ARCHER, CATHRO
& ASSOCIATES (1981) LIMITED
CONSULTING GEOLOGICAL ENGINEERS

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NAT JOINT VENTURE

DIAMOND DRILLING REPORT

LILYPAD 1-429 and NEWT 1-132, 135-163 CLAIMS

DECEMBER, 1982

Claim Sheets 115J/8 and 115I/5

Latitude 62°27'N; Longitude 137°57'W

W.D. Eaton, B.A., B.Sc.

Work done between June 15 and July 19, 1982

091435

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INTRODUCTION

Attention was first drawn to the Lilypad area in 1979 when reanalysis of samples known to be anomalous in lead returned coincident silver anomalies. The core of the anomalous area was staked as the Lilypad 1 to 16 claims by Archer, Cathro and vended to NAT in early 1980. Sampling and prospecting by NAT during the 1980 field season extended and amplified the anomalous areas (in gold, silver, arsenic and lead) and located 27 mineralized vein occurrences associated with prominent topographic linears. By the end of 1980, a total of 423 Lilypad and Newt claims had been staked.

In 1981 additional claims were staked bringing the total to 590 and an integrated program of surveying, mapping and sampling of linears, bulldozer trenching and airstrip construction was undertaken. This work resulted in discovery of more than 50 additional veins from which selected specimens returned up to 0.784 oz/ton Au and 245.0 oz/ton Ag. Unfortunately, trenching indicated that a characteristic of the veins is that most are narrow and erratically mineralized.

The 1982 program consisted of limited geological mapping and 637 m of diamond drilling in 7 holes with emphasis on definition of mineral and metal zoning patterns, determination of silver-lead ratios below the zone of weathering, and testing continuity of mineralization below the best occurrences exposed by bulldozer trenching.

PROPERTY, LOCATION AND ACCESS

The Lilypad property consists of 590 contiguous Lilypad and Newt claims forming a sub-rectangular northwest-trending block approximately 16 km long and 13 km wide. Claims are registered in the name of Archer, Cathro & Associates (1981) Limited in the Whitehorse Mining District as follows:

Property (Claim Map)	Claim Names	No. of Claims	Grant Numbers	Expiry Date
Lilypad (115I/5,J/8)	Lilypad 1- 16	16	YA25267-YA25282	14 Feb/86
	17- 32	16	YA51163-YA51178	14 Feb/87
	33-100	68	YA51500-YA51567	14 Feb/86
	101-170	70	YA51601-YA51670	14 Feb/86
	171-184	14	YA51671-YA51684	14 Feb/85
	185-198	14	YA51685-YA51698	14 Feb/86
	199-212	14	YA51699-YA51712	14 Feb/85
	213-270	58	YA51713-YA51770	14 Feb/86
	271-308	38	YA61271-YA61308	14 Feb/86
	309-350	42	YA61488-YA61529	14 Feb/86
	351-378	28	YA61969-YA61996	14 Feb/86
	379	1	YA61997	14 Feb/85
	380	1	YA61998	14 Feb/86
	381	1	YA61999	14 Feb/85
	382	1	YA62000	14 Feb/85
	383-388	6	YA62001-YA62006	14 Feb/86
	389-396	8	YA62007-YA62014	14 Feb/85
	397-421	25	YA62015-YA62039	14 Feb/86
	422-429	8	YA62123-YA62130	14 Feb/86
	Newt 1- 6	6	YA51157-YA51162	14 Feb/87
	7- 20	14	YA51486-YA51499	14 Feb/86
	21-102	82	YA51771-YA51852	14 Feb/86
	103-132	30	YA51853-YA51882	14 Feb/85
	135-155	21	YA51883-YA51903	14 Feb/85
	156-163	8	YA61309-YA61316	14 Feb/86

The Newt 133-134 claims are missing because they have not been staked.

The Lilypad-Newt block is centered at latitude 62°27'N and longitude 137°57'W, on claim sheets 115J/8 and 115I/5, about 93 km northeast of Carmacks.

The Freegold summer road, which extends 55 km west of Carmacks, terminates about 38 km east of the property. Access is by helicopter from the end of the road or by fixed-wing aircraft to an airstrip constructed by NAT on the Lilypad

claims in 1981. This airstrip is presently only usable in winter but with several hours of bulldozer or grader work could be upgraded for summer use as well.

PREVIOUS WORK

Previous exploration in the Lilypad area was for porphyry-type copper-molybdenum and copper-lead-zinc vein targets.

Chalcopyrite in small quartz veins cutting Carmacks volcanics south of Apex Mt. was explored by geochemistry in 1969 by Dawson Range Joint Venture and staked in 1970 by London Pride Silver Mining Ltd.

Bornite and chalcopyrite mineralization in quartz stringers and disseminated in a large stock of hornblende quartz monzonite intruding Yukon Group metasediments northwest of the junction of Hayes and Apex Creeks was staked as the Kook, Pat and Apex claims in 1969 by Montana Mining Ltd. and optioned in 1970 to Phelps Dodge which explored by mapping, linecutting, sampling and a magnetometer survey. The claims were transferred to Chatham Resource Ltd. in 1973.

Minor chalcopyrite, galena and sphalerite produced geochemical anomalies over a porphyry copper prospect staked as Frog claims in 1969 by International Mines Services Limited Syndicate and as PDY claims in 1969 by Phelps Dodge. The Wing claims were also staked in 1969 south of the Frog group by Sabina Mining Ltd. but were not explored. NAT's Lilypad claims now cover both area.

Copper mineralization with minor silver and zinc generated a soil anomaly coincident with an aeromagnetic anomaly northeast of Crescent Creek that was explored by sampling and trenching in 1970 to 1973 by Starbird Mining Ltd. The Pro claims were staked immediately north in 1970 by Canadian Occidental Petroleum Ltd. which prospected and soil sampled in 1971.

PHYSIOGRAPHY AND GEOMORPHOLOGY

The Lilypad property lies southwest of the Big Creek Lineament along an extensive ridge system connecting Prospector and Apex mountains, two of the highest summits in the Dawson Range. Property elevations vary from 1050 to 2000 m. Four major drainages, Big Creek, Hayes Creek, the Selwyn River and the Klotassin River, have their headwaters on the property.

Like the rest of the Dawson Range, the Lilypad area did not undergo continental glaciation during the Pleistocene epoch. A small cirque lying immediately north of the summit of Apex Mt. is the only clear indication of alpine glaciation in the area. Outcrops are scarce and most hillsides are blanketed with talus, while valley bottoms are covered by a deep layer of alluvium. A and B horizon soils are poorly developed or absent over most of the property. Treeline is at 1350 m and characteristic vegetation consists of spruce giving way to slide alder with mosses and lichens above 1400 m.

GEOLOGY

General

Figure L1 in Pocket A illustrates the general geology of the Lilypad area which was mapped in 1981 by NAT and by a Geological Survey of Canada geologist, Dirk Tempelman-Kluit. This work has not been substantially altered by 1982 mapping, although detail has been added with respect to the linears and mineralization patterns within them. The following summary draws on 1981 geological data, plus observations and interpretations made in 1982.

Lilypad is mainly underlain by 60 to 70 Ma Mt. Nansen Group andesites and associated sedimentary rocks that are intruded by a syenite laccolith(?) which is elongated west-northwest parallel to the Big Creek Linament. Minor exposures of Yukon Metamorphic Complex schists and gneisses (Mm) and mid-Cretaceous(?) granite (Mg) occur in the southeast corner of the property. Along the southwest edge of the property, Carmacks Group basalts give the impression of lapping up on the Mt. Nansen volcanics which form Prospector and Apex mountains. This interpretation is somewhat different from that suggested in 1981, which implied that the Mt. Nansen rocks are exposed at Lilypad in the core of an antiform associated with doming of the syenite laccolith.

Quartz-feldspar porphyry dykes (KTgfp) cut the Mt. Nansen volcanics and the syenite. Large (5 cm) pink euhedral potassium feldspar phenocrysts and small euhedral biotite books occur both in the syenite and in the quartz-feldspar porphyry, suggesting a textural link between them which may be genetic as well. Some quartz-feldspar porphyry dykes occupy linears paralleling those which host mineralized veins and are themselves geochemically anomalous.

Air photos taken at 1:12,000 and 1:24,000 scales in August, 1981 provide much more detailed information on linear trends than was previously available. The photos permit extrapolation of stronger linears through lowland areas where they appear sporadically as minor topographic benches and as zones of anomalous vegetation due to seeping ground water instead of kill zones as they do on the ridges. Ground traversing over linears on valley slopes confirmed that they correspond to subtle topographic breaks that often contain springs.

The air photos show a consistent pattern of north-northeast and northeast-trending linear sets. The northeast linears have steep dips and long strike

extents and form major valleys and the low saddles. The north-northeast linears are shorter with some discontinuous over distances of 200 m or less. They exhibit many horsetail-type features and do not appear to offset one another. These structures occur in swarms, the most intense of which are on Centre Mt., 7 Hill and Promenade Ridge. Topographic expressions indicate steep dips except in a few cases, notably the 7 and 707 veins.

MINERALIZATION

Most rocks in the Lilypad area contain pyrite, particularly in rusty weathering Yukon Metamorphic Complex quartzites, Mt. Nansen Group volcanics and in isolated patches within the intrusive rocks. Pyrite typically occurs as disseminated cubes less than 1 mm in size, locally reaching 3 to 4 percent but usually less than 1 percent. Both magnetite and hematite are present in volcanics and some of the intrusive rocks. Magnetite is microscopic and can only be detected as rock magnetism, whereas the hematite commonly occurs as coarse disseminations, coating fractures, in amygdule fillings and cementing breccia in association with quartz veins and other mineralization.

Mineralized veins are only obvious on ridges where they form linear depressions containing patches of scattered oxidized and leached vein material interspersed with sheared and faulted country rocks. Mineralized zones are characterized by: lack of vegetation; a colour change in the rock, tending to bleached, earthy colours; smaller size of rock fragments, rarely exceeding 5 to 10 cm; manganese, hematite and limonite staining on fracture surfaces; transparent, chalcedonic, cockade, drusy or massive quartz, often rusty, vuggy and pitted; sulphides, including galena (and its alteration product, anglesite), chalcopyrite, sphalerite,

and pyrite, with galena boulders to 30 cm in size at some locations; copper carbonates (malachite, azurite) in some locations; rare arsenopyrite (at Goldilocks), barite, fluorite, witherite (on Leo's Ridge) and other unusual minerals; and, the presence of a small yellow flower identified by D.J. Tempelman-Kluit as Draba densifolia, a mustard. This flower seems to occur only in association with the other features and seems to be a useful prospecting guide.

Disseminated and massive tourmaline occur in several veins, especially near the plutonic-volcanic contact (for example, at the headwaters of Frog Creek and at Apex Mt.) and in quartz-tourmaline breccia zones (such as the one on Centre Mt.). Topaz, another representative of the pneumatolytic alteration at the contact, has been tentatively identified.

Adularia, a K-feldspar associated with low temperature hydrothermal veins, was recognized by its colour and crystal habit, occurring with quartz in boulders on the hillside east of Parson's Pass (No. 10 vein). The association of adularia with alteration assemblages over mineralized precious metal veins in Nevada has been emphasized as a prospecting guide by some workers (L.J. Buchanan).

Eight grains of native gold crystals, flakes and irregular blebs were found by panning a sample of surface material from the No. 7 vein. After trenching, a second sample of vein material was panned and 50 grains of gold were identified under the microscope, with some 20 percent of these occurring as rounded octahedral crystals.

Aside from galena and a trace of tetrahedrite, no silver minerals have been recognized.

The highest assays obtained to date were from selected specimens collected along the surface trace of the veins. They include 250.0 oz/ton Ag with 10 percent galena in quartz vein float from the west side of Leo's Ridge; and, up to 0.784 oz/ton Au with 77.52 oz/ton Ag and 42.4% Pb in massive galena from the Newt vein. Silver to lead ratios in surface specimens averaged about 1.0 to 1.5 oz/ton Ag to 1.0% Pb.

The highest assays obtained from the 1981 bulldozer trenches were 96.54 oz/ton Ag with 62.3% Pb and 0.01 oz/ton Au from a 0.3 m wide galena vein in Trench 38-1; and, 0.202 oz/ton Au with 28.3% Pb and 8.42 oz/ton Ag from a 0.3 m wide malachite-stained quartz vein in Trench 7-1.

Prior to the 1982 field season, the assay data was examined to see if metal zoning patterns were present which resemble those in major vein camps (for example, the Creede area), in order to predict areas where precious metals might be concentrated. Silver to lead and gold to silver ratios were calculated for all previously obtained vein and trench samples. The results were generally erratic with strong local variations, particularly in samples with low absolute concentrations of silver and lead. However, one trend was recognized which showed that Ag:Pb and Au:Ag ratios for higher-grade samples generally decreased from about 4.0 oz/ton Ag to 1.0% Pb and 0.44 oz/ton Au to 1.0 oz/ton Ag on Centre Mt. to about 2.0 oz/ton Ag to 1.0% Pb and 0.25 oz/ton Au to 1.0 oz/ton Ag on Leo's Ridge, 700 m to the south. The absolute values of silver and lead increased dramatically over the same distance while gold decreased slightly.

This metal zonation is mirrored by mineralogical changes along the linear connecting the 406 vein on Centre Mt. to the 37, 38 and 39 vein system on Leo's Ridge. On Centre Mt., minor galena-, pyrite- and chalcopyrite-bearing quartz

veins are accompanied by disseminated tourmaline and pyrite with zones of quartz-tourmaline breccia. Approximately halfway between Centre Mt. and Leo's Ridge, a piece of massive sulphide float containing galena, chalcopyrite and pyrite was collected along the trace of the linear in an area of poor exposure while on Leo's Ridge, vein mineralization is predominently galena with minor tetrahedrite in barite gangue. This sequence is consistent with a model of decreasing temperature southward from a source in the tourmaline breccia zones.

DIAMOND DRILLING

General

The drilling was contracted to E. Caron Diamond Drilling Limited of Whitehorse and was done using a wireline-equipped Longyear 38 drill powered by a 4-cylinder Murphy diesel engine. Work commenced on June 19 and was completed on July 13. Core from the vein intersections is stored in H.S. Bostock Core Library in Whitehorse. The remaining core is cached on the Lilypad airstrip and will be placed in the core library when it is demobilized with the drill equipment in spring, 1983.

All holes were drilled with NQ equipment except for the bottom 62.8 m of Hole LP82-6 where BQ rods were used. Core recovery was generally good, averaging 95 percent in wallrocks and 75 percent in vein intersections, with the exception of Hole LP82-6 where vein recovery averaged only 10 percent. Sludge samples were not collected as drill mud was used in all holes to stabilize broken ground and prevent caving. A total of 60 bags of mud were required during the program, while 40 m of rods and 60 m of casing were lost due to caving, mostly in Hole LP82-4.

Although a few bags of calcium chloride were added as a precaution, permafrost was not problem. Long waterlines and a relay pump were required for all holes. Strong wind and fog caused minor delays in drill moves on several occasions.

The core was logged in metric units. Drill logs with assays and drill sections are enclosed in the pockets, while locations of drill collars are illustrated on Figures L1 and L9, also in the pockets.

Assaying

All vein intersections and any intervals exhibiting sulphide- or tourmaline-rich wallrocks were split in the field and sent to Chemex Labs Ltd., North Vancouver, B.C. where they were geochemically analyzed for silver, gold and lead. Selected samples were also analyzed for arsenic, antimony, zinc and copper. Samples exceeding geochemical detection limits for silver, gold or lead were reassayed in ounces per ton and percent using standard assay procedures. Geochemical analytical techniques used are described in Appendix III.

Results

The drilling has shown that the vein zones exhibit vertical continuity and most were intersected approximately where predicted from surface data. Widths on the vein zones at depth equal or exceed those seen on surface. The first five holes were drilled below the best mineralization exposed in bulldozer trenches but only Hole LP82-1, which explored below the 7 vein, produced comparable grades to those in the trenches. In sub-surface, the vein zones characteristically grade from fresh, relatively massive, unweathered wallrocks into highly fractured, weakly bleached wallrock cut by limonite and/or manganese-oxide coated fractures, to one or more, subparallel bands of bleached gouge which range from a few cm to 50 m in width. The oxidized sulphide mineralization and quartz, carbonate

and/or barite gangue occur as pods in the veins, usually within the gouge zones or along the vein margins.

The last two holes explored the 10 (Newt) vein system which is the widest (approximately 70 m) and most intensely-altered linear on the property and is the only vein system known to contain adularia. Results obtained from these holes were comparable to those in the other holes, except the gouge zones are more extensive, particularly in Hole LP82-6 which was drilled 120 m topographically below LP82-5. This increase in clay-rich gouge with depth may indicate that the adularia occurs above a low pH cap.

Although weathering in the massive volcanic wallrocks rarely exceeds 10 m in depth, the vein zones are strongly weathered and leached(?) to a depth of at least 150 m below surface. Vein sulphides were only weakly oxidized near the bottom of Hole LP82-3 (192.5 m), but all other holes were stopped within the supergene cap. The gouge zones dominantly consist of kaolinite and limonite and while this assemblage may be due in part to low pH alteration during the mineralizing event, three lines of evidence point to a supergene origin. First, lead and silver values are often higher in the bleached gouge zone than can be explained by visible galena, hence the metals are likely present in less conspicuous anglesite, argentojarosite, plumbojarosite, cerussite or similar secondary minerals. Second, silver to lead ratios in mineralized drill intersections are higher than those in the overlying trenches, suggesting either leaching from surface or a zone of slight supergene enrichment. Finally, the gouge zone often contains carbonate and some galena is seen in a carbonate gangue, indicating that pH's could not have been abnormally low during deposition of the metals.

Table 2 on the following page summarizes the drill data and assay results. The best gold intersection was obtained from Hole LP82-1 where a 3.0 m interval averaged 0.236 oz/ton Au with 0.76 oz/ton Ag and 0.77% Pb, including a 1.0 m interval grading 0.572 oz/ton Au with 1.43 oz/ton Ag and 0.75% Pb. The best silver assay was obtained from Hole LP82-3 where a 0.3 m interval returned 10.1 oz/ton Ag with 15.3% Pb and 0.036 oz/ton Au.

A 55 m wide tourmaline-quartz-pyrite breccia zone intersected in Hole LP82-3 was split and assayed, but returned average values of only 25 ppb Au, 1.0 ppm As and 45 ppm Pb, excluding narrow gouge zones which assayed higher as described above.

DISCUSSION

Although all vein intersections in drill core and bulldozer trenches have only returned sub-economic assays, surface work has shown that the vein system is extensive and exhibits at least local metal zoning. Drilling has shown that individual veins exhibit vertical continuity, are deeply weathered, and have increasing silver to lead ratios with depth. Less than 10 percent of the total strike length of the vein system is exposed on ridges and there is a good possibility that better ore shoots may be present along strike under overburden.

The presence of tourmaline-quartz breccia zones associated with quartz-feldspar porphyry dyke swarms in the centre of the area of interest suggests a genetic link between the vein mineralization and the breccias and, possibly, the dykes. While the sampling of one tourmaline-quartz breccia zone cut in Hole LP82-3 failed to detect significant metal concentrations, similar zones elsewhere on the property may be better mineralized.

TABLE 2 - DIAMOND DRILL SUMMARY, LILYPAD PROPERTY

HOLE	COORDINATES NORTHING	EASTING	AZIMUTH	DIP	ELEVATION	FINAL DEPTH METRES	FEET	VEIN TARGET	DRILLING REMARKS	ASSAY RESULTS MAX AU oz/ton	MAX AG oz/ton	MAX PB %
LP1	49,602	51,749	317°	-50°	1648 m	76.3	250	7	Completed	0.572/ 1.00 m	1.43/ 1.00 m	0.77/ 1.00 m
LP2	49,900	51,520	279°	-50°	1593 m	50.6	166	6	Completed	0.080/ 0.05 m	5.40/ 0.61 m	4.74 /0.61 m
LP3	50,360	49,346	297°	-50°	1649 m	192.5	631	407,408, 23	Completed	0.107/ 0.6 m	10.12/ 0.30 m	15.30/ 0.3 m
LP4	49,292	49,328	273°	-60°	1587 m	54.6	179	38	Abandoned- Rods stuck	0.001	0.073/ 0.03 m	0.01/ 0.03 m
LP4A	49,292	49,328	273°	-50°	1587 m	81.7	268	38	Completed	0.001	0.85/ 1.53 m	1.13 0.75 m
LP5	48,560	54,385	100°	-50°	1573 m	91.4	300	10	Completed	0.012/ 0.90 m	0.29/ 0.90m	0.46/ 0.90 m
LP6	48,910	54,286	265°	-50°	1426 m	90.2	296	10	Completed but poor core recovery in vein	0.002/ 1.22 m	1.11/ 1.22 m	0.45/ 1.22 m

Textural evidence has linked the quartz-feldspar porphyries to the syenite laccolith suggesting that they are late-stage differentiates and as such, may be preferentially mineralized. This theory is supported by occasional high gold and silver values obtained from porphyry dykes and by the fact that they often occupy the same linears as the mineralized veins. As most quartz-feldspar porphyries occur as dykes, they may represent leakage in the cupola of a magma chamber. Many large porphyry copper-molybdenum porphyries, including the Casino deposit some 55 km northwest of Lilypad, are surrounded by lead-silver veins and in other areas porphyries have been discovered beneath old vein camps, notably the Butte deposit in Montana. Therefore, given the general geological setting and nature of the mineralization, it is conceivable that an unroofed porphyry deposit may exist in the Lilypad area. Weathering on the property exceeds 150 m and elsewhere in the Yukon where weathering is less intense, porphyry copper mineralization has been discovered in syenitic rocks which exhibited only faint surface evidence in the form of gossanous weathering and a trace of disseminated pyrrhotite.

Figure L2 on the following page is a schematic cross-section illustrating the relationship between the various intrusive and volcanic units (including possible unroofed intrusions), and geological settings for the different types of occurrences speculated on above.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

W. Douglas Eaton, B.A., B.Sc.

/mc

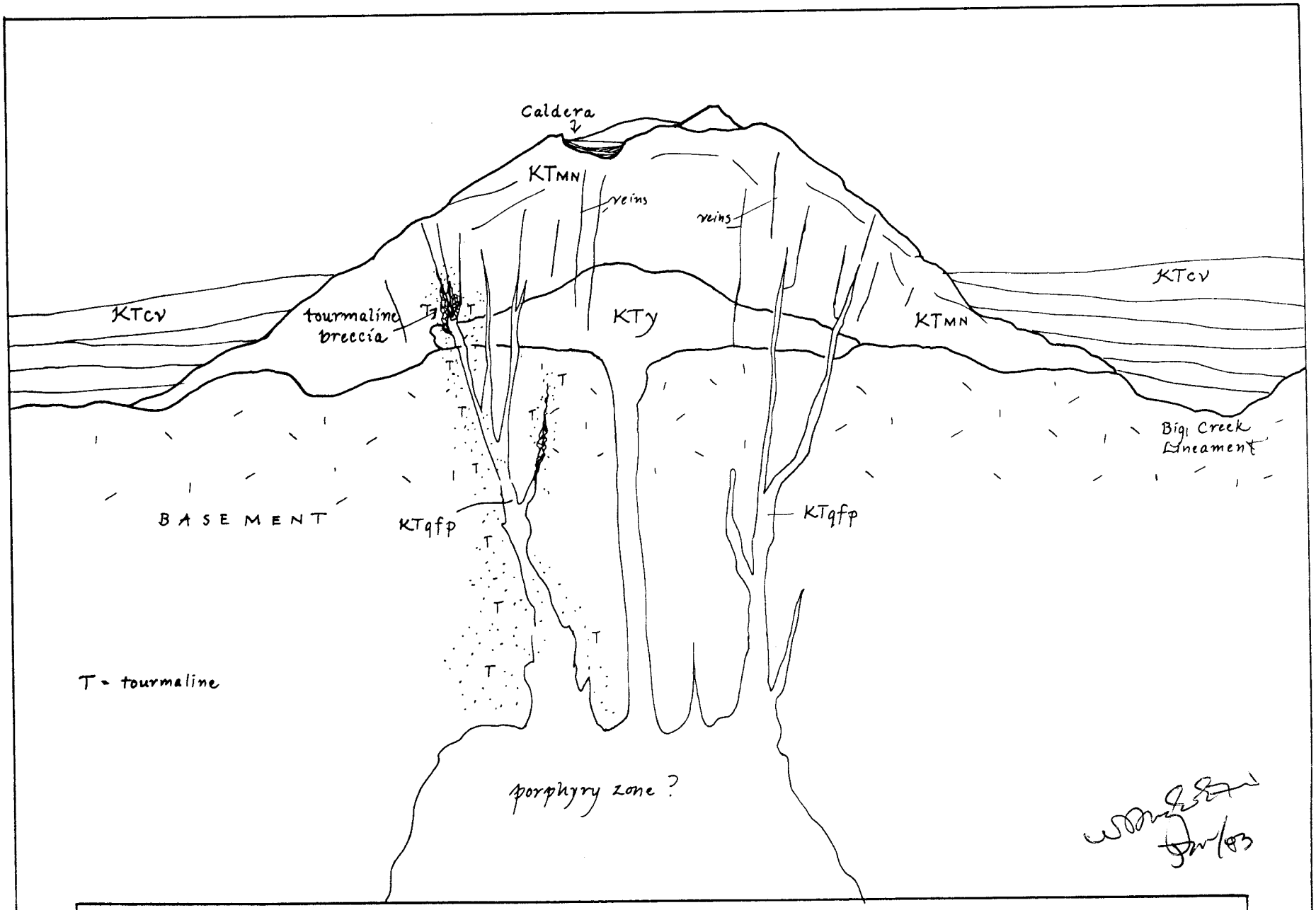


Figure 12 : Cartoon of Lilypad area circa 70 ma. B.P.

APPENDICES

APPENDIX I - STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in Burnaby, British Columbia, do hereby declare:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. and am currently enrolled in a M.Sc. majoring in Geological Sciences.
2. From 1971 to the present, I have been actively engaged in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981, became a partner in Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.

W. Douglas Eaton, B.A., B.Sc.

APPENDIX II - PERSONNEL

Name	Address	Position
J. Nelson	2980 West 8th, Vancouver, B.C.	Geologist
L. Cymbalisty	1602 #5 Morey Road, Nanaimo, B.C.	Student
A. Reid	152 Goulburn Road, Ottawa, Ontario	Student
D. Lister	c/o 106A - 93 Lewes Road, Whitehorse, Y.T.	Student
S. Price	R.R. #2, Site 265, Courtenay, B.C.	Cook
D. Eaton	6108 Burns Street, Burnaby, B.C.	Geologist
M. Phillips	50 Alsek Road, Whitehorse, Y.T.	Geologist
S. Main	3694 Ontario Street, Vancouver, B.C.	Geologist

APPENDIX III - ANALYTICAL TECHNIQUES

PREPARATION

All soil samples were dried and sieved through an ASTM 35 mesh screen (0.50 mm). The minus 35 mesh fraction was then pulverized and homogenized in a ring grinder to approximately minus 100 mesh (0.15 mm). For drill core and grab and chip rock samples, the entire sample was crushed and split. A subsample was then pulverized in a ring grinder to approximately minus 100 mesh.

ANALYTICAL TECHNIQUES

Gold was analyzed by a "combo technique" consisting of a fire assay followed by neutron activation, while silver, copper, arsenic, zinc, and lead were all analyzed using a perchloric-nitric acid extraction followed by atomic absorption spectrometry, except arsenic which used a flameless atomic absorption finish.

Antimony analysis involves a hot HCI bath followed by reduction of iron and antimony complexing with I-. The complex was extracted with TOPO-MIBK and the analysis completed by atomic absorption.

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED **PROJECT** NAT **PROPERTY** LILYPAD **HOLE NO.** LP82-1 **Page** 1 **of** 5

Elevation 1640 m **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 76.2 m
Coordinates 49602.5N 51749E **Hole started** June 22, 1982 **completed** June 24, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 317°

WPPR & ET Jan/83

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kspd	Cc	Qz	Py	Li	Mn	Hc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
2	17		highly fracture and weathered bedrock	KTMN bx1: Mt Nansen Group volcanic agglomerate - breccia: Angular clasts of andesite with vesicles, highly elongate, otherwise dense and aphanitic. Smaller clasts may even be glassy. Matrix generally dark green and chlorite-rich. Clasts form >50% of rock, all of similar lithology. Probably a few breccia fragments. Calcite fills fractures and occurs as clumps in the matrix.	Propylitte: chlorite abundant especially in matrix and larger clasts. Smaller clasts are bleached to lavender around selvages; some even white.																	
4					white crystalline calcite, epidote																			
6	19				Chlorite in amygdules, a few clumps of fine grained pyrite.					✓														
8	92																							
10	94			calcite and manganese oxide coated fracture																				
12	100											✓												
14	100																							
16	64			Transition zone: gradational contacts																				
18	100																							
20	100																							
	100																							
	100																							
	100																							
	100			KTMN bx2: as above but polymictic. Clasts may contain white tabular feldspar phenocrysts. Variable textures, colours, degree of vesicularity. Clasts up to 20cm in diameter common.	Epidote becomes common. Other minerals as above.																	
	100			2mm calcite vein																				
	100																							
	100				epidote decreases but still seen in vesicles. Also calcite-chlorite common in amygdules.																			
	100			good example of clast-clast molding - shows clasts																				
	71																							

Elevation 1640 m **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 76.2 m
Coordinates 49602.5N 51749E **Hole started** June 22, 1982 **completed** June 24, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 317°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc
	100			either very large clast or flow tongue. Vesicular aphanitic, feldspar and pyroxene phenocrysts.									
	100			KTMN bx 1 - flow dismember, matrix is chlorite and calcite-rich volcanic.	clasts bleached to pale green along edges.								
22	100												
	100												
24	100			KTMN bx 2 - Contact is fracture zone	"purple and green" colour variation in clasts - redox variations?								T
	100												
26	100												
	100												
28	100												
	100				wall rock alteration: bleached; with limonite replacing chlorite. Mn oxides on fractures.							✓	
30	76												
	92			VEIN: Gouge and altered zone: see page 5 for details highly fractured, limonite, in places tectonic (?)									T
32													
	100												
34				KTMN bx 2: primary textures in abrupt contact with vein zone	wallrock altered - closest to vein bleached, vesicles filled with quartz and pyrite. More silicified than hanging wall. Chlorite appears in vesicles, increasing downward. Mn or Fe increase toward base.					✓			T
	51												
36													
	100												
38				1cm wide quartz vein with minor galena	Wallrock somewhat bleached but no silicification; chlorite abundant in matrix. Sparce manganese-coated fractures					✓			
	100												
40	100												

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M7008	24.5 – 26.5	5.0	0.1	51	11	2.0				
M7001	28.0 – 30.0	Tr	.16 oz/T	.03 %	20	12.4				
M7002	30.0 – 30.4	Tr	.20	.07 %	50	12.8				
M7003	30.4 – 31.4	.572 oz/T	1.43 oz/T	.77 %	130	20.0				
M7004	31.4 – 32.4	.080 oz/T	.36 oz/T	.64 %	180	14.8				
M7005	32.4 – 33.4	.056 oz/T	.50 oz/T	.84 %	60	9.6				
M7006	33.4 – 34.74	.003 oz/T	.26 oz/T	.54 %	110	6.0				
M7009	34.74 – 36.20	Tr	.05 oz/T	.05 %	90	3.2				
M7010	36.7 – 38.7	Tr	.01 oz/T	.01 %	15	2.8				
M7011	38.7 – 40.84	Tr	.01 oz/T	.01 %	10	1.6				

Elevation 1640 m **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 76.2 m
Coordinates 49602.5N 51749E **Hole started** June 22, 1982 **completed** June 24, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 317°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: chl	ksp	ct	qz	py	li	mn	hc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
42	100		10 cm wide quartz vein with coarse calcite	as above.	Propylitic: chlorite abundant. Calcite occurs in patches and vesicles. Some clasts contain fresh feldspars and a trace of pyrite.				✓															
44	60																							
46	100																							
48																								
50	56																							
52			Small fault slickensides at 40° to core axis																					
54	100		faults and fractures with calcite; crumbly gouge zone 53.2 - 53.8		"red and green" alteration with calcite in vesicles epidote after feldspar																			
56																								
58																								
60																								

Elevation 1640 m
Coordinates 49602.5N 51749E
Dip -50
Azimuth 317°

Drill Contractor Caron
Hole started June 22, 1982 **completed** June 24, 1982
Target:

Logged by J. Nelson

Total depth 76.2 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Hm	Ilt	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
62	100			KTMN bx 2: volcanic agglomerate polymictic																				
64														M7007	62.5 – 64.5	7.0	0.1	102	11	1.6				
66	90			← Prominent reddish-purple dast. Contains epidote, calcite, and a trace of specular hematite in vesicles: no chlorite.	"purple and green" redox variations pH variations ?																			
68																								
70	100																							
72																								
74																								
76				Total depth 76.2m (250 ft)																				
78																								
80																								

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED PROJECT NAT PROPERTY LILYPAD HOLE NO. LP82-1 Page 5 of 5

Elevation 1640 m **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 76.2 m
Coordinates 49602.5N 51749E **Hole started** June 22, 1982 **completed** June 24, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 317°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
					clasts became lighter lavender (dispersed hematite?) Chlorite decreases												
29				Altered KTMN bx	clay becomes abundant give pitted surfaces												
					Abundant fractures coated with Mn oxide limonite												
					Silicification not evident												
31				abrupt contact													
				quartz vein with red limonite	Difficult to separate alteration from weathering												
				limonite gouge													
				3cm wide quartz vein with scorodite and pyrite	silicification, clay alteration gouge certainly present												
33				1cm quartz vein with galena pods													
				silicified	rock well foliated												
				quartz + green sericite vein	late clear gypsum veinlets throughout breccia.												
				gougy box work with minor galena													
				limit of gougy highly limonitic zone													
35				galena in veinlets with quartz veins	abrupt edge to gouge/clay/limonite zone. Rock becomes less fractured. Original textures preserved. Matrix light beige, silicified also clay? Py in vesicles. Abundant late calcite veins												
				trace galena in quartz veinlet													
37				Altered KTMN bx	Some zones more silicified than others. Contain disseminated pyrite and in veinlets.												
				1cm wide quartz vein with a few galena grains	Relative unsilicified portions show more Mn oxides												
39					Trace of galena												
					Chloride increased toward bottom												
41				calcite-quartz vein	Chlorite becomes abundant in vesicles. Matrix darker by 42.0 m no evidence of vein alteration												
43																	

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-2 |

Elevation 1591 m
Coordinates 49900N 51520E
Dip -50
Azimuth 279°

Drill Contractor Caron
Hole started June 25, 1982 **completed** June 26, 1982
Target:

Logged by J. Nelson

Total depth 50.75 m
Core size NQ

W Dow Jun 83

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Cal	Kaol	Ct	Qz	Py	Li	Mn	He			Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
				Overburden: locally derived, somewhat rounded fragments of KTMN flow-rock																					
2	74																								
4	100	✓ ✓ ✓ ✓		KTMN: flow rocks, light beige and silicified.																					
	30			Rubble zone mainly KTMN - green colour. One fragment of quartz vein. Poorly preserved section, possibly a fracture zone																					
6	38				Mn stains on fractures, pyrite cubes in lighter biege fragments. limonite					✓	✓	✓													
			highly fractured (limonite)	KTMN bx 2: agglomeritic-breccia, polymictic. Clasts 1 to 20 cm across consisting of amygdaloidal andesite with small tabular (commonly twinned) feldspar phenocrysts.	Propylitic: chlorite abundant. Some silicification of breccia matrix but clasts unaffected. Pyrite cubes in patches locally. Red hematite coats fractures.							✓													
8	67																								
10					greyish quartz forms blebs in matrix giving rock mottled appearance. pyrite with blebs. Calcite in matrix.					✓															
12	75																								
	67																								
14	75																								
16	30		fracture density decreasing	fracture network containing pyrite surrounded by lavender bleached zone	red hemate stain accompanies quartz patches in matrix.				✓			✓												
	55																								
18	96																								
	80			white quartz vein with crystalline calcite selvages. Cut by second vein with same orientation.																					
20	92																								

Elevation 1591 m **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 50.75 m
Coordinates 49900N 51520E **Hole started** June 25, 1982 **completed** June 26, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 279°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc	Ep	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	50			as above																					
22	40			highly fractured																					
24																									
26	100																								
28				clasts content of breccias changes over 0.2m to mostly russet, very fine grained, amygdaloidal. Pyroxene instead of feldspar phenocrysts.	epidote in patches becomes abruptly abundant. Trace of pyrite with limonite on fractures. Still chlorite.					✓	✓												
	75			slickensides at 50° to core axis strongly limonite stained fractures.																					
30				KTMN flow: abundant pyroxene phenocrysts, partly chloritized	calcite veins, epidote patches, chlorite fragments.										M7013	0.61 m	6	1.4	134	27	34.0	144	34		
32	100																								
34																									
36	66			fault zone: 3cm wide, ground up vein calcite 34.5 to 40.2m rock becomes increasingly fractured. At 40.2, fragments are <1 cm in diameter.											M7014	5.96 m	4	0.6	26	20	9.6	655	108		
	67			At 40.23, texture of flow still apparent in places; other places has partially become fault breccia.											M7015	2.10 m	5	0.2	49	29	4.6	845	75		
38	100																								
	88														M7016	1.43 m	3	0.3	69	30	5.4	>10000	183		
40	100				area of strong fractures with calcite and clay					✓																

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-2 | Page 3 of 3

Elevation 1591 m
Coordinates 49900N 51520E
Dip -50
Azimuth 279°

Drill Contractor Ca[illegible]
Hole started June [illegible] 1982 **completed** June 26, 1982
Target:

Logged by J. Nelson

Total depth 50.75 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc	Ep	Sc
42	100				pervasive monite - clay alteration with abundant Fe and Mn - oxides rock [illegible], easily broken with fingers.		✓				✓	✓			
				20cm rebrecciated quartz vein - quartz cemented					✓						
				KTMN flows	Crude[illegible]a - sericite alteration abundant[illegible] and Mn oxides				✓		✓	✓			✓
44					propylitic alteration with Mn-oxides on fractures	✓		✓				✓		✓	
				brecciated quartz vein with limonite in open spaces					✓						
				KTMN flow	propylitic[illegible]onite - clay - sericite						✓				✓
46					propylitic altered, Mn and Fe oxides	✓		✓			✓	✓		✓	
					propylitic[illegible]onite - clay - sericite										
	83			← 2 fragments of quartz vein plus one gash filled with galena							✓	✓			✓
48	100			complex quartz vein, unknown width, ruggy	limonite stained				✓		✓				
	76			KTMN flow											
50	100		←	calcite vein, 1cm wide and vuggy	Transition footwall over 1m into propylitic[illegible]ered rock with wide fractures but [illegible] oxides	✓		✓			✓			✓	
52															

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M7017	0.47 m	2	0.5	88	32	5.2	2490	1000		
M7018	1.05 m	3	0.4	100	29	7.4	2500	1200		
M7019	0.30 m	296	13.6	6700	63	1000	930	445		
M7020	0.45m	68	8.7	1300	46	27.0	>10000	2000		
M7021	1.20 m	4	0.8	165	25	5.6	>10000	320		
M7022	0.40 m	157	11.5	3800	73	42.0	2300	1250		
M7023	1.20 m	2	1.4	427	24	5.6	6650	850		
M7024	0.95 m	283	17.8	7700	36	85.0	2800	1850		
M7025	0.05 m	2760	98.0	2.0 %	75	230.0	1.00	1400		
M7026	0.75 m	145	13.3	1.22 %	43	860	1650	930		
M7027	0.61 m	403	5.40 oz/t	4.74 %	245	>10000	1850	3250		
M7028	1.14 m	4	12.9	1350	19	27.0	>10000	1250		
M7195	1.45 m	1	3.0	48						

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP 82-3 | Page 1 of 10

Elevation 5409' | **Drill Contractor** Caron | **Logged by** J. Nelson | **Total depth** 192.3 m
Coordinates 50360N 49346E | **Hole started** June 27, 1982 **completed** July 1, 1982 | **Core size** NQ
Dip -50 | **Target:**
Azimuth 297°

WDM etc Jun/03

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kaol	Cl	Qtz	Py	Li	Mn	Ilm	Tm	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
				overburden: locally derived																					
2	16														M07224	4.00 m	6	0.1	7				59		
4	40	V		KTMN flow: massive, very few phenocrysts, vesicles not abundant	green, very fine grained – propylitic? but possibly greenschist hornfels	✓		✓																		
	100	V																							
6	65	V			"Khaki" alteration – pale green to pinkish cast. Tourmaline scattered throughout as radiating patches in vesicles and in veinlets. Pyrite on some fractures, calcite on most.										M07225	4.00m	3	0.1	4				20		
	55	V																							
	100	V		Same flow as above but brecciated. Contact abrupt. Fragments 1–5 cm in diameter and angular. In places fragments not rotated. Rock is clast dense.																					
8	64	V																							
	96	V																							
	61																								
10	100	V			Chlorite in matrix of breccia										M07226	4.00 m	3	0.1	9				9		
	75																								
	70	V																							
	85																								
12	95	V			patches of calcite with irregular pyrite rims, patches up to 3cm across.			✓		✓					M07029	1.00 m	6	1.0	128				49		
	67																								
	100	V			strongly bleached, clay replaces feldspar especially around tourmaline. Tourmaline as veins, patches with quartz and pyrite up to ½ cm across.										M07030	1.00 m	7	0.5	59				39		
	49																								
14	45	V													M07031	1.00 m	5	0.2	33				12		
	100																								
	80	V			Calcite veinlets late – cross-cut tourmaline			✓							M07032	1.00 m	6	0.2	36				8		
	100	V		tourmaline veins at 85° to core axis veins 3/m approximately	Clay increase toward bottom of interval										M07033	1.10 m	11	1.1	61				122		
16	83	V		KTMN: sediments	Possibly silicification.					✓					M07034	0.50 m	166	0.5	15				19	1	2
				brecciated massive tourmaline											M07035	0.70m	40	1.3	61				23		
18	100			KTMN: sediments, fine bedded with cross-bedding and some slumps	calcite-ankerite as matrix. Calcite fills centres of cavities in one case, perfect quartz crystals and pyrite cubes in carbonate matrix			✓		✓					M07036	0.70 m	16	0.6	31				6		
	90			bedding at 15°	tourmaline and pyrite distribution controlled by bedding.										M07037	1.00 m	15	0.4	15				20		
20	69																								

Elevation 5409'
Coordinates 50360N 49346E
Dip -50
Azimuth 297°

Drill Contractor Caron
Hole started June 27, 1982 **completed** July 1, 1982
Target:

Logged by J. Nelson

Total depth 192.3 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc	Tm
	100				boundary below which carbonate, chlorite abundant in matrix, clay veinlets.									
	79													
22	84						v							
24					tourmaline and pyrite throughout									
26				tourmaline vein tourmaline breccia with tourmaline plus quartz cementing bleached clasts contacts at 45° to core axis clasts massive textured possible intrusive ?	yellowish bleaching around tourmaline breccia									
	100													
28														
30				quartz - tourmaline vein paralleling bedding										
32														
34				KTMN greywacke : massive no bedding apparent. White plagioclase crystals form subangular clasts. Mottled texture on largish (5cm) scale.	tourmaline - pyrite patchy often mimics greywacke texture									
	86													
36	99													
38				pyrite-tourmaline vein at 84°										
	94				39.0 - 39.2 bleached, silicified area with pyrite - tourmaline veins.					✓				
40	100													

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07038	1.00 m	5	0.1	6				4		
M07039	1.00 m	12	0.1	8				5		
M07040	1.00 m	10	0.1	8				5		
M07054	1.00 m	6	0.1	1				1		
M07055	1.00 m	6	0.2	3				3		
M07056	1.10 m	3	0.2	1				1		
M07057	0.20 m	3	0.1	3				11	1	1
M07058	0.70 m	3	0.2	4				49		
M07059	1.00 m	5	0.1	1				4		
M07060	1.00m	10	0.2	2				86		
M07061	1.00 m	7	0.3	4				43		
M07062	1.00m	7	0.1	5				6		
M07063	1.00 m	5	0.2	4				2		
M07064	2.00 m	4	0.3	73				13		
M07065	1.00 m	2	0.1	2				6		
M07066	1.00 m	7	0.3	42				42		

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-3 | Page 3 of 10

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hm	Tm	Sc
				large poorly defined porphyritic - vesicular clasts	Mn-oxides on fractures increasing density of gypsum and calcite veinlets			✓				✓			
				41.54 trace of bornite and chalcopyrite with disseminated pyrite.											
42	100			gypsum veinlets consistant at 37°											
					becoming strongly fractured										
				VEIN GOUGE ZONE	Vein zone: intensely altered country rock with fine sericite and quartz plus galena and minor copper stains										✓
44					tourmaline dominant in brecciated and strongly fractured rock. abundant pyrite with disseminated chalcopyrite and gypsum veinlets.										
	89														
46				6 cm wide quartz vein with galena and limonite											
				yellow limonitic fault breccia with quartz clasts and galena on rims					✓						
				2 cm wide quartz vein with galena and ankerite — KTMN greywacke	bleached but not silicified, abundant gypsum veinlets, pyrite in matrix increasing chlorite downward	T									
48				quartz vein at 60° contains chalcopyrite stringers and tourmaline											
				very strongly fractured gouge zone with shiny slickensides, partly brecciated	carbonate - montmorillonite - limonite in matrix										
50					carbonate very abundant										
				remnants of tourmaline and quartz											
52	100														
				KTMN greywacke	carbonate, chlorite in matrix tourmaline sparse but increase downward, often is blebs with pyrite										
54															
				parallel gypsum veinlets lead into vein - breccia zone											
56					gypsum veinlets										
				VEIN ZONE: bleached	clay, silica, limonite with sugary texture and holes in places										
58				57.75 10 cm wide banded, boxwork quartz and red Fe-oxide vein	more gypsum veinlets										
				KTMN greywacke highly fractured ↓ decreasing	tourmaline - pyrite veins up to 2 cm wide pinkish quartz-rich envelopes contain carbonate grains.										✓
60															

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07067	1.70 m	16	0.2	11				41		
M07068	0.40 m	33	1.8	850				560		
M07069	0.40 m	592	45.0	2.42%	>1000	260.0	1750	290		
M07070	0.30 m	1220	10.13%	15.30 %	>1000	475.0	1300	1850	7	7
M07071	1.20 m	73	11.5	1850	265	43.0	>10000	950		
M07072	0.70 m	45	7.2	865	810	22.0	>10000	1000		
M07073	0.60m	3680	18.8	1.98 %	>1000	195.0	2250	520		
M07074	0.70m	35	5.6	1200	675	12.6	4750	510		
M07075	1.00 m	70	6.3	1000			>10000	250		
M07076	0.70 m	17	0.7	60			900	18		
M07077	0.30 m	107	21.0	1850			3300	4500		
M07078	0.50 m	12	3.6	135			820	96		
M07079	1.50 m	35	2.2	310			870	18		
M07080	1.00 m	17	0.9	54			365	8		
M07081	1.00 m	15	0.8	65			225	9		
M07082	1.00 m	23	1.0	48			183	136		
M07083	1.00 m	21	1.3	24			300	43		
M07084	1.00 m	25	0.3	21			585	43		
M07085	1.00 m	26	0.3	14			325	42		
M07086	1.00 m	25	0.2	110	230	2.6	2185	220		
M07087	0.40 m	170	9.7	3200	>1000	76.0	1400	375		
M07088	0.60 m	102	7.0	580	>1000	120.0	1250	460		
M07089	1.00 m	8	1.0	95			2400	300		
M07090	2.00 m	10	1.2	143			1100	58		

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-3 | Page 4 of 10

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc	Tm	Sc
62	100			KTHN greywacke	mostly propylitic with chlorite replaces pyroxene in matrix tourmaline - pyrite - quartz veins throughout a few areas of silicification and tourmaline white veinlets of calcite cut tourmaline veinlets - commonly observed relationship										
64															
66															
68	96														
70	100 / 80														
72															
74	100														
76				← cave											
78															
80															

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07091	2.0 m	5	0.4	29			105	47		
M07092	2.5 m	28	0.5	48			390	51		
M07093	1.3 m	5	0.1	14			133	9		
M07094	1.1 m	4	0.1	20			107	19		
M07095	2.0 m	5	0.2	80			118	8		
M07096	0.6 m	5	0.2	7			73	4		
M07097	2.0 m	4	0.1	8			103	4		

Elevation 5409'
Coordinates 50360N 49346E
Dip -50
Azimuth 297°
Drill Contractor Caron
Hole started June 27, 1982 **completed** July 1, 1982
Target:
Logged by J. Nelson
Total depth 192.3 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	He	Tm	Sc
	100			KTMN greywacke											
82	98														
				vein with clay and quartz, strong limonite stains	in bleached zone, montmorillonite and calcite										
84				shear with rusty limonite cut by 5cm quartz vein containing 2 to 5% pyrite (dip 50°)	minor gypsum veinlets plus clay bleached zone		✓								
86	100														
88															
90					pyrite-tourmaline veinlets < .5 cm wide surrounded by bleached band, 3 to 5% pyrite (disseminated); minor calcite and gypsum veinlets.										
92	78				weak tourmaline-pyrite veinlets with bleached envelopes and later calcite veinlets. veins contain < ½% disseminated pyrite.										
94	81														
96				KTMN : flow? Contact with greywacke in highly altered rocks above	rare quartz-tourmaline-pyrite veinlets					✓					
					Propylitic alteration										
98	100				tourmaline and pyrite increase downward										
					bleached zone tourmaline breccia with minor chalcopyrite										
100					as before										

Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise) Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07098	1.4m	10	0.5	14			288	5		
M07099	1.5m	23	0.8	28			300	9		
M07100	3.1m	6	0.2	12			73	9		
M07201	3.7m	3	0.7	55			108	13		
M07202	0.7m	27	3.5	330			355	174		
M07203	1.0	13	0.1	10			72	6		

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hk	Tm	Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
		✓			bleached zone: tourmaline flooding											M07204	0.4m	24	1.8	186			355	57		
102		✓			cryptocrystalline quartz, pyrite and pervasive but minor carbonate											M07205	2.2m	3	0.1	8				38		
104		✓														M07206	1.8m	2	0.1	10				9		
		✓			poorly defined bleached zone											M07207	1.4m	27	8.1	455				500		
106		✓			calcite, montmorillonite and coarse pyrite with a trace of chalcopyrite and minor pervasive quartz																					
108	100	✓	←	tourmaline - pyrite - epidote veinlets	minor tourmaline with bleached bands - pervasive carbonate											M07208	2.8	12	1.7	80				134		
		✓																								
110		✓																								
112		✓			tourmaline veining decreases replaced by <2cm "pink" bleached bands and pyrite veinlets																					
114		✓																								
		✓																								
116		✓	←	fracture with minor pyrite, calcite and limonite	fracture zone calcite common																					
	83	✓														M07209	3.0	3	0.8	7				53		
118		✓																								
	100																									
120		✓																								

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	rhs	Ilk	Tm	Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
		v		KTMN - flow - porphyritic																						
122		v		← 1cm wide quartz vein with pervasive calcite	pyrite on fractures																					
		v																								
124	100	v		fracture density decreases																						
126		v																								
128		v		strong fractures filled with calcite and minor gypsum																						
130	50	v																								
132		v																								
134		v																								
	100															M07210	2.0m	18	0.5	6				147		
																M07211	1.5 m	3	0.2	9				44		
																M07212	0.7m	5	0.2	3				33		
136		v	X	4cm wide quartz vein sheared by later calcite and chlorite vein																						
		v																								
138		v		highly fractured zone shows some slickensides	calcite common on fractures wispy pyrite on some fractures																					
		v																								
140																										

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Ilm	Tm	Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
142		✓		highly broken core - intense fracture zone	pyrite veinlets become more common																					
144		✓			0.1 to 0.2 m wide tourmaline zone coarse pyrite replaces pyroxene calcite is some fractures.									✓		M07213	3.0 m	15	0.7	13				104		
146		✓																								
148	100	✓																								
150		✓																								
152		✓			zone of bleached envelopes around veinlike areas of pyrite and tourmaline. Some calcite - pyrite veinlets ; patchy light bands up to 0.1 cm wide.									✓		M07214	2.60 m	16	0.6	10				68		
154		✓																								
156		✓			pyrite veinlets decrease, calcite veinlets rare.																					
158		✓																								
160																										

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-3 | Page 9 of 10

Elevation 5409'
Coordinates 50360N 49346E
Dip -50
Azimuth 297°

Drill Contractor Caron
Hole started June 27, 1982 **completed** July 1, 1982
Target:

Logged by J. Nelson

Total depth 192.3 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Ka	Ct	Qz	Py	Li	Mn	Hk	Tm	Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
		V		KTMN flow	propyllitic alteration																					
162		V														M07215	2.10 m	12	0.8	87				96		
164		V			} Bleached zone: calcite-montmorillonite. Two <5 cm wide quartz-tourmaline veins with minor pyrite at 55°				✓	✓				✓										
		V																								
166	100																									
		V																								
168		V																								
		V		1 fracture zone with minor slickensides	fair to moderate calcite on fractures limonite after pyrite					✓	✓															
170		V																								
		V														M07216	3.00 m	8	0.1	9				105		
172		V																								
		V														M07217	2.50 m	79	0.3	15				113		
174		V																								
	86	V		< 1 cm wide quartz vein at 75°	no tourmaline or peripheral bleaching					✓						M07218	0.70 m	18	0.6	18				106		
176		V		Intense fracture zone with strong slickensides and chlorite	strong calcite on fractures, minor limonite.						✓																
	100															M07219	2.80 m	14	0.2	8				71		
178		V																								
	60	V														M07220	2.50 m	48	2.3	500				182		
180																										

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-3 | Page 10 of 10

Elevation 5409' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 192.3 m
Coordinates 50360N 49346E **Hole started** June 27, 1982 **completed** July 1, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 297°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Cc	Qz	Py	Li	Mn	It	Tm	Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	60																									
	100			crumbly fault 70-80° (23 linear?)	bleached: strong pervasive calcite gypsum. clay-rich fault gouge containing pyrite at 181 m		✓			✓						M07221	0.60 m	105	9.5	2550				450		
182				KTMN flow: not strongly fractured	pyrite veinlets uncommon few tourmaline veinlets abundant hairline calcite veinlets decreasing downward									✓												
	88															M07222	3.90 m	39	1.4	120				295		
184																										
186																										
188	100																									
190																M07223	4.50 m	9	0.2	17				141		
192																										
				Total depth 192.3 m	(631')																					
194																										

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-4 | Page 1 of 3

Elevation 5207'
Coordinates 49292N 49327.5E
Dip -60
Azimuth 273°

Drill Contractor Caron
Hole started July 2, 1982 **completed** July 3, 1982
Target:

Logged by J. Nelson

Total depth 54.56 m
Core size NQ

W. Dyer 8th Jul/83

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	He	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
0		✓		KTMN: flow with plagioclase-pyroxene phenocrysts. Sparse amygdules.	Propylitic: Chlorite after pyroxene; chlorite and calcite in matrix. Epidote patches to 5 mm across.																			
2	40	✓																						
		✓																						
4		✓		fracture 50° pyrite coated																				
	91																							
6		✓																						
		✓																						
8		✓		pyrite and calcite veinlet																				
	100	✓		calcite veinlet																				
10		✓																						
	67	✓																						
12				f.d. = 50/m coated with limonite and pyrolusite																				
		✓																						
14	100			calcite veinlet																				
		✓																						
16		✓		fracture with limonite and pyrolusite																				
	46																							
		✓																						
18		✓																						
	100																							
20		Y																						

Elevation 5207' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 54.56 m
Coordinates 49292N 49327.5E **Hole started** July 2, 1982 **completed** July 3, 1982 **Core size** NQ
Dip -60 **Target:**
Azimuth 273°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy	Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise								
						Kao Ct Qz Py Li Mn Hc			Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
		v		KTMN flow: as above	Propylitic												
22		v															
		v															
24																	
		v															
26																	
		v															
28	100																
		v															
30																	
		v															
32				Fe and Mn oxides with calcite veinlet		✓											
		v															
34		v		epidote vein													
				pyrite veinlet													
36		v															
		v															
38				network of chlorite veinlets and veins													
		v															
40		v					M07228	1.15m	2	0.1	27				61		

Elevation 5207' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 54.56 m
Coordinates 49292N 49327.5E **Hole started** July 2, 1982 **completed** July 3, 1982 **Core size** NQ
Dip -60 **Target:**
Azimuth 273 °

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc		Sc
							✓		✓			✓			✓
	100			VEIN: clay alteration with 2-3 cm wide band of fine grained quartz and pyrite at 10° surrounded by Mn-oxide coated fractures. KTMN flow	Propylitic: chlorite veinlets common										
42	85														
44	100														
46															
48	40														
50	100			calcite veinlets; very strong fracturing	orange clay: limonite after pyroxene; yellow-orange clay alteration. Propylitic		✓								✓
52	91														
54				VEIN: ground up volcanic altered to clay with silica and limonite border; KTMN flow	patches of pyrite and malachite stain; fractures coated with limonite				✓						
56				Total depth 54.56 m (179')											

Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise: Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07229	0.27 m	12	0.9	69	95		180	16		
M07230	0.03 m	17	2.5	118	210		108	25		
M07231	1.05 m	2	0.6	65				65		
M07232	1.17 m	5	0.5	23	45		143	64		
M07233	0.66 m	5	0.1	22				64		

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED PROJECT NAT PROPERTY LILYPAD HOLE NO. LP82-4A Page 1 of 4

Elevation 5207' Drill Contractor Caron Logged by J. Nelson, M. Phillips Total depth 81.69 m
Coordinates 49292N 49327.5E Hole started July 3, 1982 completed July 5, 1982 Core size NQ
Dip -50 Target:
Azimuth 273°

W Dunlop JN 03

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy	Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise: Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
0		✓		KTMN flow: plagioclase and pyroxene phenocrysts with sparse amygdules.	Propylitic sparse disseminated pyrite and occasional pyrite in amygdules Mn and Fe oxides common on fractures												
2	38	✓															
4		✓			Epidote and pyrite in some amygdules.												
6	89	✓															
8		✓		broken zone with Mn and Fe oxides on fractures													
10		✓		as above													
12	100	✓					M07234	1.00 m	2	0.1	16				61		
14		✓															
16		✓		fracture with limonite													
18	61	✓		KTMN flow breccia - angular clasts KTMN flow			M07165	1.20 m	12	0.4	107	27	2.8	930	52		
20		✓		VEIN: light brown, highly fractured gougy at top and bottom contacts	Weak to moderate montmorillonite with supergene kaolinite; weak calcite veins Mn oxides on fractures, disseminated hematite		M07235	2.33 m	2	0.1	18				68		

Elevation 5207' **Drill Contractor** Caron **Logged by** J. Nelson, M. Phillips **Total depth** 81.69 m
Coordinates 49292N 49327.5E **Hole started** July 3, 1982 **completed** July 5, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 273°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy	Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise: Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	61			as above	as above												
	100			KTMN flow	Propylitic												
22	82	V															
		V															
24	48			calcite and chlorite veinlets													
		V															
	82																
26		V															
	100																
	52	V															
28		V															
				VEIN: 0.05m wide quartz vein with hematite and calcite bordered by bleached band with abundant chlorite veinlets.	Bleached; weak pervasive silicification weak clay alteration, chlorite veinlets		M07236	0.40 m	10	1.2	685				17		
				KTMN flow	Zone of sparse >1cm wide pink selvages around open fractures.		M07166	1.00 m	7	1.0	215	85	3.2	970	52		
30	100	V															
		V															
32	90	V															
		V					M07227	1.00 m	3	0.1	23				17		
34	100	V															
		V															
36		V															
	98	V															
38		V		VEIN: up to 2cm wide calcite veins surrounded by limonite and weakly clay altered wallrock	calcite and montmorillonite		M07237	0.75 m	5	1.1	1130				64		
	100																
		V		zone of Mn and Fe oxides on fractures													
40																	

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED PROJECT NAT PROPERTY LILYPAD HOLE NO. LP82-4A Page 3 of 4

Elevation 5207' **Drill Contractor** Caron **Logged by** J. Nelson, M. Phillips **Total depth** 81.69 m
Coordinates 49292N 49327.5E **Hole started** July 3, 1982 **completed** July 5, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 273°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy	Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise: Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	82																
42	100			calcite vein													
			70°														
44	96			VEIN: bleached and altered to clay	Kaolinite possibly supergene. weak limonite		M07238	0.95m	3	0.1	82				41		
				KTMN flow													
46				VEIN: 2cm quartz and specular hematite minor calcite veins at top grading into quartz and specularite at bottom	strong montmorillonite bordering veins silicification weakens toward bottom but hematite increases.		M07167	1.95m	6	1.3	114	56	7.0	700	36		
							M07239	0.20m	14	1.0	144				44		
48	100			KTMN flow - fracture density fairly high 10-15/m													
	74																
50	94			quartz-chlorite vein	spotty epidote prominent												
52																	
54	100																
56																	
	49			beginning of very strong fracture zone			M07240	1.22 m	3	0.1	30				46		
58	100																
	83																
60																	

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-4A Page 4 of 4

Elevation 5207' **Drill Contractor** Caron **Logged by** J. Nelson, M. Phillips **Total depth** 81.69 m
Coordinates 49292N 49327.5E **Hole started** July 3, 1982 **completed** July 5, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 273°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy
	83			KTMN flow - dark green		
62	91					
	41					
64	100				Fair to moderate pervasive calcite moderate Kaolinite	
	39					
66	63			Increased bleaching, pale green, highly fractured; in places brecciated with Fe and Mn oxides of fractures	weak to moderate silicification weak montmorillonite, fair to moderate Kaolinite	
68	45			Increased bleaching and fractures right brown with clay and limonite	Increasing Kaolinite	
70	21			VEIN: up to 1cm wide angular quartz fragments in sandy matrix recovery		
72	56			Gouge - fine breccia, white kaolinite highly silicified, moderate limonite		
74	53			Blonde, highly altered - kaolinite with moderate limonite on fractures	Supergene Kaolinite	
	82			65° 5cm wide gouge zone strong Mn oxides on fractures		
76	77			KTMN flow		
	90					
78	100					
	74					
80	91					

Total depth 81.69 m

Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise								
		Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07241	1.86m	6	0.4	34				600		
M07242	1.00m	13	14.5	1000				750		
M07243	3.54m	11	9.0	720	100		1700	555		
M07244	1.53 m	19	29.0	745				1900		
M07245	1.63 m	21	12.8	440				1350		
M07246	1.41 m	7	5.3	195				500		
M07247	1.53 m	7	1.4	134				77		

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-5 | Page 1 of 5

Elevation 5160'
Coordinates 48560N 54385E
Dip -50
Azimuth 100°

Drill Contractor Caron
Hole started July 6, 1982 **completed** July 7, 1982
Target:

Logged by J. Nelson

Total depth 91.44 m
Core size NQ

W Dr... C... Jan/83

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Ksp	Ct	Qz	Py	Li	Mn	Hm	·	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
				overburden: locally derived																					
2	14																								
4	70		≈	KTMN breccia: laharic origin? contains angular clasts of various varicoloured: dark to light green, red to purple. Some massive with plagioclase and pyroxene phenocrysts; some with flow banding. Fragments range in size from cobbles down to fines in matrix	Propylitic: abundant chlorite or hematite depending upon clast colour. chlorite and calcite abundant in matrix. Abundant quartz veins 1mm to 1cm wide, some cockade. Sparse calcite veins cut quartz veins				✓													
6	100		≈ quartz veins						✓																
8	89		≈						✓																
10	100		≈ quartz veins						✓						M07250	1.00 m	2	0.1	25				18		
12	56		≈ 5cm wide fracture zone with hematitic gouge																						
14	100		≈ quartz vein						✓																
16	100		≈ 1cm wide quartz-calcite vein						✓						M07251	1.00 m	<1	0.1	22				9		
18	88																								
20	100 / 82																								

Elevation 5160'
Coordinates 48560N 54385E
Dip -50
Azimuth 100°

Drill Contractor Caron
Hole started July 6, 1982 **completed** July 7, 1982
Target:

Logged by J. Nelson

Total depth 91.44 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	He		Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	82								✓																	
22	92			quartz veins					✓																	
	100								✓							M07252	0.60 m	<1	0.1	21				6		
24	86				calcite masses form matrix of local mechanically formed breccia, tiny clumps of pyrite are common. Alteration becomes yellower-green veins filled with platy calcite become dominent over quartz veins irregular and discontinous.																					
26	100																									
28				Calcite veins																						
30	92			strongly fractured, hematitic zone												M07253	1.00m	1	0.2	14				11		
32	98																									
34	100			KTMN breccia here nearly monolithic. Clast highly irregular (dismembered flow?) rock light green, aphanitic with small black irregular (chloritic?) amygdules.	hematite, pyrolusite, waxy sericite? on fractures.										✓											
36	72																									
38	95				Pyrolusite dendrites highly uneven on fractures, minor quartz-calcite veins				✓							M07254	1.00m	2	0.1	120				32		
40	81																									

Elevation 5160'
Coordinates 48560N 54385E
Dip -50
Azimuth 100^0

Drill Contractor Caron
Hole started July 6, 1982 **completed** July 7, 1982
Target:

Logged by J. Nelson

Total depth 91.44 m
Core size NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy (Chl, Kao, Ct, Qz, Py, Li, Mn, He, Sc)	Sample Number	Assay Interval	Au (ppb)	Ag (ppm)	Pb (ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	81																
42	54			highly fractured zone KTMN polymictic breccia													
44	73			fracture density in general fairly high (20-30/m); brecciation seen in places.													
46	100						M07255	1.00 m	16	1.4	57				105		
48	90				calcite veins												
	92																
50				Fracture density 10/m													
52	100						M07256	1.00m	1	0.3	35				47		
							M07168	0.67m	20	0.2	62	4	0.6	388	49		
54							M07169	1.16 m	2	0.2	37	3	0.6	275	38		
	50			Sand: tectonic?			M07170	0.61 m	82	1.7	57	7	1.0	270	55		
56	95			KTMN polymictic breccia fracture density 50/m			M07171	2.44m	4	0.7	154	6	0.8	340	120		
	86																
58	88			Fault zone: 2 directions at 25° and 60° abundant slickensides Toward bottom becomes brown clay gouge	hematite imparts reddish cast still propylitic	Kao ✓	M07257	1.00 m	1	0.6	104				17		
							M07172	1.15 m	2	0.6	720	33	12.6	800	57		
60																	

Assay Results in ppm or ppb unless indicated otherwise

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED PROJECT NAT PROPERTY LILYPAD HOLE NO. LP82-5 Page 4 of 5

Elevation 5160' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 91.44 m
Coordinates 48560N 54385E **Hole started** July 6, 1982 **completed** July 7, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 100°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Cc	Qz	Py	Li	Mn	Ilc	Ab	Sc
	88			quartz vein											
62	75			KTMN highly fractured to brecciated includes brecciated white quartz veins and calcite	Still propylitic with chlorite, and calcite abundant in matrix				✓						
64															
66									✓						
68	78														
70	82			VEIN: olive green gouge, very fine grained.		✓									✓
72	80			vein coarsely crystalline adularia									✓		
74	91			quartz veins with adularia, up to 5 mm wide					✓				✓		
76	96			increasing shearing											
78															
80	90			brecciated quartz vein with clumps of pyrite	contains bleached and kaolinite matrix	✓			✓						✓

Sample Number	Assay Interval	Assay Results in ppm or ppb unless indicated otherwise: Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
M07173	0.90m	4	9.8	4600	10	47.0	3350	168		
								9		
M07258	0.14m	2	0.2	58						
M07174	1.68 m	43	1.0	142	3	1.0	390	59		
M07175	0.92 m	1	0.4	68	4	0.6	312	49		
M07176	0.91 m	22	0.7	198	5	1.6	670	59		
M07177	2.34 m	10	0.2	58	3	0.8	400	23		
M07178	0.35m	3	0.2	81	5	1.8	410	15		
M07259	0.36m	11	0.8	60				16		
M07179	1.34 m	4	0.3	37	3	0.9	340	17		
M07260	0.40 m	5	0.3	20				20		
M07180	1.73 m	8	0.9	153	6	4.2	330	32		
M07181	1.10 m	10	1.3	990	3	2.4	420	32		
M07261	0.25m	1	0.2	67				51		
M07182	0.22 m	10	0.8	83	3	1.2	288	27		
M07183	1.36 m	4	0.7	68	3	0.8	290	22		
M07262	0.14 m	2	0.6	32				26		
M07184	1.69 m	2	1.1	58	3	0.8	340	20		
M07263	1.00 m	6	0.9	850				23		
M07185	2.11 m	6	1.5	345	3	1.2	580	21		
M07264	0.70m	11	6.2	555	5	2.8	550	175		
M07265	0.90 m	411	6.9	850	43	10.2	1680			

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-5 | Page 5 of 5

Elevation 5160' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 91.44 m
Coordinates 48560N 54385E **Hole started** July 6, 1982 **completed** July 7, 1982 **Core size** NQ
Dip -50 **Target:**
Azimuth 100°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Ik	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
				as above	as above																			
	90			KTMN breccia low fracture density (10/m)	still propyllitic									M07266	0.77m	6	1.2	495	4	20	840	295	5	1
82														M07186	1.00m	5	0.5	72	4	1.4	370	7		
							✓																	
84	100			fracture density 30/m	white kaolinite scattered on fractures		✓																	
86							✓																	
									✓															
	98			fracture density 15/m	Sparse quartz-calcite veins epidote patches				✓															
88									✓															
90	100																							
				Total depth 91.44 m	(300')																			
92																								

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED | PROJECT NAT | PROPERTY LILYPAD | HOLE NO. LP82-6 | Page 1 of 5

Elevation 4680'
Coordinates 48910N 54286E
Dip -50
Azimuth 265°

Drill Contractor Caron
Hole started July 10, 1982 **completed** July 12, 1982
Target:

Logged by J. Nelson

Total depth 90.22 m
Core size BQ to 27.45 m / NQ

W Dmyt Ed Jun/83

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Cf	Qz	Py	Li	Mn	He		Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
0				Overburden: mixed float Mt. Nansen plus syenite																						
2	14																									
4	22																									
6	5																									
8																										
10	4			pink aplite: k-spar and quartz in sugary aggregate																						
12																										
14	33			KTy: medium to coarse grained syenite. Consists of equigranular aggregates of biotite, K-spar, and plagioclase. Abundant fine shears disrupt fabric (no consistant orientation) fracture density 10-20/m	clay after plagioclase Mn oxides on fractures chlorite and olive green clay (?) after biotite rare orange to red limonite on fractures																					
16	41																									
18	20																									
20	36																									

Elevation 4680' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 90.22 m
Coordinates 48910N 54286E **Hole started** July 10, 1982 **completed** July 12, 1982 **Core size** BQ to 27.45 m/ NQ
Dip -50 **Target:**
Azimuth 265°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Xao	Cb	Qz	Py	Li	Mn	Hc		Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
		+		as above																						
22		+																								
	36	+																								
24		+																								
	67	+																								
26	41																									
	49	+																								
	76																									
28	57	+																								
		+																								
30	90	+														M07267	1.22 m	4	0.1	35				35		
	60	+																								
32	66	+																								
	85	+																								
34				fd/20/m																						
	66	+																								
				fd 100/m	abundant orange fe oxides																					
36		+																								
	33	+		fd 10/m																						
				fd 30/m																						
38		+		fd 100/m	very strong clay alteration with strong shearing																					
	100	+																								
40	30	+																								

Elevation 4680'
Coordinates 48910N 54286E
Dip -50
Azimuth 265°

Drill Contractor Caron
Hole started July 10, 1982 **completed** July 12, 1982
Target:

Logged by J. Nelson

Total depth 90.22 m
Core size BQ to 27.45 m/ NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	He		Sc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	40	+		small faults with slickensides at high angle to core axis	strong clay alteration, mild Fe oxide staining																					
42	100	+																								
		+																								
44	95	+																								
	96																									
46		+																								
	91	+																								
48				chlorite on small faults fd 50/m	Fe oxides on faults and in fractures																					
	100	+																								
50	98	+														M07268	1.22 m	20	0.2	21				19		
		+																								
52	29	+																								
		+																								
54	100	+														M07272	0.92 m	2	0.2	27				23		
		+														M07269	1.29 m	2	1.3	30	3		83	24		
56	16	+														M07187	1.45 m	5	0.6	25						
58	36			Fault Zone: dark green gouge after Mt Nansen volcanics?	chlorite?											M07273	3.05 m	4	1.3	145				275		
60																										

Elevation 4680' **Drill Contractor** Caron **Logged by** J. Nelson **Total depth** 90.22 m
Coordinates 48910N 54286E **Hole started** July 10, 1982 **completed** July 12, 1982 **Core size** BQ to 27.45 m/ NQ
Dip -50 **Target:**
Azimuth 265°

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kfs	Ct	Qz	Py	Li	Mn	Hm	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	36																							
	33			KTMN volcanic breccia highly fractured and sheared	propylitic																			
62	20																							
														M07274	6.09 m	43	20.0	4400				71000		
64				← Copper stains over 5 cm with manganese oxides and hematite								✓	✓											
	16			Copper stains throughout																				
66																								
	16			VEIN: crumbly orange gouge with bleached fragments and specular hematite	clay and Fe oxides								✓	M07270	1.22 m	82	38.0	4400	27		1700	4500		
68	6			KTMN breccia fracture density 50-100/m	pyropylitic																			
70	12													M07271	4.88 m	4	0.5	115				92		
72	6																							
74	5													M07188	3.05m	9	0.3	53	11	2.2	220	33		
				KTMN flow	epidote in amygdules									M07189	1.91 m	6	0.2	29	9	1.0	100	23		
76	11																							
78	29													M07190	1.74 m	4	0.2	64	9	1.0	188	27		
80	4													M07191	2.44 m	5	0.1	27	15	2.8	185	15		

Elevation 4680'
Coordinates 48910N 54286E
Dip -50
Azimuth 265°

Drill Contractor Caron
Hole started July 10, 1982 **completed** July 12, 1982
Target:

Logged by J. Nelson

Total depth 90.22 m
Core size BQ to 27.45 m/ NQ

Depth (m)	% Recov	Visual Log	Struct	Lithology	Alteration	Vein and Alteration Mineralogy: Chl	Kao	Ct	Qz	Py	Li	Mn	Hc	Sample Number	Assay Interval	Assay Results (in ppm or ppb unless indicated otherwise): Au(ppb)	Ag(ppm)	Pb(ppm)	As ppm	Sb ppm	Zn ppm	Cu ppm	W ppm	Sn ppm
	4	v																						
82		v																						
	3	v												M07192	3.05m	4	0.1	23	12	2.2	205	9		
84		v																						
86	5	v												M07193	3.05m	6	0.1	31	12	2.0	143	9		
		v																						
88		v																						
	4	v		crumbly gouge zone fracture density 200/m										M07194	2.44 m	36	0.2	295	12	1.0	330	164		
90		v																						
				Total depth 90.22m (296')																				
92																								

LEGEND

CRETACEOUS - TERTIARY

- KTc — Carmacks volcanics.
- KTgd — Alaskite dykes.
- KTqfp — Quartz - feldspar porphyry dykes and plugs.
- KTy — Biotite - hornblende syenite.
- KTmn — Mount Nansen volcanics.
- KTbr — Vent (?) breccias.

CRETACEOUS AND EARLIER

- Mg — Undifferentiated felsic intrusive rocks.
- Mm — Undifferentiated metamorphic rocks.

- Geological contact. (known, inferred, assumed).
- Fault (showing downthrow).
- Mapped linear and reference point.
- Topographic linear and/or vein.
- Survey monument.
- Survey picket.
- Trench.
- Bulldozer road.
- Diamond drillhole location. (DDH LP 82-1)
- T — Disseminated tourmaline

11A	11D	11C	
6P	7M	7N	

Figure L1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

1982 DIAMOND DRILLHOLE LOCATIONS

LILYPAD PROPERTY

NAT JOINT VENTURE

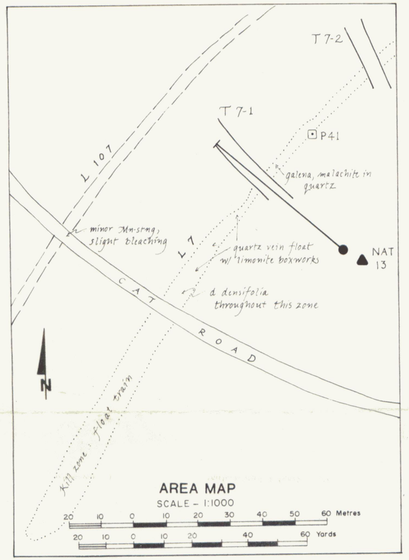
SCALE 1:8000

200 100 0 100 200 400 600 800 Metres

1 Nov / 82
15 Dec / 82
Last update 30 Nov / 82

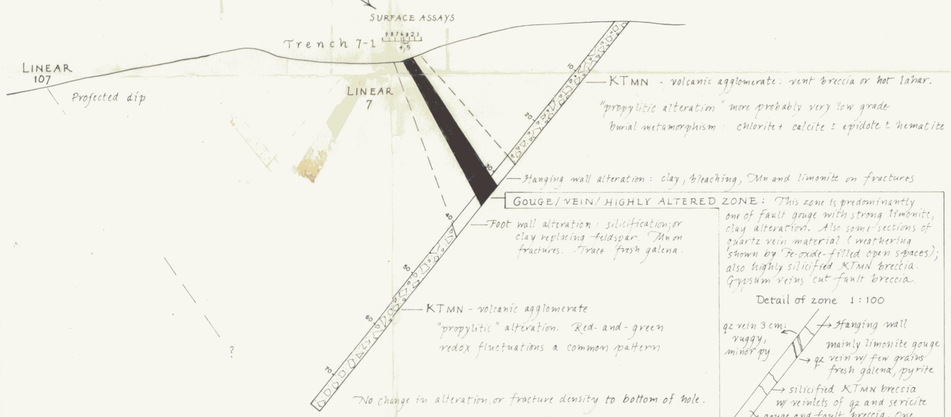
To accompany report dated December, 1982

091435



HOLE LP82-1
COORDINATES 49,602.5N, 51,749E
COLLAR ELEVATION 1645 m
AZIMUTH 317° DIP -50°
DEPTH 76.2 m (250')

Sample No.	Length (m)	Pb(%)	Assay Ag(oz/t)	Au(oz/t)
1	1.0	0.03	0.12	T
2	1.0	0.08	0.06	T
3	0.6	0.84	0.97	0.026
4	0.2	79.10	25.74	0.028
5	0.3	28.30	8.42	0.202
6	0.3	1.87	0.82	0.048
7	1.0	0.98	0.30	0.014
8	1.0	0.06	0.03	T
9	1.0	0.08	0.08	T



ASSAY RESULTS

INTERVAL From	To	SAMPLE NUMBER	ASSAY RESULTS ppb Au	ppm Ag	ppm Pb
24.50	26.50	M07008	5.0	0.1	51
28.00	30.00	M07001	Tr	5.5	300
30.00	30.40	M07002	Tr	6.9	700
30.40	31.40	M07003	19,619.6	49.0	7700
31.40	32.40	M07004	2,744.0	12.3	6400
32.40	33.40	M07005	1,920.8	17.2	8400
33.40	34.74	M07006	102.9	8.9	5400
34.74	36.70	M07009	Tr	1.7	500
36.70	38.70	M07010	Tr	0.3	100
38.70	40.84	M07011	Tr	0.3	100
62.50	64.50	M07007	7.0	0.1	102

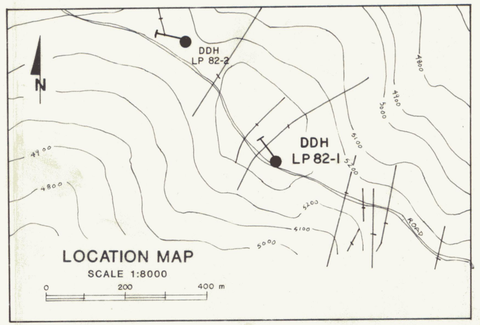


Figure L3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-1

LILYPAD PROPERTY

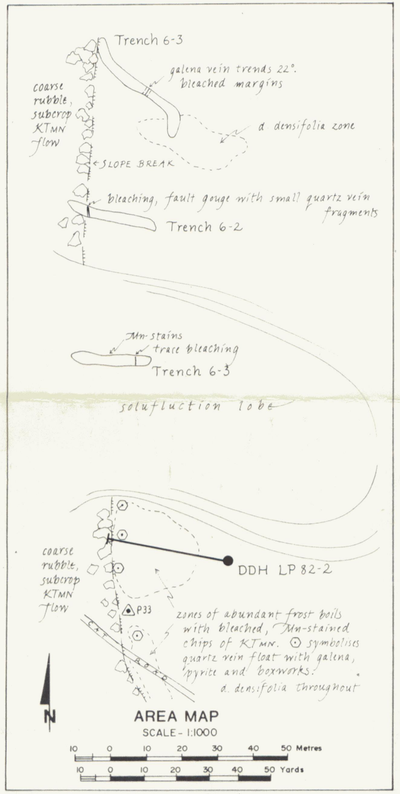
NAT JOINT VENTURE

SCALE 1:500

10 0 10 20 30 metres

To accompany report dated December, 1982

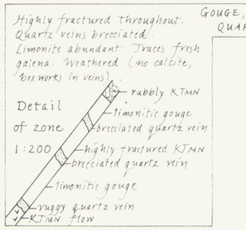
091435



ASSAY RESULTS

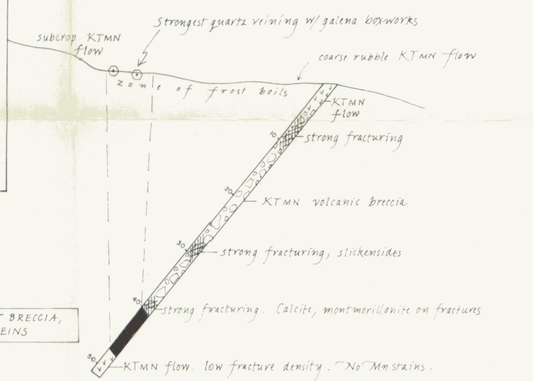
INTERVAL From	To	SAMPLE NUMBER	ASSAY RESULTS ppb Au	ppm Ag	ppm Pb
29.87	30.48	M07013	6	1.4	134
30.74	36.70	M07014	4	0.6	26
36.70	38.80	M07015	5	0.2	49
38.80	40.23	M07016	3	0.3	68
40.23	40.70	M07017	2	0.5	88
40.70	41.75	M07018	3	0.4	100
41.75	42.05	M07019	296	13.6	6700
42.05	42.50	M07020	68	8.7	1300
43.00	44.20	M07021	4	0.8	165
44.20	44.60	M07022	157	11.5	3600
44.60	45.80	M07023	2	1.4	427
45.80	46.75	M07024	283	17.8	7300
46.75	46.80	M07025	2760	95.0	20000
46.80	47.55	M07026	145	13.3	12200
47.55	48.16	M07027	403	185.2	47400
48.16	49.30	M07028	4	12.9	1350
49.30	50.75	M07195	1	3.0	48

HOLE LP82-2
COORDINATES 49,900N, 51,520E
COLLAR ELEVATION 1593 m
AZIMUTH 279° DIP -50°
DEPTH 50.75 m (166')



SCALE - 1:500

10 5 0 5 10 20 30 40 m



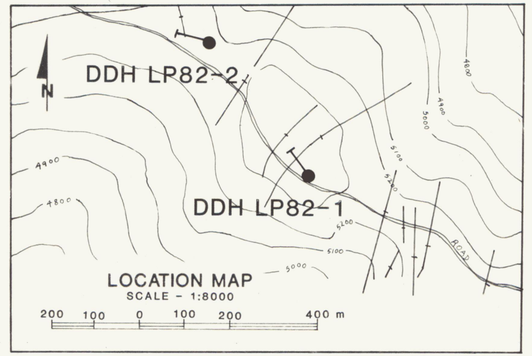


Figure L4
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-2

LILYPAD PROPERTY

NAT JOINT VENTURE

To accompany report dated December, 1982

091435

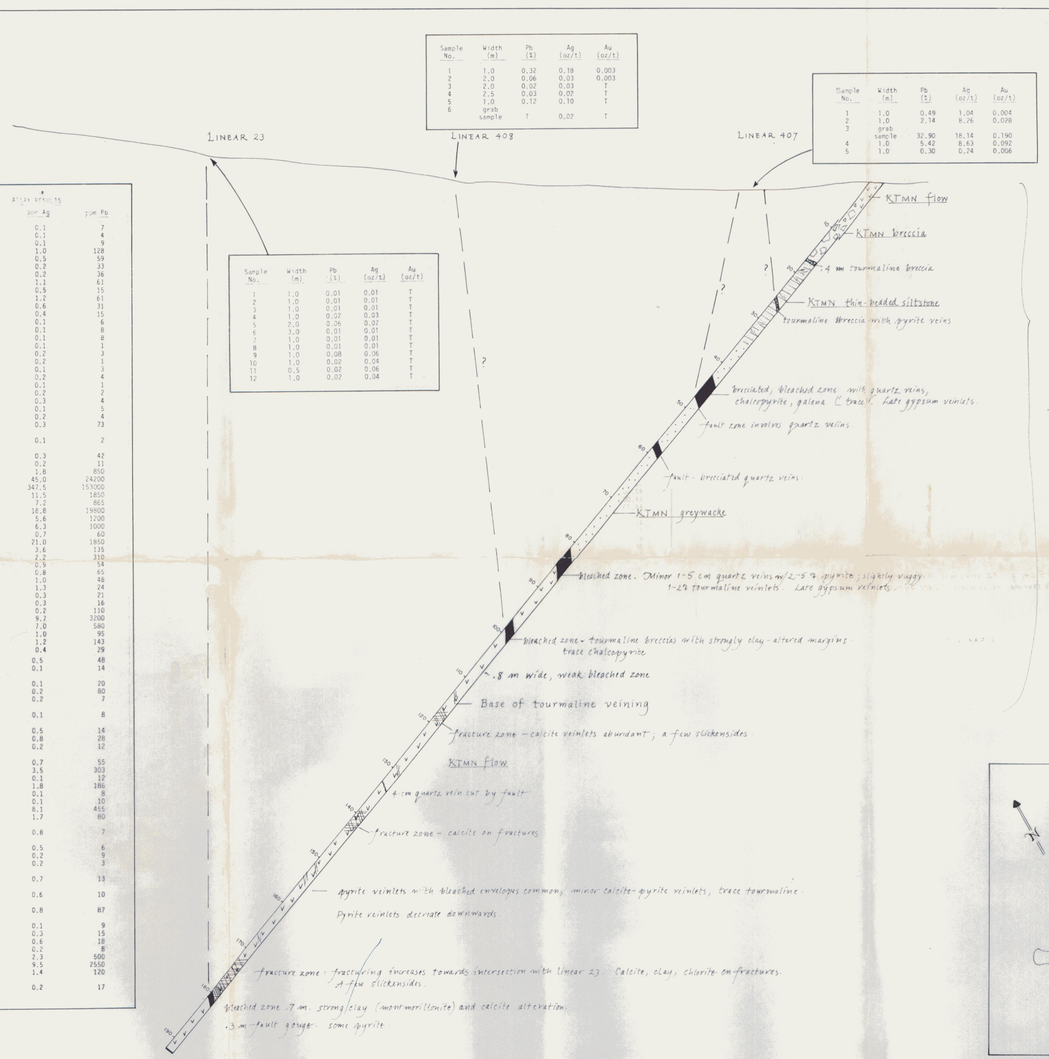
ASSAY RESULTS

Interval From	Interval To	Sample No.	Assay Results ppm Au	ppm Ag	ppm Pb
0.00	4.00	M07224	6	0.1	7
4.00	8.00	M07225	3	0.1	4
8.00	12.00	M07226	3	0.1	9
12.00	13.00	M07029	6	1.0	128
13.00	14.00	M07030	7	0.5	59
14.00	15.00	M07031	5	0.2	33
15.00	16.00	M07032	6	0.2	36
16.00	17.10	M07033	11	1.1	61
17.10	17.60	M07034	166	0.5	15
17.60	18.30	M07035	40	1.2	61
18.30	19.00	M07036	16	0.6	31
19.00	20.00	M07037	15	0.4	15
20.00	21.00	M07038	5	0.1	6
21.00	22.00	M07039	12	0.1	8
22.00	23.00	M07040	10	0.1	8
23.00	24.00	M07054	6	0.1	1
24.00	25.00	M07055	6	0.2	3
25.00	26.10	M07056	3	0.2	1
26.10	26.30	M07057	3	0.1	3
26.30	27.00	M07058	3	0.2	4
27.00	28.00	M07059	5	0.1	1
28.00	29.00	M07060	10	0.2	2
29.00	30.00	M07061	7	0.3	4
30.00	31.00	M07062	7	0.1	5
31.00	32.00	M07063	5	0.2	4
32.00	34.00	M07064	4	0.3	73
36.00	37.00	M07065	2	0.1	2
39.00	40.00	M07066	7	0.3	42
40.00	41.70	M07067	16	0.2	11
41.70	42.10	M07068	33	1.8	850
42.10	42.50	M07069	592	45.0	24200
42.50	42.80	M07070	1220	347.5	153000
42.80	44.00	M07071	73	11.5	3850
44.00	44.70	M07072	45	7.2	865
44.70	45.30	M07073	2680	18.8	19900
45.30	46.00	M07074	35	5.6	1200
46.00	47.00	M07075	70	6.3	1000
47.00	47.70	M07076	17	0.7	60
47.70	48.00	M07077	102	21.0	1850
48.00	48.50	M07078	12	3.6	135
48.50	50.00	M07079	36	2.2	310
50.00	51.00	M07080	17	0.9	54
51.00	52.00	M07081	15	0.8	65
52.00	53.00	M07082	23	1.0	48
53.00	54.00	M07083	21	1.3	24
54.00	55.00	M07084	25	0.3	21
55.00	56.00	M07085	26	0.3	16
56.00	57.00	M07086	25	0.2	110
57.00	57.40	M07087	170	9.7	3200
57.40	58.00	M07088	102	7.0	580
58.00	59.00	M07089	8	1.0	95
59.00	61.00	M07090	10	1.2	143
61.00	63.00	M07091	5	0.4	29
63.00	65.50	M07092	28	0.5	48
65.50	66.80	M07093	5	0.1	14
70.40	71.50	M07094	4	0.1	20
71.50	73.50	M07095	5	0.2	80
73.50	74.10	M07096	5	0.2	7
7600	78.00	M07097	4	0.1	8
83.00	84.40	M07098	10	0.5	14
84.40	85.90	M07099	23	0.8	28
85.90	89.00	M07100	6	0.2	12
95.00	98.70	M07201	3	0.7	55
98.70	99.40	M07202	27	3.5	303
99.40	100.40	M07203	13	0.1	12
100.40	100.80	M07204	24	1.8	186
100.80	103.00	M07205	3	0.1	8
103.00	104.80	M07206	2	0.1	10
104.80	106.20	M07207	27	8.1	455
106.20	109.00	M07208	12	1.7	80
117.00	120.00	M07209	3	0.8	7
190.00	132.00	M07210	18	0.5	6
132.00	133.50	M07211	3	0.2	9
133.50	134.70	M07212	5	0.2	3
143.00	146.00	M07213	15	0.7	13
152.00	154.60	M07214	16	0.6	10
161.00	163.10	M07215	12	0.8	87
169.00	172.00	M07216	8	0.1	9
172.00	174.50	M07217	79	0.3	15
174.50	175.20	M07218	18	0.6	18
175.20	178.00	M07219	14	0.2	8
178.00	180.50	M07220	48	2.3	500
180.50	181.10	M07221	105	9.5	2550
181.10	185.00	M07222	39	1.4	120
188.00	192.50	M07223	9	0.2	17

Sample No.	Width (m)	Pb (%)	Ag (oz/t)	Au (oz/t)
1	1.0	0.32	0.18	0.003
2	2.0	0.06	0.03	0.003
3	2.0	0.02	0.03	T
4	2.5	0.03	0.02	T
5	1.0	0.12	0.10	T
6	grab sample	T	0.02	T

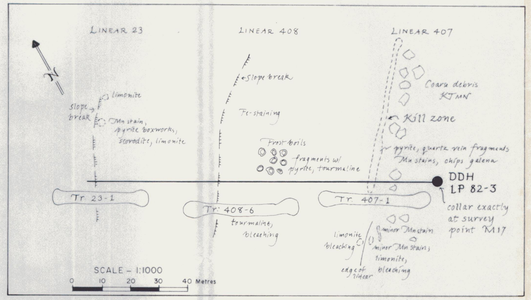
Sample No.	Width (m)	Pb (%)	Ag (oz/t)	Au (oz/t)
1	1.0	0.49	1.04	0.004
2	1.0	2.14	8.26	0.008
3	grab sample	32.90	18.14	0.190
4	1.0	5.42	8.63	0.092
5	1.0	0.30	0.24	0.006

Sample No.	Width (m)	Pb (%)	Ag (oz/t)	Au (oz/t)
1	1.0	0.01	0.01	T
2	1.0	0.01	0.01	T
3	1.0	0.01	0.01	T
4	1.0	0.02	0.03	T
5	2.0	0.06	0.07	T
6	1.0	0.01	0.01	T
7	1.0	0.01	0.01	T
8	1.0	0.01	0.01	T
9	1.0	0.08	0.06	T
10	1.0	0.02	0.04	T
11	0.5	0.02	0.06	T
12	1.0	0.02	0.04	T



Tourmaline, pyrite veinlets, disseminations common in upper part of hole; accompanied by moderate pervasive silicification.

HOLE LP82-3
COORDINATES 50,360N, 49,346E
COLLAR ELEVATION 1649m
AZIMUTH 297° DIP -50°
DEPTH 192.5 (631')



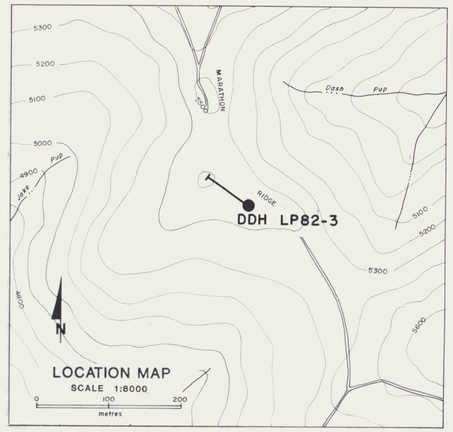


Figure L5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-3

LILYPAD PROPERTY

NAT JOINT VENTURE

SCALE 1:500

10 0 10 20 30 metres

To accompany report dated December, 1982

091435

ASSAY RESULTS

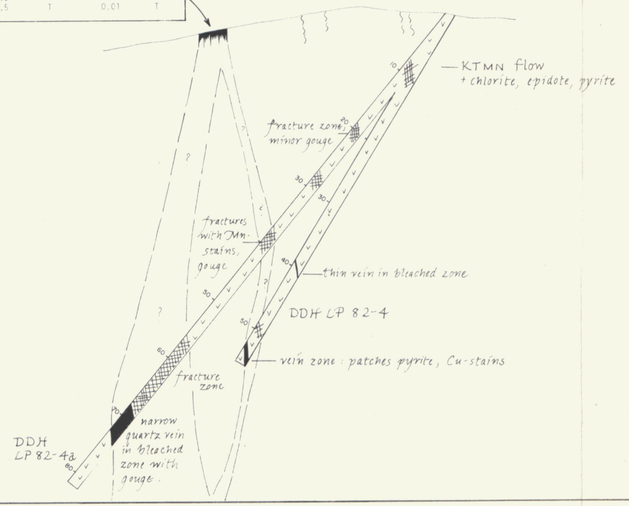
HOLE LP82-4

INTERVAL From	To	SAMPLE NUMBER	ASSAY RESULTS ppb Au	ppm Ag	ppm Pb
39.20	40.35	M07228	2	0.1	27
40.35	40.62	M07229	12	0.9	69
40.62	40.65	M07230	17	2.5	118
40.65	41.70	M07231	2	0.6	65
52.73	53.90	M07232	5	0.5	23
53.90	54.56	M07233	5	0.1	22

HOLE LP82-4a

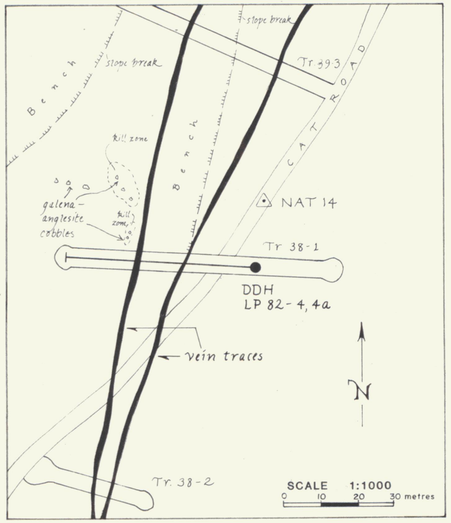
INTERVAL From	To	SAMPLE NUMBER	ASSAY RESULTS ppb Au	ppm Ag	ppm Pb
10.66	11.66	M07234	2	0.1	16
17.75	18.95	M07165	12	0.4	107
18.95	21.28	M07235	2	0.1	18
29.00	29.40	M07236	10	1.2	685
29.40	30.40	M07166	7	1.0	215
32.90	33.90	M07227	3	0.1	23
38.15	38.90	M07237	5	1.1	1130
43.85	44.80	M07238	3	0.1	82
44.80	46.75	M07167	6	1.3	114
46.75	46.95	M07239	14	1.0	144
56.69	57.91	M07240	3	0.1	30
66.14	68.00	M07241	6	0.4	34
68.00	69.00	M07242	13	14.5	1000
69.00	72.54	M07243	11	9.0	72
72.54	74.07	M07244	19	29.0	745
74.07	75.70	M07245	21	12.8	440
75.70	77.11	M07246	7	5.3	195
77.72	79.25	M07247	7	1.4	134

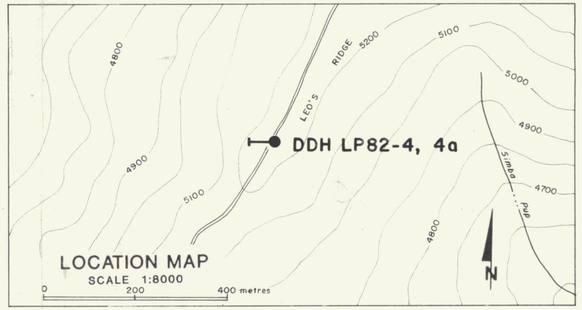
Sample No.	Width (m)	Au (oz/t)	Ag (oz/t)	Pb (%)
1	1.0	T	0.16	.36
2	0.3	.010	98.54	62.30
3	1.0	.010	10.60	2.50
4	1.0	T	4.02	2.03
5	0.3	.008	14.94	2.84
6	1.0	.026	29.66	17.10
7	1.0	T	0.62	0.27
8	1.0	.014	0.10	0.06
9	1.0	T	0.02	0.04
10	1.0	T	0.04	0.09
11	1.0	T	0.06	0.03
12	2.5	T	0.01	T
13	2.5	T	0.01	T



HOLE LP82-4
COORDINATES 49,292N, 49,327SE
COLLAR ELEVATION 1648m
AZIMUTH 273° DIP -60°
DEPTH 54.6m (179')

HOLE LP82-4a
COORDINATES 49,292N, 49327SE
COLLAR ELEVATION 1648m
AZIMUTH 273° DIP -50°
DEPTH 81.74m (268')





Jan/83

Figure L6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-4, 4a

LILYPAD PROPERTY

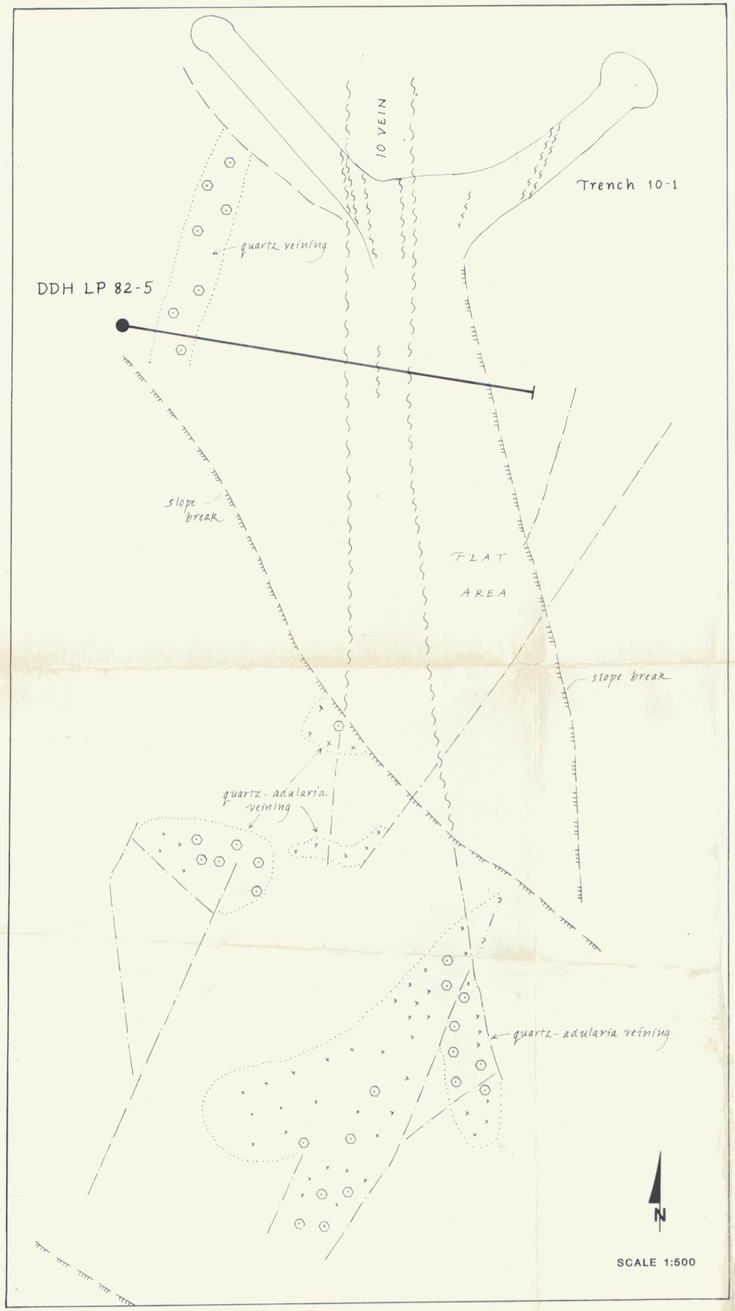
NAT JOINT VENTURE

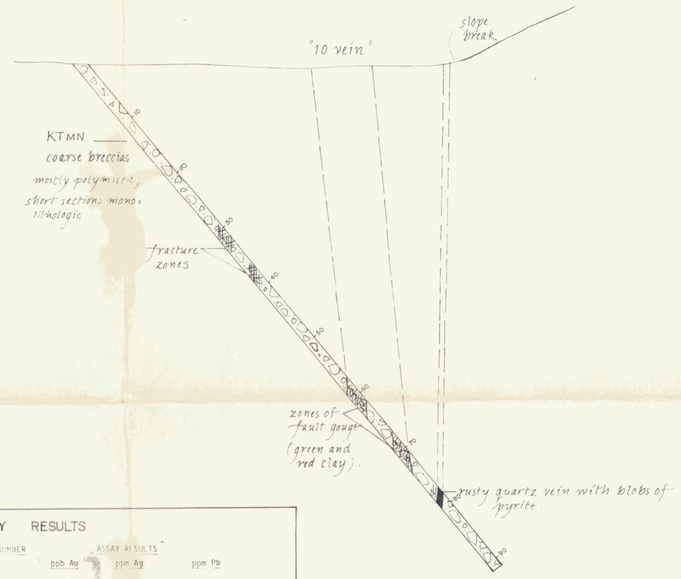
SCALE 1:500

10 0 10 20 30 metres

To accompany report dated December, 1982

091435





ASSAY RESULTS

INTERVAL From	To	SAMPLE NUMBER	ASSAY RESULTS ppb Au	ppm Ag	ppm Pb
7.31	8.31	M07250	2	0.1	25
16.15	17.15	M07251	1	0.1	22
22.56	23.16	M07252	1	0.1	21
30.08	31.08	M07253	1	0.2	14
37.49	38.49	M07254	2	0.1	120
46.33	47.33	M07255	16	1.4	57
51.73	52.73	M07256	1	0.3	35
52.73	53.40	M07168	20	0.2	62
53.40	54.56	M07169	1	0.2	37
54.56	55.17	M07170	82	1.2	57
55.17	57.61	M07171	4	0.7	154
57.61	58.61	M07257	1	0.6	104
58.61	59.76	M07172	2	0.6	720
59.76	60.66	M07173	4	9.8	4600
60.66	60.80	M07258	2	0.2	58
60.80	62.48	M07174	43	1.0	142
62.48	63.40	M07175	1	0.4	68
63.40	64.31	M07176	22	0.7	198
64.31	66.65	M07177	10	0.2	58
66.65	67.00	M07178	3	0.2	81
67.00	67.36	M07259	11	0.8	60
67.36	68.70	M07179	4	0.3	37
68.70	69.10	M07260	5	0.3	20
69.10	70.83	M07180	8	0.9	153
70.83	71.93	M07181	10	1.3	990
71.93	72.18	M07261	1	0.2	67
72.18	72.40	M07182	10	0.8	83
72.40	73.76	M07183	4	0.7	68
73.76	73.90	M07262	2	0.6	32
73.90	75.59	M07184	2	1.1	58
75.59	76.59	M07263	6	0.9	850
76.59	78.70	M07185	6	1.5	345
78.70	79.40	M07264	11	6.2	555
79.40	80.30	M07265	411	6.9	850
80.30	81.07	M07266	6	1.2	495
81.07	82.07	M07186	5	0.5	72

HOLE LP82-5
COORDINATES 48,560N, 54,385E
COLLAR ELEVATION 1572m
AZIMUTH 100° DIP -50°
DEPTH 91.4m (300')

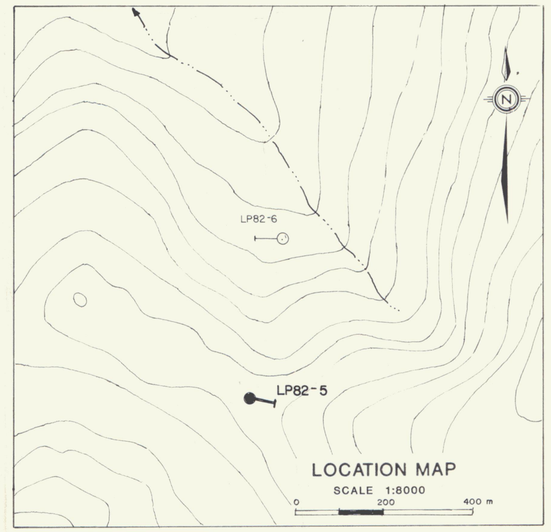


Figure L7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-5

LILYPAD PROPERTY

NAT JOINT VENTURE

SCALE 1:500

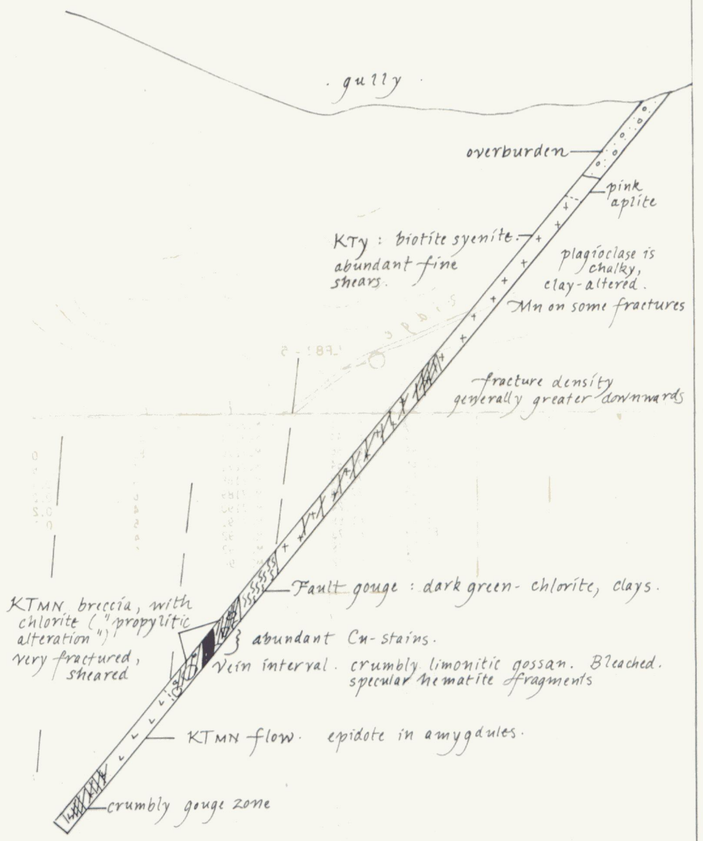
0 10 20 30 40m

To accompany report dated December, 1982

091435

INTERVAL		SAMPLE NUMBER	ASSAY RESULTS		
From	To		ppb Au	ppm Ag	ppm Pb
29.87	31.09	M07267	4	0.1	35
49.68	50.90	M07268	20	0.2	19
53.64	54.56	M07272	2	0.2	27
54.56	55.85	M07269	2	1.3	24
55.85	57.30	M07187	5	0.6	255
57.30	60.35	M07273	4	1.3	145
60.35	66.44	M07274	43	20.0	4400
66.44	67.66	M07270	82	38.0	4500
67.66	72.54	M07271	4	0.5	92
72.54	75.59	M07188	9	0.3	53
75.59	77.50	M07189	6	0.2	29
77.50	79.24	M07190	4	0.2	64
79.24	81.68	M07191	5	0.1	27
81.68	84.73	M07192	4	0.1	23
84.73	87.78	M07193	6	0.1	31
87.78	90.22	M07194	36	0.2	295

HOLE LP82-6
COORDINATES 48,910N, 54,286E
COLLAR ELEVATION 1426m
AZIMUTH 265° DIP -50°
DEPTH 90.2m (296')



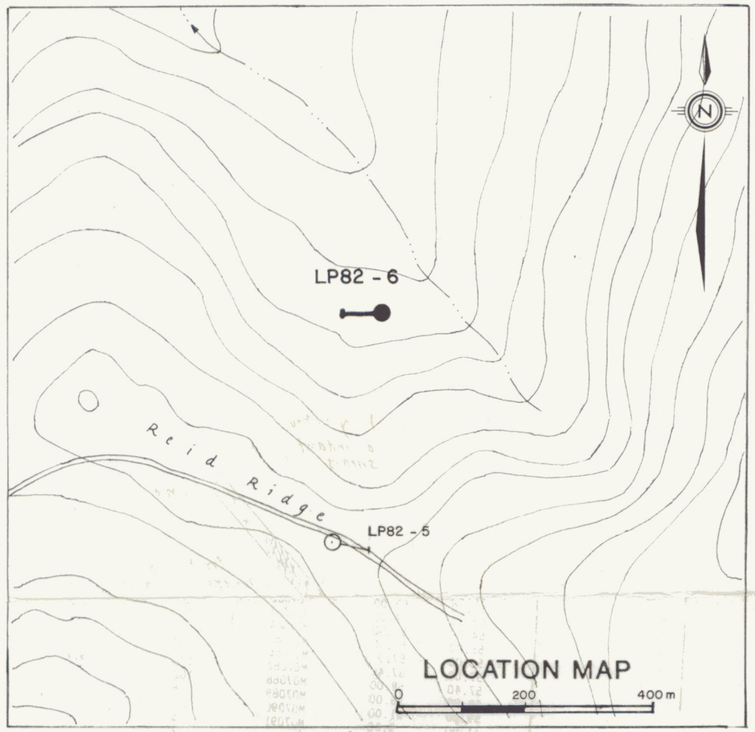


Figure L8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CROSS-SECTION DDH LP82-6

LILYPAD PROPERTY

NAT JOINT VENTURE

SCALE 1:500

10 0 10 20 30 metres

To accompany report dated December

091435