

SANTOY RESOURCES LTD
HATCHET LAKE JOINT VENTURE URANIUM CLAIMS, SASKATCHEWAN

MINERAL POTENTIAL ASSESSMENT
and
EXPLORATION PROPOSAL

Revised Report

by

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Saskatoon, Saskatchewan

June 26, 2005

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SUMMARY

Santoy Resources Ltd. has the right to earn a 50% undivided interest in 20 unsurveyed claims with a total nominal area of 59,889 hectares in the Athabasca Basin uranium area of northern Saskatchewan. The claims are in five non-contiguous blocks. Saskatchewan produces 30% of the world's supply of uranium from mines in the Athabasca Basin.

The property is underlain by flat-lying, relatively undeformed sandstones of the Athabasca Group, which unconformably overlie highly deformed and metamorphosed rocks of the Mudjatik and/or Wollaston Domains of the Hearne Province of the Canadian Shield. The target on the property is an unconformity-type uranium deposit at and near the unconformity between the Athabasca sandstone and underlying metasedimentary rocks.

Santoy has not carried out any work on the property as of the date of this report. Work by previous operators began with reconnaissance-type surveys, and progressed to the discovery of conductors in favourable basement rocks. Drilling of some of the conductors showed weak uranium mineralization at the unconformity. However, attention seems to have been diverted to targets not on the present property, leaving targets on the present property not fully investigated. This provides an opportunity for Santoy to continue the work on the targets found by the previous operators, and perhaps to find some new targets.

A first phase of work is proposed, consisting of systematic sampling of sandstone boulders, conventional prospecting for radioactive sandstone boulders, and drilling of some holes recommended by previous operators, but not done. The purpose of the boulder sampling is to acquire samples for analysis for clay mineralogy, and for uranium and its pathfinder elements. The purpose of the prospecting is to discover radioactive boulders eroded and transported by glaciers, and to trace them back to their source. More detailed boulder sampling and prospecting is recommended immediately down-ice from the known mineralization. This detailed work may help to pinpoint the exact sites for the drilling.

A second phase of work, consisting of drilling of targets defined by the first phase of work, is contingent on results of the first.

A budget of \$ 1,285,530 is proposed as the best estimate for the cost of the first phase of work. A proposed budget of \$577,000 for the second is entirely contingent on results of the first phase, and the actual amount required could be much more or less than that.

The writer firmly believes that the recommended program is warranted by the available information in the context of present knowledge of the occurrence of unconformity-type uranium deposits in this area.

1.0. INTRODUCTION

This report was prepared at the request of Mr. Ron Nichols, Vice-President of Exploration for Santoy Resources Ltd., of 611- 675 West Hastings St., Vancouver, B.C., V6B 1N2. The purpose of the report is to describe the previous work on the property, to discuss the significance of that work in the context of present knowledge of the occurrence of uranium deposits in the Athabasca Basin of Northern Saskatchewan, and to make recommendations based on this discussion.

This report is intended to be submitted as part of the requirements of National Policy 43-101 in connection with a non- arms-length acquisition of an undivided 50% interest in the property by Santoy.

Most of the information in this report is from assessment work submitted by previous operators, and now on file at the offices of Saskatchewan Industry and Resources (“SIR”). This work is identified by the file number assigned by SIR as each report of work is discussed. Other information is from papers published in government and technical journals, and is referred to in the normal manner.

The writer visited the property as part of the requirements to write this report on June 26, 2005. He supervised the field work for one of the previous work items on parts of the property.

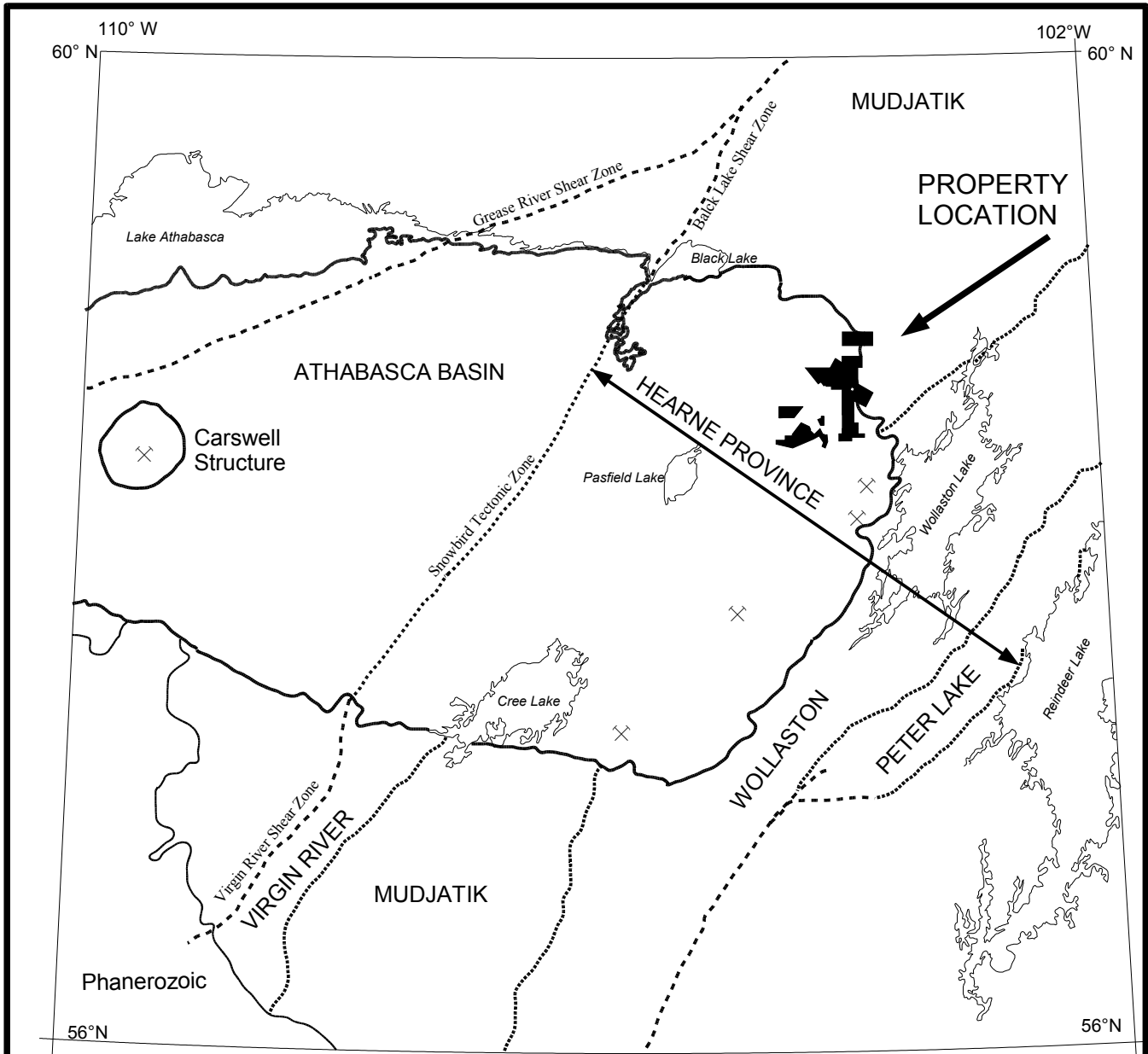
2.0. Property Description and Location

The property consists of twenty Saskatchewan claims numbered as shown in Table 1, below. The claims form five non-contiguous groups (see figs.1, 2) The total nominal area of the property is 59,889 hectares (“ha”).

Claims S-107747 to S-107749 inclusive have been staked to replace claim S-107604 to conform more closely to the staking regulations.

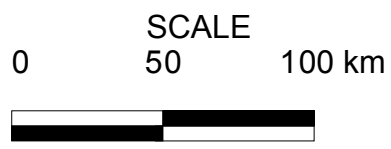
The subject claims are registered with SIR in the name of Rupert Allan as to 100%. By a letter agreement dated April 30, 2005, Mr Allan conveyed an undivided 50% interest to 723107 BC Ltd, which is owned 60% by Ronald K. Netolitzky and 40% by James Rupert Allan. The remaining 50% undivided interest in the claims is held by International Uranium Corporation. By an agreement of purchase and sale dated April 30, 2005 Netolitzky and Allan have agreed to sell 723107 BC Ltd. to Santoy, subject to regulatory approval. The writer is not licenced to practice law, and this paragraph is not an expression of any legal opinion regarding any aspect of the transactions mentioned or of any related transactions.

The claims are mainly in NTS area 74 I 8 and 9, and 64 L 12 and 13. Part of S-107603 protrudes into the southeastern corner of 74 I 16, and parts of S-107748 and all of S-107749 are in the northwestern corner of 64 L 5.



LEGEND

- MUDJATIK Domain name
- Domain boundary
- ⊗ Mine



SANTOY RESOURCES LTD
HATCHET LAKE JOINT VENTURE
GENERAL LOCATION MAP
& REGIONAL GEOLOGY
 (after Sask. Geol. Surv.)
 NTS 74 I, 63 L
 NORTHERN EXPLORERS LTD
 Scale 1:2,500,000 | June 2005 | Fig. 1



104° 30' W

104° 0' W

S-107539

S-107590

S-107538

S-107605

S-107603

58° 45' N

S-107534

S-107535

S-107536

S-107602

S-107541

S-107537

S-107548

S-107747

58° 30' N

S-107601

S-107748

S-107749

S-107584

S-107587

S-107542

S-107704



SANTOY RESOURCES LTD		
HATCHET LAKE JOINT VENTURE		
DETAILED LOCATION MAP		
NTS 74 I 8, 9, 16; 64 L 5, 12, 13		
<i>NORTHERN EXPLORERS LTD</i>		
Scale 1:400,000	June, 2005	Fig. 2

The centre of the property is near the intersection of 58° 35' north latitude, and 104° 0' west longitude (Figs 1, 2).

Mineral claims in Saskatchewan do not include any ownership of surface rights, but use of the surface for exploration, development and production can be had according to various regulations. Those which apply to the work recommended herein are discussed below.

Table 1 below shows the areas, record dates, and annual assessment work requirements for each claim. To keep the claims in good standing, work to at least the values shown (calculated at \$12 per hectare) must be done by the anniversaries of the record dates in 2006, and every year thereafter up to and including the 10th year.

Table 1. Claims: areas, record dates, assessment work requirements

<i>Claim number</i>	<i>Nominal area (hectares)</i>	<i>Record Date</i>	<i>Annual work requirements, years 2 to 10</i>
S-107534	4825	Oct. 27, 2004	\$57,900
S-107535	2437	Oct. 27, 2004	\$29,244
S-107536	4634	Oct. 27, 2004	\$55,608
S-107537	4459	Oct. 27, 2004	\$53,508
S-107538	4117	Oct. 29, 2004	\$49,404
S-107539	5242	Oct. 19, 2004	\$62,904
S-107541	719	Oct. 19, 2004	\$8,628
S-107542	888	Oct. 19, 2004	\$10,656
S-107548	2549	Oct. 27, 2004	\$30,588
S-107584	855	Dec. 10, 2004	\$10,260
S-107587	4121	Dec. 10, 2004	\$49,452
S-107590	1897	Oct. 19, 2004	\$22,764
S-107601	3240	Oct. 29, 2004	\$38,880
S-107602	4011	Nov. 3, 2004	\$48,132
S-107603	5734	Oct. 29, 2004	\$68,808
S-107747 (replaces part of S-107604)	4065 total for S-107747-749	Filed Mar. 15, 2005	\$48,780 total for S-107747to S-107749
S-107748 (replaces part of S-107604)		Filed Mar. 15, 2005	

<i>Claim number</i>	<i>Nominal area (hectares)</i>	<i>Record Date</i>	<i>Annual work requirements, years 2 to 10</i>
S-107749 (replaces part of S-107604)		Filed Mar. 15, 2005	
S-107605	4694	Nov. 3, 2005	\$56,328
S-107704	1402	Nov. 17, 2004	\$16,824
TOTAL	59,889		\$718,668

If all of the claims are retained, it will cost \$718,668 per annum to keep the property in good standing. From the 11th year, the requirements increase to \$25 per ha per annum. After each anniversary date there is a period of 90 days allowed for the preparation and submission of an assessment work report. Any work in excess of that required to keep a claim for a year is credited to that claim against future requirements, and is automatically applied each year until it is used up. There are no annual renewal fees in Saskatchewan.

Claims may be grouped so that work done anywhere on the group is applied to all claims in the group equally per hectare. The maximum size of a group is 10,000 ha, and the claims must be contiguous. These requirements mean that the grouping possibilities for this property are limited. S-107539 and S-107590 could be grouped. S-107538 and S-107603 could be grouped. S-107535 could be grouped with one of S-107534, S-10753 or S-107603, or with S-107537 and S-107548. S-107548, S-107747, S-107748, and S-107749 could be grouped, and other smaller groups are possible among those. Four of the five claims in the southwestern corner of the property could be grouped, with either S-107584 or S-107704 left out.

This means that, to keep the property intact, care must be taken to spread the work around sufficiently to keep all claims in good standing. Claims cannot be re-grouped until at least a year has passed since their last grouping, so re-grouping claims is only a partial solution.

The claims have not been surveyed. They have been plotted on topographic base maps in the field, and re-plotted on the government claim maps by the mining recorder. The claim boundaries and posts are therefore not as accurately plotted as if they had been surveyed. However, lakes and rivers are common here, and provide good topographic control. The writer believes that the accuracy of plotting of the subject claims is at least as good as that with which physically-staked claims can normally be plotted in the unsurveyed areas of Canada.

There are at least two mineralized zones presently known on the property. The most extensive is on claims S-107535, S-107536 and S-107603,

No mine workings, tailings ponds or waste piles were seen on the site visit.

The only improvements on the property are a few roads. With the exception of the winter road between Points North and Stony Rapids, these are almost certainly roads built by people

exploring for uranium, since there is no commercial logging industry this far north. There is no map of these roads available to the writer.

To the writer's knowledge, there is no environmental liability acquired along with the mineral rights. Of course, as work proceeds, there will be environmental regulations that will have to be observed.

Ground work will require a Surface Exploration Permit (\$25) and a Forest Product Permit (\$50) from Saskatchewan Environment and Resource Management. Use of water for drilling will require a temporary Water Rights Licence To Use Surface Water from Saskatchewan Watershed Authority, and the purchase of water from them. If there might be fish in the water, one has to get a Project Review from Fisheries and Oceans Canada, who issue a Letter of Advice. These permits have not been obtained as of the writing of this report, but there is a straightforward procedure for obtaining them.

3.0. Accessibility, Climate, Local Resources, Infrastructure, Physiography.

The topography is flat to rolling. It is a reflection of Pleistocene glacial deposition features, mainly outwash sand plains, with some drumlins and eskers. Boulders are common on the ground surface, and may be useful as a sample medium to find clay alteration that may indicate uranium mineralization. Elevation is about 600 metres, with a relief of about 60 metres. The sandy soil means that most of the trees are jack pines, with black spruce along the edges of water bodies. Poplar and birch are the most common deciduous trees. Virtually all of the property has been burned recently, and most of the trees are small. In places they grow very close together, and walking through them may be difficult.

The property can be reached by helicopter or float- or ski-equipped fixed wing aircraft from Points North Landing, at the end of an all-weather road connected to the provincial road system. Provincial highway 102 from the village of La Ronge to the Southend turnoff, then highway 105, provide surface access to Points North, a distance of about 470 km from La Ronge.

From Points North, a winter road leads to Black Lake and Stony Rapids, and passes through S0107584 and S-107587, in the extreme southwestern part of the property.

The property is accessible directly by air from La Ronge, a distance of about 400 km, or from Otter Lake (80 km by road north of La Ronge), a distance of 345 km.

On the property, there are some old roads that could provide access to parts of the property. The segments of road seen appeared to be connected by lakes, so they would only be useful in winter. In most places in this area, roads in outwash sand do not freeze in winter, because there is little or no water in the sand. However, snow is churned up with the loose sand, and the mixture provides a firmer roadbed.

Off the roads, some of the property looked to be accessible by snowmobile in winter, or ATV in summer, but in much of it some trail cutting would likely be required for even these small vehicles, because of the closely-spaced small trees that are so common. Most of the property is accessible on foot.

The creeks and rivers seen during the site visit did not appear to be navigable by canoe or small boat over any distance that would be useful for transporting people or material. Some of the lakes are large enough, or convoluted enough, to provide boat transport for prospectors or boulder samplers over limited areas.

Points North has limited accommodation for transient workers. It has scheduled air service to its airstrip from airports in the southern part of the province. It has a float-plane base, and there are normally bush aircraft available for charter. Wheeled aircraft are also available for charter from Points North. Fuel is generally available for purchase, or can be hauled in by large trucks.

The nearest village with any significant services is La Ronge, 400 km south by air, and about 470 km by road from Points North. Services adequate for the exploration phase are available there, including food and camp supplies, fixed and rotating wing aircraft, and expediting services. In La Ronge and in most of the smaller settlements north of La Ronge there are many people experienced in prospecting, linecutting, geophysical operating, and other exploration skills. There are consulting geologists, and geophysical and line-cutting contractors in La Ronge. Many residents have worked at one or more of the currently producing uranium mines.

The nearest city is Prince Albert, about 705 km by road, or about 610 km by air from Points North. More services are available here, including some light industrial fabrication. Many workers at the uranium mines live in Prince Albert.

Saskatoon is about 150 km south of Prince Albert, and has more and better services, including medium industrial fabrication. Many uranium mine-workers live in Saskatoon. Consulting geologists and geophysicists are available in Saskatoon.

The climate is mid-latitude continental with winter temperatures down to -50°C and summer high temperatures to 30°C . Freeze-up occurs typically in October and November with break-up in May. Much of the work can only be done after freeze-up, but, because there is road access to, or close to, the property and access by wheeled aircraft to the Points North airstrip, some types of work could be carried on all year. Boulder prospecting and sampling can only be done when there is no snow, which normally includes the months of June to September, and sometimes longer. Drilling could be done all year long, provided that it is on land. Geophysical surveys can be done all year, but are often better done in winter, when survey lines can be continued across frozen lakes. Winter work is sometimes made difficult by extremely low temperatures, with -40°C not uncommon, and occasional, but uncommon, dips to -50°C . However, in a typical winter, field work would not often have to be suspended because of low temperatures. Blowing snow, usually on larger lakes, may occasionally cause work to be halted because of the danger of getting lost.

Summer conditions are quite pleasant, with the main impediment, in this writer's experience, being forest fires.

Should exploration work on the property ultimately result in a producing mine, there will be adequate surface area for a mining operation, including tailings ponds and waste piles. No townsite would be permitted to be built here, so only enough land for a modern fly-in camp would be required, and there is plenty of room for that. A power line passes close to the southwestern end of the property.

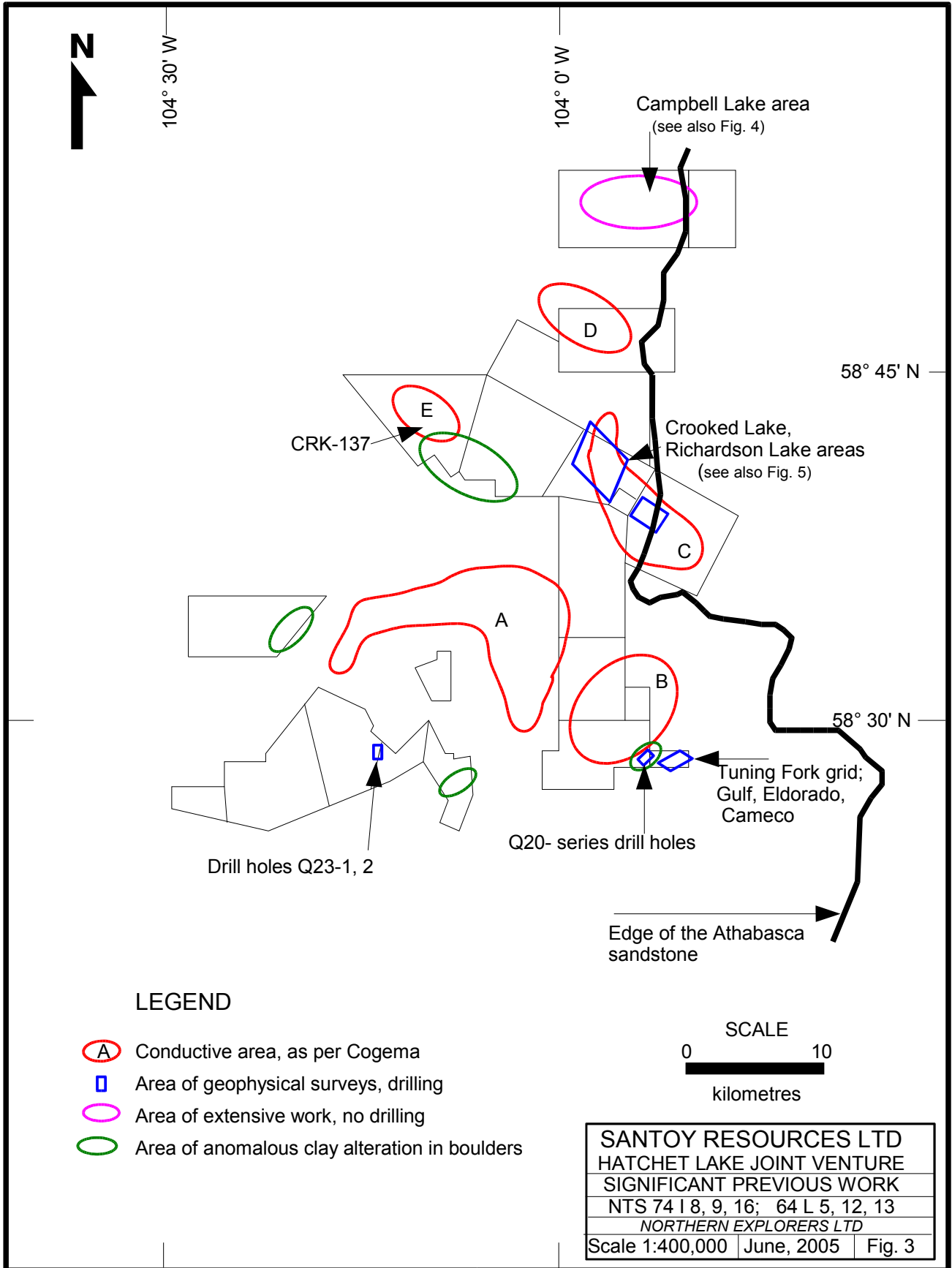
4.0. History

The property as presently constituted was staked in October 2004 by Rupert Allan, who is thus the first owner of these claims. Mr. Allan has not carried out any work of his own as of the date of writing this report.

In the past, the ground which now comprises the property has been part of various properties owned by others, and some of their work programs have covered all or parts of the present property. The work is summarized below, and the assessment work file number ("AR#") is referred to in brackets with each work item. Fig. 3 shows where the best results have been obtained, and the most work concentrated.

In Saskatchewan it is not required to file reports on all exploration work done, only that for which the owner wishes to receive assessment credits. For most of the period covered by the previous work, there was a limit to the amount of excess work that could be applied to subsequent years. The limit was quite high, being nine years as a claim plus the first year as a lease, (a mineral disposition could only be held as a claim for 10 years, then had to be taken to lease) but a large drilling program on a claim could garner that much credit. There was then no benefit to filing more work until the claim became a lease. It is thus possible that the work found in the assessment work files is not all of the work that was done. In fact, the writer noticed some items mentioned as "previous work" in a few reports which could not be found as current work in a previous report. With that caveat in mind, the following work relates to the Santoy property.

In 1969, Numac carried out an airborne radiometric survey over an area which overlaps parts of the northern two claim groups (AR# 64 L 12 NW-0001). The instrument used was a Mount Sopris Airborne Scintillometer, with a 5 inch by 4 inch sodium iodide crystal operating with a 0.45 second time constant. It was mounted in a Cessna 180 aircraft. The survey revealed an area of moderately high readings (maximum > 810 counts per second) near Richardson Lake, on the present claims S-107535 and S-107536. Ground prospecting returned no results which Numac thought interesting. They reported that the anomalous radioactivity detected from the air was due to the effect of simply passing over high ground, which is therefore closer to the detector, and gives higher readings than elsewhere. They nevertheless recommended keeping the permit because they had made some interesting discoveries on the neighbouring one.



Numac also carried out a hydrogeochemical survey, which found the second highest radon content in the region, and the highest uranium values of any of the Numac permits except the Carswell permit. The location of the latter is not specified, but it is presumably near the Carswell structure in the western part of the Athabasca Basin, where the Cluff Lake deposits were found and mined. The hydrogeochemical anomalies were in the area where claims S-107538, S-107539, and S-107590 are now. Numac recommended stream sediment surveys in the area. Ground prospecting was done in the area around the Campbell Lake anomaly, now on S-107539 and S-107590.

In 1972, Gulf Minerals Canada Ltd. carried out airborne magnetic and electromagnetic surveys on a property which touches the present claim S-107749 (AR# 64 L 05-0007). No anomalous condition is shown on the small area of overlap.

In 1975, the Saskatchewan government did ground follow-up work on some Crown Reserves (AR# 64 L-0051). The work investigated radiometric anomalies found by the Geological Survey of Canada's Skyvan survey. In that era the GSC flew regional airborne radiometric surveys using a system which had a detector composed of 3000 cubic inches of sodium iodide crystals, carried in a Short Skyvan aircraft. An anomalous area was detected near Crooked Lake, on the present claim S-107535. Subsequent work near Crooked Lake has had positive results, but not coincident with the radiometric anomaly. The radioactivity was due to basement boulders of pegmatite and granitic rocks.

From 1976 to 1981, Urangesellschaft Canada ("UG") carried out work on behalf of themselves and Saskatchewan Mining Development Corporation ("S.M.D.C.") which overlapped parts of the present property. In 1976, UG carried out geological investigations along the Athabasca sandstone/ crystalline Shield contact, an airborne radiometric survey along both sides of the contact, and a lake water and sediment survey (AR# 64 L 12-0018). This resulted in the discovery of the Campbell Lake target area, which was expressed by the only first category airborne radiometric anomaly in their entire survey, and by anomalous lake sediments and water samples. The Campbell Lake target area is on S-107539 and extends onto S-107590. Prospecting of the Campbell Lake area turned up a boulder which gave an assay of 2836 parts per million ("ppm") uranium. It was described as "cataclastic", but its lithology was not identified.

In 1977, UG carried out a lake sediment sampling program in the area of the present claims, from which a sample south of Richardson Lake returned a value of 4500 ppm uranium. Assaying of 10 duplicate samples from the site did not produce an assay greater than 6 ppm (AR# 64 L-0033). At Richardson Lake UG also carried out prospecting, radiometric surveying, and radon emanometry, without producing a result which they considered favourable.

Also in 1977, UG did follow-up work on the Campbell Lake grid. A VLF survey outlined several weak conductive zones trending NE-SW. A magnetic survey suggested a possible broad fault zone. A soil sampling program of 2430 samples was completed, and lake and stream sediment and water samples were taken. Prospecting located radioactive outcrop and boulders, but assays showed all to contain high thorium. No drill target was produced by all this work.

In 1977, UG flew an airborne electromagnetic Input survey over ground covering much of the present property, and carried out an airborne radiometric survey using a 500 cubic inch sodium iodide crystal in a Beaver aircraft. The Input survey found conductors near Crooked Lake, now on claims S-107535 and S-107536. The radiometric survey gave no results, which UG explained by saying that the aircraft had flown too high. A soil sampling survey of a grid cut over the Crooked Lake anomaly gave one anomalous sample. Samples were taken at 50 metre intervals on lines 100 metres apart. During the survey an anomalous boulder was found that assayed 9230 ppm uranium, and 6 ppm thorium.

In 1978, UG carried out many types of work on and near the property (AR# 64 L 12-0040). A lake sediment survey found samples with anomalously high contents of many metals at Campbell Lake and at Crooked and Richardson Lakes. Samples were recovered from the centres of small lakes, and from more than one location in larger lakes. The samples had a very high organic content. The sampling device was a valve-type “bomb”, which is made of steel, and allowed to drop under its own weight to the lake bottom.

Samples were analysed for uranium in a field laboratory using a Scintrex UA-3 Uranium Analyser, which measures the concentration of uranium in an aqueous solution by the fluorescence of a uranyl compound produced by treating the sample with a special reagent. This method had a claimed sensitivity of 0.05 parts per billion (“ppb”). The sampling in this survey did not cover the area evenly, but rather concentrated on areas where the 1976 and 1977 work had indicated interesting anomalous conditions, and in areas which exhibited low magnetic relief. By doing this, UG possibly missed other areas of anomalous lake sediments from areas where the rocks did not respond anomalously to the geophysical tools used for the previous work.

Detailed ground surveys were carried out on Grid G, on the boundary between S-107535 and S-107603, and on the Crooked Lake grid (now in S-107535 and S-107536) to follow up on the previous Input® surveys. A ground-based MaxMin II horizontal loop electromagnetic (“HEM”) survey was carried out, using a coil separation of 150 metres and frequencies of 888 Hz and 3555 Hz, with detailed work using a coil separation of 100 metres, at frequencies of 888 Hz, 1777 Hz, and 3555 Hz. This survey revealed a broad response, with considerable phase shift in both the in-phase and quadrature readings, possibly indicating that the source of the conductors was deeper than expected.

A magnetic survey was done as well, using a Geometrics G-816 magnetometer as a field unit, and a Geometrics G-826S unit attached to a base station recorder to record diurnal variations in the magnetic field so that they could be removed from the field readings.

A ground-based very-low-frequency electromagnetic (“VLF”) test survey revealed conductors. An induced polarization (“IP”) survey was done in both gradient and pole-dipole arrays. It was concluded from the geophysical work that there were multiple discontinuous conductors of varying orientations, but conformable with the ferruginous, graphitic sequences in basement metasedimentary rocks, indicating that the rocks were highly deformed.

UG prospected the Crooked Lake grid, and found that most radioactive boulders were in the 300 to 100 counts-per-second range, but all of the boulders were described by them as granite or pegmatite, so either there were no radioactive sandstone boulders, or the level of radioactivity in the sandstone was not high enough to interest them. Assays of the boulders revealed the ratio of uranium to thorium to be low. The author of the report recommended that the area be drill-tested.

In 1979, UG had another Input survey flown perpendicular to the earlier one in order to better define some conductors which apparently had strikes nearly parallel to the flight lines (AR# 64 L 12-0043). They also carried out airborne radiometric, VLF, and magnetic surveys. They found no anomalously radioactive areas. The VLF anomalies were due to surficial causes, and were parallel to the glacial features visible on surface. Another Input survey found weak (1 and 2-channel) conductors along the edge of S-107603, or just outside the claim (AR# 64 L 12-0042).

Detailed ground-based work was done on the Crooked Lake-Richardson Lake grids, including VLF, MaxMin II, magnetics and pulse electromagnetic surveys ("PEM") and prospecting, followed by drilling. The geophysical surveys extended the anomalies of the previous years. The prospecting revealed nothing.

The drilling, concentrated in the western part of the grid, intersected uranium at or near the unconformity, but the grades were considered to be not economic (AR# 64 L 12 NW-0044). The maximum grade was 1000 ppm uranium in the sandstone. Of particular interest, hole 29B intersected 296.5 feet of sandstone, then went into basement. Above the basement, it intersected probable fault zones, with brecciated sandstone and clay stained with hematite. Just above the unconformity (283'- 296.5') a mixed claystone (70%) and sandstone (30%) unit was logged. The unconformity was picked at the last appearance of sandstone, and below that was a highly altered zone to 315 feet, primarily composed of clay minerals, and varying in colour from medium reddish brown to light pinkish brown. Below the intense alteration zone, the rocks show evidence of faulting in the form of talc or chlorite on surfaces with slickensides. Pyrite and graphite were seen, but percentages were not estimated. Alteration continues to the bottom of the hole at 536 feet, where clay and chlorite are present mainly on fracture surfaces.

The above depths are as measured along the core. The logger did not indicate whether or not he believed that the core lengths are true thicknesses, and there is no information in the drill logs to enable the writer to make the determination. Uranium mineralization in this environment can be approximately flat-lying, in which case an intercept in a vertical hole is a true thickness, or it can dip steeply into the basement along a foliation plane, where a vertical hole would yield an intercept much greater than the true thickness. In addition, the mineralized bodies are not always of a regular, tabular shape, so it is necessary to have many drill holes to define the shape of the mineralization before one can confidently state whether or not a hole has intersected a true thickness.

The re-flying of the Input survey revealed conductors along the margins of the interpreted

metasedimentary belt at Campbell Lake. This was interpreted as graphite, and interest in the area was renewed (AR# 64 L 12-0035). Ground geophysical surveys (VLF, MaxMin II magnetics) at Campbell Lake revealed two conductors. Prospecting and geochemical soil sampling surveys found nothing.

In 1979, Jodi Energy Resources carried out an Input survey along a north-northwesterly-striking diabase dyke which crosses the region (AR# 74 I 09-0012). The area flow by Jodi crosses claim S-107602. No conductor was revealed by the EM results, but the dyke shows up clearly in the accompanying magnetic data. They also carried out a lake water and sediment survey on the same property, and concluded that the results did not warrant further work (AR# 74 I 09 SW-0013).

In 1979, Shell Canada Resources Ltd. carried out an Input survey which overlapped Santoy claim S-107584, and the western end of S-107587 (AR# 74 I 07 NE-0005). No anomaly was found. They also carried out regional prospecting, which outlined a vague zone of radioactive sandstone boulders trending northeasterly from Unknown Lake through to the northern Santoy claims (AR# 74 I 07-0004). This was followed up in 1980 by more detailed prospecting on grids, and biogeochemical surveys (AR# 74 I 07-0007). Detailed prospecting on what is now S-107587 located more radioactive sandstone boulders there.

In 1980, UG carried out ground surveys including VLF, magnetic, MaxMin II HEM and gravity on the Campbell Lake South grid (AR# 64 L 12-0035). The VLF survey used the stations in Seattle, Washington and Cutler, Maine as transmitters. Conductors with many strikes were found. They concluded that they were receiving signals from sources in both the sandstone and basement. The magnetic work indicated a broad, east-northeasterly striking low, which was interpreted to be caused by a pelitic unit. The gravity results reflected the VLF and magnetic results in that some features of each were coincident. The metasedimentary units gave high gravity readings. Weak EM response was interpreted to indicate the absence of graphitic conductors, and it was concluded that further work was not worthwhile.

UG drilled 5 holes on the Crooked Lake- Richardson Lake grid (AR# 64 L 12 NW-0036). The holes went through the Athabasca sandstone and 50 feet into basement. The sandstone was described as well laminated, varying in colour from white to grey, and varying in grain size from 0.01 mm to 4 mm, with some conglomeratic layers. Intervals of broken and lost core with clay were seen in many holes, and were interpreted as fault zones. The sandstone was highly altered to clay, with hematite staining at and above the unconformity. The basement rocks were described as altered garnet-biotite gneiss, with the alteration decreasing down the hole. It was inferred, or assumed, that some of the alteration was due to the presence of a regolith.

UG reported that no mineralization which they considered to be significant, either uranium or base metals, was found, and the recommendation was to do no more work there.

UG also carried out another airborne radiometric survey, this time mounting a system of their own manufacture in a helicopter. Details of the instrument are few, but elsewhere there is information from which it is possible to infer that the sensor consisted of 16,780 cm³ of sodium

iodide crystal. Mean terrain clearance is stated as 25 metres, and aircraft speed is 110 km/hr. Lines oriented SE-NW were 200 metres apart. With this system, 305 anomalies were located, the best one being near Campbell Lake. It was suggested that this was a hydromorphic feature. Most of the rest of the anomalies were due to pegmatite or granitic outcrop or boulders, and it was concluded that nothing of interest had been found.

UG also carried out work on their Beta grid, a small grid which is now mostly on the boundary of claims S-107537 and S-107548. This was to follow up the 1978 Input survey of the area. A VLF survey revealed two trends- east-northeast, and northeast, the latter of which coincides with a creek. A magnetic survey (using a G-816 field unit and a G-826A base station unit) showed a magnetic low down the centre of the grid, which UG interpreted to mean that that part of the grid was underlain by metasedimentary rocks. Two magnetic trends were revealed, oriented east-northeast and north-northeast. A survey with an ABEM Turam TS-280 electromagnetic instrument detected a weak north-northeasterly trending conductor on the flank of the hypothesized Archean/Aphebian contact. A 29-hole overburden sampling program using a Whacker drill did not yield encouraging results. Fifty-nine biogeochemical samples were ashed and analysed for a suite of metals. Eight had anomalous nickel, up to 719 ppm in the ash, but uranium and lead were only present at background levels in all samples.

UG's Le Drew North grid also received follow-up work, to test a medium-priority Input target. This is a small grid in the centre of S-107548. A VLF survey responded only to surficial conductors. A Magnetic survey showed the grid to be in a regional low. No Turam anomaly was found.

The Le Drew South grid, now mostly on S-107748, with a corner on S-107548, received similar attention. The first work- magnetics, VLF, and MaxMin II surveys, and prospecting- had been done in 1979. The prospecting gave no encouragement, but more geophysical surveys were done in 1980, including magnetic, VLF, and Turam. The VLF revealed some weak conductors in the Fraser-filtered results. Those conductors that coupled with the Seattle transmitter trend NE-SW, and those that coupled with the Cutler transmitter trend NNW-SSE and NE-SW. The magnetic results were interpreted by UG to indicate a fault striking parallel to the long axis of the grid, i.e. about 30° west of north. A Turam survey found a weak conductor parallel to the fault interpreted from the magnetic results. UG said they had a better one on another grid, and suggested that they might follow up the one on the Le Drew South grid if follow up work on the other one proved positive. Prospecting of the grid turned up some sandstone outcrop. The best samples gave counts of 200 to 250 counts per second. Assays of the samples showed that most of the radiation was caused by thorium.

In 1979 and 1980, Asamera Oil Corporation carried out magnetic, VLF, and VPEM surveys on their grid Q23, the southwestern end of which is on claims S-107542, and S-107601 (AR# 74 I 09-0039). They drilled a target which was a folded PEM conductor, and 2 of the drill holes are on S-107601 (AR# 74 I-0037). Hole Q32-1 intersected "normal" sandstone (unaltered). There was a peak radioactive count of 470 cps (over 0.1 m) at the unconformity, which was at 178 metres below surface, or 250 metres above sea level. The basement consists of hematized quartz-feldspar-biotite-garnet gneiss to 206 metres depth, then green metapelite with 5 to 7%

pyrite and 2% graphite. Assays revealed only trace amounts of uranium.

Hole Q32-2 was drilled on the west side of the PEM conductor, on a northeasterly-trending VLF feature. The unconformity there is at 178 metres below surface, or 250 metres above sea level. There were radioactive counts of 124 cps over 1.0 m, and 224 cps over 0.8 m at and near the unconformity. The sandstone is normal, with some fracturing, and some hematite and limonite staining. The basement rocks consist of hematized quartz-feldspar-biotite gneiss, with 5-10% pyrite and a trace of graphite. The basement rocks are vertically fractured, and the fractures have slickensides. Asamera concluded that this hole showed a favorable environment for uranium mineralization. Assays showed trace amounts of uranium at the unconformity.

In 1978, 1979, 1980 and 1982 Asamera drilled holes on their grid Q20 which are now on S-107748. The purpose of the drilling was to test conductive and magnetic anomalies. Depth to the unconformity was about 120 metres. Hole Q20-1 showed radioactive counts of 3,750 over 0.5 m at 129.1 m depth, i.e. about 8 m below the unconformity. Assays from this were from 0.04 % to 0.248% uranium over an interval of 0.9 m of core. It is not known what the true thickness is. Since these values are from basement, and since the basement rocks are usually steeply dipping, this vertical hole might be drilling along a steeply-dipping lens, and the true thickness could be less than the intersected width. No alteration or brecciation was noted in this hole, but hole Q20-3, only 40 metres to the northwest, showed "extreme" brecciation from 41 m depth to 140 m, i.e. in both sandstone and basement. The Asamera geologist noted that a "clay-regolith" extended into the sandstone above a basal conglomerate. There was white clay alteration in the sandstone, red and green clay at the unconformity, and clay-altered breccia in the basement over a core length of about 13 metres. The best uranium value was 12.7 ppm over 0.2 m core length, but there were no assays below 131 metres.

Hole Q20-5, half way between -1 and -3, showed abundant breccia in the sandstone, clay alteration, vertical fractures, staining ranging from intense purple to limonitic to bleached to light pink. The basement is a pelitic rock, brecciated from the unconformity at 120.6 m depth to 129.3 m, along with hematitic staining, and alteration of the feldspars to clay. There is pyrite in the range of 10 to 15 %, and graphite up to 10%. They attributed the conductor to the graphite and pyrite. The best uranium assay was 10.3 ppm at the unconformity, over a core length of 0.3 m. As before, true thickness cannot be determined.

Hole Q20-4, drilled 40 m northwest of Q20-3, intersected clay-altered, broken and friable sandstone, definite faults above the unconformity (at 135.7 m), strongly altered meta-arkose below the unconformity to 163 m, then fresher meta-arkose to the end of the hole at 181 m. Radiometric counts were a maximum of 85 cps at 162.5 m, i.e. below the unconformity. The highest uranium assays were two of 0.9 ppm, significantly above the unconformity.

Hole Q20-7 was drilled about 200 m south of the other holes, to test for a southward extension of the uranium mineralization in them. Radiometric counts were a maximum of 460 cps just above the unconformity. The sandstone was brick-red for about 2.5 m just above the unconformity. Basement rocks were migmatized pelites. A mylonite zone was logged over 2.2 metres, and it contained pyrite and graphite.

500 metres farther south, hole Q20-8 was drilled to look for a possible strike extension of the faulting parallel to the conductor axis. No faulting is noted, although there is graphite (up to about 70%) and pyrite (up to 20%) in the basement rocks.

In 1980, S.M.D.C. carried out an airborne Input survey on properties on either side of the Jodi property noted above (AR# 74 I-0021). A few lines pass over S-107602. Two 1-channel anomalies were noted on what is now S-107602, one in a lake, and the other on a tie line. One-channel anomalies are usually caused by surficial material.

In 1981, Gulf carried out ground geophysical surveys on a grid partly overlapping S-107749. There are some weak VLF responses. A MaxMin II survey carried out using 200 and 250 m coil separations at 444 Hz did not yield any responses. Gulf also drilled 5 holes to test the Tuning Fork grid (AR# 64 L 05-0066). No significant radioactivity was intersected in any hole. One hole intersected a zone containing about 10% pyrite and 10% graphite in basement gneiss, and another intersected traces of the same.

In 1981, Asamera carried out some boulder sampling work which overlapped the southern edge of what is now S-107748. Most of the work was off the present property, and it appears that the work was intended to check out an area of high radiometric readings. The samples on S-107748 were all lower in uranium content than the mean for the entire survey, and the U/Th ratio is very low for the entire survey, at 3.8/140.8. Three stream sediment samples were taken on S-107748, and gave low values of uranium. The results of the entire stream sediment survey are in doubt because of the inability to find the same sample medium at each site.

Also in 1981, Asamera carried out a lake sediment sampling program which targeted radiometric highs of greater than 1.00 ppm eU (equivalent uranium). Eight samples were taken on the southeastern edge of S-107587 and S-107601, and unsuccessful attempts were made to sample eight other sites. All samples on the present claims contained only low values. Prospecting follow-up did not turn up any good results. The radiometric anomalies were explained as being caused by pegmatite boulders on topographic highs. This work may have been too tightly focused. Perhaps a more regional approach might have revealed anomalies in areas containing no radiometric anomalies.

In 1981, UG had an analysis done of the gravity data for the Campbell Lake South grid (AR# 64 L 12-0039). The 8.0 milligal increase in gravity from west to east was explained as reflecting an increase in the amount of Apebian metasedimentary rocks. Faults interpreted from gravity data were compared with results of other geophysical surveys, and some were recommended to be followed up.

In 1982, S.M.D.C. carried out detailed aeromagnetic surveys over various claim groups covering much of the subject claims (AR# 74 I 09-0031, 74 I 09-0041, 74 I 16-0026, 74-0006). The work was done by Questor Surveys, and measured the total field and vertical gradient. The stated purpose of the surveys was to map the distribution of the Apebian and Archean basement lithologies. The reports stated that they were able to distinguish the units, but no

interpretive map was included with the individual reports. However, the information was used to produce maps of interpreted lithologies and structures which were included in other reports.

In 1982, S.M.D.C. took over operatorship of the joint venture with UG. They carried out prospecting of areas down-ice from areas of magnetic lows which had not been prospected by UG (AR# 64 L 13-0019). Traverse lines were at an azimuth of 320°, and were about 500 metres apart. A prospecting crew consisted of 3 people, one to keep the line, and two to range more widely. In this way, they covered the northwestern third of S-107539, the north-central half of S-107538, and some of the extreme western edge of S-107603. No significant results were returned.

Also in 1982, S.M.D.C. re-logged the core from UG's drilling at Richardson Lake. They noted bleaching in the sandstone in hole 29B, which encouraged them to do more work (AR# 64 L 12 NW-0055).

In 1982, Asamera carried out an airborne VLF survey which covered parts of the present claims (AR# 74 I-0035). It was interpreted to show various structures, but more recent compilations by subsequent workers are probably more useful.

In 1983, S.M.D.C. carried out airborne VLF surveys which partly overlap some of the claims (AR# 74 I-0039). Conductors were noted, but were not incorporated into the interpretation maps produced by S.M.D.C. The writer would agree that airborne VLF conductors are of limited use in trying to understand the geology of this area. They also did an Input survey which slightly overlaps Santoy claims S-107534, S-107535, S-107537, and S-107635 (AR# 74 I 09-0043). No conductor was detected on ground now part of the Santoy claims.

In 1983, S.M.D.C. drilled several holes on targets on the Richardson grid. Sixteen holes were completed, and 6 more were attempted, but were lost in overburden, for a total of 2310 metres, all of them on Santoy claim S-107535 (AR# 64 L 12-0058). Holes 60 and 61 were drilled on either side of UG hole 29B noted above, to further test the hydrothermal alteration seen in that hole when it was re-logged by S.M.D.C. They noted a “typical” paleoweathering profile in hole 60, and a 2-metre thick zone of bleaching of the sandstone at the unconformity in hole 61. Sulphide mineralization was seen over a core length of 1.3 m in hole 61. The true thickness is not estimated in the records, and there is not enough information for the writer to attempt any estimation. Assays returned values of 7.34% cobalt, 16.07% arsenic, and 1.66% nickel over 2.5 m core length. Uranium was present in a concentration of 1160 ppm over 27 cm core length. Nearby holes drilled to test a conductor and a possible fault (62B, 67, 68) have lesser amounts of metals, but amounts which are still significant. Holes 29B, 60 and 61 appear to be on Santoy claim S-107535, but they are close to the boundary of a claim not owned by Santoy.

S.M.D.C. noted “normal” illite, kaolinite, and chlorite enrichment near the unconformity, which they attributed to the availability of aluminum, potassium, and magnesium in the basement. However, they noted that holes 60, 61, 62B, 65, 66, 67, 72, 74 and 75 all have anomalous illite and/or kaolinite 10 metres or more above the unconformity, which they believed to be too far from the unconformity for the basement rocks to have influenced the

development of clays.

S.M.D.C. concluded that there were two areas which deserved more work, and recommended more drilling on both. These were the area around old hole 29B, and the area around hole 74, about 900 metres west of 29B.

In 1984, S.M.D.C. reported an Input airborne electromagnetic survey covering much of the Santoy claims. They then carried out ground surveys, including Max-Min II, DEEPEM, gravity and Turam on several grids, including some on the Santoy claims (AR# 64 L 12-0059). An interpretation of the magnetic results was done, but the map contains no reference points except the old claim outlines, so cannot be used without considerable work. In any case, they appear to have been used in later compilations which can be readily used. On the Richardson grid, the gravity survey found a north-northwesterly trending gravity high, which now lies partly on S-107535. A “target area” was identified just to the north of S-107603, but some of the conductors and magnetic lineaments that define the target area come onto the Santoy claim.

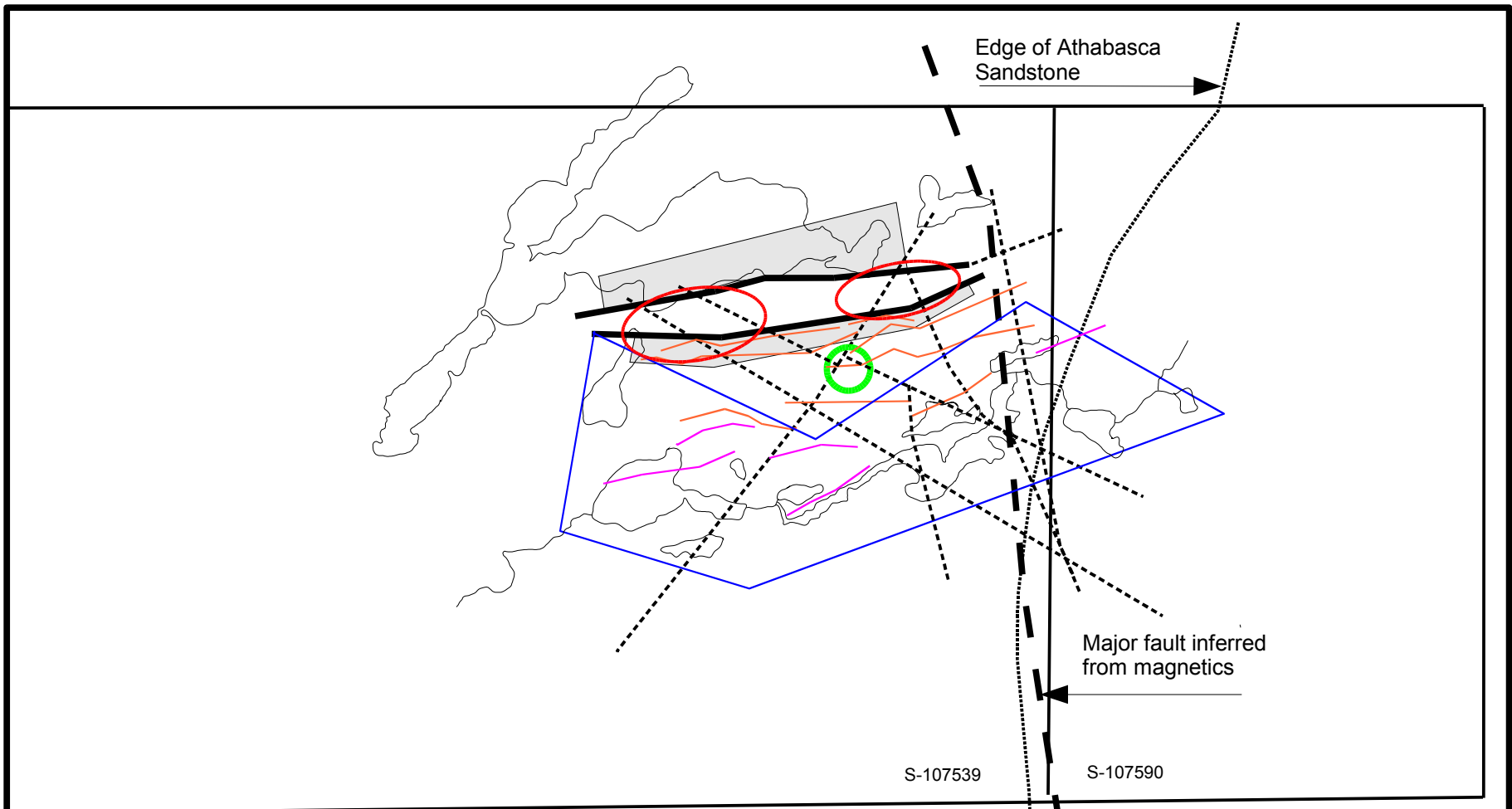
On the Campbell Lake South grid, S.M.D.C. did yet more geophysical work, including magnetics, VLF, MaxMin II, and gravity. With these and the preceding data, they made up an interpretive map of the geology of the grid. They interpreted a gravity feature as a “step” in the basement rocks, coincident with a conductor. They defined a target area at the intersection of some inferred faults, in an area with some MaxMin conductors, in an area inferred to be underlain by metasedimentary rocks near the contact with Archean granitic rocks. Fig. 4 summarizes the work to that date.

In 1985, Eldorado Resources Ltd. drilled 8 holes into that part of the conductor on the Tuning Fork grid which is now on S-107749 (AR# 64 L 05-0127). No significant radioactivity was reported in any of these holes.

In 1988, Cogema Canada Ltée carried out a GeoTem airborne time-domain electromagnetic survey which covered parts of S-107587, S-107601, about half of S-107541, and substantially all of S-107704 (AR# 74 I-0048). The survey outlined a major lineament south of, and extending onto, S-107601. It also showed a short conductive anomaly (>70 ms/m in channel 5) near the southern edges of S-107601 and S-107587. A conductor of >110 ms/m was outlined on S-107542. The conductive axis is shown to bifurcate, and crosses other anomalies (Input and PEM, from Asamera surveys) at moderate to high angles. This presents a rather confusing picture, and one wonders which, if any, of the conductors have been correctly interpreted.

In 1989, a joint venture among Interuranium, PNC, Chevron and Denison carried out a UTEM survey on a property which slightly overlaps the present property (AR# 74 I 7-0009). A few lines extend a short distance onto S-107602 and S-107587, but no results are reported for those line segments. A few lines extend onto S-107584 behind a transmitter loop.

In 1991, Cameco (successor to S.M.D.C.) carried out geophysical and geochemical work on a grid which slightly overlaps claim S-107748 (AR# 74 I 1-0083). Work done on the claim includes a boulder sampling survey by Steven Earle, using the technique which he helped



LEGEND

- Fault inferred from gravity, magnetics
- Fault inferred from magnetics
- MaxMin conductor
- Weak Turam conductor
- ▭ Gravity low (Archean granitoids)
- ▭ Area of highly anomalous lake sediments
- Target area, as per S.M.D.C.
- Target areas, this report

SANTOY RESOURCES LTD.
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 S-107539, S-107590
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 Scale 1:50,000 | June, 2005 | Fig. 4

develop (Earle et al, 1989). In this method, samples of boulders are taken at intervals 100 to 200 metres along lines separated by 800 to 2000 metres, and oriented perpendicular to the glacial direction. At each site, chips of 10 sandstone (never basement) boulders are taken from within a 10 metre radius of the site. Angular boulders are the preferred sample medium, since they are likely to be closer to source than rounded ones. The 10 chips are sent as a single sample for chemical analysis for a variety of elements, including uranium and its pathfinder elements, and rock-forming elements. Normative clay contents are calculated from the chemical analyses of the rock-forming elements. Orientation surveys over known deposits proved this technique to be very powerful, and less expensive than drilling to look for alteration halos in the subcrop.

In the 1991 survey, the most northeasterly lines are on S-107748. The last line consists of 7 samples, and of these, one has a clay content high enough to put it in the 90th percentile. Two others, with a moderately high clay content, contain illite above the 60th percentile. One has lead above the 80th percentile, and all have 0.4 ppm uranium, which is not rated. The lowest percentile contour on the uranium map is the 80th percentile contour, which is 0.5 ppm. The next line to the southwest shows lower contents of total clay, and illite, but has higher values of uranium and lead. Other lines stop at the present claim boundary, but many show significant values. It would seem to be worthwhile to extend the survey onto S-107748.

In 1991, Cogema produced a compilation of boulder lithogeochemistry, obtained using the Earle technique outlined above. (AR# 74 I-0054). S-107704 is covered, and some samples were taken on what is now the southeastern edge of S-107452. Some boulders with high clay content, a high ratio of illite to kaolinite, and high values of lead and uranium are shown on both claims.

Report # 74 I-0053 also contained a compilation with useful information, such as contours of the height of the unconformity above sea level.

In 1992, Cameco carried out boulder sampling on the Richardson grid (AR# 74 I 09-0043). Two lines were sampled, 800 metres apart, with sample intervals of 100 metres, collecting 29 samples. They found that the ratio of illite to illite + kaolin (written I/I+K) was much higher than on other grids, which they regarded as a positive indicator. All samples had ratios of greater than 10, and 7 had ratios greater than 50. However, no sample contained more than 0.6 ppm uranium. The higher uranium values correlated with the higher I/I+K ratios. They recommended the area for follow-up work.

In 1992, Cogema carried out ground-based EM surveys on grids which slightly overlap the present property (AR# 74 I 09-0051). One end of a conductive system is expressed by a MaxMin anomaly on claim S-107704, and by a UTEM anomaly which curves just onto the western edge of S-107548. The MaxMin surveys used a 300- metre cable, and frequencies of 440, 1760, and 3520 Hz, with readings at 50 metre intervals.

In 1993, Cogema had a GeoTem survey done over an area which covered most of the present claims, except the northern ones (S-107539, S-107590) and the western ones (S-107584, S-

107602, and much of S-107587) (AR# 74 I-0061). From the magnetic data, they concluded that the basement possibly consists of a series of alternating horst and graben, or ridge and valley structures, trending NE-SW to ENE-WSW. These have been cut by faulting and/or uplift along axes trending N-S or NW-SE. The lithology appears to be dominated by two units, a suite of magnetically active foliated granitic to granodioritic rocks, and a less magnetic pelitic to psammitic gneiss.

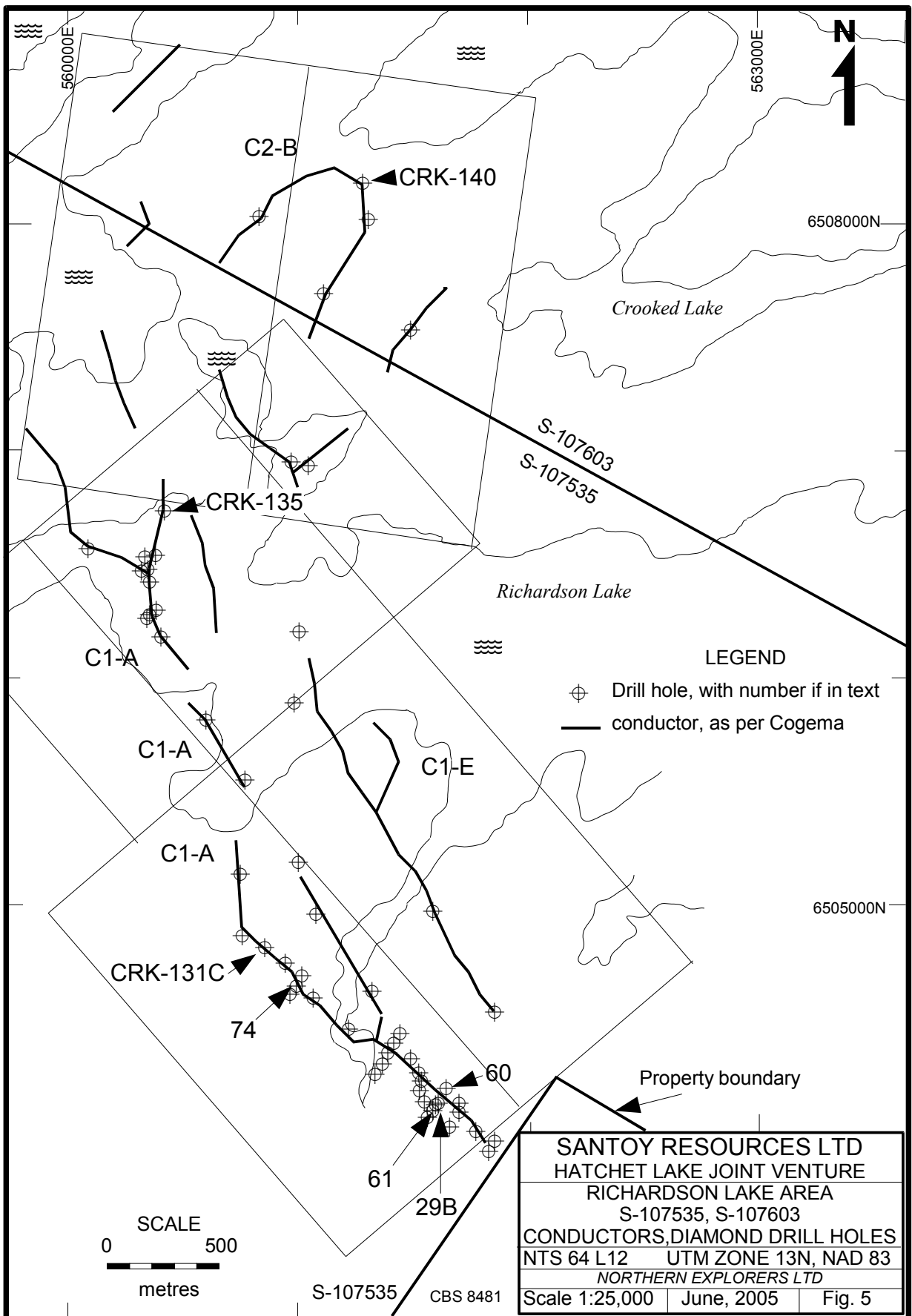
The EM data were interpreted to indicate that there are 5 areas likely to contain basement conductors, based on their correlation with magnetic features, and their coherence from line to line on lines flown in opposite directions. They labeled these areas A to E (Fig. 3). They conclude that the near-surface rock is resistive, and therefore the early time channels (1 to 6), and the on-time channel, may be useful for locating features in the sandstone with lower resistivity, and conductors in the Precambrian basement.

All of the 5 conductive areas are on, or partly on, Santoy claims. For the most part, they are areas where previous work had found conductors. Although the Cogema report states that 2 of the areas (D and E) are new, these areas cover weak conductors noted by UG some years before.

Cogema's area A overlaps the western edges of Santoy claims S-107537 and S-107548, and cover conductors noted above. Their area B covers parts of claims S-107548, S-107747, S-107748, and S-107749. In that area they noted some late-channel anomalies, and inferred that they may be cut by the Turnor Lake fault. Area C covers the area around Crooked and Richardson lakes, and is mostly on Santoy claims S-107535, S-107536, and S-107603. Cogema's interpretation is that the survey indicates the existence of multiple conductors trending NW-SE, in a NW trending magnetic low. The conductors end abruptly at the NW end as the magnetic low ends. They suggest that the conductors may be faulted to the northeast by a NE-SW fault. Area D, partly on S-107538, and S-107603, contains 2 conductive trends, terminated at their eastern ends by the Turnor Lake fault. Area E, on S-107605, contains some short, weak to moderate conductors near the junction of an east-west fault, and a northwest-trending diabase dyke.

The author of the report concluded that work to that date in areas A, B, and C had not been exhaustive, and that D and E were new (despite the results of previous UG work). He recommended ground follow-up in all 5 areas. He recommended MaxMin surveys for area C, and fixed-loop TDEM, and/or resistivity surveys, in areas D and E.

In 1995, Cogema reported results of the follow-up work recommended above (AR# 74 I-0062). HEM surveys on grids C1 and C2, in their area C, on Santoy claims S-107535 and S-107603, revealed several conductors. TDEM surveys on grid C3 (in their area D), partly on Santoy claim S-107603, failed to find a conductor. Surveys on grid C4 (in their area E), on Santoy claim S-107605, found a high-amplitude, moderate conductor striking east-west, and interpreted to be in the basement. First priority targets were recommended to be drilled on grids C1, C2, and C4. Second priority targets were selected on grid C2.



In 1996, Cogema carried out the drilling recommended above by drilling 15 holes (AR# 64 L12 NW-0062). Fig. 5 summarizes the work on the grid to the end of that program. On their conductor C-1, they drilled one hole (CRK-131C) about 150 m west of the old hole 29B, and another about 850 m west of that. The "C" designation in the hole number indicates the third attempt to drill in this location, the first two having been unsuccessful due to difficult drilling conditions. They noted strong pervasive alteration in the conductor, but pointed out the absence of reverse movement on the basement fault, which they credited with limiting the size of the alteration zone. Contradictory conclusions and recommendations are made in two different parts of the report. In one part they conclude that conductor C1-A does not show any economic potential, and need not be drilled further. In another part, they include hole CRK-131C in a list of three holes which show "moderate to high" economic potential due to the presence of pelitic gneisses containing titanium-rich tourmaline and abundant sulphides, and recommend more drilling.

No sandstone was cored in hole CRK-131C, but the neutron log indicated that there might have been some totally unconsolidated sandstone just above the unconformity. Clay at the unconformity contained 186.1 ppm uranium, 740 ppm lead, 526 ppm zinc, 313 ppm vanadium, 651 ppm copper, 1595 ppm strontium, and 1085 ppm nickel. The basement rock consists of quartz-feldspar-biotite gneiss from 75.0 to 97.7 metres. This unit graded 18.2 ppm uranium, 47 ppm lead, 128 ppm cobalt, 263 ppm vanadium, 768 ppm nickel. Magnesia (MgO) was 9.34%. Below that, to the bottom of the hole at 147.0 metres depth, the rock was weakly to moderately pyritic (5%; locally 10- 15%) and graphitic (2-3%; up to 5% locally) quartz-feldspar-biotite gneiss. Graphite occurs as small flakes in the foliation planes and as fracture coatings. Pyrite occurs as disseminated crystals, stringers and patches along foliation planes, and as fracture coatings. Copper values of up to 936 ppm were noted in the pyrite-rich zones. Argillization and chloritization is seen in and near faults in the gneiss. The writer would agree with the recommendation to do more drilling near CRK-131C.

Hole CRK-135, which tested conductor C1-A, is one of the three holes in the list mentioned above which is recommended for further drilling. It intersected overburden from surface to 21.0 metres, then possible MFb3 sandstone to 42.4 m, then MFb4 sandstone to the unconformity at 120.6 m. The sandstone was highly bleached throughout, with some limonitic zones down to 109.9 m, and with argillaceous zones. A fault was intersected at 104.1 m. A normative clay estimation shows kaolin throughout, except for the lowest sample, which had 41.4% chlorite, and 12% illite. The latter also had 9.2 ppm uranium, and 24.7 ppm lead. The basement rocks showed a paleoweathering profile, with the red zone from 120.6 m to 154.4 m, and the green zone from there to the 174.4 m. The rock was a garnet gneiss, bleached and hematized, returning uranium values up to 83.4 ppm, strontium up to 350 ppm, and nickel up to 155 ppm.

Drilling on the U-shaped conductor C2-B intersected graphite and pyrite-rich gneiss in the basement, and slight enrichment in uranium and magnesium in the sandstone. The hydrothermal alteration is confined to a volume of rock close to the unconformity, as in conductor C1-A, but because the only holes were widely-spaced, they concluded that more drilling was needed on Conductor C2-B. Hole CRK-140 tested conductor C2-B near the nose of the presumed fold. It intersected overburden to 11.0 metres, then MFb4 sandstone to the

unconformity at 94.6 m. Weak to moderate bleaching was noted in the sandstone, increasing in intensity towards the unconformity. The normative clay estimation showed dominant kaolin, with illite showing a maximum of 15%. There was chlorite only at the unconformity. The basement rocks are quartz-feldspar-biotite gneiss, with 10- 15 % graphite, and 5- 10% pyrite. The red zone of paleoweathering extends from 94.6 m to 97.5 m, and the green zone extends from 97.5 m to 107.0 m. A unit of quartz-feldspar-biotite-garnet-cordierite-sillimanite extends from 100.5 m to 116.5 m. Fracturing in the basement is weak to locally moderate. From 109.0 m to 116.5 m several fractures were seen with slickensides having pitches of 0° to 40°, indicating that the movement had a large horizontal component. The fractures are filled with strongly hematized clay from 82 m to 118 m, and with chlorite from 118 to 146 m. The hole went to 157.0 metres depth.

The author of the Cogema report also recommended drilling one or two more holes into conductor C4-A, despite the localized alteration and weak radiometric readings, because the conductor is so strong. Hole CRK-137 was the only hole to test this conductor. It intersected overburden from surface to 9.0 m, MFb1 sandstone to 99.0 m, MFb3 to 165.0 m, and MFb4 to the unconformity at 232.4 m. Bleaching of the sandstone increases towards the unconformity. Clay is dominantly kaolin, with up to 50.6% illite and up to 53.9% chlorite only very close to the unconformity. Uranium values of 10 ppm over 7.4 m, including a maximum of 103.1 ppm uranium in a "selective" sample of bleached and chloritized sandstone from just above the unconformity were returned. In this context, a "selective" sample is a sample of 0.5 m of core taken every 10 metres for lithochemical studies. Below the unconformity the red zone of paleoweathering extends from 232.4 m to 260.0 m, and the green zone extends from there to 266.0 m. The basement rock is a quartz-feldspar-biotite gneiss. From 232.4 m to 233.0 m it is highly argillized and hematized, and has a natural gamma count of 469 cps. From 233.0 to 267.5 m it is weakly to moderately fractured, and the fractures have coatings of hematized clay and chlorite. It is speculated by Cogema people that this zone may be graphite-depleted, possibly because the rock below, from 267.5 m to 302.5 m contains abundant graphite and pyrite. From 302.5 to the bottom of the hole at 317.0 m the quartz-feldspar-biotite gneiss shows some chloritization of feldspars, but the garnets and biotite are fresh. Below the unconformity a sample of altered gneiss gave an assay of 200 ppm uranium over 1 metre, 402 ppm strontium, and 284 ppm nickel. A sample of fresh, graphitic gneiss contained elevated values of 429 ppm vanadium, 370 ppm copper, and 61 ppm nickel.

On the visit to the property, two core racks were found near the sites of the drilling, but both had been burned, and the core was piled on the ground, making it useless for further study.

In 1997, Cameco carried out a TEM survey of the Tuning Fork grid (AR# 64 L 12 SW-0064). In that report they also refer to an HEM survey done in 1995. They re-located the anomaly found and drilled previously. The report's author recommended drilling the eastern end of the conductor, since its location was different from the location determined by previous work. Based on the previous drilling results, the writer would suggest that this area is not worth further work at the present state of knowledge about the property.

In 2000 JNR Resources Inc. reported on boulder sampling which partly overlaps Santoy claims S-107534, S-107535, S-107602 and S-107605 (AR# 74 I 09-0063). Some of the work was done as early as 1998, and the field operational part of that work was supervised by this writer. The technical direction and interpretation was by Steven Earle, of Grasswood Geoscience Ltd. Samples were taken on lines oriented perpendicular to the general strike of the basement rocks, at a spacing of about 2 km between lines, and at intervals of 150 to 200 metres along the lines. The technique used was the one developed by Earle. At each sample site, chips of 10 boulders of Athabasca sandstone were collected. In camp, 3 chips of each sample were analysed by an infra-red spectrophotometer to determine the ratios of clays, chlorite, and dravite present. This was done to provide some immediate results so that follow-up work could be done immediately. The 10 chips were then sent out to a laboratory and assayed as a single sample for a suite of elements including uranium and its pathfinder elements, and elements which enabled the normative clay content to be estimated.

Most of the samples showed high levels of kaolin, which appears therefore to be the background clay mineral in the region. Some samples showing significant illite were found on the Santoy claims. Illite was reported as determined by both methods, i.e. chemical and spectral. The spectral results showed 5 samples on S-107602 in the highest category (>29% illite), and one on S-107535. The chemical results for illite show only 5 or 6 fourth category results (>19%) for illite on S-107602. This is a serious discrepancy, which the writer would resolve in favor of the chemical work. Although some assumptions are involved in calculating normative values of minerals from chemical analyses, the mineralogy of the Athabasca sandstone is simple enough that this should not be much of a problem. On the other hand, while it is fairly easy to identify the presence of a clay mineral with an infra-red spectrometer if it is the only one, estimating ratios of clays is quite subjective, and a good deal of experience is required to do it well. In this case, the highest results from both methods are from the same part of claim S-107602, i.e. the southeastern edge, where it abuts another claim on which a deposit, the LaRocque Lake deposit, has been found, so both results are telling the same story. Because the La Rocque Lake deposit is east, and slightly south of the anomalous illite, it is not clear that those boulders have come from the deposit.

One sample contained 3.7% chlorite, and one contained 1% chlorite (the highest and third highest of 4 categories noted) on claim S-107605. These are on adjacent lines, but are 2.5 km apart. One sample from S-107602 contained 7 ppm boron, the highest category, two samples contained between 5 and 6 ppm, the third highest category, and at least three (depending on exactly where the claim boundary is) contained between 4 and 5 ppm. In all, there are about 30 anomalous assays of boron on those parts of claims S-107534, 535, and 605 covered by the JNR survey. Most of them are on S-107534, and they show good clustering. Estimations of dravite show fewer anomalous values (12), which is rather curious, since dravite is the usual source of boron in this environment.

Forty-four anomalous uranium values were returned on the parts of claims S-107534, S-107535, and S-107603 covered by the JNR work. As with the boron, most are on S-107534, but the uranium values extend onto S-107605 more than do the boron values. About 10 anomalous uranium values were found on S-107602. There were about 20 anomalous values in

all categories on claim S-107602, and 29 anomalous lead assays on the other claims, S-107534, 535, and 605.

5.0. Geological Setting.

5.1. Regional and Local Geology

The property is mostly underlain by rocks of the Helikian-aged Manitou Falls Formation of the virtually undeformed Athabasca Group, resting unconformable on a metamorphic basement believed to be the Mudjatik Domain (and perhaps a bit of the Wollaston Domain) of the Hearne Province of the Canadian Shield (Fig. 1). The Peter Lake, Wollaston, Mudjatik, and Virgin River Domains comprise the Hearne Province, and form the Cree Lake Mobile Zone of the Churchill Structural Province.

The Aphebian Wollaston Supergroup rocks are commonly divided into two main units (Lewry and Sibbald 1977, SGS Misc. Report 2003-7) as follows:

- an upper unit consisting of meta-arkosic quartzo-feldspathic gneisses, locally including calc-silicates, quartzites, marbles and pelitic gneiss. These rocks are divided into the Daly Lake and Geikie River Groups in the western part of the Wollaston Domain.
- a lower assemblage of conglomerate, arenite, pelite, psammopelitic biotite-rich gneisses commonly graphite bearing, and volcanic rocks, called the Compulsion River Group. The uranium deposits of the eastern Athabasca Basin are commonly in contact with, or within a few tens of metres of the graphitic units of the lower assemblage.

The metasedimentary rocks were originally deposited on a stable marine shelf consisting of Archean granitic rocks, probably under shallow marine to sub-aerial conditions. During the Hudsonian Orogeny, the Archean basement underwent thermal deformation causing domes to rise isostatically with minimal disruption to the Aphebian sediments. Later tectonic events caused a series of northeast striking antiforms, which are a distinguishing feature of the Wollaston Domain (Sask. Geol. Surv. Misc. Report 2003-7) .

The Archean granites have been age-dated at 2500 Ma (Wanless and Loveridge, 1978; Ray and Wanless, 1980). Younger phases thought to postdate the Hudsonian metamorphism and later cooling events have yielded ages ranging between 1570 and 1880 Ma (Lowdon, 1961; Money, 1968; Baer, 1969; Ray and Wanless, 1980).

In the Lower Wollaston Group, the soft graphitic units are often the locus of faulting, particularly where adjacent to relatively rigid basement units such as Archean granites and Aphebian quartzites. Fault movements, particularly strike-slip movements, enhance the electrical conductivity of graphitic horizons by aligning the graphite grains and promoting electrical continuity. Reactivated basement structures also provide enhanced permeability in

the basement and overlying sandstone which tends to channel the flow of fluids. Mixing of reducing fluids derived from basement and oxidising fluids derived from overlying sandstone is thought to be a key component in the formation of unconformity uranium deposits. Thus, graphitic basement conductors are commonly targets for unconformity-type uranium mineralization. Basal and near-basal Aphebian conductor horizons which are in close proximity to Archean granite bodies are thought to be particularly favourable.

Higher up in the Aphebian stratigraphic column, faulting of rocks containing little or no graphite can also produce enhanced permeability zones which affect fluid flow. Faulting which juxtaposes high competency quartzite units and softer sediments is perhaps the most favourable, as at the McArthur River P2N deposit, where a graphitic pelite horizon is in fault contact with a quartzite unit, and at the McArthur River BJ zone where a quartzite unit is faulted against non-graphitic metasediments. Fault movements are predominantly strike-slip, and flexures in fault planes are commonly prospective.

The Mudjatik Domain is characterized by more ovoid to arcuate features, and by a higher ratio of Archean granitic rocks than in the Wollaston Domain. The arcuate pattern is produced by three main deformational events, and locally a fourth, (Lewry and Sibbald, 1977). An initial flat-lying penetrative foliation with coeval isoclinal folding produced a nappe-forming event resulting in supracrustal zones exposed at different structural levels. This foliation is modified by two suborthogonally oriented upright fold sets with respective northeast and northwest axial plane strikes which produced a dome and basin interference pattern (Sibbald, 1983). Local development of minor folds with gently dipping axial planes characterize the fourth event. Low to medium pressure amphibolite-granulite facies accompanied the three major events while retrogressive effects are limited. The Mudjatik granites are variably migmatitic.

South of the Athabasca Basin, the infolded supracrustal rocks can be correlated with those of the Wollaston Domain, and, it appears that there is no break between the two domains (Tran and Smith, 1999; Madore et al, 1999).

North of the Basin, the Mudjatik Domain consists mainly of migmatitic Archean granitic gneisses, and includes both the southern end of the Archean Rankin-Ennadai Greenstone Belt, and what appear to be rocks correlative with the Paleoproterozoic Hurwitz Group.

The quartz arenite sandstones and conglomerates that comprise the Helikian Manitou Falls Formation lie unconformably upon the Aphebian basement rocks. Ramaekers (1983) interpreted these rocks as products of fluvial braided stream complexes originating to the south and east. Generally the grain size distribution shows there is an upwards fining that suggests basinwards development of the Manitou Falls Formation with time. The upper units indicate that they were deposited by more uniformly westward flowing rivers.

Ramaekers (1981) divided the Manitou Falls Formation into four units – d, c, b and a, from top to bottom, based on certain distinguishing characteristics, as follow:

MFd: Medium grained, well sorted, clean quartz arenite distinguished by the presence of clay

intraclasts. Grit horizons become common towards the base of the unit and cross bedding is weakly evident throughout. Weak bleaching, considered to be diagenetic in origin, is common. This unit can vary in thickness or even be absent, due usually to glacial erosion.

MFc: Moderately to poorly sorted, granular to gritty sandstone with minor pebble layers which are less than 2.0 cm thick. Grain sizes grade upwards into a gritty to granular sandstone with disseminated pebbles exhibiting well developed, generally low-angle cross bedding. The MFc generally lacks clay intraclasts, has narrow granule beds of less than 2.0 cm. Cross bedding is more apparent.

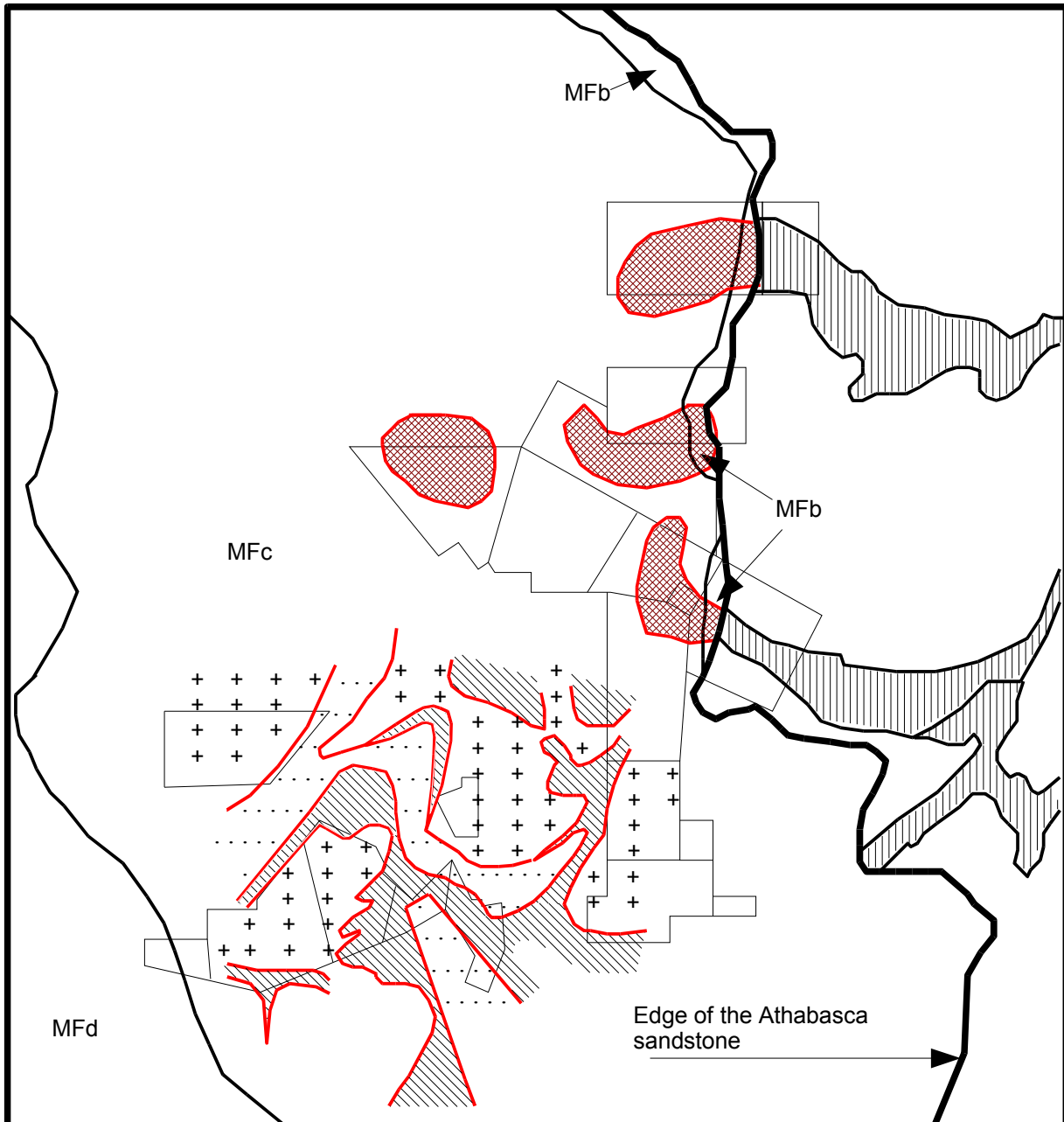
MFb: This is the conglomeratic member, consisting of interbedded, pebbly sandstone and clast-supported conglomerates. It is a medium to coarse grained, moderately to poorly sorted sandstone with intervals of grit, granules and pebbles greater than 2.0 cm. Sandy mudstone and siltstone horizons are not uncommon. Pebble band thickness and size of pebbles within bands increase with depth. The pebble size can be used to break the units into smaller lithofacies.

MFa: A medium to coarse grained, poorly sorted sandstone with common grit beds (<1.0 cm) and containing < 15% conglomeratic beds. It consists of an assemblage of clean sandstone, pebbly sandstone, sandy conglomerate and rarely, intraclast-rich sandstone. Conglomeratic members are most often found in indistinct, matrix supported bands or the pebbles may be more isolated in an otherwise sandy matrix. The unit is distinguished from the MFb by a sharp decrease in the amount and thickness of conglomeratic horizons and corresponding decrease in the maximum pebble size. At a conference in Saskatoon on November 30, 2004, Yeo et al announced a proposal to subdivide the Mfa unit into 3 new units to solve the "Mfa problem" of correlation, but the full paper has not yet been published.

The Athabasca Group has been intruded by diabase dykes along north- to northwest-striking structural zones. These dykes have been dated at 1084 ± 54 Ma (Worden et al, 1985).

5.2. Property Geology

The Geological Atlas of Saskatchewan shows that the property is mostly underlain by the Athabasca sandstone, and that the subcrop consists of the Manitou Falls formations b, c, and d (Fig. 6). Virtually all of S-107590, most of S-107536, and the eastern edge of S-107538 are underlain directly by the basement rocks. Fig.6 shows the geology of the exposed basement rocks. It also shows the geology of the basement beneath the Athabasca sandstone as inferred from geophysical work, and as checked by drill holes in some locations. The interpreted sub-Athabasca geology southern part of the Santoy claims is from a compilation done by Cogema, and that of the northern claims is from the UG/Cameco work.



LEGEND

MFb, MFc, MFd Manitou Falls b, c, d Formations

— Geological contact

— Sub-Athabasca contact inferred from geophysics

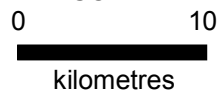
▨ Mixed felsic, pelitic metasedimentary rocks

⋯ Pelites, semi-pelites, calc-silicates

▩ Metasedimentary belt, undifferentiated

▮ Metasedimentary belt outside Athabasca Basin

SCALE



SANTOY RESOURCES LTD
 HATCHET LAKE JOINT VENTURE
 LOCAL & PROPERTY GEOLOGY
 (after Sask. Geol. Atlas, assessment work files)
 NTS 74 I 8, 9, 16; 64 L 5, 12, 13
 NORTHERN EXPLORERS LTD
 Scale 1:400,000 June, 2005 Fig. 6

A useful description of the rocks underlying the claims can be distilled from the drill logs. The Richardson Lake- Crooked Lake area has seen the most drilling of any part of the Santoy property. S.M.D.C. (AR# 64 L 12-0058) reported the following basement rock types intersected during their 1983 drilling.

Granite is massive to weakly foliated, equigranular, medium to coarse-grained, with mafic mineral content less than 10%, and quartz content greater than 10%. Feldspars are commonly altered to pale yellow or green clays.

Pegmatites are coarse-grained, of granitic composition, and occur within metasedimentary sequences. Biotite is typically chloritized, and tourmaline is sometimes present. They are often less than a metre thick, but one of 23 metres thickness was intersected. (This was implied as core thickness, not true thickness.)

Quartz veins occur as segregations within pegmatites or interlayered with mafic metasedimentary rocks. They may locally contain up to 2% euhedral garnets.

Psammities are well foliated, medium-grained to fine-grained, light grey to light greyish-green, with 10 to 15% mafic minerals. They grade into semipelites, and are interbedded with pelites.

Semipelites are similar to psammities, except that they have a mafic mineral content of 15 to 25%, and are therefore darker in colour.

Pelites are fine-grained to medium-grained, medium to dark grey to grey-green in colour, and vary from moderately foliated to strongly crenulated. Sillimanite, garnet, cordierite and biotite are the most common mafic minerals. Biotite is often the only recognizable mafic mineral. Chlorite porphyroblasts after garnet and cordierite are often seen.

Alteration of the basement rocks manifests itself in several ways. One is a form of bleaching which S.M.D.C. people attributed to paleoweathering, which extends over a few cm to a metre from the unconformity downwards. Another form of bleaching, which they termed hydrothermal bleaching, extends down to 10 metres below the unconformity. It is not stated how the two forms of bleaching may be distinguished from each other. Hematitic and chloritic alteration are present in all holes, and vary from weak to pervasive. They also attribute this to paleoweathering. Clay alteration occurs near the unconformity.

Petrographic work by Cogema (AR# 64 L 12 NW-0062) shows that metamorphism of the basement rocks in the Crooked Lake area reached granulite facies, as indicated by the mineral assemblage biotite-garnet-cordierite-sillimanite. Age dating (Madore and Annesley, 1993) indicates that this occurred circa 1816- 1812 Ma. Peak metamorphism was accompanied by migmatization, as seen in the pelitic gneisses. Retrograde metamorphism under amphibolite to greenschist facies conditions followed. Ductile deformation occurred during and slightly after peak metamorphism, and ductile/brittle to brittle deformation occurred during retrograde deformation. Many of the basement rocks have indeed been subjected to moderate to intense paleoweathering. Circulation of metamorphic and later fluids was moderate to strong. No

diagenetic hydrothermal alteration was identified in the basement rocks seen. It was concluded that the Paleoproterozoic supracrustal rocks are metasedimentary; petrographically, they are equivalent to the basal Wollaston Group rocks that outcrop to the east in the exposed part of the Wollaston Domain.

The Athabasca sandstone is logged as being from almost white to light buff, to light grey to pinkish in colour, generally medium-grained, but variable from fine to very coarse-grained, with grain moderately well rounded. It is usually well-bedded, on mm to cm scale, with occasional thicker beds. Cross-bedding is common. The rock is generally not well cemented with silica, and in places the cement is gone. Sometimes it has been replaced by clay, and sometimes it is simply unconsolidated sand, which can cause drilling problems. The sandstone in the Richardson Lake area is the Manitou Falls b Formation, with some conglomeratic horizons in which the maximum grain size rarely exceeds 12 mm.

The more vibrant colours are reds and purples due to hematite. Rusty brown colours are due to limonite. Bleaching may be seen throughout the section

Clay may be seen throughout the section as interstitial filling, or as lenses. Where there is a lot of clay, it is interpreted as an alteration product that has replaced quartz.

The bedrock is covered by Pleistocene glacial deposits, varying in thickness from zero to perhaps as much as 60 metres on the Richardson Lake grid, although it is possibly, even likely, that the casing was put well into the Athabasca sandstone in some holes. In the drilling on claim S-107748 and S-107749, the overburden was usually 6 to 8 metres deep, with a maximum of 15.5 m.

6.0. Deposit Type

The type of deposit sought here is an unconformity-type uranium deposit. Wheatley et al (1996) described a genetic model for such deposits. The Archean basement of northern Saskatchewan consists of granodiorites, tonalites, trondhjemitic and gneissic equivalents that were subjected to granulite facies metamorphism during the Kenoran Orogeny (ca 2560 Ma). Intense deformation during the Archean created major zones of weakness that became the sites of repeated faulting causing the basement to break into numerous crustal blocks.

Heier and Adams (1965) suggested that uranium migrates into the crust during granulite facies metamorphism so that it is possible the Kenoran Orogeny concentrated uranium in the upper Archean crust.

The Aphebian pelitic, psammitic, quartzitic and carbonate-rich sediments were deposited unconformably over the Archean rocks. Dahlkamp (1993) believed the basal carbonaceous pelites were enriched in uranium from the Archean crust. The Archean and Aphebian rocks were both metamorphosed to upper amphibolite to lower granulite facies during the Trans Hudson Orogeny (1880 to 1750 Ma) according to Annesley and Madore (1989). The Trans

Hudson Orogeny also reactivated many structural zones in the Archean basement. These zones may be up to hundreds of kilometres long, and up to 20 kilometres wide. The shear zones are thought to coincide with some of the preserved northeast trending keels of Aphebian metasedimentary rocks. A major shear zone, or zones, underlie(s) all of the known uranium deposits in the eastern part of the basin. Sibbald (1985) believed this structural zone was the Wollaston/Mudjatik contact. Towards the end of the Trans Hudson Orogeny the area was subjected to folding, faulting and downwarping, producing trough- or keel-shaped zones of metasedimentary rocks that were intruded by radioelement-enriched pegmatites, granodiorites, and granites. This became the focus for fluid and melt migration, increased heat flow, chemical alteration and anatexis. These events contributed to additional concentration of uranium within the faulted graphitic rocks.

However, without the overlying sandstones, the protore in the basement lithologies would not have been concentrated beyond grades of 0.5 % uranium. The final concentration resulted from a diagenetic event that promoted circulation of the basinal brines of the Athabasca group.

The deposit-forming events that occurred between 1520 and 1300 Ma (Cumming and Kristic, 1992) increased the temperature at the base of the Athabasca Group and reactivated basement structures which disrupted the overlying sandstone. This event may have been related to compaction and diagenesis. It mobilized the high salinity, oxidized basinal brines through the lower Athabasca sandstones, which had a higher permeability than the underlying basement rocks. The fluids followed the shears, and flowed along strike due to the high permeability. Some of the basinal brines were transported down into the faulted graphitic lithologies due to both gravity-induced hydrostatic pressure, and convection. In the graphitic shear zones the oxidized brines mobilized the uranium and associated metals and transported them along strike in the shear zone. Some fluids became reduced at depth in the graphitic package, but continued to travel along with the oxidized fluids in the shear zone until arriving at a dilation zone, probably caused by cross faulting. The uranium and other metals then precipitated, forming an unconformity type deposit. The fluids that followed the structures up into the sandstone created an alteration halo, with a size dependent on the local permeability and the amount of fluid flowing through the sandstone.

All uranium deposits occur within alteration halos, which demonstrate great variety and intensity. The alteration halo may extend hundreds of metres into the basement and up into the sandstone, and typically will have an increase in background uranium along with extensive clay alteration. The regional clay – illite, dickite or kaolinite – will be altered in the vicinity of the deposit, and this phenomenon can be used as an exploration tool. The regional clay around Cigar Lake is dickite but the chimney above the deposit is illitic. The dominant clay around Key Lake is illite, but above the deposit the alteration has created kaolinite, chlorite and locally dravite. Bleaching is relatively common and obvious as it removes the purple hematite to varying degrees, and reduces it to pyrite and siderite. It can extend over many metres in the sandstone, but in the basement will commonly be restricted to an interval just below the unconformity. Silicification is quite evident as interstitial filling and may act as an inhibiting agent to bleaching if the porosity is reduced. The quartz cement is remobilized, typically near a structure, and may be deposited as drusy quartz in fractures and cavities. The quartz

dissolution creates an unconsolidated zone with a large increase in clay content. Near the deposit a massive clay envelope may develop as silica is removed and feldspars and metamorphic minerals alter to clay. This clay can range in colour from white through grey to dark green. The argillization processes are accompanied by an increase in magnesium. Dravite occurs interstitially and as fracture coatings in the sandstone, but may only show up in the boron geochemistry. The intensity of dravitization is much stronger in certain deposits, e.g. McArthur River, whereas at Eagle Point it may not be observed at all. Limonite is very common and can occur in fractures and interstitially in the sandstone and within the mineralized ore zone along with siderite.

Empirically, the type of uranium deposit likely to occur here would be at or near the unconformity between the Athabasca sandstone and the metamorphic basement (from perhaps 100 metres above, to 500 metres below), close to a major fault or shear in graphitic supracrustal rock which is intersected by another fault or shear. The deposit will be within a clay-alteration zone much larger than the deposit.

Whatever the exact mechanism of formation of these deposits, they have made Saskatchewan an important producer of uranium, supplying more than 30% of the world's consumption (Saskatchewan Industry and Resources website). The Athabasca deposits are also among the richest in the world, with grades ranging from 0.12% U in one of the Rabbit Lake lenses to 15.9% U at Cameco's McArthur River Mine (Gracie and Lafrance, 1998).

7.0. Mineralization

Mineralization on the property consists of uranium and pathfinder metal values, along with extensive clay alteration at the unconformity intersected in the drilling. There are also elevated values of lead, copper, nickel, and vanadium at the unconformity. Most of the mineralization known on the property is in the Richardson Lake belt, where many holes have been drilled.

8.0 Data Verification

The assessment of the merits of the claims discussed herein is based on work carried out by previous workers and filed with Saskatchewan Industry and Resources. In the writer's opinion, the reliability of the data most relied upon in this assessment is suitable for that purpose. Specific points are:

- i. The drilling carried out in the Richardson Lake area was done to acceptable industry standards, as far as can be inferred from the assessment work reports filed. The elements assayed in the core samples, and the analytical techniques used for the assaying, were appropriate for the purposes of the work undertaken. No program of quality control or data verification is discussed in any of the assessment work reports, so it appears that the only such control and verification was provided by the internal checks of the analytical laboratories. It is not possible for the writer to check any of the assays now, because all of

the core found on the site visit has been burned by a forest fire, and is piled on the ground in such a condition that the hole numbers and depths can no longer be determined.

- ii. The core found near the Campbell Lake grid, where none had been expected, contained no Athabasca sandstone, and could therefore not have been from the Campbell Lake grid, since sandstone outcrop was seen on the grid. This tends to confirm (but does not prove) that the data presented in the assessment reports represents all of the data generated on the grid, and that there are no unfiled data that, were they available, might change the conclusions and recommendations in this document.
- iii. The boulder sampling work discussed herein was done under the overall direction of Steven Earle. It was done to industry standards, since Earle contributed to the establishing of those standards. The field operations of the boulder sampling done on parts of the Santoy claims were supervised by this writer, who confirms that it was correctly done. It is not possible to check the old boulder sampling results by spot checks, since results from an individual site are not expected to correlate very closely. The pattern of results should be repeatable over a large area, but to check results in this way would mean virtually repeating the entire survey. In the interpretation of boulder sampling surveys, it is normal to only consider clusters of anomalous results as significant. There is a high degree of confidence that a cluster of anomalous values would be repeated if the survey were repeated. The anomalous results in a cluster therefore tend to confirm each other, providing a form of internal check.
- iv. Many of the geophysical surveys done by previous workers were done with instruments still in use, and the writer has relied upon results obtained with such instruments.

The data most relied upon by the writer were generated by paid employees of or contractors to mature mining companies. Neither the employees, the contractors, or the mining companies themselves would appear to have any reason to misrepresent the results.

The writer has ignored, or attached low significance to some results of previous work in his discussion of results. It is his experience that ground-based radiometric “surveys” are not much use (although airborne regional surveys may be). VLF surveys have not been given much weight, except to confirm results of other surveys. Generally, the older work was given less weight than the more recent.

The data discussed herein have been re-checked to minimize errors of transcription. In discussing data points near the property boundary, some doubt remains as to the accuracy of plotting the original data, and of the precise location of the present claim lines in the field. However, no recommendation made in this document is based solely on data which might, if its true location were known, fall outside the subject property.

9.0. Interpretation and Conclusions

The work done on the Santoy claims by previous owners dates back to the first discovery of uranium in the region, and represents the first pass over the area. During the first pass, projects which showed promise were abandoned, or put on the shelf, in favor of projects which appeared to be more promising. It is now time to make a second pass, and to see if some of the abandoned or shelved projects are worthwhile targets in the light of current knowledge and theories on the occurrence of uranium deposits in this environment.

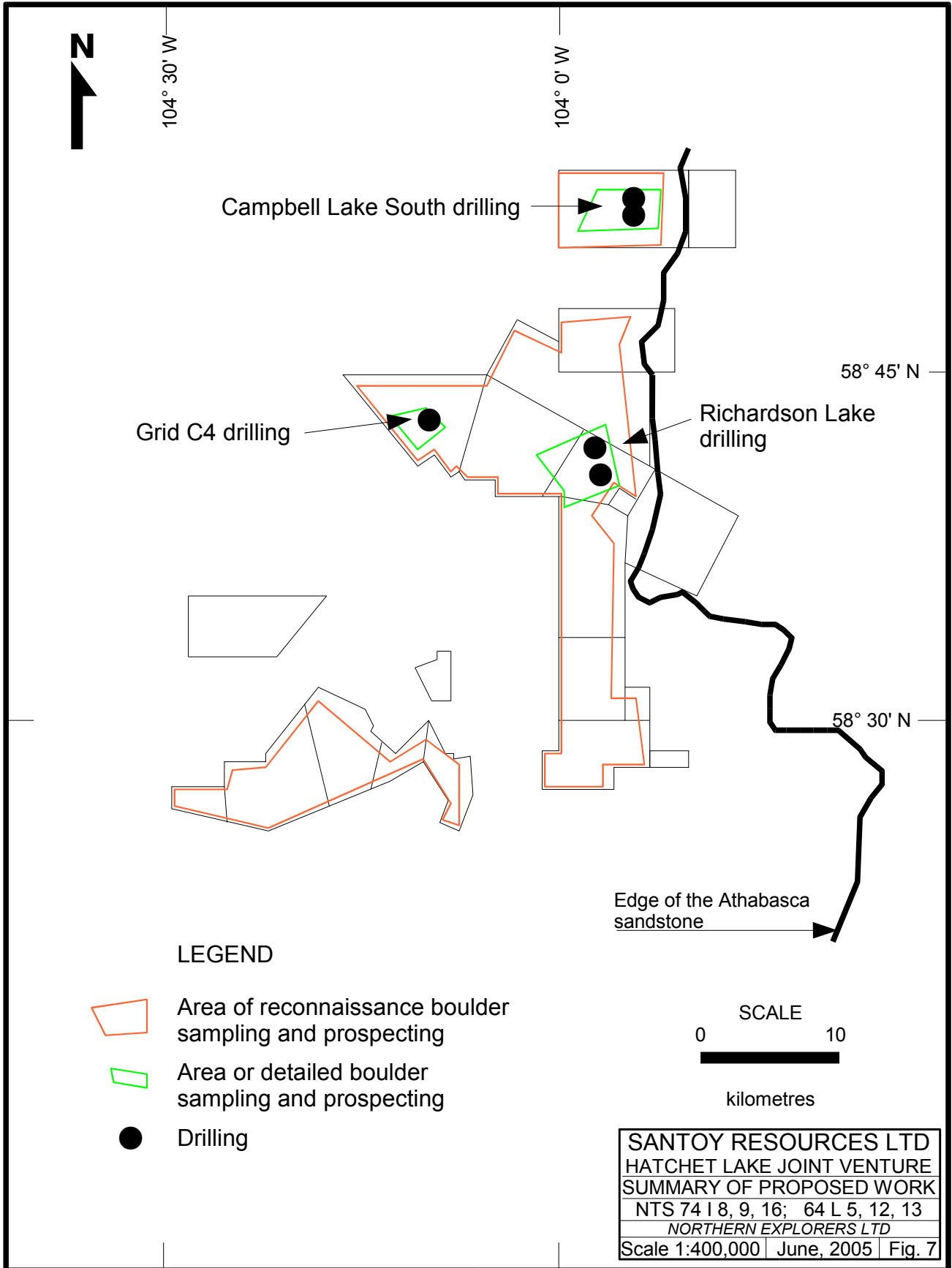
Typically, for any mining area, the large, obvious deposits are found first, and relatively cheaply and easily. Subsequent discoveries are more difficult and expensive, and tend to be smaller. It is therefore unreasonable to expect that any targets that may be identified now or in the future will be as clearly defined or otherwise as attractive as those which indicated the presence of the current or past producing deposits. A corollary is that the success ratio will be lower in the present and subsequent phases of exploration than it was in the past.

Some general comments are in order before discussing specific proposals. Sampling of boulders of Athabasca sandstone and analysing the clay content following the method of Steven Earle (Earle et al, 1990, Earle and Sopuk, 1989) has become established as an essential tool for uranium exploration in the Athabasca Basin. As noted in the section above on previous work, a limited amount of such work has been done on the Santoy claims. Moreover, the work that was done has yielded some positive results. Boulder sampling in the areas with positive results should be done to fill in the previous work, and should be done over most of the property where it has not already been done. This should be part of a first-phase program. Fig. 7 shows the areas where further work is proposed.

The orientation surveys which were carried out by Earle and others to develop the boulder sampling technique were done near both a large, rich deposit (McArthur River), and lesser deposits (Read lake, Cree Extension), so the technique should work for all deposits worthwhile looking for. The examples shown in Earle et al (1990) only show individual samples sites for one area, and do not show individual results for that one case, so it is not possible to see how the contoured results were produced. Earle says that the minerals or elements could be traced down-ice for 6 to 13 km from the Read Lake deposit, but it is difficult to prove that all of the values within the contours are from the deposit. Furthermore, the orientation studies were done on deposits which have prominent and extensive alteration "chimneys" extending up to subcrop surface, but it may be that there are deposits whose alteration chimneys are less prominent. For these reasons, the writer would suggest that the sample spacing be at the shorter end of the range specified by Earle, i.e. at 150 metres along lines 800 metres to 1 km apart for reconnaissance sampling.

The samples should be analysed for the usual suite of major and trace elements as specified by Earle.

Areas which should be particular targets of boulder sampling include parts of S-107534, S-107535, S-107603, and S-107605 (to follow-up the 2000 work of JNR), the Richardson Lake



grid and the area down-ice from it to follow up the two lines done by Cameco in 1992, S-107748 to better define some encouraging values found by Cameco in 1991, and S-107452 and S-107704, to see if the values found by Cogema in 1991 are part of a larger anomaly.

The sampling done by JNR was done at a line spacing of 2 km. Two lines should be put between JNR's lines as a minimum, and, if positive results are returned from them, the separation should be halved in a subsequent program.

Since the target here is uranium, and since uranium makes its presence known by the radiation emitted by one of its daughter products, it makes sense to be able to detect it in the field. Accordingly, one person in each boulder sampling team should be a prospector, carrying a scintillometer, and should check as many boulders as possible for radioactivity. The prospector will be able to check many more than the 10 chips normally taken at a boulder sample site, and will be able to do some immediate follow-up prospecting if radiation is detected. He will be able to prospect between sample sites, thus increasing the likelihood of finding significant boulders.

Radiometric prospecting was an important tool in many of the discoveries in the early days of uranium exploration in the region, and most of the Santoy claims have been prospected to some extent. Some areas may have been well prospected, but it has been the writer's experience that prospecting is an activity which is not always done well, and is seldom done as thoroughly as it should be. It is therefore suggested that prospecting should be carried out as a primary activity in addition to its rôle as an adjunct to boulder sampling. Prospecting should be part of any first-phase program. The two types of prospecting will not duplicate each other. The prospector accompanying the boulder sampler will be constrained to follow the line required by the boulder sampling, whereas the independent prospectors can follow the trail of radioactive boulders wherever it leads them.

Certain areas of the property have been interpreted to be underlain by basement consisting of Archean granitic rocks. These are therefore lower priority areas, since no significant deposit has been found where granitic rocks form the basement, although the contacts of granitic domes with pelitic basins are a favorable environment. Granitic areas indicated by previous work include all of S-107602, except perhaps the southeastern edge, most of S-107587 and S-107601, S-107541, and parts of S-107548 and S-107578. However, these areas are mostly interpreted from geophysical data, with little or no confirmation from drilling. In the writer's opinion, Fig. 4 is likely to be more or less correct at the scale at which it is presented, but is probably not precise enough to use at a detailed scale. Thus, a target which otherwise appears to be attractive should not necessarily be written off because it may be underlain by granitic rocks.

9.1. Campbell Lake South area

The grid known historically as the Campbell Lake South grid was worked extensively by Urangesellschaft and S.M.D.C. for a number of years. The work was interpreted to show that the grid is underlain by metasedimentary rocks cut by faults. Conductors were identified, but

never drilled, if the work recorded in the assessment work files is complete. The writer saw core at an old campsite at the eastern end of Campbell Lake. Although the racks had been burned, and the core was piled on the ground, the writer looked through the jumbled pieces of core, and found no Athabasca Sandstone. However, outcrops of Athabasca sandstone were examined near the small ponds south of Campbell Lake, so any holes drilled on the grid should have intersected some sandstone. The fact that these holes did not have any sandstone tends to confirm that the targets suggested by S.M.D.C. were never drilled.

The reason given by UG in their report on the 1980 work for not continuing to explore there was that the conductors were weak, indicating the absence of graphite. No reason for the lack of follow-up in the S.M.D.C. target area was found in the assessment work files. The writer would suggest that the fact that the conductors are weak does not disqualify them as targets.

This area needs to have boulder sampling included in the first phase of work. It has not been done before, and, since the sandstone should be thin here, it should work well, provided that enough boulders can be found. On the visit to the property this area did not appear to have as dense a coverage of sandstone boulders as one might wish. The outcrop should also be sampled, of course. This area is not large, and the boulder sampling should be quite detailed, i.e. samples at 50 metre intervals on lines 200 metres apart.

Although this area has been prospected, it was not clear in the reports whether UG was looking for mineralized basement or sandstone. It should be prospected again.

There was no trace of the old line grid visible in the area near the S.M.D.C. target, so a new line grid will need to be cut, and an electromagnetic survey will have to be done to re-locate the conductors on the ground. The appropriate instrument to use here is a MaxMin horizontal loop instrument.

At least two holes should be drilled in the first phase, to see if there is any indication at all of mineralization at the unconformity. One should be into the S.M.D.C. target area, and the other into the step in the unconformity defined by gravity.

9.2. Richardson Lake area

This area has the best mineralization on the Santoy property. However, it is also the most thoroughly investigated (by drilling) of any part of the property, and large parts of it have been recommended by the most recent people to work there as being not worthy of more work. Nevertheless, the writer would point out that the drill targets appear to have been selected based solely on the amplitude of the geophysical response and the intersection of conductors with each other and /or with faults. While that is a perfectly good way to choose drill targets it is not exhaustive, and more targets might be revealed by a program of boulder sampling, which has not been done. The purpose of boulder sampling would be to discover alteration chimneys which might reach subcrop surface above a mineralized zone not discovered by the drilling to date. Because the overburden is not very thick here, the method should work well. If an alteration chimney is found, drilling should be done in a second phase of work.

Detailed boulder sampling (in addition to the reconnaissance boulder sampling recommended above) should cover that part of the property down-ice from the known conductors. Samples should be taken at 100 metre intervals on lines 400 metres apart, oriented perpendicular to the last ice movement. Provision in the budget should be made to halve this interval if positive results are returned from the initial work.

Ideally, it would be useful to have an infrared spectrometer on site while the detailed boulder sampling is taking place to provide immediate feed-back so that in-fill sampling can be done if warranted. However, the cost of such an instrument is rather high for a small job (\$US 50,000), and it is not easy to rent one. In addition, an experienced operator is required. The use of an infrared spectrometer is therefore not part of the recommendations made in this document, but if the opportunity to have the use of such an instrument presents itself, the program should be modified to include such use.

Independently of the results of the boulder sampling, the areas recommended by Cogema to be drilled should be drilled, i.e. the areas near holes CRK-131C, and CRK-135. For this drilling, and any phase 2 drilling which might be required as a result of the boulder sampling or prospecting, it will be necessary to re-establish parts of the grid, and carry out ground-based electromagnetic surveys to re-locate the conductors. Experience here has shown that if the sandstone is less than 200 metres thick, the appropriate instrument is a MaxMin. If greater than 200 metres, some sort of time domain electromagnetic (TEM) or a resistivity system should be used. The overburden here appears from previous drilling to be less than 200 metres thick, so the MaxMin should be used. At least two holes at each site should be drilled, with the sites to be selected using the results of the boulder sampling survey.

9.3. Area C4

This area is within the area recommended for reconnaissance boulder sampling, and the sample interval should be decreased to a detailed scale (100 m x 400 m) down-ice from the known conductor to see if an alteration chimney exists. It was recommended by Cogema that more drilling was required near hole CRK-137, and the writer would concur with that, and recommends that two holes be drilled, with the sites to be selected using the results of the boulder sampling and prospecting.

The writer firmly believes that the first phase of the exploration program recommended herein is justified by the previous work carried out on the property, in the context of the present state of knowledge of the occurrence of unconformity-type uranium deposits in the region. The second and subsequent phases will have to be justified by results of previous phases.

Phase 2 is entirely contingent on the results of phase 1, and the actual budget needed for phase 2 could be larger or smaller. The amounts of money suggested for phase 2 are best guesses of what might be required, and are provided to aid in long-term planning by giving an approximate idea of possible future cash requirements.

10.0. Recommendations

Phase 1.

1. Boulder sampling should be done on a reconnaissance scale over most of the property. The boulder sampling team should include a prospector with a scintillometer to look for radioactive sandstone boulders. Sample interval should be 150 to 200 metres along lines separated by 800 m to 1 km.
2. Prospecting should also be carried out over most of the property as a primary activity independent of boulder sampling.
3. The Campbell Lake South grid should be re-established. A MaxMin horizontal loop electromagnetic survey should be done to re-locate on the ground the conductors previously found. Detailed boulder sampling and prospecting should be done in addition to the reconnaissance sampling recommended in 1. Samples should be taken at 100 metre intervals on lines 400 metres apart. At least two holes should be drilled as a first-phase program to test the target areas defined by previous work.
4. Parts of the Richardson Lake grid should be re-established so that a MaxMin HEM survey can be done to re-locate the conductors near Cogema holes CRK-131C, and CRK-135, so that follow-up drilling can be done there. Two holes should be drilled near each of the two holes. Detailed boulder sampling and prospecting should be done down-ice from the known conductors in addition to the reconnaissance boulder sampling recommended in 1.

Phase 2.

5. The best results of phase 1 should be drill-tested. Drilling will have to be carefully controlled to hit a small target at the depths expected here. Holes should be radiometrically logged. Drilling should continue well into the basement when in metasedimentary rocks.

11.0. Proposed Budget

Phase 1.

<i>Item</i>	<i>Cost</i>
Reconnaissance boulder sampling	
60 crew days @ \$2200, incl helicopter, camp.	\$132,000
analyse 1250 samples @ \$55	\$68,750
Reconnaissance prospecting	
60 crew days @ \$2200, incl helicopter, camp	\$132,000
200 samples @ \$55	\$11,000
Supervision, interpretation, consulting, incl expenses @ \$800/day	\$32,000
Subtotal	\$375,750
Campbell Lake South	
Additional boulder sampling in detailed area; 5 crew days @ \$2200	\$11,000
70 samples @ \$55	\$3,850
Detailed prospecting: 5 crew days @ \$2200	\$11,000
10 samples @ \$55	\$550
Linecutting: 40 km @ \$450, + mob, demob.	\$23,000
MaxMin survey. 38 km @ \$350/ km, + mob, demob	\$18,300
Drilling 2 holes of 250 m @ \$100 + mob, demob	\$80,000
Additional supervision, interpretation, consulting, incl expenses @ \$800/day	\$24,000
Analyses: 40 @ \$55	\$2,200
Subtotal	\$173,900
Richardson Lake	
Additional boulder sampling in detailed area; 8 crew days @ \$2200	\$17,600
100 samples @ \$55	\$5,500
Detailed prospecting: 8 crew days @ \$2200	\$17,600
15 sample s@ \$55	\$825
Linecutting: 40 km @ \$450, + mob, demob.	\$23,000
MaxMin survey. 38 km @ \$350/ km, + mob, demob	\$18,300
Drilling 4 holes of 280 m @ \$100 + mob, demob	\$142,000
Additional supervision, interpretation, consulting, incl expenses @ \$800/day	\$32,000
Analyses:80 @ \$55	\$4,400
Subtotal	\$261,225

<i>Item</i>	<i>Cost</i>
Grid C4	
Additional boulder sampling in detailed area;3 crew days @ \$2200	\$6,600
35 samples @ \$55	\$1,925
Detailed prospecting: 3 crew days @ \$2200	\$6,600
8 samples 2 \$55	\$440
Linecutting:20 km @ \$450, + mob, demob.	\$13,000
MaxMin survey. 18 km @ \$350/ km, + mob, demob	\$10,300
Drilling 2 holes of 300 m @ \$100 + mob, demob	\$90,000
Additional supervision, interpretation, consulting, incl expenses @ \$800/day	17600
Analyses:20@ \$55	\$1,100
Subtotal	\$147,565
Head office expenses, overhead, legal, accounting	\$191,688
Grand Total	\$1,150,128

Phase 2.

15 holes of 280 m @ \$100, + mob, demob, moves.	\$495,000
Analytical 200@ \$55	11,000
Planning, supervision, core logging, reporting, expenses: 70 days @ \$800	56,000
Down-hole geophysics 10 crew days @ \$1500	15,000
Total	\$577,000

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CERTIFICATE

I, Norman Ralph Newson, of 3142 Eastview, Saskatoon, Saskatchewan, do hereby certify as follows:

1. That I am a graduate geologist, with B.Sc. and M.Sc. degrees from Queen's University at Kingston, Ontario, received in 1964 and 1970 respectively. I have practised my profession continuously since receiving my undergraduate degree, except for the time spent on course and thesis work for my graduate degree.
2. That my qualifications to write a report of this nature derive not only from my academic qualifications, but from increasingly responsible positions in the mining industry, including middle and senior management. I have personally carried out and/or supervised exploration for uranium in many areas of Canada, including several properties in the Athabasca Basin of Saskatchewan, some of which were on parts of the subject property.
3. That I am a Member of the Association of Professional Engineers and Geoscientists of Saskatchewan (with Permission to Consult), a Member of the Association of Professional Engineers and Geoscientists of Manitoba, and a Licencee of the Association of Professional Engineers and Geoscientists of New Brunswick.
4. That I believe I am a “qualified person” as defined in National Instrument 43-101. I am independent of Santoy Resources Ltd. I have read the Instrument, and believe that this report has been prepared in compliance with it and with Form 43-101F1.
5. I visited the property on June 26, 2005. I am responsible for the entire report titled *Santoy Resources Ltd., Hatchet Lake Joint Venture claims, Saskatchewan: mineral potential assessment and exploration proposal*, dated effective June 26, 2005.
6. That I am not aware of any material fact or material change with respect to the subject matter of this report which is not reflected in this report, the omission to disclose which would make the report misleading.

The effective date of this revised report is June 26, 2005. Signed at Saskatoon, Saskatchewan, September 11, 2005.

“N. Ralph Newson”
N. Ralph Newson, M.Sc., P.Eng., P.Geo.