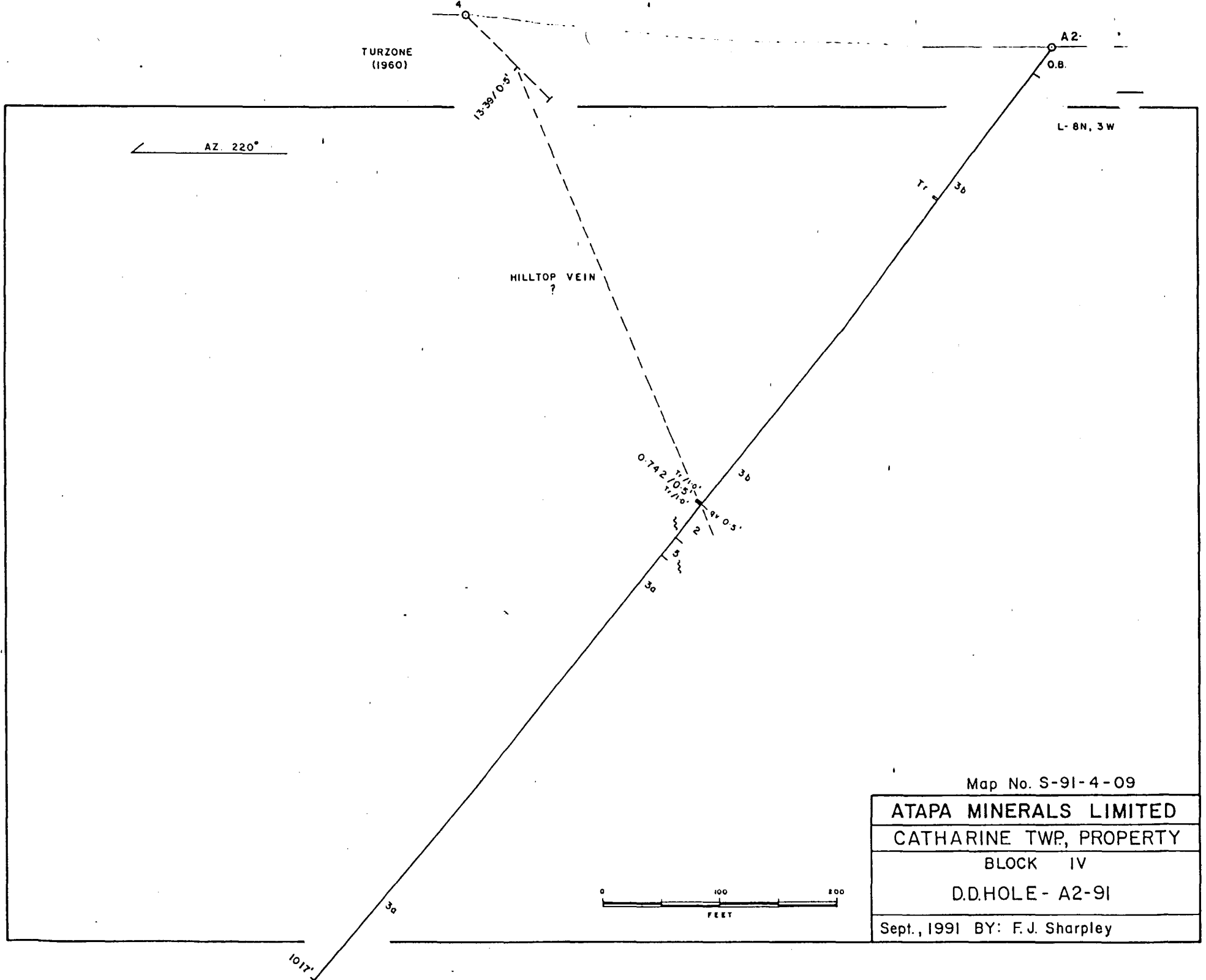
**PACAUD TWP., PROPERTY**

BLOCK 1

D.D.H. S. 1,2,3,4,13, A1,A3,A4-91

LINE 24+00N

Sept., 1991 BY: F.J. Sharpley



Map No. S-91-4-09

ATAPA MINERALS LIMITED

CATHARINE TWP, PROPERTY

BLOCK IV

D.D.HOLE - A2-91

Sept., 1991 BY: F.J. Sharpley

APPENDIX IV:  
LIST OF TABLES

TABLE NO. 1  
SUMMARY OF DDH'S - BLOCK I - PHASE I AND II - 1991.  
TERRI VEIN

BK	HOLE #	LAT.	LONG.	AZ.	DP	FROM	TO	WTH FT	ASSAY AU/OPT	VD FT	REMARKS	
I	A-1-91	24+00N	7+28E	220	52	133.5	137.0	3.5	1.146	105	q.v.-py	
									*0.525			
						131.4	137.0	5.6	0.718			
									*0.330			
I	A-3-91	24+00N	7+03E	220	50	127.0	129.7	2.7	2.996	100	q.v.10%py	
									*1.000			
						127.0	134.0	7.0	1.158			
									*0.388			
I	A-4-91	24+00N	7+13E		90	123.6	126.0	2.4	0.662	127	q.v.-10%py	
						123.6	132.5	8.9	0.231			
I	A-5-91	23+75N	7+28E	220	55	140.0	142.5	2.5	0.632	110	q.v.10%py	
						137.5	142.5	5.0	0.317			
						133.0	142.5	9.5	0.173			
I	A-6-91	24+25N	7+28E	220	50	142.5	147.0	4.5	0.762	113	q.v.-10%py	
						142.5	150.6	8.1	0.424			
	Average: DDH'S-A-1, 3, 4, 5, 6								4.4	0.867		Q.V.
								4.4	*0.525			
								6.9	0.555		MINING	
								6.9	*0.336		WIDTH	

Note: * assays cut to 1 ounce Au

TABLE NO. 2

## SUMMARY OF DDH'S - BLOCK IV - PHASE I - 1991.

BK	HOLE #	LAT.	LONG.	AZ.	DP	FROM	TO	WTH	ASSAY	VD	
								FT	AU/OPT	FT	
IV	A-2-91	8+00N	3+00W	220	52	492.0	492.5	0.5	0.742	344	gv Hilltop Vein



## CLAIM SUMMARY-CATHARINE-7/11/91

PROJ	CLAIM	OWNER	COM	TWP	REC'D	ASS-D	COM-D	DAY/\$
BLOCK I	L-733673	TECK	AU	PACAUD	10/31/84	10/31/96	4	4,796
	L-733674	TECK	AU	PACAUD	10/31/84	10/31/97	360	4,840
	L-789123	TECK	AU	PACAUD	10/31/84	10/31/96	4	4,796
	L-789124	TECK	AU	PACAUD	10/31/84	10/31/96	48	4,752
	L-919256	TECK	AU	CATHARINE	10/15/86	10/15/94	98	3,102
	L-919257	TECK	AU	CATHARINE	10/15/86	10/15/95	80	3,520
	L-919258	TECK	AU	CATHARINE	10/15/86	10/15/94	32	3,168
	L-919259	TECK	AU	CATHARINE	10/15/86	10/15/94	76	3,124
BLOCK II	L-733490	TECK	AU	CATHARINE	12/06/83	12/06/95	312	4,488
	L-733491	TECK	AU	CATHARINE	12/06/83	12/06/95	378	4,422
	L-733492	TECK	AU	CATHARINE	12/06/83	12/06/95	400	4,400
	L-733493	TECK	AU	CATHARINE	12/06/83	12/06/95	290	4,510
	L-733494	TECK	AU	CATHARINE	12/06/83	12/06/95	290	4,510
	L-733495	TECK	AU	CATHARINE	12/06/83	12/06/95	378	4,422
	L-733496	TECK	AU	CATHARINE	12/06/83	12/06/95	356	4,444
	L-733497	TECK	AU	CATHARINE	12/06/83	12/06/95	356	4,444
	L-733502	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733503	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733504	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733505	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733508	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733509	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733510	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-733511	TECK	AU	CATHARINE	12/28/83	12/28/95	400	4,400
	L-789005	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789006	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789007	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789008	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
L-789014	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400	
L-789015	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400	
L-789016	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400	
L-789017	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400	
BLOCK III	L-789001	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789003	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789004	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789009	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789010	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789011	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789012	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
	L-789013	TECK	AU	CATHARINE	1/12/84	1/12/96	400	4,400
BLOCK IV	L-789147	TECK	AU	CATHARINE	1/05/86	1/05/94	120	3,080
	L-791305	TECK	AU	CATHARINE	1/05/86	1/05/94	120	3,080
	L-842766	TECK	AU	CATHARINE	8/14/86	8/14/94	120	3,080
	L-842979	TECK	AU	CATHARINE	8/15/86	8/15/95	366	3,234
	L-842980	TECK	AU	CATHARINE	1/05/86	1/05/94	120	3,080

CLAIM SUMMARY-CATHARINE-7/11/91

PROJ	CLAIM	OWNER	COM	TWP	REC'D	ASS-D	COM-D	DAY/\$
-----							-----	-----
TOTAL:							13,908	188,892
COUNT: 45							-----	-----

APPENDIX V:

ASSAYS



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,  
POJ 1KO

HAILEYBURY, ONTARIO

TEL: 672-3107  
FAX: (705) 672-5843

## Certificate of Analysis

NO. 0436

1

DATE: September 16, 1991

SAMPLE(S) OF: Core (3)

RECEIVED: September 1991

SAMPLE(S) FROM: Mr. Leo Kosowan, Atapa Minerals Ltd.

Sample #	Oz. Gold		
1 (F9851)	0.468	$133.5 - 137.0 = 3.5$	$133.5 - 135.0 - 1.5$
2 (F9852)	3.172**	137.9 -	$138.0 - 136.0 = 2.0$
3 (F9853)	0.138		$136.0 - 137.0 = 1.0$

NOTE: ** denotes checked.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER _____



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,  
POJ 1KO

HAILEYBURY, ONTARIO

TEL: 672-3107  
FAX: (705) 672-5843

## Certificate of Analysis

NO. 0448

1

DATE: September 23, 1991

SAMPLE(S) OF: Core (18)

RECEIVED: September 1991

SAMPLE(S) FROM: Mr. Leo Kosowan, Atapa Minerals

Sample #	Oz. Gold	Ag PPM
1		ND
2		4.0
3		ND
F 9854	0.002	
F 9855	0.002	
F 9856	Trace	
F 9857	0.004	
F 9858	0.002	
F 9859	0.006	
F 9860	Trace	
F 9861	0.016	
F 9862	0.004	
F 9863	Trace	
F 9864	Trace	
F 9865	Trace	
F 9866	0.002	
F 9867	0.002	
F 9868	Trace	

NOTE: ND denotes not detected.

** denotes checked.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,  
POJ 1KO

HAILEYBURY, ONTARIO

TEL: 672-3107  
FAX: (705) 672-5843

## Certificate of Analysis

NO. 0451

1

DATE: September 23, 1991

SAMPLE(S) OF: Core (7)

RECEIVED: September 1991

SAMPLE(S) FROM: Mr. Leo Kosowan, Atapa Minerals

Sample #	Oz. Gold	Ag ppm	Cu ppm
F 9869	0.742**	ND	6460
F 9870	0.004		
F 9871	2.996**		
F 9872	0.004		
F 9873	0.020		
F 9874	0.002		
F 9875	0.004		

NOTE: N.D. denotes not detected.  
** denotes checked.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE CERTIFICATES HAVE NOT BEEN ADJUSTED TO GRAVIMETRY.

# Certificate of Analysis

NO. 0455

1

DATE: September 26, 1991

SAMPLE(S) OF: Core (10)

RECEIVED: September 1991

SAMPLE(S) FROM: Mr. Leo Kosowan, Atapa Minerals

Oz.  
Gold

Sample #	Oz. Gold
9876	0.008
9877	0.662**
9878	0.002
9879	0.116
9880	0.004
9881	Trace
9882	0.002
9883	0.014
9884	0.002
9885	0.632**

NOTE: ** denotes checked.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

AT A DISCOUNT WITH LONG-ESTABLISHED REPUTATION  
 IN THE CUSTOM. UNLESS IT IS SPECIFICALLY STATED  
 OTHERWISE GOLD AND SILVER VALUES REPORTED ON  
 THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-

AMERICAN CUSTOM. UNLESS IT IS SPECIFICALLY STATED  
 OTHERWISE GOLD AND SILVER VALUES REPORTED ON  
 THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,  
POJ 1KO

HAILEYBURY, ONTARIO

TEL: 672-3107  
FAX: (705) 672-5843

## Certificate of Analysis

NO. 0457

1

DATE: September 27, 1991

SAMPLE(S) OF: Core (5)

RECEIVED: September 1991

SAMPLE(S) FROM: Mr. Leo Kosowan, Atapa

Sample #	Oz. Gold
F 9886	0.002
F 9887	0.762**
F 9888	0.002
F 9889	0.014
F 9890	0.024

NOTE: ** denotes checked.

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-





# Certificate of Analysis

1

NO. 0477

DATE: October 07, 1991

SAMPLE(S) OF: Core (6)

RECEIVED: October 1991

SAMPLE(S) FROM: Mr. Leo Kobowan, Atapa Minerals

---

Sample #	Oz. Gold
B 7851	Trace
B 7852	Trace
B 7853	0.006
B 7854	Trace
B 7855	0.004
B 7856	Trace

APPENDIX: VI  
PROJECT EXPENDITURES

ATAPA MINERALS LIMITED  
SUMMARY OF TOTAL EXPENDITURES  
CATHARINE TOWNSHIP PROJECT  
PHASE I AND II ENDING 8 OCTOBER 1991

DIAMOND DRILLING: 2150'-6 HOLES		\$ 45,232.50
	\$ 9,102.50	
	19,960.00	
	16,170.00	
CORE LOGGING:		3,210.40
SUPERVISION AND CORE SPLITTING:		2,000.00
ASSAYING:		424.27
TRAVEL AND TRANSPORTATION:		1,200.00
LIVING EXPENSES:		780.00
REPORT PHASE I:		2,461.00
REPORT PHASE II:		2,319.63
		-----
TOTAL:		\$ 57,627.80

L.S. Kosowan  
Atapa Minerals Limited

EXPENDITURES (minus G.S.T.)  
 CATHARINE TOWNSHIP PROJECT  
 OMIP-AUGUST 2 TO OCTOBER 8, 1991

1. Contract: Kosy Drilling: Kirkland Lake	\$ 36,732.50
Phase I: 9/16/91:\$ 9102.50-8500.00=	\$ 602.50
Phase I: 9/24/91:	19,960.00
Phase II: 10/01/91:	16,170.00
2. Contract: C.G. Cheriton: core logging: 10/2/91	3,210.40
August-September 1991; 10 days at \$250	
expenses; supplies; travel	
3. Contract: L.S. Kosowan: core splitting; supervision	3,980.00
August-September 1991: 10 days at \$200	
Expenses:	
Transportation:L.S. Kosowan:10/2/91:\$1,200.00	
4000 km at \$0.30	
Accomodation: L.S. Kosowan: 10/2/91:\$780.00	
12 days at \$65/day	
4. Assays: Bell-White: 10/2/91	378.87
5. Contract: Seal River Explorations Ltd: 10/2/91	2,300.00
Report on Phase I Drilling: Block I	
expenses: prints, drafting	
6. Contract: Seal River Explorations Ltd: 10/8/91	2,168.61
Report on Phase II Drilling: Block I&IV:	
expenses: drafting; prints.	
TOTAL:	\$ 48,770.38



**Report of Work Conducted After Recording Claim**

**Mining Act**

Transaction Number  
DOCUMENT No.  
W 9380 • 00184



32D04SW0166 W9380.00184 CATHARINE

900

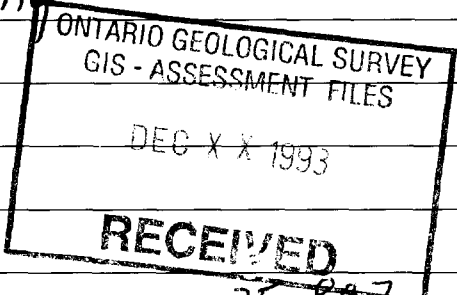
Personal information collected on this form is obtained under the authority of the M this collection should be directed to the Provincial Manager, Mining Lands, Min Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

- Instructions:**
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
  - A separate copy of this form must be completed for each Work Group.
  - Technical reports and maps must accompany this form in duplicate.
  - A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s) <i>Frank Palmy</i>		Client No. <i>179076</i>
Address <i>BCE Place, PO Box 747, Ste 2500, 181 Bay St. Toronto M5T 2T7</i>		Telephone No. <i>416-360-8600</i>
Mining Division	Township/Area <i>Pocouad - Catharine</i>	M or G Plan No. <i>G-3697 - 3615</i>
Dates Work Performed	From: <i>August 26, 1991</i>	To: <i>September 25, 1991</i>

**Work Performed (Check One Work Group Only)**

Work Group	Type
<input type="checkbox"/> Geotechnical Survey	
<input checked="" type="checkbox"/> Physical Work, Including Drilling	<i>Diamond Drilling</i>
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	



Total Assessment Work Claimed on the Attached Statement of Costs \$ *25,897*

**Note:** The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

**Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)**

Name	Address
<i>Kosy Drilling</i>	<i>Kirkland Lake ON</i>
<i>C.G. Chetron</i>	<i>Kirkland Lake ON</i>
<i>L.S. Kosowan</i>	<i>PO Box 660, Copper Cliff ON P0M 1N0</i>
<i>Scal River Expl. Ltd (F.J. Sharpley)</i>	<i>2372 Sinclair Circle, Burlington ON L7P 3C3</i>

(attach a schedule if necessary) Author

**Certification of Beneficial Interest * See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date <i>July 14/93</i>	Recorded Holder or Agent (Signature) <i>[Signature]</i>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------	------------------------------------------------------------

**Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying <i>F.J. Sharpley, 2372 Sinclair Circle, Burlington L7P 3C3</i>		
Telephone No. <i>416-335-4609</i>	Date <i>July 14/93</i>	Certified By (Signature) <i>[Signature]</i>

**For Office Use Only**

Total Value Cr. Recorded <i>\$ 2704.</i>	Date Recorded <i>July 19 1993.</i>	Mining Recorder <i>[Signature]</i>	Received Stamp <b>RECEIVED</b> LARDER LAKE MINING DIVISION JUL 19 1993 TIME <u><i>9:00</i></u>
Reserve <i>\$ 23193.</i>	Deemed Approval Date <i>October 17/93.</i>	Date Approved <i>Sept 9 21/93.</i>	
Date Notice for Amendments Sent			





Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des mines

**Statement of Costs  
for Assessment Credit**

**État des coûts aux fins  
du crédit d'évaluation**

**Mining Act/Loi sur les mines**

Transaction No./N° de transaction  
**DOCUMENT No**  
**W9380-00184**

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

**1. Direct Costs/Coûts directs**

Type	Description	Amount Montant	Totals Total global
<b>Wages Salaires</b>	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain	1060	1060
<b>Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil</b>	Type DDH	19468	
	Cons. Geol.	1701	
	" "	2368	23537
<b>Supplies Used Fournitures utilisées</b>	Type		
	Assays	201	
			201
<b>Equipment Rental Location de matériel</b>	Type		
<b>Total Direct Costs Total des coûts directs</b>			<b>24798</b>

**2. Indirect Costs/Coûts indirects**

**** Note:** When claiming Rehabilitation work Indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
<b>Transportation Transport</b>	Type vehicle	636	
			636
<b>Food and Lodging Nourriture et hébergement</b>		413	413
<b>Mobilization and Demobilization Mobilisation et démobilisation</b>			
<b>Sub Total of Indirect Costs Total partiel des coûts indirects</b>			<b>1049</b>
<b>Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)</b>			<b>1049</b>
<b>Total Value of Assessment Credit (Total of Direct and Allowable indirect costs)</b>		<b>Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)</b>	<b>25847</b>

**Note:** The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

**Note :** Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

**Filing Discounts**

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	$\times 0.50 =$

**Remises pour dépôt**

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Evaluation totale demandée
	$\times 0,50 =$

**Certification Verifying Statement of Costs**

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Agent I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

**Attestation de l'état des coûts**

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature <u>J Shupley</u>	Date <u>July 14/93</u>
-------------------------------	---------------------------

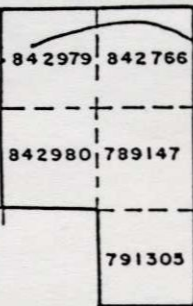
PACAUD TWP.

CATHARINE TWP.

work done  
work applied

VI  
Road

Block IV



Misema River

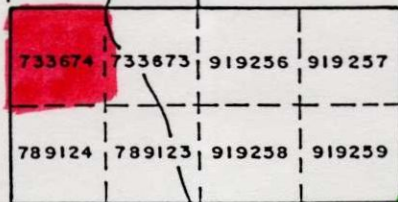


V

Lot 1

Lot 12

Block I



Block Ia

Lot 11

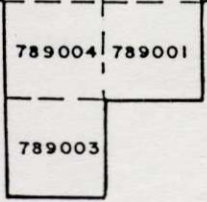
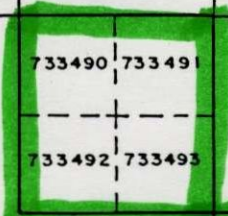
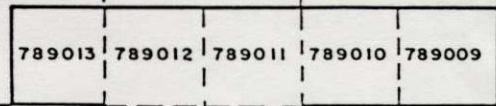
Lot 10

Lot 9

Lot 8

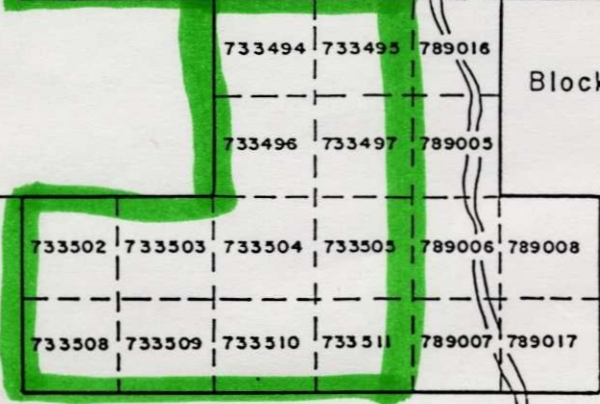
Lot 7

Lot 6



Block III

IV



Block II

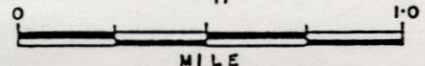
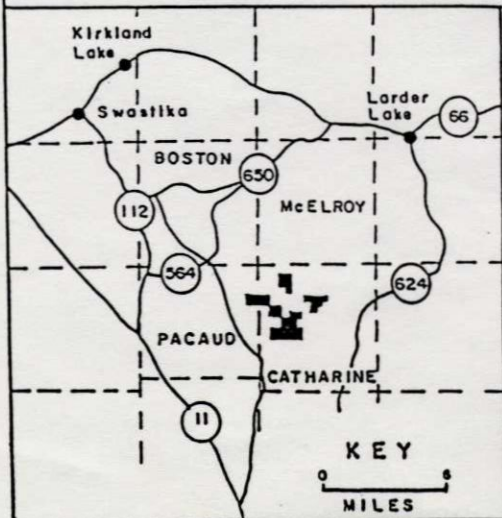


Figure 2

ATAPA MINERALS LIMITED  
CATHARINE TWP, PROPERTY

PROPERTY MAP

Nov., 1990 BY: F. J. Sharpley





**Report of Work Conducted  
After Recording Claim**

Mining Act

Transaction Number  
**DOCUMENT No.**  
**W 9380-00185**

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

- Instructions:**
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
  - A separate copy of this form must be completed for each Work Group.
  - Technical reports and maps must accompany this form in duplicate.
  - A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s) <b>Frank Palmay</b>	Client No. <b>179076</b>
Address <b>BCE Place, PO Box 747, Ste 2500 181 Bay St. Toronto M5J 2T7</b>	Telephone No. <b>416-360-8600</b>
Mining Division <b>Larder Lake</b>	Township/Area <b>Catharine</b>
	M or G Plan No. <b>G-3615</b>
Dates Work Performed From: <b>September 4, 1991</b>	To: <b>September 12, 1991</b>

**Work Performed (Check One Work Group Only)**

Work Group	Type
<input type="checkbox"/> Geotechnical Survey	
<input checked="" type="checkbox"/> Physical Work, Including Drilling	<b>Diamond Drilling</b>
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

ONTARIO GEOLOGICAL SURVEY  
GIS - ASSESSMENT FILES  
DEC 11 1993  
**RECEIVED**

Total Assessment Work Claimed on the Attached Statement of Costs \$ 22,919

**Note:** The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

**Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)**

Name	Address
<b>Kosy Drilling</b>	<b>Kirkland Lake ON</b>
<b>C.G. Cheriton</b>	<b>Kirkland Lake ON</b>
<b>L.S. Kosowan</b>	<b>PO Box 660, Copper Cliff ON P0M 1N0</b>
<b>Seal Rock Expl. Ltd (F.J. Sharpley)</b>	<b>2372 Sinclair Circle, Burlington L7P 3C3</b>

(attach a schedule if necessary) Author

**Certification of Beneficial Interest * See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date <b>July 14/93</b>	Recorded Holder or Agent (Signature) <b>F. Sharpley</b>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------	------------------------------------------------------------

**Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying <b>F.J. Sharpley, 2372 Sinclair Circle, Burlington L7P 3C3</b>		
Telephone No. <b>416-335-9609</b>	Date <b>July 14/93</b>	Certified By (Signature) <b>F. Sharpley</b>

**For Office Use Only**

Total Value Cr. Recorded <b>\$4000.</b>	Date Recorded <b>July 19/93</b>	Mining Recorder <i>[Signature]</i>	Received Stamp <b>RECEIVED LARDER LAKE MINING DIVISION JUL 19 1993 TIME 9:00</b>
Reserve \$ <b>18,919</b>	Deemed Approval Date <b>October 17/93</b>	Date Approved <b>Sept 9, July 27/93</b>	
	Date Notice for Amendments Sent		





Ministry of  
Northern Development  
and Mines  
Ministère du  
Développement du Nord  
et des mines

**Statement of Costs  
for Assessment Credit**

**État des coûts aux fins  
du crédit d'évaluation**

**Mining Act/Loi sur les mines**

Transaction No./N° de transaction  
DOCUMENT No.  
W9380-00185

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

**1. Direct Costs/Coûts directs**

Type	Description	Amount Montant	Totals Total global
<b>Wages Salaires</b>	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain	940	940
<b>Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil</b>	Type SDH	17264	
	Consult Geol.	1508	
	" "	2100	20872
<b>Supplies Used Fournitures utilisées</b>	Type		
	Assays	177	
			177
<b>Equipment Rental Location de matériel</b>	Type		
<b>Total Direct Costs Total des coûts directs</b>			<b>21989</b>

**2. Indirect Costs/Coûts indirects**

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
<b>Transportation Transport</b>	Type vehicle	564	
			564
<b>Food and Lodging Nourriture et hébergement</b>		366	366
<b>Mobilization and Demobilization Mobilisation et démobilisation</b>			
<b>Sub Total of Indirect Costs Total partiel des coûts indirects</b>			<b>930</b>
<b>Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)</b>			<b>930</b>
<b>Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)</b>			<b>22919</b>
<b>Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)</b>			<b>22919</b>

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

**Filing Discounts**

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	× 0.50 =

**Remises pour dépôt**

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
	× 0,50 =

**Certification Verifying Statement of Costs**

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Agent I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

**Attestation de l'état des coûts**

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature <u>J. Shapley</u>	Date <u>July 14/93</u>
--------------------------------	---------------------------

PACAUD TWP.



CATHARINE TWP.

VI Road

Block IV

Misema River



work done   
work applied 



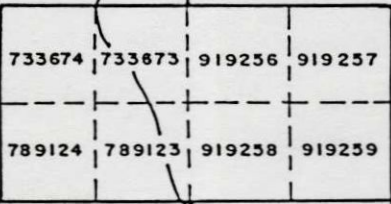
V

Lot 1

Lot 12

V

Block I

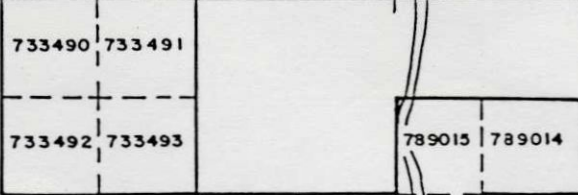


Block Ia

Lot 11

Lot 10

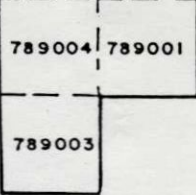
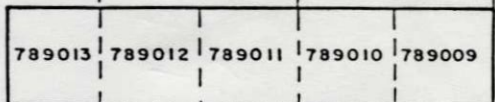
Lot 9



Lot 8

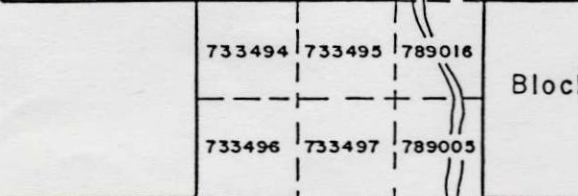
Lot 7

Lot 6

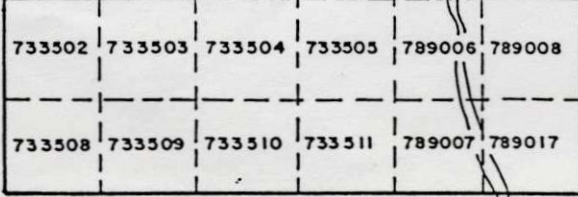


Block III

IV



Block II



III

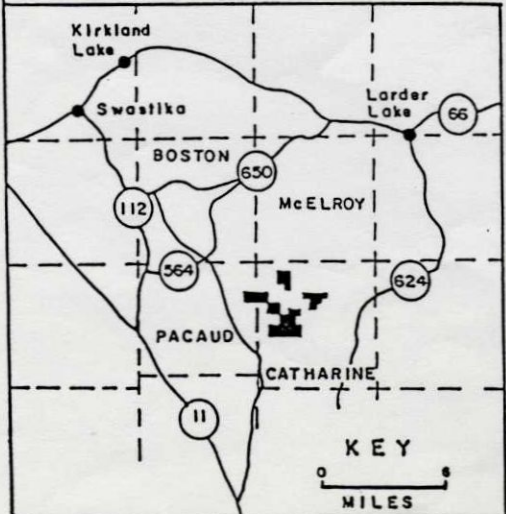
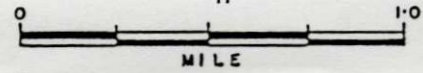


Figure 2

ATAPA MINERALS LIMITED  
CATHARINE TWP., PROPERTY

PROPERTY MAP

Nov., 1990 BY: F. J. Sharpley



DIAMOND DRILLING

TWP/AREA PACAUD TWP

REPORT NO. 24

WORK PERFORMED FOR: ATAPA MINERALS LTD/ FRANK PALMAY

RECORDED HOLDER: SAME AS ABOVE [X]  
: OTHER [ ]

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
733674	A-1-91	475.0'	AUG- SEPT/91	(1), (2)
73 ¹¹ 3674	A-3-91	157.0'	SEPT/91	(1), (2)
733674	A-4-91	157.0'	SEPT/91	(1), (2)
733674	A-5-91	177.0'	SEPT/91	(1), (2)
733674	A-6-91	167.0'	SEPT/91	(1), (2)

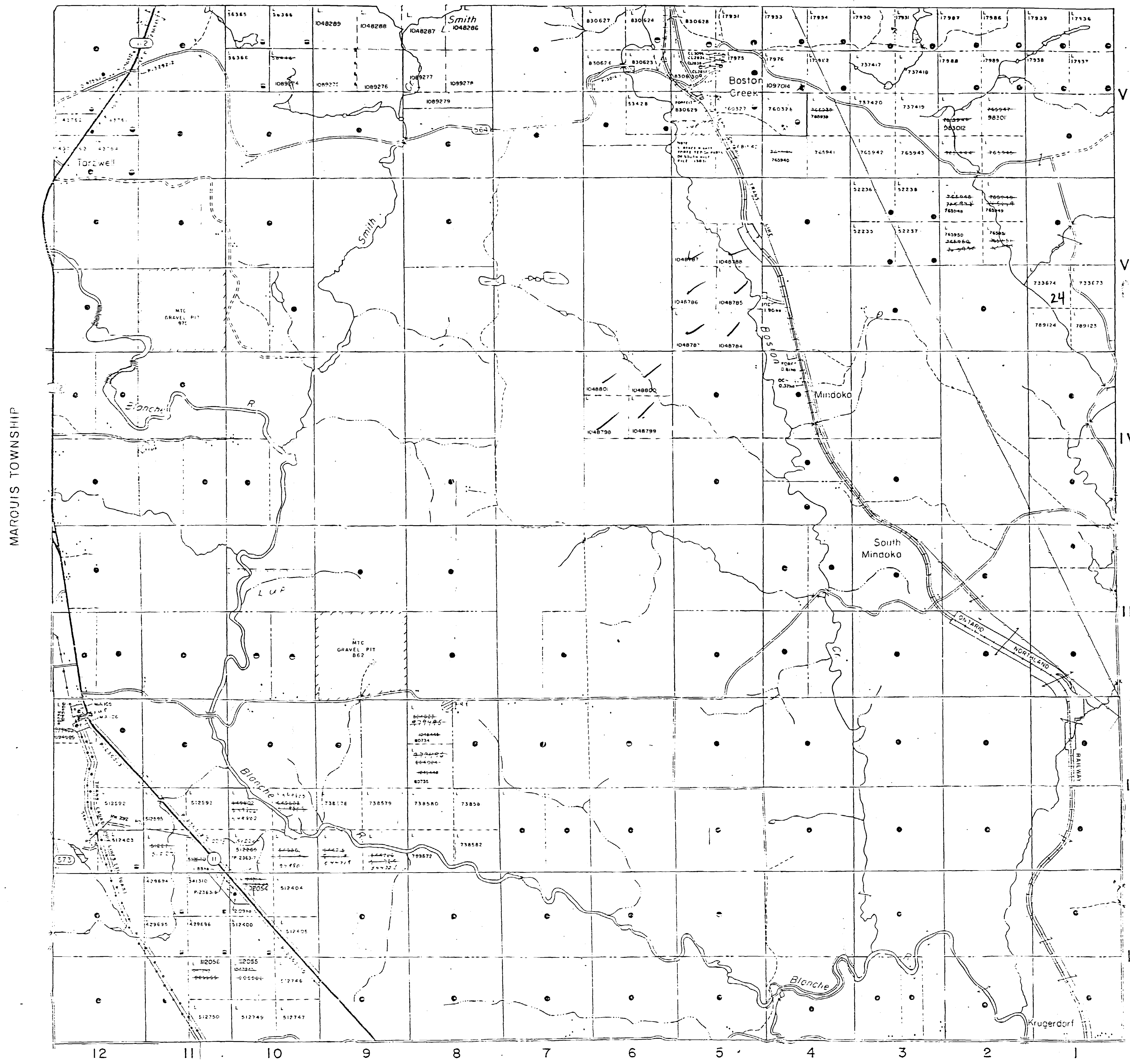
NOTES: (1) W9380.00184, W9380.00185, filed June/94  
(2) DDH A-2-91 filed under DD Report #48 in Catharine twp.



W.R.L. - MINING RIGHTS ONLY  
 S.R.O. - SURFACE RIGHTS ONLY  
 M.F.S. - MINING AND SURFACE RIGHTS

Description Date Disposition File

BOSTON TOWNSHIP



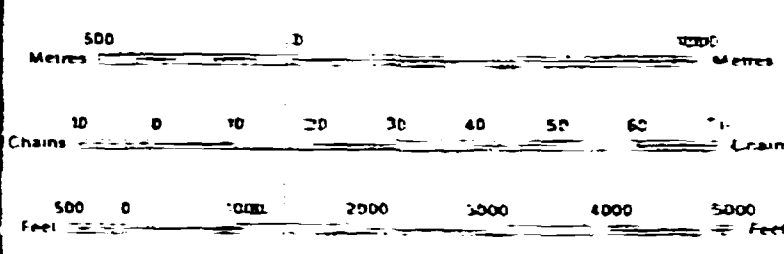
**LEGEND**

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIP BOUNDARIES ETC.	
LOTS, MINING CLAIMS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARIES	
MINING CLAIMS ETC.	
RAILWAY AND RIGHTS OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OF PERENNIAL STREAMS	
SUBDIVISION OF LANDS ETC.	
RESERVATION	
ORIGINAL SURVEY	
MARSH OR MIRE	
MINES	
TRAVERSE MONUMENT	

**DISPOSITION OF CROWN LANDS**

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6 1913 RESTAIN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT W.S.O. 1910 CHAP. 380, SEC. 43 SUBJECT 1



SCALE 1:20 000

**TOWNSHIP SUBJECT TO FORESTRY OPERATIONS**

DATE OF ISSUE  
 AUG 18 1989  
 LARDER LAKE  
 MINING RECORDER'S OFFICE

TOWNSHIP  
**PACAUD**  
 M.N.R. ADMINISTRATIVE DISTRICT  
 KIRKLAND LAKE  
 MINING DIVISION  
 LARDER LAKE  
 LAND TITLES / REGISTRY DIVISION  
 TIMISKAMING

Ministry of Natural Resources Ontario  
 Ministry of Northern Development and Mines

1989 OCTOBER, 1986  
 G-369

NOTICE OF FORESTRY ACTIVITY  
 THIS TOWNSHIP / AREA FALLS WITHIN THE

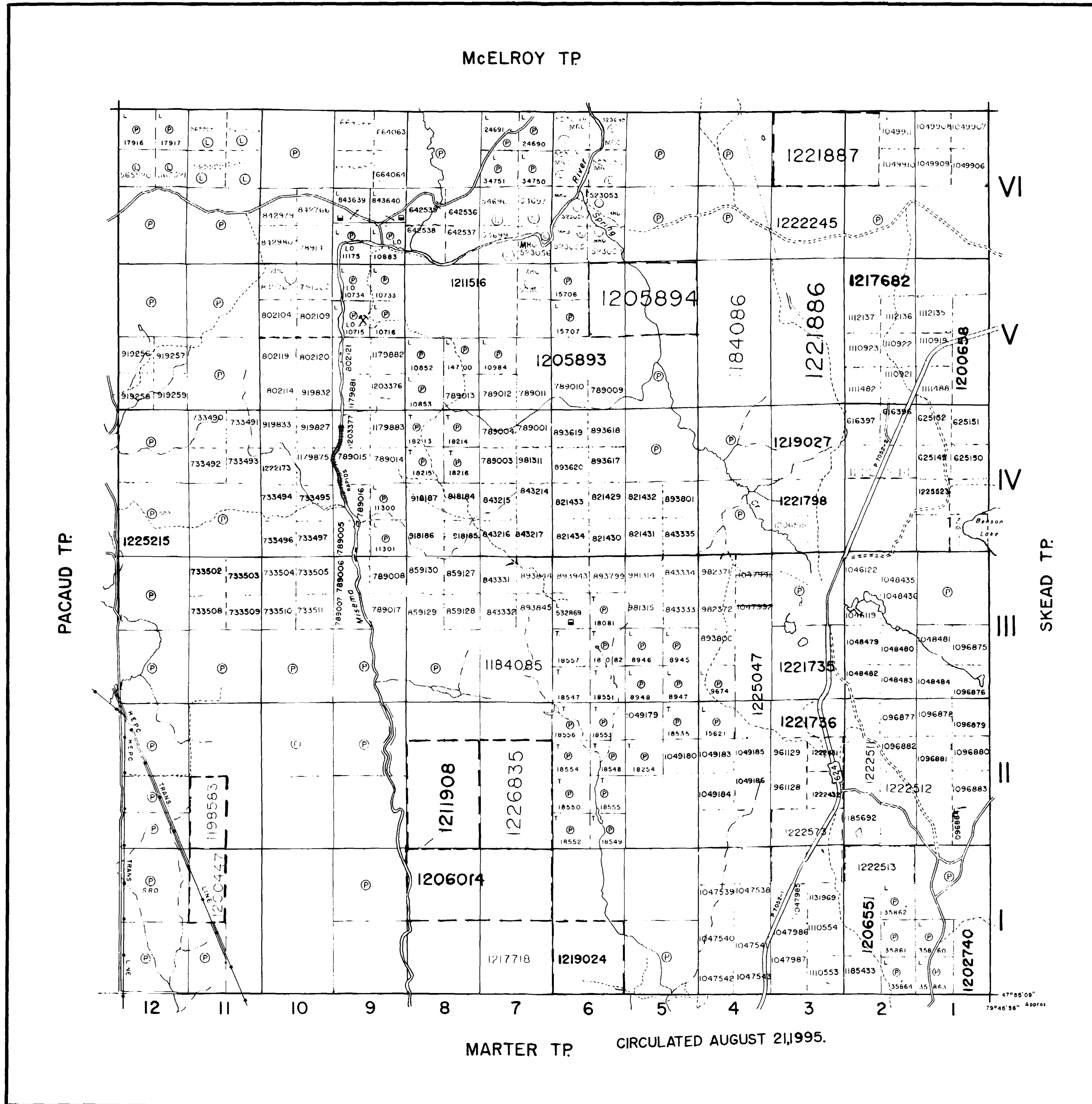


C-3612

CATHARINE T.M.D.

C-3612

TRIM LINE



McELROY TP

PACAUD TR.

SKEAD TR.

MARTER TP

CIRCULATED AUGUST 21, 1995.

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

DATE OF ISSUE

MAY 20 1988

PROVINCIAL RECORDING OFFICE - SUDBURY

LEGEND

- PATENTED LAND (P) or *
  - PATENTED FOR SURFACE RIGHTS ONLY (L)
  - LEASE (MINING RIGHTS) (L.O.)
  - LICENSE OF OCCUPATION (L.O.)
  - CROWN LAND SALES (C.S.)
  - LOCATED LAND (Loc.)
  - CANCELLED (C.)
  - MINING RIGHTS ONLY (M.R.O.)
  - SURFACE RIGHTS ONLY (S.R.O.)
  - HIGHWAY & ROUTE NO. (17)
  - ROADS (---)
  - TRAILS (---)
  - RAILWAYS (---)
  - POWER LINES (---)
  - MARSH OR MUSKEG (---)
  - MINES (X)
- *used only with summer resort locations or when space is limited

TOWNSHIP OF

CATHARINE

DISTRICT OF TIMISKAMING

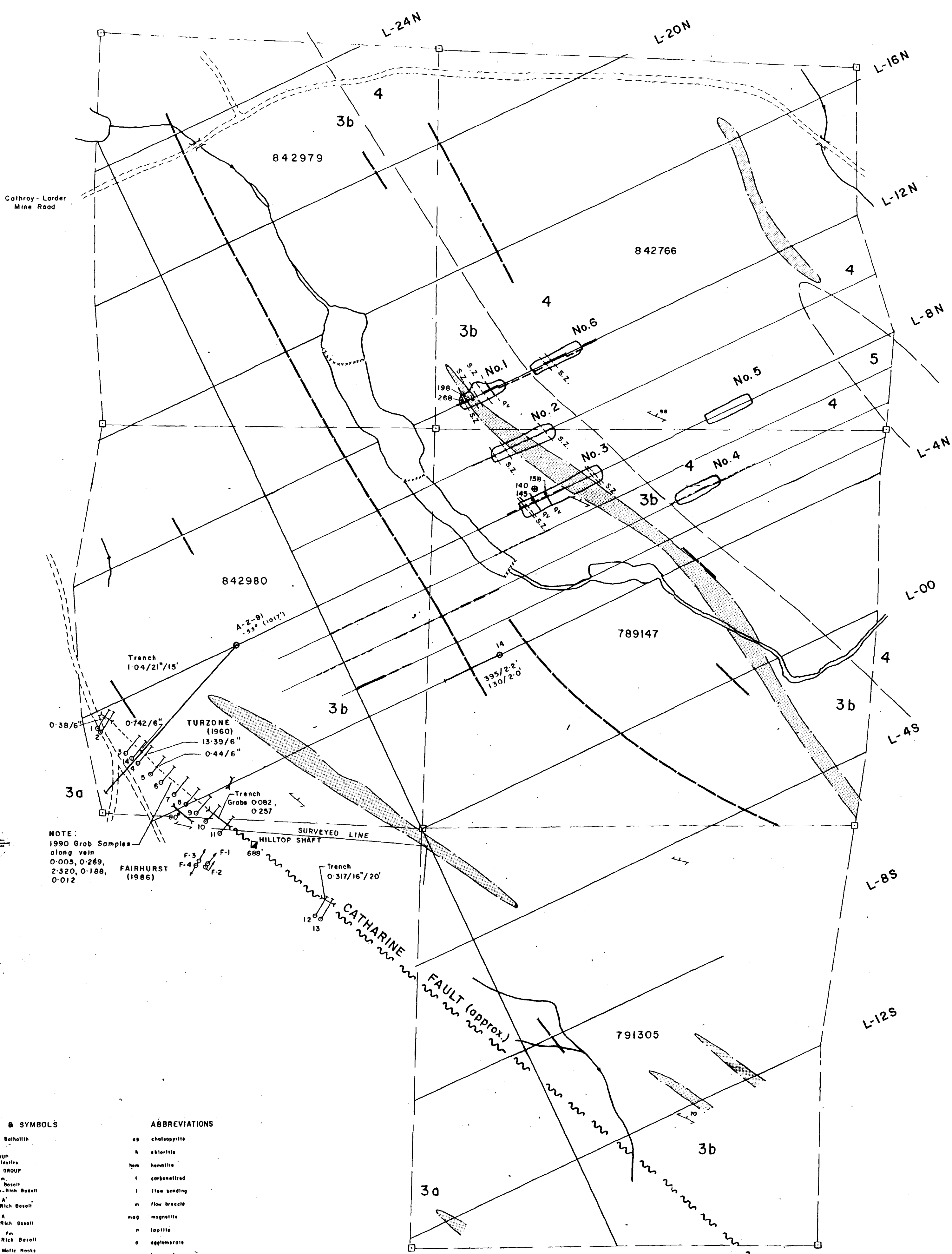
LARDER LAKE MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1/2 MILE)

DR. <i>K.K.I.</i>	PLAN NO. <b>G-3615</b>
DATE JULY 1988	

ARCHIVED FEB. 18/97





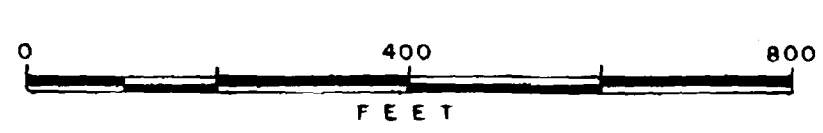
NOTE:  
 1990 Grab Samples  
 along vein  
 0-005, 0-269,  
 2-320, 0-188,  
 0-012

**LEGEND & SYMBOLS**

- 5 Round Lake Batholith Granite
- 4 SFCAD GROUP Felicit Pyroxenites
- CATHARINE GROUP
- 3 Catharine Fm. a Iron-Rich Basalt b Magnetite-Rich Basalt
- 2a Basalt Fm. A Magnetite-Rich Basalt
- 2b Basalt Fm. A Magnetite-Rich Basalt
- 2c Magnetite-Rich Basalt
- 2d Magnetite-Rich Basalt
- 2e Magnetite-Rich Basalt
- 2f Magnetite-Rich Basalt
- 2g Magnetite-Rich Basalt
- 2h Magnetite-Rich Basalt
- 2i Magnetite-Rich Basalt
- 2j Magnetite-Rich Basalt
- 2k Magnetite-Rich Basalt
- 2l Magnetite-Rich Basalt
- 2m Magnetite-Rich Basalt
- 2n Magnetite-Rich Basalt
- 2o Magnetite-Rich Basalt
- 2p Magnetite-Rich Basalt
- 2q Magnetite-Rich Basalt
- 2r Magnetite-Rich Basalt
- 2s Magnetite-Rich Basalt
- 2t Magnetite-Rich Basalt
- 2u Magnetite-Rich Basalt
- 2v Magnetite-Rich Basalt
- 2w Magnetite-Rich Basalt
- 2x Magnetite-Rich Basalt
- 2y Magnetite-Rich Basalt
- 2z Magnetite-Rich Basalt
- 1 Pigeon Structural Complex Mafic to Felsic Tuffs Iron Fm. - sulphide tectonics
- Geological Contact
- Fault
- Beaver Dam
- Schistosity
- Bedding
- Trench or Pit
- Strippled Area - Trench and No.
- Sample Location (Track)
- 140 Au ppb
- 140 Sample Location and No. in Trench
- 140 D.D. Hole and No.
- 140 Au or /ton /length
- 140 Trench D.D. Holes have prefix 1533 (omitted)
- 140 Au ppb / length
- Crane Rodem V.L.F. E.M. Conductor Axis
- L.P. Anomaly - Dipole - Dipole N = 110S, α = 100°
- Strong
- Medium
- Weak
- Magnetic High > 1000 gammas

**ABBREVIATIONS**

- cp chloropyrite
- h chlorite
- hm hematite
- i carbonized
- l flow banding
- m flow breccia
- mag magnetite
- n topzite
- o agglomerate
- p lamprophyre
- pp pyrrhotite
- py pyrite
- qcz quartz carbonate vein
- qv quartz vein
- q felsic
- r rubble
- sh shored
- sl siliceous
- S.Z. shear zone
- t tuffaceous
- w water



**ATAPA MINERALS LIMITED**  
**CATHARINE TOWNSHIP PROPERTY**  
 CATHARINE TWP. - ONT.  
 BLOCK IV  
**COMPILATION MAP**

SEPT, 1991 BY: F. J. Sharpley Map S-91-4-02 No.



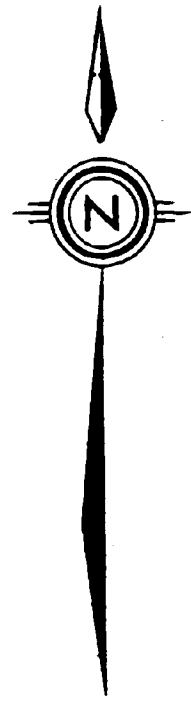
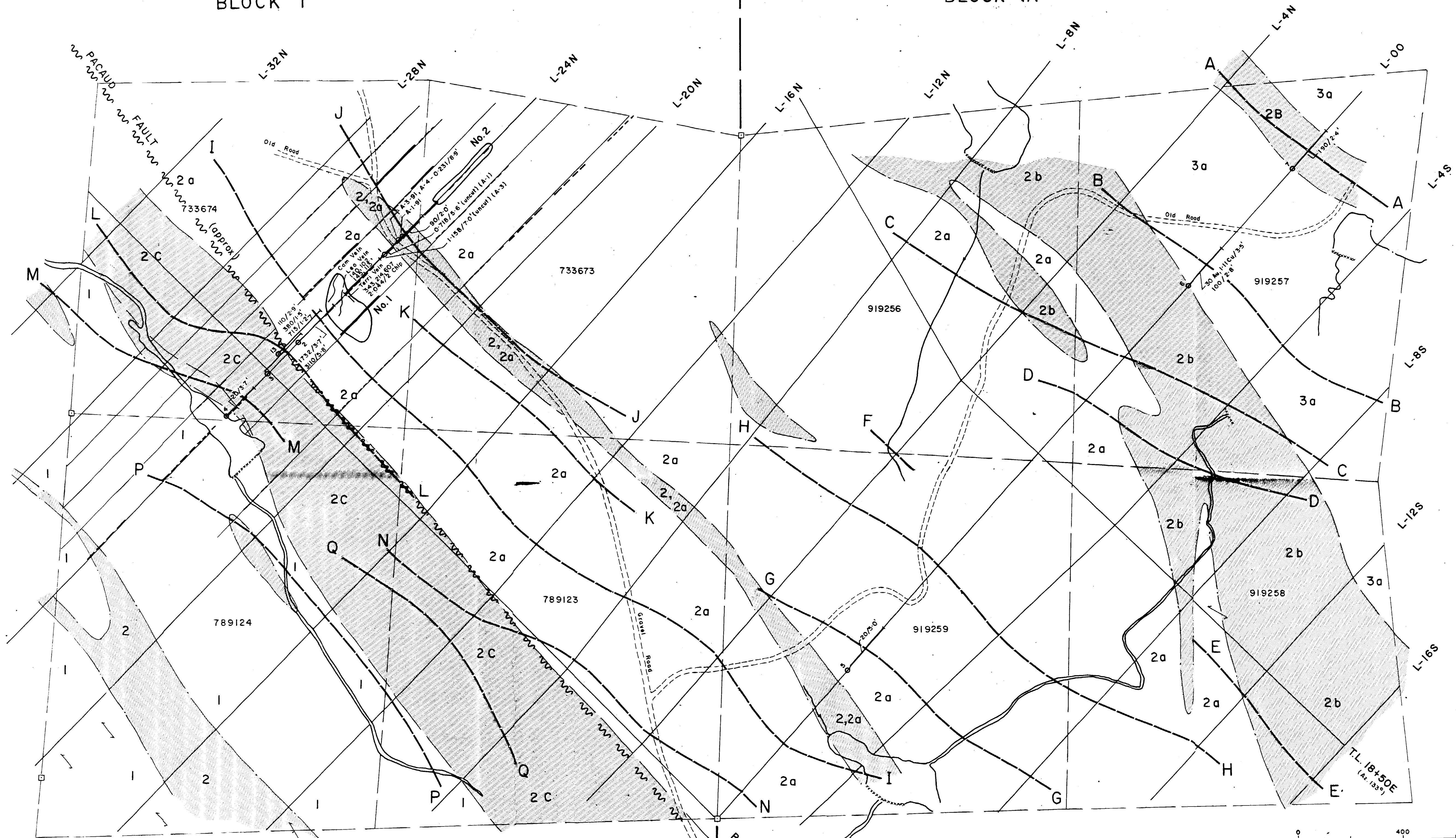


BLOCK I

PACAUD

CATHARINE

BLOCK IA



LEGEND & SYMBOLS

- 3 Road Lash Basaltic Granite
- 4 SLED GROUP Felsic Pyroclastics CATHARINE GROUP Catharine Fm. a Iron-Rich Basalt b Manganese-Rich Basalt
- 2c Basalt Fm. A Manganese-Rich Basalt
- 2b Basalt Fm. A Manganese-Rich Basalt
- 2a Wopasawa Fm. Manganese-Rich Basalt
- 2c Ultramafic - Mafic Rocks Komatiite 2A Mixed Komatiite 2B Oxidation Complex/Boston Crest Komatiite 2C Pacaud Komatiite
- 140 Au pbb
- 140 Sample Location (tracil)
- 140 Sample Location and No. in Trench
- 140 D.D. Hole and No.
- 140 Test D.H. Notes have prefix 1333 (omitted)
- 140 Au pbb/length
- 140 Au pbb/length

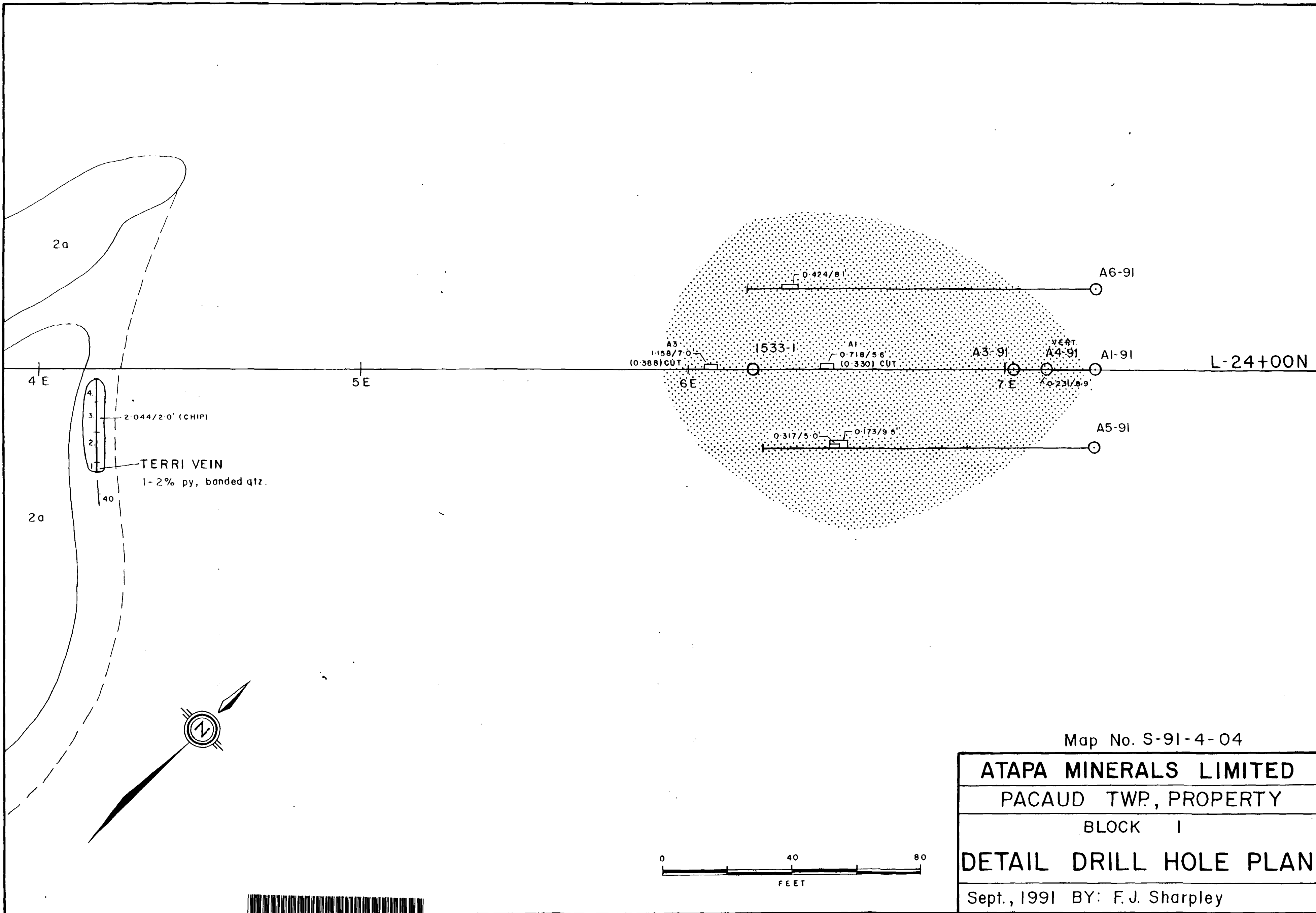
ABBREVIATIONS

- cp chlorite
- ch chloritic
- hem hematite
- c carbonaceous
- f flow banding
- m flow breccia
- mag magnetite
- l lapilla
- o ophiolite
- p lamprophyre
- py pyrrhotite
- py pyrite
- ec quartz carbonaceous vein
- qv quartz vein
- l lenticle
- r rubble
- sh sherd
- all alluvium
- S.Z. shear zone
- t tuffaceous
- w water



**ATAPA MINERALS LIMITED**  
**CATHARINE TOWNSHIP PROPERTY**  
 PACAUD and CATHARINE TWP'S. - ONT.  
 BLOCKS I and IA  
**COMPILATION MAP**

SEPT., 1991 BY: F.J. Sharpley MAP No. S-91-4-01



Map No. S-91-4-04

<b>ATAPA MINERALS LIMITED</b>
PACAUD TWP., PROPERTY
BLOCK I
<b>DETAIL DRILL HOLE PLAN</b>
Sept., 1991 BY: F.J. Sharpley



6 E

7 E

8 E

A6-91

O.B.

2a

0.002/2.0'

0.762/4.5'  
 0.002/2.0'  
 0.018/3.6'  
 0.024/3.2'  
 167'  
 2a  
 0.424/8.1'

qv

Map No. S-91-4-05

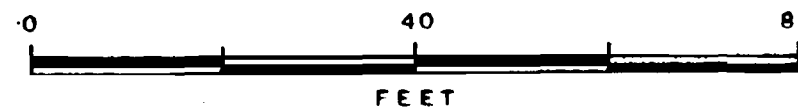
ATAPA MINERALS LIMITED

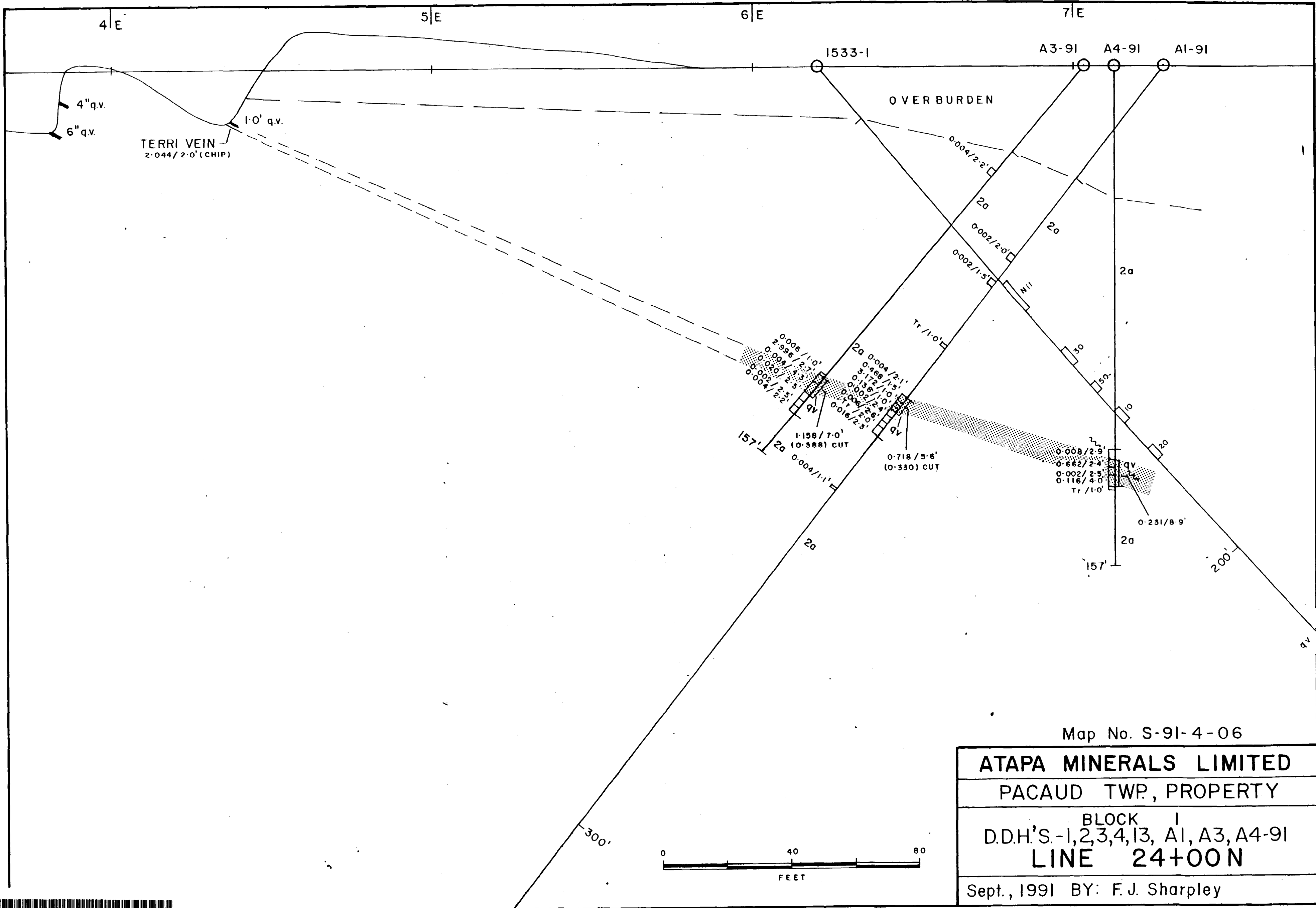
PACAUD TWP., PROPERTY

BLOCK 1  
D.D.HOLE A6-91

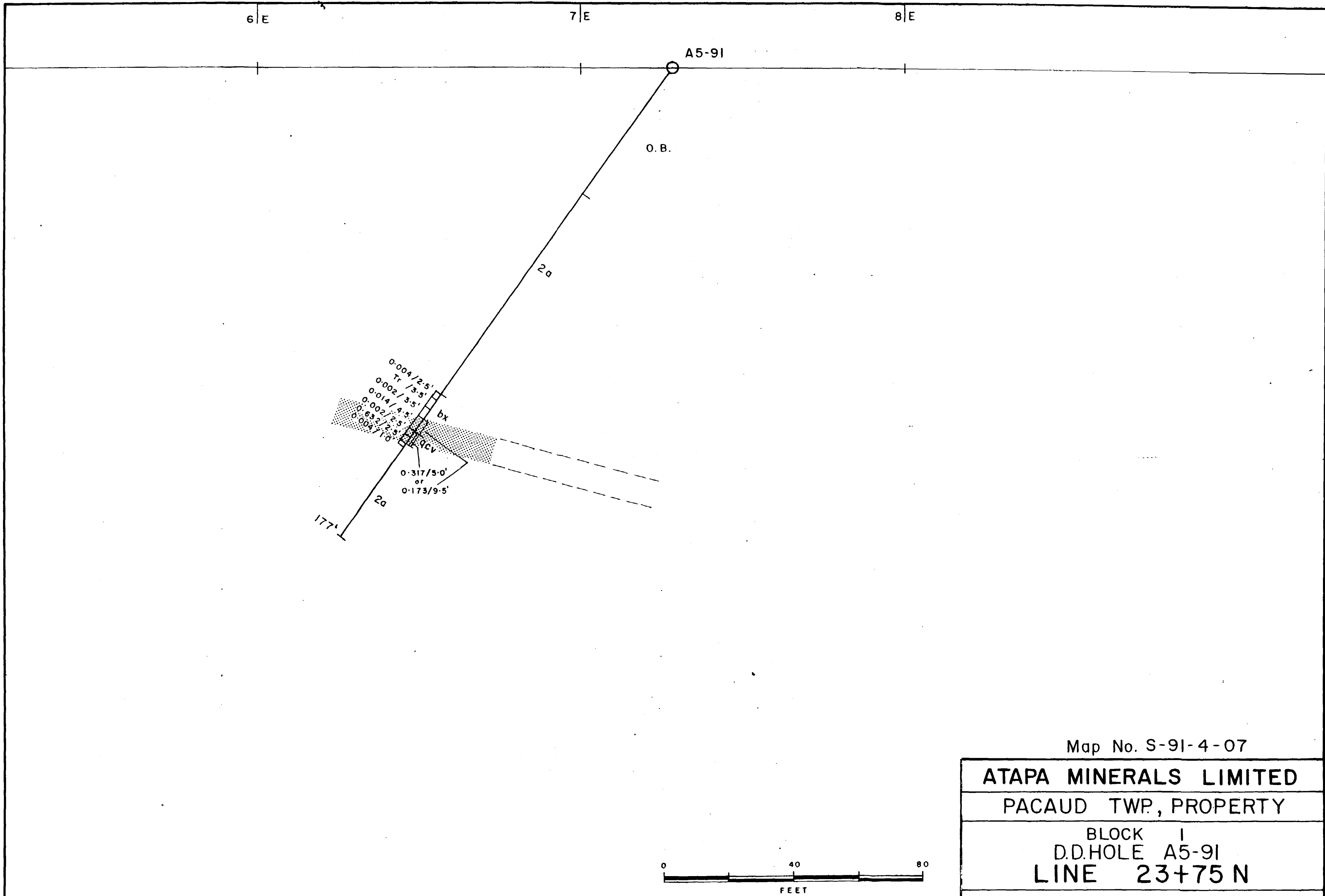
LINE 24+25 N

Sept., 1991 BY: F.J. Sharpley





32D045W0166 W9380.00184 CATHARINE



Map No. S-91-4-07

**ATAPA MINERALS LIMITED**

PACAUD TWP., PROPERTY

BLOCK 1  
D.D.HOLE A5-91  
**LINE 23+75 N**

Sept., 1991 BY: F.J. Sharpley

