



Saskatchewan
Ministry of
Energy and
Resources

Report 261

The Geology and PGE Potential of the Peter Lake Domain, Saskatchewan

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ALL TABLES



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Table D-01 – Previous bedrock geology reports and maps, Peter Lake Domain.

| Author (year) | Report | NTS area | Map scale | Title |
|-------------------------------|--------------------------------------|------------------------------------|---------------------------|--|
| Shklanka (1962) | Map 74A (no report) | 64E-15 | 63,360 | The geology of the McLean Bay area, Saskatchewan |
| Scott (1969) | 122 | 74H-8 | 63,360 | The geology of the Beckett Lake area (east half), Saskatchewan |
| Scott (1970) | 135 | 64E-5 | 63,360 | The geology of the Combe Lake area, Saskatchewan |
| Ray (1978) | Misc. Rep. 78-10 | 64L | 100,000 | Reconnaissance geology: Wollaston Lake (west) area (part of NTS 64L) |
| Ray (1979) | Misc. Rep. 79-10 | 64L-1, 64L-2 | 100,000 | Reconnaissance geology: Wollaston Lake east (part of NTS Area 64L) |
| Ray (1980) | 190 | 74A-15, 74A-16, 74H-1, 74H-2 | 100,000 | Geology of the Parker Lake-Nelson Lake vicinity |
| Lewry <i>et al.</i> (1980) | 199 | 64E-3, 64E-4, 64E-6 | 100,000 | Geology of the area around Spalding Lake |
| MacQuarrie (1980) | Misc. Rep. 80-4 | 64L-1, 64L-7, 64L-8, 64L-9, 64L-10 | 100,000 | Reconnaissance bedrock geology: Wollaston Lake southeast area (part of NTS 64L) |
| Stauffer <i>et al.</i> (1980) | 200 | 64E-1, 64E-2, 64E-7, 64E-8 | 100,000 | Geology of the Reindeer Lake north (Southeast) area |
| Lewry <i>et al.</i> (1981) | 205 | 64E-11, 64E-12, 64E-13, 64E-14 | 100,000 | Geology of an area around Compulsion Bay, Wollaston Lake |
| Stauffer <i>et al.</i> (1981) | 206 | 64E-9, 64E-10, 64E-15, 64E-16 | 100,000 | Geology of the Ballentin Island vicinity, Reindeer Lake |
| MacDougall (1987) | Misc. Rep. 87-4 | 64E-6 | 20,000(1) | Bedrock geological mapping, Campbell River area (part of NTS 64E-6), Sheets 1 and 2 |
| MacDougall (1988a) | Misc. Rep. 88-4 | 64E-10 | 2500(2) | Bedrock geology, Patterson Island (part of NTS 64E-10) |
| MacDougall (1990a, 1990b) | Misc. Rep. 90-4 | 64E-5 | 20,000 | Geology of the pegmatites and fluoritic granites, Pyett Lake area (NTS 64E-5) |
| Corrigan <i>et al.</i> (1999) | Misc. Rep. 99-4.2 | 64E | 20 000 | The Wathaman Batholith and its relation to the Peter Lake Domain: insights from recent mapping along the Reindeer Lake transect, Trans-Hudson Orogen |
| Corrigan (2001) | Open File 1394 (with marginal notes) | 64E | 100,000 | Geology, northern Reindeer Lake, Saskatchewan; Geological Survey of Canada |



**Table D-02 – Previous Quaternary geology reports and maps,
Peter Lake Domain.**

| Author (year) | Report | NTS area | Map scale | Title |
|-----------------------------------|-----------------|---|-------------------------|---|
| Schreiner (1984c) | 221 | Precambrian Shield region | 1 000 000 | Quaternary geology of the Precambrian Shield, Saskatchewan |
| Schreiner (1984a) | Open File 84-07 | 74A | 250 000 | Quaternary geology of the Foster Lake area (74-A), Saskatchewan |
| Schreiner (1984d) | Open File 84-10 | 64E | 250 000 | Quaternary geology of the Reindeer Lake north area (64-E), Saskatchewan |
| Schreiner (1984b) | Open File 84-11 | 74H | 250 000 | Quaternary geology of the Geikie River area (74-H), Saskatchewan |
| Schreiner (1984f) | Open File 84-14 | 64L | 250 000 | Quaternary geology of the Wollaston Lake area (64-L), Saskatchewan |
| Campbell (1992) | Misc. Rep. 92-4 | 64E, 74H | | Regional till geochemistry of the Peter Lake Domain |
| Swanson (1996) | Misc. Rep. 96-4 | 74H, 74I, 74P, 64E, 64L, 64M | | Reconnaissance sampling for diamond indicator minerals on the exposed Precambrian Shield, northeastern Saskatchewan |



Table D-03 – Summary of Investigations (SOI) bedrock geology reports, 2002 to 2005, Peter Lake Domain.

| Author (year) | Miscellaneous Report | Pages | Title |
|--|----------------------|-------|--|
| Maxeiner and Hunter (2002a) | 2002-4.2, Paper A-3 | 24 | A geological transect across the southwestern Peter Lake Domain, Saskatchewan |
| Heaman et al. (2003) | 2003-4.2, Paper A-3 | 4 | Preliminary results of the 2002-2003 Saskatchewan Industry and Resources geochronology program |
| Maxeiner and Leatherdale (2003d) | 2003-4.2, Paper A-6 | 17 | Geology and extent of the Archean Swan River Complex in the Patterson Island area (part of NTS 64E-10), Peter Lake Domain, northern Saskatchewan |
| Leatherdale et al. (2003) | 2003-4.2, Paper A-8 | 17 | Petrography and geochemistry of the Love Lake Leucogabbro, Swan River Complex, Peter Lake Domain, northern Saskatchewan |
| Maxeiner et al. (2004b) | 2004-4.2, Paper A-4 | 21 | Peter Lake Domain project: analytical update and new field results from northwest Reindeer Lake area (NTS 64E-NE) |
| Maxeiner and Rayner (2005) | 2005-4.2, Paper A-5 | 32 | PGE occurrences within layered intrusions of the 2.56 Ga Swan River Complex, Peter Lake Domain (parts of NTS 64E and 64L) |
| Maxeiner (2006c) | 2006-4.2, Paper A-8 | 17 | Peter Lake Domain project: 1:100 000-scale compilation of bedrock geology and platinum-group element potential maps |



Table D-04 – Summary of Investigations (SOI) surficial geology reports, 2003 to 2004, Peter Lake Domain.

| Author (year) | Miscellaneous Report | Pages | Title |
|----------------------------------|----------------------|-------|---|
| Campbell (2003a) | 2003-4.2, Paper A-7 | 16 | Quaternary investigations in the Patterson Island area (part of NTS 64E-10 and -15), Reindeer Lake, eastern Peter Lake Domain |
| Campbell (2004a) | 2004-4.2, Paper A-5 | 19 | Peter Lake Domain project: Quaternary investigations in the northwest Reindeer Lake area (parts of NTS 64E-15 and -16) |



Table G-01 – Samples on which whole-rock geochemical analyses were performed, Peter Lake Domain project (map units from Maxeiner [2006]).

Abbreviations: RL – Reindeer Lake; LL – Love Lake; WL – Warner Lake

| Sample reference number | Station ID | Rock type | Geographic area | Map unit (age in Ma) | Map suite | UTM E (NAD 83) UTM N (NAD 83) |
|-------------------------|--------------|----------------------------|-----------------------|----------------------|------------------------------|----------------------------------|
| JC0401-521 | JC04-11-ST08 | gabbro dyke | NW Crane Island | SGa | Swan River Complex (RL) | 654222 6416789 |
| JC0401-545 | JC04-27-ST12 | gabbro dyke | Crane Island | SGa | Swan River Complex (RL) | 654954 6411442 |
| JC0401-547 | JC04-28-ST17 | gabbro dyke | SW Feaviour Peninsula | SGa | Swan River Complex (RL) | 656022 6413052 |
| JC0401-553 | JC04-30-ST20 | gabbro dyke | W Fontaine Island | SGa | Swan River Complex (RL) | 644692 6407304 |
| RH0201-502 | RH02-04-ST08 | quartz vein | Hate Lake | qtz vein | Swan River Complex (LL) | 565469 6338555 |
| RH0201-511 | RH02-10-ST05 | pyroxenite | Wathaman River | SUp | Swan River Complex (WL) | 568987 6330288 |
| RH0201-540 | RH02-27-ST03 | leucogabbro | S Peter Lake | SLg | Swan River Complex (LL) | 563797 6338940 |
| RH0201-551 | RH02-31-ST05 | leucogabbro | SE of Peter Lake | SAn | Swan River Complex (LL) | 565533 6340398 |
| RH0201-565 | RH02-40-ST10 | gabbro | E Combe Lake | Ga | Undivided gabbro | 572073 6354898 |
| RH0201-600 | RH02-33-ST04 | schist | Campbell River | SUp | Swan River Complex (WL) | 569658 6330325 |
| RH0201-601 | RH02-33-ST03 | quartz-monzonite | Campbell River | RGm | Lueaza River granitoid suite | 569567 6336310 |
| RM0201-005 | RM02-03-ST11 | intermediate volcanic rock | Wathaman River area | SAm | Swan River Complex (WL) | 570007 6330075 |
| RM0201-013 | RM02-05-ST07 | gabbro | Gravel pit | SGa | Swan River Complex (WL) | 571800 6332570 |
| RM0201-014 | RM02-05-ST17 | diorite (to gabbro) | Gravel pit | SDi | Swan River Complex (WL) | 572460 6333248 |
| RM0201-016 | RM02-05-ST24 | gabbro | Gravel pit | SDi | Swan River Complex (WL) | 572434 6332750 |
| RM0201-021 | RM02-06-ST24 | micro-gabbro | Road, N gravel pit | SGa | Swan River Complex (WL) | 566699 6333492 |
| RM0201-024 | RM02-07-ST09 | gabbro | Warner Lake | SGa | Swan River Complex (WL) | 564307 6334570 |
| RM0201-026 | RM02-07-ST12 | leucodiorite | Warner Lake | SDi | Swan River Complex (WL) | 563834 6334568 |
| RM0201-027 | RM02-07-ST12 | leucodiorite | Warner Lake | SDi | Swan River Complex (WL) | 563834 6334568 |
| RM0201-029 | RM02-08-ST05 | leucogabbro | Road, Peter Lake | SLg (2562) | Swan River Complex (LL) | 562952 6340090 |
| RM0201-032 | RM02-09-ST03 | gabbro | Korvin Lake | SGa | Swan River Complex (WL) | 571075 6332222 |
| RM0201-036 | RM02-10-ST06 | pyroxenite | Warner Lake | SUp | Swan River Complex (WL) | 564215 6335237 |
| RM0201-039 | RM02-12-ST03 | gabbro | Love Lake area | SDi | Swan River Complex (WL) | 565899 6336280 |



| | | | | | | |
|------------|--------------|---------------------|---------------------------|------|------------------------------|----------------|
| RM0201-041 | RM02-12-ST09 | gabbro | Love Lake area | SGa | Swan River Complex (LL) | 566915 6337493 |
| RM0201-046 | RM02-13-ST09 | pyroxenite | Wathaman River | SUp | Swan River Complex (WL) | 576340 6329378 |
| RM0201-049 | RM02-14-ST22 | gabbro | SW Warner Lake | SGa | Swan River Complex (WL) | 562629 6329633 |
| RM0201-063 | RM02-18-ST03 | leucogranite | Vollman Lake | Gf | Undivided granite | 562308 6358950 |
| RM0201-064 | RM02-18-ST08 | granite | Vollman Lake | RGm | Lueaza River granitoid suite | 562378 6358309 |
| RM0201-065 | RM02-18-ST12 | granite | Vollman Lake | RGm | Lueaza River granitoid suite | 562903 6358063 |
| RM0201-066 | RM02-18-ST17 | amphibolite | Vollman Lake | dyke | Lueaza River granitoid suite | 563867 6358534 |
| RM0201-081 | RM02-23-ST06 | granite | NW Warner Lake | RGm | Lueaza River granitoid suite | 560728 6338659 |
| RM0201-083 | RM02-24-ST11 | gabbro | Lakeshore, NW Warner Lake | SGa | Swan River Complex (LL) | 561190 6335820 |
| RM0201-089 | RM02-25-ST21 | diorite | NE Warner Lake | Di | Undivided diorite | 564452 6336602 |
| RM0201-091 | RM02-26-ST05 | quartz-monzonite | Warner Creek / Peter Lake | MQm | Monzonitic intrusive suite | 566789 6332400 |
| RM0201-092 | RM02-26-ST06 | granite | Warner Creek / Peter Lake | G | Undivided granite | 564462 6341005 |
| RM0201-095 | RM02-27-ST04 | dacite | NE Courtenay Lake | CAm | Courtenay Lake Formation | 564420 6363163 |
| RM0201-098 | RM02-27-ST08 | rock | NE Courtenay Lake | CAm | Courtenay Lake Formation | 564590 6363286 |
| RM0201-101 | RM02-27-ST14 | leucogranite | NE Courtenay Lake | Gf | Leucogranite (1830 Ma) | 564856 6362556 |
| RM0201-108 | RM02-29-ST15 | mafic volcanic rock | NE of Courtenay lake | CAm | Courtenay Lake Formation | 563948 6364175 |
| RM0201-113 | RM02-31-ST31 | quartz-monzonite | W Robson Lake | MQm | Wathaman Batholith | 574287 6330477 |
| RM0201-115 | RM02-32-ST02 | leucogabbro | S Peter Lake | SLg | Swan River Complex (LL) | 563442 6339653 |
| RM0201-125 | RM02-37-ST03 | leucogabbro | S of Ziggy Lake | SLg | Swan River Complex (LL) | 562491 6339042 |
| RM0201-127 | RM02-37-ST15 | leucogabbro | S of Ziggy Lake | SLg | Swan River Complex (LL) | 561399 6339955 |
| RM0201-128 | RM02-38-ST03 | gabbro | N of gravel pit | SGa | Swan River Complex (WL) | 573035 6332593 |
| RM0201-129 | RM02-38-ST14 | monzonite | N of gravel pit | Di | Mylonitic (altered) | 573127 6333940 |
| RM0201-138 | RM02-41-ST01 | diorite | Love Lake | SDi | Swan River Complex (LL) | 567775 6337153 |
| RM0201-142 | RM02-42-ST10 | amphibolite | E Love Lake | AMv | Mafic volcanic rock | 570826 6336237 |
| RM0201-147 | RM02-43-ST05 | amphibolite | N Love Lake | AMv | Mafic volcanic rock | 569095 6340630 |
| RM0201-149 | RM02-43-ST08 | gabbro | N Love Lake | SGa | Swan River Complex (LL) | 570022 6340843 |
| RM0201-164 | RM02-48-ST18 | gabbro | Combe Lake (lakeshore) | Ga | Undivided gabbro | 572507 6355014 |
| RM0201-167 | RM02-50-ST06 | gabbro | SE Peter Lake | SGa | Swan River Complex (LL) | 567189 6340479 |
| RM0201-168 | RM02-50-ST07 | peridotite | SE Peter Lake | SUp | Swan River Complex (LL) | 567367 6340331 |



| | | | | | | |
|------------|--------------|--------------------------|------------------------|-------------|------------------------------|----------------|
| RM0201-169 | RM02-50-ST12 | gabbro | SE Peter Lake | SLg | Swan River Complex (LL) | 567307 6340112 |
| RM0201-170 | RM02-50-ST12 | gabbro | SE Peter Lake | SLg | Swan River Complex (LL) | 567307 6340112 |
| RM0201-171 | RM02-20-ST02 | granodiorite | SE Peter Lake | WGd (1850?) | Wathaman Batholith | 566098 6334819 |
| RM0201-177 | RM02-06-ST19 | monzonite | Road, N gravel pit | MMz | Monzonitic intrusive suite | 567633 6332518 |
| RM0201-178 | RM02-17-ST07 | granite | Road, Courtenay Lake | RGm | Lueaza River granitoid suite | 563812 6338273 |
| RM0201-182 | RM02-06-ST14 | quartz-monzonite | Road, N gravel pit | MQm (2540) | Monzonitic intrusive suite | 568233 6331842 |
| RM0301-004 | RM03-02-ST07 | mafic volcanic rock | Wiley Bay | AMv | Mafic volcanic rock | 639724 6387691 |
| RM0301-017 | RM03-06-ST08 | leucogabbro | W of Patterson Channel | PLg | Porter Bay Complex | 636164 6390848 |
| RM0301-018 | RM03-06-ST12 | gabbro | W of Patterson Channel | PLg | Porter Bay Complex | 635558 6391352 |
| RM0301-024 | RM03-07-ST15 | amphibolite | W of Wiley Bay | AMv | Mafic volcanic rock | 635250 6388450 |
| RM0301-032 | RM03-09-ST13 | pyroxenite | NE of Patterson Island | SUp | Swan River Complex (RL) | 643610 6394943 |
| RM0301-035 | RM03-10-ST13 | mafic volcanic rock | Wiley Bay | AMv | Mafic volcanic rock | 639823 6388752 |
| RM0301-040 | RM03-11-ST23 | gabbro | W of Patterson Channel | PLg | Porter Bay Complex | 634849 6391264 |
| RM0301-041 | RM03-11-ST25 | leucogabbro | W of Patterson Channel | PLg | Porter Bay Complex | 634596 6391320 |
| RM0301-045 | RM03-13-ST03 | trachyte | W of Patterson Island | Plv | Porter Bay Complex | 638442 6393133 |
| RM0301-053 | RM03-16-ST22 | mafic volcanic rock | SE Cloud Lake | AMv | Mafic volcanic rock | 633861 6389435 |
| RM0301-055 | RM03-18-ST14 | ultramafic volcanic rock | W Patterson Channel | AMv | Mafic volcanic rock | 638406 6388655 |
| RM0301-056 | RM03-18-ST15 | serpentinite | W Patterson Channel | AMv | Mafic volcanic rock | 638422 6388661 |
| RM0301-057 | RM03-18-ST16 | mafic volcanic rock | W Patterson Channel | AMv | Mafic volcanic rock | 638444 6388674 |
| RM0301-058 | RM03-18-ST16 | mafic volcanic rock | W Patterson Channel | AMv | Mafic volcanic rock | 638444 6388674 |
| RM0301-072 | RM03-26-ST01 | gabbro | Horseshoe Lake | SGa | Swan River Complex (RL) | 635061 6377827 |
| RM0301-074 | RM03-27-ST03 | leucogabbro | Ant Lake | PLg | Porter Bay Complex | 636922 6392114 |
| RM0301-075 | RM03-27-ST04 | gabbro | Ant Lake | PGa | Porter Bay Complex | 636421 6392552 |
| RM0301-086 | RM03-29-ST18 | leucogabbro | W of camp | PLg | Porter Bay Complex | 634780 6391469 |
| RM0301-087 | RM03-29-ST18 | leucogabbro | W of camp | PLg | Porter Bay Complex | 634780 6391469 |
| RM0301-092 | RM03-31-ST16 | leucogabbro | Pearce Lake | PLg | Porter Bay Complex | 635231 6403570 |
| RM0301-095 | RM03-32-ST09 | melagabbro | N Patterson Island | PLg | Porter Bay Complex | 637423 6392903 |
| RM0301-099 | RM03-35-ST01 | anorthosite | N Patterson Island | PGa (1917) | Porter Bay Complex | 642395 6399234 |
| RM0301-102 | RM03-35-ST02 | rhyolite | N Patterson Island | AFv | Archean supracrustal rock | 643102 6400416 |
| RM0301-104 | RM03-36-ST02 | porphyry | W of Patterson Island | Plv (1910) | Porter Bay Complex | 638577 6393162 |



Table H-01 – view or download free map by clicking on Geological Survey of Canada Open File number

| NTS Map Area Name | NTS Number | Geological Survey of Canada Open File | Saskatchewan Industry and Resources Open File |
|----------------------------------|-----------------------------------|--|--|
| COMPULSION BAY (1:250,000 scale) | parts of 64E, 74H, 64D and 74A | 4847 | 2005-1 |
| REILLY LAKE | 64E/3 (part of) | 4848 | 2005-2 |
| ROBSON LAKE | parts of 64E/4 and 64D/13 | 4849 | 2005-3 |
| COMBE LAKE | 64E/5 | 4850 | 2005-4 |
| RUTHERFORD LAKE | 64E/6 (part of) | 4851 | 2005-5 |
| BEDFORD ISLAND | 64E/7 (part of) | 4852 | 2005-6 |
| BALLENTIN ISLAND | 64E/9 (part of) | 4853 | 2005-7 |
| PATTERSON ISLAND | 64E/10 (part of) | 4854 | 2005-8 |
| CAIRNS LAKE | 64E/11 | 4855 | 2005-9 |
| MORELL LAKE | 64E/12 | 4856 | 2005-10 |
| NEKWEAGA BAY | 64E/13 (part of) | 4857 | 2005-11 |
| BRANDSER ISLAND | 64E/14 | 4858 | 2005-12 |
| REYNOLDS LAKE | 64E/15 | 4859 | 2005-13 |
| FEAVIOUR PENINSULA | 64E/16 (part of) | 4860 | 2005-14 |
| BAILEY LAKE | parts of 74H/1 and 74A/16 | 4861 | 2005-15 |
| BECKETT LAKE | 74H/8 (part of) | 4862 | 2005-16 |
| MCDOWELL LAKE | 74H/9 (part of) | 4863 | 2005-17 |
| POULTON LAKE | 74H/16 (part of) | 4864 | 2005-18 |
| WOLLASTON LAKE (1:250,000 scale) | parts of 64L and 64M | 4865 | 2005-19 |
| ZANGEZA BAY | 64L/1 | 4866 | 2005-20 |
| FIDLER BAY | 64L/2 | 4867 | 2005-21 |
| HUNGRY ISLAND | 64L/3 (part of) | 4868 | 2005-22 |
| HIDDEN BAY | 64L/4 (part of) | 4869 | 2005-23 |
| CUNNING BAY | 64L/5 (part of) | 4870 | 2005-24 |
| FIFE ISLAND | 64L/6 (part of) | 4871 | 2005-25 |
| KLEMMER LAKE | 64L/7 | 4872 | 2005-26 |
| METKA LAKE | 64L/8 | 4873 | 2005-27 |
| SAVA LAKE | 64L/9 | 4874 | 2005-28 |
| WELLBELOVE BAY | 64L/10 | 4875 | 2005-29 |
| KILLOCK BAY | parts of 64L/11 and 64L/12 | 4876 | 2005-30 |
| BANNOCK LAKE | parts of 64L/15, 64L/14 and 64M/2 | 4877 | 2005-31 |
| CHARCOAL LAKE | 64L/16 and 64M/1 (part of) | 4878 | 2005-32 |



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Maxeiner, R.O., Campbell, J.E., Rayner, N., Slimmon, W.L., Ford, K., Corrigan, D., Heaman, L., and Hulbert, L. (2011): The Geology and PGE Potential of the Peter Lake Domain, Saskatchewan; Sask. Ministry of Energy and Resources, Rep. 261, DVD.

Table I-01 – Mineral showings in the Peter Lake Domain (showings highlighted in green are discussed on this page). Abbreviations: Be, beryl; Cu, copper; Fe, iron; Fl, fluorite; Gf, graphite; Mo, molybdenum; Ne, nepheline; Ni, nickel; Po, pyrrhotite; Pt, platinum; Py, pyrite; U, uranium; Zn, zinc ([click here to view as Excel spreadsheet](#)).

| SMDI# | | Showing Name with hyperlink (Internet connection required) | Com. | UTM_E (Nad_83) | UTM_N (Nad83) | DEP_TYPE |
|-------|---|--|------|----------------|---------------|----------|
| 537 | a | Spalding Lake (northwest shore) EM Conductor or AEM Zone D | Gf | 596742 | 6343431 | Outcrop |
| 537 | b | Spalding Lake (northwest shore) Magnetic Highs flanking Anomaly D | Gf | 596742 | 6343431 | Outcrop |
| 537 | c | Spalding Lake (northwest shore) Cu Occurrence | Gf | 596742 | 6343431 | Outcrop |
| 538 | a | Korvin Lake Cu-Ni Showing | Cu | 576101 | 6339131 | Trench |
| 538 | b | Korvin Lake (northeast of) Magnetite Occurrence | Cu | 576101 | 6339131 | Outcrop |
| 538 | c | Korvin Lake (north shore) Cu Occurrence | Cu | 576101 | 6339131 | Outcrop |
| 540 | a | Warner Lake Area Pyrite Occurrence | Py | 562344 | 6332714 | Outcrop |
| 540 | b | Warner Lake (west of) Pyrite Occurrence | Py | 562344 | 6332714 | Outcrop |
| 543 | | Pyett Lake Beryliferous Pegmatite, Pyett Lake Amazonstone Pegmatite, Pyett Lake Allanite Pegmatite | Be | 580686 | 6366283 | Outcrop |
| 544 | | Pyett Lake (northeast bay) Cu Occurrence | Cu | 583721 | 6368819 | Outcrop |
| 545 | | Combe Lake (east shore) Cu Occurrence | Cu | 572046 | 6354832 | Outcrop |
| 546 | | Combe Lake (east of) Cu Occurrence | Cu | 576371 | 6356148 | Outcrop |
| 552 | | Charles Lake Radiometric Anomaly Number 7 | U | 584602 | 6362496 | Outcrop |
| 553 | | Charles Lake Radiometric Anomaly Number 8 | U | 581146 | 6359951 | Outcrop |
| 557 | | Lake A-21 Cu-Mo-Ni Occurrences (northeast of) | Cu | 599368 | 6366541 | Outcrop |
| 558 | a | Lake A-21 Cu-Mo-Ni Occurrences (west shore of) | Cu | 598879 | 6366065 | Outcrop |
| 558 | b | Lake A-21 Cu-Mo-Ni Occurrences (west shore of) | Cu | 598879 | 6366065 | Outcrop |
| 559 | | Hornfels Lake (northeast of) Cu, Ni Occurrences or Buval and Boswell River Mines C Zone | Cu | 611894 | 6361223 | Outcrop |
| 560 | | Morwick Lake (northwest of) Pyrite Occurrence | Fe | 598211 | 6373009 | Outcrop |
| 561 | | Morwick Lake (west of) Radioactive Pegmatite | U | 597983 | 6372076 | Outcrop |
| 562 | | Hornfels Lake (northeast of) Zn-rich Float | Zn | 611632 | 6360515 | Float |



| | | | | | | |
|------|---|--|----|--------|---------|---------|
| 563 | | Murray Lake (southwest of) Zn-rich Argillite Boulders | Zn | 601073 | 6351547 | Boulder |
| 564 | | Murray Lake (west of) Zn-rich Felsenmeer | Zn | 600901 | 6351729 | Float |
| 565 | | Campbell Lake (northeast of) Zn-rich Felsenmeer | Zn | 600722 | 6352188 | Outcrop |
| 566 | | Hornfels Lake Anomaly C Zn-rich Felsenmeer | Zn | 608983 | 6357586 | Outcrop |
| 567 | | Murray Lake Anomaly B Zn-rich Argillite Float | Zn | 604205 | 6353513 | Outcrop |
| 569 | | Wiley Bay Cu Showing | Cu | 638323 | 6389154 | Outcrop |
| 570 | a | Swan Lake Trench No. 1 | Cu | 620236 | 6384926 | Trench |
| 570 | b | Swan Lake (north of) Fe-Cu Occurrences | Fe | 620236 | 6384926 | Outcrop |
| 571 | | Mullin Lake (west end) Cu Showing | Cu | 600999 | 6384834 | Outcrop |
| 572 | | Swan Lake Trenches Nos. 2 and 3 | Cu | 615294 | 6379893 | Trench |
| 573 | | Fordham Lake (southeast of) Site 3-SM4 Cu Occurrence | Cu | 608640 | 6387971 | Outcrop |
| 577 | | Fordham Lake (southeast of) site 11-1E Mo-Rich Float | Mo | 607208 | 6385612 | Outcrop |
| 582 | | Fordham Lake (southeast of) Pyrite Occurrences at sites 8-3G and 9-3Y | Py | 606394 | 6384972 | Outcrop |
| 588 | | Cook Lake (east of) Radioactive Pegmatite Float | U | 595955 | 6376823 | Float |
| 589 | | Radiometric Anomaly No. 9; Radiometric Zone 3 | U | 608039 | 6391822 | Outcrop |
| 590 | | Morwick Lake (northeast of) Radioactive Pegmatite | U | 602415 | 6378063 | Outcrop |
| 608 | | Zangeza Bay (southwest shore) Mo Occurrence | Mo | 668929 | 6432210 | Outcrop |
| 609 | | Krauchi Peninsula (east shore) Mo Occurrence | Mo | 667606 | 6426518 | Outcrop |
| 610 | | Crimes Lake (east of) Mo Occurrence | Mo | 663314 | 6428818 | Outcrop |
| 611 | a | Zengle Lake (northeast of) Trench | Mo | 653635 | 6426421 | Trench |
| 611 | b | Zengle Lake (east of) Mo Occurrence | Mo | 653635 | 6426421 | Outcrop |
| 1121 | | Johnson River Fluorite Occurrences | Fl | 542390 | 6343439 | Outcrop |
| 1134 | | Carol Lake "A" Fluorite Occurrence, Carol Lake "B" Fluorite Occurrence | Fl | 559001 | 6354654 | Outcrop |
| 1139 | | Carol Lake (south of) Py-Cu-Ni Occurrence | Py | 554668 | 6347141 | Outcrop |
| 1833 | | Mackenzie Lake Py-Po-rich Boulder | Po | 630443 | 6415539 | Boulder |
| 1834 | | McLean Bay Cu Occurrence | Cu | 653104 | 6419652 | Outcrop |
| 1835 | | Lueaza River (east of mouth) Po Occurrence | Po | 658567 | 6426552 | Outcrop |
| 1836 | | Crane Island (northeast of) Po Occurrence | Po | 657815 | 6418504 | Outcrop |
| 1837 | | McLean Bay (island in) Po Occurrence | Po | 659076 | 6413724 | Outcrop |
| 1838 | | Smith Point Po Occurrence | Po | 660528 | 6405887 | Outcrop |



| | | | | | | |
|--------|---|--|----|--------|---------|---------|
| 1843 | | Labine Lake (west side) Py-Po-Cu Occurrence | Cu | 565231 | 6339439 | Outcrop |
| 1844 | | Korvin Lake Trenches 11 to 13 | Cu | 575283 | 6337910 | Trench |
| 1845 | | Korvin Lake Trenches 1 and 2 | Cu | 578828 | 6339677 | Trench |
| 1845 | a | Peter Lake East Cu-Ni Showing | Cu | 577853 | 6339720 | Trench |
| 1855 | | Berston Island Py-Po Occurrences | Po | 672665 | 6417258 | Outcrop |
| 1857 | | Choker Lake (east side) Radioactive Pegmatite Boulders | U | 664085 | 6449966 | Boulder |
| 1858 | | Mullen Lake (northwest of) Radioactive Boulders | U | 653714 | 6452399 | Boulder |
| 1891 | | Radioactive Pegmatite Boulder PM-102 | U | 598760 | 6377818 | Boulder |
| 1892 | | Cook Lake (east of) Radioactive Pegmatite or Grab Sample Number 80CA-203RO | U | 596289 | 6376769 | Outcrop |
| 1893 | | Radioactive Pegmatite Boulder 80CA-90RB | U | 597835 | 6378940 | Boulder |
| 1894 | | Cook Lake (east of) Radioactive Anomaly 5 or Grab Sample Number 80CA-200RB | U | 596492 | 6376650 | Boulder |
| 1895 | | Radioactive Pegmatite Boulder 80CA-14RB | U | 597638 | 6378843 | Boulder |
| 1896 | | Swan Lake (Trenches) Pt-Pd-Ni-Cu Showing | Pt | 620018 | 6381608 | Trench |
| 1946 | | Uraniferous Boulder W9B4019 | U | 655079 | 6446755 | Boulder |
| 1947 | | Choker Lake Grid Uranium Showing | U | 665747 | 6451707 | Outcrop |
| 1948 | | Roberts Lake (southwest of) Radioactive Pegmatite Boulders | U | 658085 | 6456782 | Boulder |
| 1949 | | Mullen Lake Radioactive Boulder | U | 652945 | 6450728 | Boulder |
| 2373 | | Ant Lake South Cu-Ni-Pt-Pd Showing | Cu | 635113 | 6391305 | Outcrop |
| 2374 | | Antoine's Cu-Ni-Pt-Pd Showing or Ant Lake North Showing, Tweety Lake Cu-Ni-Pt-Pd Showing | Cu | 636227 | 6392240 | Outcrop |
| 2384 | | Campbell Lake Pt-Cu Showing | Pt | 596993 | 6351975 | Outcrop |
| 2385 | | Haglund Gabbro Cu-Pt-Pd Showing or 12-83 Cu Showing | Cu | 661868 | 6444899 | Outcrop |
| 2386 | | Gulf Lake Gabbro Pt-Pd-Cu Showing | Pt | 659644 | 6437462 | Outcrop |
| 2387 | | SMDC Grid 12-83 U-Mo Boulder Field Showing | Mo | 665837 | 6443289 | Boulder |
| 2639 | | Lyle Lake nepheline-bearing pegmatite/plug | Ne | 612037 | 6364610 | Outcrop |
| Max-01 | | Fluorite occurrence | Fl | 565576 | 6362282 | Outcrop |
| Max-02 | | Fluorite occurrence | Fl | 562871 | 6358067 | Outcrop |
| Max-03 | | Peter Lake south grab sample anomaly (Ni=612, Cr=1770 ppm) | Ni | 567378 | 6340364 | Outcrop |
| Max-04 | | Delorme Bay Cu occurrence (cpy; Cu=1849 ppm) | Cu | 570006 | 6340854 | Outcrop |
| Max-05 | | Warner Lake south Py-Po occurrence | Py | 562570 | 6329673 | Outcrop |
| Max-06 | | Warner Lake Pt-Pd occurrence (py; Pt=66, Pd=46 ppb) | Pt | 564190 | 6335272 | Outcrop |



| | | | | | |
|--------|--|----|--------|---------|---------|
| Max-07 | HW 905 KM111 grab sample anomaly (Ni=281, Cr=1540 ppm) | Ni | 568995 | 6330276 | Outcrop |
| Max-08 | Robson Lake west Cu-Ni-Pt-Pd-Au occurrence | Py | 573053 | 6332598 | Outcrop |
| Max-09 | Wathaman River northwest Py-Po occurrence | Py | 574338 | 6330479 | Outcrop |
| Max-10 | McLean Bay Cu occurrence (Cu=950 ppm) | Cu | 663284 | 6418956 | Outcrop |
| Max-11 | MacKenzie Lake Cu-Pt-Pd occurrence (Cu=0.7%) | Cu | 637576 | 6405663 | Outcrop |
| Max-12 | 'Ant' Lake South Cu-Pt-Pd occurrence (Cu=0.15%) | Cu | 634585 | 6391373 | Outcrop |
| Max-13 | 'Ant' Lake South Cu occurrence (Cu=0.2%) | Cu | 634810 | 6391238 | Outcrop |
| Max-14 | McLean Channel PGE anomaly | Pt | 635038 | 6377864 | Outcrop |



Table I-02 – Location of trenches in the Peter Lake East (unofficial place name) area, between Korvin Lake (also spelled Kovin [both unofficial place names]) and What Lake (unofficial place name). Abbreviation: SMDC, Saskatchewan Mining and Development Corporation.

| Trench name | Area | Discovered by | Maxeiner station# | UTM E (NAD 83) | UTM N (NAD 83) |
|----------------------------|---------------------------------|----------------------|--|----------------|----------------|
| Trench 1 | What Lake | SMDC | not found, but within metres of trench 2 | ? | ? |
| Trench 2 | What Lake | SMDC | RM05-06-ST08 | 577986 | 6339863 |
| Trench 3 | What Lake | SMDC | RM05-02-ST20 | 578022 | 6339823 |
| Trench 4 | What Lake | SMDC | RM05-06-ST09 | 578029 | 6339797 |
| Trench 5 | What Lake | SMDC | RM05-06-ST10 | 578066 | 6339823 |
| Trench 6 | What Lake | SMDC | RM05-06-ST11 | 578110 | 6339767 |
| Trench 7 | What Lake | SMDC | RM05-06-ST12 | 578136 | 6339779 |
| Trench 8 | What Lake | SMDC | RM05-06-ST13 | 578212 | 6339749 |
| Trench 9 | | SMDC | | ? | ? |
| Trench 10 | 1 km southwest of What Lake | SMDC | RM05-06-ST16 | 577421 | 6339227 |
| Trench 1 Creek trench | 0.7 km north of Korvin Lake | Don Fisher Syndicate | RM05-04-ST06 | 575460 | 6338550 |
| Trench 2 Creek trench | 0.7 km north of Korvin Lake | Don Fisher Syndicate | RM05-04-ST07 | 575500 | 6338480 |
| Trench 1 Muskeg trench | 1.4 km northeast of Korvin Lake | SMDC | RM05-05-ST16 | 576037 | 6339033 |
| Trench 2 Muskeg trench | 1.4 km northeast of Korvin Lake | SMDC | RM05-05-ST17 | 576001 | 6339021 |
| Trench 2 Pyroxenite trench | 0.2 km north of Korvin Lake | Don Fisher Syndicate | RM05-05-ST03 | 575151 | 6337947 |



Table I-03 – Ni-Cu-platinum group element (PGE) sulphide deposit (high S, Ni rich), rift- and continental flood basalt-associated type (after Page, 1986; Eckstrand and Hulbert, 2007).

| General Characteristics | |
|---|--|
| Description: | <p>massive to disseminated sulphides in rift- and continental flood basalt-associated mafic sills and dyke-like bodies; 10s of metres thick and continuous for 100s of metres; associated with feeders to large magma systems; intruded through sulphur-bearing supracrustal rocks and emplaced during active faulting; commonly with <i>taxitic</i>, ophitic, subophitic, cumulate textures;</p> <p>Archean to Paleozoic in age and commonly associated with flood basalts, picritic gabbro, norite, olivine gabbro, dolerite, intrusive and volcanic breccias;</p> <p>predominantly with chalcopyrite, pentlandite, pyrrhotite;</p> <p>flat-lying massive sulphide sheets at base of sills; copper breccia zones with inclusions of wallrock and hostrock within massive sulphides; layer-like disseminated sulphide zones within interior of sills.</p> |
| Commodities [and by-products]: | Ni, Cu [PGE ±Au ±Ag] |
| World examples: | Noril'sk-Talnakh, Russia; Jinchuan, China; Duluth Complex, Minnesota, USA. |
| References: | Eckstrand (1984), Page (1986), Eckstrand <i>et al.</i> (1996), Macdonald (1988), Eckstrand and Hulbert (2007). |
| Description of Peter Lake Domain Occurrences | |
| Possible examples: | no known examples in the Peter Lake Domain. |
| Age and tectonic setting: | the period between 2562 to 2530 Ma is characterized by widespread mafic magmatism and emplacement of various sizes of plutons in an extensional tectonic environment; mafic dykes and sills associated with this magma event. |
| Host and/or associated rock types: | exploration targets might be mafic dykes and sills intruded into the ?2630 Ma granodiorite-tonalite migmatite complex and the 2580 to 2566 Ma Lueaza River granitoid suite; these dykes might be feeders to mafic volcanic rocks of speculated Archean age, which are also associated with sulphur-bearing banded iron formation and pelite; the volcanic rocks may represent early phases of the 2562 Ma Swan River Complex. |



Table I-04 – Ni-Cu-platinum group element (PGE) sulphide deposit (high S, Ni rich), komatiitic volcanic flow- and sill-associated type (after Eckstrand and Hulbert, 2007).

| General Characteristics | |
|---|--|
| Description: | conformable lenses of massive and disseminated sulphides near the base of the most MgO-rich peridotitic flows of the komatiitic sequence; zonation of sulphides from massive to matrix-supported to disseminated going upwards within a flow; commonly occupying local depressions; typically Archean to Paleoproterozoic and associated with greenstone belts and rifted continental margins; predominantly with pyrite, pyrrhotite, chalcopyrite, pentlandite, and magnetite; sulphur saturation is achieved by contribution from country rock. |
| Commodities [and by-products]: | Cu, Ni [PGE] |
| World examples: | Kambalda, Australia; Thompson, Manitoba, Canada; Abitibi, Ontario, Canada. |
| References: | Eckstrand <i>et al.</i> (1996). |
| Description of Peter Lake Domain Occurrences | |
| Possible examples: | Wiley Bay Cu showing (Saskatchewan Mineral Deposits Index [SMDI] # 0569). |
| Age and tectonic setting: | intruded by Patterson Island Pluton (PIP) of the 1917 to 1913 Ma Porter Bay Complex and likely by the 2562 Ma Swan River Complex; unit is metamorphosed from upper amphibolite facies to granulite facies in the east, possibly due to contact metamorphism with PIP. |
| Host and/or associated rock types: | succession of ultramafic to mafic volcanic rocks consisting of: a) fine-grained, heterogeneous, mafic volcanic rock with deformed pillows; local centimetre-scale gradational patches of dioritic leucosome contain coarse hornblende, diopside, and cummingtonite after orthopyroxene; towards the west, this subunit is characterized by local occurrence of abundant garnet and absence of leucosome; b) fine- to medium-grained, pale brown-weathering, Mg-rich ultramafic rock characterized by fine-grained tremolite, serpentine, phlogopite, talc and magnetite, and relict olivine; c) pale green- to dusky green-weathering, homogeneous ultramafic rock composed of actinolitic tremolite, spinel, magnetite, and relict olivine; interpreted as another, more Fe-Ca-rich ultramafic rock; d) fine-grained, homogeneous |



| | | | | | | | |
|------------------------------------|---|----------------------|----------------------|----------------------|--------------------|--------------------|---|
| | plagioclase-porphyratic mafic rock intruding pillowed mafic flows. | | | | | | |
| | Geochemistry of the ultramafic rocks is komatiitic based on SiO ₂ , MgO (24 to 32 wt. %) and TiO ₂ (0.26 to 0.45 wt. %) concentrations, but trace element signatures lack the distinctive light rare earth element (LREE)-depleted patterns (see 'Lithogeochemistry' section). | | | | | | |
| Rock texture/structure: | pillowed flows; serpentinized Mg-rich ultramafic rocks (?base of komatiitic flows). | | | | | | |
| Showing dimensions: | small trench; drilling down to 8 m. | | | | | | |
| Grab sample highlights: | | Cu (wt. %) | Ni (wt. %) | Zn (wt. %) | Ag (ppm) | Au (ppb) | Reference |
| | Wiley Bay Showing | | | | | | |
| | DDH-3 (20-25) | 0.06 | 0.04 | 0.09 | 6.9 | trace | Saskatchewan Ministry of Energy and Resources assessment file 64-E-10-SE-0005 |
| Mineralogy and mode of occurrence: | according to previous workers, the small trench at surface contains disseminated pyrrhotite-pyrite, and traces of chalcopyrite and sphalerite; as well as massive stringers of pyrite and blebs of chalcopyrite, associated with cherty quartz and locally in a 'shear-breccia zone'; drilling found no significant sulphide mineralization and intercepted sheared graphitic rock. | | | | | | |
| Geological ore controls: | ?magmatic Cu-Ni mineralization; in part remobilized in shear zone; presence of sulphides and elevated Cu-Ni concentrations suggest that potential for economic Cu-Ni-PGE mineralization may exist elsewhere within the mafic-ultramafic succession. | | | | | | |
| Geochemical signature: | at Kambalda, (Ni/Cr) x (Cu/Zn) ratio is used to vector to mineralization; the MgO-rich portion of the mafic-ultramafic flows contain 23 to 31 wt% MgO, 2400 to 4200 ppm Cr, 920 to 1550 ppm Ni, with 0.2 to 0.5 wt% TiO ₂ (samples RM0301-055, RM0301-056); PGE potential not tested. | | | | | | |



Table I-05 – Magmatic platinum group element (PGE) deposit (low S, PGE rich), reef or stratiform type (after Eckstrand and Hulbert, 2007).

| General Characteristics | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------------|---------------|---------------|-------------|----------------------------|-------------|-----------|--------------------------|--|--|--|--|--|--|------------|-----|-----|-----|-----|-----|----------------------------|
| Description: | several percent of disseminated magmatic sulphides occurring at distinctive and identifiable horizons, within thick, cyclically layered cumulate mafic to ultramafic sequences; persistent along strike for many kilometres; most deposits are Precambrian, but Phanerozoic examples exist (Skaergaard intrusion); still controversy about their formation, but preferred model involves introduction of new magma pulses into the partially crystallized magma chamber and mixing of contrasting magma types; generally <3% disseminated sulphides, dominated by pyrrhotite, chalcopyrite, and pentlandite. | | | | | | | | | | | | | | | | | | | | | |
| Commodities [and by-products]: | Pt, Pd [Cu, Ni] | | | | | | | | | | | | | | | | | | | | | |
| World examples: | Merensky Reef, Bushveld Complex, South Africa; JM Reef, Stillwater Complex, USA; Main Sulphide Zone, Great Dyke, Zimbabwe; Ferguson Reef, Munni Munni Intrusion, Australia; Skaergaard, Greenland. | | | | | | | | | | | | | | | | | | | | | |
| References: | Eckstrand <i>et al.</i> (1996), Eckstrand and Hulbert (2007). | | | | | | | | | | | | | | | | | | | | | |
| Description of Peter Lake Domain Occurrences | | | | | | | | | | | | | | | | | | | | | | |
| Possible examples: | no known examples; the Haglund East Lake Pluton, at the northeast end of the Peter Lake Domain, contains a megacrystic diorite traceable for several kilometres along strike, either representing a sill or cumulate layer. | | | | | | | | | | | | | | | | | | | | | |
| Age and tectonic setting: | Haglund East Lake Pluton is part of the Neoproterozoic Swan River Complex, interpreted to have been emplaced in a failed rift or rift environment. | | | | | | | | | | | | | | | | | | | | | |
| Host and/or associated rock types: | gabbro, gabbronorite, megacrystic diorite, leucogabbro. | | | | | | | | | | | | | | | | | | | | | |
| Rock texture/structure: | pegmatitic, subophitic to ophitic, and cumulate textures are present within the Haglund East Lake Pluton. | | | | | | | | | | | | | | | | | | | | | |
| Showing dimensions: | small trenches. | | | | | | | | | | | | | | | | | | | | | |
| Grab sample highlights: | <table border="1"> <thead> <tr> <th></th> <th>Cu (wt. %)</th> <th>Ni (wt. %)</th> <th>Pd (ppb)</th> <th>Pt (ppb)</th> <th>Au (ppb)</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>Haglund East Lake</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RM0501-100</td> <td>.77</td> <td>.01</td> <td>304</td> <td>131</td> <td>107</td> <td>Maxeiner and Rayner (2005)</td> </tr> </tbody> </table> | | Cu (wt. %) | Ni (wt. %) | Pd (ppb) | Pt (ppb) | Au (ppb) | Reference | Haglund East Lake | | | | | | | RM0501-100 | .77 | .01 | 304 | 131 | 107 | Maxeiner and Rayner (2005) |
| | Cu (wt. %) | Ni (wt. %) | Pd (ppb) | Pt (ppb) | Au (ppb) | Reference | | | | | | | | | | | | | | | | |
| Haglund East Lake | | | | | | | | | | | | | | | | | | | | | | |
| RM0501-100 | .77 | .01 | 304 | 131 | 107 | Maxeiner and Rayner (2005) | | | | | | | | | | | | | | | | |
| Mineralogy and mode of occurrence: | chalcopyrite, pyrrhotite. | | | | | | | | | | | | | | | | | | | | | |



Table I-06 – Magmatic platinum group element (PGE) deposit (low S, PGE rich), magmatic breccia type (also contact or marginal type).

| General Characteristics | | | | | | | | | | |
|--|---|--------|------------|------------|----------|----------|----------|----------|----------------------------------|--|
| Description: | large zones of disseminated sulphides in brecciated mafic magmatic hostrock with high proportion of autoliths and/or xenoliths; also semi-conformable zones of disseminated sulphides in basal breccia zones of layered mafic/ultramafic intrusions; many are Precambrian in age; commonly associated with varitextured, pegmatitic, and/or heterolithic brecciated gabbro and gabbronorite, emplaced in dynamic magmatic environment with disruptive magma pulses; generally with chalcopyrite, pyrrhotite, pentlandite, and pyrite; but also braggite, merenskyite, and kotulskite; typical grades are between 5 and 15 ppm PGEs. | | | | | | | | | |
| Commodities [and by-products]: | Pd, Pt [Au, Cu, Ni]; generally with high Pd/Pt ratios (9:1 at Lac des Iles, Ontario, Canada) | | | | | | | | | |
| World examples: | Lac des Iles, Ontario, Canada; Marathon, Coldwell Complex, Ontario, Canada; Platreef, Bushveld Complex, South Africa. | | | | | | | | | |
| References: | Lavigne and Michaud (2002), Hinchey <i>et al.</i> (2005), Eckstrand and Hulbert (2007). | | | | | | | | | |
| Description of Peter Lake Domain Occurrences | | | | | | | | | | |
| Possible examples: | Peter Lake East Cu-Ni showing (SMDI# 1845a); Swan Lake Pt-Pd-Ni-Cu showing (SMDI# 1896); Ant Lake South Cu-Ni-Pt-Pd showing (SMDI# 2373); Antoine's Cu-Ni-Pt-Pd showing (SMDI# 2374). | | | | | | | | | |
| Age and tectonic setting: | 2562 Ma Swan River Complex: rift or failed rift; 1917 to 1913 Ma Porter Bay Complex: continental arc. | | | | | | | | | |
| Host and/or associated rock types: | gabbro, gabbronorite (Swan River Complex); monzonite, monzodiorite, leucogabbro, gabbro (Porter Bay Complex). | | | | | | | | | |
| Rock texture/structure: | brecciated with heterolithic autoliths and xenoliths; varitextured; ophitic-subophitic; megacrystic; local cumulate layering. | | | | | | | | | |
| Showing dimensions: | tens of metres on surface; locally trenched (typically 1 by 3 m); very limited drilling in the Peter Lake East area. | | | | | | | | | |
| Grab sample highlights: | | Trench | Cu (wt. %) | Ni (wt. %) | Ag (ppm) | Pt (ppb) | Pd (ppb) | Au (ppb) | Reference | |
| | Peter Lake East showing | | | | | | | | | |
| | PL20-114 | 4 | 0.33 | 1.33 | 3.3 | 2735 | 2685 | 70 | SMER assessment file 64E-05-0028 | |
| | PL20-115 | 4 | 0.43 | 0.23 | 2.2 | 3580 | 4275 | 200 | SMER assessment | |



| | | | | | | | | | |
|------------------------------------|---|---|------|------|------|-----|------|------|--------------------------------|
| | | | | | | | | | file 64E-05-0028 |
| | M-91 | | 0.21 | 0.03 | n.a. | 359 | 336 | n.a. | SMER assessment file 64E-0008 |
| | RM0501-022 | 2 | n.a. | n.a. | n.a. | 410 | 648 | 145 | Maxeiner and Rayner (2005) |
| | RM0501-023 | 2 | 0.85 | 0.11 | 3.0 | 341 | 276 | 418 | Maxeiner and Rayner (2005) |
| | Antoine showing | | | | | | | | |
| | RM0301-075 | | 0.96 | 0.03 | 7.0 | 374 | 2830 | 818 | Maxeiner <i>et al.</i> (2004b) |
| | Note: n.a., not analyzed. | | | | | | | | |
| Mineralogy and mode of occurrence: | pyrrhotite, chalcopyrite; sparsely disseminated. | | | | | | | | |
| Geological ore controls: | associated with breccia zones, coarse-grained to pegmatitic or varitextured gabbroic rocks. | | | | | | | | |

