

**TECHNICAL REPORT ON THE McFINLEY GOLD PROJECT  
OF RUBICON MINERALS CORPORATION**

May 17, 2002

G.M. Hogg and Associates Ltd.  
28 Thompson Avenue  
Toronto, Ontario

## TABLE OF CONTENTS

	<u>Page #</u>
Summary .....	1
Introduction And Terms Of Reference.....	3
Property Description And Location.....	3
Accessibility, Climate, Local Resources, Infrastructure and Physiography.....	6
History .....	7
Geological Setting .....	10
Deposit Types .....	13
Mineralization .....	16
Exploration .....	16
Drilling .....	16
Sampling Method And Approach .....	16
Sample Preparation, Analysis And Security .....	17
Data Verification.....	17
Adjacent Properties .....	17
Mineral Processing And Metallurgical Testing.....	18
Mineral Resource And Reserve Estimates.....	18
Other Relevant Data And Information .....	18
Interpretation And Conclusions.....	18
Recommendations .....	19
Certificate Of Qualification .....	22

## ILLUSTRATIONS

FIGURE 1 – Location Plan of the McFinley Property .....	2
FIGURE 2 – Claim Location Plan of the McFinley Property .....	4
FIGURE 3 – General Geology of the McFinley Property.....	11
FIGURE 4 – Aerogeophysical Plan of the McFinley Area .....	12
FIGURE 5 – Schematic Projection, McFinley Shaft Area .....	14

## APPENDICES

APPENDIX 1 – Listing of References on the McFinley Red Lake Property.....	20
---	----

## SUMMARY

This report on the McFinley Gold Project of Rubicon Minerals Corporation (Rubicon) has been prepared by G.M. Hogg, P. Eng., who is experienced in the project area. Central to the project is the McFinley Red Lake property lying in Bateman Township of the Red Lake District in northwestern Ontario about six kilometers north of the operating Campbell and Dickenson gold mines of Placer Dome and Goldcorp. It is accessible via secondary road.

The McFinley Property (also referred to as the "McFinley Gold Project") was optioned by Rubicon from Dominion Goldfields Corporation in January, 2002, that company having acquired it from McFinley Red Lake Mines Limited through foreclosure. At this time Dominion Goldfields title is secured on the water covered Licences of Occupation and one Mining Lease which comprises McFinley property. Rubicon retains the right of first refusal on the adjacent McFinley Peninsula Property which will herein be referred to as the "MP Property" if the title is clarified in favour of Dominion Goldfields Corporation. The property is 716 Acres in area, all of which is covered by the waters of East Bay of Red Lake.

McFinley Red lake Mines carried out an extensive but localized evaluation program in the northern part of the adjacent McFinley peninsula (MP Property) during the 1980's. This included over 200,000 feet of diamond drilling, underground development on three levels from a 428 foot vertical shaft, and the construction of a test milling facility capable of processing 150 tons per day. A bulk sampling operation was in progress on closure of the operation in the early 1990's.

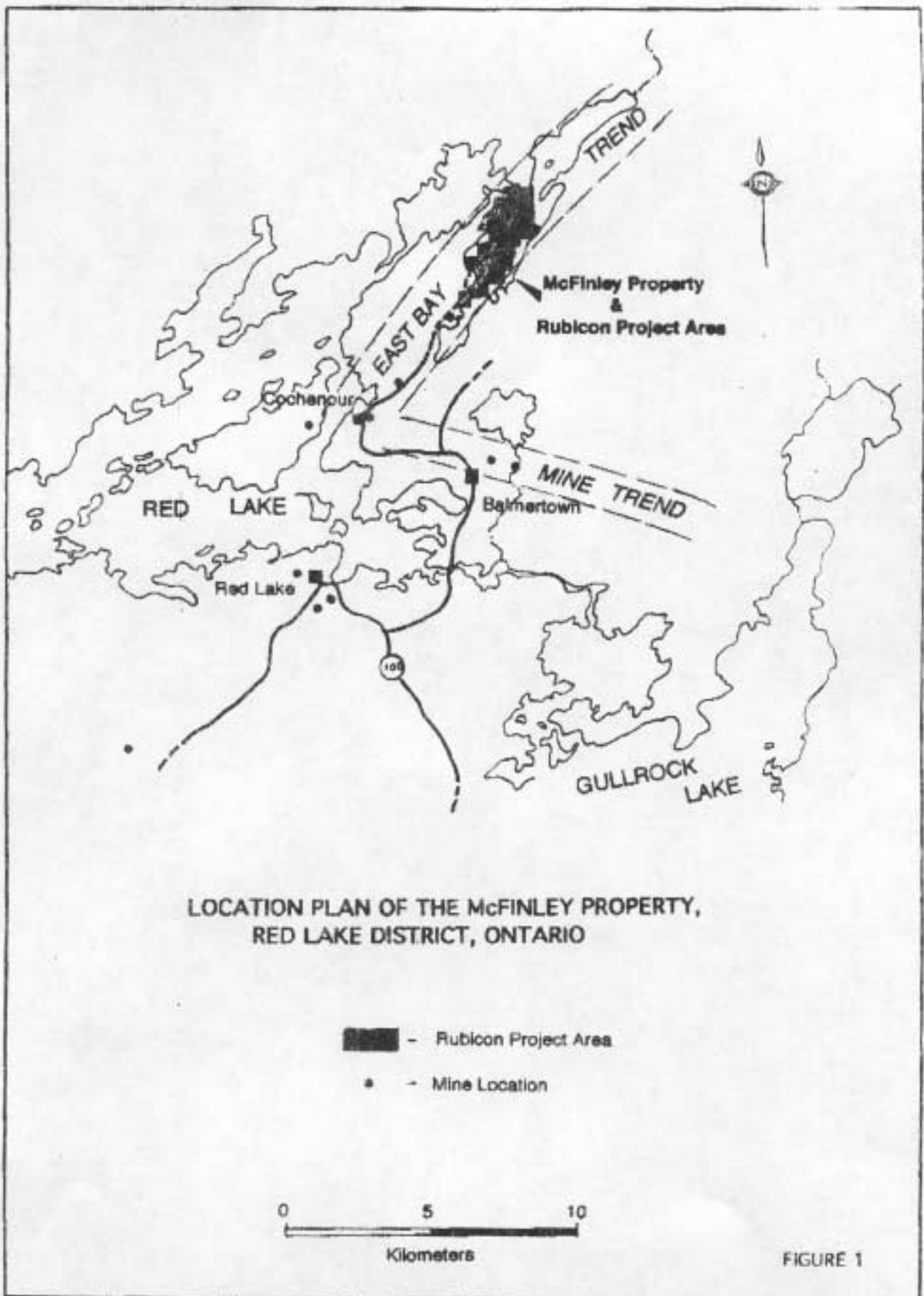
The mineralized system under evaluation consisted of extensive auriferous zones and cherty units within a metasedimentary/volcanic complex, and auriferous veining in a biotitic quartz carbonate unit which occurs at the contact of the complex and underlying ultramafic talc chlorite schist. This system bears strong geological similarity to those of nearby Campbell and Dickenson mines. In the area evaluated an Inferred Mineral Resource of 334,007 tons at a grade of 0.20 oz.Au/ton is estimated to be present to a depth of 400 feet. Deeper drilling has shown the system to extend to a depth of at least 1,700 feet and has reported excellent gold values.

This system in itself does not lie within the McFinley Property holdings of Rubicon at present, but past exploratory work has shown it to extend to the north into water-covered areas. As such, it presents an attractive exploration target for Rubicon. As well, auriferous zones are known to occur within the talc chlorite schist in water-covered areas in the vicinity, and these remain to be explored.

To the south the adjoining Abino property, currently controlled by Goldcorp Inc., is known to contain extensive zones of mineralized auriferous veining within granodiorite. These lie at the contact and within talc chlorite schist units which form a second belt lying to the east of the metasedimentary/volcanic belt and extending in a NNE direction into the McFinley property under the waters of East Bay. One such zone was mined by Goldcorp interests in the late 1980's and is known to extend in strength to within a few hundred feet of the McFinley Property. This mineralized locus constitutes a very attractive exploration target for Rubicon which extends in a northerly direction for a distance of 13,000 feet, or 2 kilometers, and is virtually untested.

It is recommended that the initial exploratory work by Rubicon consist of three fences of test holes across East Bay, two drilled in the southern boundary area and one in the central part of the McFinley Property. In the southern property area the prime objective would be to test the northern extension of the Abino mineralized system, and in the central property area to test the extension of both the mineralized McFinley metasedimentary/volcanic belt and the Abino belt in a area indicated by aeromagnetic surveying to be geologically complex.

This work will involve about 18,400 feet of diamond drilling at an estimated cost of \$750,000.



LOCATION PLAN OF THE McFINLEY PROPERTY,  
RED LAKE DISTRICT, ONTARIO

- - Rubicon Project Area
- - Mine Location

0 5 10  
Kilometers

FIGURE 1

## INTRODUCTION AND TERMS OF REFERENCE

This report on the McFinley Gold Project of Rubicon Minerals Corporation (Rubicon) has been prepared by G.M. Hogg, P. Eng., at the request of Mr. Michael J. Gray, Vice-President and Chief Financial Officer of the company.

The McFinley Gold Project (the "McFinley Property") is situated in the Red Lake District, Ontario, and has been inactive since the early 1990's. It is in the process of acquisition by Rubicon as a wholly owned project, pursuant to an option agreement with Dominion Goldfields Corporation ("DGC"), and this technical report is required pursuant to the preparation of the Annual Information Report of the company. The McFinley Property forms an important part of Rubicon's extensive involvement in the Red Lake area.

The McFinley Property contains widespread gold mineralization and offers excellent potential for the occurrence of economically viable gold deposits in a geological environment similar to that of the nearby Campbell and Dickenson mines which are currently operated by Placer Dome and Goldcorp. A previous owner, McFinley Red Lake Mines Limited, carried out a substantial evaluation program on the adjacent McFinley Peninsula Property (the "MP Property") during the 1980's, but this was limited in a real extent and extended only to shallow depths.

The writer is experienced in the Red Lake area having examined and prepared technical reports on several properties therein in the past and acted in the capacity of an independent consulting engineer to McFinley Red Lake Mines Limited from 1983 to 1988. The McFinley and MP Properties were last visited by the writer in 1990, and it has since been inactive.

Considerable data is available on the MP Property and some sources of information are listed in Appendix I of this report. This information is considered of sufficient extent and accuracy for the purposes of this study.

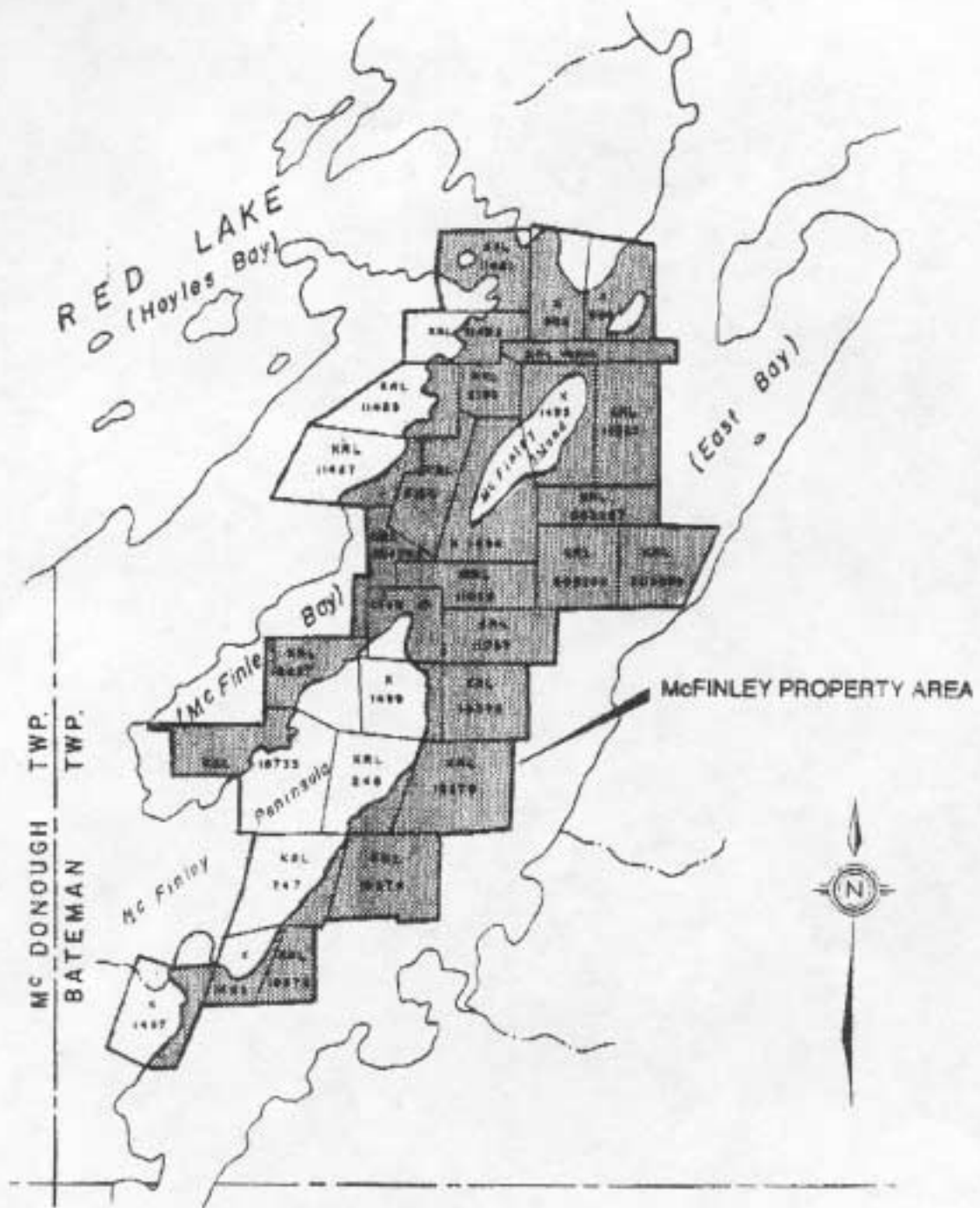
## PROPERTY DESCRIPTION AND LOCATION

The McFinley Property lies in the southwestern part of Bateman Township within the Red Lake Mining Division of northwestern Ontario, Canada. Its location within the Red Lake district is shown in figure 1.

The McFinley Property consists of 25 licenses of occupation and one mining lease comprising a total of approximately 716 acres. All have been surveyed, and the patented land claims embody surface as well as mineral rights.

The McFinley Property had been held by McFinley Red Lake Mines Ltd. and Sabina Enterprises Ltd. since the mid 1970's, and during the 1980's an agreement with Phoenix Gold Mines Ltd. was reached whereby Phoenix could earn a 50 percent interest in the venture. As a result of financial difficulties experienced by the owners during the early 1990's ownership of the water-covered areas included in the Property derived to Domain Goldfields Corporation ("DGC"), a private company through a foreclosure process. As well, DGC may retain certain lien rights to the land areas of the MP Property but this matter remains to be resolved. For the most part the mining facilities installed on the MP Property under the Sabina-McFinley-Phoenix partnership during the 1980's remain in place.

In January, 2002, Rubicon finalized an option agreement with DGC whereby it may earn a 100 percent interest in the McFinley Property (water-covered areas) with the right of first refusal on the



CLAIM LOCATION PLAN, McFINLEY PROPERTY  
BATEMAN TOWNSHIP, ONTARIO

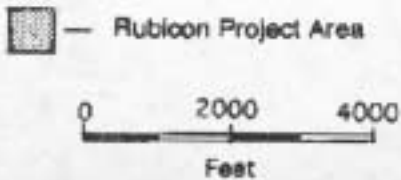


FIGURE 2

adjacent MP Property (land areas) if acquired by that company. The terms of this option agreement are as follows:

1. Rubicon has paid to DGC C\$800,000 and issued 260,000 common shares of the company to DGC. These securities are subject to a holding period which extends to May 30, 2002.
2. Rubicon will carry out \$US 325,000 in exploration work on the McFinley Property before September 30, 2003. Thereafter it will spend \$US 325,000 in exploration in each of the following three years for a total of \$US 1,000,000.
3. Beginning in January, 2004 Rubicon will make advance royalty payments to DGC of \$US 50,000. These payments will be capped at \$US 1,000,000.
4. DGC will receive a 2 percent net smelter return royalty on production from the McFinley Property, one quarter of which may be purchased by Rubicon for \$US 675,000. Rubicon will also retain the right of first refusal on the purchase of the remaining 1.5 percent net smelter return royalty.
5. In the event that a production decision is reached on the McFinley Property, following a positive bankable feasibility study, Rubicon will make an additional advance royalty payment of \$US 675,000 to DGC. All advance royalties paid will be credited against production royalties which may become due.
6. Rubicon retains the right of first refusal on the purchase of the land areas of the McFinley adjacent MP Property should they be acquired by DGC.

This option agreement between two parties was closed January 30, 2002.

A claim location plan of the McFinley Property area is shown in Figure 2, and the included licenses of occupation are listed in the following tabulation:

McFINLEY LICENCES OF OCCUPATION AND MINING LEASE

**LICENCES OF OCCUPATION**

<u>Licence#</u>	<u>Description</u>	<u>Township</u>	<u>Anniv. Date</u>	<u>Hectares</u>
3186	KRL2155	Bateman	1945-Aug-01	9.9153
3187	KRL2156	Bateman	1945-Aug-01	13.678
3289	K1498	Bateman	1945-Oct-01	11.048
3290	K1499	Bateman	1945-Oct-01	2.428
3370	K1493	Bateman	1946-Mar-01	5.018
3371	K1494	Bateman	1946-Mar-01	18.737
3372	K1495	Bateman	1946-Mar-01	10.117
3380	K1497	Bateman	1946-Mar-01	6.111
3381	KRL246	Bateman	1946-Mar-01	4.330
3382	KRL247	Bateman	1946-Mar-01	4.532
10830	KRL11038-39	Bateman	1947-Jan-01	28.672
10499	K11487	Bateman	1941-Nov-01	5.738
10834	KRL11031	Bateman	1947-Jan-01	17.887
10835	K954 (rec. as KRL18152)	Bateman	1947-Jan-01	9.267

10836	K955 (rec. as KRL18515)	Bateman	1947-Jan-01	9.955
10952	KRL18514	Bateman	1947-Oct-01	17.478
11111	KRL18735	Bateman	1950-Jan-01	12.226
11112	KRL18457	Bateman	1950-Jan-01	10.967
11114	KRL18373	Bateman	1950-Jan-01	7.734
11115	KRL18374	Bateman	1950-Jan-01	19.688
11116	KRL18375	Bateman	1950-Jan-01	22.869
11117	KRL18376	Bateman	1950-Jan-01	15.018
10495	KRL11483	Bateman	1941-Nov-01	6.718
10496	K11482	Bateman	1948-Nov-01	5.637
10497	K11481	Bateman	1941-Nov-01	14.148
				<b>289.916</b>

### MINING LEASE

<u>Lease#</u>	<u>Description</u>	<u>Township</u>	<u>Anniv. Date</u>	<u>Hectares</u>
104721	KRL503297 et.al.	Bateman	1986-Nov-01	56.033

All licenses of occupation and the mining lease are in good standing, and are subject only to annual renewal through payment of taxes. Title to the McFinley Property are registered to DGC in the form of Licenses of occupation and one mining lease. The lease also includes the water-covered unpatented mining claims which have sufficient work on record to satisfy assessment work requirements of the Ontario Mining Act. As noted, clear title to the MP Property (- land areas) has not been established as yet.

### **ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The Property is accessible via fifteen kilometers of road from Balmertown, this running westerly to the village of Cochenour and thence in a northerly direction to the McFinley peninsula. This road is paved as far as Cochenour and gravel surfaced thereafter. Balmertown itself and the nearby airport are linked to the town of Red Lake and Highway 105 by about 10 kilometers of paved road. Situated on East Bay, the McFinley Property is also easily accessible via the waters of Red Lake.

The McFinley Property is 100 percent water-covered, with the adjacent the land areas including the McFinley Peninsula and some islands comprising the MP Property. These are subdued topographically, locally swampy covered with spruce, poplar and birch growth, and exhibit moderate outcrop exposure particularly along shorelines.

The area offers services, a labor pool and infrastructure suitable to the support of mineral exploration and mining operations. An electric power transmission line extends to the Abino Property of Goldcorp which adjoins the McFinley Property to the south, a distance of about 2 kilometers from the McFinley shaft. It will be noted that in winter months road clearance extends only a short distance north of the village of Cochenour.

## HISTORY

As a note to the reader, the author has described the history of the McFinley Property and the adjacent MP Property together here for clarity as both properties were at one time part of a larger property. It is emphasized that Rubicon does not hold an interest in the MP Property for which a resource is referenced.

A brief summary of work conducted on the McFinley Property alone, is provided at the end of this section.

### **Overall History of MP Property & McFinley Property**

The original McFinley claims were staked in 1922 to cover a high grade silver occurrence on the McFinley peninsula, the first mineral prospect of record in the Red Lake area. Shortly afterward gold was discovered in the vicinity of the Town of Red Lake attracting prospectors into the area, and subsequently several gold mines were developed in the district.

Among these were the profitable Cochenour Willans and nearby MacKenzie Red lake Mines, lying about 7 kilometers SSW of the McFinley Property, which were brought to production during the mid to late 1930's. Interestingly, the Cochenour vein systems lie within a volcanic/sedimentary complex with associated ultramafics, while the MacKenzie veins occurred in sheared granodiorite and diorite. The currently operating Campbell and Dickenson gold mines further to the east did not attain production until the late 1940's and their vein systems occur in a geological environment similar to those of Cochenour. Economically significant gold concentrations at the Campbell and Dickenson mines occur at depth, however, accounting for their later discovery and development.

Early work on the McFinley Property consisted of trenching, sampling and very limited shallow drilling by McCallum Red Lake Mines Ltd. Wide spread but erratic gold mineralization was noted as present in cherty metasediments on the McFinley peninsula and the island to the north, and occurrences were drilled as part of the Wartime Minerals Evaluation program during the early 1940's. McFinley Red Lake Gold Mines Ltd. acquired the Property in 1944 and carried out a 48,548 foot drilling program, largely on the McFinley peninsula. In 1956 Little Long Lac Gold Mines sank a 423 vertical shaft on claim KRL 246 and completed 1,358 feet of exploratory underground development on two levels. This operation was terminated in 1957, and no further work was done on the Property until 1974.

In 1974 Sabina Enterprises undertook a drilling program on the Property completing 25 holes comprising approximately 10,000 feet of drilling. In so doing it established a 60 percent interest in the Property, the remaining 40 percent retained by McFinley Red Lake Mines. Through 1981-83 under the management of Sabina and McFinley Red Lake Mines a magnetic/electromagnetic geophysical survey over the McFinley peninsula area was completed, and some surface bulk sampling as well as 10,688 feet of surface drilling carried out.

In 1984 an agreement with Phoenix Gold Mines Ltd. was concluded to partially finance the opening of the McFinley shaft and carry out underground evaluation of mineralized zones in the northern peninsula area by Sabina/McFinley interests. This program, at an estimated cost of \$6,114,000, commenced in September, 1984, and J.S. Redpath Ltd. was engaged to design and oversee construction and underground development operations. In the mean time surface drilling operations were continued and an additional 69 holes comprising 34,870 feet of drilling were completed.

Underground operations in the initial phase of the evaluation process included a total of 1,570 feet of drifting and crosscutting on the 150' and 400' levels. In addition 80 underground drill holes totaling 6,000 feet were completed. However, in February, 1985, after the expenditure of approximately

\$4,700,000 on the project, funding difficulties under the Phoenix agreement were experienced and the project was placed on temporary standby.

As noted a considerable amount of mineral processing and metallurgical test work has been carried out on the adjacent MP Property, all from samples taken from the shaft area which is not part of the McFinley Property held by Rubicon.

The original metallurgical test work was performed by Lakefield Research during the mid-1980's, and later bulk sampling operations were carried out by McFinley Red Lake Mines at their facilities which were installed at the Property. The McFinley Red Lake Mines operations were guided by a reputable and experienced consulting engineer, C. Lendrum, P.Eng. The relevant records are presumably held by a trustee which is unknown to the writer.

Operations resumed in June, 1985 and by May, 1986 an additional 3,727 feet of drifting and crosscutting had been carried out on the 150' and 400' levels and 23,300 feet of underground drilling completed. An extensive chip sampling program had also been undertaken and 30 feet of raising done for sampling purposes.

All resource estimates refer to the shaft area of the MP Property where underground development and extensive sampling were carried out; it is emphasized that Rubicon does not hold this ground.

The last estimate for the MP Property with which the writer has some familiarity was completed by the mine staff in 1986. It was developed using underground sampling results augmented with closely spaced drill hole data where openings for sampling were not available. Standard methods of resource block development were employed to a depth of 400 feet, and an in-place grade calculated on the basis of sampling information. The estimate was as follows:

Mine Location	Zone	Tons	Grade (oz. Au/ton)
North Shaft Area	FWC-3	3,875	0.50
"	C Zone	10,520	0.87
South Shaft Area	FWC-1 & 2	30,600	0.24
"	C-2	128,700	0.11
"	C-3	36,562	0.19
"	WL Zone	10,500	0.49
"	403 Zone	5,000	0.80
"	BX Zone	2,000	0.84
"	D Zone	106,250	0.15
<b>Total Estimated Resource</b>		<b>334,007</b>	<b>0.20</b>

Under the standards of reserve and reserve definition now set forth by National Instrument 43-101 this must be classed as an Inferred Mineral Resource. Considering the large amount of sampling and assay data involved in its development this may appear to warrant a higher classification, but as the bulk sampling program is incomplete the degree of confidence in indicated assay values does not allow consideration on an economic basis.

Additional drilling to greater depths later tested the mineralized system to a depth of about 1,700 feet below surface in the shaft area, and on the basis of these results the resource estimate was increased to 890,000 tons at an in-place grade of 0.19 oz.Au/ton. However, as the deeper holes were widely spaced zonal dimensions and continuity below the 400' Level were not established to the degree now necessary to be considered in the Resource category.

Nonetheless, drill hole 86-6 drilled in 1986 at a point 500 feet south and 500 feet west of the shaft at a dip of -85°E is confirmatory. It reached a depth of 1,600 feet and ended in underlying talc chlorite schist, reporting the following intersections:

- 11.26 oz.Au/ton over 1.0' at a hole depth of 752 feet.
- 0.55 oz.Au/ton over 15.0' at a hole depth of 963 feet.
- 0.63 oz.Au/ton over 14.0' at a hole depth of 1,163 feet.
- 0.13 oz.Au/ton over 7.2' at a hole depth of 1,245 feet.

Based on this work four main mineralized zones were identified in the area explored, these estimated to contain a resource of 153, 250 tons grading 0.27 oz.Au/ton and 2.61 oz.Ag/ton to a depth of 400 feet. However, the erratic nature of gold mineralization in these dominantly lenticular cherty zones clearly introduced a strong "nugget effect" on sampling and assaying results. Later during 1986 the McFinley engineering staff recalculated the resource estimated above the 400' level as 334,007 tons at an in-place grade of 0.20 oz.Au/ton. At this juncture it was decided by McFinley Red Lake Mines and Sabina to proceed with a 15, 000 ton bulk sampling program at the Property.

To this end a test milling facility with a capacity of 150 tons per day was constructed which could readily be expanded to mill higher tonnages. As well, additional development was carried out on the existing 150' and 400' levels and the new 275' level, and a ventilation raise driven from the 400' level to surface. Additional sampling, metallurgical testing and drilling were also completed, and mine buildings for an office and accommodation of the mine staff prepared. This preparatory work was completed in 1988, and bulk sampling operations commenced later that year. Electric power was supplied by diesel generators, however, and some difficulty was encountered in balancing the supply between milling and mining operations which in turn led to some delays.

At this point mine development in drifting, crosscutting and raising totaled 12,600 feet on three levels, and on the basis of deeper drilling the resource estimate to a depth of 1,700 feet was increased to 890,000 tons at an in-place grade of 0.19 oz.Au/ton.

As the bulk sampling operation proceeded into 1989 it indicated that a head grade in the range of 0.25 oz.Au/ton was being maintained from the openings which had been prepared. This was encouraging, but the income derived was insufficient to satisfy debt requirements and operating costs. Accordingly the operation had to be closed prior to completion of the planned bulk sampling program, and efforts undertaken to refinance the project. Ultimately this did not prove possible and action was taken by the creditors to acquire the Property in settlement. The Property has since remained idle.

Most of the work carried out under the aegis of McFinley Red lake Mine Ltd. was concentrated within a small area in the vicinity of the shaft on the McFinley Peninsula. Indeed, exploration and evaluation efforts have been largely restricted to relatively shallow depths over only about 14 percent of the projected strike length of this very well mineralized system which extends through land and water-covered areas of the Property (see figure 3). However, considering the geological similarity of this mineralized system to those of the Campbell and Dickenson mines coupled with ease of accessibility this concentration of effort is understandable.

During the McFinley/Sabina evaluation program which lasted from 1982 to 1989 approximately \$18,675,150.00 was spent in exploration and construction operations on the McFinley Property. The bulk of this expense relates, of course, to the evaluation of the area in proximity to the shaft on the McFinley peninsula. The costs incurred in the course of this work may be itemized as follows:

Mining Equipment & Camp at cost .....	\$1,518,000
Bulk Sample Plant .....	\$3,372,450

Road Construction .....	\$300,000
Tailing Disposal Area .....	\$250,000
Powerline Preparation .....	\$76,000
Effective Exploration Costs .....	<u>\$13,158,700</u>
Total	\$18,675,150

**History of the McFinley Property alone (Optioned by Rubicon)**

During 1944 to 1946 McFinley Red Lake Gold Mines Limited conducted a ground magnetics survey over the lake and conducted 4,877 ft of diamond drilling on the ice (Ferguson).

Some time during 1946 to 1957, a series of diamond drill holes with the pre-fix "M" were drilled. Of these holes four were drilled from the ice (M74, 75, 76, 77) and ten holes were drilled from land but a portion of each hole was under the lake (M-30, 35X, 36X, 43, 57, 59, 73, 84, 92, 93) for an estimated total of approximately 5,200 feet of diamond drilling.

In 1974, Sabina Industries optioned the property from McFinley Red Lake Gold Mines Limited and conducted ground magnetic and electromagnetic surveys over a portion of the lake. In 1975, one hole was drilled from the ice (S-4-75) and nine holes were drilled from land but partially under the lake (S-6-75, 8, 14, 17, 19, 22, 24, 23) for a total of approximately 2410 feet of diamond drilling.

During 1983, McFinley Mines Ltd., formed through a plan of arrangement between McFinley Red Lake Gold Mines Limited and Sabina Industries, conducted diamond drilling which included two holes drilled from the ice (83-06, 02) and five holes from land for which a portion was under the lake (83-30, 26, 04, 03, 01) for a total of approximately 1900 feet of diamond drilling. In 1984, only about five drill holes drilled from land had a portion of their lengths go under the lake for approximately 220 feet of diamond drilling.

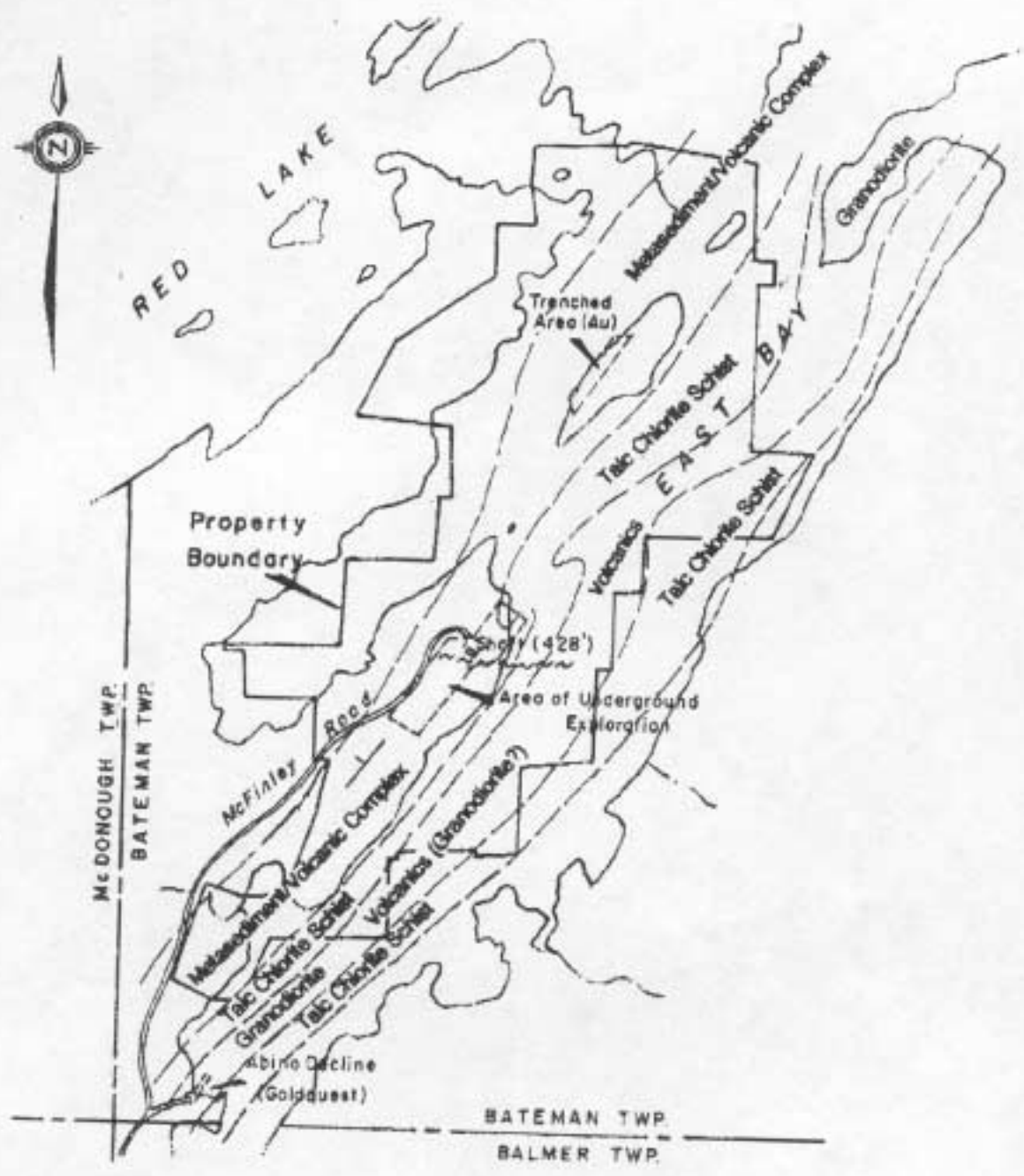
In 2001 Dominion Goldfields Corporation foreclosed on the Licences of Occupation & one Mining Lease and was awarded title to the McFinley Property which covers the lake.

In 2002, Rubicon Minerals Corporation optioned the McFinley Property from Dominion Goldfields Corporation in January and conducted a detailed heli-mag survey of the McFinley Property. Final results from the contractor (Fugro) were pending at the time of writing this report.

**GEOLOGICAL SETTING**

As illustrated in Figure 1 the McFinley Property lies along a NNE-trending belt of highly disturbed intermixed metasediments, basaltic volcanics and ultramafic rocks which are identified as the "East Bay Trend". This belt is traceable in sinuous configuration into the Cochenour Willans mine area to the south, and thence in a SE direction through the Campbell/Dickenson mine area along what is identified as the "Mine Trend".

In the view of the writer this constitutes a continuous and highly disturbed "break" horizon, likely marking an ancient volcanically-active and auriferous paleosurface which was later downfolded and intensely deformed during a period of geosynclinal collapse. This opinion is supported by the strong geological similarities which exist in the McFinley, Cochenour and Campbell/Dickenson areas, the fact that the contained ultramafics appear to be volcanic rather than intrusive origin, and the unusually high frequency of gold occurrence along this locus.



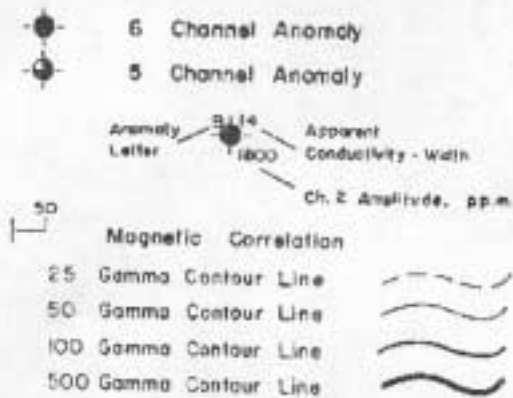
GENERAL GEOLOGY OF THE McFINLEY PROPERTY,  
RED LAKE DISTRICT, ONTARIO

FIGURE 3

Interpretation by G.M. Hogg, P.Eng., May, 2002



### AEROGEOPHYSICAL PLAN OF THE EAST BAY AREA, RED LAKE DISTRICT, ONTARIO



Airborne Electromagnetic and Total Intensity Magnetic Survey, Red Lake Area, Map D, District of Kenora; by Questor Surveys Limited, for the Ontario Geological Survey, Prelim. Map P.1574.

SCALE: 1 : 20,000

FIGURE 4

The general geology of the McFinley Property area as presently interpreted is shown in figure 3. Best known is the belt of intercalated metasediments and basaltic volcanics which strikes in a N 30° E direction through the McFinley peninsula and onto McFinley Island to the north, and within which the underground evaluation program of McFinley Red Lake Mines was carried out. The included units dip from 55° to 75° NW, as does the often irregular contact with the underlying ultramafic talc chlorite schist.

In the shaft area of the adjacent MP Property the sediment/volcanic belt is actually composed of two sub-belts. The most westerly of these contains numerous cherty beds within tuffaceous volcanics and flows and is about 200 feet in thickness. This is followed to the east by a dominantly volcanic interval which is from 200 to 400 feet in thickness, and which lies in contact with the underlying talc chlorite schist. The cherty sediments are considered to represent a sulphide facies of iron formation and are commonly auriferous.

Strike faulting and shearing involving limited displacement are encountered throughout this area, but in the shaft location a westerly-trending crossfault occurs which appears to have displaced the south side about 200 feet to the west. Some narrow and generally comfortable syenitic dike material is also present within the volcanic-metasedimentary system.

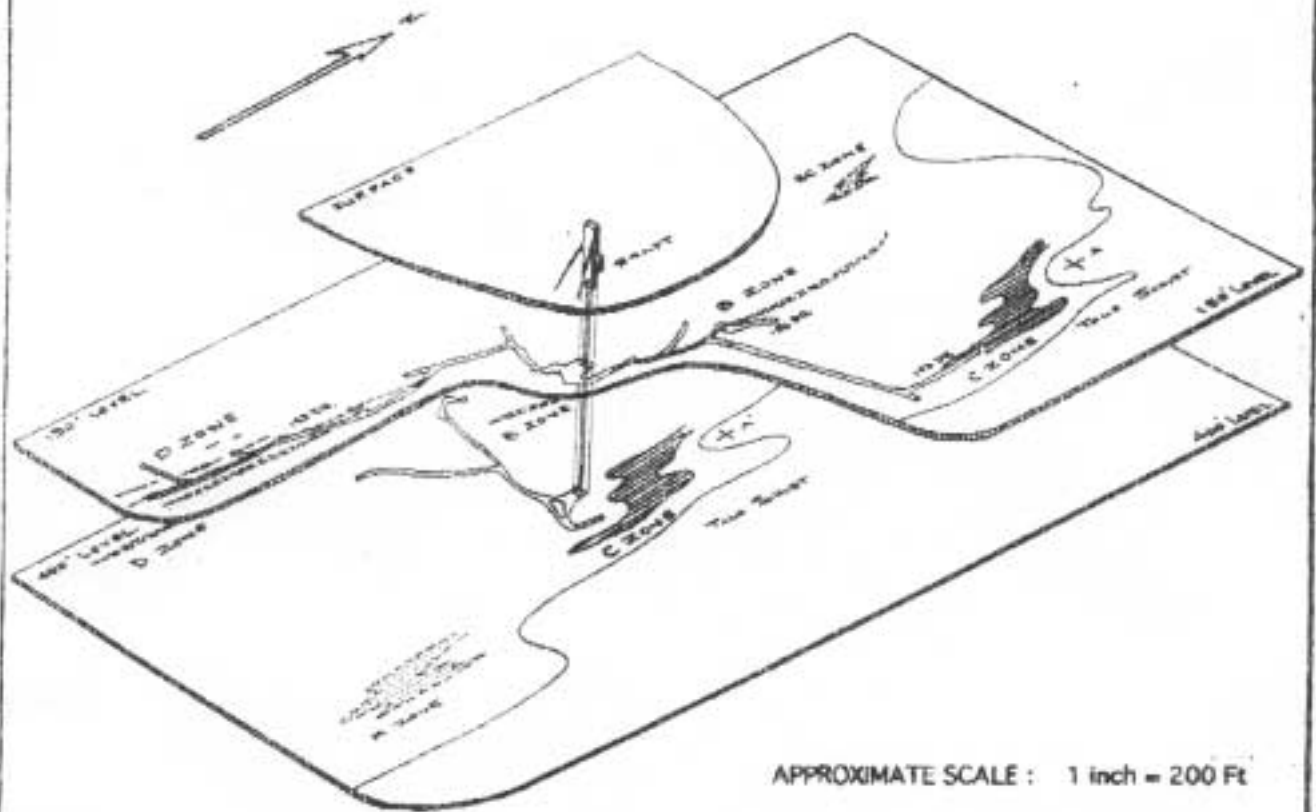
Underlying East Bay, and paralleling the described metasediment/volcanic belt, another distinctive belt from 1,500 to 2,000 feet in width passes through the Property in a NNE direction. Known only the basis for a few drill holes, geological mapping and geophysical data it appears to consist of two ultramafic horizons separated by a dominantly volcanic interval which contains more or less granodioritic intrusive material. On the adjoining Abino Property to the south two extensive granodiorite-hosted auriferous zones are known lying within this sequence, and the northern most of these extends to within a few hundred feet of the McFinley Property.

Geological mapping and exploratory work carried out on the adjacent MP Property suggest a large measure of formational regularity trending in a NNE direction, and quite logically it was assumed that the rocks underlying East Bay would exhibit similar characteristics. However, the results of the Questor aerogeophysical survey performed for the Ontario government in 1978 indicates that this is not the case. The relevant portion of this aerosurvey, derived from O.G.S. map P. 1574, is shown in figure 4. Nonetheless, McFinley Red Lake Mines was heavily committed to the evaluation of the mineralized zones in the northern part of the McFinley peninsula, so virtually no exploration work was carried out on this belt.

In reference to figure 4, the areas of higher magnetic response which would be expected to indicate the presence of obscured ultramafic rocks underlying East Bay are highly irregular, suggesting discontinuity and/or substantial structural deformation. The presence of the adjacent Abino Property mineralized zones in this environment prompted Rubicon to carry out a high resolution aeromagnetic survey following its acquisition of the licences of occupation that comprise the McFinley Property, but this data is under compilation and interpretation (receipt pending) at this time and unavailable for consideration herein.






## **DEPOSIT TYPES**

The mineralized zones which were under evaluation by McFinley Red Lake Mines in the northern part of the McFinley peninsula are currently of relevance to Rubicon operations since the containing metasedimentary/volcanic belt extends into water-covered areas to the north of the peninsula. As well, Rubicon may in due course acquire the land areas of the Property which includes the very well mineralized area in proximity to the shaft.



**SCHEMATIC PROJECTION OF THE McFINLEY SHAFT AREA  
SHOWING THE LOCATION OF WORKINGS AND  
SOME MINERALIZED ZONES**

**LEGEND**

-  Discretized or Sheared vein System, inferred
-  Discretized vein System, probable
-  Linear vein System, defined
-  Linear Vein System, probable
-  Drifting 1986-03

**FIGURE 5**

In the McFinley shaft vicinity two main types of gold concentration occur. The first lies within cherty sedimentary units which contain variable amounts of sulphide mineralization made up of pyrite and lesser amounts of chalcopyrite, sphalerite and arsenopyrite. Gold occurs in native form associated with sulphides and in fractures and minor veining, and is highly erratic in distribution. Higher grade areas within the cherts form lenticular bodies which exhibit good vertical continuity and may extend over lengths of 200 feet or so. Normal zonal widths are in the range of 5 to 10 feet.

The second type consist of similarly erratic native gold mineralization within veining developed in the biotitic quartz carbonate alteration zone which occurs at the contact of the metasediment/volcanic complex with the underlying talc chlorite schist. This deposit type occurs in areas of contact irregularity caused by flexures and/or shearing, and follows the structural locus to depth. The veining is multiple, attains widths of about 5 feet, and may extend over horizontal lengths of 100 to 200 feet.

These deposit types are illustrated schematically in figure 5, the B and D zones of the cherty sediment type, and the C, M and HG zones of the biotitic quartz carbonate type. This particular mineralized system has been traced in considerable detail over a strike length of 2,200 feet by drifting and drilling, a few deeper drill holes have shown it extend to a minimum depth of 1,700 feet below surface in this area. It will not in itself become directly relevant to Rubicon operations until the land areas of the McFinley Property are acquires, of course, but as the mineralized belt extends to the north where it is less well explored duplication is quite possible.

Little exploratory work has been carried out within the ultramafic talc chlorite schist lying to the east of the shaft, but two exploratory holes drilled from land under the waters of East Bay in the shaft vicinity reported substantial gold values associated with shear zones in this environment. One of these, Hole 83-26 was drilled from a point about 400 feet north of the McFinley shaft and reported a value of 0.22 oz.Au/ton in a 20 foot shear zone in talc chlorite schist. Hole M-75, drilled from a point 1,000 feet south of the shaft, reported a value of 1.24 oz.Au/ton over a 2.0 foot core length.

Ultramafic-hosted gold zones have proven economically significant in the geologically similar Campbell and Dickenson mines to the south, and could constitute a third deposit type existing in the vicinity of the McFinley shaft. Insofar as ultramafic rocks extend into water-covered areas in this location they are of immediate relevance in exploratory work to be carried out by Rubicon.

In the northern part of the Abino Property, which adjoins the McFinley Property to the south, Goldcorp interests drove a decline into and produced limited tonnages of ore from an extensive veined zone in granodiorite during the 1980's (see Figure 3). The hosting granodiorite lies in contact with and extends within ultramafic talc chlorite schist which is interpreted to constitute the easternmost of the two ultramafic members of the belt which extends to the north into the McFinley Property under the waters of East Bay.

The Abino deposit is best described as a stockwork of veining within the granodiorite which contains erratic concentrations of native gold, and was estimated at the time to contain approximately 600,000 tons of mineralized material grading 0.25 oz.Au/ton to a depth of 1,000 feet below surface. More recent drilling has confirmed its extension to the north, within a few hundred feet of the McFinley Property boundary, and has reported values as high as 18.11 oz.Au/ton over a core length of 2.0 feet from this zone.

The veined system in this instance may well have formed in zones of fracturing and brecciation developed within the more competent granodiorite in response to shear movement within the less competent ultramafic talc chlorite schist. As this zone likely extends onto the McFinley Property, and may be duplicated in structurally disturbed areas further to the north, this deposit type is of immediate exploration significant to Rubicon. No exploratory work on this belt was carried out by McFinley Red Lake Mines.

## **MINERALIZATION**

As has been noted in the preceding description of the various deposit types within and around the McFinley Property, gold mineralization in the area occurs in a variety of rock types and configurations. In general it can be observed that significant concentrations lie within a few hundred feet of observed that significant concentrations lie within a few hundred feet of ultramafic contacts, and particularly where there are irregularities in the contact and where the containing rocks exhibit a wide contrast in competency.

On the McFinley Property significant intervals from drilling are as follows:

1.24 oz. Au/ton over 2.0 feet  
0.60 oz. Au/ton over 3.0 feet

Gold mineralization of low tenor is persistent in veined and mineralized zones of the adjacent MP property, and in this mode is in intergrowth with light to heavy disseminations of pyrite, arsenopyrite, chalcopyrite and sphalerite. Substantial silver values are commonly present where sulphide content is high.

However, in common with many deposits of the Red Lake district the mineralized zones of the McFinley area often contain course, erratic gold mineralization which occurs along fractures and in subsidiary veining. This introduces a strong "nugget effect" on sampling and assaying results which can be overcome to some extent by applying very extensive and thorough procedures in such operations.

## **EXPLORATION**

Having just recently acquired the McFinley Property, Rubicon has not yet carried out any extensive exploration work thereon. A high resolution aeromagnetic survey has been completed over the McFinley Property, but this is presently under compilation and reporting from Fugro and the results are unavailable. It will, however, refine the magnetic pattern illustrated in Figure 4 and will allow more precise definition of ultramafic distribution and structural features in particular.

In addition, a detailed review of exploration data available on the McFinley Property and the adjacent MP property has been initiated. This includes the records of well over 200,000 feet of diamond drilling as well as surface and underground geological data to which Rubicon has access to a portion of.

## **DRILLING**

No drilling has been performed by Rubicon on the McFinley Property as yet. However, it will be noted that insofar as only the water-covered areas are presently held such operations will be restricted to winter months unless access to land areas can be arranged. The other option Rubicon may be advised to investigate is barge-based drilling which would extend the drill season substantially.

## **SAMPLING METHOD AND APPROACH**

No sampling operations have yet been carried out, but when undertaken methods and procedures should be developed to minimize the "nugget effect" introduced by the erratic nature of gold occurrence known to exist in this area.

## **SAMPLE PREPARATION, ANALYSIS AND SECURITY**

While no new exploratory operations involving sampling have been carried out, the extensive sampling of diamond drill core from both the McFinley Property and MP Property as well as surface and underground openings done by McFinley Red Lake Mines in the past are of particular relevance in the data review by Rubicon which is in progress.

In the experience of the writer mineralized drill core from exploratory holes by previous workers was split in the standard fashion with one half submitted for analysis and the other retained and stored. Complete sections of mineralized core from underground test holes of the adjacent MP Property were sent for analysis. Sludge samples were also taken in exploratory drilling. Face and back sampling in underground openings of the adjacent MP Property was extensive and thorough, involving linear chip sampling across backs and closely spaced ship sampling at close intervals on faces. Mine car sampling was also carried out when mineralized zones were opened.

Historic analytical work was done variously by Bell White Analytical Laboratories, Accurassay and locally by Cochenour Fire Assay Laboratories. Recognizing the erratic nature of gold mineralization fine grinding and thorough mixing of each sample was required of the assayer. Routine rechecking procedures were followed by these laboratories, but in the case of underground rock samples from exposed mineralized zones on the adjacent MP Property each assay was rechecked, often by another laboratory.

No unusual security procedures were imposed in sample storage or transfer.

## **DATA VERIFICATION**

Again in respect to existing data which is now under review by Rubicon all work performed while the writer was associated with the Property was carried out by reputable and fully qualified consultants, contractors and mine staff. Accordingly, the derived information is accurate and reliable.

## **ADJACENT PROPERTIES**

### **Abino Property**

To the south, the adjoining Abino property, currently controlled by Goldcorp Inc., is known to contain extensive zones of mineralized auriferous veining within granodiorite. These lie at the contact and within talc chlorite schist units which form a second belt lying to the east of the metasedimentary/volcanic belt and extending in a NNE direction into the McFinley property under the waters of East Bay. One such zone was mined by Goldcorp interests in the late 1980's and is known to extend in strength to within a few hundred feet of the McFinley Property. This mineralized locus constitutes a very attractive exploration target for Rubicon which extends in a northerly direction for a distance of 13,000 feet, or 2 kilometers, and is virtually untested.

The information regarding the adjacent Abino Property, which is owned by Goldcorp, is published information released by that Company and its predecessors in the past.

### **MP Property**

The adjacent MP Property, which lies on either side of the McFinley Property, consists of McFinley Peninsula and McFinley Island. Together, the MP Property and the McFinley Property have

historically been part of one larger property. Because the work on the MP Property is intertwined with that of the McFinley Property, the author has described the MP Property under the heading "History".

### **MINERAL PROCESSING AND METALLURGICAL TESTING**

There has not been mineral processing or metallurgical testing on the McFinley Property optioned by Rubicon.

### **MINERAL RESOURCE AND RESERVE ESTIMATES**

There are no mineral resource and reserve estimates for the McFinley Property optioned by Rubicon.

### **OTHER RELEVANT DATA AND INFORMATION**

The writer is aware of no further information of relevance concerning the McFinley Property.

### **INTERPRETATION AND CONCLUSIONS**

Rubicon has acquired the promising McFinley gold Property in the productive Red Lake District of northwestern Ontario. Geologically it is similar to the nearby Campbell, Dickenson and Cochenour properties that have seen sizeable production of high grade gold ore, and appears to lie along the northern extension of the same highly disturbed litho-structural belt which hosts their deposits.

Much of past evaluation work has been conducted on the adjacent MP Property (not under option to Rubicon) has been concentrated at shallow depths on the vicinity of a 428 foot vertical shaft in the northern part of the McFinley peninsula. Rubicon retains the right of first refusal on the MP Property should they be acquired by DGC Corporation. As such, an economically viable gold mining operation could likely be developed in this location.

There is a strong possibility that well-mineralized gold bearing zones similar to those occurring on the adjoining Abino Property will be found to extend into the southern part of the McFinley Property, this now held by Rubicon. The Abino zones consist of auriferous vein systems lying within granodiorite and are geologically quite different from those present in the McFinley shaft area. An initial exploration drilling program will be recommended to determine if extensions do exist and to gain geological information in this unexplored area of the McFinley Property.

A similar exploratory drilling program in the water-covered central part of the McFinley Property to gain geological information across this virtually unexplored area is considered justified. On the basis of aeromagnetic data this location is known to be geologically complex, and mineralized metasediments and ultramafic talc chlorite schist are known to be present in proximity to the adjacent McFinley peninsula (part of the MP Property). As well, mineralized granodiorite of the Abino type may be present in the belt to the east.

Should the MP Property be acquired by Rubicon, the evaluation of the shaft area and the extensive mineralized horizon within which it is contained must be addressed. In this eventuality it is suggested that the mineralized system in the vicinity of the shaft be tested to greater depths by surface drilling prior to other undertakings.

## RECOMMENDATIONS

Holding title to the McFinley Property through the option agreement with DGC, Rubicon is able to proceed with the exploration of the important East Bay area lying to the east of the McFinley peninsula, an area on which little information is available. It is imperative that its geological nature be determined, and this understanding can most effectively be gained by drilling approximate east-west fences of test holes across the complete section. This work must be carried out during winter months when the waters of East Bay are ice-covered unless barge-based drilling is determined to be feasible.

There is little doubt that the first fences to be drilled should be in the extreme southern part of the Property where it appears that mineralized zones within granodiorite will be found to extend northward from the Abino Property onto the McFinley claims.

Two fences in this area are suggested, one along the southern boundary of Licenses of Occupation 3370 and 11114, and one along the southern boundary of claim 11115 (see figure 2). Each fence will require four 800 foot holes to complete the section, these drilled at a dip of -50°E at intervals of 500 feet.

This part of the program will comprise a total of 6,400 feet of drilling and the cost is estimated as follows:

6,400 feet @ \$30.00 per foot.....	\$ 192,000
Mob./Demob. Cost, Road Clearing.....	10,000
Supervision, Logging, Surveying.....	20,000
Sampling, Assaying.....	10,000
Compilation.....	<u>5,000</u>
Subtotal.....	\$ 237,000
Contingencies (@10%).....	<u>23,700</u>
Total Estimated Cost.....	\$ 260,700

The drilling of a more extensive fence of exploratory drill holes is suggested in the central part of the McFinley Property, this extending in an easterly direction to the north of the McFinley peninsula over the License of Occupation 10830 and Mining Lease 104721 (see Figure 2). This area is indicated to be geologically complex by the aerogeophysical plan shown in Figure 4, and limited drilling completed in the past between McFinley peninsula and McFinley Island has shown this area to be auriferous. The precise location of this fence should be determined when the interpretation of the recently completed high resolution aeromagnetic survey becomes available.

This part of the exploratory drilling program will consist of 12 to 16 holes drilled at the same orientation, spacing, and to similar depths as those on the fences to the south. It will comprise about 12,000 feet of drilling at an approximate cost of \$500,000.

Respectfully Submitted,

*"G.M. Hogg"*

---

G.M. Hogg, P.Eng.

Toronto, Ontario  
May 17, 2002

## APPENDIX I

### Listing of References on the McFinley Red Lake Property

- Horwood, H.C.            Geology and Mineral Deposits of the Red Lake Area; O.D.M. Annual Report, Vol. 49, Part 2, 1940.
- Newman, W.R.            Geological Report on the McFinley Red Lake Gold Mines Limited; December, 1946.
- Ferguson, S.A.            Geological Report on the South Half of Bateman Township; O.D.M. Geological Report No. 6, 1962.
- Ferguson, S.A. et al      Gold Deposits of Ontario; O.D.M. Mineral Resources Circular No. 13, 1971.
- Mongeau, R.J.            An Assessment of the Mineral Economic Potential of the McFinley Gold Property, Bateman Township, Red Lake Area, Kenora Mining Division, Ontario; Nov. 17, 1974.
- MacLean, P.C.            The 1976 Exploration Programme, Abino Gold Mines Ltd.; July 7, 1976.
- Questor Surveys Ltd.     Airborne Electromagnetic and Total Intensity Magnetic Survey, Red Lake Area, District of Kenora; O.G.S. Preliminary Map 1574 (Bateman Twp.), 1978.
- Wetmore, D.             Trenching & Initial Bulk Sampling, McFinley Property, Red Lake, Ontario; James Wade Engineering Ltd., May 20, 1981.
- Wyslozil, D.M.            Investigation of the Recovery of Gold and Silver from Samples Submitted by Wade Engineering Ltd., Progress Report No. 1; Lakefield Research of Canada Limited, July 29, 1981.
- Betz, J.E.                Report on the Electromagnetic and Magnetic Surveys, McFinley Red Lake Property, Township of Bateman, District of Kenora, Ontario; July, 1982.
- Hogg, G.M.                A Report on the McFinley Red Lake Gold Property of Sabina Industries Ltd. and McFinley Mines Ltd., Bateman Twp., Ontario; Aug. 29, 1983. (Addendum, Sept. 29, 1983).
- Hogg, G.M.                Summary Report on the Evaluation of the McFinley Red Lake Property, Bateman Twp., Ontario to February 28, 1985; March 5, 1985.
- Wilson, G.C.             Petrographic Examination of McFinley Samples; Rept. Prepared by Turnstone Geol. Services Ltd., February 19, 1986.
- Hogg, G.M.                A Report on the Evaluation of the McFinley Red Lake Shaft Area, Bateman Township, Ontario, during 1985-86; June 26, 1986.
- Ashford, G.                Study on Gold Recovery from Sample Submitted by McFinley Red Lake Mines Ltd.; Lakefield Research, July 14, 1986.

- Hogg, G.M. A Report on 1986-87 Operations on the McFinley Red Lake Property, Bateman Township, Ontario; April 8, 1988.
- Postle, J.T. Review of Mining Aspects of the McFinley Red Lake Project; Communication prepared for A.C.A. Howe International Inc. by Roscoe Postle Associates Inc., September 7, 1988.
- Hogg, G.M. Appraisal of Value, McFinley Red Lake Property; Internal Report, May 31, 1989.

Miscellaneous drill logs, plans sampling and assay records, and Reports retained in the records of McFinley Red Lake Mines Ltd.

G.M. HOGG & ASSOCIATES LTD.

28 THOMPSON AVENUE  
TORONTO CANADA

TELEPHONE:  
(416)288-3255

**CERTIFICATE OF AUTHOR**

I, Glen M. Hogg, P.Eng. do hereby certify that:

1. I am currently the principal of the firm of G.M. Hogg & Associates Ltd. with an office located at 28 Thompson Avenue, Toronto, Ontario, Canada, M8Z 3T3.
2. I graduated with the degree of Master of Science in Geological Sciences from Queen's University, Kingston, Ontario, in 1952.
3. I am a member of the Canadian Institute of Mining and Metallurgy, the Prospectors and Developers Association of Canada, and Professional Engineers Ontario.
4. I have worked as a geologist for 50 years since my graduation from University.
5. I have read the definition of "qualified person" set out in National Instrument 43-101, and certify that by reason of my education, affiliation with professional associations and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of all sections of the report titled "A Report On The McFinley Red Lake Project of Rubicon Minerals Corporation" relating to the McFinley Red Lake Property. I visited this Property many times during the 1983 to 1989 period in the capacity of consulting engineer to McFinley Red Lake Mines Limited that owned and was engaged in the evaluation of the Property.
7. I have had prior involvement with the Property that is the subject of the Technical Report. The nature of my prior involvement is the provision of consulting services to McFinley Red Lake Mines Limited in respect to ongoing exploration and development operations on that Property.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which make the Technical Report misleading.
9. I am independent of the issuer applying all the tests in Section 1.5 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 17<sup>th</sup> day of May, 2002.

*"G.M. Hogg"*

---

Signature of Qualified Person

Glen M. Hogg

---

Name of Qualified Person

**G.M. HOGG & ASSOCIATES LTD.**

28 THOMPSON AVENUE  
TORONTO CANADA

TELEPHONE:  
(416)288-3255

**CONSENT OF AUTHOR**

TO: British Columbia Securities Commission  
TSX Venture Exchange

I, Glen M. Hogg, P.Eng., do hereby consent to the filing, with the regulatory authorities referred to above, of the Technical Report titled "A Report On The McFinley Red Lake Project of Rubicon Minerals Corporation", dated May 17, 2002, and to the written disclosure of the Technical Report and of extracts from or a summary of the Technical Report in the written disclosure of Rubicon Minerals Corporation being filed.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report, or that the written disclosure in the Information Report of Rubicon Minerals Corporation contains any misrepresentation of the information contained in the Technical Report.

Dated this 17<sup>th</sup> day of May, 2002.

*"G.M. Hogg"*

\_\_\_\_\_  
Signature of Qualified Person

Glen M. Hogg

\_\_\_\_\_  
Name of Qualified Person