ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 -510 West Hastings Street
Vancouver, B.C. V6B 1L8
Telephone: 604-688-2568 Fax: 604-688-2578

# ASSESSMENT REPORT

describing

## DIAMOND DRILL CORE SAMPLING

at the

## MAGNUM PROPERTY

| | | |
|---|---|---|
| Magnum | 1-46 | YC28867-YC28912 |
| | 47-70 | YC36154-YC36177 |
| | 71-144 | YF36201-YF36274 |

located at

Latitude 64°26' N; Longitude 140°32' W
NTS 116/C07

in the

Dawson Mining District
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

**STRATEGIC METALS LTD.**

by

H. Burrell, B.Sc., P.Geo.
September 2013

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## APPENDICES



## TABLES

## INTRODUCTION

The Magnum property is a gold-enriched volcanogenic massive sulphide (VMS) prospect located in west-central Yukon. It is wholly owned by Strategic Metals Ltd.

This report describes diamond drill core sampling of 2006 drill core that is stored at the H.S. Bostock Core Library in Whitehorse, Yukon. The sampling was performed by Archer, Cathro & Associates (1981) Limited on behalf of Strategic Metals. The author conducted the sampling and interpreted all results obtained from it.

## PROPERTY LOCATION, CLAIM DATA AND ACCESS

The Magnum property is located in west-central Yukon, at latitude 64°26′ north and longitude 140°32′ west on NTS map sheet 116C/07 (Figure 1). The property comprises a total of 144 contiguous mineral claims covering approximately 2900 ha (29 sq. km). The claims are registered with the Dawson Mining Recorder in the name of Archer Cathro, which holds them in trust for Strategic Metals. Claim registration data are listed below, while the locations of individual claims are shown on Figure 2.

| Claim Name | | Grant Number | Expiry Date* |
|---|---|---|---|
| Magnum | 1-46 | YC28867-YC28912 | March 24, 2018 |
| | 47-70 | YC36154-YC36177 | March 24, 2018 |
| | 71-144 | YF36201-YF36274 | March 24, 2016 |

* Expiry dates do not include 2013 work that has not yet been filed for assessment credit.

The claims are situated about 60 km by air northwest of Dawson City. The southern edge of the claim block adjoins the abandoned townsite of Fortymile. The area can be reached via a haulage road to the former Clinton Creek Mine, which crosses the southwestern part of the Magnum property. The Clinton Creek road branches off the Top of the World Highway, about 60 km west of Dawson City. The road is typically open from late spring to late fall. An overgrown bulldozer road extends from the Clinton Creek road to the south-central part of the Magnum property.

## REGIONAL GEOLOGY

The Magnum property lies within the Yukon-Tanana Terrane (YTT) approximately five kilometres southwest of the Tintina Fault. YTT comprises a variety of Late Devonian to Early Mississippian metavolcanic and metasedimentary rocks, and represents both arc and back-arc environments (Colpron and Nelson, 2011; Piercey et al., 2006). The Tintina Fault is a transcurrent structure that experienced about 450 km of dextral strike-slip movement during the Eocene. This movement offset a segment of YTT in the Finlayson Lake District of southeastern Yukon from the main body of YTT, which lies southwest of the fault.

YTT rocks of back-arc affinity occur mainly in the Finlayson Lake District where they are host to four major VMS deposits –Wolverine, Kudz Ze Kayah, Fyre Lake and GP4F. Back-arc facies

are dominated by bimodal metavolcanic rocks associated with fine grained carbonaceous metaclastic rocks. The geochemical signatures at the Wolverine and Kudz Ze Kayah deposits are enriched in zinc, silver, copper, gold, lead, antimony and selenium. The Wolverine Deposit, owned by Yukon Zinc Corporation, is the most advanced deposit hosted by YTT rocks in the Finlayson Lake District. It commenced production in 2012 with a NI 43-101 compliant, measured and indicated mineral resource of 4.46 Mt grading 12.14% zinc, 354.8 g/t silver, 1.16% copper, 1.70 g/t gold and 1.58% lead (Yukon Zinc Corp., 2013).

YTT rocks are often overlain by or intruded by Anvil Suite rocks. The Anvil Suite comprises mafic volcanics, oceanic sediments and related mafic to ultramafic intrusions formed in a back-arc setting from Carboniferous to Permian. The Ice Deposit in the Finlayson Lake District is hosted by Anvil Suite rocks and consists of Cyprus-type VMS mineralization.

Southwest of Tintina Fault, the YTT assemblage comprises mostly intermediate to mafic metavolcanic and metavolcaniclastic rocks of arc affinity, and fringing metasedimentary rocks (Colpron and Nelson, 2011). Some Anvil Suite rocks are stratigraphically and structurally interdigitized with the YTT assemblage. VMS-style mineralization has recently been discovered on the southwest side of the Tintina Fault at the Touleary property owned by Arcus Development Group Inc. and ATAC Resources Ltd.

Table I below contains a brief summary of the main lithologies in the Magnum property area.

**Table I - Regional Lithologies (*After Gordey and Makepeace, 2003*)**

| Unit | Period | Description |
|---|---|---|
| CPA | Carboniferous and Permian | **Anvil Suite**: A dominantly oceanic assemblage of mafic volcanics, ultramafics, chert, pelite and limestone. |
| | | **Anvil Suite (1):** Variably altered and foliated, augite-phyric basalt, diorite and gabbro with minor metachert, siliceous argillite, greywacke and limestone. |
| | | **Anvil Suite (4):** Dunite, peridotite, gabbro, pyroxenite, harzburgite, hornblendite and serpentinite. Alteration assemblages include quartz-carbonate, green chromian muscovite (mariposite) and talc-carbonate. |
| DMN | Devonian, Mississippian and older (?) | **Nasina Assemblage (1)**: Graphitic quartzite and muscovite quartz-rich schist. Dark grey to black, fine grained graphitic and non-graphitic quartzite and quartz-muscovite schist. |

The Magnum property area is underlain by Devonian, Mississippian and older (?) Nasina Assemblage quartz-muscovite schist, which is overlain and intruded by Carboniferous to Permian Anvil Suite oceanic sediments volcanic rocks and sills of mafic to ultramafic composition. Anvil Suite rocks are mapped as wavy, east-trending bands in the north and central parts of the property and appear to cap the Nasina Assemblage in the southwestern part (YSG, 2013).

The Magnum property area has undergone intense post-depositional deformation. Schistosity generally parallels primary compositional banding and bedding (McIvor, 1988).

## PROPERTY GEOLOGY

In 1988, property-scale mapping was conducted by Homestake. It identified an upright stratigraphic package composed primarily of quartz-muscovite schists that are assigned to the Nasina Assemblage and are thought to have felsic volcanic protoliths. The felsic schists are locally interlayered with chlorite schist, phyllite, limestone and a banded iron formation (Magnum Zone). The Nasina Assemblage is overlain by andesite and intruded by a 300 m by 700 m ultramafic plug, which belongs to the Anvil Suite. There is no documented mapping from the northeastern or southwestern parts of the property.

Stratigraphy is well foliated parallel to compositional layering. Foliation orientations exhibit variable strikes and relatively gentle dips between 10 and 25° to the west. Although large-scale folds and faults have not been documented, local folding is marked by crenulation cleavages and boudinaged quartz sweats.

The Magnum Zone comprises a 5 to 20 m thick section of iron formation within the felsic schist stratigraphy, which has been traced in outcrop and float for over 1600 m along strike (Wengzynowski and Nunez, 2006). This formation appears to be a continuous horizon situated about 70 m below the contact between the felsic schist package and overlying andesite.

## 2006 DIAMOND DRILLING

A total of 368.81 m of diamond drilling was completed in 2006. Drilling was designed to test down dip of showings MZ1 and MZ2. Information concerning the drill holes is summarized in Table II.

**Table II – Drill Hole Data**

| Hole | Easting | Northing | Elevation | Azimuth | Angle | Depth (m) |
|---|---|---|---|---|---|---|
| MG-06-01 | 0523040 | 7146945 | 1892 | 165° | -70° | 208.79 |
| MG-06-02 | 0522386 | 7146705 | 1739 | 142° | -70° | 160.02 |

Hole MG-06-01 intersected an 8.31 m section of iron formation (Magnum Zone) within a 23.75 m exhalative horizon that is interbedded with felsic schist. Below the iron formation, stratigraphy comprises interbedded schists and phyllites. The iron formation consists of thinly laminated magnetite, carbonate, barite and limonite after pyrite, which correspond with the MZ2 surface showing. Immediately below the exhalative sequence, there is a 1.43 m thick interval of heavily sheared muscovite-limonite schist. A sample of this interval returned 7.3 g/t silver, 1460 ppm lead and 917 ppm zinc (Wengzynowski and Nunez, 2006).

Hole MG-06-02 intersected andesite followed by thinly bedded muscovite schist, minor cherty exhalite and phyllite. Hematite alteration overprints felsic schists and phyllites in this hole. No

comparative iron formation or limonitic schists were encountered, and geochemical response in MG-06-02 was low.

No VMS mineralization was observed in either hole. Apart from the iron formation and limonitic schists, the only mineralization encountered in drill holes was pyrite, occurring as weakly disseminated flecks and occasional coarse cubes in quartz veinlets.

## PROCEDURES FOR 2013 SAMPLING OF 2006 DRILL CORE

In June 2013 three diamond drill core specimens were taken from MAG-06-01. The sample intervals are contiguous and were selected because they comprised a silica flooded zone with seams of fine grey matter, which was thought to be a sulphide. Table III below lists the data pertaining to this sampling.

**Table III – Diamond Drill Core Sampling**

| From (m) | To (m) | Interval (m) | Sample Number |
|---|---|---|---|
| 76.94 | 79.94 | 3.00 | M355818 |
| 79.94 | 81.44 | 1.50 | M355819 |
| 81.44 | 84.44 | 3.00 | M355820 |

All sample intervals were sawn in half using a rock saw located at the H.S. Bostock Core Library in Whitehorse. Analytical work was done by ALS Minerals with sample preparation in Whitehorse and assays and geochemical analyses in North Vancouver, British Columbia. Each sample was dried, fine crushed to better than 70% passing -2 mm and then a 250 g split was pulverized to better that 85% passing 75 micron. All samples were then analyzed for gold by inductively coupled plasma-atomic emission spectroscopy (Au-ICP21) and 48 other elements by four acid digestion followed by inductively coupled plasma-atomic emission spectrometry (ME-MS61).

## 2013 SAMPLING RESULTS

The intervals sampled in 2013 returned low values for gold, copper, lead and zinc, but yielded elevated barium values up to 2880 ppm. Values for other elements were also low, which is not surprising based on the subdued results from the initial sampling of the 2006 drill core.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

Heather Burrell

H. Burrell, B.Sc., P.Geo.

## REFERENCES

Colpron, M. and Nelson, J. L.
2011 A Digital atlas of terranes for the Northern Cordillera; Yukon Geological Survey and BC Geology Survey, BCGS GeoFile 2011-11; (http://www.geology.gov.yk.ca/pdf/CanCord_terranes_2011.pdf).

Gordey, S.P. and Makepeace, A.J. (comp.).
2003 Yukon digital geology; Geological Survey of Canada Open File D3826 and Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada.

McIvor, D.
1988 Summary report on the results of geological mapping and lithogeochemical sampling on the Fortymile property; Report for Homestake Mineral Development Company.

Piercey, S.J., Nelson, J.L., Colpron, M., Dusel-Bacon, C., Simard, R.-L., and Roots, C.F.
2006 Paleozoic magmatism and crustal recycling along the ancient Pacific margin of North America, northern Cordillera; *in* Colpron, M. and Nelson, J.L. Eds., Paleozoic Evolution and Metallongeny of Pericratonic Terranes at the Ancient Pacific Margin of North America, Canadian and Alaskan Cordillera; Geological Association of Canada, Special Paper 45, p. 281-322.

Wengzynowski, W.A. and Nunez, M.
2006 Assessment report describing airborne geophysical surveys and diamond drilling at the Magnum Property; Report prepared by Archer, Cathro & Associates (1981) Limited; Assessment Report 094803.

Yukon Geological Survey,
2013 Yukon Digital Geology; Yukon Geological Survey; Available at: http://www.geology.gov.yk.ca/

Yukon Zinc Corp.
2013 www.yukonzinc.com

# APPENDIX I

# CERTIFICATES OF ANALYSIS

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **STRATEGIC METALS LTD.**
**C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**
**1016-510 W HASTINGS ST**
**VANCOUVER BC V6B 1L8**


**Finalized Date: 13-JUN-2013**
**Account: MTT**

# CERTIFICATE WH13097166

Project: Magnum

P.O. No.:

This report is for 3 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 6-JUN-2013.

The following have access to data associated with this certificate:

| | | |
|---|---|---|
| HEATHER B<br>SARAH DRECHSLER | HEATHER BURRELL<br>JOAN MARIACHER | SARAH D |

## SAMPLE PREPARATION

| ALS CODE | DESCRIPTION |
|---|---|
| WEI-21 | Received Sample Weight |
| LOG-22 | Sample login - Rcd w/o BarCode |
| CRU-31 | Fine crushing - 70%<2mm |
| CRU-QC | Crushing QC Test |
| SPL-21 | Split sample - riffle splitter |
| PUL-QC | Pulverizing QC Test |
| PUL-31 | Pulverize split to 85%<75 um |

## ANALYTICAL PROCEDURES

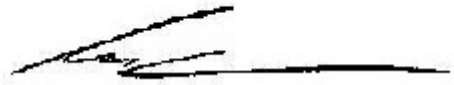
| ALS CODE | DESCRIPTION | INSTRUMENT |
|---|---|---|
| Au-ICP21 | Au 30g FA ICP-AES Finish | ICP-AES |
| ME-MS61 | 48 element four acid ICP-MS | |

To: **STRATEGIC METALS LTD.**
**ATTN: HEATHER BURRELL**
**C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED**
**1016-510 W HASTINGS ST**
**VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

**Signature:**



Colin Ramshaw, Vancouver Laboratory Manager

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**Finalized Date: 13-JUN-2013**
**Account: MTT**

Project: Magnum

# CERTIFICATE OF ANALYSIS WH13097166

| Sample Description | Method | WEI-21 | Au-ICP21 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Recvd Wt. | Au | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cs | Cu |
| | Units | kg | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm |
| | LOR | 0.02 | 0.001 | 0.01 | 0.01 | 0.2 | 10 | 0.05 | 0.01 | 0.01 | 0.02 | 0.01 | 0.1 | 1 | 0.05 | 0.2 |
| M355817 | | 8.76 | 0.013 | 0.12 | 6.77 | 291 | 2570 | 2.15 | 0.19 | 6.01 | 0.87 | 81.2 | 21.6 | 54 | 8.82 | 26.2 |
| M355818 | | 4.21 | 0.035 | 0.23 | 6.34 | 306 | 2880 | 1.86 | 0.30 | 4.63 | 0.27 | 84.3 | 11.0 | 50 | 5.68 | 17.5 |
| M355819 | | 9.18 | <0.001 | 0.20 | 6.87 | 18.6 | 920 | 1.32 | 0.10 | 5.15 | 0.24 | 65.2 | 28.8 | 67 | 3.88 | 31.8 |

***** See Appendix Page for comments regarding this certificate *****

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**Finalized Date: 13-JUN-2013**
**Account: MTT**

Project: Magnum

# CERTIFICATE OF ANALYSIS WH13097166

| Sample Description | Method | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Fe | Ga | Ge | Hf | In | K | La | Li | Mg | Mn | Mo | Na | Nb | Ni | P |
| | Units | % | ppm | ppm | ppm | ppm | % | ppm | ppm | % | ppm | ppm | % | ppm | ppm | ppm |
| | LOR | 0.01 | 0.05 | 0.05 | 0.1 | 0.005 | 0.01 | 0.5 | 0.2 | 0.01 | 5 | 0.05 | 0.01 | 0.1 | 0.2 | 10 |
| M355817 | | 5.11 | 18.70 | 0.23 | 4.8 | 0.103 | 2.84 | 40.0 | 19.1 | 1.40 | 1420 | 2.07 | 0.46 | 23.4 | 28.8 | 1170 |
| M355818 | | 3.40 | 17.10 | 0.20 | 4.7 | 0.074 | 1.77 | 41.0 | 12.4 | 1.21 | 2010 | 0.91 | 1.98 | 21.7 | 21.4 | 710 |
| M355819 | | 6.70 | 20.0 | 0.23 | 4.3 | 0.099 | 0.35 | 30.6 | 32.1 | 2.18 | 982 | 1.40 | 2.52 | 24.9 | 38.1 | 1300 |

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| Sample Description | Method | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Pb | Rb | Re | S | Sb | Sc | Se | Sn | Sr | Ta | Te | Th | Ti | Tl | U |
| | Units | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm |
| | LOR | 0.5 | 0.1 | 0.002 | 0.01 | 0.05 | 0.1 | 1 | 0.2 | 0.2 | 0.05 | 0.05 | 0.2 | 0.005 | 0.02 | 0.1 |
| M355817 | | 29.3 | 129.5 | 0.004 | 0.47 | 3.21 | 19.6 | 3 | 3.1 | 179.5 | 1.52 | 0.08 | 11.1 | 0.840 | 1.11 | 2.4 |
| M355818 | | 34.8 | 105.5 | 0.003 | 0.23 | 2.69 | 13.5 | 2 | 4.4 | 162.5 | 1.46 | 0.05 | 13.4 | 0.402 | 0.83 | 2.6 |
| M355819 | | 11.0 | 19.1 | 0.007 | 0.16 | 1.88 | 23.4 | 3 | 2.5 | 174.0 | 1.60 | 0.06 | 7.6 | 1.035 | 0.16 | 2.3 |

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**Account: MTT**

Project: Magnum

# CERTIFICATE OF ANALYSIS WH13097166

| Sample Description | Method | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|
| | Analyte | V | W | Y | Zn | Zr |
| | Units | ppm | ppm | ppm | ppm | ppm |
| | LOR | 1 | 0.1 | 0.1 | 2 | 0.5 |
| M355817 | | 164 | 1.6 | 31.6 | 438 | 197.0 |
| M355818 | | 69 | 2.5 | 27.7 | 85 | 215 |
| M355819 | | 200 | 1.3 | 36.6 | 117 | 173.0 |

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**VANCOUVER BC V6B 1L8**


**Finalized Date: 13-JUN-2013**
**Account: MTT**

Project: Magnum

# CERTIFICATE OF ANALYSIS WH13097166

## CERTIFICATE COMMENTS

### ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

### LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

| | | | |
|---|---|---|---|
| CRU-31 | CRU-QC | LOG-22 | PUL-31 |
| PUL-QC | SPL-21 | WEI-21 | |

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

| | |
|---|---|
| Au-ICP21 | ME-MS61 |