

ECHO BAY MINES LTD. - DIAMOND DRILL LOG

Drill Hole Number: HL01-01

| | | | | | | | | |
|-----------------|---|----------------|--------|-----------------|---------------|-------|-------|-----|
| Project Name: | Homestead Lake | Grid Easting: | 14350E | Measure: | Meters | Depth | Tests | |
| Project Number: | 732 | Grid Northing: | 13440N | Drilled By: | NDS Drilling | 0.0 | Azi. | Dip |
| Claim Number: | M & S Lease 290 | Elevation: | 276 | Start: | 2/10/01 | 149.0 | 310 | -50 |
| Location: | Macklem Twp. | Azimuth: | 310 | Completed: | 2/12/01 | 187.0 | 312 | -56 |
| | | Dip: | -50 | Core Size: | BQ | | 323 | -54 |
| | | Length: | 187m | Date(s) Logged: | Feb. 13, 2001 | | | |
| Core Storage: | Echo Bay Mines Ltd's Timmins Office, Aquarius Mine Site | | | Logged By: | Paul Degagne | | | |

| From (m) | To (m) | Rock Description | | Sample | From (m) | To (m) | Length (m) | Au (ppb) | Au check (ppb) | |
|----------|--------|------------------|---|--|--|--|--|---------------------------------|----------------|--|
| | | code | Description | | | | | | | |
| 0.00 | 88.50 | | Overburden | | | | | | | |
| 88.50 | 97.50 | 4 | Talc-Chlorite Schist - massive, aphanitic, homogenous, dark green, talc and chlorite rich - very weakly carbonatized with less than 10% quartz-carbonate alteration veinlets and clots | 801901 801902 801903 801904 801905 | 106.00 107.00 108.00 109.00 110.00 | 107.00 108.00 109.00 110.00 111.00 | 1.0 1.0 1.0 1.0 1.0 | 17 15 29 22 5 | 36 | |
| 97.50 | 136.70 | 4.1 | Talc-Chlorite (grading to mixed) - massive, aphanitic, homogenous, dark green, talc and chlorite rich - weakly carbonatized with 20 to 30% quartz-carbonate alteration veinlets and clots | 801906 801907 801908 801909 801910 801911 | 134.70 135.70 136.70 137.70 138.15 139.15 | 135.70 136.70 137.70 138.15 139.15 140.00 | 1.0 1.0 1.0 0.5 1.0 0.8 | nil 9 5 19 9 | 5 | |
| 136.70 | 138.15 | 3 | Felsite or Altered Intrusive - fine to medium grained, light grey, siliceous dyke (granitic) - carbonate rich, nil sulphides | 801912 801913 801914 801915 801916 801917 | 140.00 141.00 141.40 142.40 143.40 144.60 | 141.00 141.40 142.40 143.40 144.60 145.60 | 1.0 0.4 1.0 1.0 1.2 1.0 | 67 17 74 36 29 2 | 55 | |
| 138.15 | 141.40 | 4.1 | Talc Chlorite - Grading to Mixed - massive, aphanitic, homogenous, dark green, talc and chlorite rich - weakly carbonatized with 20 to 30% quartz-carbonate alteration veinlets and clots | | | | | | | |
| 141.40 | 144.60 | 3 | Felsite or Altered Intrusive - fine to medium grained, light grey, siliceous dyke (granitic) - carbonate rich, 3% disseminated Cpy, Py | | | | | | | |
| 144.60 | 164.00 | 4.1 | Talc Chlorite - Grading to Mixed - massive, aphanitic, homogenous, dark green, talc and chlorite rich - weakly carbonatized with 20 to 30% quartz-carbonate alteration veinlets and clots | | | | | | | |
| 164.00 | 172.90 | 4 | Talc-Chlorite Schist - massive, aphanitic, homogenous, dark green, talc and chlorite rich - very weakly carbonatized with less than 10% quartz-carbonate alteration veinlets and clots | | | | | | | |
| 172.90 | 187.00 | 3.6 | Feldspar Porphyty - massive, very hard, >50% feldspar phenocrysts in grey siliceous matrix | | | | | | | |
| | 187.00 | | E.O.H. | | | | | | | |

42A105W2021 2.20997

MACKLEM

010





Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Geochemical Analysis Certificate

1W-0266-RG1

Company: **ECHO BAY MINES LTD**

Project: 734

Attn: P.Degagne

Date: FEB-19-01

We hereby certify the following Geochemical Analysis of 17 Core samples submitted FEB-15-01 by .

| Sample Number | Au PPB | Au Check PPB |
|---------------|--------|--------------|
| 801901 | 17 | - |
| 801902 | 15 | - |
| 801903 | 29 | 36 |
| 801904 | 22 | - |
| 801905 | 5 | - |
| 801906 | Nil | - |
| 801907 | 9 | - |
| 801908 | 5 | - |
| 801909 | 19 | - |
| 801910 | 9 | 5 |
| 801911 | 36 | - |
| 801912 | 67 | 55 |
| 801913 | 17 | - |
| 801914 | 74 | - |
| 801915 | 36 | - |
| 801916 | 29 | - |
| 801917 | 2 | - |
| Blank | Nil | - |
| STD TT-23 | 669 | - |

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705) 642-3244 Fax (705) 642-3300

ECHO BAY MINES LTD. - DIAMOND DRILL LOG

Drill Hole Number: HL01-02

| | | | | | | | | |
|-----------------|--|----------------|--------|-----------------|---------------|-------|-------|-----|
| Project Name: | Homestead Lake | Grid Easting: | 14350E | Measure: | Meters | Depth | Tests | |
| Project Number: | 732 | Grid Northing: | 13410N | Drilled By: | NDS Drilling | 0.0 | Azi. | Dip |
| Claim Number: | M & S Lease 290 | Elevation: | 276 | Start: | 2/6/01 | 191.0 | 344 | -50 |
| Location: | Macklem Twp. | Azimuth: | 344 | Completed: | 2/11/01 | | 348 | 54 |
| | | Dip: | -50 | Core Size: | BQ | | | |
| | | Length: | 191m | Date(s) Logged: | Feb. 11, 2001 | | | |
| Core Storage: | Echo Bay Mine Ltd's Timmins Office, Aquarius Mine Site | | | Logged By: | Paul Degagne | | | |

| From (m) | To (m) | Rock Description | | Sample | From (m) | To (m) | Length (m) | Au (ppb) | Au check (ppb) |
|----------|--------|------------------|--|--|--|--|---|---|----------------|
| | | code | Description | | | | | | |
| 0.00 | 89.00 | | Overburden | | | | | | |
| 89.00 | 126.70 | 4.1 | Talc Chlorite (grading to mixed) - relatively unaltered dark black, fine grained, aphanitic ultramafic flow (remnant spinafex) - increasing carbonate levels towards bottom of section, carbonate +/- quartz occurs as anastomising stringers and blebs (up to 20%) - locally coarse pyrite (to 3 mm) as blebs and sub-hedral crystals - mafic dyke from 125.4 to 125.7: fine grained, green with 15% feldspar phenocrysts | 862851 862852 862853 862854 862855 862856 862857 | 125.70 126.70 127.70 128.70 129.70 130.70 131.70 | 126.70 127.70 128.70 129.70 130.70 131.70 132.70 | 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | 5 29 34 nil 15 26 50 | 17 |
| 126.70 | 134.00 | 2 | Mixed Talc Chlorite (grading to carbonate) - black to grey altered volcanic with 30% to 60% quartz-carbonate - trace to 1% disseminated pyrite - quartz vein from 120.7 to 120.8 | 862858 862859 862860 862861 | 132.70 133.70 134.00 135.00 | 133.70 134.00 135.00 136.00 | 1.0 1.0 0.3 1.0 | 178 597 111 45 | 477 |
| 134.00 | 138.70 | 5.3 | Variolitic Mafic Volcanic - green to grey-green, chloritic, lower 40cm of section has well developed varioles - relatively unaltered at top grading to mixed quartz-carbonate towards bottom of section | 862862 862863 862864 862865 | 136.00 137.00 138.00 138.70 | 137.00 138.00 138.70 139.70 | 1.0 1.0 0.7 1.0 | 34 57 41 46 | |
| 138.80 | 142.10 | C | Carbonate - mottled, grey carbonate rich unit (>60% quartz-carbonate) - quartz-carbonate occurs as breccia matrix to bleached volcanic fragments or as stringers and blebs - trace to nil sulphides | 862866 862867 862868 862869 | 139.70 140.70 141.70 142.10 | 140.70 141.70 142.10 143.10 | 1.0 1.0 0.4 1.0 | 17 nil nil nil | 34 |
| 142.10 | 144.50 | 3.4 | Altered Diorite (medium grained phase) - grey, massive, feldspar porphyritic - quartz-carbonate stringers throughout, nil sulphides | 862870 862871 862872 862873 862874 | 143.10 144.10 144.50 145.50 146.50 | 144.10 144.50 145.50 146.50 147.90 | 1.0 0.4 1.0 1.0 1.4 | 456 nil 2949 3565 444 | 343 2811 |
| 144.50 | 147.90 | 3.4 | Altered Diorite (fine grained phase) - green to greenish brown, massive, fine grained aphanitic - <5% quartz-carbonate stringers - 5% pyrite (fine to coarse) throughout | 862875 862876 862877 862878 862879 862880 862881 | 147.90 148.90 149.50 150.50 151.50 152.50 153.50 | 148.90 149.50 150.50 151.50 152.50 153.50 154.50 | 1.0 0.6 1.0 1.0 1.0 1.0 1.0 | 10 nil 1234 1029 3497 1543 6343 | 3017 6548 |

42A10SW2021 2.20997 MACKLEM

020



| From (m) | To (m) | Rock Description | | Sample | From (m) | To (m) | Length (m) | Au (ppb) | Au check (ppb) |
|-------------|-----------|------------------|---|--------|-------------|-----------|---------------|-------------|-------------------|
| | | code | Description | | | | | | |
| 147.90 | 149.50 | 3.4 | Altered Diorite (medium grained phase) - grey, massive, feldspar porphyritic - 30% quartz-carbonate stringers throughout - nil sulphides | 862882 | 154.50 | 155.50 | 1.0 | 5760 | 5588 |
| | | | | 862883 | 155.50 | 156.50 | 1.0 | 5726 | 5931 |
| | | | | 862884 | 156.50 | 157.50 | 1.0 | 1337 | |
| | | | | 862885 | 157.50 | 158.00 | 0.5 | 305 | 289 |
| | | | | 862886 | 158.00 | 159.00 | 1.0 | 38 | |
| 149.50 | 158.00 | C | Carbonate - grey to brown, brecciated carbonate altered rock - locally silicified, albitized - quartz-carbonate occurs as breccia matrix to bleached volcanic fragments or as stringers and blebs - 5% fine to medium grained disseminated pyrite throughout, locally to 10% - numerous fine grained aphanitic mafic dykes throughout section as follows: 150.0-150.4, 150.6-151.0, 151.2-151.3, 151.5-152.3, 152.5-152.7, 153.3-154.2, 157.0 | 862887 | 159.00 | 160.00 | 1.0 | nil | |
| | | | | 862888 | 160.00 | 161.00 | 1.0 | nil | |
| | | | | 862889 | 161.00 | 161.60 | 0.6 | 7 | |
| | | | | 862890 | 161.60 | 162.60 | 1.0 | 5 | |
| | | | | 862891 | 162.60 | 163.60 | 1.0 | 3 | |
| | | | | 862892 | 163.60 | 164.60 | 1.0 | 22 | |
| | | | | 862893 | 164.60 | 165.60 | 1.0 | 39 | |
| | | | | 862894 | 165.60 | 166.60 | 1.0 | 26 | |
| 158.00 | 165.50 | 2 | Mixed Talc Chlorite - black, fine grained aphanitic with 20% quartz-carbonate stringers/blebs - 159.7 - 161.6: Altered diorite dyke, green, massive with 30% fine to medium grained feldspar phenocrysts, quartz-carbonate throughout | | | | | | |
| 165.50 | 182.20 | 4 | Talc-Chlorite - relatively unaltered dark black, fine grained, aphanitic ultramafic flow | | | | | | |
| 182.20 | 191.00 | 3.6 | Feldspar Porphyry (Diorite) - mottled dark green and white medium grained, feldspar porphyritic intrusive - weakly foliated - contains several xenoliths of talc-chlorite ultramafic volcanics - possibly more altered (chloritic) phase of porphyry intersected in HL01-1 | | | | | | |
| | 191.00 | | E.O.H. | | | | | | |



Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 1 of 2

Geochemical Analysis Certificate

1W-0267-RG1

Company: **ECHO BAY MINES LTD**
 Project: 734
 Attn: P. Degagne

Date: FEB-19-01

We hereby certify the following Geochemical Analysis of 44 Core samples submitted FEB-15-01 by .

| Sample Number | Au PPB | Au Check PPB | Au 2nd PPB | Au Check PPB |
|---------------|--------|--------------|------------|--------------|
| 862851 | 5 | - | - | - |
| 862852 | 29 | - | - | - |
| 862853 | 34 | - | - | - |
| 862854 | Nil | - | - | - |
| 862855 | 15 | 17 | - | - |
| 862856 | 26 | - | - | - |
| 862857 | 50 | - | - | - |
| 862858 | 178 | - | - | - |
| 862859 | 597 | 477 | - | - |
| 862860 | 111 | - | - | - |
| 862861 | 45 | - | - | - |
| 862862 | 34 | - | - | - |
| 862863 | 57 | - | - | - |
| 862864 | 41 | - | - | - |
| 862865 | 46 | - | - | - |
| 862866 | 17 | 34 | - | - |
| 862867 | Nil | - | - | - |
| 862868 | Nil | - | - | - |
| 862869 | Nil | - | - | - |
| 862870 | 456 | 343 | - | - |
| 862871 | Nil | - | - | - |
| 862872 | 2949 | 2811 | - | - |
| 862873 | 3565 | - | - | - |
| 862874 | 444 | - | - | - |
| 862875 | 10 | - | - | - |
| 862876 | Nil | - | - | - |
| 862877 | 1234 | - | - | - |
| 862878 | 1029 | - | - | - |
| 862879 | 3497 | 3017 | - | - |
| 862880 | 1543 | - | - | - |

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705) 642-3244 Fax (705) 642-3300



Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 2 of 2

Geochemical Analysis Certificate

1W-0267-RG1

Company: **ECHO BAY MINES LTD**
 Project: 734
 Attn: P. Degagne

Date: FEB-19-01

We hereby certify the following Geochemical Analysis of 44 Core samples submitted FEB-15-01 by .

| Sample Number | Au PPB | Au Check PPB | Au 2nd PPB | Au Check PPB |
|---------------|--------|--------------|------------|--------------|
| 862881 | 6343 | 6548 | 5554 | 4868 |
| 862882 | 5760 | 5588 | - | - |
| 862883 | 5726 | 5931 | - | - |
| 862884 | 1337 | - | - | - |
| 862885 | 305 | 289 | - | - |
| 862886 | 38 | - | - | - |
| 862887 | Nil | - | - | - |
| 862888 | Nil | - | - | - |
| 862889 | 7 | - | - | - |
| 862890 | 5 | - | - | - |
| 862891 | 3 | - | - | - |
| 862892 | 22 | - | - | - |
| 862893 | 39 | - | - | - |
| 862894 | 26 | - | - | - |
| Blank | Nil | - | - | - |
| STD TT-23 | 650 | - | - | - |

One assay ton portion used.

Certified by _____

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705) 642-3244 Fax (705) 642-3300

ECHO BAY MINES LTD. - DIAMOND DRILL LOG

Drill Hole Number: HL01-03

| | | | | | | | | |
|-----------------|---|----------------|--------|-----------------|---------------|-------|-------|-----|
| Project Name: | Homestead Lake | Grid Easting: | 14735E | Measure: | Meters | Depth | Tests | |
| Project Number: | 732 | Grid Northing: | 13275N | Drilled By: | NDS Drilling | 0.0 | Azi. | Dip |
| Claim Number: | M & S Lease 290 | Elevation: | 276 | Start: | 2/19/01 | 77m | 319 | -50 |
| Location: | Macklem Twp. | Azimuth: | 319 | Completed: | 2/21/01 | 215m | 323 | -53 |
| | | Dip: | -50 | Core Size: | NQ | | 322 | -53 |
| | | Length: | 221m | Date(s) Logged: | Feb. 22, 2001 | | | |
| Core Storage: | Echo Bay Mines Ltd's Timmins Office, Aquarius Mine Site | | | Logged By: | Paul Degagne | | | |

| From (m) | To (m) | Rock Description | | Sample | From (m) | To (m) | Length (m) | Au (ppb) | Au check (ppb) |
|----------|--------|------------------|--|--|--|---|--|---|----------------|
| | | code | Description | | | | | | |
| 0.00 | 65.00 | | Overburden | | | | | | |
| 65.00 | 71.20 | 4 | Talc-Chlorite - typical aphanitic, dark black, talcy feel with <10% quartz-carbonate veinlets, blebs - nil sulphides - numerous blocky, fault gauged sections | 4001 4002 4003 4004 4005 4006 4007 4008 4009 4010 4011 4012 4013 4014 4015 4016 4017 4018 4019 4020 4021 4022 4023 4024 | 80.90 81.90 82.90 83.90 84.90 85.90 86.90 87.90 88.90 89.90 90.90 91.90 92.60 93.60 94.60 95.60 96.60 97.60 98.60 99.60 100.20 101.20 130.65 131.65 132.65 | 81.90 82.90 83.90 84.90 85.90 86.90 87.90 88.90 89.90 90.90 91.90 92.60 93.60 94.60 95.60 96.60 97.60 98.60 99.60 100.20 101.20 131.65 132.65 133.65 | 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.6 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.8 1.0 1.0 | 7 nil nil nil 5 nil 5 7 3 nil nil 17 2 nil nil 2 nil nil nil nil 3 7 2 206 | |
| 71.20 | 80.90 | 4.1 | Talc-Chlorite grading to mixed - as above but with an increase in quartz-carbonate of up to 15%) - locally trace pyrite | | | | | | |
| 80.90 | 92.60 | 2 | Mixed Talc-Chlorite And Carbonate - host talc-chlorite is similar to above but generally light grey in colour (bleached) - quartz-carbonate content increases to 30% to 50% - trace to 1% disseminated pyrite | | | | | | nil |
| 92.60 | 100.20 | C,2 | Carbonate (weak) Grading to Mixed - 50% to 80% quartz-carbonate in bleached talc-chlorite unit - up to 3% disseminated pyrite locally | | | | | | |
| 100.20 | 137.10 | 4.4.1 | Talc-Chlorite (Grading to Mixed locally) - typical black, aphanitic talc-chlorite unit with 5% quartz-carbonate stringers, blebs - top 3 meters has increased quartz-carbonate content (grading to mixed) - fault zone (sections of rock gouge, flour) from 104m to 117m - possible spot of V.G. in qtz-carb. stringer at 132.1m | | | | | | nil |
| 137.10 | 140.90 | 4.1 | Talc-Chlorite Grading to Mixed - predominantly talc-chlorite, possibly tuffaceous with 1 to 5mm thick chloritic beds with talc-chlorite fragments/pebbles - 25% quartz-carbonate - no visible sulphides | | | | | | 158 |

030

42A103W2021 2.20397 MACKLEM



| From (m) | To (m) | Rock Description | | Sample | From (m) | To (m) | Length (m) | Au (ppb) | Au check (ppb) |
|-------------|-----------|------------------|--|--------|-------------|-----------|---------------|-------------|-------------------|
| | | code | Description | | | | | | |
| 140.90 | 142.80 | C | Carbonate (altered dyke) - grey, aphanitic to fine grained siliceous (albitized?) unit with 40% quartz-carbonate - 5% cubic magnetite crystals (1mm) throughout - 15% pyrite | 4031 | 142.80 | 143.80 | 1.0 | 48 | |
| | | | | 4032 | 143.80 | 144.80 | 1.0 | 9 | |
| | | | | 4033 | 144.80 | 145.80 | 1.0 | 2 | |
| | | | | 4034 | 145.80 | 146.80 | 1.0 | 3 | |
| | | | | 4035 | 146.80 | 147.80 | 1.0 | nil | |
| 142.80 | 154.60 | 2 | Mixed Talc-Chlorite and Carb - bleached grey talc-carbonate with 25% quartz-carbonate veinlets, stringers and blebs - locally chloritic as opposed to talcose (more mafic composition?) - local pyrite content up to 5% as disseminations and cubes | 4036 | 147.80 | 148.80 | 1.0 | nil | 231 |
| | | | | 4037 | 148.80 | 149.80 | 1.0 | 7 | |
| | | | | 4038 | 149.80 | 150.80 | 1.0 | 307 | |
| | | | | 4039 | 150.80 | 151.80 | 1.0 | 17 | |
| | | | | 4040 | 151.80 | 152.80 | 1.0 | nil | |
| 154.60 | 155.00 | 3.6 | Feldspar (+/- quartz) Porphyry - massive, very siliceous, buff coloured dyke with 3% fine disseminated pyrite - 15% quartz-carbonate | 4041 | 152.80 | 153.80 | 1.0 | 2 | |
| | | | | 4042 | 153.80 | 154.60 | 0.8 | 5 | |
| | | | | 4043 | 154.60 | 155.00 | 0.4 | 48 | |
| | | | | 4044 | 155.00 | 156.00 | 1.0 | nil | |
| | | | | 4045 | 156.00 | 156.50 | 0.5 | nil | |
| 155.00 | 156.50 | 2 | Mixed Talc-Chlorite and Carb - bleached grey talc-carbonate with 25% quartz-carbonate veinlets, stringers and blebs - locally chloritic as opposed to talcose (more mafic composition?) | 4046 | 156.50 | 157.50 | 1.0 | 156 | 216 |
| | | | | 4047 | 157.50 | 158.50 | 1.0 | 103 | |
| | | | | 4048 | 158.50 | 159.50 | 1.0 | 3 | |
| | | | | 4049 | 159.50 | 160.50 | 1.0 | 2 | |
| | | | | 4050 | 160.50 | 161.50 | 1.0 | 9 | |
| 156.50 | 158.50 | 3.6 | Feldspar (+/- quartz) Porphyry - massive, very siliceous, buff coloured dyke with 3% fine disseminated pyrite - 15% quartz-carbonate | 4051 | 161.50 | 162.50 | 1.0 | nil | |
| | | | | 4052 | 162.50 | 163.50 | 1.0 | 7 | |
| | | | | 4053 | 163.50 | 164.50 | 1.0 | 2 | |
| | | | | 4054 | 164.50 | 165.50 | 1.0 | 3 | |
| | | | | 4055 | 165.50 | 166.15 | 0.7 | 58 | |
| 158.50 | 170.20 | 2 | Mixed Talc-Chlorite and Carb - bleached grey talc-carbonate with 25% quartz-carbonate veinlets, stringers and blebs - locally chloritic as opposed to talcose (more mafic composition?) - 80% quartz-carb (vein) from 166.15 to 167.35 | 4056 | 166.15 | 167.35 | 1.2 | 2 | |
| | | | | 4057 | 167.35 | 168.35 | 1.0 | 10 | |
| | | | | 4058 | 168.35 | 169.35 | 1.0 | 2 | |
| | | | | 4059 | 169.35 | 170.35 | 1.0 | nil | |
| | | | | 4060 | 170.35 | 171.35 | 1.0 | 7 | |
| 170.20 | 221.00 | 4 | Talc Chlorite - aphanitic to fine/medium grained talc altered volcanic - generally less than 10% quartz-carbonate | 4061 | 171.35 | 172.35 | 1.0 | 3 | nil |
| | | | | | | | | | |
| | 221.00 | | E.O.H. | | | | | | |



Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 1 of 2

Geochemical Analysis Certificate

1W-0352-RG1

Company: **ECHO BAY MINES LTD**

Project: 734

Attn: P. Degagne

Date: MAR-06-01

We hereby certify the following Geochemical Analysis of 61 Core samples submitted FEB-27-01 by .

| Sample Number | Au PPB | Au Check PPB |
|---------------|--------|--------------|
| 4001 | 7 | - |
| 4002 | Nil | - |
| 4003 | Nil | - |
| 4004 | Nil | 2 |
| 4005 | 5 | - |
| 4006 | Nil | - |
| 4007 | 5 | - |
| 4008 | 7 | - |
| 4009 | 3 | - |
| 4010 | Nil | - |
| 4011 | Nil | Nil |
| 4012 | Nil | - |
| 4013 | 17 | - |
| 4014 | 2 | - |
| 4015 | Nil | - |
| 4016 | Nil | - |
| 4017 | 2 | - |
| 4018 | Nil | - |
| 4019 | Nil | Nil |
| 4020 | Nil | - |
| 4021 | 3 | - |
| 4022 | 7 | - |
| 4023 | 2 | - |
| 4024 | 206 | 158 |
| 4025 | 3 | - |
| 4026 | 5 | - |
| 4027 | 34 | - |
| 4028 | 17 | - |
| 4029 | 34 | - |
| 4030 | 27 | - |

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705) 642-3244 Fax (705) 642-3300



Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 2 of 2

Geochemical Analysis Certificate

1W-0352-RG1

Company: **ECHO BAY MINES LTD**

Project: 734

Attn: P. Degagne

Date: MAR-06-01

We hereby certify the following Geochemical Analysis of 61 Core samples submitted FEB-27-01 by .

| Sample Number | Au PPB | Au Check PPB |
|---------------|--------|--------------|
| 4031 | 48 | - |
| 4032 | 9 | - |
| 4033 | 2 | - |
| 4034 | 3 | - |
| 4035 | Nil | - |
| 4036 | Nil | - |
| 4037 | 7 | - |
| 4038 | 307 | 231 |
| 4039 | 17 | - |
| 4040 | Nil | - |
| 4041 | 2 | - |
| 4042 | 5 | - |
| 4043 | 48 | - |
| 4044 | Nil | - |
| 4045 | Nil | - |
| 4046 | 156 | 216 |
| 4047 | 103 | - |
| 4048 | 3 | - |
| 4049 | 2 | - |
| 4050 | 9 | - |
| 4051 | Nil | - |
| 4052 | 7 | - |
| 4053 | 2 | - |
| 4054 | 3 | - |
| 4055 | 58 | - |
| 4056 | 2 | - |
| 4057 | 10 | - |
| 4058 | 2 | Nil |
| 4059 | Nil | - |
| 4060 | 7 | - |
| 4061 | 3 | - |

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705) 642-3244 Fax (705) 642-3300



Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
W0160.00078
Assessment Files Research Imaging



42A10SW2021 2.20997 MACKLEM

900

Subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, this assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Assessment Files Research Imaging, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

- Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

Name: Echo Bay Mines Ltd. Client Number: 128711
Address: P.O. Box 551, Timmins, ON. P4N-7E7 Telephone Number: 705-363-2366
Fax Number: 705-363-2222

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration:

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)
Physical: drilling stripping, trenching and associated assays
Rehabilitation

Work Type: Diamond Drilling
Office Use: Commodity, Total \$ Value of Work Claimed: 45,287
Dates Work Performed: From 06/02/2001 To 22/02/2001
Township/Area: MACKLEM
M or G-Plan Number: G-3997
Mining Division: Porcupine
Resident Geologist District: Timmins

- Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

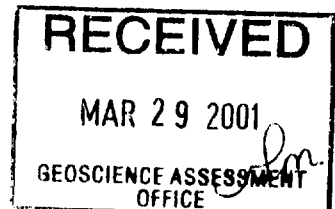
3. Person or companies who prepared the technical report (Attach a list if necessary)

Name: Paul DeGagne - Echo Bay Mines Ltd. Telephone Number:
Address: AS ABOVE. Fax Number:
Name: Telephone Number:
Address: Fax Number:
Name: Telephone Number:
Address: Fax Number:

4. Certification by Recorded Holder or Agent

I, Paul DeGagne, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent: [Signature] Date: MAR 27/01
Agent's Address: P.O. Box 551 Timmins, ON P4N-7E7 Telephone Number: 705-363-2366 Fax Number: 705-363-2222



#3575

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

1201120.00078

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date |
|---|--|---|--------------------------------------|--|--|
| eg TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg 1234568 24000192 | 2 | \$ 8,892 | \$ 4,000 | 0 | \$4,892 |
| 1 CLM 290 | 328.3 Ha | 45,287.50 | 0 | \$22,800 | \$ 22,487.50 |
| 2 1182607 | 3 | 0 | \$3600.00 | | |
| 3 1182608 | 4 | 0 | \$4800.00 | | |
| 4 1182609 | 1 | 0 | \$ 1200.00 | | |
| 5 1182610 | 1 | 0 | \$ 1200.00 | | |
| 6 1182611 | 1 | 0 | \$ 1200.00 | | |
| 7 1182612 | 3 | 0 | \$ 3600.00 | | |
| 8 1203897 | 4 | 0 | \$ 4800.00 | | |
| 9 1203900 | 1 | 0 | \$ 1200.00 | | |
| 10 1203983 | 1 | 0 | \$ 1200.00 | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | 2.200007 |
| 14 | | | | | |
| 15 | | | | | |
| Column Totals | | 45,287.50 | \$ 22,800 | \$ 22,800 | \$ 22,487.50 |

I, PAUL DE GAGNE - ECHO BAY MINES Ltd, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

Date

MARCH 27/01

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

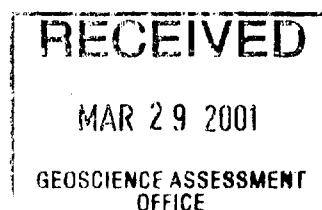
Deemed Approved Date

Date Notification Sent

Date Approved

Total Value of Credit Approved

Approved for Recording by Mining Recorder (Signature)



Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

| Work Type | Units of work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc. | Cost Per Unit of work | Total Cost |
|--|--|-----------------------|---------------------|
| Diamond DRILLING | 599 meters | 63.82/m | 38,230.50 |
| ASSAYS | 122 samples | 10.50/sample | 1,281.00 |
| Core Cutting / Sample prep | 24 HOURS | 16.50/Hr | 396.00 |
| Core logging / supervision | 17 days | \$ 300 /day | 5100.00 |
| snow plowing | 4 HOURS | \$ 70/HOUR | 280.00 |
| Associated Costs (e.g. supplies, mobilization and demobilization). | | | |
| Transportation Costs | | | 2,209.97 |
| Food and Lodging Costs | | | |
| Total Value of Assessment Work | | | \$ 45,287.50 |

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK $\times 0.50 =$ Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Paul Degagne, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Project geologist - Echo Bay Mine I am authorized to make this certification.

Signature: [Signature] Date: MAR 29 2001

RECEIVED
MAR 29 2001
GEOSCIENCE ASSESSMENT OFFICE

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9845
Fax: (877) 670-1555

April 19, 2001

Paul DeGagne
ECHO BAY MINES LTD.
P.O. BOX 551
TIMMINS, ONTARIO
P4N-7E7

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mismnpge.htm

Dear Sir or Madam:

Submission Number: 2.20997

Status

Subject: Transaction Number(s): W0160.00078 Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact LUCILLE JEROME by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY
Lucille Jerome
Acting Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.20997

Date Correspondence Sent: April 19, 2001

Assessor: LUCILLE JEROME

| Transaction Number | First Claim Number | Township(s) / Area(s) | Status | Approval Date |
|---------------------------|---------------------------|------------------------------|---------------|----------------------|
| W0160.00078 | 6000192 | MACKLEM | Approval | April 18, 2001 |

Section:
16 Drilling PDRILL

Correspondence to:
Resident Geologist
South Porcupine, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):
Paul DeGagne
ECHO BAY MINES LTD.
TIMMINS, ONTARIO

2.20997
PORILL

Date / Time of Issue Apr 20 2001 09:28h Eastern

TOWNSHIP / AREA PLAN
MACKLEM G-3997

ADMINISTRATIVE DISTRICTS / DIVISIONS
Mining Division Porcupine
Land Titles/Registry Division COCHRANE
Ministry of Natural Resources District TIMMINS

TOPOGRAPHIC

- Administrative Boundary
- Contours
- Contour Interval
- Electric Line
- Power Pole
- Cell Phone Pole
- Contour
- Contour (Top of Hill) (Meters)
- Shade
- Macadam Road
- Road
- Road
- Trail
- Relief (Spot) (Feet)
- Riverbank
- Stream
- Wooded Area
- Mineral Occurrence (Mined)

LAND TENURE

Freehold Title

- Freehold (Surface Rights)
- Freehold (Subsurface Rights)
- Freehold (Surface & Subsurface Rights)

Leased Land (Surface)

- Leased (Surface) (Surface Rights)
- Leased (Surface) (Subsurface Rights)
- Leased (Surface) (Surface & Subsurface Rights)

Leased Land (Subsurface)

- Leased (Subsurface) (Surface Rights)
- Leased (Subsurface) (Subsurface Rights)
- Leased (Subsurface) (Surface & Subsurface Rights)

Lease of Occupation

- Lease of Occupation (Surface Rights)
- Lease of Occupation (Subsurface Rights)
- Lease of Occupation (Surface & Subsurface Rights)

Land Tenure Withdrawals

- 1234 Area Withdrawn from Disposition (Mining and Minerals Act)
- 1234 Area Withdrawn from Disposition (Mining and Minerals Act) (Surface Rights)
- 1234 Area Withdrawn from Disposition (Mining and Minerals Act) (Subsurface Rights)
- 1234 Area Withdrawn from Disposition (Mining and Minerals Act) (Surface & Subsurface Rights)

IMPORTANT NOTICES

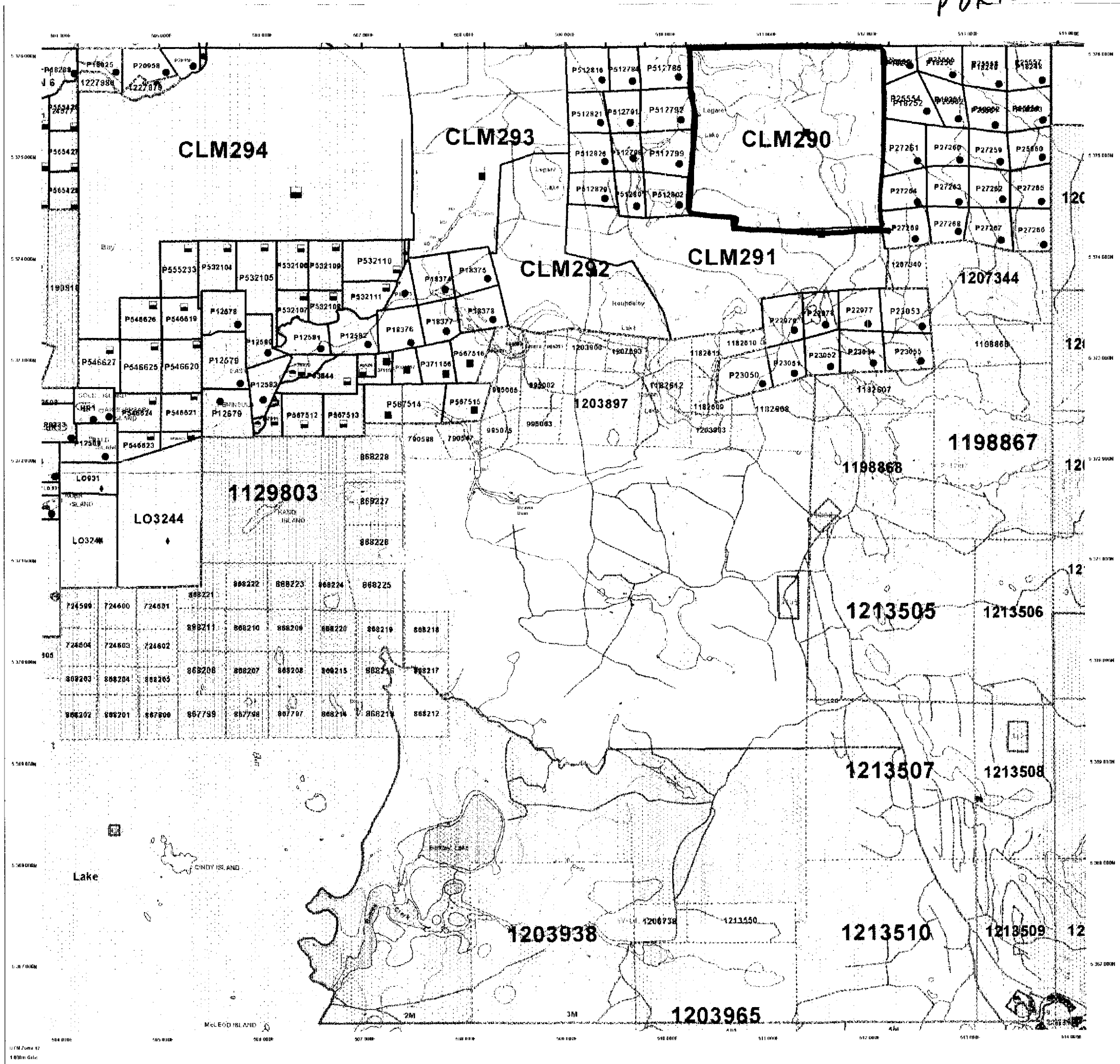
1234

LAND TENURE WITHDRAWAL DESCRIPTIONS

| Mineral | Type | Date | Description |
|---------|------|------------|--|
| 339 | Wm | Jul 1 2001 | Sec. 5, W. 2/30 July 1993 Mining Reservation under the Rules of Mining & Minerals Act |
| WP 1297 | Wm | Jul 1 2001 | SUBJECT RIGHTS ONLY WITHDRAWN FROM PROSPECTING, STAMING, OFF, SALE OR LEASE BY ORDER NO. WP 1297 DATED SEP. 27 1993 MAY 299 SECTION 35 THE MINING ACT, R.S.O. 1990 |
| 3195 | Wm | Jul 1 2001 | SUBJECT AND MINING RIGHTS WITHDRAWN FROM PROSPECTING, STAMING, OFF, SALE OR LEASE BY ORDER NO. WP 1297 DATED SEP. 27 1993 SECTION 35 THE MINING ACT, R.S.O. 1990 |
| 340 | Wm | Jul 1 2001 | SUBJECT AND MINING RIGHTS WITHDRAWN FROM PROSPECTING, STAMING, OFF, SALE OR LEASE BY ORDER NO. WP 1297 DATED SEP. 27 1993 SECTION 35 THE MINING ACT, R.S.O. 1990 |
| 3421 | Wm | Jul 1 2001 | SUBJECT AND MINING RIGHTS WITHDRAWN FROM PROSPECTING, STAMING, OFF, SALE OR LEASE BY ORDER NO. WP 1297 DATED SEP. 27 1993 SECTION 35 THE MINING ACT, R.S.O. 1990 |
| 3430 | Wm | Jul 1 2001 | RESERVE FLOODING RIGHTS ON RIGHT HAND LANE TO ONTARIO HIGHWAY 101 ELEVATION 905.41 |
| 3438 | Wm | Jul 1 2001 | SUBJECT AND MINING RIGHTS WITHDRAWN FROM PROSPECTING, STAMING, OFF, SALE OR LEASE BY ORDER NO. WP 1297 DATED SEP. 27 1993 SECTION 35 THE MINING ACT, R.S.O. 1990 |
| 3439 | Wm | Jul 1 2001 | FLOODING RIGHTS ON RIGHT HAND LANE TO ONTARIO HIGHWAY 101 ELEVATION 905.41 |
| WP 1297 | Wm | May 7 1990 | Sec. 35 W.L.C. 158/90 DNT MAY 7 1990 |

IMPORTANT NOTICES

Areas under withdrawal are subject to conditions and may be subject to future development.

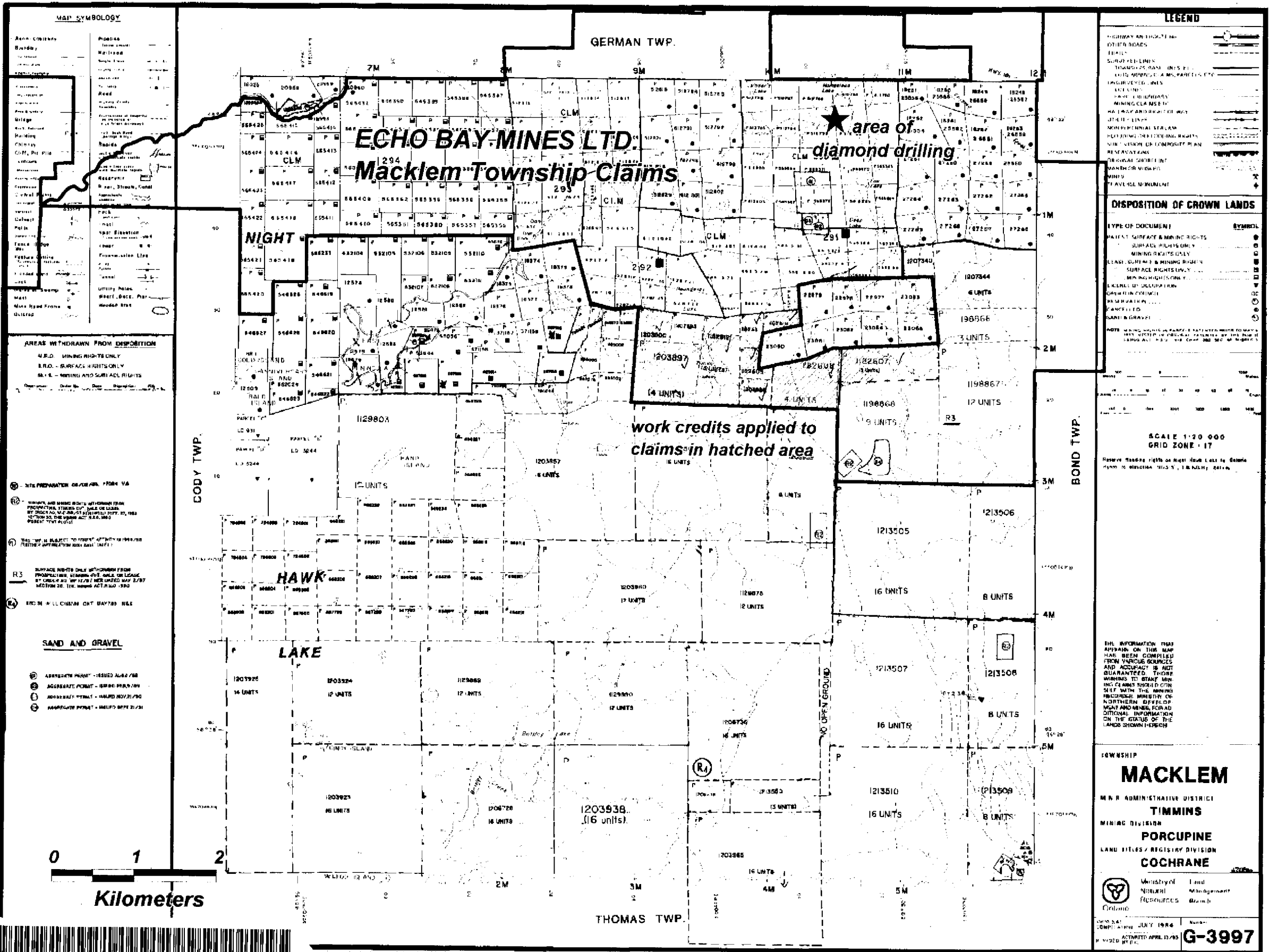


42A10SW2021 2.20997 MACKLEM

General Information and Limitations

This map is not a guarantee of title or ownership. It is a representation of the land tenure as of the date of issue. The land tenure shown on this map is subject to change without notice. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990.

This map is not a guarantee of title or ownership. It is a representation of the land tenure as of the date of issue. The land tenure shown on this map is subject to change without notice. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990. The land tenure shown on this map is subject to the provisions of the Mining Act, R.S.O. 1990.



MAP SYMBOLS

| | |
|---------------------|----------------|
| Area Contour | Process |
| Boundary | Iron Mine |
| Stream | Molten |
| ... | ... |

AREAS WITHDRAWN FROM DISPOSITION

| |
|----------------------------------|
| M.S.D. - MINING RIGHTS ONLY |
| S.R.O. - SURFACE RIGHTS ONLY |
| M.S. - MINING AND SURFACE RIGHTS |

- ⊙ SITE PREPARATION OR/AND/OR POND VA
- ⊙ MINING AND MINING RIGHTS WITHDRAWN FROM PROSPECTIVE STAMPS BY SALE OR LEASE BY ORDER OF THE MINING ACT R.S.O. 1990 CHAPTER 216 (1)
- ⊙ THIS UNIT IS SUBJECT TO FUTURE APPLICATION FOR/AND/OR FUTURE APPLICATION FOR/AND/OR
- R3 SURFACE RIGHTS ONLY WITHDRAWN FROM PROSPECTIVE STAMPS BY SALE OR LEASE BY ORDER OF THE MINING ACT R.S.O. 1990 CHAPTER 216 (1)
- ⊙ END OF M.L. CLAIMS ON DAY/DATE

- SAND AND GRAVEL**
- ⊙ ABBREVIATE POINT - ISSUED AUG 1988
 - ⊙ ABBREVIATE POINT - ISSUED FEB 1989
 - ⊙ ABBREVIATE POINT - ISSUED NOV 1989
 - ⊙ ABBREVIATE POINT - ISSUED APR 1990

LEGEND

| | |
|------------------------|-----|
| HIGHWAY AND TRUCK ROAD | ⊙ |
| OTHER ROADS | ⊙ |
| ... | ... |

DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT | SYMBOL |
|--------------------------------|--------|
| PATENT SURFACE & MINING RIGHTS | ⊙ |
| SURFACE RIGHTS ONLY | ⊙ |
| MINING RIGHTS ONLY | ⊙ |
| LEASE SURFACE & MINING RIGHTS | ⊙ |
| SURFACE RIGHTS ONLY | ⊙ |
| MINING RIGHTS ONLY | ⊙ |
| ... | ... |

SCALE 1:20 000
GRID ZONE 17

Reserve Mining Rights on Night Stamp Units to Date of Issue in Section 216.3.1 of the Mining Act, R.S.O. 1990

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THESE MINING RIGHTS SHOULD CONSIDER THE MINING ACT, R.S.O. 1990 CHAPTER 216 (1) AND THE MINING ACT, R.S.O. 1990 CHAPTER 216 (1). FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

TOWNSHIP
MACKLEM
 M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
 MINING DIVISION
PORCUPINE
 LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources and Land Management Branch
 Ontario

DATE: JULY 1994
 ACTIVED: APRIL 13/93
 REVISED BY: **G-3997**



42A10SW2021 2.20997 MACKLEM 220



magnetic declination:
10.5 deg. west

Claim 1206613
(Echo Bay Mines Ltd.)

Highway 101 (Matheson 28km east)

Gibson Lake Road

German Twp.
Macklem Twp.

14000E

14000E

14000E

14000E

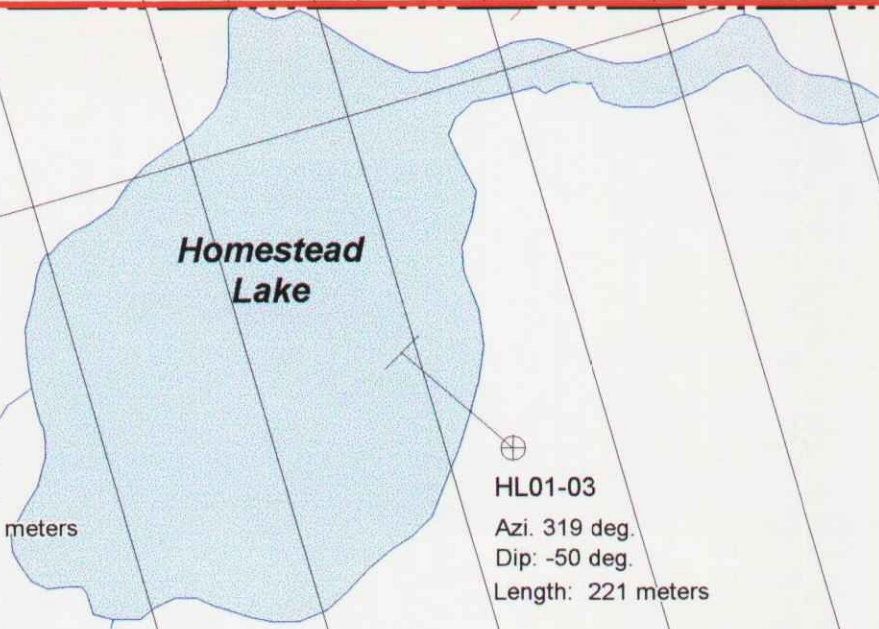
14000E

14000E

14000E

14000E

3+500N



Homestead Lake

HL01-01
Azi. 310 deg.
Dip: -50 deg.
Length: 187 meters

HL01-02
Azi. 344 deg.
Dip: -50 deg.
Length: 191 meters

HL01-03
Azi. 319 deg.
Dip: -50 deg.
Length: 221 meters

Claim 25556
(Echo Bay Mines Ltd.)

Claim 25555
(Echo Bay Mines Ltd.)

2.20997

TL 3+000N
AZIM 074

Claim 25554
(Echo Bay Mines Ltd.)

Claim 25562
(Echo Bay Mines Ltd.)

Claim CLM 290
(Echo Bay Mines Ltd.)

Claim 27261
(Echo Bay Mines Ltd.)

ECHO BAY MINES LTD.

Homestead Lake Property
2001 Diamond Drilling
Drill Hole Plan



Scale: 1:5,000

March 26, 2001

90SE

40SE

13440N (0NW)

10NW

60NW

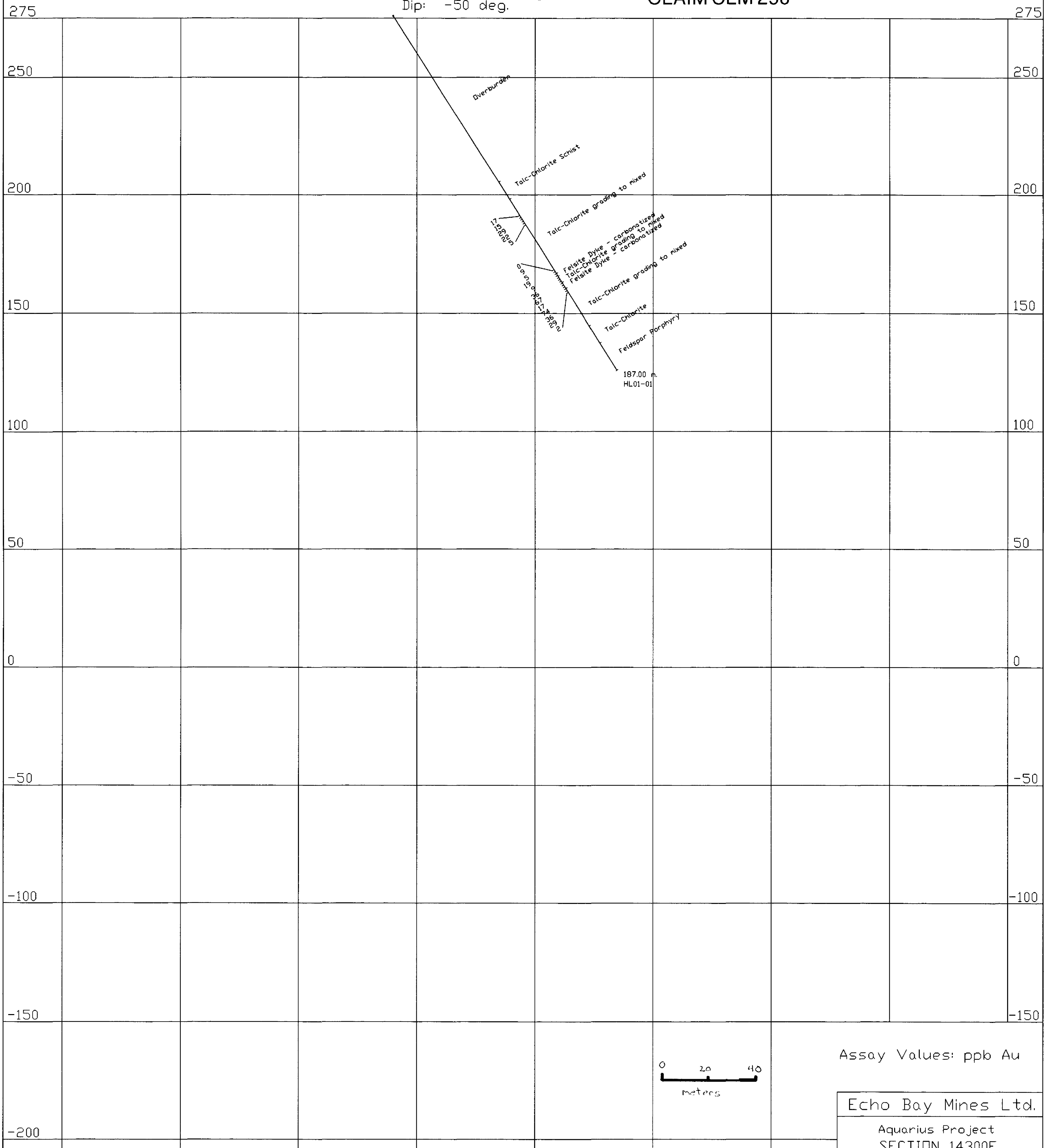
110NW

160NW

210NW

HL01-01
Azimuth: 310 deg.
Dip: -50 deg.

CLAIM CLM 290



Assay Values: ppb Au

Echo Bay Mines Ltd.
 Aquarius Project
 SECTION 14300E
 (oblique section looking 254 deg.)
 Homestead Lake Area
 DATE: 01/03/23 SCALE: 1/1000



13300N 13350N 13400N 13450N 13500N 13550N 13600N 13650N 13700N

HL01-02
Azimuth: 344 deg.
Dip: -50 deg.

CLAIM CLM 290

275

250

200

150

100

50

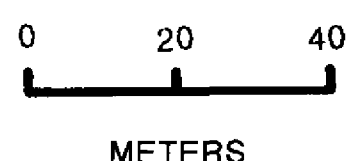
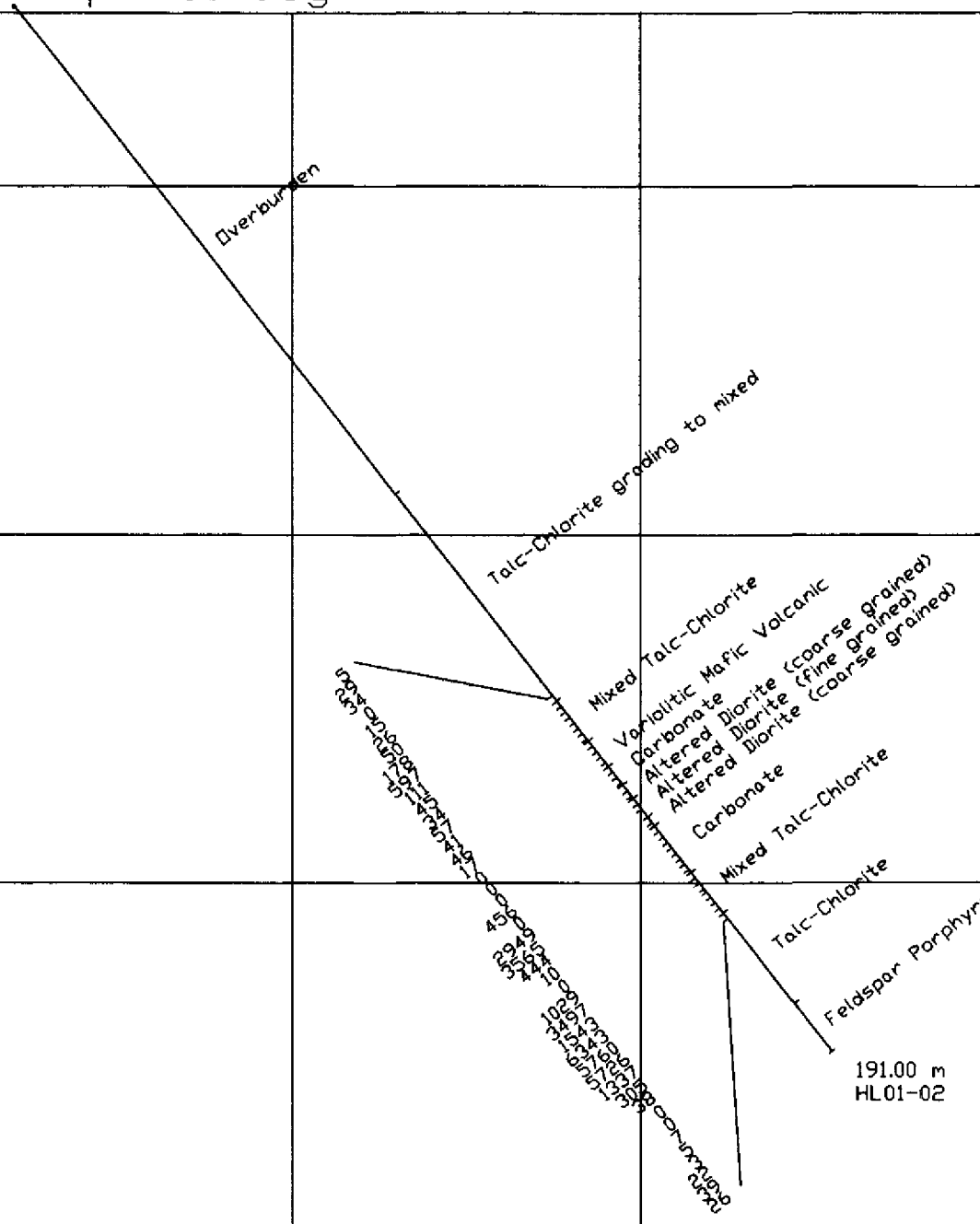
0

-50

-100

-150

-150



Assay Values: ppb Au

Echo Bay Mines Ltd.

Aquarius Project
Section 14350E
Homestead Lake Area

Date: 01/03/23

Scale: 1/1000



75SE

25SE

13275N
(0NW)

25NW

75NW

125NW

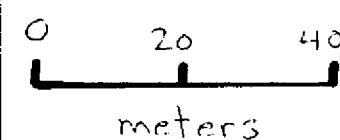
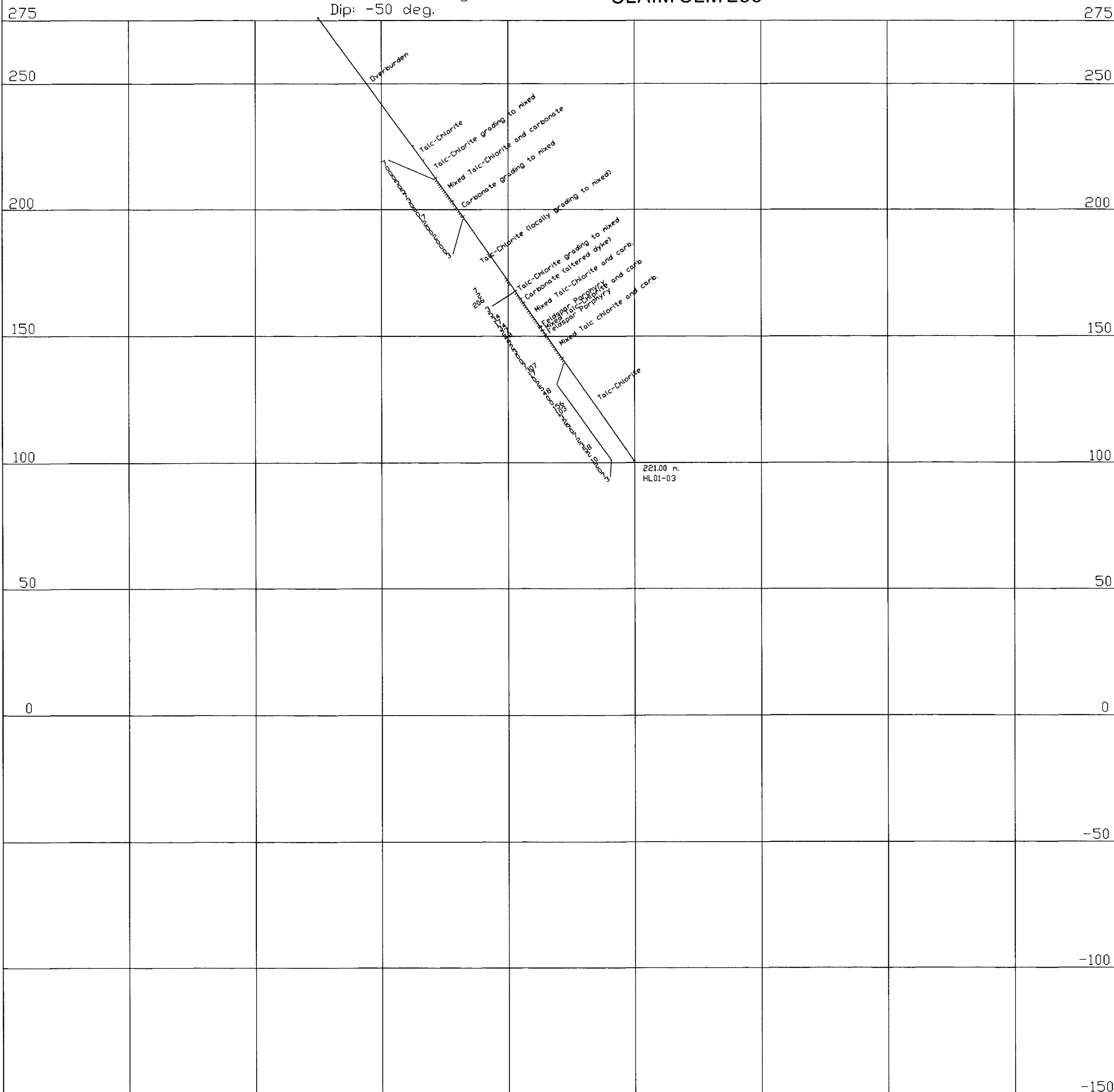
175NW

225NW

275NW

HL01-03
Azimuth: 319 deg.
Dip: -50 deg.

CLAIM CLM 290



Assay Values: ppb Au

Echo Bay Mines Ltd.

Aquarius Project
Section 14700E
(oblique section looking 229 deg.)
Homestead Lake Area

Date: 01/03/23

Scale: 1/1000



42A10SW2021 2.20997 MACKLEM