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A.F. Lichtblau, C. Ravnaas, C.C. Storey, P. Hinz and J. Bongfeldt

2009

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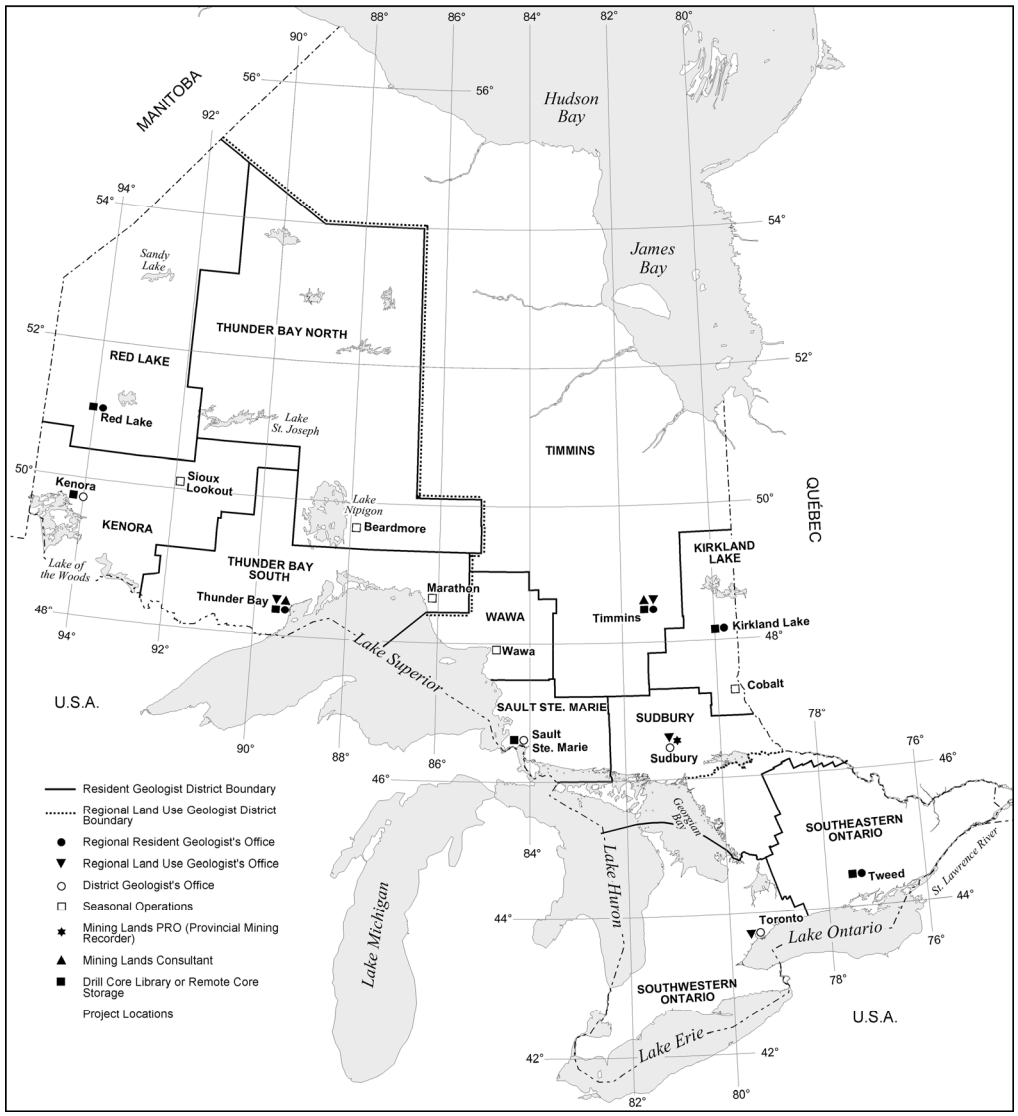

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ONTARIO GEOLOGICAL SURVEY

RESIDENT GEOLOGIST PROGRAM

REPORT OF ACTIVITIES - 2008

RED LAKE REGIONAL RESIDENT GEOLOGIST REPORT

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A.F. Lichtblau[1], C.C. Storey[2] and P. Hinz[3]

[1]Regional Resident Geologist, Red Lake–Kenora, Resident Geologist Program, Ontario Geological Survey

[2]District Geologist, Red Lake District, Resident Geologist Program, Ontario Geological Survey

[3]Northwest Regional Land Use Geologist, Ontario Geological Survey

INTRODUCTION

Gold was the only commodity mined in the Red Lake District in 2008. Total yearly production decreased by approximately 8590 ounces Au (Table 1; Figure 1).

Continued advances in mineral development on gold properties in the Red Lake District have resulted in 3 projects receiving Advanced Exploration status: 1) Rubicon Minerals Corp. Phoenix project in the Red Lake greenstone belt; 2) Gold Eagle Mines' Bruce Channel discovery; and 3) Claude Resources Ltd.'s Madsen Mine project; work on Tribute Minerals Inc.'s Arrow base metal deposit in the Confederation Lake greenstone belt continued as an Advanced Exploration project.

Table 1. Mine production and reserves in the Red Lake District in 2008.

Mine	Production in 2007		Production in 2008		Reserves Plus Resources (all categories) at end of 2008	
	Tonnage @ Grade	Total Commodity	Tonnage @ Grade	Total Commodity	Tonnage	Grade
Goldcorp Inc. Red Lake Mine (1)	721 022 tonnes @ 30.90 g/t Au	700 590 ounces Au	765 500 tonnes @ 26 g/t Au	629 200 ounces Au	17 980 000 tonnes	16.45 g/t Au

(1) Goldcorp Inc., Web site, www.goldcorp.com, accessed March 25, 2009.

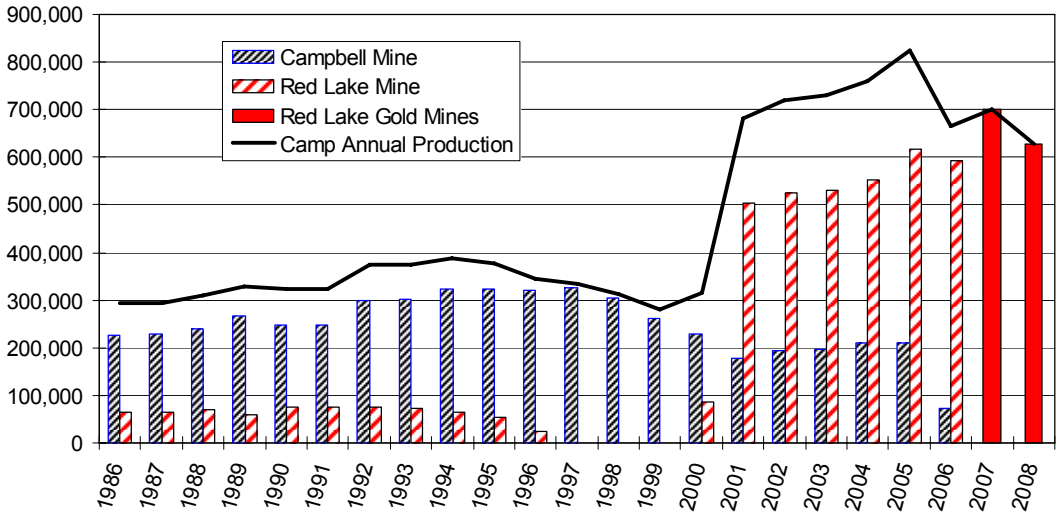

Figure 1. Annual gold production in the Red Lake belt, 1986–2008.
(No production at the Red Lake Mine between 1997 and 1999 due to strike by unionized employees.)

The price of gold showed considerable volatility throughout the year (Figure 2), closing the year with a December average price of US$816, a negligible increase relative to the price (US$803) at year-end 2007 (price information from Kitco®, www.kitco.com).

Claim staking activity in 2008 again showed a steady increase since 2004 (Table 2). Active claim units also increased over previous years; claims are being held in good standing, with a subsequent increase in the number of active units, and decrease in the number of cancelled claims.

During 2008, 40 assessment work and other technical reports were received in the Red Lake Resident Geologist's Office (Table 4). The total value of the work received was $12 226 045 over twice the value of assessment work received in 2007.

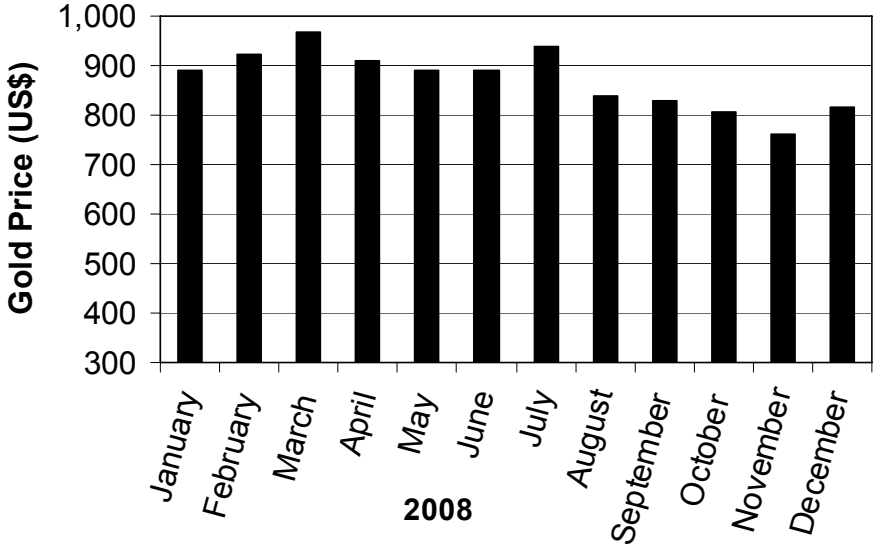

Figure 2. Average monthly price of gold in 2008 (price information from Kitco®, www.kitco.com).

Table 2. Summary of claims recorded in the Red Lake District, 2008.

Year	Cancelled (Claim Units)	Recorded (Claim Units)	Active (Claim Units)
2008	1921	5008	21 326
2007	1878	4716	18 334
2006	4759	3358	15 436
2005	5165	3117	16 911
2004	3690	2099	18 647
2003	1842	6781	21 127
2002	1795	7689	15 732
2001	290	291	2269

MINING ACTIVITY

Gold production in Red Lake continued unabated at the integrated operations of Goldcorp Canada Ltd.'s Red Lake Gold Mines, comprising the Campbell and Red Lake complexes. Historical statistics for all producers in the district are given in Table 3.

Goldcorp Canada Ltd.–Red Lake Gold Mines

During the first 3 quarters of 2008, Goldcorp Canada Ltd. was on track with its growth scenario which entailed strategic developments on several fronts (information from www.goldcorp.com). Goldcorp Canada Ltd. spent approximately $20 million in underground exploration drilling and development in 2008. This entailed approximately 570 000 feet of drilling, with up to 13 active drills at one time (D. Crick, Goldcorp Canada Ltd., presentation to CIMM–Red Lake Branch, June 4, 2008). Workforce flexibility, the completed mill expansion, and #3 shaft projects, all contributed to overall efficiencies. Problems in mine production sequencing, however, hampered year-end total gold production figures. The company's growth scenario envisions ultimate annual production of 1 million ounces of gold; custom milling from other sources (Deep Cochenour, Bruce Channel discovery ("BCD"), Rahill–Bonanza and Sidace Lake) would figure prominently in the scenario. By year-end, however, work dewatering the Cochenour shaft, as well as shaft and ramp development on McKenzie Island (the BCD deposit) and Rahill–Bonanza, respectively, were postponed for at least a year (*Northern Sun News*, November 26, 2008). No jobs are affected at this time, but approximately 100 jobs will not be created in 2009.

Reserve and resource estimates for the Red Lake Gold Mines are listed below:

Category	Tonnes	Grade (g/t Au)	Contained Ounces Au
Proven and Probable Reserves	8 410 000	14.65	3 960 000
Measured and Indicated Resources	3 850 000	16.95	2 100 000
Subtotal	*12 260 000*	*15.37*	*6 060 000*
Inferred Resources	5 720 000	18.75	3 450 000
Total all categories	**17 980 000**	**16.45**	**9 510 000**

Source: Goldcorp Inc., Web site, www.goldcorp.com, accessed March 25, 2009.

At year-end 2008, the mine employed 847 personnel directly, with 347 contract personnel also on site. Mine Manager Dan Gagnon left Goldcorp Canada Ltd. during the year and was replaced by Mike Lalonde.

Table 3. Gold production in the Red Lake District to December 31, 2008.

Mine	Years of Production	Ore Milled (Short Tons)	Gold Produced	
			Troy Ounces	Ounces per Ton
Red Lake Gold Mines	2006–present[1]	2 213 740	1 922 690	0.869
Campbell Mine	1949–2006[2]	19 944 241	11 216 443	0.562
Goldcorp (Dickenson)	1948–2006[3]	9 606 894	5 962 948	0.621[4]
Madsen	1938–1976, 1997[5]–1999	8 678 143	2 452 388	0.283[6]
Cochenour–Willans	1939–1971	2 311 165	1 244 279	0.538[7]
McKenzie Red Lake	1935–1966	2 353 833	651 156	0.277
Howey	1930–1941, 1957[8]	4 630 779	421 592	0.091[9]
Hasaga	1938–1952	1 515 282	218 213	0.144
Starratt Olsen	1948–1956	907 813	163 990	0.181
Berens River	1939–1948	560 607	157 341	0.281
Uchi	1939–1943	757 074	114 467	0.151
Jason (Argosy)	1934–1952	276 573	101 875	0.368
H.G. Young	1960–1963	288 179	55 244	0.192
Sachigo River	1938–1941	46 457	52 560	1.131
McMarmac	1940–1948	152 978	45 246	0.296
Gold Eagle	1937–1941	180 095	40 204	0.223
Jackson Manion	1934–1940	105 357	27 142	0.258
Red Lake Gold Shore	1936–1938	86 333	21 100	0.244
Hudson Patricia	1936–1937	11 228	1857	0.165
Buffalo	1981–1982	31 986	1656	0.052
Abino	1985–1986	2733	1397	0.511
Lake Rowan	1986–1988	13 023	1298	0.100
Mount Jamie	1976	972	377	0.388
Kostynuk Brothers	1963–1966	577	1126	1.951
Bobjo	1929	N/A	362[10]	N/A
Bathurst	1927–1937	562	307	0.546
Red Summit	1935–1936	591	277	0.469
Sol d'Or	1933–1936	458	258	0.563
McFinley	1987	N/A	N/A	N/A
TOTAL		**54 677 673**	**24 877 731**	**0.455**

Notes:
(1) Includes total production from the Red Lake complex from January 1, 2006, and production from the Campbell complex subsequent to May 12, 2006, the date of acquisition.
(2) Includes production figures under Placer Dome (CLA) Ltd., to May 12, 2006.
(3) For 1997, 1998 and 1999, no production due to strike by unionized employees.
(4) From 1970, includes production from Robin Red Lake.
(5) Includes clean up of ore and materials from the mine site.
(6) Historic grade, actual grade for 1999 was 0.14 ounce per ton gold.
(7) Includes production from Annco and Wilmar properties.
(8) Continuous production 1930 to 1941; includes 268 ounces recovered from clean up in 1957.
(9) The ore mined at Howey, before sorting, totalled 5 158 376 tons. The average production from run-of-mine ore was therefore 0.0817 ounce per ton gold.
(10) Not included in total production figure.
N/A Data not available.

EXPLORATION ACTIVITY

Assessment work received by the Red Lake Resident Geologist's office is listed in Table 4, and a summary of exploration activity is given in Table 5. The 48% increase in the price of gold between January 2006 (US$550) and December 2008 (US$816) and the overall increase in the price of most base metals, until the third quarter of the year, sustained high exploration interest and expenditures in the Red Lake District during much of 2008. The fall in the price of gold from its high in March ($US968), and reaching its low point in November ($US761), combined with major declines in all other commodity prices introduced a great deal of uncertainty into the exploration industry.

Table 5 lists the companies and individuals who reported some activity on their property during 2008; several are described in more detail in the following pages. Programs with significant exploration expenditures and/or significant known results, and properties whose location is of particular strategic or geologic interest are described below. Information included in this section is taken from assessment files in the Red Lake Resident Geologist's office, unless otherwise indicated. Programs are keyed to Table 5 and Figures 3, 4, 5, 6, 7 and 8.

Table 4. Assessment files received in the Red Lake District in 2008.

Abbreviations

AEM	Airborne electromagnetic survey	IP	Induced polarization survey
AM	Airborne magnetic survey	Lc	Linecutting
ARA	Airborne radiometric survey	MMI	Mobile Metal Ion™ soil sampling survey
Beep	Beep Mat survey	OD	Overburden drilling
Bulk	Bulk sampling	ODH	Overburden drill hole(s)
DD	Diamond drilling	PEM	Pulse electromagnetic survey
DDH	Diamond-drill hole(s)	PGM	Platinum group metals
DGP	Down-hole geophysics	Pr	Prospecting
GC	Geochemical survey	RES	Resistivity survey
GEM	Ground electromagnetic survey	Samp	Sampling (other than bulk)
GL	Geological survey	Seismic	Seismic survey
GM	Ground magnetic survey	SP	Self-potential survey
GRA	Ground radiometric survey	Str	Stripping
Grav	Gravity survey	Tr	Trenching
HLEM	Horizontal loop electromagnetic survey	UG	Underground exploration/development
HM	Heavy mineral sampling	VLEM	Vertical loop electromagnetic survey
IM	Industrial mineral testing and marketing	VLFEM	Very low frequency electromagnetic survey

Township or Area	Company Filing Report (Property)	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation
Agnew and Earngey townships	Skyharbour Resources Ltd. (South Bay Property)	2008	GM $16,777.00	2.38456	RL2872
Armstrong and Mattson Lake Areas	Canstar Resources Inc. (Shrimp Lake and Tahoe Lake Properties)	2007	DDH(10)=1123 m $293,016.00	2.36894 Digital Submission	RL2890
Avis Lake Area	Amador Gold Corporation (Maskootch Property)	2007	AEM, AM $14,670.00	2.37970	RL2172
Avis Lake Area	Amador Gold Corporation (Maskootch Property)	2006	GEM, LC, GM, VLFEM $57,203.00	2.37259	RL2887
Ball Township and Indian House Lake Area	Halo Resources Ltd. (West Red Lake Property-Pipestone Bay)	2008	Samp, GL $13,273.00	2.38856 Digital Submission	RL2860
Balmer Township	Goldcorp Inc./Goldcorp Canada Ltd. (Red Lake Mines Complex)	2007-2008	DDH(1)=427 m; Samp $62,704.00	2.38101	RL2891
Belanger Township, Fredart Lake Area, Gerry Lake Area	Tribute Minerals Corporation (Copperlode Property)	2007	DDH(3)=1530 m; Samp $233,137.00	2.36018	RL0582

Township or Area	Company Filing Report (Property)	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation
Belanger and Bowerman Townships	Tribute Minerals Corporation (Garnet Lake Property)	2006	DDH(6)=2304 m; $371,275.00	2.36747	RL0584
Belanger Township	Tribute Minerals Inc. (Garnet Lake (West) Property)	2007	DDH(3)=1333 m; Samp $224,609.00	2.38270	RL2870
Black Bear Lake Area	MetalCORP Ltd./Goldcorp Inc. (Black Bear Property)	2005	DDH(9)=2717 m; Samp $193,418.00	2.36970	RL2222
Black Bear Lake Area and Bateman Township	Rubicon Minerals Corporation (Red Lake North Property)	2007	DDH(9)=2703 m; Samp $797,495.00	2.37677	RL2223
Borland Lake Area	Gold Canyon Resources Inc. (Borland Lake Property)	2008	IP, Res, MT (Titan-24), Lc $381,092.00	2.38466 Digital Submission	RL2863
Borland Lake and Setting Net Lake Areas	Gold Canyon Resources Inc. (Borland Lake, Bearhead Lake and Setting Net Lake Properties)	2008	AM, AEM, ARA $69,514.00	2.38651	RL2966
Casummit Lake Area	Gold Canyon Resources Inc. (Horseshoe Island Property)	2007	MMI, LC $57,523.00	2.37077	RL2503
Casummit Lake, Keigat Lake, Satterly Lake and Seagrave Lake areas	Gold Canyon Resources Inc. (Springpole Lake Property)	2005-2008	DDH(32)=5281 m $842,977.00	2.38524 Digital Submission	RL2875
Coli Lake Area	Goldcorp Inc./Planet Exploration Inc. (Sidace Lake Project)	2005-2008	DDH(39)=12 542 m; Samp $1,847,554.00	2.37273 Digital Submission	RL2886
Coli Lake Area	Rubicon Minerals Corporation (Red Lake North–Sidace Lake Area)	2008	DDH(1)=2269 m Samp $654,499.00	2.39281	RL2969
Dent Township	Northern Mineral Exploration Services (Shanty Bay Property)	2007	Assay, Samp, Tr $15,306.00	2.36814	RL0742
Dixie Lake Area	Trueclaim Resources Inc. (Trueclaim Property)	2008	Lc, GM, VLF $82,976.0	2.38478 Digital Submission	RL2861
Dixie Lake Area	Grandview Gold Inc. (Dixie Lake Property)	2007	DDH(18)=4563 m $333,409.00	2.36780 Digital Submission	RL2885
Dome Township	Rubicon Minerals Corporation (McCuaig Property)	2007	DDH(9)=7343 m; Samp $1,656,200.00	2.37791	RL0975
Dome Township	Goldcorp Inc.	2008	GL $6,350.00	2.38467	RL2866
Dome Township	Goldcorp Inc.	2008	Pr $1,650.00	2.38219	RL2868
Dome Township	Goldcorp Inc./Wolfden Resources Inc./Premier Gold Mines Ltd. (Rahill–Bonanza Property)	2007-2008	DDH(60)=31 880 m, includes 34 new holes and 25 wedge-offs Samp $3,725,051.00	2.38976 Digital Submission	RL2873
Dome Township	Premier Gold Mines Limited (Rahill–Bonanza Property)	2007-2008	DDH(3)=1471 m Samp $192,875.00	2.37732 Digital Submission	RL2888
Earngey Township Mitchell Township/ Uchi Lake Area/ Agnew Township	King's Bay Gold Corp. (Bobjo Property)	2006-2007	DDH(28)=5717 m Samp, VLF, LC, GM, $732,075.00	2.37462	RL1020

Township or Area	Company Filing Report (Property)	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation
Earngey Township	English, Perry Vern (Earngey Claim)	2008	Samp, Pr $912.00	2.38931 Digital Submission	RL2862
Fairlie Township	Rubicon Minerals Corporation (Humlin Property)	2007	DDH(3)=1380 m Samp $233,342.00	2.39421	RL2970
Favourable Lake Area (south part) and Setting Net Lake Area	Gold Canyon Resources Inc. (Favourable Lake Property)	2007-2008	AM, ARA, AEM $55,038.00	2.38378 Digital Submission	RL2892
Gerry Lake Area	Campbell, Gregory John (Gerry Lake Property)	2007-2008	GL $772.00	2.38497	RL2867
Heyson Township	Melville, Ronald Warren (Heyson Township Property)	2008	Samp, Pr $761.00	2.39259	RL2965
Joyce River Area	Frank, Raymond Arthur (Joyce River Property)	2006-2007	Pr, Tr, Samp $12,551.00	2.38095 Digital Submission	RL2864
Mitchell and Dent townships	Skyharbour Resources Ltd. (South Bay Mine Property)	2007	IP, RES, MT (Titan-24) $256,000.00		RL2968
Setting Net Lake Area	Anaconda Gold Corp. (Borthwick Lake Property)	2007-2008	Samp, Pr $26,833.00	2.37754	RL2871
Shabumeni Lake Area	Merrex Gold Inc. (Shabumeni Lake Property)	2007-2008	Samp, GL, Lc, Pr, Str $232,069.00	2.37654	RL2286
Skinner Township	Sabina Silver Corporation (Skinner Property)	2008	DDH(2)=597 m Samp $86,268.00	2.37899 Digital Submission	RL2865
Slate Lake Area	North American Uranium Corporation (Slate Lake Property)	2008	Lc, GM $19,460.00	2.38071	RL2869
Todd Township	Goldcorp Inc. (Rowan Lake Property)	2006-2007	DDH(22)=15 300 m Samp $932,564.00	2.38534 Digital Submission	RL2874
Willans Township and South of Otter Lake Area	Tri Origin Exploration Ltd. (RLX Property)	2007	ODH(23)=268 m Samp $151,516.00	2.37063 Digital Submission	RL2889
Willans Township and South of Otter Lake Area	Tri Origin Exploration Ltd. (RLX Property)	2003	Compilation $0.00	Non-assessment	RL5123

Table 5. Exploration activity in the Red Lake Resident Geologist District in 2008 (keyed to Figures 4 to 8).

Abbreviations

AEM ..... Airborne electromagnetic survey
AM ..... Airborne magnetic survey
ARA ..... Airborne radiometric survey
Beep ..... Beep Mat survey
Bulk ..... Bulk sampling
DD ..... Diamond drilling
DDH ..... Diamond-drill hole(s)
DGP ..... Down-hole geophysics
GC ..... Geochemical survey
GEM ..... Ground electromagnetic survey
GL ..... Geological survey
GM ..... Ground magnetic survey
GRA ..... Ground radiometric survey
Grav ..... Gravity survey
HLEM ..... Horizontal loop electromagnetic survey
HM ..... Heavy mineral sampling
IM ..... Industrial mineral testing and marketing
IP ..... Induced polarization survey
Lc ..... Linecutting
MMI ..... Mobile Metal Ion™ soil sampling survey
OD ..... Overburden drilling
ODH ..... Overburden drill hole(s)
PEM ..... Pulse electromagnetic survey
PGM ..... Platinum group metals
Pr ..... Prospecting
RES ..... Resistivity survey
Samp ..... Sampling (other than bulk)
Seismic ..... Seismic survey
SP ..... Self-potential survey
Str ..... Stripping
Tr ..... Trenching
UG ..... Underground exploration/development
VLEM ..... Vertical loop electromagnetic survey
VLFEM ..... Very low frequency electromagnetic survey

No.	Company/Individual (Stock Symbol) Property Name	Township/Area (Commodity)	Exploration Activity
1	Canstar Resources Ltd. (ROX) (Slate Bay Property)	McDonough Township (Au, Cu)	DDH(5)=1000 m; Cu and Au bearing skarn mineralization intersected; assays up to 1.01% Cu, 0.24 g/t Au, 71.3 g/t Ag over 0.6 m (ROX, news release, Nov. 19, 2008)
2	Claude Resources Inc. (CRJ) (Madsen Project)	Baird Township (Au)	DDH(6)=5041 m; Russet UM zone drill results up to 29.08 g/t Au over 2.0 m (CRJ, news release, Feb. 26, 2008) DDH(31)=15 397 m on the new discovery at the Starratt Olsen target includes 185.62 g/t Au over 0.41 m, and 26.85 g/t Au over 0.58 m (CRJ, news release, Apr. 8, 2008) DDH(55)=20 712 m on the Fork Zone drill results up to 17.32 g/t Au over 10.33 m (CRJ, news release, Apr. 16, 2008) DDH(2)=1903 m in the Hasaga area DDH(1)=1394 m, testing the 8 Zone from surface Underground hoisting plant and 5-compartment shaft were certified July 2, 2008, as an "Advanced Exploration" project (CRJ, news release, July 21, 2008) UG (10th level Madsen Mine)
3	Cypress Development Corp. (CYP) – 80% / Skyharbour Resources Ltd. (SYH) – 20% (Broulan Reef Project)	Dome Township (Au)	DDH(2)=1980 m; Deep drilling program with 2 'mother' holes and wedge-offs
4	Gold Canyon Resources Inc. (GCU) (Bear Head Uranium Project)	Favourable Lake Area (Uranium)	Lc, AM, AEM, ARA IP, MT (Titan-24)
5	Gold Canyon Resources Inc. (GCU) (Horseshoe Island Property)	Casummit Lake and Satterly Lake areas (Au, PGE)	Lc, MMI
6	Gold Canyon Resources Inc. (GCU) (Springpole Property)	Casummit Lake Area (Au)	DDH(7)=2452 m; Program designed to test the strike and dip potential of the new sedimentary hosted semi-massive sulphide intersection; assays up to 10.5 g/t Au over 0.8 m (GCU, news release, May 27, 2008)
7	Goldcorp Inc. (G) (Craibie Fletcher Property)	Dome Township (Au)	DDH(2)=2769 m
8	Goldcorp Inc. (G) (Cochenour–Willans Property)	Dome Township (Au)	DDH(35)=21 548 m
9	Goldcorp Inc. (G) (East Bay Property)	Bateman Township (Au)	DDH(4)=1418 m
10	Goldcorp Inc. (G) (Humlin Property)	Fairlie Township (Au)	DDH(5)=3051 m
11	Goldcorp Inc. (G) (Marcus Property)	Balmer Township (Au)	DDH(2)=831 m

No.	Company/Individual (Stock Symbol) Property Name	Township/Area (Commodity)	Exploration Activity
12	Goldcorp Inc. (G) (Mine site exploration)	Balmer Township (Au)	DDH(22)=8839 m Balmertown surface drilling
13	Goldcorp Inc. (G) 60% / Planet Exploration Inc. (PXI) 40% (Sidace Lake Property)	Coli Lake Area, Sobeski Lake and Black Bear Lake areas (Au)	DDH(34)=13 874 m; Diamond drilling on the Main Discovery zone (MDZ) and Upper Duck zone (UDZ) to better delineate mineralization and prepare for a 43-101 compliant resource estimate (PXI, news release, Oct. 9, 2008) Results include 17.07 g/t Au over 3.0 m in the UDZ (PXI, news release, Oct. 9, 2008); 5.80 g/t Au over 1.0 m in the Anderson Lake area (PXI, news release, Aug. 22, 2008); 11.58 g/t Au over 2.0 m in the Deep MDZ (PXI, news release, Aug. 22, 2008)
14	Goldcorp Inc. (G) (50%)/ Premier Gold Mines Limited (PG) (50%) (Rahill-Bonanza Property)	Dome Township (Au)	DDH(27)=20 943 m for details, *see* Premier Gold Mines Limited/Goldcorp Inc.
15	Gold Eagle Mines Ltd. (GEA) (Gold Eagle Mine Property)	Dome Township (Au)	DDH(54)=46 549 m (includes wedge-offs) drilled by Gold Eagle Mines Ltd. DDH(12)=12 290 m (includes wedge-offs) drilled by Goldcorp Inc. starting Sept. 24, 2008 Gold Eagle Mines Ltd. was bought by Goldcorp Inc. for $1.5B (GEA, news release, July 31, 2008)
16	Grandview Gold Inc. (GVX) 60% / EMCO SA 40% (Sanshaw-Bonanza Property)	Dome Township (Au)	DDH(5)=1087 m
17	Grandview Gold Inc. (GVX) 64% / Fronteer Development Group Inc. (FRG) 36% (Dixie Lake Property)	Dixie Lake Area (Au)	DDH(2); Assays from NS zone up to 18.26 g/t Au over 2.20 m (GVX, news release, Feb. 20, 2008)
18	Halo Resources Ltd. (HLO) / Goldcorp Inc. (G) (West Red Lake Property (includes Middle Bay, Pipestone, and Biron Bay properties))	Ball Township (Au)	DDH(5)=1056 m; Gold in shallow quartz-carbonate veins up to 3.42 g/t Au over 1.0 m (HLO, news release, Nov. 28, 2008) St, Tr, Samp
19	Halo Resources Ltd. (HLO) / Tribute Minerals Corporation (TBM) (Bridget Lake Property)	Ball Township (Au)	DDH(5)=788 m; Assays up to 9.84 g/t Au over 0.30 m (HLO, news release, Dec. 4, 2008) St, Tr, Samp
20	Hy Lake Gold Inc. (HYLK) / Goldcorp Inc. (G) (Rowan Lake Gold Project)	Todd Township (Au)	DDH(7)=4083 m; Hole HYR-07-08 intersected multiple mineralized zones, potentially extending the RM vein system an additional 980 m to the east (HYK, news release, April 23, 2008)
21	Hy Lake Gold Inc. (HYLK) (Red Summit/Red Crest Property)	Todd Township (Au)	DDH(7)=2259 m; Samples of ore stockpile material range from 0.22g/t Au to 47.33g/t Au, average of 6 samples returned 10.45 g/t Au (HYLK, news release, May 15, 2008)
22	King's Bay / Gold Corp. (KBG) / Mainstream Minerals Corporation (MJO) (Bobjo Mine Property)	Dent Township (Au)	DD
23	King's Bay Gold Corp. (KBG) / Mainstream Minerals Corporation (MJO) (Goodall Township Property)	Goodall Township (Au, Cu, Zn)	Lc, Geophys
24	Merrex Gold Inc. (MXI) (Birch-Uchi Gold Project (Skinner Property))	Skinner Township (Au)	GC, samp (AFRO# 2.39253)
25	Puget Ventures Inc. (PVS.P) / West Timmins Mining Inc. (WTM) / Goldcorp Inc. (G) (Trout Bay Project)	Ball, Killala and Mulcahy townships (Cu, Ni, Pt, Pd)	DDH(13)=1865 m; Assay results of Trout Bay summer diamond-drill program include 27.08 m of 11.34% Zn, 1.68% Cu, 0.34% Pb hole TB08011, also 43-101 Technical Report completed (PVS, news release, Dec. 17, 2008)
26	Raytec Metals Corp. (RAY) (El Sol Iron Project)	Avis Lake (Fe)	DDH(11)=2301 m, GM (RAY, news release, Dec 5, 2008)

No.	Company/Individual (Stock Symbol) Property Name	Township/Area (Commodity)	Exploration Activity
27	Redstar Gold Corp.(RGC) (Newman–Todd Property)	Todd Township (Au)	DDH(8) = 2250 m; Results include 14.2 g/t Au over 5 m, including 61.02 g/t over 1 m in hole NT-040 (RGC, news release, Mar. 12, 2008)
28	Rubicon Minerals Corporation (RMX) (Adams Lake Project)	Balmer Township (Au)	DDH(3)=3151 m for details, *see* "Rubicon Minerals Corporation"
29	Rubicon Minerals Corporation (RMX) (Phoenix Gold Project)	Bateman Township (Au)	DDH(54)=48 471 m (including 39 holes, totalling 37 260 m on the F2 Zone); Titan-24 for details, *see* "Rubicon Minerals Corporation"
30	Rubicon Minerals Corporation (RMX) / Solitaire Minerals Corp. (SLT) (Red Lake North Property)	Coli Lake Area (Au)	DDH(1)=313 m (final depth of 2269 m) for details, *see* "Rubicon Minerals Corporation"
31	Rupert Resources Ltd. (RUP) (Gold Centre Property)	Balmer Township (Au)	DDH(2)=1947 m (estimate) (1 mother hole (3416 m started in 2007 with last approx 150 m drilled in 2008) 1 daughter hole (1795 m) (information from RUP, MD&A, Nov. 30 2007) Drill program is testing the SE extension of the Main Red Lake Mine Structure. Completed 2nd mother hole to a final depth of 3416 m. Bottom portion of 2nd mother hole encountered mafic volcanic rocks interpreted to be Balmer basalts. Daughter hole from the mother hole cut-off at 1600 m (RUP, news releases, Apr. 21, and Nov. 26, 2008)
32	Sabina Silver Corporation (SBB) (Golden Sidewalk Property)	Skinner Township (Au)	DDH(11)=4512 m for details, *see* "Sabina Silver Corporation"
33	Sabina Silver Corporation (SBB) (Skinner Property)	Skinner Township (Au)	DDH(2)=597 m; Pr, GL for details, *see* "Sabina Silver Corporation"
34	Shoreham Resources Ltd. (SMH) / RPT Uranium Corp. (RPT) (Bear Head Lake Uranium Project)	Favourable Lake and Setting Net Lake areas (U)	Lc, Geophys, DD: The 2008 winter exploration program to date has included LC, ground geophysics and DD (SMH, MD&A, Apr. 9, 2008)
35	Shoreham Resources Ltd. (SMH) / Gold Canyon Resources Inc. (GCU) (Favourable Lake Property)	Borland Lake and Favourable Lake North areas (Ag, Au, BM, Mo)	Samp IP, Res, MT (Titan-24)
36	Skyharbour Resources Ltd. (SYH) (South Bay Properties)	Dent, Agnew and Mitchell townships (Cu, Zn, Ag)	DDH(14)=5640 m; DGP (IP/Res); Discovered 3 zinc-rich VMS zones within 500 m of past-producing South Bay Mine Assays up to 1.40% Zn, 0.03% Cu, 10.2 g/t Ag over 15.1 m including 0.5m of 9.40% Zn, 0.03% Cu, 31.0 g/t Ag (SYH, news release, July 10, 2008)
37	Superior Diamonds Inc. (SUP) now known as Northern Superior Resources Inc. (Thorne Lake Gold Property)	Thorne Lake, Ellard Lake, Gummer Lake areas (Au)	Samp; Completed an overburden sampling program under an Agreement with Sachigo Lake First Nations (SUP, web site accessed Feb. 6, 2009) Changed name to Northern Superior Resources Inc. April 2008 (SUP, news release, Apr. 14, 2008)
38	Tribute Minerals Inc. (TBM) (Copperlode Property)	Belanger Township (Zn, Cu, Au, Ag)	DDH(2); Assays of VMS mineralization up to 2.3% Zn, 0.04% Cu over 6.8 m (TBM, news release, Apr. 8, 2008)
39	Tribute Minerals Inc. (TBM) (Garnet Lake Property (Arrow zone))	Belanger Township (Zn, Cu, Au, Ag)	DDH(3); Assays up to 2.45% Zn, 0.05% Cu over 4.0 m (TBM, news release, Apr. 8, 2008) Environmental and Geochemical reports pending from baseline studies completed by Golder Associates. Results of metallurgical bench testing on HQ core from mineralized intersections remain pending (TBM, news release, Apr. 8, 2008)
40	Tribute Minerals Inc. (TBM) (Snake Falls Property)	Karas Lake Area (Zn, Cu, Au, Ag)	IP, Res, MT (Titan-24)
41	Tri Origin Exploration Ltd. (TOE) (Red Lake Extension (RLX) Property)	South of Otter Lake Area (Au, Ag, Cu, Zn)	AEM, AM, IP, GL DDH(8)=1323 m; Anomalous gold values detected in 7 of the 8 holes (TOE, news release, November 28, 2008)

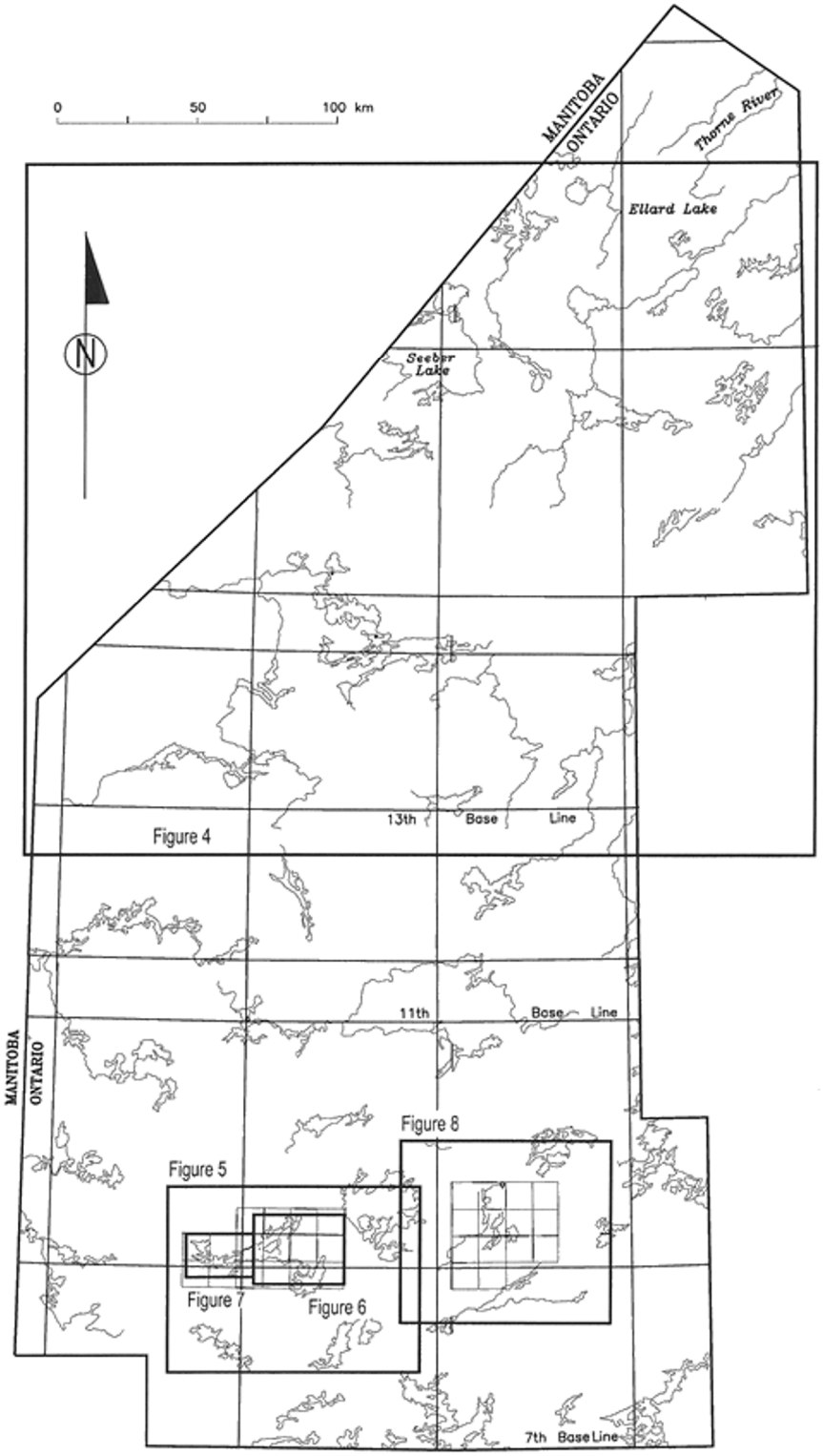

Figure 3. Red Lake District, index map for Figures 4 to 8.

Red Lake Greenstone Belt

Exploration in the Red Lake belt has continued at a steady pace since 2001. Table 5 lists the companies and individuals who reported some activity on their property during 2008; several are described in more detail in the following pages.

Work on significant discoveries from 2004 and 2005 continued in 2008 and 2 projects are moving forward toward Advanced Exploration status: Rubicon Minerals Corporation's Phoenix gold project, and Claude Resources' Madsen Mine project. Rubicon Minerals Corporation plans to rehabilitate the McFinley shaft and proceed to underground exploration. Claude Resources Inc. commenced dewatering its Madsen Mine workings, where production had ceased in 1999. Underground drilling commenced at year-end.

Throughout the first half of 2008, a minimum of 12 surface diamond drills were active in the Red Lake greenstone belt. Lower commodity prices and the global economic downturn in the latter part of the year had a negative influence on exploration activities.

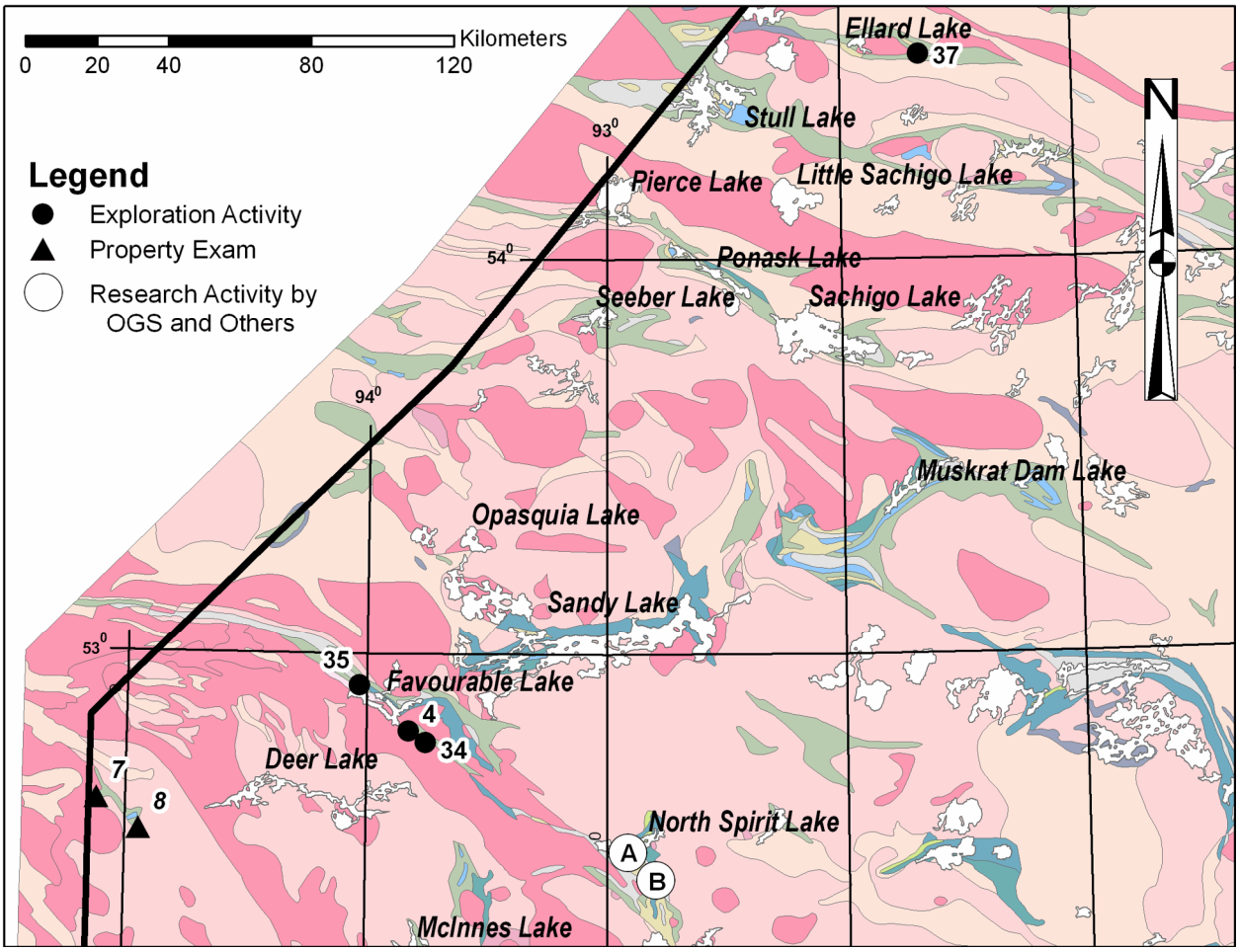

Figure 4. Red Lake District (north part): exploration activity, property visits, and OGS and other research activities (*see* Tables 5 and 7).

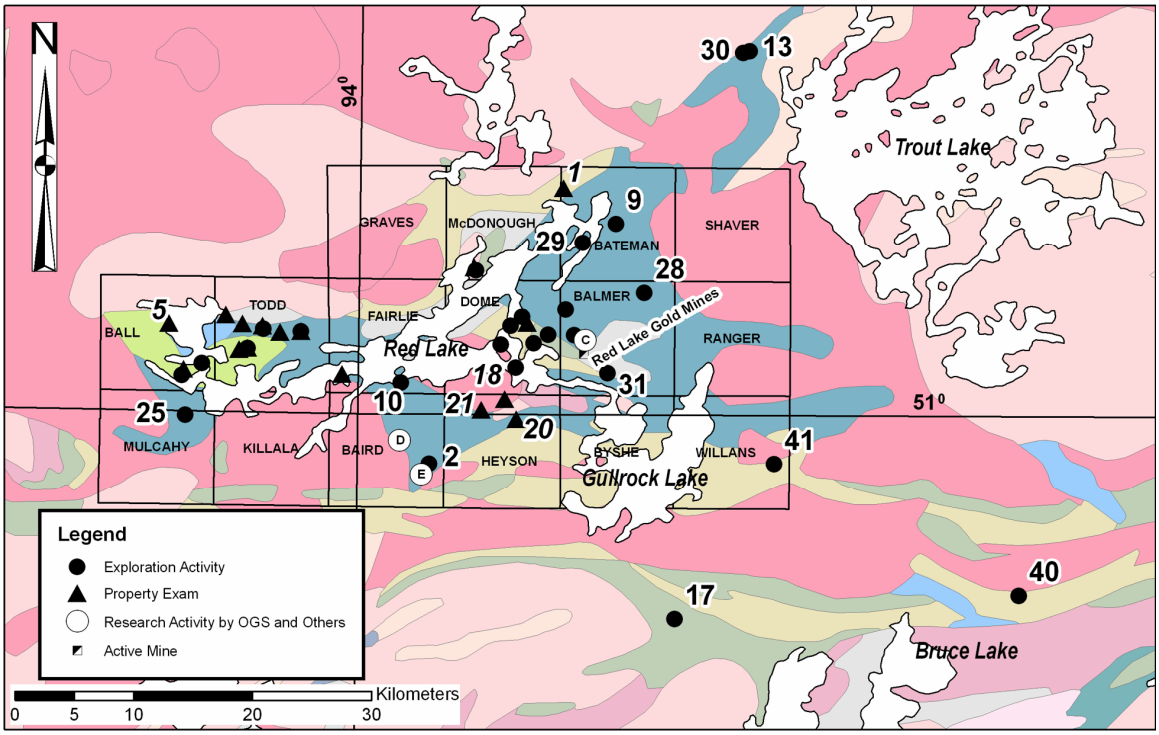

Figure 5. Red Lake greenstone belt: exploration activity, property visits and research activity (*see* Tables 5 and 7).

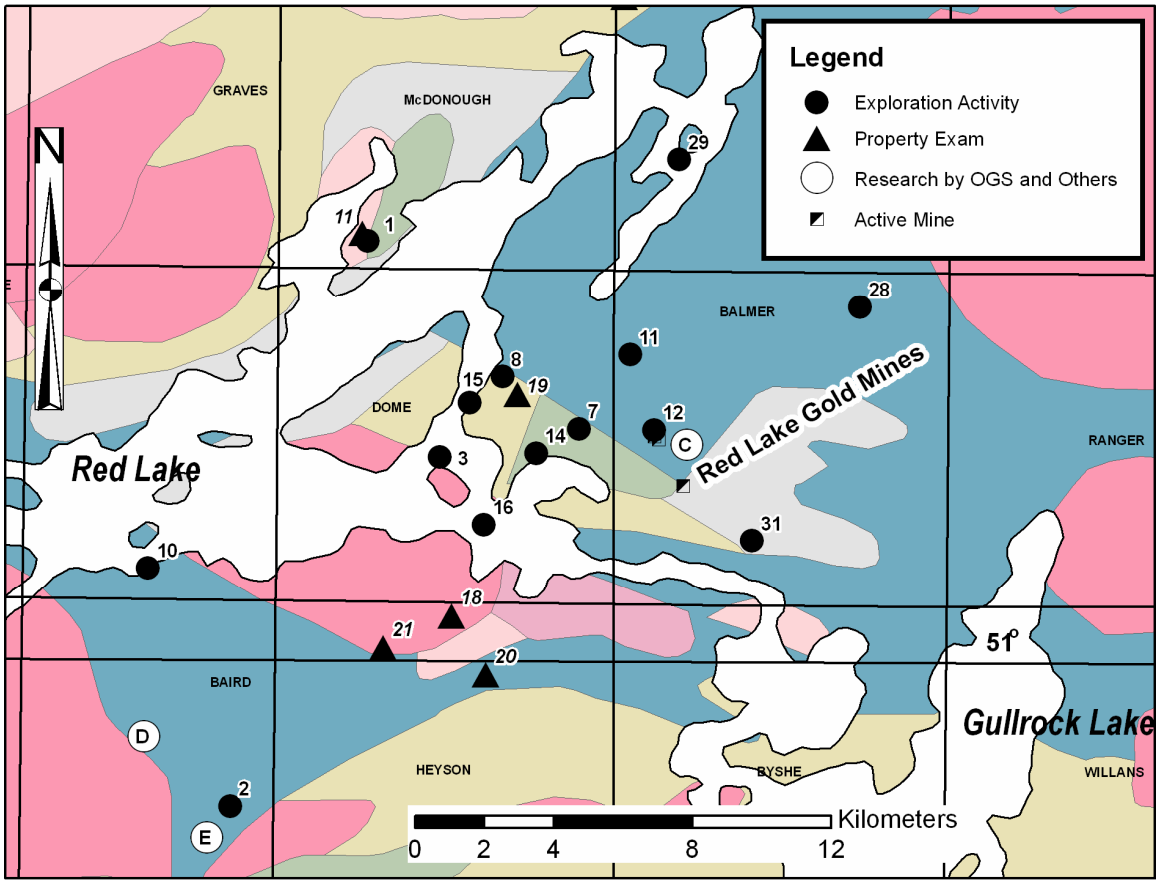

Figure 6. Eastern Red Lake greenstone belt: exploration activity, property examinations and research activity (*see* Table 5 and 7).

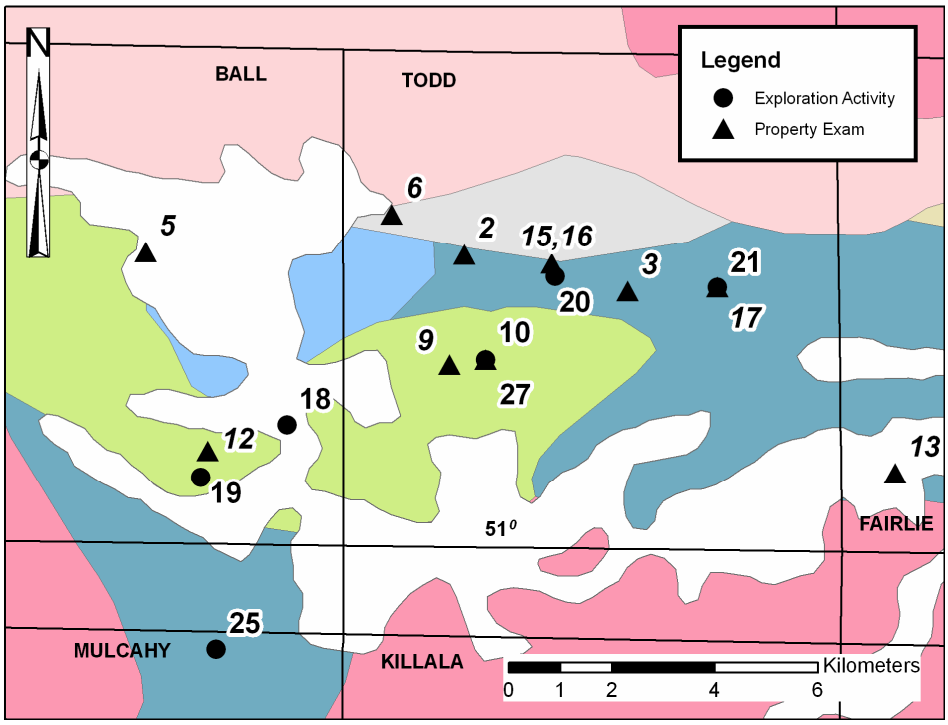

Figure 7. Western Red Lake greenstone belt: exploration activity and property examinations (*see* Tables 5 and 7).

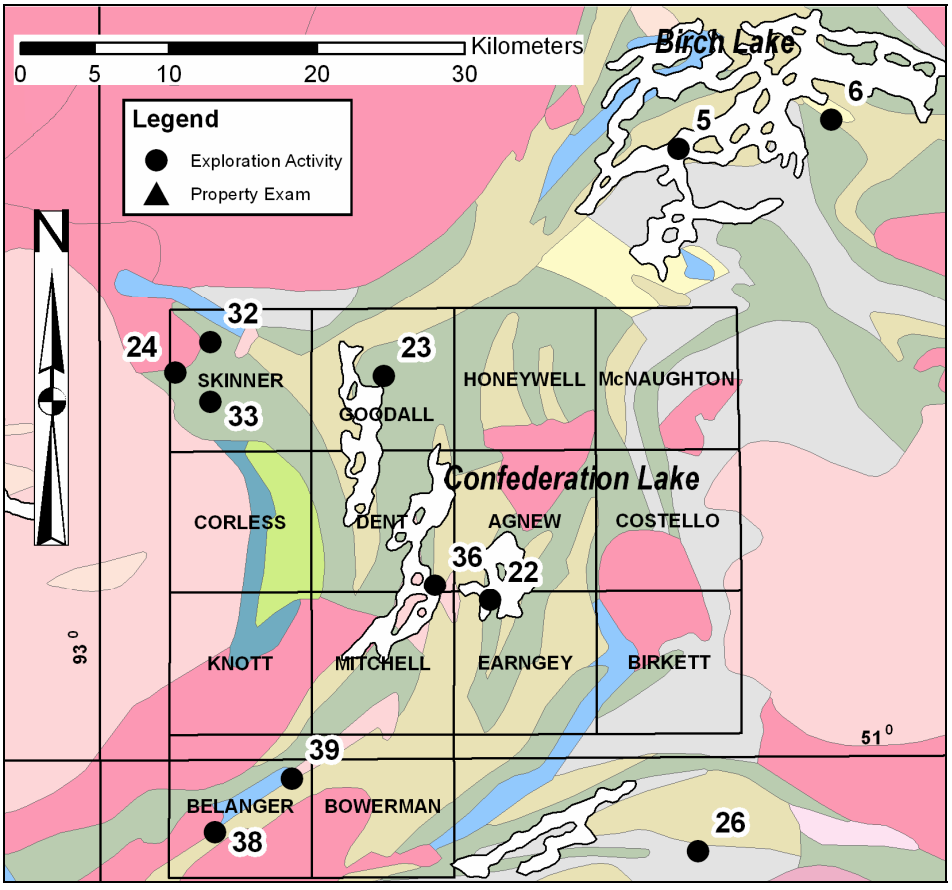

Figure 8. Birch–Uchi greenstone belt: exploration activity (*see* Tables 5 and 7).

CANSTAR RESOURCES INC.–SLATE BAY PROPERTY

Canstar Resources owns a 75% interest in 8 patented claims comprising the property, located in McDonough Township, on the southern shore of Slate Bay, 7 km northwest of Balmertown, Ontario. Luxor Explorations Inc., a private company, owns the remaining 25%.

The property is underlain predominantly by the Slate Bay assemblage (Sanborn-Barrie, Skulski and Parker 2004), represented by northeast-trending thickly bedded polymictic conglomerates interbedded with wackes, mudstones, slate and argillite intercalated with mafic tuff. A trondhjemitic quartz-porphyry intrusion (Pirie and Sawitzky 1977), the Slate Bay stock, is exposed along the north shore of Slate Bay; its contact with the sediments is interpreted to be under the water of Slate Bay, approximately 300 m from the southern shore.

Diamond drilling by Canstar Resources Inc. in 2002 concentrated on the historic "Gold Zone", on claim KRL 2214; more recently, in 2005 and 2008, drilling took place in what was referred to as the "Silver Zone", on claims KRL 2206 and KRL 2208. Drilling, surface work and geophysical surveys performed by Canstar Resources Inc. continue to increase the dimensions of an extensive Cu-Au-Ag mineralized skarn.

A description of surface exposures in this area is given by Atkinson, Parker and Storey (1990):

> Metasediments at the Silver zone have been pervasively skarnified to a mineral assemblage of pink to brown, fine- to coarse-grained garnet; dark green, fibrous actinolite; blue-black magnetite; crystalline calcite; and pale green, fine-grained epidote. Alteration varies from garnet- to epidote-rich zones. The garnetiferous altered zone contains abundant disseminated chalcopyrite, pyrrhotite, pyrite and minor tetrahedrite and sphalerite with malachite and azurite staining.

The most recent drill program by Canstar Resources Inc. (5 holes totalling 1000 m) succeeded in extending the strike length of the skarn to 300 m. The skarn occurs as a tabular body and has been tested to a vertical depth of 130 m. Canstar Resources Inc. reported drill hole intersections of skarn greater than 100 m along strike from previous drill intersections (Canstar Resources Inc., www.canstarresources.com, accessed February 9, 2008).

Highlights from the recent program include

Hole #	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	Ag (g/t)
SB08-10	127.0	161.0	34.0	0.32	0.15	12.0
including	137.0	144.5	7.5	0.85	0.06	31.0
SB08-12	42.8	44.7	1.9	0.50	0.48	32.4
SB08-14	38.6	39.2	0.6	1.01	0.24	71.3

CLAUDE RESOURCES INC.

Exploration work on the **Madsen Project** increased in intensity during 2008. A total of 102 diamond-drill holes, totalling 47 210 m, tested several targets from surface. In addition, underground drilling commenced from the 10th level of the past-producing Madsen Mine (produced 2.45 million ounces gold between 1938 and 1999).

Focussing on results achieved in previous years' drilling, surface drilling efforts were concentrated on the Fork Zone (55 holes, totalling 20 712 m), Starrat Olsen Mine footwall (31 holes, totalling 15 397 m), Hasaga Shoots (2 holes, totalling 1903 m), the Russett Shoots (6 holes, totalling 5041 m), and the 8 Zone (1 hole, totalling 1394 m).

Fork Zone mineralization is interpreted to be hosted in at least 2 subparallel, moderately southeast-dipping shear systems that host southwest-plunging shoots. Assays include 0.61 ounce per ton gold over 33.89 feet and 0.90 ounce per ton gold over 8.86 feet (Claude Resources Inc., news releases, April 16, 2008 and December 11, 2008). Exploration plans for 2009 include a 3000 m, 15-hole, infill drilling program along the 450 m of known strike length.

Drilling in the footwall of the past-producing **Starratt Olsen Mine** (2 km southwest of the Madsen Mine; produced

0.16 million ounces Au between 1948 and 1956) discovered several, narrow high-grade vein systems that returned intercepts of 5.97 ounces per ton gold over 1.35 feet and 0.86 ounce per ton gold over 1.90 feet in hole ST-08-03 (Claude Resources Inc., news release, April 8, 2008). Assay results from 13 follow-up holes completed during late 2008 are expected in early 2009. A 20-hole, 5000 m diamond-drilling program is planned to further test the high-grade veins in 2009.

As part of Claude Resources' Advanced Exploration program, by year-end 2008, the Madsen 5-compartment shaft was dewatered and recommissioned to the 12th Level. Underground drilling from the 10th level started in December, 2008 (Claude Resources Inc., news release, December 17, 2008); targets include the plunge and strike extensions of the **8 Zone** as well as conceptual targets associated with the 8 Zone shear system. The 8 Zone is interpreted from underground mapping and historic documentation as a series of high-grade, quartz-vein systems and silicification associated with a complexly folded package of mafic and ultramafic lithologies; the zone was mined until mine closure in 1976. The system remains open in all directions. A 20-hole Phase 1 program is anticipated to continue through to the end of the second quarter of 2009 (Claude Resources Inc., news release, December 17, 2008).

GOLD EAGLE MINES LTD. – BRUCE CHANNEL DISCOVERY

The company continued an aggressive exploration program on the **Gold Eagle Mine Project**, comprising 35 patented claims in Dome Township. A deep diamond-drilling program of master holes with several wedges from each totalled 54 holes (including wedge-cuts) and 46 549 m. Drilling of the **Bruce Channel Discovery** (BCD) continued throughout 2008 with an average of 4 machines on the mainland, McKenzie Island and from the ice of Bruce Channel of Red Lake.

An independent report prepared for Gold Eagle Mines estimates the exploration potential of the BCD as being between 14.1 Mt and 16.5 Mt, grading between 20 and 25 g/t Au, yielding an in-situ potential between 9.0 to 13.3 million ounces gold (Gold Eagle Mines Ltd., news release, May 27, 2008). The mineralized envelope starts approximately 800 m below the waters of Red Lake, and extends a minimum of 1450 m vertically with horizontal dimensions of approximately 800 m northeast and by 450 m northwest.

Drilling continued to intersect high-grade gold mineralization within the BCD. Representative values are listed below.

Hole #	Width (m)	Au (g/t)
BC 30-1	4.20	7.19
including	0.85	23.50
BC 30-2	6.00	6.88
including	2.70	12.57
BC 30-3	4.50	13.13
including	0.70	60.87
BC 33-1	1.65	28.71
including	0.75	54.83
BC 33-4	6.90	11.39

Source: Gold Eagle Mines Ltd., news releases, July 16 and August 12, 2008

An Advanced Exploration work program to sink an exploration shaft to approximately 1460 m, with exploration levels at 800 m, 1100 m and 1400 m, was accepted by the Ministry of Northern Development and Mines (Gold Eagle Mines Ltd., news release, August 12, 2008). Work on the shaft collar and infrastructure foundations was postponed due to the announcement of an agreement whereby Goldcorp Inc. was to acquire, through a friendly plan of arrangement, all outstanding shares of Gold Eagle Mines Ltd. (Gold Eagle Mines Ltd., news release, July 31, 2008). The transaction was completed September 25, 2008 (Gold Eagle Mines Ltd., news release, September 25, 2008).

Exploration drilling with 4 machines continued under Goldcorp Inc. until year-end; however, shaft sinking was postponed for one year due to the difficulty of financing new projects during the economic downturn (*Northern Sun News*, November 26, 2008).

PREMIER GOLD MINES LIMITED / GOLDCORP – RAHILL–BONANZA PROJECT

The **Rahill-Bonanza** project comprises several properties from both Premier Gold Mines Ltd. and Goldcorp Inc. By the terms of the joint venture agreement, Goldcorp took over as operator of the project in January 2008 by increasing its interest in the project to 51% (Premier Gold Mines, news release, January 18, 2008). The property package covers several kilometres of the key geological unconformity that spans from Goldcorp's Red Lake Gold Mines to the east, to the Cochenour–Willans gold mine to the west. The Project hosts several gold deposits and mineralized zones including the **Wilmar** and **West Granodiorite** gold deposits associated with the Cochenour–Willans Mine and the **Follansbee, Bonanza, CP** and **North Contact zones**.

Exploration of the Rahill–Bonanza Joint Venture property in 2008 consisted primarily of diamond drilling in the vicinity of the past-producing **Wilmar Mine** (a satellite deposit of the Cochenour–Willans Mine) and diamond drilling on the **Bonanza** deposit. At Wilmar, drilling is testing below, and in the vicinity of the workings of the Wilmar Mine.

A deep diamond drill hole near the Wilmar Mine intersected the Mine Horizon, a series of variably deformed, altered and veined rocks, approximately 3 km from the westernmost occurrence of this deformation corridor at the Red Lake Gold Mines complex. Several intensely veined intervals hosting minor amounts of pyrite and pyrrhotite, with traces of arsenopyrite and chalcopyrite were intersected returning highly anomalous gold values. This discovery suggests that this deformation corridor is untested at depth for several kilometres towards the Red Lake Gold Mines complex and has the potential to host significant gold mineralization. Wedging off of the initial hole has been completed to provide additional information regarding the character and geometry of this horizon. Additional drilling will be performed, aimed at intersecting potential crosscutting structures that could host high-grade gold mineralization. (Premier Gold Mines, news release, July 22, 2008)

Drilling onto the Joint Venture project from the Campbell Complex of Red Lake Gold Mines, which is located immediately east of the property, was completed. This hole, collared on the 41 Level (1875 m below surface) of the Red Lake Gold Mines complex, successfully intersected the primary target opening up significant exploration potential along strike from the mine onto the joint venture project. Prior to reaching the main target area, a narrow gold-bearing zone was intersected returning an assay of 6.80 g/t Au (0.20 ounce per ton gold) over 1.0 m.

At the **Bonanza** deposit, a NI 43-101 compliant resource estimate was released in February 2008. At a 4.0 g/t Au cut-off grade, there is a resource of 2.283 million tonnes at 6.98 g/t Au undiluted (2.468 million tonnes of 6.46 g/t Au diluted to a 2.0 m width); at a 2.0 g/t Au cut-off, this increases to 6.657 million tonnes of 4.26 g/t Au (7.364 million tons of 3.85 g/t Au diluted) in 11 subparallel zones (Premier Gold Mines, news release, February 6, 2008). Diamond drilling during 2008 was focussed on expanding and delineating this deposit.

RUBICON MINERALS CORPORATION

Rubicon Minerals Corporation has a large land package in the Red Lake greenstone belt. Exploration activities during 2008 focussed on 3 of their properties.

At **Adams Lake**, 3 diamond-drill holes, totalling 3151 m, designed to test deep-seated northwest-trending regional structures interpreted from a Titan-24 survey, carried out in 2003, were completed. This is interpreted to be a major fold closure in Balmer assemblage metavolcanic rocks.

A deep diamond-drill hole at the **Red Lake North Property** (SD-06-05-ext) started in 2006 was completed to a final depth of 2269 m. The hole intersected rocks interpreted to be the extension of Planet Exploration Inc.'s Main Discovery zone (MDZ). Assay results indicate a thick section (36.1 m) of elevated gold values individual assays up to 7.7 g/t Au over 1.0 m are present in the gold zone (AFRO file #2.39281).

The **Phoenix Gold Project** was the main focus of exploration during 2008. The property contains the McFinley shaft and surface infrastructure where an extensive underground exploration project took place in the 1980s. Work during 2008 comprised a Titan-24 survey and diamond drilling. A total of 54 holes were drilled for 48 471 m of which 39 holes for 37 260 m targeted the newly discovered F2 zone located southeast of the shaft. The discovery hole, F2-01, (drilled at –70° from surface), targeted a newly interpreted geological structure and intersected several

gold-bearing intervals related to intrusive units and silica flood zones within altered ultramafic and mafic metavolcanic rocks. This drill hole intersected thick gold-bearing zones that returned up to 6.8 g/t Au over 11.0 m (0.20 ounce per ton over 36.1 feet) and also contains higher grade intervals that returned up to 34.6 g/t Au over 2.0 m (1.01 ounce per ton gold over 6.6 feet (Rubicon Minerals, news release, March 12, 2008). The F2 zone occurs within an extensive, 5000-foot long (1500 m) target area that is defined by a geophysical (Titan-24) anomaly. The vertical envelope of mineralization has been extended to 360 m laterally by 1025 m vertically and remains open. (Rubicon Minerals, news release, December 11, 2008). Ongoing interpretation suggests that the core F2 zone gold mineralization can be correlated with a minimum of 4, subvertical to northwest-dipping, subparallel gold zones developed over a vertical distance of 788 m (Rubicon Minerals, news release, October 21, 2008). Extensive diamond drilling on this zone returned numerous high-grade gold assays. The table below provides additional details (Rubicon Minerals, news release, August 26, 2008):

Hole #	Depth to Centre of Intercept (m)	Gold (g/t)	Metres	Gold (ounces per ton)	Feet
F2-01	93	8.4	4.5	0.25	14.8
F2-01	232	6.8	11.0	0.20	36.1
including	229	23.2	3.0	0.68	9.8
F2-03	267	283.2	1.0	8.26	3.3
F2-06	171	49.0	0.8	1.43	2.5
F2-06	349	4.9	8.5	0.14	27.9
including	347	8.7	2.5	0.25	8.2
F2-06	383	19.4	4.5	0.57	14.8
including	384	119.8	0.5	3.49	1.6
F2-06	433	15.4	1.0	0.45	3.3
F2-07	230	19.8	1.0	0.58	3.3
F2-07	239	12.6	1.0	0.37	3.3
F2-07	246	73.2	3.0	2.14	9.8
F2-07	380	24.4	17.0	0.71	55.8
including	384	36.5	8.0	1.06	26.2
F2-08	294	42.4	11.0	1.24	36.1
F2-09	442	28.7	15.5	0.84	50.8
including	438	52.6	7.4	1.53	24.3
or	439	353.8	0.9	10.32	3.0
F2-10	404	56.5	0.5	1.65	1.6
F2-10	424	77.8	0.5	2.27	1.6
F2-15-W1	393	19.1	1.0	0.56	3.3
F2-17	456	3.1	6.8	0.09	22.3
F2-21	170	9.1	8.6	0.27	28.2
including	168	97.9	0.5	2.85	1.6
F2-22	207	6.8	20.3	0.20	66.6
including	209	13.6	6.0	0.40	19.7
or	210	20.4	3.5	0.59	11.5
F2-22	238	8.0	6.0	0.23	19.7
including	236	18.5	2.0	0.54	6.6
F2-22	438	21.6	3.0	0.63	9.8

Work on permitting reopening the McFinley shaft to dewater and extend the underground workings to carry out further drilling of the F2 zone progressed through the latter part of 2008 with actual work on the shaft starting early in 2009.

Birch–Uchi and Confederation Greenstone Belts

The Birch–Uchi and Confederation greenstone belts are geologically similar to the Red Lake belt, with the exception that a much larger proportion of the rocks are assigned to the Confederation assemblage. Both gold and base metals have been historically produced, but there are no currently producing mines. While large areas of ground are held, exploration activity is not as intense as that in the Red Lake belt. Moreover, there has not been the same amount of recent geological research as there has been in the Red Lake belt. Exploration activities are summarized in Table 5.

SABINA SILVER CORPORATION

Sabina Silver Corporation carried out exploration work on 2 properties in Skinner Township. The Golden Sidewalk and Skinner projects are adjacent projects, both are located approximately 70 km east-northeast of the town of Red Lake.

Work on the **Golden Sidewalk** during 2008 consisted of 4512 m of diamond drilling and fencing the historic Bathurst Mine shaft. Drilling successfully intersected gold mineralization in the primary target area (the Bathurst Mine horizon (BMH)) and also discovered a second horizon with high gold mineralization, including 45.96 g/t Au (1.34 opt) over 1.70 m. Diamond drilling of the BMH and the new upper Bathurst Mine horizon (UBMH) confirms the presence of multiple gold-bearing structures with further potential along the strike and depth. (Sabina Silver Corporation, news release, July 7, 2008).

Work on the adjacent **Skinner property** included prospecting, geological mapping and diamond drilling. Diamond drilling intersected a gold mineralization structure along the edge of an ultramafic unit that is located under the arm of Narrow Lake. Only 2 holes tested the structure, both returning anomalous gold values including 1.28 g/t Au over 0.30 m. These holes were successful in delineating an east-trending unit (the Blind zone) with gold mineralization occurring where it is in contact with a gabbro sill (Sabina Silver Corporation, news release, July 7, 2008).

Northern Greenstone Belts

In the Red Lake District, the northern greenstone belts include those volcanic belts formed on rifted continental crust of the North Caribou terrane (McInnes Lake, North Spirit Lake, Setting Net Lake, Favourable Lake, Sandy Lake, Muskrat Dam Lake, Sachigo Lake, Lingman Lake belts), and belts within the Stull–Oxford terrane that formed as products of juvenile ocean floor–arc volcanism (Stull Lake, Ellard Lake belts) (Sanborn-Barrie, Stott and the Superior Working Group 2005).

Although numerous mineral occurrences are reported from both terranes, mineral production from this portion of the Red Lake District has been restricted to the Berens River and Sachigo River mines, both prior to 1950. Precious and base metals (157 341 ounces gold, 5 676 486 ounces silver, 5 105 873 pounds of lead and 1 797 091 pounds of zinc) from polymetallic veins were produced at the Berens River Mine in the Setting Net Lake belt. The Sachigo River Mine (produced 52 560 ounces gold) is situated within the Ellard Lake belt of the Stull–Oxford terrane (MDI 53J11SW00002).

Several companies hold claims in the northern terranes, either individually or in joint-venture agreements; information on their properties is summarized in Table 5. Recent exploration efforts have been directed toward uranium, molybdenum, copper and diamonds, as well as gold and silver. The Favourable Lake and Setting Net Lake greenstone belts host projects directed at uranium, molybdenum and copper, and polymetallic silver-gold mineralization. In addition, there are rare-metal pegmatite occurrences near Setting Net Lake that are covered by claims, but were not explored in 2008.

Much of the area of the northern greenstone belts is under exploration/mining moratoriums from one or more First Nation communities. A notable exception to this is Northern Superior Resources Inc. (formerly Superior Diamonds Inc.): this company recently completed an overburden sampling program in the Thorne Lake Area under an agreement with Sachigo Lake First Nations (*Northern Sun News*, February 4, 2009).

RESIDENT GEOLOGIST STAFF AND ACTIVITIES

In 2008, staff of the Red Lake Resident Geologist's office comprised Andreas Lichtblau *P.Geo.*, Regional Resident Geologist; Carmen Storey *P.Geo*., District Geologist; and Kelly Joy, Acting District Support Geologist (DSG). Kelly Joy left the DSG position in June, but continued on short-term contract converting the assessment file system from top tabs to end tabs as well as creating an assessment file database. Judith Hinton, Penny Symonds and Kelly Comrie assisted in this project at various times from August to December. Emily Hinton was employed from July 14 to August 22 and Sarah Dickson from August 6 to August 29 as office assistants in the Summer Experience Program. The office was located in temporary facilities at the Red Lake Heritage Centre (51A Hwy 105, Red Lake) until December 2008 when it was moved back to the Ontario Government Building at 227 Howey Street. Preparation for the move and the move itself occupied a significant amount of time during November and December.

During the year, staff of the Resident Geologist's office made 22 visits to active and inactive mineral properties and gave 7 field trips (totalling in excess of 75 participants) in the Red Lake District, plus organizing the field trip included with the CIMM–Red Lake Branch Exploration Roundup. Field and office activities focussed on delivering high-quality services to the exploration and mining sector.

A.F. Lichtblau attended the Boreal Prospectors Association's Northern Ontario Mines and Minerals Symposium in Sioux Lookout in February, the Prospectors and Developers Association of Canada conference (PDAC) in Toronto in March, the Northwestern Ontario Mines and Minerals Symposium meeting in Thunder Bay in April and the Manitoba Mining and Minerals Convention in Winnipeg in November. He continued to be actively involved in the Canadian Institute of Mining, Metallurgy and Petroleum (CIMM) Red Lake Branch and was re-elected as Membership Chair for the current year. During the latter part of the year, he became a board member of the Whitefeather Aboriginal Skills and Employment Partnership Corporation and attended 2 of its Board meetings. A.F. Lichtblau also attended the Treaty No.3 Mining Act Review meeting in Kenora.

C.C. Storey attended the Boreal Prospectors Association's Northern Ontario Mines and Minerals Symposium in Sioux Lookout in February, the Northwestern Ontario Mines and Minerals Symposium meeting in Thunder Bay in April and the Resident Geologist Program (RGP) annual meeting in Sault Ste. Marie in October. He continued to be actively involved in the Canadian Institute of Mining, Metallurgy and Petroleum (CIMM) Red Lake Branch and was re-elected as Technical Program Chair for the current year.

C.C. Storey and A.F. Lichtblau organized a very well-attended Annual CIMM Exploration Roundup and Field Trip in June in Red Lake, which included talks by industry representatives and a field trip to see recent stripped outcrops and drill core at the Goldcorp Red Lake Gold Mines Campbell Complex. Several field trips were organized in the Red Lake District for industry representatives, academics and students in 2008, including 3 general Red Lake field trips for industry representatives, and trips for North Park University, North Dakota State and McCalister University (combined), and a University of Manitoba student and faculty field trip in September. One notable field trip involved showing various types of exploration activities to a group of 40 MNR lands course participants.

Staff of the Red Lake Resident Geologist's Office attended 2 meetings between the northwest Regional Land Use Geologist and representatives of the Municipality of Red Lake, regarding the impact of mine hazards and high mineral potential areas on land use planning. Staff also attended 2 Gold Eagle Mines Ltd. Open Houses, detailing the company's plans for its McKenzie Island Advanced Exploration shaft; as well as a Goldcorp Inc. Open House on the company's surface exploration plans within the boundaries of the Municipality.

With the strong support of Treasury Metals Inc. field staff, a presentation of current exploration techniques and environmental monitoring, and career-related opportunities in mineral exploration, was given to Dryden High School's annual Conservation Course in Dryden. Staff also participated in Red Lake High School's Career Day.

DRILL CORE STORAGE SITE

The remote diamond-drill core storage compound is located 6 km south of Red Lake, on Highway 105. The compound is operated as a self-serve facility by the Red Lake Resident Geologist's office. The Kenora Drill Core Library houses an additional 14 529.9 m of diamond-drill core from the Red Lake District.

In 2008, the remote drill-core facility had 12 users. Industry visits usually extend over several days, involving examining, relogging and sampling core.

Diamond-drill core from 1 property was donated to the remote core facility this year (Table 6). There is additional diamond-drill core from industry projects stored at the site but not yet incorporated in the collection and not included in the table. Work to roof and partially enclose 2 sets of core racks began in 2008 and will be completed in 2009.

Table 6. Drill core stored at the Red Lake Resident Geologist's District remote drill core compound.

Company	Property	Township/Area	Length (m)
Ansil Resources Ltd.	Baird Tp	Baird Township	177.9
Ansil Resources Ltd.	Willans Tp	Willans Township	351
Ansil Resources Ltd.	Ranger Lake	Ranger Township	245
Asarco Exploration Co. of Canada Ltd.	Skinner, Goodall	Skinner and Goodall townships	444.0
Barrick Gold Corporation	Hasaga Mine	Heyson Township	2889.8
Barrick Gold Corporation	Red Lake Gold Shore Mine	Dome Township	106.7
Barrick Gold Corporation	Red Lake Gold Shore Mine	Dome Township	257.6
Belmont Resources Inc./ International Montoro Resources Inc.	Walsh Lake	Bateman Township	474.0
Belmont Resources Inc./ International Montoro Resources Inc.	Shaver Lake	Bateman and Shaver townships	882.2
Canadian Industrial Minerals Corp.	Bouzan Lake	Heyson Township	2029.2
CANMET Howey and Hasaga Mine Hazards Drilling	Howey-Hasaga	Heyson Township	1027.2
Central Geophysics Ltd.	Conifer Lake Complex	Sumach Lake Area	170.8
Cross Lake Minerals Ltd.	Gerry Lake	Gerry Lake Area	981.0
Cypress Development Corp./ Skyharbour Resources Ltd.	McKenzie Island	Dome Township	3059.9
Cypress Development Corp./ Skyharbour Resources Ltd.	McKenzie Island	Dome Township	2081.8
East-West Resource Corporation	Bouzan Lake	Heyson Township	1489.5
Freewest Resources Ltd.	McQuaig Property	Dome Township	993.1
Hemlo Gold Mines Ltd.	Miles Red Lake	Todd Township	369.3
ITL Capital Corp./Rupert Resources Ltd.	Durham-McEwen	Balmer Township	1682.5
Lac Properties Ltd.	Hasaga Mine: Time-Domain Reflectometry (TDR) cables installed in the Crown Pillar	Heyson Township	33.7
Loydex Resources Inc.	Bug River	Heyson Township	190
Mutual Resources Ltd.	Dixie Lake	Dixie Lake Area	499.3
Noramco Explorations Inc.	Various	Ball Township, Balmer Township, Byshe Township, Dome Township, Fairlie Township, Goodall Township, Honeywell Township, McDonough Township, Ranger Township, Shabumeni Lake Area, Skinner Township, Todd Township	31268.6
Noranda Exploration Company Ltd.	Selco Dixie Joint Venture	South of Otter Lake and Karas Lake areas	1638.2
Pure Gold Resources Inc.	McKenzie Island	Dome Township	1762.4

Company	Property	Township/Area	Length (m)
Rio Algom Exploration Co. Ltd.	Fly Lake	Mitchell Township	731.0
**Skyharbour Resources Ltd.	Heyson	Heyson and Byshe townships	2018.2
**Skyharbour Resources Ltd.	Heyson	Heyson and Byshe townships	731.0
**Skyharbour Resources Ltd./ Consolidated Abaddon Resources Inc.	Sidace Lake Property	Sobeski Lake Area	2215.7
**Skyharbour Resources Ltd./ Consolidated Abaddon Resources Inc.	Black Bear Property	Black Bear Lake Area	694.9
Teck Exploration Ltd.	Howey Mine	Heyson Township	7255.5
Tri Origin Exploration Ltd.	RLX Property	Willans Township	120.0
Tri Origin Exploration Ltd.	RLX Property	South of Otter Lake Area	32.3
*Tri Origin Exploration Ltd.	RLX Property	South of Otter Lake Area	1323.0
United Reef Petroleums Limited	Aiken-Russett	Baird Township	8154.0
Western Pacific Energy Corp.	Swain Lake	Goodall Township	1936.2
TOTAL			**80928.5**

*2008 submission; **length is total length of hole including overburden

PROPERTY EXAMINATIONS

Table 7 lists the property visits conducted by staff in 2008 in the Red Lake District. A location map, keyed to the property numbers, is shown in Figures 4, 5, 6, 7 and 8. The figure locations are superimposed on geology from the *Bedrock Geology of Ontario* (Ontario Geological Survey 2000).

Table 7. Property visits conducted by the Red Lake Regional Resident Geologist and staff in 2008 (keyed to Figures 4 to 8).

Number	Property or Occurrence	Location	*see* Figure
1	Pine Ridge Road stromatolites	Bateman Township	Figs. 5, 6
2	Mt Jamie Mine Hy Lake gold	Todd Township	Fig. 7
3	Lake Rowan–Golden Arm area, Hy Lake gold	Todd Township	Fig. 7
4	Halo Resources core shack		
5	Cole Mine	Ball Township	Fig. 7
6	Mt Jamie Landing (twice)	Ball Township	Fig. 7
7	McKay Lake reconnaissance	Meandrine Lake Area	Fig. 4
8	Cherrington Lake reconnaissance	Cherrington Lake Area	Fig. 4
9	Rivard property	Todd Township	Fig. 7
10	Redstar Gold Corp.: Newman–Todd property	Todd Township	Fig. 7
11	Canstar Resources Ltd.: Slate Bay Property	McDonough Township	Fig. 6
12	Halo Resources Ltd.: Middle Bay and Bridgit Lake properties	Todd Township	Fig. 7
13	Skarn Island	Fairlie Township	Fig. 7
14	Rupert Resources core shack		
15	Lake Rowan shaft	Todd Township	Fig. 7
16	Lake Rowan adit	Todd Township	Fig. 7
17	Red Crest area	Todd Township	Fig. 7
18	Hasaga Mine	Heyson Township	Fig. 6
19	Diamond-drill sites, Cochenour and Balmertown	Balmer and Dome townships	Fig. 6
20	Hydro Line zinc occurrence	Heyson Township	Fig. 6
21	Claude Resources: Buffalo property	Heyson Township	Fig. 5
22	Camping Lake cordierite	Camping Lake Area	

Cherrington Lake Greenstone Belt (C.C. Storey and A.F. Lichtblau)

INTRODUCTION

The northwest-trending Cherrington Lake greenstone belt is located near the Ontario–Manitoba boundary approximately 220 km north of Red Lake. Access is by float or ski-equipped aircraft only. MacKay Lake provides access to the northwest part of the belt and Cherrington Lake to the southeast part of the belt. The area has been mapped at reconnaissance scale by Rickaby (1923), Kirwin (1959), Averill and Ayres (1968), Ayres et al. (1972), Stone (1991, 1998) and Stone and Crawford (1993). The belt is covered by 1:63 360 scale federal–provincial airborne magnetic maps 4036G and 4055G. The belt falls in the area of claim maps Cherrington Lake, Meandrine Lake, Palsen Lake and BMA 526 951. There is no recorded mineral exploration activity in the belt and no current Crown land mining claims.

A two-day reconnaissance survey of the Cherrington Lake greenstone belt was undertaken in August, 2008, to examine mineral occurrences and obtain rock samples from as many assemblages as possible for further study. This area is part of a much larger area currently being considered for inclusion in the Pimachiowin Aki UNESCO World Heritage Site.

GENERAL GEOLOGY

The Cherrington Lake greenstone belt is 18 km long by a maximum of 5 km wide and lies within the North Caribou superterrane (Rayner and Stott 2005). Figure 9 shows the geology of the Cherrington Lake belt. The following description has been taken from Stone (1998) and Stone and Crawford (1993). The Cherrington Lake greenstone

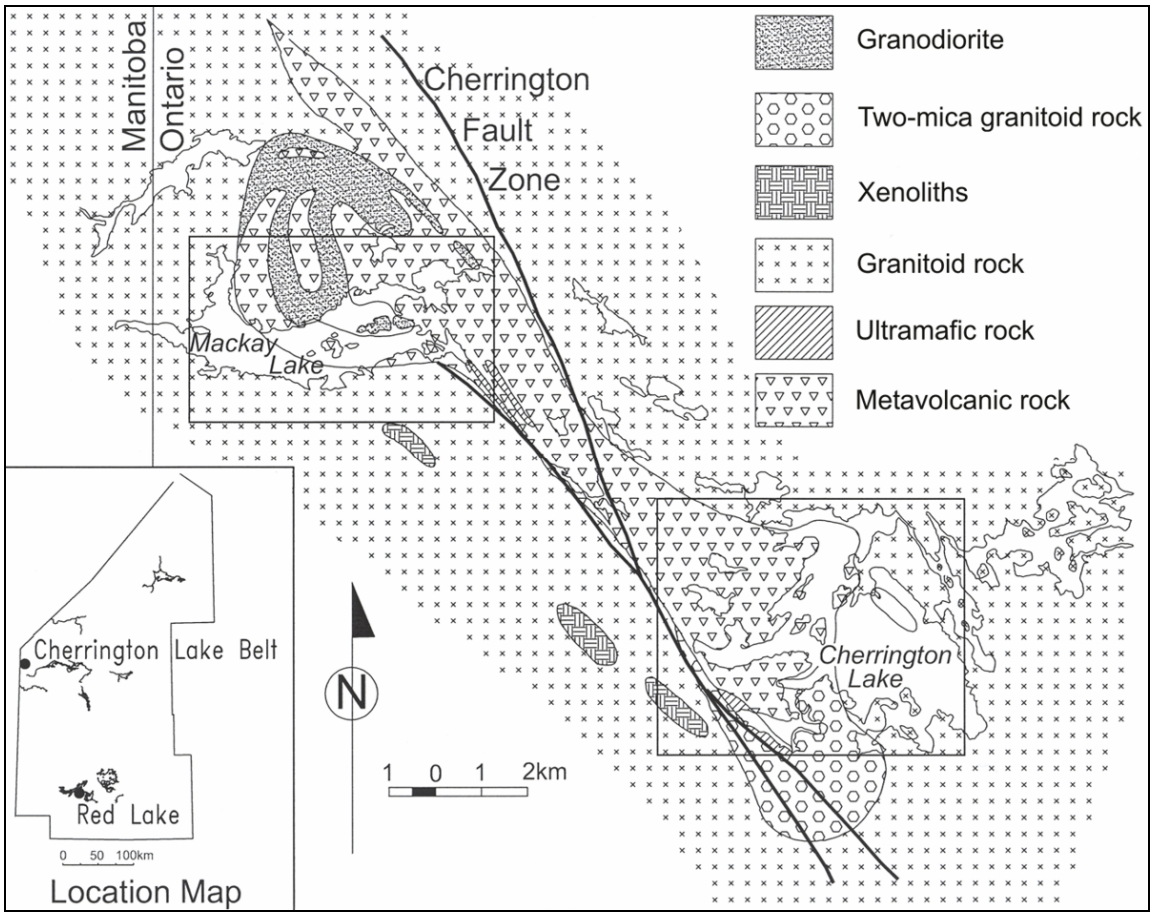

Figure 9. General geology of the Cherrington Lake greenstone belt (*after* Stone and Crawford 1993). The northern (McKay Lake) and southern (Cherrington Lake) areas are shown in more detail in Figures 10 and 11, respectively.

belt is composed primarily of massive and pillowed mafic metavolcanic flows with minor intercalated ultramafic rock at the southeast bay of MacKay Lake. Pillows are preserved in the central and southern parts of the belt; pillow tops face northeast (Stone and Crawford 1993). Flows are 2 to 12 m thick as shown by pillow breccia and flow breccia. Metasedimentary rocks are absent except for thin ferruginous interflow chert units. Stone and Crawford (1993) indicated one outcrop on Cherrington Lake that contains a small exposure of intermediate to felsic metavolcanic rocks. The metamorphic grade is amphibolite.

The belt is bisected obliquely by the transcurrent Cherrington fault. The fault bifurcates with 1 branch along the southwest margin of the belt, whereas the main part crosses the belt. The Cherrington batholith, a relatively late biotite granodiorite to granite body, envelopes the entire Cherrington Lake belt. Several small gneissic areas in the Cherrington batholith may represent greenstone xenoliths. A diorite to quartz diorite body intrudes the belt north of MacKay Lake. A two-mica granite intrudes the belt at its southeast end and is cut by the Cherrington fault.

There are no published ages for either the metavolcanic rocks or the granitoid bodies. The metavolcanic rocks show moderate to strong foliations trending parallel to the Cherrington fault or the contact zones between the greenstone belt and the surrounding granitoid rocks.

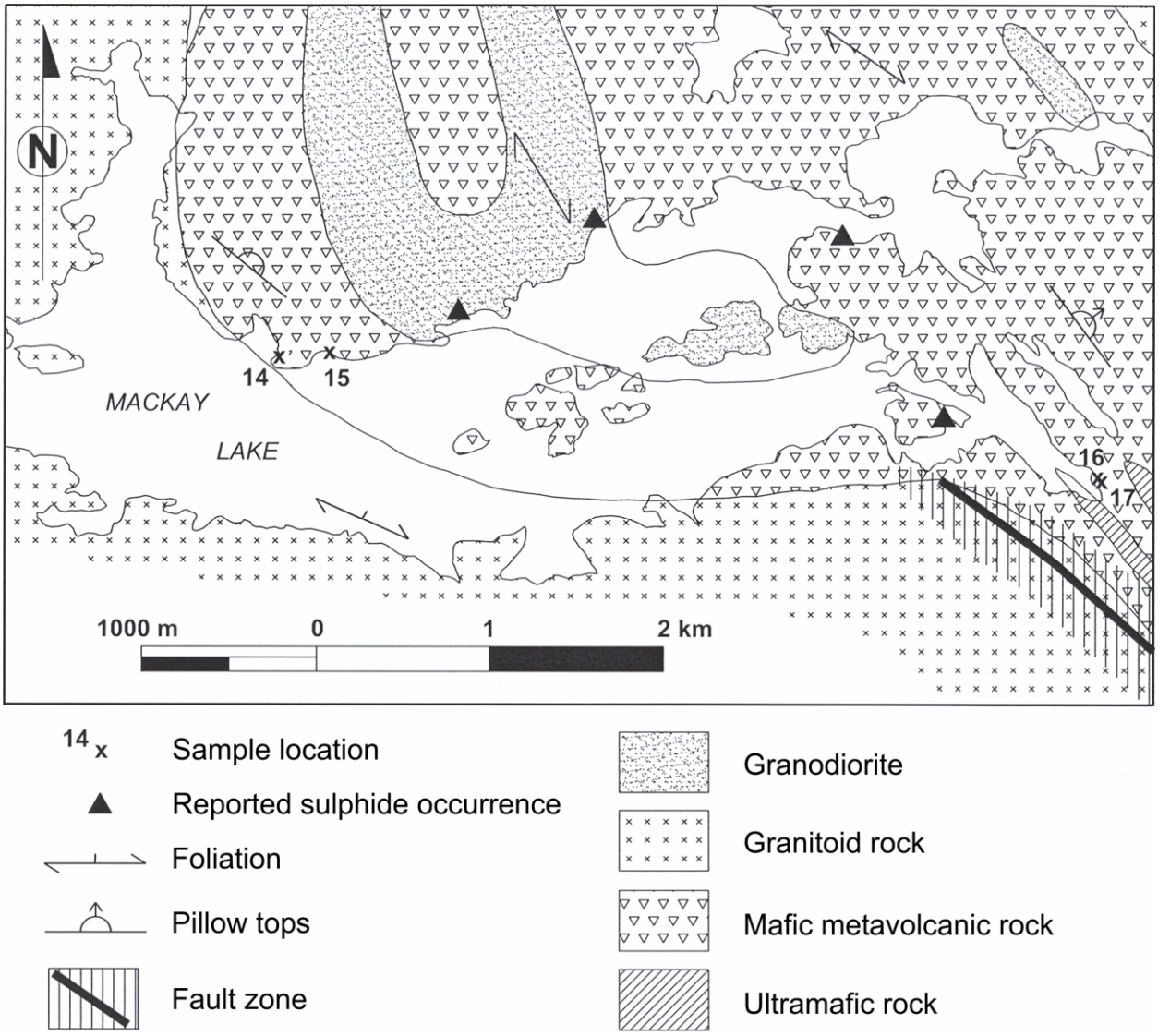

Figure 10. Geology of the northern portion of the MacKay Lake area, Cherrington Lake greenstone belt.

GEOCHEMISTRY

Geochemical classification of rocks sampled for this study established the presence of high-iron and high-magnesium tholeiitic basalt, ultramafic komatiite, and weakly peraluminous granitic rock. Sample locations are shown on Figures 10 and 11, and in Table 8. Whole rock and trace element compositions are presented in Tables 9 and 10.

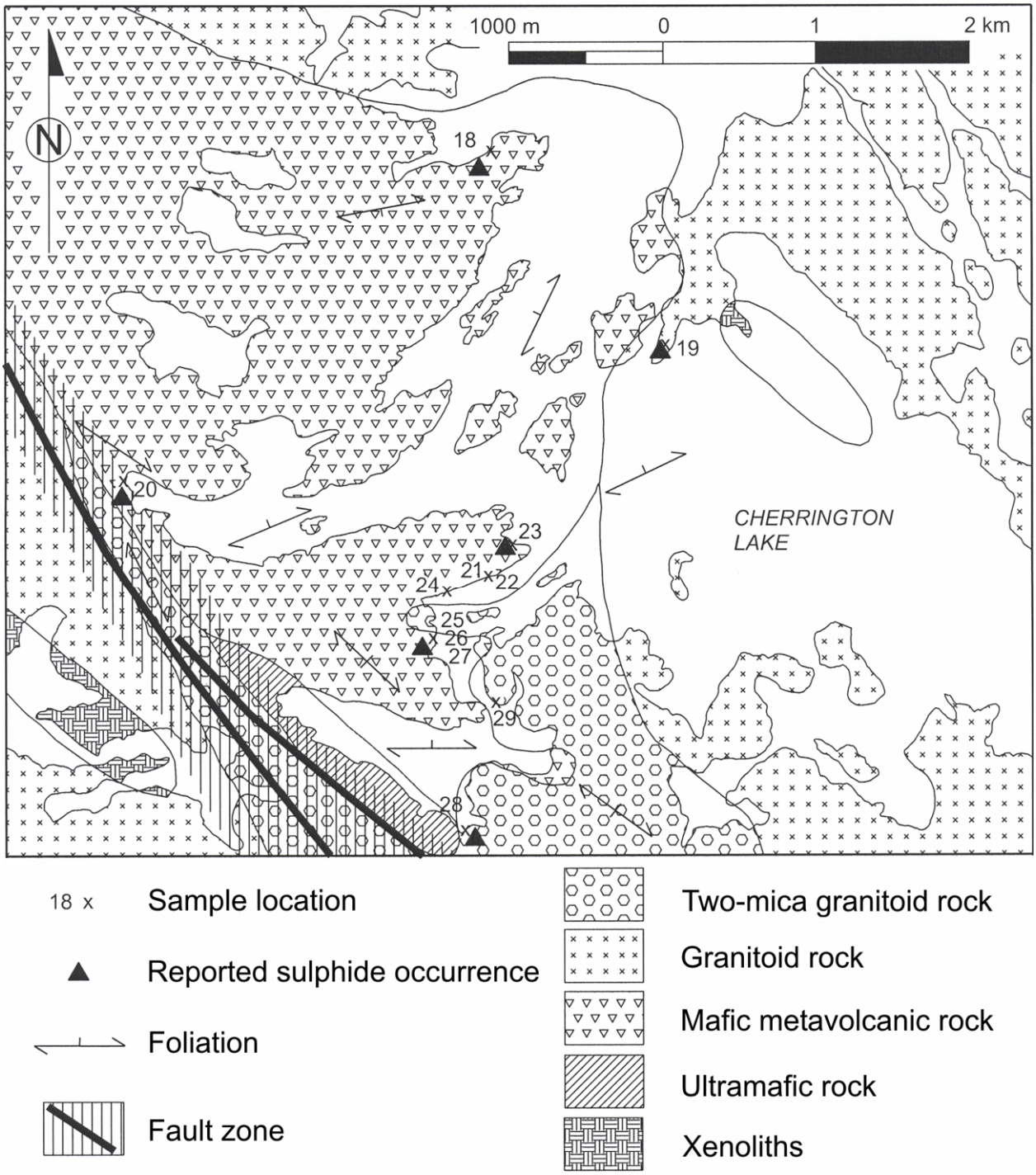

Figure 11. Geology of the southern portion of the Cherrington Lake area, Cherrington Lake greenstone belt.

Geochemical classification of mafic extrusive rocks was based on the cation plot (Figure 12) of Jensen (1976), and Irving and Baragar's (1971) tholeiitic–calc-alkaline AFM discrimination diagram (Figure 13).

Sample 2008AL-016 is from one of two previously recognized (Stone and Crawford 1993) ultramafic metavolcanic rock units found within the northeastern limits of the Cherrington fault, in the southeastern McKay Lake area (*see* Figure 10). A second ultramafic sample, 2008AL-020, comes from the western Cherrington Lake area, on the eastern margin of the southward continuation of the Cherrington fault (*see* Figure 11). This is an area previously mapped as unsubdivided mafic metavolcanic rock (Stone and Crawford 1993). The possibility exists that this exposure is a northward continuation of gabbroic to ultramafic rocks mapped approximately 1 km to the southeast (Stone and Crawford 1993) or that this is a continuation of the McKay Lake ultramafic unit, 8.7 km to the northwest. Conceivably, these exposures are a series of disrupted ultramafic units along the eastern margin of the Cherrington fault. As such, they may offer exploration potential for lode gold and Ni-Cu-PGE mineralization.

The third sample of ultramafic komatiite, 2008AL-018, is from northern Cherrington Lake, in an area generally underlain by massive mafic metavolcanic rock (Stone and Crawford 1993). It may represent a thin intercalated unit. The 3 ultramafic rocks (2008AL-16, 2008AL-18 and 2008AL-20) were described in the field as medium-grained, weak- to non-magnetic, moderately foliated amphibolitic basalt.

Table 8. Locations of samples collected in the Cherrington Lake greenstone belt (UTM co-ordinates using NAD83, Zone 15).

Sample #	Easting (m)	Northing (m)
2008AL-014	356632	5833413
2008AL-015	356918	5833418
2008AL-016	361346	5832448
2008AL-017	361323	5832468
2008AL-018	368418	5828358
2008AL-019	369487	5827011
2008AL-020	365966	5826278
2008AL-021, 2008AL-022	368186	5825515
2008AL-023	368474	5825770
2008AL-024	368052	5825477
2008AL-025, 2008AL-026, 2008AL-027	367946	5825202
2008AL-028	368131	5823935
2008AL-029	368340	5824739

Table 9. Major element chemistry of Cherrington Lake samples.

	Rock Type[1]	SiO_2 (%)	TiO_2 (%)	Al_2O_3 (%)	Fe_2O_3 (%)	K_2O (%)	Na_2O (%)	CaO (%)	MgO (%)	MnO (%)	P_2O_5 (%)	LOI (%)	Total (%)
2008AL-014	HFT	48.64	0.79	14.53	14.55	0.24	1.40	11.44	7.43	0.25	0.06	0.77	100.11
2008AL-016	PK	48.96	0.30	5.99	9.99	0.24	0.62	11.72	18.57	0.22	0.02	2.63	99.27
2008AL-018	PK	45.21	0.24	6.38	11.3	0.04	0.17	8.74	22.28	0.14	0.01	4.64	99.16
2008AL-019	GD	72.48	0.16	14.83	1.19	3.48	4.42	1.71	0.49	0.03	0.06	0.66	99.51
2008AL-020	PK	45.63	0.16	3.89	10.03	0.02	0.10	6.92	27.15	0.18	0.01	5.83	99.93
2008AL-022	HFT	55.14	0.51	12.75	11.64	0.28	1.86	10.04	5.61	0.17	0.06	1.69	99.75
2008AL-023	HFT	49.07	0.81	14.16	13.77	0.26	2.04	11.54	7.00	0.21	0.06	0.67	99.60
2008AL-024	HFT	48.00	1.03	13.59	15.96	0.29	2.00	11.32	5.62	0.22	0.09	1.37	99.48
2008AL-025	HFT	50.69	0.98	14.99	12.57	0.23	2.75	10.72	5.67	0.20	0.09	1.02	99.90
2008AL-026	HFT	60.24	0.44	10.05	12.39	0.19	0.94	9.32	4.83	0.22	0.06	1.04	99.71
2008AL-027	HFT	47.67	0.81	12.76	16.21	0.30	1.00	13.01	7.09	0.33	0.08	0.72	99.96
2008AL-028	HMT	51.80	0.74	14.38	12.52	0.37	3.16	8.51	7.33	0.18	0.06	0.71	99.76
2008AL-029	GR	73.66	0.06	14.35	0.82	4.21	4.18	1.12	0.16	0.02	0.02	0.46	99.06

[1]Abbreviations: GD, granodiorite; GR, granite; HFT, high iron tholeiitic basalt; HMT, high magnesium tholeiitic basalt; PK, ultramafic komatiite.

Table 10. Trace element analyses (in ppm) of Cherrington Lake samples (sample number prefix is 2008AL, i.e., 2008AL-014).

Detect. Limit		**-014**	**-016**	**-018**	**-019**	**-022**	**-023**	**-024**	**-025**	**-026**	**-027**	**-028**	**-029**
	Rock Type[1]:	HFT	PK	PK	GD	HFT	HFT	HFT	HFT	HFT	HFT	HMT	GR
Ba	*0.9*	19.1	18.5	1.7	585.1	39.8	34	45.7	40	21.9	31.7	54.8	940.4
Be	*0.06*	0.65	0.53	0.25	2.09	0.48	0.38	1.61	0.54	0.92	1.06	0.91	1.68
Bi	*0.009*	0.146	0.749	0.11	0.16	0.756	0.099	0.373	0.783	1.235	0.813	0.497	0.158
Cd	*0.01*	0.31	0.15	0.1	0.02	0.37	0.2	0.2	0.15	0.15	0.18	0.19	0.04
Ce	*0.2*	6.53	1.85	1.33	38.47	12.82	7.87	9.65	9.2	17.77	11.03	5.45	18.25
Co	*0.1*	58.4	32.1	79.8	1.5	60.4	55	81	75	54.5	51.2	43.7	0.7
Cr	*24*	244	>600	>600	29	190	255	189	144	93	136	114	<24
Cs	*0.006*	0.3	0.34	0.04	3.73	0.46	0.23	0.11	0.07	0.14	0.24	2.62	3.82
Cu	*2*	311	43	152	8	464	214	398	557	362	123	128	13
Dy	*0.02*	3.7	1.52	0.97	1.11	2.92	3.41	4.49	4.32	2.47	3.52	3.67	0.5
Er	*0.01*	2.46	1.05	0.64	0.55	1.83	2.26	2.90	2.84	1.63	2.40	2.26	0.22
Eu	*0.005*	0.71	0.35	0.18	0.39	0.66	0.79	1.01	0.96	0.63	0.86	0.78	0.27
Ga	*0.05*	16.56	9.46	6.50	20.72	15.34	15.34	16.81	16.60	16.49	21.21	17.03	18.34
Gd	*0.02*	2.90	1.14	0.72	1.52	2.55	2.88	3.58	3.49	2.26	2.97	2.73	0.81
Hf	*0.09*	0.94	0.44	0.27	3.18	1.60	0.53	0.93	1.05	1.73	1.40	0.97	1.95
Ho	*0.003*	0.79	0.33	0.21	0.2	0.61	0.75	0.95	0.96	0.55	0.79	0.79	0.08
La	*0.09*	2.39	0.62	0.38	23.00	4.87	2.79	3.58	3.21	7.93	4.34	2.07	11.05
Li	*0.2*	39.30	4.00	0.90	53.60	15.40	17.60	16.00	18.60	17.00	24.60	41.10	46.70
Lu	*0.002*	0.37	0.15	0.09	0.09	0.27	0.32	0.40	0.41	0.25	0.36	0.31	0.04
Mo	*0.03*	4.20	0.99	0.46	5.64	3.98	0.37	0.68	0.57	7.35	2.67	0.26	0.74
Nb	*0.04*	1.83	0.53	0.32	6.04	3.58	2.12	2.98	2.83	2.64	2.72	1.33	4.43
Nd	*0.08*	5.94	1.64	1.28	12.14	7.18	6.4	7.92	7.6	8.62	7.17	4.66	5.93
Ni	*3*	153	217	637	4	265	122	100	148	120	97	66	<3
Pb	*0.4*	1.5	3.8	1.3	42.5	10.7	5.4	5.6	6.6	4.2	3.7	4.6	46
Pr	*0.02*	1.05	0.32	0.22	3.73	1.73	1.23	1.51	1.49	2.15	1.55	0.84	1.79
Rb	*0.2*	7.41	3.63	0.82	143.12	4.06	2.97	3.67	2.93	2.91	5.01	15.38	157.02
Sb	*0.04*	0.04	0.05	<0.04	<0.04	<0.04	0.04	0.04	0.06	0.05	0.06	<0.04	<0.04
Sc	*0.9*	49.0	28.1	33.8	3.0	28.4	44.9	42.7	44.3	21.1	38.8	42.7	1.7
Sm	*0.02*	2.00	0.69	0.46	2.10	2.11	2.07	2.54	2.63	2.00	2.25	1.79	1.10
Sn	*0.08*	0.87	1.87	0.18	1.47	2.36	0.57	1.45	1.98	2.12	3.37	0.86	0.95
Sr	*2*	78	12	4	233	75	109	109	141	46	55	70	147
Ta	*0.2*	<0.2	<0.2	<0.2	0.9	0.3	<0.2	0.2	0.2	0.3	0.2	<0.2	0.7
Tb	*0.003*	0.52	0.209	0.134	0.21	0.445	0.502	0.639	0.626	0.377	0.517	0.498	0.101
Th	*0.09*	0.2	0.18	<0.09	13.29	3.89	0.25	0.44	0.44	3.51	1.07	0.24	13.29
Ti	*26*	4927.6	1693	1371.8	948.07	3046.7	5082.5	6506.5	5825.3	2544.5	4961.6	4462.9	377.48
Tl	*0.005*	0.04	0.09	0.02	0.76	0.17	0.06	0.10	0.06	0.07	0.09	0.14	0.86
Tm	*0.002*	0.36	0.15	0.09	0.09	0.28	0.33	0.42	0.43	0.24	0.35	0.33	0.04
U	*0.02*	0.10	0.10	0.02	5.65	1.05	0.08	0.34	0.16	0.97	0.63	0.08	2.96
V	*10*	381.43	161.48	153.12	12.06	183.25	309.38	326.91	325.14	159.7	290.64	319.53	<10
W	*0.5*	6.87	40.72	<0.5	<0.5	3.63	<0.5	1.76	1.37	0.58	1.03	<0.5	<0.5
Y	*0.08*	21.23	8.89	5.51	5.52	16.01	19.44	25.01	23.83	14.33	20.78	20.52	2.51
Yb	*0.009*	2.377	1.051	0.642	0.61	1.794	2.167	2.73	2.82	1.605	2.354	2.07	0.236
Zn	*8*	111.70	143.73	69.40	22.26	268.18	112.26	148.84	125.68	170.02	240.39	71.64	23.23
Zr	*3*	25	14	6	107	57	9	23	30	61	46	32	58

[1]GD, granodiorite; GR, granite; HFT, high iron tholeiitic basalt; HMT, high magnesium tholeiitic basalt; PK, ultramafic komatiite.

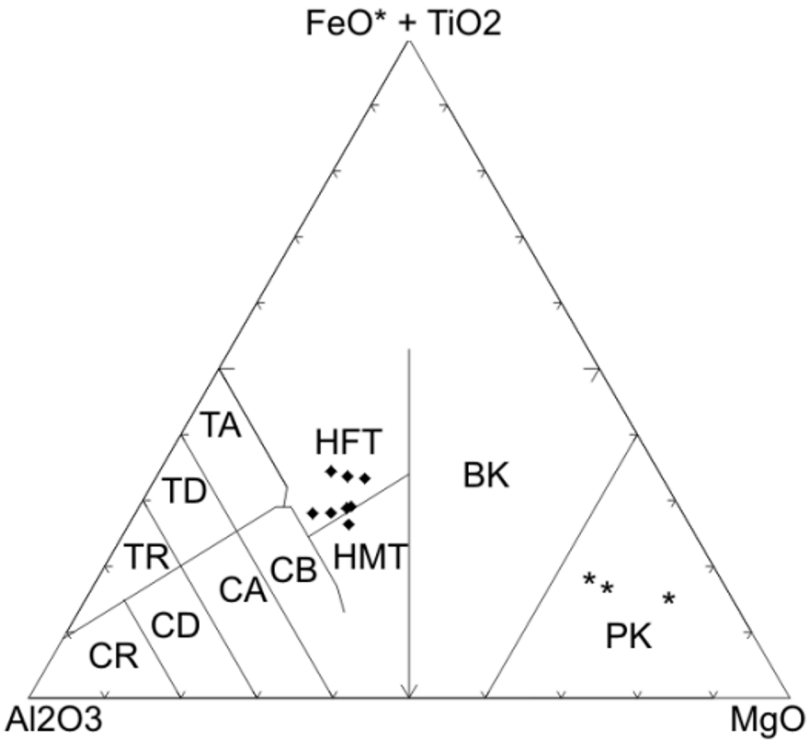

Figure 12. Classification of Cherrington Lake greenstone belt rocks (granitoids not shown) using the cation plot of Jensen (1976). Abbreviations: BK, basaltic komatiite; HFT, high iron tholeiitic basalt; HMT, high magnesium tholeiitic basalt; PK, ultramafic komatiite. Symbols: diamonds, extrusive mafic rocks; asterisks, ultramafic rocks.

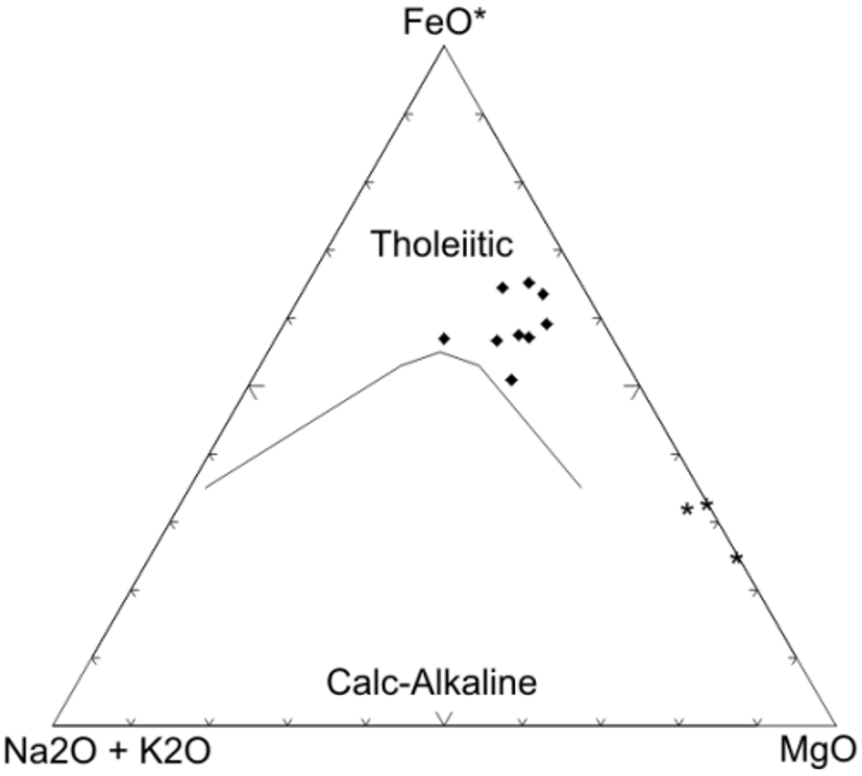

Figure 13. AFM plot (*after* Irving and Baragar 1971) of Cherrington belt samples. Symbols: diamonds, extrusive mafic rocks; asterisks, ultramafic rocks.

The 2 granitic samples are shown in Figure 14, a QAP diagram after Streckeisen (1976).

Following Breaks, Selway and Tindle (2003), if the molecular ratio A/CNK (defined as (AL_2O_3/(CaO+Na_2O+K_2O)) in a bulk whole rock analysis is >1.0, then the rock exhibits excess alumina and is classed as peraluminous. This method suggests the 2 granitic samples (2008AL-19 and 2008AL-29) are mildly peraluminous, with an A/CNK ratio of 1.05 and 1.07, respectively. Peraluminous granitic rocks ("fertile granites") may be indicative of the presence of associated rare-element pegmatite mineralization.

Sample 2008AL-019 is a biotite-granodiorite, with a minor white mica component from northern Cherrington Lake (*see* Figure 11), in an area previously mapped as "unsubdivided granodiorite to granite" (Stone and Crawford 1993). Other outcrops in the vicinity displayed graphic granite texture. Sample 2008AL-029, from western Cherrington Lake (*see* Figure 11), is a two-mica granite from an area mapped by Stone and Crawford (1993) as "two-mica granite to granodiorite".

Both samples have more than double the average upper continental crust concentrations of lithium (53.6 ppm and 46.7 ppm in 2008AL-019 and 2008AL-029, respectively; average upper continental crust contains 20 ppm Li) (Breaks, Selway and Tindle 2003). Concentrations of other incompatible rare elements (e.g., Be, Cs, Nb, Rb, Sn, Ta) and ratios (K/Cs, K/Rb, Nb/Ta) used by Breaks, Selway and Tindle (2003) to determine fertile granites do not indicate significant degrees of fractionation of the granitic intrusive rocks in the limited area sampled. Further sampling of this intrusive body and, in particular, some related granitoid dikes, mapped by Stone and Crawford (1993) along the southwest contact of the Cherrington Lake belt with the Cherrington batholith, may give a clearer picture of the rare metal potential of this area.

MINERAL OCCURRENCES

While there is no recorded mineral exploration, Ayres et al. (1972) indicate several sulphide occurrences on the shores of MacKay Lake and Cherrington Lake. Meyn and Howarth (1977) indicate 2 molybdenum occurrences, a pegmatite occurrence on MacKay Lake, and an unclassified occurrence on Cherrington Lake. All these mineral occurrences are shown on Figures 10 and 11.

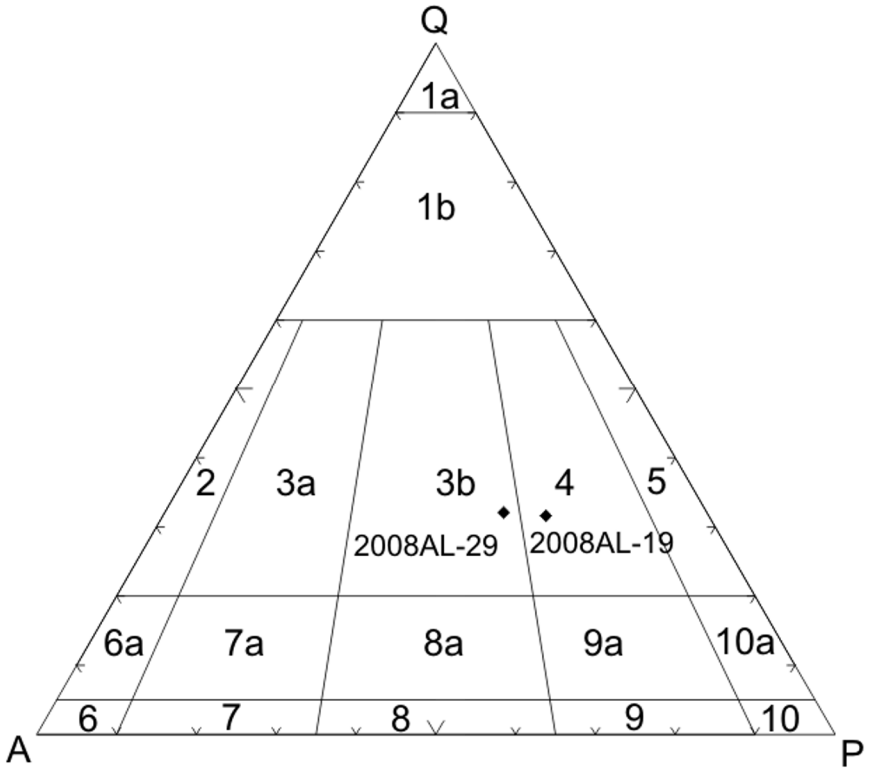

Figure 14. QAP plot (*after* Streckeisen 1976) of granitoid samples (diamond symbol) from the Cherrington Lake greenstone belt (3B, granite; 4, granodiorite).

The sulphide occurrences examined during this reconnaissance survey in the MacKay Lake area were all of a very minor nature. Evidence of potential hydrothermal alteration (whether associated with volcanogenic massive sulphide systems or lode gold mineralization) was not evident. Sample 2008AL-014 returned 313 ppm Cu from the interior portion of an unaltered mafic tholeiitic pillow.

The southern part of the belt, particularly the south arm of Cherrington Lake, hosts a series of gossans visible along the shoreline, situated in the vicinity of samples 2008AL-021 through -027. The host rock is unaltered, massive amphibolitic tholeiite, returning elevated copper values (between 214 and 464 ppm Cu, Table 10). Minor pyrite and trace pyrrhotite occurs along joint planes and as wispy disseminations in the rock; total sulphides never exceeds 0.5%.

RECOMMENDATIONS FOR EXPLORATION

Gold

Gold occurrences have been documented along portions of the **Lake St. Joseph-Sydney Lake fault** that are within a few kilometres of the Papaonga Lake quartz-diorite stock, 100 km east of Red Lake. The fault represents the subprovince boundary between the Uchi metavolcanic terrane to the north, and the English River metasedimentary gneisses to the south (Breaks et al. 1976b). At least 6 gold showings are known between Curie and Papaonga lakes; they are hosted by sheared, silicified, sericitized ± tourmalinized tuffs and sedimentary rocks, which are cut by quartz-tourmaline-arsenopyrite veins. At the PL-1a zone of the Papaonga Lake occurrence (MDI#52K16NW00005), sulphide-bearing, graphitic wacke hosts a 1.7 km long zone of contorted, quartz-tourmaline veining. Channel samples as high as 0.33 ounce gold per ton over 0.5 m were reported from the North showing of the Curie Lake occurrence (MDI#52K16NE00003) during the last exploration work performed in mid-1980s.

Gold mineralization in the Curie and Papaonga lakes area has certain similarities with **Roberto-style** gold mineralization, being actively explored at Goldcorp Canada Ltd.'s Eleonore property in Quebec. They include 1) the regional association of gold mineralization with a quartz diorite stock, adjacent to a subprovince boundary; 2) the polydeformed nature of host sedimentary rocks and tuffs; and 3) the association of gold with tourmaline-arsenopyrite-sulphide veins and disseminated sulphides.

Base Metals

Volcanogenic massive sulphide (VMS) deposits and prospects, and associated, proximal chlorite and aluminosilicate alteration, have been documented in the Red Lake and Birch–Uchi greenstone belts, hosted in Confederation Assemblage rocks (Parker 1999). **FII-type and FIII-type rhyolites** (cf. Lesher et al. 1986) have also been documented (Parker 1999) in a 100 km band of greenstone, extending east from Red Lake, to the past-producing South Bay Mine (1.6 million tons grading 11.06% Zn, 1.8% Cu and 2.12 ounces Ag per ton; MDI#52N02SE00012).

Tribute Minerals Inc. holds a large number of claims in the greenstone belt southwest of the South Bay Mine. The company continues to build upon its exploration success in tracking sulphide-mineralized horizons with deep-penetrating Titan-24 magnetotelluric–induced polarization geophysical surveys. The company is in the first stages of permitting for a ramp to extract a bulk sample and perform underground delineation drilling on its **Arrow Zone** (indicated resource of 2.1 million tonnes at 5.92% Zn, 0.75% Cu, 0.58 g/t Au, 21.1 g/t Ag, with indium and gallium credits). Further exploration in this prospective VMS belt is highly encouraged. At year-end 2008, a significant portion of the ground was still open.

A number of rhyolite-hosted zinc occurrences have been documented within a 3 km radius of the intersection of Highways #105 and 125, in northeastern Heyson Township. Very little work has been done in this area of FIII-type rhyolite volcanism.

OGS ACTIVITIES AND RESEARCH BY OTHERS

Publications received in the Red Lake Resident Geologist office during 2008 are listed in Table 11. Research activities in the Red Lake District in 2008 are listed below. A location map, keyed to the activity letters, is shown in Figures 4, 5, 6 and 7.

A. S. Préfontaine and S. Buse (Precambrian Geoscience Section, OGS), D.W. Davis and M.A. Hamilton (Jack Satterly Geochronology Laboratory, University of Toronto) and G.M. Stott (Precambrian Geoscience Section, OGS) carried out a review of the tectonostratigraphic assemblages, the structural history and the geochronology of the North Spirit Lake greenstone belt, which was conducted under the Far North Geological Mapping Initiative (FNGMI) (Préfontaine et al. 2008).

B. M.G. Houlé (Precambrian Geoscience Section, OGS), H.L. Gibson (Laurentian University) and S. Préfontaine (Precambrian Geoscience Section, OGS) carried out investigation of komatiitic rocks in the North Spirit Lake greenstone belt, which was conducted under the Far North Geological Mapping Initiative (FNGMI) (Houlé, Gibson and Préfontaine 2008).

C. Ryan Murray (University of Manitoba) carried out work for a fourth year technical report on "An interpretive report of the Red Lake gold mine based on a structural and petrographic study of 37 level track".

D. Jessica Scanlon (University of Manitoba) carried out work for a fourth year technical report on "Characterization of hydrothermal alteration associated with mineralization of the polymetallic zone, Madsen area, Ontario".

E. Ruth Scott (University of Manitoba) carried out work for a fourth year technical report on "The geology of the Southwest Madsen Fork Zone Project, Madsen area, northwestern Ontario".

Matthew Williams (University of Toronto) continued out work for an MSc thesis project on the structural geology of the northern section of the North Spirit Lake area.

D.K. Tinkham (Laurentian University) continued investigating partial melting reactions that form migmatites in the Longlegged Lake area, English River Subprovince and is conducting petrographic, phase equilibria, and isotopic analysis of migmatite samples from the Umfreville–Conifer lakes granulite zone, English River Subprovince, to constrain the timing and conditions of partial melting.

K. Williamson continued his PhD work at INRS–ETE, Université Laval on the Goldcorp Red Lake Mine deposit.

Table 11. Publications received by the Red Lake office in 2008.

Title	Author	Type and Year of Publication
GIS Compilation of Geology and Tectonostratigraphic Assemblages, Wabigoon-Winnipeg River-Marmion Transect, Western Superior Province, Ontario	D.R. Lemkow, M. Sanborn-Barrie, G.M. Scott, J.A. Percival, D. Stone, K.Y. Tomlinson, T. Skulski, V. McNicoll, D.W. Davis, J.B. Whalen and P. Hollings	Ontario Geological Survey, Miscellaneous Release—Data 187, 2005
Short Course: Exploring for Volcanic Massive Sulphide Deposits	Manitoba Geological Survey	Presentations given at the Manitoba Mining and Minerals Convention, November 15, 2007
Sampling Lamprophyre Dikes for Diamonds: Discover Abitibi Initiative	G.P.B. Grabowski and A.C. Wilson	Ontario Geological Survey, Open File Report 6170, 2005
Investigation of the Overburden Signature of the Engagement Zone, a Diamond-Bearing Lamprophyric, Heterolithic Breccia, Wawa, Ontario	P.J. Barnett, D.C. Crabtree and S.A. Clarke	Ontario Geological Survey, Open File Report 6197, 2007
Petrography, Chemistry and Diamond Characteristics of Heterolithic Breccia and Lamprophyre Dikes at Wawa, Ontario	D. Stone and L. Semenyna	Ontario Geological Survey, Open File Report 6134, 2004
The Timmins–Porcupine Gold Camp, Northern Ontario: The Anatomy of an Archean Greenstone Belt and its Gold Mineralization: Discover Abitibi Initiative	R. Bateman, J.A. Ayer, B. Dubé and M.A. Hamilton	Ontario Geological Survey, Open File Report 6158, 2005
Working Near Water Considerations for Fish and Fish Habitat Reference and Workshop Manual – Northwest Territories	P. Cott and J.P. Moore	Fisheries and Oceans Canada, April 2003
Report of Activities 2007, Resident Geologist Program, Red Lake Regional Resident Geologist Report: Red Lake and Kenora Districts	A.F. Lichtblau, C. Ravnaas, C.C. Storey, P. Hinz and J. Bongfeldt	Ontario Geological Survey, Open File Report 6216, 2008
Report of Activities 2007, Resident Geologist Program, Thunder Bay North Regional Resident Geologist Report: Thunder Bay North District	M.C. Smyk, G.D. White, M.A. Puumala, P. Hinz and C.L. Komar	Ontario Geological Survey, Open File Report 6217, 2008
Report of Activities 2007, Resident Geologist Program, Thunder Bay South Regional Resident Geologist Report: Thunder Bay South District	J.F. Scott, D.A. Campbell, P. Hinz and C.L. Komar	Ontario Geological Survey, Open File Report 6218, 2008
Report of Activities 2007, Resident Geologist Program, Timmins Regional Resident Geologist Report: Timmins and Sault Ste. Marie Districts	B.T. Atkinson, A. Pace, H. Woo, A.C. Wilson, S. Butorac, D. Cholette, D.M. Draper and G.Wm. Seim	Ontario Geological Survey, Open File Report 6219, 2008
Report of Activities 2007, Resident Geologist Program, Kirkland Lake Regional Resident Geologist Report: Kirkland Lake District	G.P.B. Grabowski, D.L. Guindon, A.C. Wilson and M.C.M. Picotte	Ontario Geological Survey, Open File Report 6220, 2008
Report of Activities 2007, Resident Geologist Program, Kirkland Lake Regional Resident Geologist Report: Sudbury District	D. Farrow, V.E. Felix and J.M. Gaudreau	Ontario Geological Survey, Open File Report 6221, 2008
Report of Activities 2007, Resident Geologist Program, Southern Ontario Regional Resident Geologist Report: Southeastern and Southwestern Ontario Districts, Mines and Minerals Information Centre, and Petroleum Resources Centre	P.J. Sangster, D.A. Laidlaw, P.S. LeBaron, K.G. Steele, C.R. Lee, T.R. Carter and M.R. Lazorek	Ontario Geological Survey, Open File Report 6222, 2008
Archean Bedrock Mapping in the Fry Lake Area, Meen–Dempster Greenstone Belt, Northwestern Ontario	E. Dinel and N. Pettigrew	Ontario Geological Survey, Open File Report 6208, 2008
Geological, Geochemical and Geochronological Data from the Fry Lake Area, Superior Province, Ontario	E. Dinel and N. Pettigrew	Ontario Geological Survey, Miscellaneous Release—Data 221, 2008
U-Pb Cobaltite-Tantalite Geochronology of Rare-Element Pegmatites from the Superior Province of Ontario	L. Heaman, D. Krstic and F.W. Breaks	Ontario Geological Survey, Miscellaneous Release—Data 230, 2008
Geochemistry and Petrography of the Shrimp Lake Intrusion in the North Spirit Lake Greenstone Belt, Northwestern Ontario, Canada	A. Henderson	BSc Thesis, Lakehead University, 2008

Title	Author	Type and Year of Publication
GIS Compilation of Geology and Tectonostratigraphic Assemblages, Western Uchi Subprovince, Western Superior Province, Ontario and Manitoba	D.R. Lemkow, M. Sanborn-Barrie, A.H. Bailes, J.A. Percival, N. Rogers, T. Skulski, S.D. Anderson, K.Y. Tomlinson, V. McNicoll, J.R. Parker, J.B. Whalen, P. Hollings and M. Young	Ontario Geological Survey, Miscellaneous Release—Data 203, 2006 Geological Survey of Canada, Open File 5269 Manitoba Geological Survey, Open File Report OF2006-30
Field Trip Guidebook to the Stratigraphy and Volcanology of Supracrustal Assemblages Hosting Base Metal and Gold Mineralization in the Abitibi Greenstone Belt, Timmins, Ontario	M.G. Houlé, J.A. Ayer, G. Baldwin, B.R. Berger, E. Dinel, A.D. Fowler, B. Moulton, B.-M. Saumur and P.C. Thurston	Ontario Geological Survey, Open File Report 6225, 2008
Procedural Guidelines for Provincially Significant Mineral Potential Mineral Resource Assessments	A.C. Wilson, D.J. Rowell, G.Wm. Seim and R.L. Debicki	Ontario Geological Survey, Open File Report 6141, 2008
Sample Location Maps for Archived Peraluminous S-Type Granites, Rare-Element Pegmatites and Miscellaneous Granitic and Migmatitic Rocks, Mainly from the Superior Province of Ontario	F.W. Breaks	Ontario Geological Survey, Miscellaneous Release—Data 232, 2008
Report of Activities 2008	Manitoba Geological Survey	Ministry of Industry, Economic Development and Mines, Manitoba Geological Survey, 2008 (CD ROM)
Summary of Field Work and Other Activities 2008	C.L. Baker, E.J. Debicki, R.I. Kelly, J.A. Ayer and G.M. Stott (eds.)	Ontario Geological Survey, Open File Report 6226, 2008
Precambrian Geology, North Spirit Lake Area, Northern Ontario	S. Préfontaine, M. Williams, J. Filmore and N. Haider	Ontario Geological Survey, Preliminary Map P.3603, 2008
Precambrian Geology, Hewitt Lake Area, Northern Ontario	S. Buse, T. Moss, L. Smar and A. Henderson	Ontario Geological Survey, Preliminary Map P.3604, 2008
Precambrian Geology Hudson Bay and James Bay Lowlands Region Interpreted from Aeromagnetic Data, West Sheet	G.M. Stott	Ontario Geological Survey, Preliminary Map P.3597—Revised, 2008
Precambrian Geology Hudson Bay and James Bay Lowlands Region Interpreted from Aeromagnetic Data, East Sheet	G.M. Stott	Ontario Geological Survey, Preliminary Map P.3598—Revised, 2008
Precambrian Geology Hudson Bay and James Bay Lowlands Region Interpreted from Aeromagnetic Data, South Sheet	G.M. Stott	Ontario Geological Survey, Preliminary Map P.3599, 2008
Ontario Airborne Geophysical Surveys, Magnetic and Electromagnetic Data, Grid and Profile Data (ASCII and Geosoft® Formats) and Vector Data, Whitefeather Forest Area, GEOTEM$_{1000}$® Survey	Ontario Geological Survey	Ontario Geological Survey, Geophysical Data Set 1058A, 2008
Ontario Airborne Geophysical Surveys, Magnetic and Electromagnetic Data, Halfwave Data (Compressed ASCII Format) and Calibration Data, Whitefeather Forest Area, GEOTEM$_{1000}$® Survey	Ontario Geological Survey	Ontario Geological Survey, Geophysical Data Set 1058B, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81960, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81961, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81962, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81963, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81964, 2008

Title	Author	Type and Year of Publication
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81965, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81966, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81967, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81968, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81969, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81970, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81971, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81972, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81973, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81974, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81975, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81976, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81977, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81978, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81979, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81980, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, North Spirit Lake Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81981, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82352, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82353, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82354, 2008

Title	Author	Type and Year of Publication
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82355, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82356, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82357, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82358, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82359, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82360, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82361, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82362, 2008
Airborne Magnetic and Electromagnetic Surveys, Residual Magnetic Field Contours with Electromagnetic Anomalies and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82363, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Whitefeather Forest	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82364, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82365, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82366, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82367, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82368, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82369, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82370, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the EM Decay Constant and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82371, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82372, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82373, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82374, 2008

Title	Author	Type and Year of Publication
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Conductance and Electromagnetic Anomalies, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 82375, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81976, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81977, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81978, 2008
Airborne Magnetic and Electromagnetic Surveys, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Whitefeather Forest Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81979, 2008
Airborne Magnetic Survey, Colour-filled Contours of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81992, 2008
Airborne Magnetic Survey, Colour-filled Contours of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81993, 2008
Airborne Magnetic Survey, Colour-filled Contours of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81994, 2008
Airborne Magnetic Survey, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81995, 2008
Airborne Magnetic Survey, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81996, 2008
Airborne Magnetic Survey, Shaded Colour Image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients, Webequie Area	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 81997, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60137, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Residual Magnetic Field and Electromagnetic Anomalies, Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60138, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients , Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60139, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour image of the Second Vertical Derivative of the Residual Magnetic Field and Keating Coefficients , Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60140, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Resistivity and Electromagnetic Anomalies, Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60141, 2008
Airborne Magnetic and Electromagnetic Surveys, Colour-filled Contours of the Apparent Resistivity and Electromagnetic Anomalies, Werner Lake Area, Purchased Data	Ontario Geological Survey	Ontario Geological Survey, Geophysical Map 60142, 2008

MINERAL DEPOSITS NOT BEING MINED

Table 12. Mineral deposits not being mined in the Red Lake District in 2008.

Abbreviations

AF.....Assessment Files
CMH .....*Canadian Mines Handbook*
GR .....Geological Report
MDC .....Mineral Deposit Circular
MDIR .....Mineral Deposit Inventory record
MLS .....Mining Lands, Sudbury
MR .....Mining Recorder
NM .....*The Northern Miner*
OFR.....Open File Report
PC.....Personal Communication

Deposit Name and NTS	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status
Abino Bateman, Balmer and Dome Townships (52N/04SW)	Au	Total Granodiorite zone: drill indicated tonnage 405 162 tons 0.203 opt Au from three sub-zones	AF (McClean 1976)	Patent
Aiken–Russet Baird Township (52K/13NW)	Au	Total reserves of 102 555 tons of 0.22 opt Au	AF (Kuryliw 1967)	Patent
Alcourt (Copper Man, Hanson–Campbell) Fairlie Township (52N/04SW)	Au	Reserves: 20 000 tons of 0.45 opt Au from 1959-60 diamond drilling No. 1 vein: 17 000 tonnes of 0.2429 oz per tonne Au from 1959-60 diamond drilling and 1981 sampling program	AF (Tilsley 1981)	Patent
Annco Mine Dome Township (52N/04SW)	Au	Reserves: 50 000 tons of "Excellent Grade" (0.35 opt Au?)	Energy Mines and Resources Canada (1989)	Patent
Bathurst Mine Skinner Township (52N/07SW)	Au	Reserves: 80 000 tons of 0.587 opt Au	Energy Mines and Resources Canada (1989)	Leased
Bear Head Lake Prospect (53C/12NW)	U_3O_8	Reserves: 978 810 tons of 0.06% U_3O_8 to a depth of 500 feet	MDC 25 (Robertson and Gould 1983)	Staked Claim
Berens River Mine (Golsil, Zahavy) (53C/13SE)	Au, Ag, Pb, Zn	Reserves: No. 1 zone: 75 000 tons of 0.10-0.12 opt Au, 4.0-5.0 opt Ag No. 3 zone: 982 213 tons of 0.26 opt Au, 4.8 opt Ag, 0.77% Pb, 1.12% Zn (713 249 tons indicated, 268 964 tons inferred) at 0.15 opt Au cut-off to 750 metre level	AF (Bevan 1983)	Staked Claim
Bluffy Lake (52K/14SE)	Fe	Reserves: 21 000 000 tons at 22.86% Fe	Prelim. Map P.1199 (Breaks et al. 1976a)	Licence of Occupation
Bonanza Deposit (52N/04SW)	Au	Inferred Resource: 2 283 000 tonnes of 6.98 g/t Au (NI 43-101 compliant)	Premier Gold Mines Ltd., news release, February 6, 2008	Patent, Staked Claims
Borland Lake (53D/16NE)	Ag, Au	Probable Reserves: 502 412 tons of 8.09 opt Ag and 0.02 opt Au	Massive Resources Ltd., Preliminary Prospectus, Aug. 6, 1987	Open
Buffalo Red Lake Heyson Township (52N/04SW)	Au	Reserves: 421 728 tonnes of 0.139 opt Au drill indicated in 1980	AF (Kita 1988)	Patent
Cochenour–Willans Mine Dome Township (52N/04SW)	Au	Reserves: Proven and probable 173 000 tons of 0.51 opt Au, possible reserves 274 000 tons of 0.59 opt Au	NM, Dec. 12, 1994, p.7	Patent, Licence of Occupation
Cole Gold Mine Ball Township (52M/01SE)	Au	Reserves: 119 780 tons of 0.41 opt Au probable and indicated	AF (Wilton 1973)	Patent, Licence of Occupation
Consolidated Marcus Dome Township (52N/04SW)	Au	Reserves: 60 000 tons of 0.18 opt Au	Energy Mines and Resources Canada (1989)	Patent

Deposit Name and NTS	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status
Copper Lode A–Rexdale Group Prospect (52K/15NW)	Cu, Ag	Reserves: 236 424 tons of 1.94% Cu, 1.22 opt Ag or 425 612 tons of 1.56% Cu, 0.98 opt Ag or 854 007 tons of 1.01% Cu, 0.57 opt Ag	AF (Archibald 1970); MP 152 (Atkinson, Parker and Storey 1991)	Staked Claim
Copper–Lode D Belanger Township (52K/15NW)	Cu, Zn	Reserves: 36 000 tons of 0.26% Cu, 7.58% Zn	AF (MacDougall 1996)	Leased
Copper–Lode E Belanger Township (52K/15NW)	Cu, Ag	Reserves: 160 000 tons of 8.28% Zn, 1.02% Cu, 0.39 opt Ag	AF (Archibald 1970)	Leased
Dixie Creek (52K/13SE)	Au	Reserves: 417 000 tons of 0.12 opt Au	MDIR	Staked Claim
Dixie 3 Prospect (52K/14NW)	Cu, Zn	Reserves: 91 000 tons of 10.0% Zn, 1.0% Cu	AF (MacDougall 1995)	Leased - Mining Rights Only, Staked Claim
Dixie 18 Prospect (52K/14NW)	Zn	Reserves: 110 000 tons of 0.5% Cu, 12.5% Zn, 0.57 opt Ag	AF (King and Petrie 1998)	Staked Claim
Garnet Lake (52K/15NW)	Zn, Cu, Ag, Au	Resource (NI 43-101): 2 070 888 tonnes of 5.92% Zn, 0.75% Cu, 0.58 g/t Au, 21.1 g/t Ag	G. Carter (Tribute Minerals Inc., news release, August 14, 2007)	Staked claim
GAZ Bateman Township (52N/04NE)	Au	Resource (NI 43-101): 1 400 000 tonnes of 8.0 g/t Au, in 5 lenses	Wolfden Resources Inc., news release, Feb. 23, 2005	Staked claims
Gold Eagle Mine (Western Discovery zone) Dome Township (52N/04SW)	Au	Resource (NI 43-101): 309 000 tonnes at 16.67 g/t Au (uncut)	Micon International (Pressacco 2004)	Patent
Grassett Prospect Earngey Township (52N/02SE)	Au	Reserves: 78 295 tons of 0.22 opt Au (Part of the Hill–Sloan–Tivy vein)	Energy Mines and Resources Canada (1989)	Patent
Griffith Mine (52K/14SW)	Fe	Reserves: 120 000 000 tons of 29% Fe	GR 82 (Shklanka 1970)	Withdrawn from staking
Hasaga Mine Heyson Township (52N/04SW)	Au	Reserves: C Block (below 1800 feet) - 200 203 tons of 0.192 opt Au (Ferguson 1968) Stopes - 41 430 tons of 0.104 opt Au Pillars - 6365 tons of 0.134 opt Au	GR 56 (Ferguson 1968)	Patent
Hill–Sloan–Tivy Earngey Township (52N/02SE)	Au	Reserves: 296 000 tons of 0.219 opt Au (Grassett Prospect Reserves may be included in total)	AF (Germundson 1995)	Patent
Horseshoe Island (52N/08NW)	Au	Reserves: 893 508 tons of 0.14 opt Au	*Northwest Prospector*, March/April 1990, p.27	Staked Claim
Howey Mine Heyson Township (52N/04SW)	Au	Reserves: 780 000 tons of 0.08 opt Au	Energy Mines and Resources Canada (1989)	Patent, Licence of Occupation
Jackson–Manion Mine Dent Township (52N/02SE)	Au	Reserves: 40 000 tons of 0.5 opt Au	NM, Mar. 14, 1985, p.21	Patent
Joy–New zone (Diamond Willow zone, Creek zone) (52K/14NW)	Cu, Zn	Reserves: 300 000 tons of 4% combined Cu-Zn	AF (Lewis 1994)	Staked Claim
Kesaka Lake (52K/16NW)	Fe	Reserves: 312 500 000 tons of 31.1% Fe to a depth of 100 feet	MRC 11 (Shklanka 1968)	Open, Staked Claim
Laverty (Thrall) Heyson Township (52N/04SW)	Au	Reserves: Speculative reserves from the Diabase dike zone: 329 000 tons of 0.08 opt Au or 75 000 tons of 0.15 opt Au	AF (Gillies 1982)	Patent

Deposit Name and NTS	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status
Lingman Lake (53F/15SW)	Au	Reserves: 1 172 753 tons of 0.20 opt Au in all zones at 5.0 foot minimum width and a cut-off grade of 0.08 opt Au	AF (McPhee 1989)	Patent
Madsen Mine Baird Township (52K/13NW)	Au	Inferred Mineral Resource: 490 000 ounces Au at 0.29 opt Au historic resource not NI 43-101 compliant	B. Skanderbeg, Claude Resources Inc. personal communication, Feb. 5, 2008	Patent
May–Spiers Ball Township (52M/01SE)	Au	Reserves: 30 000 tons of 0.09 opt Au	AF (Bayne 1981)	Staked Claim
McCombe (Root Lake) (52J/13NE)	Lithia	Reserves: 2.3 million tons of 1.3% LiO_2 to the 500 foot level	MP 90 (Breaks 1979)	Patent, Licence of Occupation
McFinley Mine Bateman Township (52N/04SE)	Au	Inferred Mineral Resource: 334 007 *in situ* at an average grade of 0.20 opt Au to a depth of 400 feet; Broken down as follows: FWC-3 zone: 3875 tons of 0.50 opt Au C zone: 10 520 tons of 0.87 opt Au FWC-1 + 2: 30 600 tons of 0.24 opt Au C-2 zone: 128 700 tons of 0.11 opt Au C-3 zone: 36 562 tons of 0.19 opt Au WL zone: 10 500 tons of 0.49 opt Au 403 zone: 5000 tons of 0.80 opt Au BX zone: 2000 tons of 0.84 opt Au D zone: 106 250 tons of 0.15 opt Au Resource Estimate: 890 000 tons at an in-place grade of 0.21 opt Au to a depth of about 1700 feet	AF (Hogg 2002)	Patent, Licence of Occupation
Mount Jamie Todd Township (52M/01SE)	Au	Reserves: Main zone: 47 048 tons of 0.425 opt Au No. 2 Shaft area: 25 360 tons of 0.37 opt Au	AF (Gordon 1988)	Patent
My–Ritt (Coin Lake) (52N/04SW)	Au	Unknown		
New Faulkenham Mines Ltd. (Faulkenham Lake) Baird Township (52K/13NW)	Au	Reserves: 15 000 tons of 0.428 opt Au ($15.00 at $35.00 per ounce Au)	AF (Holbrooke 1958)	Patent
North Spirit Lake (Crown Trust) (53C/07NW)	Fe	Reserves: 1.3 million tons per vertical foot of 33.94% Fe	MRC 11 (Shklanka 1968); GR 150 (Wood 1977)	Patent, Leased
Northgate Prospect Earngey Township (52N/02SE)	Au	Reserves: 64 600 tons of 0.28 opt Au	AF (Zinn 1984)	Staked Claim
Ogani Lake (52K/15NE)	Fe	Reserves: 100 000 000 tons of 21.6% Fe	MRC 11 (Shklanka 1968)	Open
Papaonga Lake (52K/16NE)	Fe	Reserves: 13 500 000 tons of 31.06% Fe	MDIR	Open
Red Crest (Red Summit) Todd Township (52M/01SE)	Au	Reserves: 47 439 tons of 0.269 opt Au (uncut grade) (Horwood 1945) 38 000 of 0.3 opt Au	NM, Mar. 14, 1985, p.21; ODM Annual Report (Horwood 1945)	Patent
Redaurum Baird Township (52N/04SW)	Au	Possible Reserves: 14A zone: 243 750 tons of 0.22 opt Au, 26 250 tons of 0.20 opt Au No. 2 zone: 137 500 tons of 0.18 opt Au No. 3 zone: 102 500 tons of 0.18 opt Au Camp zone: 24 750 tons of 0.13 pt Au	AF (Barclay 1986)	Patent
Richardson (Kostynuk Bros. Mine) (52N/09SW)	Au	Reserves: 700 000 tons of 0.2 opt Au inferred reserves	OFR 5835 (Parker and Atkinson 1992)	Patent

Deposit Name and NTS	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status
Rowan Todd Township (52M/01SE)	Au	Reserves: 10 900 tons of 0.657 opt Au ($23.00 a ton at $35.00 per ounce)	AF (Bishop 1939)	Patent
Sanshaw (Whitehorse Island) Dome Township (52N/04SW)	Au	Reserves: 175 000 tons of 0.20 opt Au	NM, June 11, 1953	Patent, Licence of Occupation
Setting Net Lake (53C/13SE)	MoS_2	Reserves: 100 000 000 tons of 0.09% MoS_2	MDIR; NM, Mar. 23, 1973	Open
Sol d'Or Honeywell Township (52N/07SE)	Au	Reserves: 8565 tons of 0.57 opt Au	Energy Mines and Resources Canada (1989)	Staked Claim
Springpole Lake Prospect (52N/08NW)	Au	Reserves (NI 43-101): 35 000 t of 6.27 g/t Au measured, 214 000 t of 5.56 g/t Au indicated, 1 353 000 t of 4.53 g/t Au inferred	Armstrong, Puritch and Yassa (2006)	Patent, Staked Claims
Starratt–Olsen Mine Baird Township (52K/13NW)	Au	Reserves: 15 000 tons of 0.45 opt Au	NM, July 26, 1973	Patent
Trout Bay Zinc Pit zone Mulcahy Township (52M/01SE)	Zn, Cu, Pb, Ag, Au	Reserves: West zone: 13 776 tons of 4.75% Zn, 0.68% Cu, 0.94 opt Ag East zone: 124 760 tons 7.86% Zn, 1.5% Cu, 0.24% Pb, 1.7 opt Ag, 0.007 opt Au	MP 147 (Atkinson, Parker and Storey 1990); Preliminary Map P.567 (Riley 1969); MDIR	Patent (Mining Rights Only), Leased (Mining Rights Only, Licence of Occupation
Uchi Mine Earngey Township (52N/02SE)	Au	Reserves: 214 000 tons of 0.147 opt Au	Energy Mines and Resources Canada (1989)	Patent
Wilmar Mine Dome Township (52N/04SW)	Au	Reserves: Quoted from OFR 5558 unless indicated otherwise: Diorite Dike zone: 140 000 tons of 0.21 opt Au East Breccia zone: 31 500 tons of 0.32 opt Au (Proven) 50 500 tons of 0.25 opt Au (Probable) 1 777 000 tons of 0.24 opt Au (Possible) Carbonate zone: 25 000 tons of 0.17 opt Au (Probable) 7 500 tons of 0.15 opt Au (Possible) West Granodiorite zone: 3.15 to 4.5 million tons of 0.076 to 0.131 opt Au (Energy Mines and Resources Canada 1989) Granodiorite zone: 5 700 000 tons of 0.10 to 0.15 opt Au	OFR 5558 (Durocher, Burchell and Andrews 1987); Energy Mines and Resources Canada (1989)	Patent
Woco Vein Earngey Township (52N/02SE)	Au	Reserves: 21 263 tons of 0.80 opt Au	AF (Germundson 1995)	Staked Claims
Young, H.G. Mines Ltd. Balmer Township (52N/04SW)	Au	Reserves: 270 000 tons of 0.31 opt Au	OFR 5558 (Durocher, Burchell and Andrews 1987)	Patent

Note: This table contains tonnage and grade estimates referred to as reserves (indicated, possible, probable), which were determined at various times by methods largely unreported. Except where noted, none of these estimates are known to conform to the standards required for National Instrument 43-101. All should be considered inferred mineral resources not reserves.

LAND USE PLANNING ACTIVITIES (P. HINZ)

The northwest Regional Land Use Geologist, based in Thunder Bay, co-ordinates input into land use planning activities in the Red Lake–Kenora districts. The objectives are to effectively represent mineral-related values in the context of competing interests for land use; to optimize the land base available for mineral exploration and development; and to raise awareness within the mineral sector of the implications of legislation and regulations other than the *Mining Act* on their activities. The competing interests for land use vary from place to place across the province, but most have potential to restrict the availability of land, access to it, and the activities on it. In 2008, the northwest Regional Land Use Geologist dealt with a variety of land use planning issues in the Red Lake–Kenora districts.

The Ministry of Northern Development and Mines engages with the Ministry of Natural Resources when Crown land use planning activities have potential to impact the Provincial mineral interests. These activities include Forest Management Planning, implementing management strategies for Ontario's Living Legacy Signature Sites, Northern Boreal Initiative – Community-base Land Use Planning and issues related to access to Crown Land.

The northwest Regional Land Use Geologist provided comments and input to the Red Lake, Dryden, English River and Lac Seul forest management units planning teams. The Forest Management Planning Manual requires socio-economic descriptions of the minerals industry in the forest management unit. The Regional Land Use Geologist provided, to the planning teams, factual data on the past and potential future contributions of mineral resources on the management unit and local communities.

During the year, there were several inquiries dealing with access issues related either to the potential decommissioning of water crossings installed by the forest industry or construction of roads or trails by mineral exploration companies. These inquiries often require bringing the various interested parties to the table to develop a solution and/or identifying the definitions applied by the Ministry of Natural Resources in regards to roads and trails. The northwest Regional Land Use Geologist facilitated discussions between a remote tourist outfitter, an exploration company and prospector, and Ministry of Natural Resources staff regarding access issues related to pending decommissioning of a portion of the Maybrun Road. An equitable solution for all parties was agreed upon and monitoring of the situation continues.

The northwest Regional Land Use Geologist also worked with the Northwestern Ontario Prospector's Association to identify mineral representatives for the Crossroute Local Citizens Committee. Local Citizens committees work with the Ministry of Natural Resources to provide input into land use planning initiatives that impact Crown Land, primarily the development of forest management plans. A presentation outlining the mineral exploration process from grassroots prospecting to advanced exploration was given to the Dryden Local Citizen's Advisory Committee and the Fort Frances Natural Resources Advisory Committee.

The northwest Regional Land Use Geologist participated in a planning process initiated by the Ministry of Natural Resources to evaluate sites within the district for possible protection under the Room to Grow Initiative. Room to Grow resulted from the Ontario's Living Legacy Land Use Strategy and the Ontario Forest Accord as an initiative to address gaps in representation. Recently (circa 2004), the Ministry of Natural Resources, Bowater Incorporated and the Partnership for Public Lands (PPL) identified 14 sites to address gaps in representation within Bowater Forest Products (Bowater) forest management units. Some of these sites are in the Red Lake–Kenora districts. Preliminary review to identify conflicts with significant mineral potential at that time eliminated 1 site. Subsequently, a consultant conducted mineral resource assessments of the remaining 13 sites using the Provincially Significant Mineral Potential methodology. Since 2004, 4 sites have been dropped, 2 sites have been combined and 6 sites have had their boundaries revised. The northwest Regional Land Use Geologist continued engaging with Ministry of Natural Resources regional staff in regards to the proposed regulation of these sites.

The Ministry of Northern Development and Mines supports municipal and private land planning though the One Window Planning Service led by the Ministry of Municipal Affairs and Housing. When requested, the northwest Regional Land Use Geologist provides input into and participates in the review of draft Official Plans, Official Plan Amendments, draft plans of subdivision and consent applications. In 2008, the Regional Land Use Geologist reviewed and commented on 19 consent applications, 5 validation orders and 1 Zoning By-Law amendment in the Red Lake–Kenora districts. In addition, the Regional Land Use Geologist, in conjunction with the Red Lake Resident Geologist, made presentations to staff of the Town of Red Lake and Town Council regarding mineral values within the towns boundaries and the importance of considering these values when making land use decisions.

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Ontario

Ontario Geological Survey
Regional Resident Geologist Program

Red Lake Regional Resident Geologist (Kenora District)—2008

by

C. Ravnaas and J. Bongfeldt

2009

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RED LAKE REGIONAL RESIDENT GEOLOGIST (KENORA DISTRICT)—2008

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[1]District Geologist, Kenora District, Resident Geologist Program, Ontario Geological Survey

[2]District Support Geologist, Kenora District, Resident Geologist Program, Ontario Geological Survey

INTRODUCTION

The Kenora District extends from the Manitoba border, east to Savant Lake and south to the International Border. It encompasses the towns of Kenora, Vermilion Bay, Dryden, Ignace, Sioux Lookout, Savant Lake, Fort Frances and a number of First Nation communities.

Dimension stone continued to be produced in the Kenora District in 2008. No metallic mineral production was recorded in the District. Significant exploration projects targeted gold at the Elora property (Seafield Resources Ltd.), Goldlund Mine (Tamaka Holdings Inc.), Goliath property (Treasury Metals Inc.), Mine Centre property (Q-Gold Resources Ltd.), Minnitaki property (Ginguro Exploration Inc.), Rainy River properties (Bayfield Ventures Corp.), Richardson Township property (Rainy River Resources Ltd.), Thundercloud Lake property (Teck Cominco Limited), and at the West Cedartree properties (Houston Lake Mining Inc.). Orthomagmatic base metal and platinum group elements were targeted at the Eagle Rock property (Champion Bear Resources Ltd.), Kenbridge Nickel Mine and Turtlepond Lake properties (Canadian Arrow Mines Ltd.), and the Westco property (Numax Resources Inc.). Base and precious metals continued to be targeted at the Atikwa Lake property (Opawica Explorations Inc.), and the Off Lake property (Rainy River Resources Ltd.).

Programs initiated in 2007, which continued to receive activity in 2008, targeted molybdenum at the Pidgeon property (MPH Ventures Ltd.) and uranium at the Kenora Uranium Project (Delta Uranium Inc.). Exploration programs were initiated in 2008 for iron at the Bending Lake iron deposit (Bending Lake Iron Group Ltd.) and at the Westco property (Numax Resources Ltd.). In 2008, MetalCORP Limited announced the discovery of diamonds at the GUP showing, located on the North Rock property.

With a continued rise in commodity prices to mid 2008, and positive results from exploration efforts in 2008, activity in the Kenora District exceeded the levels of previous years. A total of 67 exploration projects were conducted by mineral exploration companies and individual prospectors during the year (Table 9). Work completed within the Kenora District and filed for assessment credit, or otherwise provided, is shown in Table 1.

MINING ACTIVITY

There was no production of either base or precious metals in the Kenora District in 2008. Production continued from 5 granite quarries in 2008. The quarries are keyed, with letters, to Figure 2.

Nelson Granite Ltd.

Nelson Granite Ltd. continued year-round production from 5 stone quarries in the Kenora District during 2008.

Production continued at the **Docker Township quarry** (A), 10 km southwest of the town of Vermilion Bay. Homogeneous, medium-grained, pink granite is produced from a granite plug, which is part of the Dryberry batholith. Fracturing is negligible, allowing for removal of blocks of virtually any size. The majority of the stone produced is used in the monument industry and is sold as "Vermilion Pink". In 2008, approximately 7034 m^3 (266 044 ft^3) were produced (C. Spence, Nelson Granite Ltd., personal communication, 2008).

The company continued production at their **Red Deer Lake quarry** (B) in 2008. The quarry is located near Red Deer Lake, approximately 40 km northeast of Kenora and 15 km northwest of the railway stop at Jones. A total of 1192 m^3 (42 093 ft^3) were produced for use as monument and building stone (C. Spence, Nelson Granite Ltd., personal communication, 2008). The stone is marketed as "Red Deer Brown" or "Canadian Mahogany".

The company continued to produce stone from their **Forgotten Lake quarry** (C) in 2008. The quarry is located on the eastern side of Forgotten Lake, approximately 35 km north of Kenora and 10 km north of the hamlet of Redditt. A total of 2 579 m^3 (91 083 ft^3) were produced for use as monument and building stone. The stone is green megacrystic granite marketed as "Pine Green" (C. Spence, Nelson Granite Ltd., personal communication, 2008).

The company continued production at their **Second Mountain quarry** (D) in 2008. The quarry is located approximately 3 km east of their Forgotten Lake quarry. A total of 1 292 m^3 (45 619 ft^3) of the yellow, feldspar-megacrystic granite, sold as "Crystal Gold", was extracted in 2008 (C. Spence, Nelson Granite Ltd., personal communication, 2008).

Production continued at the **Shepody quarry** (E) in 2008. The quarry is located approximately 45 km north of Kenora and 15 km northwest of the railway stop at Jones. A total of 425 m^3 (15 005 ft^3) were produced in 2008 for dimension stone use, under the market name "Shepody" (C. Spence, Nelson Granite Ltd., personal communication, 2008). The stone is a medium- to coarse-grained, porphyritic granite composed of potassic feldspar phenocrysts in a matrix of plagioclase, potassic feldspar, quartz and biotite.

Table 1. Assessment files received in the Kenora District in 2008.

Abbreviations

AEM	Airborne electromagnetic survey	GM	Ground magnetic survey
AM	Airborne magnetic survey	Gr	Geological report
ARA	Airborne radiometric survey	Grav	Gravity survey
BS	Beneficiation Study	IP	Induced polarization survey
Bulk	Bulk sample	Lc	Linecutting
DD	Diamond drilling	MRE	Mineral Resource Estimate
DDH	Diamond-drill hole(s)	OVD	Overburden drill hole(s)
DDR	Diamond-drill hole re-logging	Pr	Prospecting
DDU	Diamond-drill hole underground	RES	Resistivity survey
GC	Geochemical survey	Samp	Sampling (other than bulk)
GEM	Ground electromagnetic survey	Str	Stripping
GL	Geological survey	Tr	Trenching

Township or Area	Company Name	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation	
Armit Lake Area	Benton Resources Corporation	2006	GEM, GM, Lc ($98 450)	2.38334	52J07NW	46
Atikwa Lake Area	Canadian Arrow Mines Ltd.	2008	AM, AEM ($165 265)	2.37629	52F05NE	KK-2
Aubrey Township	Champion Bear Resources Ltd.	2006	DDH, Gr, Samp ($647 332)	2.37336	52F14SE	E-9
Aubrey Township	Glatz, A.	2007–2008	Pr, GL, Samp ($542)	2.36898	52F10NW	F-7
Bad Vermilion Lake Area	Q-Gold Resources Ltd.	2007	DD, Gr, Samp ($43 123)	2.36631	52C10NE	LLL-6
Bad Vermilion Lake Area	Q-Gold Resources Ltd.	2007	DDH, Gr, Samp ($61 344)	2.36793	52C10NE	LLL-7
Bad Vermilion Lake Area	Q-Gold Resources Ltd.	2007	DDH, Gr, Samp ($70 728)	2.38641	52C10NE	LLL-8
Bad Vermilion Lake Area	Q-Gold Resources Ltd.	2007	DDH, Samp ($17 603)	2.37422	52C10NE	LLL-9

Township or Area	Company Name	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation	
Bad Vermilion Lake Area	Sedex Mining Corp.	2008	AM, AEM ($21 668)	2.39121	52C10NE	NNN-1
Bliss Lake Area	Cousineau, R.	2007	Pr, Samp, Str ($5 773)	2.37046	52C10NW	U-21
Bliss Lake Area	Numax Resources Inc.	2007	GEM, GL, GM, Lc, Pr, Samp, Str ($14 230)	2.35484	52C10NW	Z-4
Bliss Lake Area	Numax Resources Inc.	2007	GL, Pr, Samp, Str ($29 139)	2.35787	52C10NW	Z-5
Bliss Lake Area	Numax Resources Inc.	2007	Gr, Str ($27,688)	2.37348	52C10NW	Z-6
Bliss Lake Area	Numax Resources Inc.	2007	Gr, Samp, Str ($21 114)	2.36355	52C10NW	Z-7
Bluffpoint Lake Area	Ryznar, T.	2007	GL, Str ($3 243)	2.36823	52F03NW	Z-1
Bluffpoint Lake Area	Ryznar, T.	2007	GL, Gr, Str ($4 865)	2.37160	52F03NW	Z-2
Bluffpoint Lake Area	Western Warrior Resources Ltd.	2007	DDH, Samp ($487 550)	2.38549	52F03NW	AA-1
Boyer Lake Area	Goldeye Explorations Ltd.	2008	Gr, Samp ($13 454)	2.38742	52F07NE	III-8
Boyer Lake Area	Goldeye Explorations Ltd.	2007	GL, Lc, Samp ($23 004)	2.35573	52F07NE	III-9
Boyer Lake Area	Goldeye Explorations Ltd.	2007	IP, GM, RES ($46 050)	2.35572	52F07NE	III-10
Boyer Lake Area	Teck Cominco Limited	2007	IP, RES ($44 709)	2.35568	52F07NE	QQQ-1
Bridges Township	Delta Uranium Inc.	2005–2007	AM, DDH, GM, Gr, Radiometric ($933 490)	2.36421	52F13SE	KK-1
Brooks Lake Area	King's Bay Gold Corporation	2007	GM, IP, RES ($77 873)	2.36242	52F04NE	DD-1
Brooks Lake Area	Western Warrior Resources Ltd.	2007	AM, Gr ($230 032)	2.37690	52F04NE	EE-1
Brownridge Township	Canadian Arrow Mines Ltd.	2008	AEM, AM ($82 650)	2.37629	52F15SE	II-1
Dash Lake Area	Western Warrior Resources Ltd.	2006–2007	AM, DDH, Gr, Samp ($193 296)	2.36778	52F04SE	V-3
Dogpaw Lake Area	Metalore Resources Inc.	2006–2007	DDH, Gr, Samp ($358 341)	2.36589	52F05SW	LLLL-8
Dogpaw Lake Area	North American Uranium Corp.	2007	DDH, GL, Samp ($191 505)	2.36695	52F05SW	OOOO-1
Dogpaw Lake Area	North American Uranium Corp.	2007	GL, Gr, Samp ($40 448)	2.36084	52F05SW	OOOO-2
Dogpaw Lake Area	North American Uranium Corp.	2007	GM, Gr, Lc ($26 465)	2.36700	52F05SW	OOOO-3
Eagle Rock Lake Area	Champion Bear Resources Ltd.	2007	DDH, GL, GM, Gr, Pr, Samp ($64 192)	2.35551	52F02NE	D-10
Eagle Rock Lake Area	Champion Bear Resources Ltd.	2007	DDH, GL, Pr ($368 352)	2.38013	52F02NE	D-11
Echo Township	Glatz, A. and Riives, J	2007	DDH, Gr, Samp ($312 470)	2.35579	52F16NW	125
Echo Township	Glatz, A. and Riives, J.	2007	DD, Samp, Gr ($40 000)	2.35977	52F16NW	126

Township or Area	Company Name	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation	
Flyingloon Lake Area	Benton Resources Corporation	2007	DDH, Gr, Samp ($125 958)	2.37017	52G13SE	15
Fourbay Lake Area	KBG Minerals Corporation	2006–2007	DDH ($420 380)	2.37634	52J02SW	109
Garnet Bay Area	Emerald Fields Resource Corporation	2007	DDH, Gr, Samp ($1 646)	2.36148	52F11NW	Z-9
Halkirk Township	MetalCORP Ltd.	2007	DDH, Gr, Samp ($1 940 705)	2.38825	52C11NE	BBB-5
Halkirk Township	Sedex Mining Corp.	2008	AM, AEM ($68 500)	2.39129	52C10NW	L-1
Harper Lake Area	Delta Uranium Inc.	2007	GM, Gr ($13 269)	2.35928	52F07NW	PPP-1
Hillock Lake Area	Temex Resources Corp.	2008	AM, ARA, Gr ($33,500)	2.39038	52F12NW	A-1
Kawashegamuk Lake Area	Glatz, A.	2007	GL, Pr, Samp ($13 738)	2.36039	52F08NW	DD-1
Kirkup Township	O'Flaherty, K.	2007	Gr, Pr ($250)	2.37143	52E09NW	KKK-2
Lobstick Bay Area	Teck Cominco Limited	2007	GL, Gr, Samp ($14 920)	2.37350	52F05NW	DD-1
MacNicol Township	Delta Uranium Inc.	2007	DDH, Gr ($17 098)	2.35892	52F13SW	GG-2
Mang Lake Area	Angove, R.	2008	Pr, Samp ($2 750)	2.39155	52F02NW	K-1
Mang Lake Area	Johnson, S.	2006–2007	DDH, Gr, Samp ($67 446)	2.35511	52F02NW	J-1
Osaquan Township	Falcon Mineral Exploration Ltd.	2006	Gr, Samp, Str ($13 223)	2.37297	52G05NW	N-1
Osaquan Township	Falcon Mineral Exploration Ltd.	2006	Samp, Str ($10 675)	2.37297	52G05NW	N-2
Patterson Lake Area	Gossan Resources Ltd.	2007	GC, Gr, Lc, Pr, Samp ($22 445)	2.36102	52L07SE	U-1
Pattullo Township	Bayfield Ventures Corp.	2007–2008	GEM, GM, Gr, Lc, OVD, Samp ($132 000)	2.39194	52D16SE	H-2
Pattullo Township	Skyharbour Resources Ltd.	2007	DDH, OVD, Samp ($125 000)	2.39363	52D16SE	G-1
Pattullo Township	Skyharbour Resources Ltd.	2007–2008	GEM, GM, Lc, OVD, Samp ($107 469)	2.39293	52D16SE	G-2
Penassi Lake Area	1522923 Ontario Inc.	2007	DD, Samp, Gr ($25 000)	2.35158	52G14NE	66
Penassi Lake Area	Unitronix Mining & Exploration	2007	Gr, Pr, Samp ($9 980)	2.37749	52G14NE	67
Penassi Lake Area	Unitronix Mining & Exploration	2007	Lc, GM, Grav ($22 031)	2.37751	52G14NE	68
Press Lake Area	Trigold Resources Corp.	2007	AM, IP, RES ($61 863)	2.36638	52G14SW	D-1
Press Lake Area	Trigold Resources Corp.	2007	DDH, Gr, Samp ($147 110)	2.37157	52G14SW	D-2
Raynar Lake Area	Temex Resources Corp.	2008	AM, ARA, Gr ($60,000)	2.39038	52L06NE	Y-1
Redvers Township	Western Warrior Resources Inc.	2007	AM, Gr ($22 464)	2.37335	52K03SW	E-1

Township or Area	Company Name	Year	Type of Work (Work Value)	AFRO Number	Resident Geologist Office File Designation	
Rowan Lake Area	Norris, M.	2007–2008	DDH, Samp ($15 033)	2.37534	52F05SE	AA-1
Rowan Lake Area	Norris, M.	2008	GL, Pr, Samp ($11 504)	2.37817	52F05SE	AA-2
Rowan Lake Area	Norris, M.	2008	GL, Gr, Pr, Samp ($5 882)	2.38289	52F05SE	AA-3
Satterly Township	English, P.	2007	Pr, Samp ($700)	2.35948	52F09SW	SS-1
Senn Township	Rainy River Resources Ltd.	2006–2007	Gr, OVD, Samp ($28,036)	2.35683	52C13NW	Q-4
Senn Township	Rainy River Resources Ltd.	2005–2007	Pr, Samp ($57 143)	2.36196	52C13NW	Q-5
Senn Township	Rainy River Resources Ltd.	2007–2008	GL, Gr, Pr, Samp ($47 999)	2.37092	52C13NW	Q-6
Sixmile Lake Area	1522923 Ontario Inc.	2007	DDH, Gr ($155 660)	2.35158	52G15SW	53
Snowshoe Bay Area	Halo Resources Ltd.	2007	AEM, AM ($22 584)	2.36414	52E11SE	W-3
Swan Lake Area	Redditt Stones Inc.	2007	Gr, Samp ($17 403)	2.36632	52L02SW	F-2
Tait Township	Bayfield Ventures Corp. & Range Metals Inc.	2007	DDH, GL, GEM, GM, Lc, OVD ($211 000)	2.39193	52D16SE	H-1
Turtlepond Lake Area	Canadian Arrow Mines Ltd.	2008	AEM, AM ($82 650)	2.37629	52F10SE	AA-2
Ukik Lake Area	Canadian Arrow Mines Ltd.	2008	Gr, Pr, Samp ($3 160)	2.37002	52F10SE	AA-1
Valora Lake Area	Unitronix Mining & Exploration	2007	GM, Grav, Lc ($30 000)	2.37751	52G14SE	D-1
Vista Lake Area	Angove, R.	2008	Pr, Samp, Str ($4 949)	2.39037	52F03SE	E-5
Watten Township	King's Bay Gold Corporation	2006	DDH, Gr, Lc, Pr, Samp, Str, Tr ($267 527)	2.34653	52C11NE	CCC-2
Webb Township	Solitaire Minerals Corp.	2007	DDH, Gr ($185 525)	2.36666	52F16NW	127
Werner Lake Area	Temex Resources Corp.	2008	AM, ARA, Gr ($60,000)	2.39038	52L07NW	Z-1

EXPLORATION ACTIVITY

A complete summary of exploration activity, including prospecting, is given in Table 9. The extent of staking is shown in Figure 3. Significant exploration programs conducted in the Kenora District in 2008 were largely based on success from previous years' work. A sampling program was successful in establishing the presence of diamonds in the Kenora District. Described below are programs with significant exploration expenditures and/or results. Programs are keyed with numbers to Table 9 and Figure 2.

Gold

In December 2007, **Bayfield Ventures Corp.** (47) entered into an option agreement with **Rainy River Resources Ltd**. on the Burns Block gold property. The property located in Richardson Township is situated approximately 800 m east of Rainy River Resources Ltd. 17/ODM gold zone. These properties are located approximately 55 km northwest of Fort Frances. The option agreement was established based on the possibility that the eastern extension

of the 17 Gold Trend could underlie the Burns Block property (Bayfield Ventures Corp. and Rainy River Resources Ltd., press release, December 3, 2007). Rainy River Resources completed a 7-hole, 3303 m diamond-drill program on the property. Drill-hole NR08-283, which was collared near the eastern boundary of the Burns Block property, intersected 4.5 m grading 7.34 g/t Au. In November 2008, due to economic uncertainty, Rainy River Resources Ltd. terminated its option on the property (Bayfield Ventures Corp., press release, November 3, 2008).

Bayfield Ventures Corp. (2) continued the exploration program on the Claim Block B gold property. The property located in Richardson Township is situated approximately 1200 m northeast of Rainy River Resources 17/ODM gold zone. These properties are located approximately 55 km northwest of Fort Frances. A 4-hole, 1192 m diamond-drill program, conducted in the southwest part of the property, targeted areas of potential gold mineralization which were identified based on the results from the 2007 exploration work. Drill-hole RR08-02 intersected 2.0 m grading 5.7 g/t Au (Bayfield Ventures Corp., press release, December 10, 2008).

Ginguro Exploration Inc. (16) continued exploration work on the Minnitaki gold project, approximately 12 km south of Sioux Lookout. In 2008, a 12-hole diamond-drill program, totalling approximately 3303 m, tested mineralized zones associated with the trend of the Neepawa structural corridor (NSC). These targets are related to historical gold occurrences and based on the results of exploration efforts by Ginguro Exploration Inc. in the past 2 years. The drill-hole collars of this drill program were widely spaced, but were successful in confirming the presence of gold mineralization along a 1.65 km section of the NSC (Ginguro Exploration Inc., press release, January 20, 2009).

Houston Lake Mining Inc. (23–26) continued an aggressive exploration program on the West Cedartree gold project, which comprises 8 properties, approximately 20 km southeast of Sioux Narrows. Regional and detailed mapping was completed on parts of the project area. Sampling and geological mapping continued at the Angel Hill and McLennan gold zones. Four diamond-drill holes, totalling approximately 344 m, were completed at the McLennan zone (Houston Lake Mining Inc., press release, May 1, 2008). A majority of exploration work conducted in 2008 targeted the potential of the gold-bearing zones at the Dogpaw Lake and Dubenski properties.

Dogpaw Lake Property (24)**:** The 34-hole Phase I diamond-drill program, totalling approximately 3209 m, was designed to upgrade and expand a portion of the Dogpaw No.1 vein historical resource of 54 011 tonnes grading 15.43 g/t Au. Mechanical removal of overburden, pressure washing, channel-cutting and sampling continued on the Dogpaw No.2 and No.4 veins that are interpreted to be lateral extensions of the No.1 vein (Houston Lake Mining Inc., press release, August 7, 2008). A 14-hole Phase II diamond-drill program, totalling approximately 2062 m, tested these mineralized extensions. Based on the success of these efforts, the trend of the No.1 vein system has been traced for over 310 m along strike and tested to a depth of 210 m. A revised mineral resource estimate on the Dogpaw Lake gold zone, based on these drill results and historical data, is planned for 2009 (Houston Lake Mining Inc., press release, January 6, 2009).

Dubenski Property (25)**:** A 17-hole Phase I diamond-drill program, totalling approximately 1799 m, was initiated to confirm historical gold values at the Shaft zone. The Shaft zone extends along trend for 60 m and has been tested to a vertical depth of 90 m. The higher grade gold values are mainly concentrated in the central portion of the Shaft zone. A majority of the drill holes from this program were successful in intersecting significant intervals of mineralization. The best intersection from the Phase I drill program was 38.9 m grading 20.44 g/t Au, which included 22.6 m grading 35.68 g/t Au (Houston Lake Mining Inc., press release, October 29, 2008).

Houston Lake Mining Inc. also commissioned an independent NI 43-101 study on the Shaft zone, which was designed to upgrade an estimate of the historical mineral resource of 355 286 tonnes grading 6.32 g/t Au. Table 2 presents the revised mineral resource estimate based on the Phase I drill results and historical data (Houston Lake Mining Inc., press release, January 16, 2009).

Table 2. Exploration Shaft zone, Dubenski property, mineral resource estimate (cut-off grade 1.0 g/t Au)(Houston Lake Mining Inc.).

Category	Tonnes	Average Grade (g/t Au)	Ounces Au
Indicated	177 400	7.329	41 750
Inferred	118 700	5.63	19 150

An induced polarization (IP) survey completed in 2008 identified a conductive anomaly that can be traced over 1200 m and coincides with the Shaft, Central and East gold zones. Mechanical removal of overburden, pressure washing, channel-cutting and sampling was completed at several sulphide-bearing exposures that could be associated with the additional 30 targets identified from this IP survey. Houston Lake Mining Inc. also commissioned a three-dimensional model of the chargeability induced polarization responses to identify drill targets at the Shaft zone.

A Phase II diamond-drill program was initiated based on the results of studies which provided a re-interpretation of mineralizing events at the Shaft zone. This 22-hole drill program, totalling 2232 m, was designed to test the down-plunge extension of mineralization at the Shaft zone. Diamond-drill core from historical programs targeting the Dubenski property was also recovered, re-logged and sampled (Houston Lake Mining, press release, October 29, 2008).

Q-Gold Resources Corp. (45) continued work on the Mine Centre property, approximately 55 km east of Fort Frances. In 2008, Q-Gold Resources Corp. focussed their efforts on de-watering the historical underground workings at the Foley gold mine. The Phase I program involved de-watering to the –400-foot level, rehabilitation of workings, and sampling of exposed underground levels. Two mini-bulk samples of 30 and 71 kg were removed from the –150-foot level. The Phase II program will involve the de-watering of workings to the –850-foot level, rehabilitation and entry into additional levels, and the initiation of an underground diamond drill program (Q-Gold Resources Corp., press release, September 29, 2008).

Rainy River Resources Ltd. (49) continued an aggressive exploration program at the Richardson Township property located approximately 55 km northwest of Fort Frances. These efforts continued to expand the mineral reserves at the 17/ODM gold deposit, and attempted to locate additional mineralized areas adjacent to the known gold zones on the property.

In 2007, 3 ground geophysical surveys were initiated in an attempt to establish the extension of the 34 Ni-Cu zone and identify additional gold targets adjacent to the 17/ODM deposit. These surveys included the Titan-24® direct induced polarization and magnetotelluric survey, a ground gravity and an InfiniTEM® electromagnetic system survey. The latter survey was not successful in identifying conductive areas associated with the 34 zone, but newly identified potential gold targets were generated from other conductive responses and were tested with a diamond-drill program (W. Rayner, Rainy River Resources Ltd., personal communication, January 22, 2009).

Metallurgical testing was initiated on 750 kg of diamond-drill core that was selected as a representative sample of the 17/ODM deposit. The results indicated that 94% of the gold can be recovered using a combination of gravity concentration followed by floatation of the gravity tailing (Rainy River Resources, press release, February 13, 2008).

In 2008, an independent NI 43-101 study was completed on the Richardson Township property, which includes a revised estimate to the historical mineral resource for the 17/ODM deposit (Kelso and Selway 2008). This estimate includes the economic mineralization at the 433 and Cap gold zones (Table 3). The database for this estimate comprised 428 diamond-drill holes, totalling approximately 145 630 m (Rainy River Resources Ltd., press release, February 28, 2008). This diamond drilling was completed by Nuinsco Resources Inc. (1994–2004) and Rainy River Resources Ltd. (September 2005–February 2008). Figure 1 illustrates the surface-projected boundary of the gold zones outlined as part of this study.

Table 3. Revised mineral resource estimate of the Richardson Township gold zones (cut-off grade 1.0 g/t Au) (Rainy River Resources Ltd.).

Gold Zone(s)	Resource Category	Tonnes	Grade Au (g/t)	Grade Ag (g/t)
17/ODM deposit	Indicated	34 238 000	1.26	2.63
17, ODM, 433 and Cap zones	Inferred	67 564 000	1.03	2.35

Kelso and Selway (2008) also summarized the sulphide-gold mineralization at these zones:

1. a diffuse “background” Au composed of fine disseminated sulphide and possible conformable bands/beds that typically returned assay values from <100 ppb to several hundred ppb Au, and
2. narrow, Au enriched, vein/fracture sets with thin alteration haloes that generally returned significantly higher values (i.e., hundreds to thousands of ppb Au with rare multigram values)

A total of 56 reverse-circulation drill holes targeted mainly 2 areas on the Richardson Township property. A gold-anomalous area situated north of Highway 600, approximately 550 m west of the 433 gold zone, was identified from a 47-hole reverse-circulation till and bedrock sampling program. This anomalous area, which is interpreted by Rainy River Resources to be a western extension of the HS and 433 gold zones, was tested with 9 diamond-drill holes (Table 4; *see* Figure 1). Drill-hole NR08-311 intersected 3.0 m grading 12.77 g/t Au and a second 4.5 m interval, located down-hole from this section, returned 53.24 g/t Au (W. Rayner, Rainy River Resources Ltd., personal communication, February 7, 2009). A second area situated adjacent to the Sabaskong batholith, which is coincident with an airborne magnetic low-response, located north of the 17/ODM gold zone, was tested with 19 reverse-circulation till and bedrock holes (Rainy River Resources Ltd., press release, January 20, 2009).

Rainy River Resources completed 111 diamond-drill holes on the Richardson Township property in 2008. Table 4 summarizes the areas targeted by this drill program (Rainy River Resources Ltd., press release, December 22, 2008). Figure 1 illustrates the approximate location of the mineralized areas.

The seventh gold zone on the Richardson Township property is located north of the Burns Block property (*see* Figure 1). The 17 East gold zone, which is situated on the Johnson Block, is located approximately 800 m east-northeast of the 17 gold zone was identified during the 2008 diamond-drill program. Two mineralized sections were intersected in drill-hole NR08-280. The upper level of the drill hole intersected 4.5 m grading 2.97 g/t Au and a second 79.5 m interval that returned 2.02 g/t Au. A 5.2 m interval, from the lower section of the hole, graded 12.17 g/t Au (Rainy River Resources Ltd., press release, September 9, 2008).

In 2009, Rainy River Resources Ltd. plans to initiate a preliminary economic assessment (PEA) study on the gold zones, which will include socioeconomic sensitivity analysis, environmental baseline studies and geotechnical analysis. Unique plans for 2009 include a survey utilizing borehole optical and acoustics televiewer on approximately 12 drill holes, which pierced the 17/ODM gold zone (Rainy River Resources Ltd., press release, January 12, 2009).

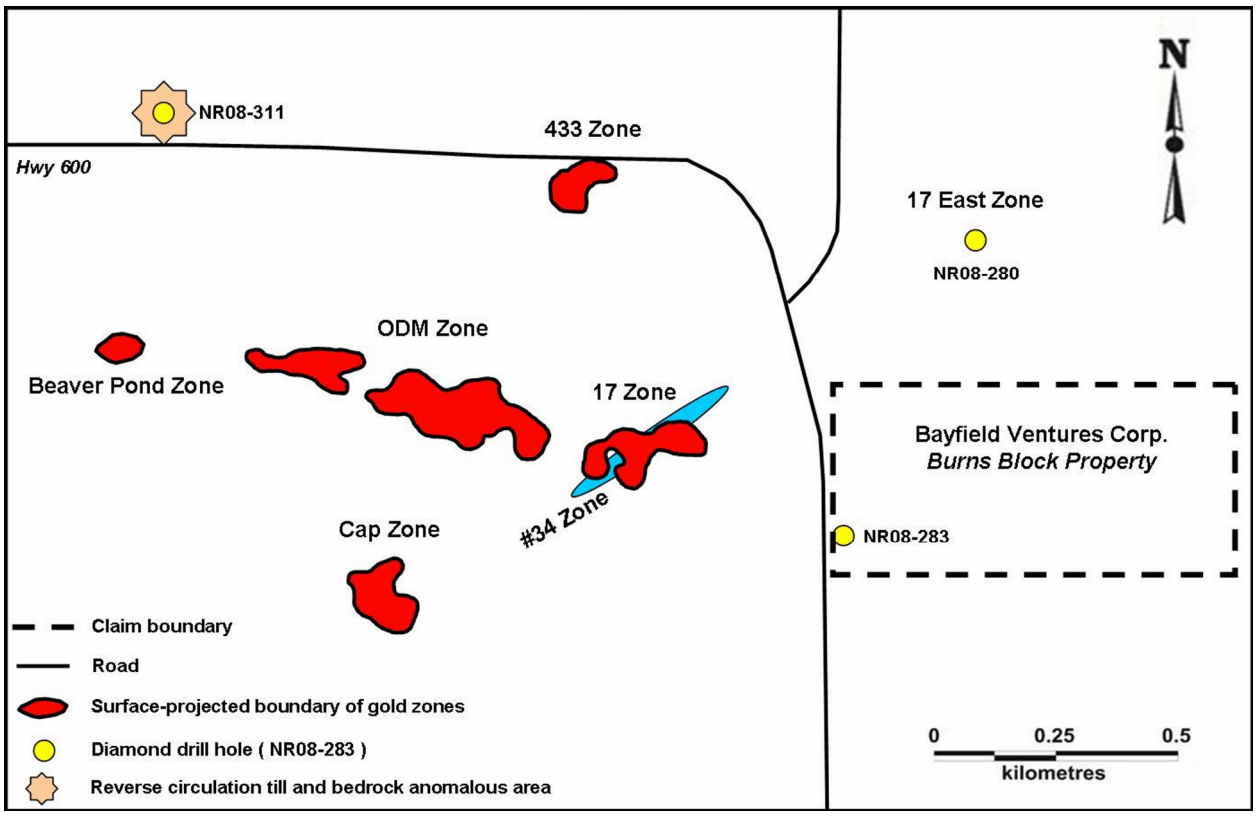

Figure 1. Location of known gold zones, additional mineralized zones and anomalous areas on a portion of the Rainy River gold project, Rainy River Resources Ltd. (Locations from W. Rayner, Rainy River Resources Ltd., personal communication, 2009, with information from the company's Web site, www.rainyriverresources.com.)

Table 4. Summary of 2008 diamond-drill program on the Richardson Township property, Rainy River Resources Ltd.

Area / Gold Zone	Number of Holes	Total Length of Holes (m)	Purpose of Diamond-Drill Program
North of Hwy 600	9	3 497	Test reverse-circulation anomalous area
Beaverpond gold zone	7	2 978	Tested extension of Beaverpond zone
HS and 433 gold zones	37	16 332	Continued drill-hole piercing points at 30 m intervals along the longitudinal section of gold zones
ODM and 17 gold zones	10	7 633	
ODM and Cap gold zones	19	10 663	Targeted the vertical extensions of zones
17 gold zone	8	7 222	Targeted areas east and south of 17 Zone
17 East gold zone	11	4 173	Johnson Block situated east of 433 gold zone
#34 zone	3	2 252	Tested Titan 24 induced polarization conductors
Burns Block Property	7	3 303	Tested eastern extension of 17 zone
Program Totals	**111**	**58 053**	

Range Gold Corp. (50), a subsidiary company of Range Metals Inc., initiated a reverse-circulation till and bedrock sampling program on the Tait Township gold property, located approximately 6 km southwest of Rainy River Resources Ltd. 17/ODM gold zone. These properties are located approximately 55 km northwest of Fort Frances. This 23-hole drill program, totalling 406.3 m, was successful in establishing 3 anomalous areas based on the intersection of till which contained grains of gold. This gold-in-till was confirmed by several drill holes with counts ranging up to 250 grains and one sample returning 357 gold grains (Range Gold Corp., press release, August 6, 2008).

Seafield Resources Ltd. (52) continued work at the Elora gold project, located in the historic Upper Manitou Gold Rock area, situated approximately 38 km south of Dryden. The 9-hole, 2306 m diamond-drill program confirmed the down-plunge and lateral extensions of the Jubilee gold zone. Significant results from this program include hole E-08-33 that intersected 2.8 m grading 34.9 g/t Au. The drill program was also designed to test the mineral potential of the Jubilee zone hanging wall. Samples of the M zone situated in the hanging wall, which is located east of the Jubilee zone, returned anomalous gold values over 9 m. Additional work is planned for 2009 (Seafield Resources Ltd., press release, November 12, 2008).

Tamaka Gold Corporation (57) continued work on the Goldlund gold property, approximately 38 km northeast of Dryden. In 2008, a 66-hole diamond-drill program, totalling 19 445 m, mainly targeted the area underlain by the Goldlund deposit. Since 2007, a total of 109 drill holes, totalling 28 824 m, have identified at least 12 gold-bearing zones over an 800 m wide by 3000 m long area. The intermediate intrusive rocks that contain primary gold-bearing structures generally trend easterly and dip steeply to the south. Secondary structures are contained within these primary structures. These secondary structures strike north-northeast and have a shallow dip to the west. Generally the secondary structures contain higher grade gold, whereas the primary structures return lower grade mineralization.

Diamond-drill core from historical programs was also re-located, logged and sampled in 2008. Ninety-eight of these drill holes were re-examined and 5989 m of the core were sampled. A mechanical removal of overburden and pressure-washing program was initiated in 2008 to create a semi-continuous exposure on the property. The length of the exposure was designed to trend perpendicular to the strike of the gold-mineralized structures. Detailed mapping, structural studies and sampling programs of these exposures are planned in 2009 (K. Pieterse, Tamaka Gold Corporation, personal communication, January 30, 2009).

Treasury Metals Inc. (64) initiated an aggressive exploration program on the Goliath project, located in Zealand Township, approximately 20 km east of Dryden. The southern part of the project area is covered by the Laramide property, whereas the northern part is the Thunder Lake property. A majority of historical work, mainly targeting the Thunder Lake deposit, has been conducted on the Thunder Lake property. In 2008, an airborne magnetometer survey of 2165 line-kilometres was completed over the entire project area. An IP survey, structural and geochemical studies were completed on the Thunder Lake deposit. A 55-hole diamond-drill program, totalling approximately 13 305 m, targeted the mineralized zones at the Thunder Lake deposit. The drill program was designed to in-fill historical pierce-point intersections of the mineralized zones and also defines the high-grade ore shoots.

Treasury Metals Inc. also commissioned an independent NI 43-101 study on the Thunder Lake deposit, which confirmed and improved the historical mineral resource estimate (Roy and Trinder 2008). Table 5 presents a summary of the Thunder Lake deposit mineral resource, which is based on results from the 55 drill holes completed in 2008 and 185 historical diamond-drill holes (Treasury Metals Inc., press release, November 26, 2008).

Table 5. Thunder Lake deposit mineral resource estimate (cut-off grade 3.0 g/t Au) (*from* Treasury Metals Inc.).

Category	Zone	Tonnes above Cut-off Grade	Average Grade (g/t Au)	Ounces Au
Indicated	Main	560 000	5.9	110 000
Inferred	H	480 000	4.7	70 000
	Main	2 520 000	6.4	520 000
	B	130 000	4.2	18 000
	C	90 000	4.0	12 000
	D	50 000	3.1	5000
Total Inferred		3 270 000	5.9	625 000

Roy and Trinder (2008) indicate that the Thunder Lake deposit was historically interpreted as a shear-hosted, structurally controlled gold deposit. Based on recent compilations and a review of 2008 exploration data, Treasury Metals Inc. has proposed

> a Magmatic Hydrothermal Archean Lode Gold Deposit model as the most promising genetic model to explain the geological features and mineralisation of the Thunder Lake Deposit. Treasury notes that there is evidence of anomalous syngenetic gold (silver) mineralisation that has been subsequently upgraded and overprinted by deformation and alteration events including the amagmatic hydrothermal event.

Based on this genetic model and success from the 2008 exploration program, Treasury Metals Inc. plans additional work to expand the mineral resource at the Thunder Lake deposit and examine the remainder of the project area. Treasury Metals Inc. also intends to initiate a Preliminary Economic Assessment and environmental baseline studies in 2009 (Treasury Metals Inc., press release, November 26, 2008).

Western Warrior Resources Inc. (66) continued work at the Pipestone project, which covered approximately 754 km^2 and includes 4713 contiguous claim units located east of Nestor Falls and situated mainly in the Kakagi–Rowan lakes greenstone belt. A majority of the exploration work in 2008 targeted the mineral potential of the Wampum gold property, approximately 37 km northeast of Nestor Falls. The 11-hole Phase I diamond-drill program, totalling approximately 1568.6 m, was designed to test the potential beneath the Main South exposures and target the western extension of this mineralization zone (Western Warrior Resources Inc., press release, March 25, 2008). A prospecting, mapping and lithogeochemical sampling program was designed to examine the mineral potential of the Wampum property based on structural interpretation of responses from the 2007 detailed airborne magnetometer survey (Western Warrior Resources Inc., press release, June 18, 2008).

Western Warrior Resources Inc. announced a name change to Whetsone Minerals Inc., effective October 27, 2008. A 2-hole Phase II diamond-drill program, totalling approximately 448 m, was completed at the North exposures, located 200 m north of the Main South zone. Samples of drill core from this program returned 2.4 m grading 7.9 g/t Au (Whetsone Minerals Inc., press release, November 26, 2008).

Copper and Gold

Opawica Explorations Inc. (41) continued work on the Atikwa Lake copper-gold property, approximately 70 km southeast of Kenora. A 100 m line-spacing control-grid was established on the property except over the historical Maybrun deposit where the spacing was 50 m. In 2008, an induced polarization and magnetometer survey was completed utilizing this grid. Based on the results of the geophysical programs, a 70-hole diamond-drill program, totalling approximately 10 000 m, was completed in 2008. This drill program mainly tested the Maybrun deposit, but also targeted other mineralized zones located on the property.

Drill-hole AT-08-001, which tested the northern part of the Maybrun deposit, intersected 183 m grading 1.54 g/t Au and 0.389% Cu including a 46.75 m interval which returned 4.02 g/t Au and 0.866% Cu. Hole AT-08-049, which targeted the central part of the Maybrun deposit, intersected 7.0 m grading 9.4 g/t Au and 3.87% Cu (Opawica Explorations Inc., press release, August 13, 2008).

Opawica Exploration Inc. commissioned an independent NI 43-101 study on the Atikwa Lake property which was designed to provide mineral resource estimates on the Maybrun mineralized zones (Table 6). The Maybrun deposit historical mineral resource estimate was 3 000 000 tonnes grading 1.18% Cu and 2.5 g/t Au non–NI 43-101 compliant (Opawica Explorations Inc., press release, February 2, 2009).

Table 6. Atikwa Lake property, Maybrun zones mineral resource estimate.

Maybrun Zone	Resources Category	Tonnes	Average Grade Cu (%)	Average Grade Au (g/t)
Main	Indicated	7 367 000	0.41	0.64
Main	Inferred	1 738 000	0.30	1.15
Footwall	Inferred	2 534 000	0.13	1.20
North	Inferred	2 082 000	0.17	0.69

A mineralogical and metallurgical study was initiated on a 300 kg sample of diamond-drill core, selected to provide representative material from the Maybrun mineralized zones. The average grade of a 400 g sample of this material was 1.60 g/t Au, 5 g/t Ag, 0.91% Cu, 3% Mg and 0.434% Ti (Opawica Explorations Inc., press release, February 2, 2009).

Orthomagmatic Base Metals and Platinum Group Elements

Benton Resources Corporation (4) initiated an exploration program on the Armit Lake Ni-Au property located approximately 27 km northwest of the hamlet of Savant Lake. A 13-hole, 2151 m diamond-drill program targeted the mineral potential of areas identified by prospecting efforts and tested anomalous zones based on the response of ground geophysical surveys. Historical grab samples of mafic intrusive rocks at the DC Creek occurrence returned up to 4.2% Ni. In the area adjacent to this occurrence, prospecting located mineralized float that returned 1.24% Cu and 1.6 g/t Au. Grab samples of chert-sulphide iron formation, located approximately 3 km west of the DC Creek occurrence, returned 25.4 g/t Au over 1.5 m. Drill-hole 07, which was collared 800 m southeast of the DC Creek occurrence, intersected mineralization grading 23.03 g/t Au. Drill-hole 12, which was collared 1200 m southwest of the DC Creek occurrence, intersected 0.8 m grading 10.58 g/t Au and 0.30% Cu in altered mafic volcanic rocks (Benton Resources Corporation, press release, May 28, 2008).

Canadian Arrow Mines Ltd. (6) initiated an exploration program at the Denmark Lake Ni-Cu-PGE property, which adjoins the southern boundary of the Kenbridge property, located approximately 11 km south of the Kenbridge deposit. Most of the activities tested the mineralization at the Apex and Nielson Gauthier historical occurrences which are located north of Denmark Lake. Seven diamond-drill holes were completed at the Apex occurrence and 11 holes tested the Nielson Gauthier occurrence, totalling approximately 876 m and 1763 m, respectively (T. Keast, Canadian Arrow Mines Ltd., personal communication, January 22, 2009). Drill-hole CL-08-01, which targeted the Nielson Gauthier mineralized zone, intersected 24.6 m, grading 0.35% Ni and 0.36% Cu, and included a 0.75 m section that returned 4.51% Ni and 0.50% Cu (Canadian Arrow Mines Ltd., press release, April 30, 2008).

Canadian Arrow Mines Ltd. (8) also continued work at the Glatz–Turtlepond Lake project approximately 30 km south of Dryden. There are several historical mineral showings located on the project area with a majority of the work targeting the Glatz Ni-Cu-PGE occurrence. The 2008 exploration program was designed to evaluate electromagnetic conductive and magnetometer anomalous zones identified by Canadian Arrow Mines Ltd. in a 2007 airborne geophysical survey. Control grids were established in the Glatz occurrence area to cover 2 anomalous areas identified from this survey. Ground magnetometer and electromagnetic geophysical surveys conducted on these grids outlined 2 parallel trending areas of potential mineralization (Canadian Arrow Mines Ltd., press release, October 20, 2008). Twenty-two sites were selected for power-stripping, pressure-washing, channel-cutting and sampling, completed at the southern mineral potential area. Bedrock exposures were mapped in detail and over 350 channel-cut samples were submitted for analysis (T. Keast, Canadian Arrow Mines Ltd., personal communication, January 22, 2009).

Canadian Arrow Mines Ltd. (9) continued work at the Kenbridge nickel mine property, approximately 70 km southeast of Kenora. Twelve diamond-drill holes, totalling approximately 5000 m, were completed in 2008, and were designed to increase the mineral resources below the 300 m level at the Kenbridge deposit. A Preliminary Assessment Study, based on the results from the 2007 diamond-drill program and historical data, confirmed and improved the historical mineral resource estimate for the Kenbridge deposit (Buck, Cole and Gowan 2008). Canadian Arrow Mines Ltd. revised this mineral resource estimate to included the results from the 2008 diamond-drill program (Table 7).

Table 7. Revised Kenbridge deposit mineral resource estimate (Canadian Arrow Mines Ltd., press release, August 19, 2008).

Zone	Category	Tonnes	Ni (%)	Cu (%)
Open pit	Measured	3 340 000	0.43	0.23
Open pit	Indicated	1 124 000	0.38	0.23
Open pit	Total measured and indicated	4 464 000	0.42	0.23
Underground	Measured	206 000	0.85	0.43
Underground	Indicated	2 469 000	0.97	0.51
Underground	Inferred	118 000	1.38	0.88

Buck, Cole and Gowan (2008) also provided a summary of the geological setting and mineralization at the Kenbridge deposit:

> The Kenbridge deposit occurs within a vertically dipping, lenticular gabbro and gabbro breccia with surface dimensions of 250 metres by 60 metres. The deposit and host rock are situated within a regional northeast-trending deformation zone. The mafic intrusive body is hosted by a vertically dipping volcanic sequence comprised of andesitic flow, fragmental units and epivolcaniclastic sediments.
>
> Mineralization (pyrrhotite, pentlandite, and chalcopyrite ± pyrite) is found as massive to net-textured and disseminated sulphide zones, primarily in pyroxenite, gabbro pyroxenite with lesser amounts in gabbro and talc schist.

In 2008, metallurgical testing was initiated on a blended representative sample, which averaged 0.85% Ni and 0.38% Cu, of open pit and underground material from the Kenbridge deposit. The objectives of the metallurgical program were to determine flotation conditions and grinding design criteria for mineralized rock. A locked cycle floatation test indicated the recovery of nickel is 90%, and 93% for copper (Canadian Arrow Mines Ltd., press release, June 26, 2008). Access to the Kenbridge deposit site, to conduct exploration work in the future, will improve since the work permit to establish an access road has been issued (Canadian Arrow Mines Ltd., press release, December 4, 2008).

Champion Bear Resources Ltd. (10) continued work on the Eagle Rock Cu-Ni-PGE property located approximately 64 km south of Dryden. Drill-hole pierce-points, at 50 m intervals, tested the eastern extension of the historical Campbell zone to a vertical depth of 200 m. The Campbell zone was extended approximately 500 m to the current length of 1600 m based on the results of this 13-hole diamond-drill program. The remainder of this definition drill program is planned to target the western extension of the Campbell zone in 2009 (Champion Bear Resources Ltd., press release, January 5, 2009).

Iron

Bending Lake Iron Group Ltd. (3) initiated an exploration program to evaluate the mineral potential of their holdings in the Stormy–Bending lakes area, approximately 38 km southwest of Ignace. The main focus of the program was to evaluate the mineral potential of the Bending Lake iron deposit, which is situated on the 49 patent claims in the Bending Lake area. The historical mineral resource estimate of the deposit is 249 million tons grading 28.19% Fe (www.bliocorp.com). Shklanka (1968, p.200) classified this as Algoma-type sedimentary iron deposit.

Diamond-drill core from historical programs targeting the Bending Lake iron deposit was recovered, re-logged and sampled. Eight diamond-drill holes, totalling approximately 2200 m, were completed in 2008. These data will be part of the revised NI 43-101 mineral resource estimate of the deposit that is planned to be released in 2009.

Compilation and digitization of historical data, environmental baseline studies and economic feasibility studies were also initiated by Bending Lake Iron Group Ltd. In the past 2 years, public information sessions with stakeholders, municipalities, provincial and federal government agencies including First Nations communities, have been held to discuss the potential development of the Bending Lake iron deposit.

Ten mining patents associated with 1584859 Ontario Inc. and staked mining claims held under ownership of Windigo Ridge Resources Inc. were acquired adjacent to the Bending Lake iron deposit in 2008. These 2 companies are subsidiary holdings of Bending Lake Iron Group Ltd. Compilation of historical data, prospecting, and mechanical removal of overburden, pressure-washing, and channel sampling was also initiated to evaluate the base-metal and gold potential of selected part of these properties (H. Wetelainen, Bending Lake Iron Group Ltd., personal communication, January 29, 2009).

Numax Resources Inc. (39) continued work on the Westco property located approximately 45 km east of Fort Frances. The property is predominantly underlain by layered mafic intrusive rocks of the Bad Vermilion intrusion. In the past 3 years, exploration efforts by Numax Resources Inc. targeted lode gold, volcanogenic massive sulphide and mafic intrusion-hosted, copper-nickel-platinum group element mineralization on the property. In 2008, an aggressive program was initiated to target the iron potential associated with some of the historical iron-titanium-vanadium (Fe-Ti-V) zones, located within and near the northern boundary of the Bad Vermilion intrusion.

A 100 m line-spacing, continuous-recording ground magnetometer and VLF electromagnetic survey was completed over a grid that was established to cover 9.5 km of the western part of the Bad Vermilion intrusion. Three areas coincident with highly anomalous responses identified by this magnetometer survey were the focus of detailed examination. Mechanical removal of overburden and a pressure washing program was completed to create semi-continuous exposures across the trend of these magnetic anomalous zones.

Two of these exposures are semi-continuous and were channel-sawn which provided a method to sample the rocks at one-metre intervals. The areas selected for this excavation program were separated by 600 m, but the sites could be associated with a continuous magnetometer response. In excess of 300 samples were collected during this sampling program and assay results returned values exceeding 55% iron and 22% titanium oxide. Three diamond-drill holes, totalling approximately 514 m, tested 2 mineralized zones. The entire length of the core was halved and submitted for analytical results. Additional samples of mineralized rock were submitted to 2 laboratories for testing the magnetic separation of the iron (J. Oertel, Numax Resources Inc., personal communication, January 28, 2009).

Molybdenum

MPH Ventures Ltd. (36) continued their exploration work on the Pidgeon molybdenum property, located approximately 39 km northeast of Dryden. Two phases of diamond drilling has targeted the mineral potential of the Pidgeon molybdenum deposit. Three holes from the 16-hole, 3032 m Phase I drill program were initiated in 2007, whereas the remainder of these holes were completed in 2008. This program was designed to confirm historical intercepts and test the depth and lateral extension of mineralization at the deposit (MPH Ventures Ltd., press release, February 28, 2008). The 31-hole, 2644 m Phase II diamond-drill program was designed to target the mineral potential of the deposit within 100 m of surface (MPH Ventures Ltd., press release, October 7, 2008).

In 2008, mechanical removal of overburden, pressure washing, channel-cutting and sampling was initiated to examine the exposures underlain by the Pidgeon deposit. Mineralization at the deposit occurs in fractures that cut the felsic intrusive rocks. Molybdenite is located in veins and veinlets and can occur as large clots, particularly in the quartz zones. The mineralization has been traced for approximately 1700 m and the fractures dip to the southeast. MPH Ventures Corp. plans to remove a bulk sample from the deposit in 2009 (D. Huston, MPH Ventures Corp., personal communication, January 22, 2009).

Uranium

Delta Uranium Inc. (12) continued an aggressive exploration program on the Kenora uranium project. The western boundary of the property is located approximately 30 km east of Kenora and extends eastward to Vermilion Bay. The property is underlain by 32 historical uranium occurrences. In 2007, 20 diamond-drill holes, totalling approximately 2151 m, tested the lateral extensions of the mineralized zone at the historical Richard Lake uranium prospect.

An airborne radiometric survey, conducted over the property in 2006 by Delta Uranium Inc., identified several anomalous areas. The ground radiometric and lithogeochemical sampling programs, targeting these anomalous areas, were successful in establishing at least 17 mineral potential sites (Delta Uranium Inc., press release, May 26, 2008). A total of 2484 lithogeochemical samples collected in 2008, combined with 701 samples collected during the 2007 programs, were successful in identifying at least 12 additional sites that are planned to be tested in 2009 (Delta Uranium Inc., press release, January 5, 2009). The length and width of the target areas presented in Table 8 are the estimated extent of anomalous zones, additional work is required to determine the size of the mineralized zones (Delta Uranium Inc., press release, January 5, 2009).

Table 8. Summary of assay results of samples collected by Delta Uranium Inc. from anomalous target areas.

Target Area	Length (m)	Width (m)	Samples	Number of samples in range (U_3O_8 ppm)			
				>2000	1000–1999	500–999	250–499
Fiest Lake	2200	100	129	4	7	6	15
Nixon Lake	1100	40	29	1	1	1	2
Hawk Lake	800	90	61	1	3	5	5
Foot Lake	750	100	42	0	1	6	8
Lake 393	650	150	20	2	1	2	3
Windermere Lake	650	300	73	0	0	1	7
Corner lake South	500	170	57	0	0	5	4
Pine Road	500	25	24	0	1	4	1
Eagle River	450	150	53	0	1	2	1
Stewart Lake	400	150	33	1	5	3	2
Ely Lake	350	50	18	0	0	2	3
George Lake	150	50	14	0	0	2	2

In 2008, the Bee Lake, Preston East Dome and Wilson Lake anomalous areas were the target of diamond drill programs. Twenty-two diamond-drill holes, totalling approximately 2988 m, confirm the historical results and extended the size of the potential mineralized zones (Delta Uranium Inc., press release, June 3, 2008).

Research by Delta Uranium Inc. indicates that rock samples analyzed using the delayed neutron counting (DNC) assay method returned increases of 20 to 35% U_3O_8 when compared with results using the inductively coupled plasma (ICP) analytical method. Subsequently, a majority of the samples processed in 2007 with the ICP method were re-analyzed using the DNC procedure and all samples submitted for analysis in 2008 were processed using the DNC method (Delta Uranium Inc., press release, August 11, 2008).

Temex Resources Corp. (60) and joint venture partner **Nuinsco Resources Limited** initiated an exploration program to examine the uranium potential of 2 properties located in the Umfreville Lake area approximately 70 km northwest of Kenora. The Marijane Lake property is situated mainly north of Umfreville Lake; the adjoining Huston Lake claim block extends westward into the province of Manitoba. In 2008, an airborne radiometric and magnetometer survey of 2705 line-kilometres was conducted over these properties (Temex Resources Corp. and Nuinsco Resources Limited, press release, July 10, 2008). A ground radiometric and lithogeochemical sampling program was conducted to test some of the radiometric anomalous areas identified by this survey. Grab samples of mineralized pegmatite returned uranium values ranging up to 0.130% U_3O_8 (Temex Resources Corp. and Nuinsco Resources Limited, press release, October 22, 2008). A 10-hole diamond-drill program tested anomalous sites identified by exploration efforts, mainly at the Marijane Lake property (Temex Resources Corp. and Nuinsco Resources Limited, press release, December 8, 2008).

Volcanogenic Massive Sulphides

Rainy River Resources Ltd. (48) continued work on the Off Lake property, northwest of Fort Frances. This area, part of the Rainy River project, is located approximately 16 km northeast of the 17/ODM gold zone. A detailed compilation of the geological setting and mineral potential of the property was completed in 2007 (Kenora District Office, Assessment Files, 52C13NW Q-6). Prospecting efforts in 2007 identified mineralized exposures and also located several occurrences of mineralized float. Grab samples of the float material returned values up to 4.87g/t Au, 7.66% Zn and 2.75% Cu. These boulders were found on the shore of the northernmost peninsula located on the east side of Off Lake. The bedrock source of this mineralized float could not be confirmed based on past years' exploration efforts on the Off Lake property. In 2007, Rainy River Resources Ltd. entered into an option agreement on 41 mining claims situated north of the Off Lake property, which comprise the southern portion of Western Warrior Resources Inc.'s Pipestone Project (Rainy River Resources Ltd., press release, December 17, 2007).

In 2008, Rainy River Resources initiated a lithogeochemical sampling program on the Off Lake property including the Western Warrior Resources–optioned ground. Approximately 600 samples were collected and submitted for analysis in an effort to locate the source of anomalous float. A reverse-circulation till and bedrock sampling program was also initiated at the Off Lake property in 2008. Eighteen holes were completed on the original Rainy River Resources Off Lake claims and 5 holes on Western Warrior Resources claims for a total of 343.0 m. Additional work included the completion of 5 diamond-drill holes totalling approximately 1550 m. These programs were not successful in locating the source of these boulders and, in November 2008, due to economic uncertainty, Rainy River Resources Ltd., terminated its option on the Western Warrior Resources property (Western Warrior Resources Inc. press release, November 6, 2008).

A second prospecting program was initiated in an effort to locate the source of the mineralized float. This program, which focussed on the area near the mineralized boulders, was successful in identifying the possible source of this float. The Burnell showing mineralized zone, situated near the eastern shore of Off Lake was the target of a mechanical removal of overburden, pressure washing, channel-cutting and sampling program. This portion of the property is also the target of the proposed 2009 diamond-drill program (C.J. Baker, Rainy River Resources Ltd., personal communication, January 21, 2009).

Diamonds

MetalCORP Limited (32) exploration efforts on part of the North Rock property were successful in identifying diamonds. The North Rock property is situated mainly in Halkirk Township and is located approximately 25 km east of Fort Frances. A 100 kg sample of the Grassy Portage pyroclastic (GUP) ultramafic rock, analyzed using the caustic fusion procedure, returned 6 diamonds. One diamond was recovered on the 0.212 mm sieve, 3 diamonds on the 0.106 mm sieve and 2 smaller stones were recovered. Subsequent to this discovery, Kennecott Canada Exploration Inc. entered into an option agreement with MetalCORP Limited on the North Rock property, including the diamond-bearing GUP unit (MetalCORP Limited, press release, December 22, 2008).

Table 9. Exploration activity in the Kenora District in 2008. Locations shown on Figure 2.

Abbreviations

AEM ..... Airborne electromagnetic survey	GMI ..... Ground magnetic response interpretation
AM ..... Airborne magnetic survey	Lc ..... Linecutting
ARA ..... Airborne radiometric survey	IP ..... Induced polarization survey
CC ..... Channel cutting	IS ..... Public information sessions
Comp ..... Compilation	Met ..... Metallurgical studies
DDG ..... Downhole geophysical surveys	MRE ..... Mineral Resource Estimate
DDH ..... Diamond-drill hole(s)	MS ..... Marketing studies
DDR ..... Diamond-drill hole(s) re-logging	ODH ..... Overburden drill hole(s)
DW ..... De-watering underground workings	Pr ..... Prospecting
GC ..... Geochemical survey	Rad ..... Ground radiometric survey
EBS ..... Environmental baseline studies	Samp ..... Sampling (other than bulk)
GEM ..... Ground electromagnetic survey	Str ..... Stripping
GL ..... Geological survey	Tr ..... Trenching
GM ..... Ground magnetic survey	VLFEM ..... Very low frequency electromagnetic survey

No.	Company/Individual (Occurrence Name or Property)	Township/Area (Commodity)	Exploration Activity
1	Angove, R. (Angove property)	Vista Lake Area (Au)	Pr, Samp
2	Bayfield Ventures Corp. (Block B property)	Richardson Township (Au)	DDH 4-1192m, GM, GEM, Lc, Samp
3	Bending Lake Iron Group Ltd. (Bending Lake property)	Bending Lake Area (Fe)	DDH 8-2200m, Comp, DDR, Lc, IS, Pr, Samp
4	Benton Resources Corporation (Armit Lake property)	Armit Lake area (Ni, Cu, PGE)	DDH 13-2151m, Pr, Samp
5	Burt, D. (Triggs property)	Code Township (Au)	Str, Pr, Samp
6	Canadian Arrow Mines Ltd. (Denmark Lake property)	Atikwa Lake Area (Ni, Cu, Co, PGE)	DDH 18-2639m, AM, AEM, Lc, GM, GEM, Str, Comp, staking
7	Canadian Arrow Mines Ltd. (Ghost Lake property)	Brownridge Township (Ni, Cu)	AM, AEM, Pr, Samp
8	Canadian Arrow Mines Ltd. (Glatz – Turtlepond Lake property)	Turtlepond Lake Area (Ni, Cu)	Comp, Pr, GL, GM, GEM, Str, CC, Samp
9	Canadian Arrow Mines Ltd. (Kenbridge Nickel Mine project)	Atikwa Lake area (Ni, Cu, Co, PGE)	DDH 12-5000m, MRE, Met, Samp, Comp
10	Champion Bear Resources Ltd. (Eagle Rock property)	Eagle Rock Lake Area (Cu, Pd, Pt)	DDH 13-3211m, Comp, Samp
11	Conquest Resources Ltd. (King Bay Gold property)	Fourbay Lake Area (Au)	DDH 3-500m, Samp
12	Delta Uranium Inc. (Kenora Uranium project)	McNicol to Langton townships (U)	DDH 22-2988, Pr, GL, Samp
13	Dobransky, D. (Ford Lake property)	Osaquan Township (Mo)	Str, CC, Pr, Samp
14	Etherington, B. (Triggs property)	Code Township (Au)	Pr, Samp
15	Excalibur Resources Ltd. (Sturgeon Lake property)	Bell Lake Area (Cu, Zn)	Comp, staking
16	Ginguro Exploration Inc. (Minnitaki Gold project)	Parnes Lake Area (Au)	DDH 12-3033m, Samp
17	Glatz, A. (Mosher Bay property)	Boyer Lake Area (Au)	Pr, Samp
18	Glatz, A. (Melgund property)	Melgund Township (Au)	Str, CC, Pr, Samp
19	Glatz, A. & Riives, J. (Avery property)	Avery Township (Au)	Pr, Samp

No.	Company/Individual (Occurrence Name or Property)	Township/Area (Commodity)	Exploration Activity
20	Glatz, A. & Riives, J. (Howey Lake property)	Kawashegamuk Lake Area (Au)	Pr, Samp
21	Goldeye Exploration Ltd. (Boyer Lake property)	Boyer Lake Area (Au)	GC, Samp
22	Gold Summit Corporation (Burning Lake property)	Satterly Township (Cu, Ni)	DDH 5-1205m, GL, Pr, Samp
23	Houston Lake Mining Inc. (Angel Hill zone)	Dogpaw Lake Area (Au)	GL, Str, CC, Samp
24	Houston Lake Mining Inc. (Dogpaw Lake zone)	Dogpaw Lake Area (Au)	DDH 48-2822m, GL, Str, CC, Samp
25	Houston Lake Mining Inc. (Dubenski zone)	Dogpaw Lake Area (Au)	DDH 39-4031m, IP, Samp, MRE, Comp, DDR, Str
26	Houston Lake Mining Inc. (McLennan Lake zone)	Dogpaw Lake Area (Au)	DDH 4-344, GL, Str, CC, Samp
27	International Millennium Mining Corp. (Hope Lake property)	Lobstick Bay Area (Au)	GC, Samp
28	King's Bay Gold Corporation (Phyllis Lake property)	Cathcart & Grummett townships (Au, Mo, Cu, Ni, PGE)	DDH 4-900m, Comp, Pr, Samp
29	King's Bay Gold Corporation (Sakoose property)	Melgund Township (Au)	DDH 20-6096m, Samp
30	Laurentian Goldfields Ltd. (Van Horne property)	Contact Bay Area (Au)	Comp, GL, Pr, Samp
31	McMillan, S. (Thunder Lake West property)	Zealand Township (Au)	Pr, Str, Samp
32	MetalCORP Limited / Kennecott Canada Exploration Inc. (GUP property)	Halkirk Township (Diamonds)	100kg sample removed in 2007
33	Metals Creek Resources Corp. (Flint Lake property)	Dogpaw Lake Area (Au)	GL, Pr, Samp
34	Metalore Resources Ltd. (East Cedartree Lake property)	Dogpaw Lake Area (Au)	DDR, Samp
35	Minerx Inc. (Duport Gold property)	Snowshoe Bay Area (Au)	MRE, Comp
36	MPH Ventures Corp. (Pidgeon property)	Echo Township (Mo, Cu)	DDH 31-2644m, Lc, CC, GM, Str, GL, Samp
37	Norris, M. (Rowan Lake property)	Rowan Lake Area (Au, Cu)	DDH 9-75m, Pr, Str, Samp
38	Nuinsco Resources Limited (Cameron Lake property)	Rowan Lake Area (Au)	MRE, Comp
39	Numax Resources Inc. (Westco property)	Bliss Lake Area (Fe, Ni, Cu, Pd, Pd, Au)	DDH 3-514m , Lc, GM, Str, CC, GL, Pr Samp
40	Nordstrom, F. (Ford Lake property)	Osaquan Township (Mo)	Pr, Samp
41	Opawica Explorations Inc. (Atikwa Lake property)	Atikwa Lake Area (Cu, Au)	DDH 70-10,000m, IP, GM, Lc, MRE, Comp, Samp
42	Pacific Iron Ore Corporation (King's Bay property)	Beckington Lake Area (Au)	Pr, Lc, GEM, GM, Str, Samp
43	Pacific Iron Ore Corporation (Scarp Lake property)	Garnet Lake Area (Cu, Au)	GL, Pr, Samp

No.	Company/Individual (Occurrence Name or Property)	Township/Area (Commodity)	Exploration Activity
44	Puget Ventures Inc. (Werner Lake mineral belt property)	Rex Lake–Werner Lake Areas (Co, Cu, Ni, PGEs)	Comp, Staking
45	Q-Gold Resources Ltd. (Mine Centre gold property)	Bad Vermilion Lake Area (Au)	DW, Comp, GL, Samp
46	Quest Uranium Corporation (Thor property)	Paterson Lake Area (U)	ARAD, Pr, Samp, Comp
47	Rainy River Resources Ltd. / Bayfield Ventures Ltd. (Burns Block Option property)	Richardson Township (Au)	DDH 7-3303m, Samp
48	Rainy River Resources Ltd. (Off Lake property)	Menary and Senn townships (Au, Cu, Zn, Ag)	DDH 5-1550m, OVD 17-343m, Pr, GL Samp
49	Rainy River Resources Ltd. (Rainy River property)	Richardson Township (Au, Cu, Zn, PGE)	DDH 111-58,053m, MRE, IP, OVD 66-1200m, GEM, Met, Samp
50	Range Gold Corp. (Tait property)	Tait Township Township (Au)	OVD 23-406.3m, Samp
51	Roisin, F. (Lockhart Lake property)	Farrington Lake Area (Cu, Pb, Zn)	Pr, Samp
52	Seafield Resources Ltd. (Elora Gold project)	Boyer Lake Area (Au)	DDH 9-2306m, Samp
53	Sedex Mining Corp. (Mine Centre property)	Bad Vermilion Lake Area (Cu, Zn, Au)	AEM, AM
54	Sedex Mining Corp. (Wind Bay property)	Halkirk Township (Cu, Zn, Au)	AEM, AM
55	Shotgun Exploration (Straw Lake Beach property)	Bluffpoint Lake Area (Au)	Pr, Samp
56	Skyharbour Resources Ltd. (Blocks D, D1, E)	Pattullo, Sifton, Tait townships (Au)	Comp, GM, GEM, Samp
57	Tamaka Gold Corporation (Goldlund project)	Echo Township (Au)	DDH 66-19,445, Lc, Str, Comp, CC, DDR, Samp
58	Takara Resources Inc. (Basket Lake project)	Abamategwi Lake and Hook Lake areas (U)	AM, ARA
59	Teck Cominco Limited (Thundercloud Lake property)	Boyer Lake Area (Au)	DDH 10-2500m, Lc, GL, Str, CC, DDR, Samp
60	Temex Resources Corp. / Nuinsco Resources Ltd. (Hillock Lake property)	Hillock Lake Area (U)	ARA, AM, Pr, Samp
61	Temex Resources Corp. / Nuinsco Resources Ltd. (Huston Lake property)	Reynar Lake Area (U)	ARA, AM, Pr, GL, Samp
62	Temex Resources Corp. / Nuinsco Resources Ltd. (Marijane Lake property)	Umfreville Lake Area (U)	ARA, AM, DDH 10-1118 m, Pr, GL, Samp
63	Titan Resources International Corp. (Norgold property)	Melgund Township (Au)	Lc, GM, Samp
64	Treasury Metals Inc. / Laramide Res. (Goliath property)	Zealand Township (Au)	DDH 55-13,305m, GL, GC, IP, AM, MRE, Comp, DDR, Samp
65	Unitronix Corporation (Sturgeon Lake property)	Sixmile Lake Area (Au, Cu, Zn)	Comp, Pr, GL, Samp
66	Whetstone Mineral Inc. (Wampum property)	Rowan Lake Area (Au)	DDH 13-2016.6m, GL, Str, CC, Comp, Samp
67	Whetstone Mineral Inc. (Warclub property)	Dryberry Lake Area (Au)	GL, Comp, Samp, staking

KENORA DISTRICT STAFF AND ACTIVITIES

The Kenora office was staffed by C. Ravnaas *P.Geo.*, District Geologist; J. Bongfeldt, District Support Geologist, and K. Wiebe, summer assistant (Summer Experience Program).

Kenora staff attended the following conferences and symposia:

- a poster and oral presentation highlighting activities in the district were presented at the Northwestern Ontario Mines and Minerals Symposium held in Thunder Bay in April;
- a poster highlighting metal producers and significant exploration activity in Northwestern Ontario held at the Manitoba Mining and Minerals Convention held in Winnipeg, Manitoba in November; and
- participated in the Ontario Exploration and Geoscience Symposium held in Sudbury in December.

Kenora office staff also gave talks on the mineral development sequence, exploration activity, mineral potential areas and employment opportunities related to the mineral sector to the Kenora, Dryden and Fort Frances municipality executive and these communities' economic development staff. C. Ravnaas delivered a talk on significant exploration activity in the Kenora District to the Canadian Institute of Mining at the January luncheon meeting held in Winnipeg, Manitoba.

Kenora staff attended the following First Nation meetings:

- Interim Aboriginal Approach two-day workshop delivered to Treaty #3 executive and community representatives held in Kenora in April;
- *Mining Act* modernization consultation held in Kenora in October;
- Naotkamegwanning Anishinabe First Nation resource information session in December in Whitefish Bay; and
- a poster and booth displaying employment opportunities at the Wabaseemong First Nation elementary school career day held in January.

The Kenora office organized and delivered a mineral exploration information session held in Dryden to approximately 81 participants in August. Kenora staff attended the Resident Geologist Program annual meeting held in Sault Ste. Marie. Kenora staff also attended the Mines and Mineral Division meeting held in Sudbury.

Kenora staff participated in the following workshops:

- workplace violence workshop held in Kenora;
- Gold Short Course delivered in Winnipeg during the Manitoba Mining and Minerals Convention;
- J. Bongfeldt attended the Power Within seminar held in Winnipeg in October;
- Confederation College skill-trades meeting held in Kenora; and
- mineral sector employment opportunities at the Kenora Job Fair.

The Kenora office facilitated a tour of the structural features related to the Pipestone–Cameron deformation zone for Lakehead University professor May Louise Hill. Kenora staff also delivered an outcrop tour to 30 elementary school students.

Kenora staff participated in the following Mines and Minerals sessions:

- submitted updates related to Kenora District's part of the Mines and Minerals Division web site; and
- submitted and discussed 14 geoscience proposals during the GAP Analysis workshop held in Kenora. This workshop canvasses the mineral exploration industry for input toward OGS project planning.

Kenora staff provided geoscience information to P. Moses, the Resident Geologist Program First Nations Minerals Information Officer for the delivery of prospecting and staking courses. The First Nation communities, situated in the Kenora District, which received these courses, were Big Island and Seine River.

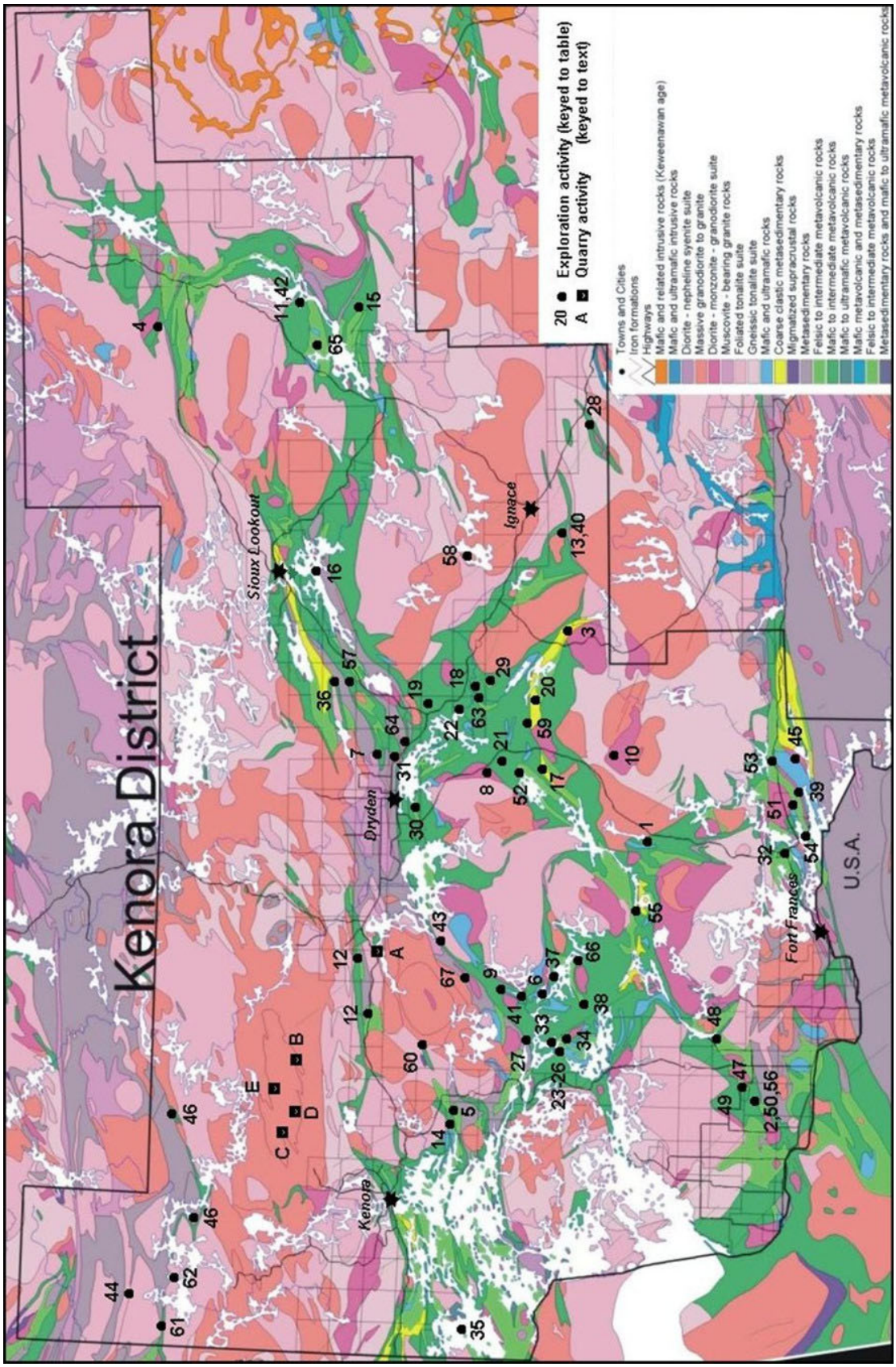

Figure 2. Exploration and quarry activity in the Kenora District in 2008 (*modified from* OGS 2003). Locations listed in Table 9 and in text.

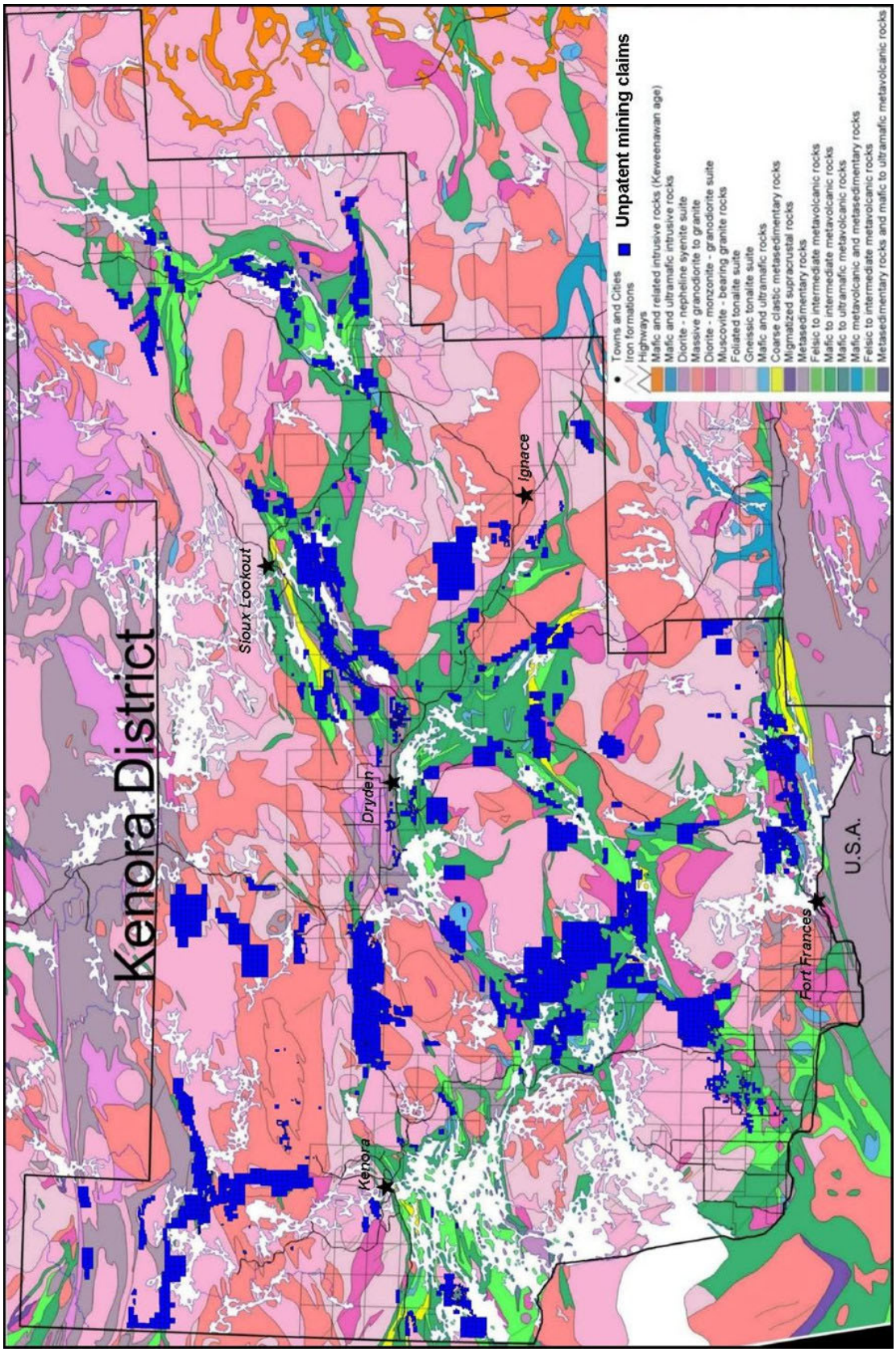

Figure 3. Extent of staking in the Kenora District in 2008 (*modified from* OGS 2003).

Kenora staff attended the Nuinsco Resources Limited public information sessions on the proposed advanced exploration program at the Cameron Lake deposit. Kenora staff supervised the rehabilitation of the off-site drill core site in Kenora. J. Bongfeldt contributed to the design of the Resident Geologist Program "Recommendation for Exploration" brochure.

In 2008, 31 property visits were conducted by Kenora District Office staff (Table 10; Figure 4).

Table 10. Property and field examinations conducted by the Kenora District Geologist in 2008. Locations are keyed to Figure 4.

Number	Client – Occurrence
1	Amador Gold Ltd. – Mennin Lake Mo occurrence
2	Avalon Ventures Ltd. – Big Whopper Li deposit
3	Burt, D. – Triggs Au occurrence
4	Canadian Arrow Mines Ltd. – Glatz–Turtlepond Cu-Ni occurrence
5	Delta Uranium Inc. – Kenora U project
6	Detorge, E. – Ford Lake Mo property
7	Dobransky, D. – Horseshoe Lake Au property
8	Dobransky, D. – Ford Lake Mo occurrence
9	Dobransky, D. – McNamera Lake Au-PGE occurrence
10	Glatz, A. – Mosher Bay Au occurrence
11	Lakehead University – Pipestone–Cameron deformation zone
12	Minerx Inc. – Duport Au deposit
13	MPH Ventures Ltd. – Pigeon Mo prospect
14	Nelson Granite Ltd. – Forgotten Lake East prospect
15	Nelson Granite Ltd. – 2nd Mountain Quarry
16	Nelson Granite Ltd. – Forgotten East Quarry
17	Nelson Granite Ltd. – Pine Green Quarry
18	Nelson Granite Ltd. – Red Deer Quarry
19	Nelson Granite Ltd. – Shepody Quarry
20	Norris, N. – Denmark Lake Au-Cu showing
21	Numax Resources Inc. – Westco Cu-Ni-PGE exposures
22	Numax Resources Inc. – Westco Fe-Ti Vi exposures
23	Rainy River Resources Ltd. – Off Lake Zn-Cu-Au occurrence
24	Rainy River Resources Ltd. – Richardson Township Au deposit
25	Staff examination – Eagle River pegmatite exposures
26	Staff examination – Gibi Lake greenstone exposures
27	Staff examination – Snake Bay volcanic rocks
28	Staff examination – Little Turtle River logging road U exposures
29	Tamaka Gold Corporation – Goldlund Au deposit
30	Teck Cominco Limited – Pelham Au occurrence
31	Teck Cominco Limited – Thundercloud Lake Au exposures

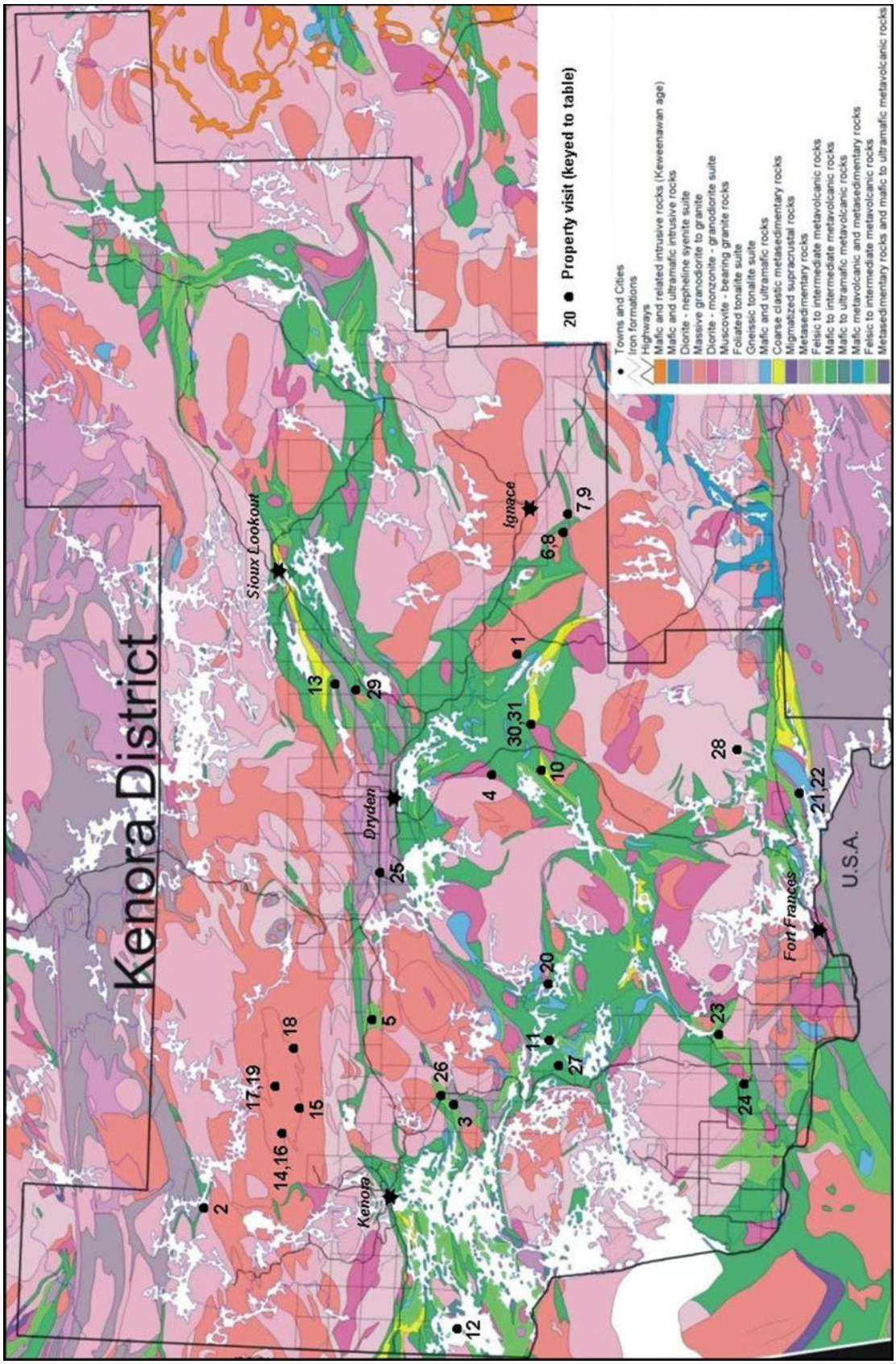

Figure 4. Property visits and field examinations conducted in the Kenora District in 2008 (*modified from* OGS 2003) Locations listed in Table 10.

PROPERTY EXAMINATIONS

All Universal Transverse Mercator (UTM) co-ordinates are in North American Datum 1983 (NAD83), Zone 15. Analytical values presented in tables and text, unless indicated otherwise, were processed through the Geoscience Laboratories (Geo Labs), Ontario Geological Survey, in Sudbury.

Numax Resources Inc. Iron-Titanium Property

For the past 3 years, Numax Resources Inc. has been exploring the mineral potential of the Westco property, which is underlain by the Bad Vermilion intrusion. The property is located approximately 45 km east of Fort Frances and is situated between Seine Bay and Bad Vermilion Lake. The property is accessed by logging roads that traverse the area south of Highway 11.

The Bad Vermilion intrusion is an east-northeast-trending, layered mafic intrusive body approximately 25 km long and up to 1 km wide. This trend is generally parallel to the layering of the mafic units. Poulsen (2000) describes the mafic rocks of the intrusion as composed of equigranular medium-grained gabbro, leucogabbro and anorthosite, with disseminated magnetite and ilmenite occurring as common phases. The south boundary of the intrusion is fault-bounded by metasedimentary rock of the Quetico Subprovince, and felsic intrusive rocks are located immediately north of the Bad Vermilion intrusion.

Historically, the entire Bad Vermilion intrusion has received minor exploration work. A majority of this work targeted the iron-titanium-vanadium potential of mineralized zones located within and near the northern boundary of the intrusion. These efforts, mainly conducted by Stratmat Limited in the mid 1950s, were successful in identifying at least 3 zones which host subeconomic concentrations of iron-titanium-vanadium mineralization. This coarse-grained mineralization is located in isolated lenses within massive-textured zones of ilmenite and titaniferous magnetite (Poulsen 2000). There was limited exploration activity targeting the copper-nickel and platinum group element potential of this intrusion until Numax Resources Inc. initiated work on the Westco property.

In 2008, Numax Resources Inc. exploration efforts targeted the iron and titanium potential of central part of the intrusion, which is situated near the historical Central Fe-Ti-V zone. A 100 m line-spaced control grid was established over the central part of the Westco property. A site visit was conducted by staff of the Kenora Resident Geologist Office to examine the exposures that underlie part of control-grid Line 2800. This area corresponds with highly anomalous responses identified by a continuous recording, ground magnetometer survey that was completed by Numax Resources Inc. The magnetic background response of the mafic intrusive rocks on the property averaged 57 000 gammas, with a minimum response of 50 000 and a maximum response exceeding 100 000 gammas (Simoneau 2008). Based on the response from this survey, a section of Line 2800, coincident with an anomalous response, was the target of work by Numax Resources Inc. in 2008.

A mechanical removal of overburden (power stripping) and pressure-washing program was completed to create a 203 m long, semi-continuous exposure of this potentially mineralized area (509560E 5391400N). The lengths of these exposures were excavated parallel to control-grid Line 2800. The exposure was also designed to trend perpendicular to the strike of the mafic intrusive rocks that underlie this part of the Bad Vermilion intrusion. The length of this exposure was semi-continuous channel-sawn that provided a method for Numax Resources to collect 221 samples at 1 m intervals. All of these samples were submitted for major and trace element analysis by the company, and selected assay results are tabulated below.

Figure 5 illustrates the profile of the magnetic response associated with rocks that underlie the Line 2800 exposure. The major and trace element values presented in Table 11 are from selected samples that represent rocks associated with some of the distinct magnetic amplitude variances illustrated in Figure 5. The pattern of the profile illustrates at least 3 zones of distinctive amplitude; these zones are labelled A, B and C (*see* Figure 5). The samples presented in Table 11 were also selected to give representative values for each of the zones, based on the results of all samples collected from the Line 2800 exposure.

Table 11. Major and trace element assay results of selected samples collected from the grid Line 2800 exposure.

Zone	Sample	SiO_2 (%)	Al_2O_3 (%)	Al_2O_3 (%)	Fe * (%)	TiO_2 (%)	Ti * (%)	Co (ppm)	Cr (ppm)	Cu (ppm)	Mn (ppm)	Ba (ppm)
C	**701**	41.77	12.67	27.74	18.54	2.54	1.52	12	28	16	1498	58
C	**712**	40.96	12.38	28.52	19.08	2.42	1.45	13	12	19	1426	29
C	**723**	36.43	13.58	29.19	19.55	3.42	2.05	20	9	20	1333	62
C	**738**	32.77	12.54	30.95	20.68	4.84	2.90	31	8	15	1119	44
C	**756**	28.08	11.70	33.41	22.30	6.23	3.73	39	6	11	1072	31
B	**765**	22.38	8.47	39.22	26.24	7.97	4.78	61	10	8	1147	45
B	**776**	15.31	4.70	42.37	28.38	11.70	7.01	58	13	10	624	32
B	**781**	15.67	3.98	50.63	33.87	19.46	11.67	56	23	11	440	15
B	**783**	8.14	3.90	56.59	37.89	21.70	13.01	69	33	6	443	10
A	**878**	31.56	14.49	29.20	19.55	1.55	0.93	71	28	24	773	21
A	**881**	8.19	4.54	73.27	49.07	5.57	3.33	95	238	43	940	11
A	**808**	36.25	16.53	23.72	15.86	1.14	0.68	97	69	75	2254	32
A	**811**	14.25	8.78	63.46	42.51	3.98	2.39	216	74	56	1328	6
A	**814**	12.71	8.79	56.95	38.09	18.66	11.12	216	83	7	2044	6
A	**820**	5.43	4.56	78.60	52.61	5.71	3.42	212	584	7	3429	4

* chemical conversion: % Fe_2O_3 × 0.6694 = % Fe , % TiO_2 × 0.5995 = % Ti; Analysis by Accurassay Laboratories, Thunder Bay, Ontario.

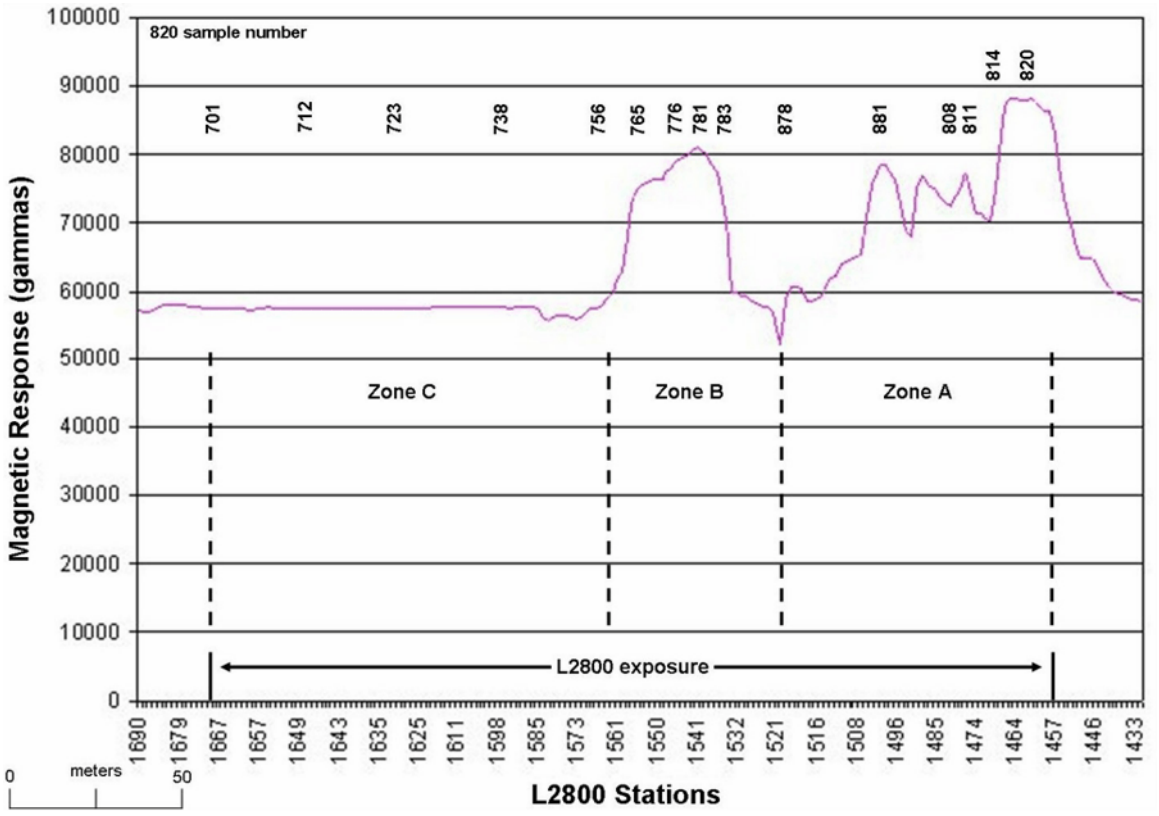

Figure 5. Area's magnetic response profile (looking east), anomalous zones and location of samples collected from the grid Line 2800 ("L2800") exposure (*modified after* Simoneau 2008).

The mineralized rocks illustrate a number of unique geochemical characteristics, based on the major and trace element results of samples collected from the Line 2800 exposure (*see* Table 11). Samples with elevated iron (Fe_2O_3) have proportionally lower silica (SiO_2) and aluminum (Al_2O_3) content, irrespective of the zones. The amount of titanium (Ti) in the rocks, except for samples collected from zone A, provides a consistent correlation with the iron (Fe) content. The base-metal values in Table 11 illustrate there are elevated amounts of copper, cobalt and chromium (Cu, Co, Cr) in rocks from zones A compared to the results from zones A and C samples.

The following summarizes the unique rock characteristics and mineralization associated with each zone.

ZONE A

The southern 50 m of this zone, based on the magnetic response and assay results, is underlain by rocks that contain significant amounts of iron. The amount of iron in these samples does not correspond to the titanium content. This part of the exposure is underlain by irregular patches of iron-titanium–bearing zones surrounded by less mineralized rocks, which is possibly coincidental with the significant fluctuations in the magnetic response profile (*see* Figure 5).

ZONE B

This 40 m section, which is associated with the central part of Line 2800 exposure, based on assay results and supported by the interpretation of the magnetic response profile, is underlain by rocks that contain anomalous iron and significant concentrations of titanium. The content of iron in the samples collected from this zone, in contrast to zone A, corresponds with the amount of titanium (*see* Table 11).

ZONE C

This northern 110 m of the Line 2800 exposure is underlain by rocks that have unique characteristics. The amount of iron in these rocks, which is still significant, progressively decreases in content north from Zone B. The assay result of the sample site located adjacent to Zone B contains 26.2% Fe (sample 765), whereas the most northerly sample of zone C returned 18.5% Fe (sample 701). Contrary to the varying iron content in these rocks, there is not a corresponding amplitude variance in the magnetic response (*see* Figure 5). The magnetic response of the entire zone C exposure is similar to the background values for the Bad Vermilion Lake intrusion (57 000 gammas). There were no geological features, based on examination of theses mafic intrusive rocks, that could explain this unique magnetic characteristic. Numax Resources Inc. has speculated the rocks that underlie this part of the exposure contain hematite, a non-magnetic iron-bearing mineral (M. Reiter, Numax Resources Inc., personal communication, September 16, 2008).

The barium (Ba) and manganese (Mn) values of samples collected from zones B and C illustrate these elements consistently increase northerly from zone A (*see* Table 11). The progressive increase in the amounts of these elements may be related to alteration associated with a hydrothermal system (Thompson 1996), although no other indications of alteration are evident in the Line 2800 exposures. The area adjacent to the northern boundary of the Line 2800 exposures is covered with extensive overburden and the rocks underlying this part of the property could not be examined.

Numax Resources Inc. collected grab samples, representative of the zone C mafic intrusive rocks, with the intention of conducting a petrographic study. The results of this study could provide evidence to support the hypothesis that this part of the exposure has been influenced by hydrothermal events or metamorphism.

ROCK FORMATION AT ZONES B AND C

Geological features and major element geochemical results of samples collected from zones B and C provide evidence that the formation of these rocks could be associated with a continuous magmatic event. The results of samples collected from these zones illustrate a progressive northerly increase in SiO_2 and Al_2O_3 and a corresponding decrease in Fe_2O_3 and TiO_2 values (*see* Table 11). Zone B is underlain by mainly melanogabbro. The composition of the mafic intrusive rocks progressively changes northerly from zone B. There is no distinctive change in rock types based on examination of these exposures. The northern part of zone C is underlain mainly by gabbro to leucogabbro.

Iron and titanium, which have higher specific gravity than silica and aluminum, typically segregate and accumulate in the lower part of a magmatic chamber. The southern part of these zones could represent the basal portion of the magma chamber. This would explain why the rocks from zone B, compared to the remainder of the exposure, contain consistently higher amounts of iron and titanium.

The plagioclase crystals in the mafic intrusive rocks generally are randomly oriented, except in the exposures located in the central part of zone C. A distinctive accumulation and alignment of plagioclase is evident in these rocks. This compositional layering of medium- to coarse-grained, white plagioclase-bearing gabbro and plagioclase-barren gabbro trends east-northeast.

The plagioclase cumulate layering, and mineralogical and chemical features provide evidence for a northerly younging direction of the mafic rocks in this part of the Bad Vermilion intrusion.

MINERALIZED ROCKS AT LINE 2800 EXPOSURE

The iron-bearing rocks examined in the Line 2800 exposures supports Shklanka's (1968) genetic classification of the historic iron-titanium-vanadium zones as magmatic iron deposits. Based on major element chemistry of samples collected from the Line 2800 exposures, the width of this iron-bearing zone could exceed 203 m. The extent of these iron-bearing rocks, at this portion of the Bad Vermilion intrusion, has been proven to exceed the width of 125 m based on interpretation of the ground magnetometer survey response (*see* Figure 5). The potential extension of the mineralized rocks existing north of the Line 2800 exposure is unknown because this area is covered with overburden.

Based on the results of the exploration activity conducted by Numax Resources Inc., this part of the Bad Vermilion intrusion has potential to host economic concentrations of iron and titanium. The ground magnetometer survey identified additional highly anomalous responses that could be underlain by mineralized rocks similar to those in the Line 2800 exposures.

RECOMMENDATION FOR EXPLORATION

Rare Earth Elements

Rare earth elements (REE) historically have not been targeted by mineral exploration programs in the Kenora District. The rare earths are a group of metallic elements consisting of the lanthanide series on the periodic table as well as the element yttrium (Figure 6). This grouping is based on the similarity in chemical behaviour between the elements. In the periodic table, these lanthanide elements have atomic numbers 57 through 71.

BACKGROUND

The metallic elements in the lanthanide series are typically subdivided into the cerium group of light rare earth elements (LREE) and the yttrium group of heavy rare earth elements (HREE). The LREE are typically more abundant in the Earth's continental crust than HREE (Figure 7). Promethium (Pm) is a unique rare metal as it is not found in its natural form, is not of economic importance and is not usually reported in analytical results (Sinton 2005).

The name "rare earth" has its origin in the history of the discovery of these elements. The rare part of the name refers to the difficulty in obtaining the pure elements and not associated with their abundances in the Earth's crust. Some REE, when compared to nickel, copper and gold, can exceed in relative crustal concentrations (*see* Figure 7), but, contrary to ordinary base and precious metals, REE have very little tendency to be concentrated in economic deposits (Sinton 2005).

APPLICATION AND MARKETS

The industrial application and demand for REE has been increasing in past years. The applications involving REE typically use them in oxide form, only occasionally as metals. Table 12 presents a summary of the products and also illustrates the specific rare earth that is required for the application.

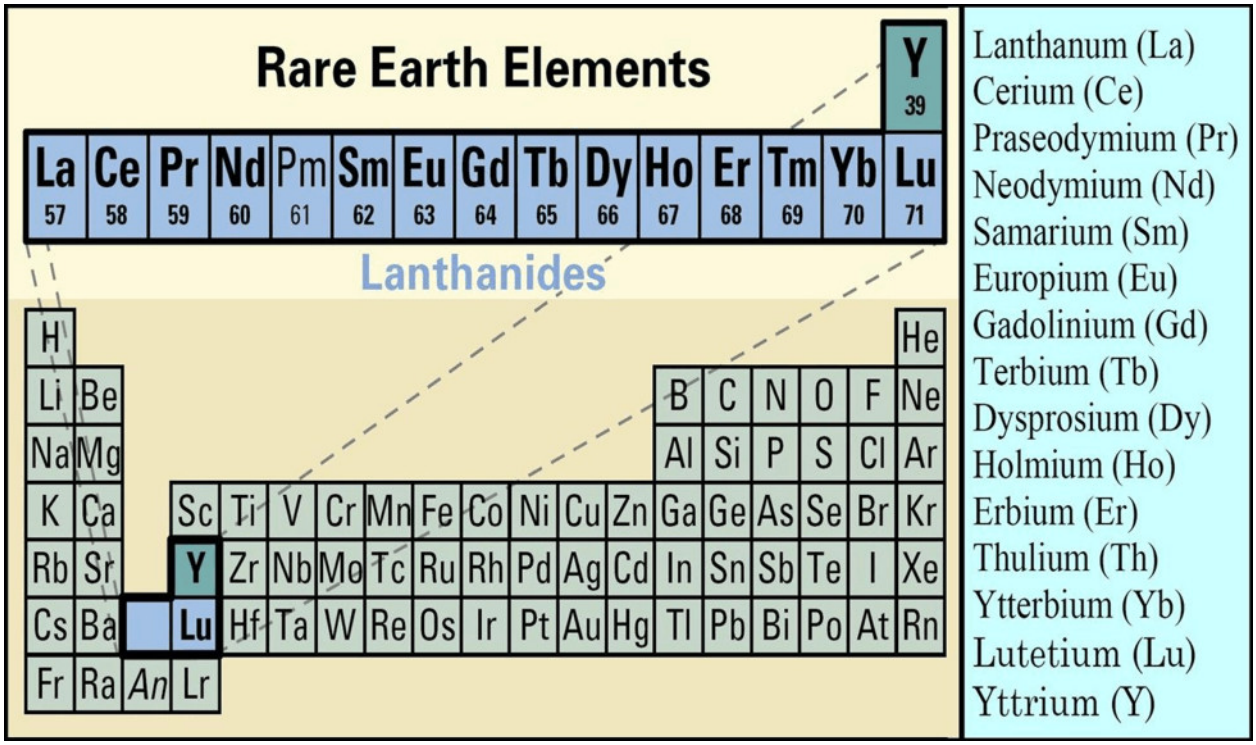

Figure 6. The periodic table of elements highlighting the rare earth elements (*modified from* Sinton 2005).

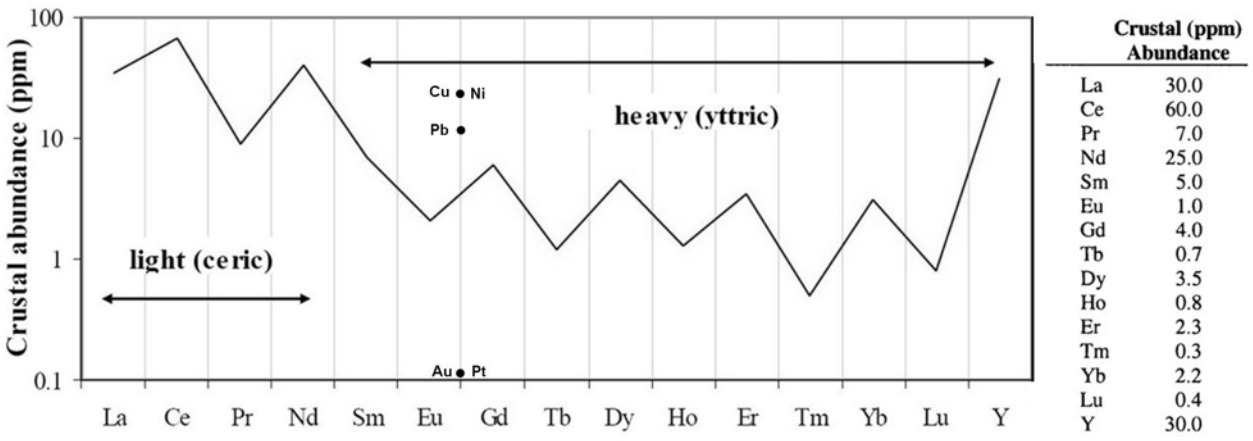

Figure 7. Graph illustrating the relative abundance (logarithmic scale) of each rare earth in an average composition of the Earth's crust (*modified from* Sinton 2005) (ceric = cerium group (LREE); yttric – yttrium group (HREE)).

Table 12. Summary of rare earth element applications (*modified from* Sinton 2005).

REE Application	Magnets	NiMH batteries	Auto Catalysis	Fluid Cracking Catalysis	Phosphors	Optic Polishing	Glass Additives
Rare earth elements	**Nd**, Pr, Dy, Tb, Sm	**La**, Ce, Pr, Nd	**Ce**, La, Nd	**La**, Ce, Pr, Nd	**Eu**, **Y**, **Tb**, La, Dy, Ce, Pr, Gd	**Ce**, **La**, **Pr**, others REE	**Ce**, **La**, Nd, Er, Gd, Yb

bold font denotes the primary main rare earth element(s) for each application

There is no commodity exchange on which REE are traded. The price of REE (Table 13) depends on the purity level, which is set by the specification for each application of the element. The marketing of REE is commonly priced in the oxide form and analytical data are usually expressed in weight percentage of a particular element (Sinton 2005).

Table 14 presents a summary of the primary REE producers and also illustrates the total percentage of rare earth element oxides (REO) for each element extracted from these operations. The minerals monazite and bastnaesite are typically the source of LREE, whereas the ion absorption clays contain both LREE and HREE. Felsic igneous rocks are common sources of HREE (Sinton 2005).

Table 13. Summary rare earth element prices (purity 99%), element symbols and chemical conversion (www.asianmetals.com).

Element Name	Element Symbol	Conversion Factor *	Element Oxide	Oxide (US$/kg) (as of Feb. 1, 2009)	Metal (US$/kg) (as of Feb. 1, 2009)
Lanthanum	La	1.173	La_2O_3	6.50	11.00
Cerium	Ce	1.171	Ce_2O_3	13.50	10.50
Praseodymium	Pr	1.170	Pr_2O_3	12.50	18.00
Neodymium	Nd	1.166	Nd_2O_3	13.50	18.00
Samarium	Sm	1.160	Sm_2O_3	4.10	21.00
Europium	Eu	1.158	Eu_2O_3	460.00	700.00
Gadolinium	Gd	1.153	Gd_2O_3	2.60	n/a
Terbium	Tb	1.151	Tb_2O_3	360.00	445.00
Dysprosium	Dy	1.148	Dy_2O_3	95.00	129.00
Holmium	Ho	1.146	Ho_2O_3	n/a	n/a
Erbium	Er	1.143	Er_2O_3	14.00	n/a
Thulium	Tm	1.142	Tm_2O_3	n/a	n/a
Ytterbium	Yb	1.139	Yb_2O_3	24.00	n/a
Lutetium	Lu	1.137	Lu_2O_3	8.00	13.00
Yttrium	Y	1.269	Y_2O_3	12.00	42.00

* chemical conversion: % element × conversion factor = % oxide; n/a: not available

Table 14. Comparison of ore minerals, grade (% of total REO) of each rare earth element (*modified from* Sinton 2005).

Element Name	Mountain Pass, California Bastnaesite	Mt. Weld, Australia Monazite	LongNan Jiangxi, China Iron Absorption Clays
Lanthanum	33.20	25.50	7.80
Cerium	49.10	46.74	2.40
Praseodymium	4.38	5.32	2.40
Neodymium	12.00	18.50	9.0
Samarium	0.80	2.27	3.00
Europium	0.10	0.21	0.03
Gadolinium	0.20	0.75	4.40
Terbium	trace	0.05	0.90
Dysprosium	trace	0.12	5.30
Holmium	trace	trace	1.40
Erbium	trace	0.05	0.90
Thulium	trace	trace	3.60
Ytterbium	trace	trace	trace
Lutetium	trace	trace	0.30
Yttrium	0.10	0.25	56.20

GEOLOGY

Rare earths are not naturally found as native elements, but reside as compounds within minerals. At least 100 minerals have REE as part of their composition. Approximately 10 of these minerals have significant rare-earth constituents, but only bastnaesite, monazite and xenotime are the primary ore-bearing minerals of economic deposits (Richardson and Birkett 1995).

The rare earths are metals, with high lustre and are typically conductive. In colour, they are typically silver, silvery white or grey. A good field characteristic is the tendency for REE to tarnish rapidly when exposed to air. Some LREE-bearing minerals, which are sources of europium (Eu), praseodymium (Pr) and neodymium (Nd), strongly fluoresce under ultraviolet light (Christie, Brathwaite and Tulloch 1998).

The most significant economic concentrations of REE-bearing minerals are hosted in, or associated with, alkaline igneous rocks and carbonatites. Within hydrothermal systems, these minerals are located in quartz veins, fluorite-bearing veins and as breccia filling. The minerals also occur in skarns, in pegmatite and are sometimes concentrated in placer and laterite clay deposits. The geological setting of economic concentrations of REE-bearing minerals is usually within or a combined variety of these rock types and mineralizing events. The REE are also extracted as a by-product during uranium and niobium milling process (Pell 1996).

PERALKALINE INTRUSIVE ROCKS

Based on their bulk whole rock chemistry, igneous rocks are classed as peralkaline (literally “excess alkalis”) when $Na_2O+K_2O>Al_2O_3$ and peraluminous (literally “excess alumina”) when $Al_2O_3>Na_2O+K_2O$ (Richardson and Birkett 1995).

Breaks, Selway and Tindle (2001) mention rare elements typically occur in quartz-rich pegmatite and include lithium, rubidium, cesium, niobium and tantalum where this mineralization is associated with peraluminous rocks. Rare earth elements typically occur in quartz-poor pegmatite and syenite can be found in peralkaline felsic intrusive rocks. Richardson and Birkett (1995) also indicate peralkaline REE deposits are typically enriched in yttrium, HREE, zirconium and contain lesser amounts of other rare earth elements.

Richardson and Birkett (1995) provided comments on the characteristic of this type of deposit:

- These peralkaline rocks are typically located in specific phases of a larger multi-phase felsic intrusive complex.
- Typically, the peralkaline phase is one of the youngest intrusive events related to the formation of the batholitic complex.
- These phases are considerably smaller in size than the encompassing batholith and are often situated near the margins of the complex.
- Peralkaline granite–syenite systems consist of peralkaline granite, and related pegmatite, quartz syenite, undersaturated syenite and gabbro.
- Peralkaline rocks are those with so little aluminum that sodium or potassium is left over after the feldspars form. The most common indications of peralkaline rocks are the presence of sodium pyroxene and sodium amphibole.
- There is a variety of exotic minerals related to these peralkaline rocks, and rare earth elements are often associated with silicates, carbonates, phosphates, simple oxides and multiple oxide.

Richardson and Birkett (1995) also provided some exploration guidelines for identifying peralkaline rocks and assess the potential for these phases to contain REE:

- Typically, REE mineralizing events associated with peralkaline rocks contain more thorium than uranium. A regional method to possibly identifying peralkaline phases in areas underlain by extensive felsic intrusive rocks is the comparison of airborne geophysical survey responses. The peralkaline phases are often associated with thorium radiometric responses. These radiometric anomalous areas occasionally coincide with magnetic responses.
- REE-enriched carbonatite and peralkaline deposits can be identified using aerial photography. Circular patterns related to these rocks are evident even in weathered and highly vegetated areas.

- Biogeochemical surveys, which involve the analysis of foliage samples of deciduous trees, can be a useful method of defining buried REE targets.
- The elements associated with most igneous REE concentrations are beryllium (Be) gallium (Ga), lead (Pb), niobium (Nb), tantalum (Ta), uranium (U), zinc (Zn), yttrium (Y), and all rare earth elements (REE). Zirconium (Zr), thorium (Th), fluorine (F) and carbon dioxide (CO_2) are typically elevated in REE-enriched peralkaline rocks. Assay results of these elements will return elevated amounts when compared to the values of samples collected from the surrounding felsic intrusive rocks.

The geochemical patterns of rare metals and associated elements, related to peralkaline rocks and possibly REE mineralizing events, can provide strong contrasts to regional background concentrations. The assay results from lake sediment sampling programs can be used to identify patterns related to mineral potential areas. Ravnaas and Bongfeldt (2008) presents a methodology of using highly anomalous (98^{th}) percentile lake sediment samples sites to identify high mineral potential areas. The values presented in Table 15 are the highly anomalous values of 14 rare metals and 9 associated elements. Ravnaas and Bongfeldt (2008) described the method used to determine these values:

> "The assay results for at least 57 elements are presented in each of the OGS lake sediment sampling reports. The analytical results for all 14 133 sites collected by these surveys were combined into one data set. Erroneous highly anomalous element values can occur if the 98^{th} percentile is calculated from the combined data set. This error can occur because the assay results represent material collected from sites that are underlain by a variety of rock types (R. Dyer, Ontario Geological Survey, personal communication, April, 2007). Dyer (ibid) recommended that the sample sites for the study area be grouped based on dominant rock type. With that in mind, Kenora RGP staff subdivided the eastern and northern parts of the Kenora District into 3 dominant rock type areas [Figure 8]. Two of these areas cover part of the Western Wabigoon and English River subprovinces (OGS 2003), and are underlain predominantly by felsic to mafic metavolcanic rocks, and metamorphosed and migmatized clastic metasedimentary rocks, respectively. The third rock type area is underlain predominantly by felsic intrusive rocks... Analytical results from these sample sites were used to tabulate the data."

PEGMATITE

Rare earth element–enriched minerals can be found in pegmatites, but, generally, the economic concentrations are considerably smaller in size than other igneous REE deposits. Hewitt (1967) provides an adequate summary of the mineralogy, concentrations and setting of the primary rare earth minerals, typically found in pegmatite:

> Bastnaesite is a fairly common accessory phase in REE-rich pegmatites derived from granites and syenite. In pegmatites, bastnaesite commonly forms by alteration of allanite…Xenotime is a common accessory in granite pegmatites where it is associated (often intergrown with) zircon, monazite, and fergusonite… Monazite is…common in feldspar-rich portions of granitic pegmatites in association with zircon and host of complex rare-earth minerals.

REE-enriched pegmatite often has similar lithological and mineralogical characteristics to mineralized peralkaline intrusive rocks. Most of the REE exploration guidelines associated with peralkaline rocks can apply to the evaluation of pegmatite.

CARBONATITE

Carbonatites are igneous rocks composed of more than 50% carbonate minerals, predominantly calcite and dolomite. Carbonatite occurs commonly as intrusive bodies, but can form as dikes or veins in the host rocks. Pell (1996) discusses the setting of the Mountain Pass carbonatite REE deposit. The orebody is mainly a carbonatite dike and the composition is 40% calcite, 25% barite, 11% bastnaesite, 10% strontianite and 8% silica.

There are no intrusive bodies, located in the Kenora District, that could be classified as carbonatite; however, some intrusive rocks, such as the alkali-intrusive complexes in the Sturgeon Lake area, located approximately 120 km northeast of Ignace, could contain as yet undiscovered REE-bearing carbonatite dikes (Trowell 1983).

RECOMMENDATION

Since there are no historical occurrences of rare earth elements in the Kenora District, a regional approach could be used to identify areas that could be underlain by intrusive rocks that have the potential to contain mineralization. A systematic search of these areas could locate REE-enriched minerals.

Table 15. Highly anomalous (98th percentile) OGS lake sediment sample values (ppm) for rare earth and associated elements (*modified from* Ravnaas and Bongfeldt 2008).

Rock Type Areas	Be	Ce	Dy	Er	Eu	Ho	La	Lu
Intrusive	1.22	180.00	5.49	2.72	2.12	0.99	111.25	0.36
Western Wabigoon	1.09	160.00	5.27	2.60	2.18	0.92	92.03	0.33
English River	1.40	97.64	3.10	1.54	1.24	0.60	46.82	0.30
Combined	**1.22**	**180.00**	**5.49**	**2.72**	**2.12**	**0.99**	**111.25**	**0.36**

	Nb	Nd	Pb	Pr	Sc	Sm	Ta	Tb
Intrusive	2.52	90.42	13.10	24.75	10.00	13.38	1.30	1.32
Western Wabigoon	2.61	79.47	14.89	21.59	8.55	12.43	1.20	1.24
English River	2.59	41.71	11.14	11.39	10.00	6.84	1.20	0.75
Combined	**2.52**	**90.42**	**13.10**	**24.75**	**10.00**	**13.38**	**1.30**	**1.32**

	Th	Tm	U	Y	Yb	Zn	Zr
Intrusive	20.00	0.38	27.18	28.82	2.34	141.00	13.00
Western Wabigoon	13.78	nil	18.71	27.12	2.23	144.18	14.28
English River	11.00	nil	10.67	15.75	1.39	138.00	12.00
Combined	**20.00**	**0.38**	**27.18**	**28.82**	**2.34**	**141.00**	**13.03**

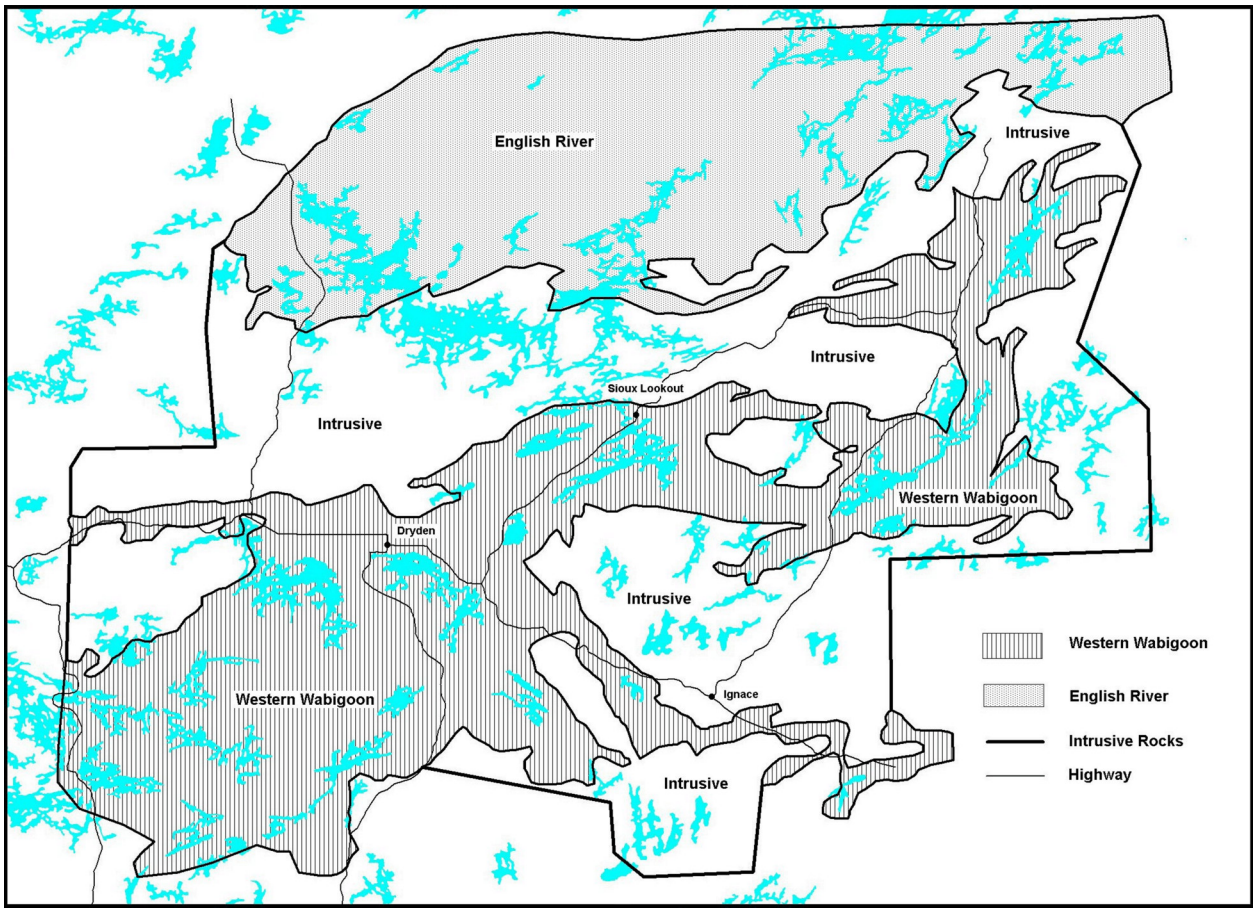

Figure 8. Location and extent of the 3 dominant rock type areas within the eastern and northern parts of the Kenora District.

OGS ACTIVITIES AND RESEARCH BY OTHERS

D. Stone, Precambrian Geoscience Section, Ontario Geological Survey, conducted an examination of exposures situated west of the Bending Lake iron deposit along Highway 622 in the Kenora District in 2008.

University research projects included:

F. Paulus, University of Manitoba, Manitoba (BSc Honours thesis), examined the geological setting of the gabbroic stock located on the Glatz property.

S. Secord, Lakehead University, Thunder Bay, Ontario (MSc thesis), continued a study on the geochemistry and gold mineralization events at the Kakagi–Rowan Lake greenstone belt, concentrating on Houston Lake Mining Inc., West Cedartree project.

Table 16. Mineral deposits not being mined in the Kenora District in 2008.

Abbreviations

AF ..... Assessment Files	MLS ..... Mining Lands, Sudbury
CMH ..... *Canadian Mines Handbook*	MR ..... Mining Recorder
GR ..... Geological Report	NM ..... *The Northern Miner*
MDC ..... Mineral Deposit Circular	OFR ..... Open File Report
MDIR ..... Mineral Deposit Inventory record	PC ..... Personal Communication
RoA ..... Report of Activities	SMDR ..... Source Mineral Deposit Record

Deposit Name (NTS)	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status (as of Jan. 2009)
Bad Vermilion Lake–Seine Bay Prospect (52C/10NW)	Fe, Ti, V	Reserves: 1.2 Mt tonnes at 15% TiO_2 and 45% Fe. Potential for 177 800 tonnes of titanium sponge	NM 08/15/85, p.3 (Beaver Energy Resources)	Active, 8 claims
Bending Lake Prospect (52F/08SE)	Fe	Recoverable Ore (proposed): 2000 m by 300 m wide with a resource of 247 Mt @ 23% Fe Proposed concentrate of 70% Fe (96–97% magnetite) using magnetic separation	Bending Lake Ore Corporation, personal communication, 2006	Active; 70 patented claims
Big Master (Kenwest Mine) (52F/07NE)	Au, Ag	Production: 2565 oz Au and 184 oz Ag from 14 470 tons Indicated 1967 drilling: 30 000 t @ 0.36 opt Au Old workings: 19 000 t @ 0.30 opt Au Reserves (proven and probable): 123 000 t @ 0.30 opt Au and Indicated: 600 000 t @ 0.22 opt Au	MDC 16, p.9 CMH, 1988–1989, p.92 (Canamerica Precious Metals Inc.)	Inactive, patented claims HP366, HP373, HP301
Big Whopper Pegmatite (52L/07SE)	Li, Cs, Rb	Preliminary resource estimated @ 11.6 Mt averaging 1.34% Li_2O and 0.30 Rb_2O	CMH, 2000–2001, p.45 (Avalon Ventures Ltd.)	Active, 12 staked claims
Cameron Lake Deposit (52F/05SE)	Au	Measured & Indicated Reserves: 748 000 t @ 6.47 gpt Au Inferred Reserves at 1 819 000 t @ 5.99 g/t Au	Nuinsco Resources, press release, June 12, 2008	Active, 61 leased claims
Canadian Arrow Prospect (Dogpaw Lake) (52F/05SW)	Au	Indicated Reserves: 96 650 t @ 0.43 opt Au in 2 veins	NM 4/5/61 (Consolidated Golden Arrow Mines Ltd.)	Active, 17 claims

Deposit Name (NTS)	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status (as of Jan. 2009)
Cates Prospect (52F/13SE)	Zn, Ag	Zone: 2700 m by 12 m by 60 m Reserves: 5.83 Mt @ 0.5% Zn and 0.5 opt Ag	AF 52F/13SE M-1 to M-6 (Noranda) AF 52F/13SE B-1 to B-6 (Rio Algom)	Active, 9 claims
Cedar Island Deposit (Cornucopia) (52E/10SW)	Au	Production: 5620 oz Au Indicated Reserves: 1.096 Mt @ 6.63 g/t Au Inferred Reserves: 0.832 Mt @ 5.63 g/t Au (both Cedar Island and Mikado)	Amador Gold Ltd., press release, October 6, 2003	Inactive, patented claims D212, D265
Dobie Deposit (52C/12NW)	Cu-Ni	Reserves: 5.0 Mt @ 0.28% Cu and 0.24 % Ni	AF 52C/12NW B-3	Inactive, patent claims and reserve
Dubenski Gold Prospect (52F/05SW)	Au	Drill-Indicated Reserves: 355 286 t @ 6.32 g/t (calculated to a depth of 150 m)	CMH, 1999–2000, p.52 (Avalon Ventures Ltd.)	Active, 22 leased claims
Duport Mine (Consolidated Professor) (52E/11SE)	Au	Production: 4672 oz Au and 1143 oz Ag from 1287 tons Indicated Reserves: 424 000 t @ 13.4 g/t Au Inferred Reserves: 387 000 t @ 10.7 g/t Au	MDC 16, p.11 Halo Resources Ltd., press release, Aug. 10, 2005	Inactive, patented claims S.170, K1332, K1333, K2374
Elora (Jubilee) (52F/07NE)	Au	Production: 1370 oz Au and 296 oz Ag from 13 766 tons Reserves (Au): Probable: 228 500 tonnes @ 0.18 opt, Speculative: 5000 t @ 0.10 opt from dump	MDC 16, p.15 OFR 5332, p.37, Table 8	Active, patented claim HP 301
F-Group (52G/14SE)	Cu, Zn, Pb, Ag	Original Reserves (Dec. 1978): 630 000 tonnes @ 8.10% Zn, 0.98% Cu, 0.49% Pb, 1.80 opt Ag Reserves (Dec. 1982): 200 000 tonnes @ 8.20% Zn, 0.80% Cu, 0.60% Pb, 1.80 opt Ag	CMH 1979–1980, p.194 (Noranda) CMH 1982–1983, p.254 (Noranda)	Inactive, patent claims PA312564-65, PA312567-68, PA226490-91
Foley Mine (52C/10NE)	Au	Production: 855 oz Au and 149 oz Ag from 568 tons Reserves: 40 000 tonnes @ 0.5 opt Au proven/probable and 400 000 tonnes @ 0.5 opt Au speculative	MDC 16, p.16 NM 09/25/80 (Seaforth Mines Ltd.) OFR 5539, p.194	Active, patented claims K475101-103
Gaffney Prospect (52F/07SW)	Au	Reserves: 300 000 tonnes @ 0.15 opt Au	CMH, 1990–1991, p.393	Inactive, patents K3594-3595
Goldlund Mine (52F/16NW)	Au	Production: 111 891 tonnes @ 0.15 opt Au (Dec. 1984) Reserves: 781 000 tonnes @ 0.14 opt Au with 150 000 tonnes @ 0.15 opt Au that can be mined by open pit	AF 52F/16NW 081 (Locke Riche Minerals Ltd.) CMH 1995–1996, p.223	Active, patented claim KRL 18802
Gordon Lake Mine (52L/07NW)	Cu, Ni, PGE	Production: 1.6 Mt @ 0.78% Ni, 0.41% Cu and 0.026 opt Pd (Dec. 1971) Reserves: 170 420 t @ 0.85% Ni and 0.35% Cu (Dec. 1971)	OFR 5975, p.121	Inactive, mining patent KRL 19096-97, 29065-66, 30055, 31373-74, 31823-26, 31829-32, 33206, 33208, 33210, 36272-74

Deposit Name (NTS)	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status (as of Jan. 2009)
High Lake–Evenlode (52E/11NE)	Mo, Au	Reserves: 126 000 tonnes @ 0.68% MoS_2 and 0.015 opt Au Indicated: 200 000 tonnes @ 0.63% MoS_2 Inferred: 550 000 tonnes estimated to a depth of 145 m	OFR 5695, p.114	Inactive, patented claims K8705, K8707 and staked claims
Kenbridge Prospect (52F/05NE)	Ni, Cu	Indicated and Inferred Reserves: 4.464 Mt @ 0.42% Ni and 0.23% Cu (above –150 m level); Indicated and Inferred Reserves: 2.793 Mt @ 1.60% Ni and 6.1% Cu (below –150 m level)	Canadian Arrow Mines Ltd., press release, January 21, 2008	Active, patented claims K6672, K6634, K6635
Lockhart Lake–INCO (52C/10NW)	Zn, Cu, Au, Ag	Reserves: 6.1 Mt @ 1.06% Zn, 0.27% Cu, 3.2 g/t Ag and 0.006 g/t Au	AF 52C/10NE Y-6 (Minnova 1989)	Inactive, patent claims K417852-854, K418156-157, K446504-509
Lyon Lake Zone (Creek Zone) (52G/15NW)	Cu, Zn, Pb, Ag	Original Reserves: 3.945 Mt @ 6.53% Zn, 1.24% Cu, 0.63% Pb, 3.42 opt Ag and 0.01 opt Au Reserves: 0.695 Mt of 10.34% Zn, 0.75% Cu, 1.62% Pb and 5.96 opt Ag	CMH 1979–1980, p.194 (Noranda) CMH 1990–1991, p.332 (Noranda)	Closed mine, patented claim CLM 185
Marchington Road Deposit (52J/07SE)	Cu, Zn, Pb, Ag	Reserves: 150 000 t @ 0.98% Cu, 3.11% Zn, 1.16% Pb, 1.97% Ag	Umex Inc. AF 52J/7SW 0024	Inactive, patented claim CLM 337
Mattabi Mine (52G/15SW)	Cu, Zn, Pb, Ag	Original Reserves: 13.66 Mt @ 7.50% Zn, 0.80% Cu, 0.77% Pb and 3.10 opt Ag Reserves: 0.387 Mt of 0.13% Cu, 9.28% Zn, 0.58% Pb and 1.77 opt Ag	GR 221, p.4 CMH 1988–1989, p.338 (Noranda)	Closed mine, patented claims GTP Block 7
Mavis Lake Prospect (52F/15SE)	Li, Ta	Reserves: 500 000 t of 1% LiO_2	OFR 5718, p.151	Inactive, leased claims K498288-290, K498292, K498308, K498140
Maybrun Mine (52F/05NE)	Cu, Au	Maybrun Main zones: Indicated: 7.37 Mt @ 0.41% Cu, 0.64 g/t Au Inferred: 1.74 Mt @ 0.30% Cu, 1.15 g/t Au Maybrun Footwall zone: Inferred: 2.53 Mt @ 0.13% Cu, 1.20 g/t Au Maybrun North zone: Inferred: 2.08 Mt @ 0.17% Cu, 0.69 g/t Au	Opawica Expl. Inc., press release, Feb. 2, 2009	Active, Care and maintenance, patent claims K15364-381, K15524-427
Mikado Mine (52E/10SW)	Au	Production: 31 000 oz Au (*see* Cedar Island Deposit)	www.AmadorGold.com	Inactive, patented mining claim D148
Norpax (Reynar Lake) (52L/06NE)	Ni, Cu	2002 drilling intersected 3.35 m of 1.308 g/t PGE and 2.94% Cu, Ni Reserves: 1 Mt @ 1.2% Ni and 0.5% Cu	Atikwa Minerals, press release, Aug. 28, 2003 Norpax Nickel Mines Ltd., AF	Inactive, patent claims KRL350101, KRL347670
North Kaskaweogama Prospect (52J/07NW)	Fe	Reserves: 405 000 tons at 28% Fe in 4 zones and a possible 50 Mt at unstated grade	MDC 11, p.443	Staked

Deposit Name (NTS)	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status (as of Jan. 2009)
North Pines Mine (52K/01SE)	Pyrite	Production: 500 000 tonnes at 28% Fe (1909–1921) Reserves: open	GR 101, p.36	Inactive, patented claim HW 715
North Rock Mine (South Grassy) (52C/11NE)	Cu	Zone: 400 m by 2–30 m by 91 m Reserves: 1.02 Mt @ 1.17 % Cu including 265 230 t @ 2.08% Cu	MDC 29 p.34	Active, 8 staked claims
Pidgeon Molybdenum Mine (52F/16NW)	Mo	Resource: 8.5 Mt @ 0.099% Mo	MPH Ventures Ltd, press release, December 27, 2007	Active, patented claim Pat 4051
Purdex Prospect (A-D Zones) (52E/11NE)	Au	Reserves: 226 800 t grading between 8.57 and 10.28 g/t Au	International Millennium 2006 Technical Report	Active, patent claims K25130-131
Rainy River Zones 17, 34 (52D/16SE)	Au, PGE, Cu, Ni	17/ODM, 433, HS, Cap Gold zones: Indicated Resource: 34.238 Mt of 2.63 g/t Au Inferred Resource: 67.564 Mt of 12.35 g/t Au, 0.02% Cu, 0.20% Zn and 3.60 g/t Ag 34 Nickel Zone: Resource: 150 000 t at 2.00% Ni, 1.9% Cu, 2.5 g/t Pt, 6 g/t Pd, 2 g/t Au and 21 g/t Ag	Rainy River Resources Ltd., press release, Feb. 28, 2008 Nuinsco Resources Limited, research article, Nov. 18, 1997	Active, patented land
Richard Lake Prospect (52F/13SW)	U	Zone: 213 m by 3 m by 300 m Reserves: 650 000 t of 0.10% U_3O_8	GR 130, p.46	Active, patented claim K18761
Scramble Mine (Homestake) (52E/16SW)	Au	Zone: 366–457 m by 3.7 m wide zone @ 0.15 opt Au Reserves: 150 000 tonnes at 0.24 opt and 70 000 oz (at 0.05 opt. cut-off) drill indicated	NM 07/25/88 (Madeline Mines Ltd.) CIMM, Dist.4 Field Trip Guidebook, p.44	Inactive, Jaffray Twp., Conc.VI, lots 13 and 14
St Anthony Mine (52J/02SE)	Au	Production: 331 069 tons @ 0.19 opt Au Reserves: 37 800 tons @ 0.18 opt Au	MDC 13, p.295	Active, patented claim BG 154
Sturgeon Lake Mine (52G/15NW)	Cu, Zn, Pb, Ag	Original Reserves (Dec. 1974): 2.10 Mt @ 10.64% Zn, 2.98% Cu, 1.47% Pb, 6.14 opt Ag and 0.021 opt Au Reserves (Dec. 1978): 599 000 tonnes @ 2.34% Cu, 8.98% Zn, 1.30% Pb, 5.17 opt Ag and 0.018 opt Au	GR 221, p.4 CMH 1980–1981, p.102 (Falconbridge)	Inactive, patented claim
Thunder Lake Deposit (52 F/15SE)	Au	Bulk Sampling: 428 oz Au and 1161 oz Ag from 2365 t Inferred Resource of Main zone: 560 000 t @ 5.9 g/t Au Inferred Resource all zones: 3.270 Mt @ 5.9 g/t Au	Corona Gold 1999 Annual Report; Treasury Metals Inc., press release, Nov. 26, 2008	Active, patented and staked claims
Vanlas Prospect (52F/10NW)	Au	Reserves: 100 000 tonnes @ 0.20 opt Au	Power Expl. Inc. AF 52F/10NW UU-1	Inactive, patented claim K70627
Victor Island Prospect (52F/05SE)	Au	Reserves: Drill-indicated 300 000 tonnes @ 0.12 opt Au to a depth of 213 m	MP 128, p.16	Inactive, patented claim K4712, claims 690655, 718785

Deposit Name (NTS)	Commodity	Tonnage-Grade Estimates and/or Dimensions	Reserve References	Status (as of Jan. 2009)
Wendigo Mine (52E/09NE)	Au, Ag, Cu	Produced: 67 423 oz Au, 14 762 oz Ag and 1.89 million lbs Cu from 206 054 tonnes Reserves (Au): Vein 1: 110 m by 0.8 m by 230 m depth @ 0.33 opt Au (production vein) Vein 2: 118 m by 0.6 m Vein 3: 180 m by 0.3 m Vein 4: unknown tailings: 61 970 tonnes at 0.027 opt Au	SMDR 001350 OFR 5695, p.352	Inactive, patented mining claims MH 208-210
Werner Lake Cobalt (52L/07NW)	Co, Cu	Production: recovered 389 363 lbs of Co (1932, 1940–1944); grades 2% Co and 0.75% Cu Reserves: 1.01 Mt at 0.31% Co and 0.29% Cu	MDC 1, p.37 Canmine Resources Corporation, press release, Feb. 9, 1999	Inactive, patented mining claim KRL 9383
West Cedartree – Angel Hill Gold Zone (52F/05SW)	Au	Inferred Resource (NI 43-101): 106 400 t @ 2.97 g/t Au with 2.0 g/t Au cut-off	Houston Lake Mining, press release, Oct. 20, 2005	Active, patented claim K10026

*N.B. This table contains tonnage and grade estimates, referred to as "reserves" (indicated, possible, probable), which were determined at various times by methods largely unreported. It is not known if any or all of these estimates are in compliance with the reporting standards required by National Instrument 43-101.

LAND USE PLANNING ACTIVITIES

The northwest Regional Land Use Geologist, based in Thunder Bay, co-ordinates input into land use planning activities in the Red Lake–Kenora districts. The objectives are to effectively represent mineral-related values in the context of competing interests for land use; to optimize the land base available for mineral exploration and development; and to raise awareness within the mineral sector of the implications of legislation and regulations other than the *Mining Act* on their activities. The competing interests for land use vary from place to place across the province, but most have potential to restrict the availability of land, access to it, and the activities on it. In 2008, the northwest Regional Land Use Geologist dealt with a variety of land use planning issues in the Red Lake–Kenora districts.

The Ministry of Northern Development and Mines engages with the Ministry of Natural Resources when Crown land use planning activities have potential to impact the Provincial mineral interests. These activities include Forest Management Planning, implementing management strategies for Ontario's Living Legacy Signature Sites, Northern Boreal Initiative – Community-base Land Use Planning and issues related to access to Crown Land.

The northwest Regional Land Use Geologist provided comments and input to the Red Lake, Dryden, English River and Lac Seul forest management units planning teams. The Forest Management Planning Manual requires socio-economic descriptions of the minerals industry in the forest management unit. The Regional Land Use Geologist provided, to the planning teams, factual data on the past and potential future contributions of mineral resources on the management unit and local communities.

During the year, there were several inquiries dealing with access issues related either to the potential decommissioning of water crossings installed by the forest industry or construction of roads or trails by mineral exploration companies. These inquiries often require bringing the various interested parties to the table to develop a solution and/or identifying the definitions applied by the Ministry of Natural Resources in regards to roads and trails. The northwest Regional Land Use Geologist facilitated discussions between a remote tourist outfitter, an exploration company and prospector, and Ministry of Natural Resources staff regarding access issues related to pending decommissioning of a portion of the Maybrun Road. An equitable solution for all parties was agreed upon and monitoring of the situation continues.

The northwest Regional Land Use Geologist also worked with the Northwestern Ontario Prospector's Association to identify mineral representatives for the Crossroute Local Citizens Committee. Local Citizens committees work with the Ministry of Natural Resources to provide input into land use planning initiatives that impact Crown Land, primarily the development of forest management plans. A presentation outlining the mineral exploration process from grassroots prospecting to advanced exploration was given to the Dryden Local Citizen's Advisory Committee and the Fort Frances Natural Resources Advisory Committee.

The northwest Regional Land Use Geologist participated in a planning process initiated by the Ministry of Natural Resources to evaluate sites within the district for possible protection under the Room to Grow Initiative. Room to Grow resulted from the Ontario's Living Legacy Land Use Strategy and the Ontario Forest Accord as an initiative to address gaps in representation. Recently (circa 2004), the Ministry of Natural Resources, Bowater Incorporated and the Partnership for Public Lands (PPL) identified 14 sites to address gaps in representation within Bowater Forest Products (Bowater) forest management units. Some of these sites are in the Red Lake–Kenora districts. Preliminary review to identify conflicts with significant mineral potential at that time eliminated 1 site. Subsequently, a consultant conducted mineral resource assessments of the remaining 13 sites using the Provincially Significant Mineral Potential methodology. Since 2004, 4 sites have been dropped, 2 sites have been combined and 6 sites have had their boundaries revised. The northwest Regional Land Use Geologist continued engaging with Ministry of Natural Resources regional staff in regards to the proposed regulation of these sites.

The Ministry of Northern Development and Mines supports municipal and private land planning though the One Window Planning Service led by the Ministry of Municipal Affairs and Housing. When requested, the northwest Regional Land Use Geologist provides input into and participates in the review of draft Official Plans, Official Plan Amendments, draft plans of subdivision and consent applications. In 2008, the Regional Land Use Geologist reviewed and commented on 19 consent applications, 5 validation orders and 1 Zoning By-Law amendment in the Red Lake–Kenora districts. In addition, the Regional Land Use Geologist, in conjunction with the Red Lake Resident Geologist, made presentations to staff of the Town of Red Lake and Town Council regarding mineral values within the towns boundaries and the importance of considering these values when making land use decisions.

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Metric Conversion Table

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
		LENGTH			
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
		AREA			
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
		VOLUME			
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
		CAPACITY			
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
		MASS			
1 g	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311 3	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 90**	t
		CONCENTRATION			
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

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