12-033

Report on Geochemical Sampling and Trenching at the MAG Property, Squanga Lake Area, Yukon, 2012 Exploration Season

Property Coordinates

NTS Map Sheet: 105C 05

Latitude: 60 degrees 26 minutes

Longitude 133 degrees 36 minutes 56 seconds

Submitted to:

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Table of Contents

Appendices

A. Certificate of Qualifications
B. Proposed Exploration Budgets
C. Assay Certificates
D. 2012 Expenditure Summary
E. Figures, Maps and Tables

Introduction

The potential of listwaenite sequences to host lode-style gold mineralization on the MAG Property, Squanga Lake area was evaluated in this study funded through the Yukon Mineral Incentive Program. The 2012 exploration program was designed to follow up on positive geophysical results achieved during 2011 exploration efforts. These results showed a sharp magnetic gradient which was interpreted as faults or intrusive contacts between serpentinized ultramafic rocks and pyroxene gabbro.

The field studies were delayed due to a lengthy permitting process but eventually were completed during the period September-October, 2012. In addition as part of this work, the author has completed a comprehensive compilation of works completed relating to studies on listwaenites with a focus on studies completed throughout the North American Cordillera and a local focus on the Atlin Gold Camp, as this will provide guidance for current and future exploration efforts in the Squanga Lake area by Sourdough Resources Inc.

The author is the Director/President of Sourdough Resources Inc. and directed and supervised all exploration work.

Location and Access

The MAG property is located immediately adjacent to the Alaska Highway in the Squanga Lake area. Work focused on the MAG claims on the south side of the highway. Access within the property area was improved by the development of a 2 meter wide ATV trail that was established during the 2012 field season. A location map of the study area is attached (see Figure 1).

The MAG claims are located immediately west and southwest of Squanga Lake and traverse the Alaska Highway approximately 125 km south of Whitehorse, the capital city of Yukon. The claims were staked by Sourdough Resources Inc. in late 2010 to cover a geophysical anomaly identified from regional aeromagnetic geophysical surveys completed by the Yukon Geological Survey and also were of interest as the claims were in close proximity to the TOG gold showing (MINFILE 105C28).

Physiography

The MAG Property comprises primarily of a gently to moderately rolling landscape which starts to increase in elevation towards the TOG showing to the southwest of the property area.

Thick glacial sands and gravel deposits cover most of the area with less than 1% of the property comprising of outcrop exposures with the large majority of the area characterized with occasional glacial erratics exposed in the areas of small streams or on the edges of steep slopes (less than 50 meters in overall height and comprising of glacial gravels) in valley bottoms.

Climate

The southwestern Yukon has a dry subarctic climate with average summer temperatures of 15 degrees Celsius and winter minimum of -45 degrees Celsius. As the Jakes property is located in lower elevations in the region, it provides an opportunity for slightly better climatic conditions as compared to most of the Yukon, it enables work to begin a couple of weeks earlier and a few weeks later in the spring and fall, respectively. Snow cover is generally in place from late October to mid-April. The climate tends to be dry (precipitation range 200-325 mm per annum) and cool.

Vegetation

The vegetation of the Yukon Southern Lakes Ecoregion is dominantly open coniferous and mixed woodland, reflecting the rain shadow climate of the area and the pattern of forest fires. Medium shrubs dominate the higher elevation slopes, while mountain summits are usual dry dwarf shrub.

Pine is the dominant tree species, because it quickly regenerates in burned areas. Black spruce has limited distribution in this ecoregion. On dry upland sites, the understory vegetation is dominated by a mixture of ground shrubs including twinflower, kinnikinnick, lingonberry and lichen, with abundant litter. Mixed aspen and white spruce are common on fine soils with a variable cover of ground shrubs, lichen and litter. Aspen is also found on steep south-facing slopes, often with small pockets of spruce occupying the moister sites. Balsam poplar is found on roadsides and along creeks and rivers.

Open areas at lower elevations include grasslands on steep south-facing slopes and alkaline lacustrine depressions.

Ecoregion

The Yukon Southern Lakes, Boreal Cordillera Ecozone, Ecoregion 177 is characterized by broad valleys and large lakes set within the rain shadow of the St. Elias Mountains (Smith, C.A.S. et. Al, 2004). This ecoregion lies in the sporadic discontinuous permafrost zone, where permafrost underlies less than one quarter of the landscape. Soils tend to be alkaline and wetlands (mainly fens) are dominated by marl formation. The ecoregion supports the highest mammalian diversity in the Yukon, with at least 50 of the 60 species known to occur in Yukon at present.

Property and Claims Information

As previously noted the MAG claims comprise of 95 contiguous claims (See Table 1) in the Squanga Lake area. The claims in the northern portion cover a chromite occurrence and limited mapping has determined the presence of altered serpentinitized units. The MAG claims south of the Alaska Highway have been the focus of exploration efforts to date.

Regional Geology

The study areas lie south of a northwest trending contact between Lower and Middle Jurassic clastics to the west of Marsh Lake and are fault bounded to the west by Mississippian to Upper Triassic Cache Creek oceanic volcanic and sediments and to the east by Upper Triassic Lewes River inter-arc clastics believed to be part of the Cache Creek Terrain (Wheeler, 1987).

The Laberge Group consists of greywacke, arkose, quartzite, conglomerate, siltstone, argillite and hornfels. The Tuku Group consists mainly of volcanic tholeiitic to alkaline basalts.

Of significance to the geology in the region, and believed to be present within the property, is the occurrence of oceanic ultramafic units of dunites, harzburgites and pyroxenites that occur within the Cache Creek Terrane rocks. These have been well documented in the Atlin Gold camp of Northwestern British Columbia (Bloodgood et. al, 1989; Ash, 2000) and are also known to host California mother lode gold style deposits which was a primary motivator for the selection of the study areas. These ultramafic bodies are known within the region to range from linear bodies many tens of kilometers long, to pods and slivers a few meters in length and it has been suggested that these bodies represent oceanic basement (Ash, 2000). Many of the gold bearing veins in the Atlin camp are related to these ultramafic rocks. Figure I illustrates the network of tectonic lineaments throughout the region, the ribbon lakes emphasize this feature in particular and of notable mention is the northwesterly trending Teslin Fault system which may have influenced the setting for gold mineralization in the region (Ballantyne, 1986).

Surficial Geology, Geomorphology and Glacial History

(Excerpts from Smith et. al, 2004)

Due to the lack of rock exposure, and hence the heavy reliance on soil/till geochemistry sampling methods to provide indications of potential mineral anomalies, it is critical to understand the surficial geology, geomorphology and glacial history of the region.

The main sources of surficial geology information for the Yukon Southern Lakes Ecoregion are several surficial geology and soil maps (Rostad et. al., 1977; Morison and McKenna, 1981; Klasen and Morison, 1987; Morison and Klasen, 1991; Mougeot and Smith, 1992 and 1994). The surface deposits in this ecoregion are associated with the most recent Cordilleran glaciations, the McConnell, believed to have covered the south and central Yukon between 26,500 and 10,000 years ago. Most of the ecoregion was covered by ice that flowed towards the northwest from the Cassiar Mountains. Ice flowed into the area from the Cassiar Mountains to the southeast and the eastern Coast Mountains to the southwest. Trunk glaciers followed the major valleys and flowed northwestward across this region to terminate in the central Yukon. After the maximum extent of McConnell ice, deglaciation produced disruptive drainage systems and large glacial lakes as a result of a complex assemblage of ice lobes, which were restricted to valley bottoms and controlled by local topography. The streamlined topography of this region was shaped by the glacial flow directions.

Quaternary deposits are distributed in a general pattern throughout the Yukon River valley. High elevation slopes and summits are covered with a discontinuous colluviums or moraine veneer over bedrock. Where exposed, the bedrock is weathered or frost-shattered. Glacial till, often gullied, covers most mid-elevation slopes mixed with colluvial fans or aprons. The general composition of the till matrix in the region, noted by Jackson (1994), indicates a wide range of sand content (20-70%), silt (20-80%), and usually a lower clay content (5-30%).

Glaciofluvial sand and gravel terraces flank the valley sides while pitted or hummocky deposits of sand and gravel line the bottom of some valleys. These deposits are free of permafrost and have stable surfaces.

Listwanite - Lode Gold Related Deposits
(Excerpt from Ash et. al, 1991)

Listwanite is a term applied to an alteration assemblage generated by carbon dioxide matasmonatism of serpentinzed ultramafic rocks. This alteration type is associated with most of the major mesothermal vein deposits in British Columbia and is also found to be associated with many major mesothermal vein deposits in Phanerozioc and Arhcen gold camps worldwide. This relationship appears to be due primarily to similarities in tectonic history and involves using ultramafic and related plutonic rocks to delineate major structural breaks which act as "first order control" for the development of mesothermal gold deposits (Groves, 1990).

The term "listwanite" (or "listwaenite") is loosely characterized as a carbonatized ultramafic rock (Buisson and Leblanc, 1986). The process of listwanization produces a varying sequence of lateration products caused by differences in the intensity of lateration. This suite commonly includes (in order of increasing intensity of alteration): talc-altered serpentinite; talc-carbonate; quartz-talc carbonate; quart-carbonate-mariposite; and quartz-carbonate-mariposite-sulphides +/- gold (see Figure 2).

Economic Significance and Deposit Setting

The economic significance of this deposit type in the western Cordillera is demonstrated by historic gold production (Schroeter et al., 1989). In British Columbia, a total of six gold camps have produced more than one million ounces of gold and have accounted for approximately 80% of the province's historical gold production. Three of these gold camps have been classified as mesothermal vein deposits with a defined ophiolitic association. In addition, of added economic significance for this deposit type is the fact that a majority of placer gold camps in British Columbia are closely associated with accreted oceanic terranes (Hodgson et al., 1982).

These gold deposits are hosted by structures within or marginal to ophiolitic crustal and/or mantle lithologies. Having formed at oceanic crustal depths of 6 to 12 kilometers, the tectonic setting suggests the presence of deep crustal structures along which reverse movement must have occurred (Ash et al, 1991). These crustal structures were most likely active during collision and ophiolitic obduction processes and account for major vertical displacements that are observed within these gold camps. These crustal rocks appear to be significant as they provide competent lithologies suitable for the development of dilational fractures during the ore deposition process. In most of the areas throughout British Columbia it has been observed (Ash et al, 1991) that there is a spatial and temporal association between mineralization and syn- to primarily post-accretionary felsic magmatism.

In the Atlin area, lode-gold mineralization is hosted by structures either within or marginal to a relatively flat-lying, dismembered and imbricated ophiolitic complex. This complex overlies with marked structural discordance, a lithologically variable imbricated package of oceanic metasedimentary and metavolcanic rocks, interpreted to represent a remnant subduction accretionary complex (Ash et. al., 1991). Furthermore the timing of the lode-gold mineralization reflects both the timing of oceanic closure and ophiolitic obduction, evidenced by the ending of oceanic crustal formation (Monger, 1984; Cordey, 1990) arc volcanism (Tipper, 1984), and the shedding of oceanic material into the Bowser Basin (Monger, 1984). Felsic magmatism is spatially and temporally related to mineralization and tectonism. Throughout most of the Atlin gold camp, areas of listwaenitic alteration with anomalous gold values are in close proximity or immediately adjacent to a felsic dyke or stock.

The setting of the TOG gold occurrence, located within one km of the southern boundary of the MAG claims, is hosted in shallow dipping, strongly magnetic, altered and sheared ultramafic rocks (see Map 1). This setting has recently been recognized as an important prospect for gold of the White Gold-Underworld-Kinross type (Mackenzie and Craw, 2010).

Exploration History

Historically work on the MAG property can be generally associated with previous exploration work in the area that focused on the TOG gold occurrence. Originally the claim block associated with the TOG occurrence extended as far north as the southwest shoreline of Squanga Lake which encompassed the current southern block of the MAG claims.

The areas was originally staked as Pan Claims 1-4 (Y75492) in June 1973 by G.W. McLeod. They were then restaked in November, 1976 by G. McLeod and R. Eastman as SEA claims 1-16 (YA8404) and transferred to Hermanson Holdings Ltd. and McNamara Coal Ltd. in March, 1977. Between 1978-1984 the area was withdrawn from staking as it was a part of the Alaska Highway pipeline corridor.

The area was then restaked as Jube claims 1-10 (YA82536) in July 1984 by G. McLeod and E. Johnson, who hand trenched and then added Jube claims 11-13 (YA92624), Jube claims 15-32 (YA92726) and Jube claim 14 (YA92746) in July, 1985.

In January, 1987, Dunvegan Exploration Company Ltd. staked TOG claims 10-16 (YA96648) and TOP claims 1-44(YA96668) on the northwest side of the Jube claims. In April, 1988, Duvegan acquired the remaining 10 Jube claims and applied to rename them TOG claims 1-10 (YA82536). In July, 1988 they restaked the TOG claim block to the northwest as GOT claims 1-16 (YB20460) and also restaked the northwest end of the TOP claims as POT claims 1-16 (YB20476) and added TOG claims 11-24 (YB20466). They then carried out bulldozer trenching on the TOG claims. In December 1988, Dunvegan then staked TOG claims 25-44 (YB24638) and in February, 1989 staked TOG claims 45-73 (YB25431) and GOT claims 17-29 (YB25460).

During 1989, Dunvegan conducted a lot of exploration work in the area comprising of road construction, soil sampling, magnetic and VLF surveys, and detailed geological mapping on the main TOG showing and focused work also on the TOG 1-10 claims (YA82536).

In 1989 Dunvegan Exploration Limited conducted a two fold geophysical program designed to define the boundaries of major structure(s) and to delineate any secondary structures within the major zone at TOG. The surveys include ground magnetometer and VLF-EM surveys and modeled after successful exploration efforts at the Golden Bear (Muddy Lake) gold deposit in north-central British Columbia. A total of 1.64 line kilometers of grid lines were collected. The magnetic data was generally found to be characterized by a gradient decreasing east to west. VLF data showed the presence of several conductors which were interpreted to represent the traces of fault and/or shear zones. Some of the conductors also appeared to be conformable with geological contacts. Coincident VLF conductors and magnetic lows were therefore thought to represent alteration along the defined VLF structure associated with depletion of magnetite.

Over the TOG showing itself, there was a correlation of the VLF conductors with narrow graphitic horizons that in themselves were conformable with mineralized horizons and could be traced over 140 meters and open to the south. Davidson (1989) concluded that the geophysical surveys were successful in:

- Delineating differing geological lithologies;
- Defining geological structures which could provide structural control for emplacement of mineralization; and,
- Indicate zones of potential alteration.

Davidson concluded that it would be important to determine the relationship between the VLF conductors on the TOG showing and the mineralization by further geophysical studies.

On behalf of Sourdough Resources Inc., McKeown Exploration Services of St. John's, Newfoundland completed a ground magnetometer survey of the MAG claims south of the Alaska Highway and just west-southwest of the TOG showing. A total of 59.6 line kilometers were surveyed during September, 2011. Interpretation of the survey results was completed by Dr. C. J. Hale of Intelligent Exploration, Campbellford, ON. He noted that the magnetic field on the south MAG claims was generally strongest along the western, southern and eastern boundaries of the survey area with a strong decreasing gradient in the magnetic intensity observed from the west and east edges in the central section of the south survey area. Hale (2011) noted that a well-defined, north-south striking magnetic high trend was observed in the southeast section and extended several hundreds of meters northward from the south boundary. This magnetic relief of approximately 2500-3000nT, was deemed to be consistent with the presence of free magnetite in serpentinized ultramafic rocks. Areas with lower magnetic relief in the central part of the map area were interpreted as overthrust Permian mafic volcanic and carbonate oceanic sequences (Hart, 1996).

Hale (2011) concluded that the ground magnetometer survey successfully outlined several magnetic high anomalies that were associated with rock units that dipped shallowly to the west-southwest and that the area was "quite favorable for gold mineralization…it appears to share similarities with the rocks hosting the TOG showing". Hale (2011) also interpreted the magnetic trends on the MAG property to reflect the northeastern margin of a Permian floor sequence thrust from the southwest over the Stikinian basement and he then approximated the location of the thrust fault and concluded it to be located within or near the margin of the same thrust sheet on the TOG claims.

Hale (2011) recommended further exploration work to comprise of:

- A geological mapping and sampling program in the southern half of the survey area, including a trenching program;
- That the prospective leading edge of an interpreted thrust fault, determined from the analysis of the geophysical data, be used as a guide to development of a grid survey for with a soil geochemical sampling program to look for gold and arsenic anomalies;
- Additional ground geophysical surveys be conducted because the quartz vein hosting the TOG Showing coincides with a conductor outlined by a VLF-EM survey (Webster, 1990). Also IP surveys were recommended to follow-up favorable results from the geological and geophysical surveys as they would detect both conductive (graphitic layers) and non-conductive (disseminated sulphides) features that could possibly then be correlated with areas hosting potential gold mineralization.

Work completed in the area by governmental survey efforts includes:

- Geological mapping at a scale of 1:250,000 for the Teslin 105C sheet was completed by the Geological Survey of Canada (Mulligan, 1963, Gordey and Stevens, 1994) and the Whitehorse 105D sheet (Wheeler, 1961).
- A geological atlas of the NTS 105/115 sheets was later compiled at a 1:1,000,000 scale (H. Gabrielse et al, 1980).
- Hunt et al., (1995) completed the most recent work that included a geological interpretation of an airborne geophysical survey. This work inferred the presence of thrust faults and associated ultramafic rocks of ophiolitic origin, within Permian- to Triassic-aged volcanic and sedimentary rocks of the Cache Creek Terrane.
- Reconnaissance-level stream silt sampling was conducted by the Geological Survey of Canada on NTS map sheets 105C and 105D (Friske et. al., 1985). Results in the area by other exploration companies have demonstrated anomalous values of gold, silver and copper in soils and in localized shear zones that relate to ophiolitic thrust sequences.

Based on the listwaenite gold model and related publications on that topic including Ash et al., (1991) and Ash (2001), and the presence of aeromagnetic anomalies in the region (that are potential target areas as they exhibit possible magnetic destruction processes contiguous with the boundary areas between continental edge sediments and ophiolitic thrust sequences oceanic slices), Sourdough Resources Inc. undertook this study. It was hoped that study results would:

- Identify possible extensions of the TOG showing into the MAG property:
- Identify coincident soil anomalies with the geophysical anomalies;
- Further the understanding of possible structural controls in the property areas; and

- Conduct trenching with the aim of exposing outcrops.

Mineral Occurrences in the Squanga Lake Area

TOG Showing (after Minfile 105C28)

Mineralization at the TOG Showing comprises of terahedrite, chalcopyrite, galena and sphalerite which all occur with visible gold. Dunvegan (1989) reported visible gold in at least 13 samples over a strike length of 26 meters and across a true width of 5 meters, with assay values of up to 41.482oz/ton gold recorded from grab samples and up to 2.119 oz/ton gold over 0.46 meters from chip samples. Many of these samples also returned anomalous values of silver (> 50ppm). Enven though it was found by Dunvegan that the individual widths over which the visible gold occurred was not large, there was a consistency to the occurrence of gold along the exposed strike length of the structure. Also the visible gold was not limited to one shear fracture, but was noted to exist in several mineralized graphitic shears over a true width of 5 meters. The shear fractures in both the hanging wall and footwall are in contact with a massive, buff weathered, calc-silicate unit containing disseminated pyrite and chrome mica, that was noted to possibly be an altered dyke that sheared into the main vein structure (Davidson, 1989).

The mineralization is associated with a second phase of quartz which is clear, grey and vuggy and which cuts the massive white quartz, or as ribbon-banded quartz , along the vein margins. The quartz vein subcrop was mapped for a minimum strike length of 120 meters, and the zone of carbonatization on surface was estimated to be at least 85 meters wide with higher silicification in at least 10 meters of the carbonatized zone. The mineralized veins appear to be strongly structurally controlled by faults and/or shears (Ballantyne, 1989). The mineralized zone strikes northwest/southeast and dips towards the southwest at 45 degrees.

The gold tends to be coarse and native and in most cases, appears to be confined to the veins and not present in the altered wall rock. At TOG, high gold values are geochemically associated with elevated levels of silver, zinc, cadmium, galena, copper, and sometimes arsenic and antimony. But Dunvegan (Davidson, 1989) did report that soil geochemistry in over 450 samples was problematic and inconclusive likely due to poor soil development and quality, a light cover of glacial till, permafrost and swampy ground.

Hunt et al (1995) concluded that exploration in the TOG region should concentrate on zones hosting the faulted contacts between these two terranes and on the margins of the ultramafic bodies, particularly adjacent to faults or gabbroic units.

Of significance to the TOG Showing and that of the majority of the mineral occurrences from Atlin through to northeastern portion of Marsh Lake, are the oceanic ultramafic units of dunites, hartzburgites and pyroxenites that occur within the Cache Creek Terrane rocks. The TOG claims straddle the boundary between Mississippian Upper Traissic Cache Creek oceanic volcanics and sediments and Upper Triassic interarc clastics. Of additional significance is that within 20 kilomters of the TOG claims to the east, is a large hornblende granodioritic pluton of Mid Cretaceous age which was a likely heat source for any of the mineralization within this immediate area.

Seaforth Showing (After Minfile 105C011)

The area is located on the north side of the Alaskan Highway approximately 25 km west of Johnsons Crossing and 7.5 km west of Squanga Lake and was re-mapped at 1: 250 000 scale in 1994 by Gordey and Stevens. The area is located entirely within the oceanic Cache Creek Terrane, a terrane composed of structurally complex successions of Mississippian to Jurassic basalt, carbonate, chert and greywacke and ultramafite.

The occurrence is located at the southwest end of a large serpentinized peridotite body, part of a large ultramafic package, Carboniferous to Triassic in age that dominates the area. Although no public records can be located it appears early exploration interest was focused on an occurrence of short fibre asbestos that occurs sporadically at the contact between the peridotite body and massive andesitic and basaltic flows. An Early Cretaceous dioritic dyke intrudes the package.

McLeod staked these claims to check the peridotite bodes potential to host platinum group elements (PGE's). An exploration program conducted by Dodgex Ltd in 1986 on the northeast side of the peridotite body 3 km to the northeast, located a chromite-rich tabular zone of dunite (Minfile Occurrence #105C 012) in a layered ultramafic sequence. A 1 m chip sample collected across the exposed portion of the zone assayed 33.5% chromium oxide, 145 ppb platinum and 2 ppb palladium. In 2002 McLeod prospected and sampled the area which was covered by a separate claim block. A grab sample collected by McLeod returned a total PGE value of 1 740 ppb and led him to stake the FH claims.

Chromite Showing (After Minfile 105C012)

The area is located entirely within the oceanic Cache Creek Terrane, a terrane composed of structurally complex successions of Mississippian to Jurassic basalt, carbonate, chert and greywacke and ultramafite.

The original occurrence was discovered by J. Dodge in 1987, who traced a float train of chromite-bearing dunite boulders back to an exposed massive banded, tabular zone of dunite measuring approximately 4 m wide and at least 20 m long. The dunite is part of a layered ultramafic sequence, Carboniferous to Triassic in age that includes basal hartzburgite, interlayered hartzburgite and dunite and an upper succession of gabbro-pyroxenite-andesite. The sequence is weakly to strongly serpentinized and intruded by a few scattered monzonite plugs and dykes of Early Cretaceous age. A few short-fibre asbestos veins occur along the eastern edge of the ultramafic body. A 1 m chip sample collected across the exposed portion of the zone assayed 33.5% chromium oxide, 145 ppb platinum and 2 ppb palladium.

Possible Timing of Mineralization

In the Atlin area, the timing of lode-gold mineralization, as inferred from mariposite radiometric ages, clearly reflects both the timing of oceanic closure and ophiolite obduction, as evidenced by the ending of both oceanic crustal formation (Monger, 1984; Cordey, 1990), arc volcanism (Tipper, 1984), and the shedding of oceanic material into the Bowser Basin (Monger, 1984) – See Figure 2-3-4.

Even though dating of mineralization is not available from the TOG or other showings in the area to date, it is generally thought that the age of mineralization will be similar to the proximal Atlin Camp.

Exploration Guidelines

Ash et al., (1991), Ash (2001) and numerous other contributors who have studied listwanitic alteration sequences in the Cache Creek Terrane, and in particular those within the proximal Atlin gold camp provided some exploration guidelines that were considered in this study effort and are worthy of any exploration effort that is focused on identifying lode-gold deposits in the Squanga Lake area.

These included:

- Systematic surface mapping should focus on the tectonic setting and the spatial distribution of the listwanite alteration suite (Ash etal.,, 1991).
- Efforts to understanding the alteration mineralogy and intensity are important to distinguish as they can vary systematically away from the controlling structure and the focus of significant mineralization is typically associated with silicified zones (veins or stockworks) at the core of the structural zone or its related splays (Ash et al., 1991)
- It is important wherever possible to distinguish pre-accretionary, allochthonous, ophiolitic mantle and metamorphic or crustal plutons from those plutonic rocks which are syn- to post-collisional and intrude the accreted oceanic package as this will help to evaluate the tectonic setting. An example provided was that of the "Bralorne diorite" or "Bralorne intrusion" which through a systematic examination was determined to be an obducted, dismembered ophiolitic assemblage that was subsequently tectonically transported to its current position and not intruded into its present position as implied by its name (Ash et al, 1991).
- Geochemical indicators could include (after Ash, 2001):
  - A marked increase in potassium content adjacent to the gold-bearing veins;
  - Ba and V are mobile during refractory processes of mantle partial melting and could be selectively enriched in the melt fraction produced during the melting in

    - the derived ultramafic cumulate rocks. Also one could expect a possible enrichment of Mg in these areas as well.
    - Mariposite (Cr-muscovite) is associated with many of the quartz veins and zones of silicification that are often restricted or adjacent to the controlling fracture
    - Gold bearing hydrothermal systems are generally low in sulphide content, ranging from 2-5%.
    - Bozek (1989) who studied listwanitic alteration haloes on the Yellowjacket and Pictou Properties (Atlin area) noted that there was a positive correlation between elevated gold and higher concentrations of other metals (Cu, Pb, Zn, As, Ag) at the Pictou showing.
    - Ballantyne and MacKinnon (1986) examined a number of gold occurrences in the Atlin area and reported that associated elements included Ag, As, Ni, Co, Ba, Sb, Te and Pb were consistently present in the gold-bearing quartz veins.
- IP surveys could serve to detect both conductive (graphitic layers) and non-conductive (disseminated sulphides) features that could possibly then be correlated with areas hosting potential gold mineralization (Hale, 2011).
- That the prospective leading edge of an interpreted thrust fault, determined from the analysis of the geophysical data, be used as a guide to development of a grid survey for with a soil geochemical sampling program to look for gold and arsenic anomalies (Hale, 2011).

Property Geology

Due to the lack of rock exposures, the property geology is inferred and remains as previously described in the region by work done in the region by exploration companies such as Dunvegan Exploration Company Limited and numerous survey mapping efforts (see Map 2) and descriptions of Cache Creek units which are found to be remarkably similar throughout the vast geographic extent of the Western Cordillera.

At TOG, Dunvegan mapped several units as follows:

Unit 1: Light green, fine grained volcanics, including tuffs and flows (greenschist facies), generally massive with remnant white feldspar crystals in more medium grained phases.

Unit 2: Black banded cherts that appear to be strongly folded and occur as lensoid ribbons or boudins within the volcanics.

Unit 3: Mafic lenses of gabbro, diorite and pyroxenite, exhibiting chloritic alteration. Dioritic rocks may be strongly pyritized.

Unit 4: coarse crystalline peridotites and related ultramafics. The peridotites are often found to contain large pyroxene crystals that weather to a brown color, are contained within a back fine –grained groundmass. Adjacent to tectonic contacts, the peridotites are strongly serpentinized and foliated. Other descriptions of the ultramafic unit were described in Ash (2001).

Harzburgites were noted to be commonly bright orange or dark red weathering and dark purple-brown to black on fresh surfaces. Altered varieties of harzburgite were often found to contain many generations of crosscutting, resistant quartz veins and sometimes flecked with green mariposite (Chrome mica and balck magnetite).

Serpentinites are noted to be commonly bright green to black or blue on weathered and fresh surfaces, with random fabrics and slickenside surfaces. The serpentinite is thought to be largely derived from hydrated harzburgite, some of which has survived as relict pods. Hydration is enhanced above subduction zones due to dewatering of the down going slab and may be especially vigorous during the first few million years following initiation of a subduction zone. This hydration expansion forces serpentinite to the surface as flows and/or by elevating ultramafic horst blocks. Fluid venting on the resulting seamounts produces carbonate and silicate chimneys (Ash, 2001).

On the MAG claims in hand dug pits and trenches there is an abundance of fragments of harzburgites and serpentinites in the central portion of the southern property, especially in lower elevations and coinciding with low magnetic areas. These may be assigned to the Nahlin Ultramafic suite (CPu).The harzburgite fragments have been found to contain mariposite and occasional black magnetite. In addition, many siliceous and carbonatized pebbles were found although noted as often being quite rounded suggesting that they have been transported and may not be representative of underlying units. Occasional angular pebbles of chert have also been found in these same pits. These may be assigned to the Kedahda Formation (CPk).

Additionally within the trench, fragments of pale grey to tan and locally orange coloured carbonate were found. These may be assigned to the Horsefeed Formation Carbonate (CPh), and are a distinctive feature of the Cache Creeek Terrane. In the Atlin area, these carbonates are commonly interbedded with chert, argillite, and lesser wacke of the Kedadha Formation (Monger, 1975).

More detailed mapping of pits and/or trenches in the area may serve to help define the possible underlying geology. Current depths of areas tested are limited to about 5' with the capacity of the Candig and no areas tested uncovered outcrop. Geophysical surveys commonly used in the placer industry need to be undertaken to determine possible depth of overburden and if it is thought to be within 5 meters a large excavator may be a worthwhile consideration

A total of 178 soil samples were collected this season comprised of:

Sampled area	No. of samples
Random preliminary sampling	12
Trench sampling	23
Grid Sampling (Areas B &C)	143
Total samples	178

Grid Sampling

Jeff Bond, a surfical geologist with the Yukon Geological Survey, visited the property for one day along with our Chief Project Geologist and Mr. Riley Gibson, Project Supervisor with All-In Exploration who were hired to complete the till sampling program. Jeff Bond recommended a broad program of sampling with 100 meter line spacing and 50 meter sample spacing be conducted over the most prospective area of the central portion of the property and extended toward the southeast with the aim to define geochemical trends and help define at a preliminary level the extent of glacial travel of material.

A total of 143 samples were collected in Grids "B" and "C" (See assay report WH1225088 and Maps 3 and 4 - Mag Property Soils 2012). For each sample, notations included the waypoint in UTM coordinates, slope angle, physiography, tree cover, ground cover, depth, moisture, colour, horizon, texture, origin, sample quality, other features and notes (see Table 2). Sample numbers included 10684-10732, 10901-10940, 08344-08347, 10178-10198 and EL001-EL012.

Jeff Bond also recommended detailed compilations of till fabrics be completed in a couple of locations. This was completed at two stations with UTM coordinates (1) 575919E by 6700026N on the west side of a SE-NW trending meltwater channel on a steep slope, and (2) 576470E by 6699785N on the western edge of "C" block on a gentle northeasterly trending slope (See Figures 3A and B). The author is unfamiliar with till fabric mapping and therefore plans to meet with both Riley Gibson and Jeff Bond to discuss an interpretation of these results which will be reported in a supplementary memo to this report and submitted to YMIP.

Random sampling was conducted in several areas throughout the property on reconnaissance traverses conducted by the author and Riley Gibson.

Trench Sampling

In addition, two trenches were completed southeast of Zone C in the valley floor (see Figure 4). The trenches were designed to provide a cross section of the magnetic gradient previously identified in the area. Both soil and pebble samples in the trenches were collected at one meter intervals.

Trench A was located at UTM 575884 easting/6700364 northing to 575890/6700363. Six till samples of approximately 2-3 kg of material each and numbered 10001-10006 (see Assay certificate WH12224099) were collected from this site along with six soil samples T2: A1-A6 (see Assay certificate WH12225400). These samples were taken from a mix of 10% clay, 50% pebbles and 30-40% rounded pebbles. Rusty angular fragments were all noted to be quartz rich and veined in a light grey to rusty brown groundmass..

Trench B was located at UTM 575921 easting/6700367 northing to 575935 easting/6700361 northing. 17 till samples of approximately 2-3 kg of material each and numbered 10007-10029 (see Assay Certificate WH12224099) and 17 soil T2:B1- T2B17 were collected from this trench (see Assay certificates WH12225400). Trench B had a higher sand content as compared to Trench B and was closer to the elevated bank. It contained less pebbles (15-20%) and also contained very few rusty angular fragments. It had a darker grey-black coloration.

Discussion of Results

Limited results collected from the 2012 program were encouraging. The 2012 program was severely hampered by permitting delays due to a very lengthy (6 months) environment assessment applied by YESAB that resulted in all work being initiated during fall type weather conditions and eventually having to be discontinued as a result of frozen ground conditions and snow cover.

Preliminary Random Samples

Random soil, till and rock samples collected throughout the southern portion of the property area and from a combination of material collected in hand dug pits and occasional glacial erratics did not result in any anomalous values of precious or base metals.

Grid Sampling

As previously noted, 143 till samples from Grids A and C in the southern portion of the property area were collected. No samples were anomalous in precious or base metal content. One sample EL005 has a slightly anomalous arsenic value of 46.2 ppm. Indicator minerals such as Bi, Co, Cr, Mg, and Fe also were not anomalous. This sampling failed to identify any trends in mineralization and/or provide information that could help interpret possible impacts of material travelled from glaciation. The grid survey did serve to identify the location of material that contained rusty fragments that are likely comparable to similar material collected in the trenches and to possibly provide background values of metals/minerals that could be used for comparative purposes in other areas sampled. The significance of the rusty fragments found in some of the hand dug pit areas is yet to be determined as they also do not appear to have any precious or base metal content.

Background values from the average of the 143 samples for specific elements were found to be as follows:

Element	Volume Measurement	Possible Background Value
Au	ppb	1.32
Ag	ppm	0.0098
As	ppm	1.64
Bi	ppm	0.035
Co	ppm	2.59
Cr	ppm	12.65
Cu	ppm	9.42
Fe	%	0.63
Hg	ppm	0.10
K	%	0.022
Mg	%	0.18
Mn	ppm	99.77
Ni	ppm	11.77
P	ppm	124.06
Pb	ppm	1.49
S	%	0.0064
Sr	ppm	7.73
Sb	ppm	0.14
Te	ppm	0.007

Trench Sampling

Of the material collected from both trenches, larger till samples versus regular size soil samples appeared to provide a better sample result. Three (3) anomalous gold values of 92.8 ppb (sample 10015) and greater than 100 ppb (samples 10001 and 10029) were collected from the trenches. The samples with gold anomalous value of greater than 100ppb were then further tested using assay technique AUROR43 (ALS testing code) and gave values of 0.16 ppm and 0.11 ppm respectively. All of the till samples from the trenches were note to have elevated As, Co, Cr, Mn, P, and Ni values and slightly elevated Cu, Fe, Mg, Mg, Pb and Te. Rock fragments did not provide any anomalous gold or precious metal values. This may be explained by the lack of carbonatization in all fragments collected.

Recommendations

Further work is recommended on the southern portion of the MAG property to follow up on the identified geochemical gold-in-soil anomalies. This work should include:

- Follow up soil testing to be conducted to both determine repeatability of the elevated gold assays in the trenches, and on a tighter line spacing (25 meters) with 25 meter sampling stations to possibly link current anomalies and/or distinguish possible narrow zones of altered serpentinites.
- Extension of the existing trenches both to the west and the east to provide a complete cross section of the valley floor and test pitting of the elevated banks on either side of the valley. It is thought that the valley may represent fault zone and for that reason is a significant area of interest. Additional trenching should also be conducted throughout the valley floor to fully assess this area of possible interest.
- The area should be evaluated for its potential for placer gold, especially in the valley floor.
- Trenching and/or test pitting in all grid areas should be collected with the Candig to both collect deeper samples, expose rock sequences, and/or establish a better understanding of the depth of glacial cover.
- Follow-up sampling should be conducted in Grids A and C where sampling indicated the presence of rusty pebbles as this may be an indicator of proximity to an area of interesting prospectivity.
- Geophysical surveys should be conducted to
    - help determine the depth of the overburden and outcrop horizon as this may indicate that it may be worthwhile to utilize a larger excavator to provide excavation at depth to expose outcrops.
    - An IP survey should be considered to help identify the presence of structural controls such as faults etc,.

With continued positive results a drill program would then be recommended to provide a better understanding of the local geology and tectonic setting and to follow up on identified coincident soil and geophysical anomalies.

In addition, little work has been completed on the northwest portion of the MAG property although limited geological mapping has indicated the presence of altered serpentinites, the presence of massive chromite showings, and the area has also been deemed as having potential for platinum-group-element (PGE) mineralization. Exploration efforts in this area should include:

- Trail development: the establishment of a 2.5 meter wide trail to allow for ATV access into the area as current access is poor and requires a minimum of 2.5 hour traverse to reach areas of exploration interest;
- Geological mapping and prospecting: detailed mapping at a scale of 1;2500 or less should be conducted in the areas of the chromite showings and mapping at a preliminary level at a scale of 1:10,000 be conducted over the area of the magnetic gradient identified from regional aeromagnetic surveys;
- Grid establishment; and,
- A ground electromagnetic survey (possibly combined with an Induced Polarization survey) be completed over the grid area(s).

The budgets for these proposed exploration activities is included in Appendix B.

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Appendix A: Certificate of Qualifications

Certificate of Qualification

I, Kevin J. Brewer, PGeo, hereby certify that:

I) I am a self-employed Consulting Geologist and sole proprietor of:
39627 Yukon Inc, 6 Carnelian Court, Whitehorse, Yukon Y1A 6A3

2) I graduated with a Bachelor of Science (Honours) Degree in geology from Memorial University Of Newfoundland (MUN), St. John's, Newfoundland, in 1984,

3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) and the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (APEGNL).

4)I have worked as a geologist for more than 25 years since my graduation from MUN.

5) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6) I am responsible for preparation of all sections of this assessment report.

7) I am not aware of any material facts or material changes with respect to the subject matter of the assessment report not contained within the report, of which the omission to disclose makes the report misleading.

8) I have read National Instrument 43-101 and form 43-101I'1; however, this Assessment Report has not been prepared in compliance with that instrument and form,

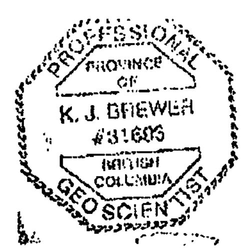
9) I consent to the filing of this Report with the Department of Energy, Mines and Resources, Government of Yukon.

10) The effective date of this report is February 18, 2013.

Dated this 18th' day of February, 2013,

"Kevin Brewer"

Kevin Brewer, MBA, BSc (Hons), PGeo
Address: 6 Carnelian Court
Whitehorse, Yukon Y IA 6A3
Telephone: 867-633-4260
Fax: 867-668-7127
E-mail: kbrewer80@hotmail.com



Appendix B: Proposed Exploration Budgets

Proposed Exploration Budgets 2013 and Beyond
Sourdough Resources Inc.

MAG South

Activity	*Amount*
Geological Support	$7,500
Seismic survey	$10,000
Trenching	$5,000
Assays	$4,000
Subtotal	$19,000

MAG Northwest

Activity	*Amount*
Trail Development	$5,000
Geological Prospecting and Mapping	$7,500
Assays	$5,000
Subtotal	$17,500

Reporting	$2,500
Field Expenses, Misc.	$2,500
TOTAL	$41,500

Appendix C: Assay Certificates

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

ALS Minerals

To: SOURDOUGH RESOURCES
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 3-OCT-2012
Account: SODORE

Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219222

Sample Description	Method	WEI-21	Au-ST43	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOR	0.02	0.0001	0.01	0.01	0.1	0.2	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
MAG1		0.27	0.0035	0.02	1.69	9.1	<0.2	<10	360	0.59	0.17	0.56	0.13	30.2	15.2	58
MAG2		0.70	0.0052	0.02	1.23	5.2	<0.2	<10	290	0.41	0.10	0.37	0.04	26.7	6.6	37
MAG2A		0.28	0.0018	0.02	0.92	4.8	<0.2	<10	150	0.22	0.06	0.30	0.06	14.10	5.5	32
MAG3		0.20	0.0028	0.02	0.98	4.8	<0.2	<10	160	0.18	0.07	0.31	0.06	15.30	5.6	33
MAG4		0.34	0.0038	0.01	1.21	4.9	<0.2	<10	270	0.35	0.09	0.37	0.03	23.1	6.7	36
MAG5		0.31	0.0034	0.02	0.87	3.4	<0.2	<10	180	0.24	0.07	0.32	0.04	17.50	4.8	30
MAG6		0.24	0.0054	0.50	1.58	9.6	<0.2	<10	410	0.55	0.17	0.70	0.41	26.3	14.4	55
MAG9		0.23	0.0022	0.05	1.25	4.2	<0.2	<10	240	0.30	0.09	0.30	0.06	16.75	6.1	35
MAG10T		0.67	0.0043	0.03	1.46	5.6	<0.2	<10	350	0.41	0.10	0.39	0.04	25.2	7.9	41
MAG10-2		0.31	0.0032	0.02	1.32	5.5	<0.2	<10	310	0.38	0.11	0.40	0.04	25.4	8.0	38
MAG107		0.54	0.0086	0.04	1.42	6.6	<0.2	<10	320	0.41	0.21	0.45	0.03	20.2	7.6	42
MAG109		1.00	0.0074	0.12	1.76	7.5	<0.2	<10	300	0.46	0.14	0.52	0.06	27.3	14.1	63

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

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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOR	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
MAG1		1.08	52.5	2.99	5.42	0.07	0.26	0.06	0.027	0.12	16.3	12.7	0.90	618	1.08	0.03
MAG2		0.58	24.6	1.92	3.85	<0.05	0.05	0.03	0.016	0.06	12.4	8.9	0.49	264	0.76	0.02
MAG2A		0.44	12.8	1.44	3.18	<0.05	0.04	0.01	0.011	0.05	7.1	7.6	0.42	185	0.85	0.01
MAG3		0.44	13.7	1.50	3.31	<0.05	0.05	0.02	0.014	0.05	7.8	7.9	0.44	194	0.82	0.01
MAG4		0.55	25.1	1.92	3.65	<0.05	0.09	0.05	0.016	0.06	11.9	7.8	0.51	277	0.76	0.02
MAG5		0.44	12.6	1.49	2.89	<0.05	0.04	0.02	0.013	0.04	9.0	6.4	0.38	190	0.76	0.02
MAG6		0.88	89.4	2.82	5.27	0.06	0.07	0.09	0.027	0.11	13.9	12.6	0.78	784	1.13	0.03
MAG9		0.72	18.1	1.68	3.66	<0.05	0.02	0.03	0.017	0.06	8.6	9.0	0.48	258	0.99	0.02
MAG10T		0.67	30.7	2.08	4.48	0.05	0.07	0.05	0.020	0.06	12.3	10.2	0.59	305	0.73	0.02
MAG10-2		0.61	28.3	2.06	4.08	0.05	0.06	0.05	0.018	0.06	12.3	9.0	0.55	346	0.83	0.02
MAG107		0.51	31.5	2.13	4.51	0.06	0.24	0.05	0.019	0.08	12.9	8.6	0.55	300	0.61	0.02
MAG109		0.98	54.6	2.87	5.49	0.09	0.25	0.06	0.025	0.13	17.0	11.9	0.84	491	0.90	0.03

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

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WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219222

Sample Description / Method / Analyte / Units / LOR	ME- MS41 Nb ppm 0.05	ME- MS41 Ni ppm 0.2	ME- MS41 P ppm 10	ME- MS41 Pb ppm 0.2	ME- MS41 Rb ppm 0.1	ME- MS41 Re ppm 0.001	ME- MS41 S % 0.01	ME- MS41 Sb ppm 0.05	ME- MS41 Sc ppm 0.1	ME- MS41 Se ppm 0.2	ME- MS41 Sn ppm 0.2	ME- MS41 Sr ppm 0.2	ME- MS41 Ta ppm 0.01	ME- MS41 Te ppm 0.01	ME- MS41 Th ppm 0.2
MAG1	0.42	71.2	580	7.9	9.8	0.001	<0.01	0.74	6.8	0.6	0.6	33.2	<0.01	0.03	5.2
MAG2	0.75	30.9	290	4.5	5.5	<0.001	<0.01	0.37	4.5	0.2	0.4	21.8	<0.01	0.02	4.1
MAG2A	0.82	28.5	320	4.0	7.0	0.001	<0.01	0.29	2.3	0.2	0.3	15.3	<0.01	0.03	2.2
MAG3	0.87	29.8	310	4.3	7.0	<0.001	<0.01	0.29	2.4	<0.2	0.3	15.8	<0.01	0.03	2.1
MAG4	0.56	28.8	410	4.4	5.1	<0.001	<0.01	0.37	4.1	0.4	0.3	21.8	<0.01	0.03	3.4
MAG5	0.69	20.9	250	3.3	5.1	<0.001	<0.01	0.28	2.4	<0.2	0.3	15.8	<0.01	0.02	3.4
MAG6	1.74	84.2	490	7.9	10.0	<0.001	0.01	0.89	5.8	0.8	0.5	37.6	<0.01	0.02	3.5
MAG9	0.96	29.5	360	4.6	7.5	<0.001	<0.01	0.33	2.6	<0.2	0.4	16.6	<0.01	0.02	1.9
MAG10T	0.61	34.1	320	5.1	5.7	<0.001	<0.01	0.44	4.4	0.3	0.4	25.7	<0.01	0.02	3.6
MAG10- 2	0.69	31.9	370	5.0	5.5	<0.001	<0.01	0.42	4.5	0.3	0.4	24.4	<0.01	0.02	3.6
MAG107	0.43	34.3	270	4.4	5.8	<0.001	<0.01	0.42	5.7	0.6	0.4	25.0	<0.01	0.03	3.2
MAG109	0.88	62.5	400	5.9	10.3	0.001	0.01	0.56	7.3	0.7	0.6	26.1	<0.01	0.03	4.3

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

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To: **SOURDOUGH RESOURCES**
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219222

Sample Description	Method Analyte Units LOR	ME- MS41 Ti % 0.005	ME- MS41 Tl ppm 0.02	ME- MS41 U ppm 0.05	ME- MS41 V ppm 1	ME- MS41 W ppm 0.05	ME- MS41 Y ppm 0.05	ME- MS41 Zn ppm 2	ME- MS41 Zr ppm 0.5
MAG1		0.125	0.13	0.70	58	0.20	12.95	64	10.9
MAG2		0.090	0.07	0.71	41	0.26	5.53	34	2.3
MAG2A		0.080	0.05	0.34	34	0.62	2.96	26	1.8
MAG3		0.083	0.04	0.36	35	0.17	3.02	27	1.6
MAG4		0.089	0.06	0.57	41	0.21	5.65	34	3.5
MAG5		0.087	0.05	0.47	36	0.17	3.34	26	1.7
MAG6		0.109	0.10	0.76	56	0.24	10.85	65	2.8
MAG9		0.075	0.08	0.40	36	0.21	3.31	29	0.8
MAG10T		0.093	0.08	0.55	44	0.19	5.48	36	3.0
MAG10- 2		0.087	0.08	0.68	44	0.21	6.84	36	2.4
MAG107		0.113	0.06	0.66	48	0.18	11.00	31	7.8
MAG109		0.151	0.13	0.78	62	0.22	15.95	49	8.3

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Finalized Date: 1- OCT- 2012
Account: SODORE

Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219221

Sample Description	Method	WEI- 21	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
	Analyte	Recvd Wt.	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
	LOR	0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01	10
Mag- 1R		0.27	<0.2	5.14	12	10	340	1.0	<2	0.43	<0.5	82	452	140	13.7	20
Mag- 8		0.40	<0.2	0.34	7	<10	320	<0.5	<2	0.27	<0.5	3	51	39	1.50	10
Mag- 99		1.34	0.3	3.40	11	<10	220	0.8	<2	1.66	0.5	21	85	94	4.44	10
Mag- 100		0.58	<0.2	2.05	<2	<10	530	<0.5	<2	17.0	<0.5	21	60	25	4.30	10
Mag- 101		0.25	<0.2	0.12	4	<10	20	<0.5	<2	0.35	<0.5	77	488	10	4.23	<10
Mag- 101A		0.51	<0.2	0.12	21	<10	20	<0.5	<2	0.28	<0.5	106	541	20	4.93	<10
Mag- 102		0.95	<0.2	1.78	7	<10	290	<0.5	<2	0.67	<0.5	9	39	26	2.40	<10
Jakes 1		1.23	<0.2	0.20	5	<10	40	<0.5	<2	4.10	<0.5	9	11	27	1.76	<10
Jakes 2		0.45	<0.2	2.62	18	10	70	<0.5	<2	5.10	<0.5	28	42	21	6.05	10

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Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219221

Sample Description	Method / Analyte / Units / LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
Mag- 1R		<1	0.42	10	5.20	1795	1	<0.01	432	1030	<2	<0.01	<2	28	26	<20
Mag- 8		<1	0.22	10	0.35	92	6	0.07	17	390	7	0.11	<2	3	37	<20
Mag- 99		<1	1.04	20	1.48	320	5	0.49	107	1190	8	1.86	4	3	232	<20
Mag- 100		<1	0.16	30	1.52	1270	<1	0.01	68	1490	4	0.86	<2	9	264	<20
Mag- 101		<1	0.01	<10	16.85	790	<1	<0.01	1355	50	<2	0.02	<2	4	14	<20
Mag- 101A		1	<0.01	<10	17.85	875	<1	<0.01	1830	30	<2	0.15	<2	5	7	<20
Mag- 102		<1	0.85	<10	1.22	487	<1	0.04	31	820	11	0.01	3	2	53	<20
Jakes 1		<1	0.10	<10	1.56	578	1	<0.01	29	110	7	0.11	4	2	73	<20
Jakes 2		<1	0.12	<10	2.04	985	<1	0.01	39	510	<2	0.07	<2	25	125	<20

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Finalized Date: 1- OCT- 2012
Account: SODORE

Project: MAG/Jakes

CERTIFICATE OF ANALYSIS WH12219221

Sample Description	Method / Analyte / Units / LOR	ME- ICP41 Ti % 0.01	ME- ICP41 Tl ppm 10	ME- ICP41 U ppm 10	ME- ICP41 V ppm 1	ME- ICP41 W ppm 10	ME- ICP41 Zn ppm 2
Mag- 1R		0.08	<10	<10	233	<10	175
Mag- 8		0.18	<10	<10	55	<10	27
Mag- 99		0.24	<10	<10	103	<10	126
Mag- 100		0.01	<10	<10	44	<10	57
Mag- 101		<0.01	<10	<10	8	<10	8
Mag- 101A		<0.01	<10	<10	10	<10	7
Mag- 102		0.19	<10	<10	43	<10	63
Jakes 1		<0.01	<10	<10	8	<10	29
Jakes 2		0.10	<10	<10	204	<10	55

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3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG.

CERTIFICATE OF ANALYSIS WH12225400

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt. kg 0.02	Au-ST43 Au ppm 0.0001	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.2	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1
T2-A-1		0.32	0.0034	0.05	1.16	14.1	<0.2	<10	200	0.40	0.10	0.33	0.16	19.60	15.0	122
T2-A-2		0.39	0.0042	0.08	1.08	12.2	<0.2	<10	180	0.37	0.10	0.34	0.13	20.8	13.7	109
T2-A-3		0.29	0.0025	0.08	1.26	10.2	<0.2	<10	220	0.40	0.10	0.33	0.21	19.25	13.0	104
T2-A-4		0.28	0.0030	0.09	1.31	15.5	<0.2	<10	210	0.41	0.10	0.34	0.17	24.0	17.6	132
T2-A-5		0.27	0.0043	0.12	1.34	26.4	<0.2	<10	240	0.47	0.11	0.38	0.19	21.8	17.7	120
T2-A-6		0.23	0.0014	0.05	1.52	14.1	<0.2	<10	240	0.44	0.11	0.31	0.23	16.40	16.0	131
T2-B-1		0.46	0.0024	0.06	1.12	7.9	<0.2	<10	180	0.40	0.10	0.28	0.16	17.70	12.3	72
T2-B-2		0.47	0.0031	0.12	0.99	6.7	<0.2	<10	190	0.26	0.07	0.43	0.12	17.90	13.8	76
T2-B-3		0.49	0.0021	0.07	0.97	8.6	<0.2	<10	200	0.36	0.09	0.42	0.15	20.7	12.9	79
T2-B-4		0.58	0.0030	0.14	0.85	8.0	<0.2	<10	190	0.30	0.09	0.49	0.16	19.95	12.7	72
T2-B-5		0.49	0.0040	0.13	1.02	10.2	<0.2	<10	250	0.33	0.12	0.34	0.21	23.0	14.3	76
T2-B-6		0.52	0.0036	0.10	0.87	8.1	<0.2	<10	180	0.32	0.09	0.42	0.16	19.15	12.4	73
T2-B-7		0.44	0.0053	0.15	0.75	8.9	<0.2	<10	180	0.27	0.09	0.42	0.18	19.30	12.5	60
T2-B-8		0.74	0.0133	0.16	0.84	9.0	<0.2	<10	210	0.29	0.10	0.41	0.17	20.4	13.1	68
T2-B-9		0.43	0.0039	0.10	0.89	8.6	<0.2	<10	210	0.31	0.11	0.37	0.14	22.3	12.0	69
T2-B-10		0.26	0.0041	0.10	0.85	8.6	<0.2	<10	220	0.30	0.09	0.42	0.16	22.5	12.6	67
T2-B-11		0.31	0.0027	0.24	1.16	7.8	<0.2	<10	240	0.42	0.08	0.53	0.16	18.20	12.9	76
T2-B-12		0.28	0.0024	0.17	0.98	9.1	<0.2	<10	290	0.32	0.08	0.35	0.14	18.50	13.1	83
T2-B-13		0.27	0.0030	0.09	0.87	8.3	<0.2	<10	300	0.30	0.08	0.36	0.14	18.15	12.9	80
T2-B-14		0.28	0.0070	0.16	0.90	8.5	<0.2	<10	200	0.31	0.10	0.34	0.14	18.95	12.9	79
T2-B-15		0.32	0.0045	0.16	0.98	8.3	<0.2	<10	230	0.35	0.10	0.39	0.17	19.80	13.7	76
T2-B-16		0.36	0.0042	0.14	0.90	8.2	<0.2	<10	240	0.30	0.08	0.37	0.17	18.20	14.2	85
T2-B-17		0.31	0.0123	0.08	0.94	7.0	<0.2	<10	210	0.28	0.08	0.32	0.15	18.55	12.1	86

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To: **SOURDOUGH RESOURCES**
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG

CERTIFICATE OF ANALYSIS WH12225400

Sample Description / Method / Analyte / Units / LOR	ME- MS41 Cs ppm 0.05	ME- MS41 Cu ppm 0.2	ME- MS41 Fe % 0.01	ME- MS41 Ga ppm 0.05	ME- MS41 Ge ppm 0.05	ME- MS41 Hf ppm 0.02	ME- MS41 Hg ppm 0.01	ME- MS41 In ppm 0.005	ME- MS41 K % 0.01	ME- MS41 La ppm 0.2	ME- MS41 Li ppm 0.1	ME- MS41 Mg % 0.01	ME- MS41 Mn ppm 5	ME- MS41 Mo ppm 0.05	ME- MS41 Na % 0.01
T2- A- 1	0.93	23.7	2.35	4.03	0.08	0.08	0.02	0.016	0.07	10.2	9.5	0.87	339	0.85	0.01
T2- A- 2	0.81	24.6	2.16	3.89	0.08	0.08	0.02	0.015	0.07	10.5	9.3	0.85	298	0.86	0.01
T2- A- 3	0.89	20.5	2.31	4.39	0.06	0.04	0.02	0.017	0.07	9.4	9.6	0.80	347	0.89	0.01
T2- A- 4	0.93	26.6	2.55	4.30	0.08	0.06	0.01	0.019	0.07	10.4	10.2	0.95	387	1.13	0.01
T2- A- 5	0.98	27.4	2.64	4.51	0.08	0.06	0.02	0.021	0.09	11.4	10.5	0.87	452	0.94	0.01
T2- A- 6	0.94	19.7	2.64	5.24	0.07	0.03	0.01	0.021	0.07	7.5	12.1	0.88	389	1.07	0.01
T2- B- 1	0.72	19.8	1.98	3.75	0.07	0.07	0.01	0.015	0.06	8.4	9.0	0.64	275	0.83	0.01
T2- B- 2	0.89	26.6	1.99	3.79	0.09	0.07	0.02	0.011	0.11	9.7	11.7	0.88	353	0.67	0.01
T2- B- 3	0.78	22.9	2.04	3.46	0.09	0.07	0.02	0.015	0.07	9.3	8.4	0.76	360	0.80	0.01
T2- B- 4	0.78	27.5	1.94	3.30	0.09	0.08	0.03	0.013	0.07	10.1	8.0	0.84	374	0.82	0.01
T2- B- 5	0.79	30.5	2.38	3.74	0.08	0.06	0.04	0.016	0.07	11.7	9.0	0.76	424	1.23	0.01
T2- B- 6	0.79	23.7	2.15	3.27	0.08	0.10	0.02	0.014	0.07	10.0	8.0	0.74	361	0.92	0.01
T2- B- 7	0.77	25.0	2.01	3.07	0.09	0.05	0.03	0.013	0.07	10.0	7.2	0.73	449	0.87	0.01
T2- B- 8	0.79	25.1	2.06	3.36	0.11	0.10	0.03	0.013	0.08	10.2	7.9	0.80	460	0.86	0.01
T2- B- 9	0.80	27.5	2.09	3.46	0.10	0.10	0.02	0.016	0.08	11.7	8.1	0.76	378	0.92	0.01
T2- B- 10	0.85	24.2	2.04	3.32	0.10	0.10	0.02	0.013	0.08	11.3	8.1	0.75	478	0.82	0.01
T2- B- 11	0.75	22.8	2.08	4.09	0.10	0.11	0.03	0.014	0.07	11.1	6.6	0.76	403	0.82	0.05
T2- B- 12	0.90	25.9	2.12	3.80	0.09	0.11	0.03	0.015	0.10	9.9	7.3	0.82	413	0.81	0.01
T2- B- 13	0.82	23.4	2.04	3.38	0.09	0.10	0.02	0.014	0.08	10.7	6.2	0.78	487	0.81	0.01
T2- B- 14	0.84	25.2	2.02	3.46	0.09	0.11	0.03	0.015	0.08	10.7	6.7	0.80	428	0.89	0.01
T2- B- 15	1.06	28.1	2.11	3.78	0.09	0.11	0.03	0.016	0.10	10.7	7.1	0.83	484	0.80	0.01
T2- B- 16	0.88	24.8	2.11	3.37	0.09	0.10	0.03	0.014	0.07	10.3	6.4	0.82	600	0.88	0.01
T2- B- 17	0.77	21.7	1.96	3.41	0.07	0.10	0.02	0.015	0.07	11.5	6.4	0.73	346	0.69	0.01

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WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG

CERTIFICATE OF ANALYSIS WH12225400

Sample Description	Method Analyte Units LOR	ME- MS41 Nb ppm 0.05	ME- MS41 Ni ppm 0.2	ME- MS41 P ppm 10	ME- MS41 Pb ppm 0.2	ME- MS41 Rb ppm 0.1	ME- MS41 Re ppm 0.001	ME- MS41 S % 0.01	ME- MS41 Sb ppm 0.05	ME- MS41 Sc ppm 0.1	ME- MS41 Se ppm 0.2	ME- MS41 Sn ppm 0.2	ME- MS41 Sr ppm 0.2	ME- MS41 Ta ppm 0.01	ME- MS41 Te ppm 0.01	ME- MS41 Th ppm 0.2
T2- A- 1		0.97	143.5	430	5.3	8.4	<0.001	<0.01	0.78	6.1	0.4	0.3	17.3	<0.01	0.02	2.8
T2- A- 2		0.78	138.0	340	4.8	8.3	<0.001	<0.01	0.68	6.1	0.4	0.3	17.4	<0.01	0.02	2.8
T2- A- 3		1.30	124.5	440	5.5	9.2	<0.001	<0.01	0.65	5.3	0.4	0.4	17.0	<0.01	0.02	2.0
T2- A- 4		0.95	202	490	5.8	9.3	<0.001	<0.01	0.85	6.6	0.4	0.4	18.4	<0.01	0.02	3.0
T2- A- 5		1.15	157.5	710	6.6	11.4	<0.001	<0.01	1.17	6.9	0.4	0.3	20.4	<0.01	0.02	2.8
T2- A- 6		1.38	141.0	660	8.9	11.3	<0.001	<0.01	0.87	4.8	0.3	0.5	16.3	<0.01	0.03	2.0
T2- B- 1		0.93	97.3	540	4.7	7.3	<0.001	<0.01	0.48	4.2	0.3	0.3	15.1	<0.01	0.02	2.4
T2- B- 2		0.67	106.0	560	4.0	8.2	<0.001	<0.01	0.48	4.5	0.4	0.2	17.9	<0.01	0.01	2.8
T2- B- 3		0.63	102.5	630	5.0	7.4	<0.001	<0.01	0.57	4.7	0.4	0.3	20.3	<0.01	0.02	2.4
T2- B- 4		0.45	102.0	510	4.5	6.5	<0.001	<0.01	0.59	4.6	0.4	0.3	20.7	<0.01	0.02	3.2
T2- B- 5		0.81	128.0	530	6.1	7.6	<0.001	<0.01	0.66	4.9	0.4	0.3	22.8	<0.01	0.03	2.9
T2- B- 6		0.45	98.0	540	5.2	6.5	<0.001	<0.01	0.59	4.6	0.4	0.3	19.9	<0.01	0.02	2.6
T2- B- 7		0.52	94.9	550	5.4	5.8	<0.001	<0.01	0.61	4.1	0.4	0.3	19.7	<0.01	0.02	2.2
T2- B- 8		0.42	107.0	530	5.1	6.2	<0.001	<0.01	0.62	4.7	0.4	0.3	21.2	<0.01	0.02	2.6
T2- B- 9		0.40	105.5	470	5.1	6.2	<0.001	<0.01	0.59	5.9	0.4	0.3	18.9	<0.01	0.03	2.9
T2- B- 10		0.42	113.0	570	5.1	7.0	<0.001	<0.01	0.57	4.9	0.3	0.3	20.4	<0.01	0.02	2.9
T2- B- 11		0.57	115.0	560	5.4	5.7	<0.001	<0.01	0.67	5.3	0.4	0.3	56.7	<0.01	0.04	2.6
T2- B- 12		0.56	131.5	470	4.8	7.3	<0.001	<0.01	0.67	5.6	0.3	0.3	18.8	<0.01	0.03	2.5
T2- B- 13		0.50	127.0	450	5.1	5.9	<0.001	<0.01	0.69	5.1	0.3	0.3	18.1	<0.01	0.03	2.3
T2- B- 14		0.59	128.0	370	6.0	6.6	<0.001	<0.01	0.65	5.4	0.3	0.3	17.9	<0.01	0.03	3.6
T2- B- 15		0.55	129.0	500	5.3	8.0	<0.001	<0.01	0.73	5.2	0.4	0.3	20.3	<0.01	0.03	2.7
T2- B- 16		0.52	143.0	480	5.0	6.3	<0.001	<0.01	0.65	5.1	0.3	0.3	18.0	<0.01	0.04	2.3
T2- B- 17		0.75	110.5	410	4.7	6.1	<0.001	<0.01	0.57	4.6	0.3	0.3	16.3	<0.01	0.04	2.7

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

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

ALS Minerals

To: **SOURDOUGH RESOURCES**
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 3- OCT- 2012
Account: SODORE

Project: MAG

CERTIFICATE OF ANALYSIS WH12225400

Sample Description	Method / Analyte / Units / LOR	ME- MS41 Ti % 0.005	ME- MS41 Tl ppm 0.02	ME- MS41 U ppm 0.05	ME- MS41 V ppm 1	ME- MS41 W ppm 0.05	ME- MS41 Y ppm 0.05	ME- MS41 Zn ppm 2	ME- MS41 Zr ppm 0.5
T2- A- 1		0.090	0.10	0.62	47	0.20	7.19	35	3.2
T2- A- 2		0.080	0.09	0.62	43	0.19	8.28	33	3.5
T2- A- 3		0.091	0.09	0.52	47	0.21	6.56	39	1.3
T2- A- 4		0.086	0.11	0.74	50	0.21	6.77	38	2.2
T2- A- 5		0.086	0.12	0.71	49	0.24	8.99	40	2.6
T2- A- 6		0.096	0.09	0.42	50	0.34	3.74	44	1.4
T2- B- 1		0.079	0.07	0.45	41	0.21	5.06	31	3.1
T2- B- 2		0.121	0.11	0.56	41	0.18	8.21	32	3.0
T2- B- 3		0.070	0.09	0.57	42	0.18	6.94	32	3.0
T2- B- 4		0.074	0.09	0.54	40	0.17	7.67	35	3.7
T2- B- 5		0.078	0.10	0.57	42	0.18	8.42	42	2.9
T2- B- 6		0.078	0.10	0.54	46	0.19	7.21	34	4.3
T2- B- 7		0.073	0.11	0.47	41	0.19	7.54	33	2.0
T2- B- 8		0.081	0.11	0.53	43	0.20	8.56	35	4.1
T2- B- 9		0.084	0.10	0.60	49	0.19	8.96	36	4.6
T2- B- 10		0.078	0.11	0.56	43	0.21	8.49	34	4.4
T2- B- 11		0.079	0.11	0.68	46	0.20	10.70	34	4.1
T2- B- 12		0.093	0.13	0.71	47	0.21	9.32	35	4.2
T2- B- 13		0.075	0.11	0.65	45	0.98	10.15	33	3.7
T2- B- 14		0.084	0.12	0.96	43	0.21	9.93	33	4.1
T2- B- 15		0.091	0.13	0.60	45	0.20	9.12	38	4.4
T2- B- 16		0.082	0.13	0.62	45	0.22	9.61	35	4.0
T2- B- 17		0.089	0.09	0.61	42	0.18	8.38	35	3.9

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

ALS Minerals

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North Vancouver BC V7H 0A7
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To: **SOURDOUGH RESOURCES**
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 6- OCT- 2012
Account: SODORE

Project: MAG

CERTIFICATE OF ANALYSIS WH12225401

Sample Description	Method	WEI-21	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
	Analyte	Recvd Wt.	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
	LOR	0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01	10
T2R1		0.56	<0.2	1.71	3	<10	150	<0.5	<2	1.20	<0.5	29	72	39	5.07	<10
T2R- 1		1.08														
T2R2		0.59	<0.2	0.56	11	<10	190	<0.5	<2	0.16	<0.5	20	381	14	2.54	<10
T2- R- 2		0.79														
T2- R- 3		0.66	<0.2	1.10	205	<10	150	<0.5	<2	0.39	<0.5	42	326	27	3.89	<10
T2- R- 4		0.27	<0.2	2.20	86	<10	340	0.5	<2	0.54	<0.5	53	636	45	6.15	10
T2- R5		1.10	<0.2	3.13	27	<10	110	<0.5	<2	3.79	<0.5	23	143	144	7.83	10
T2- R6		0.49	<0.2	0.87	125	30	140	<0.5	<2	0.21	<0.5	93	1395	22	6.21	<10

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To: **SOURDOUGH RESOURCES**
3151C 3RD AVE
WHITEHORSE YT Y1A 1G1

Finalized Date: 6- OCT- 2012
Account: SODORE

ALS Minerals

Project: MAG

CERTIFICATE OF ANALYSIS WH12225401

Sample Description	Method / Analyte / Units / LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
T2R1		<1	0.11	10	2.29	747	1	0.32	112	1510	4	0.01	<2	5	102	<20
T2R- 1																
T2R2		<1	0.21	10	4.15	298	<1	0.03	455	100	5	0.03	<2	4	9	<20
T2- R- 2																
T2- R- 3		<1	0.13	<10	5.05	863	<1	0.02	738	470	4	0.01	18	8	17	<20
T2- R- 4		<1	0.52	10	1.74	1435	1	0.14	644	930	4	0.01	4	13	89	<20
T2- R5		<1	0.05	<10	3.40	1410	<1	0.08	102	650	3	0.01	4	31	44	<20
T2- R6		<1	0.09	10	13.75	760	<1	0.02	1585	930	3	0.01	6	9	9	<20

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WHITEHORSE YT Y1A 1G1

Finalized Date: 6- OCT- 2012
Account: SODORE

Project: MAG

CERTIFICATE OF ANALYSIS WH12225401

Sample Description	Method / Analyte / Units / LOR	ME- ICP41 Ti % 0.01	ME- ICP41 Tl ppm 10	ME- ICP41 U ppm 10	ME- ICP41 V ppm 1	ME- ICP41 W ppm 10	ME- ICP41 Zn ppm 2
T2R1		0.15	<10	<10	49	<10	87
T2R- 1							
T2R2		0.01	<10	<10	13	<10	20
T2- R- 2							
T2- R- 3		0.10	<10	<10	58	<10	34
T2- R- 4		0.08	<10	<10	102	<10	60
T2- R5		0.02	<10	<10	234	<10	81
T2- R6		0.01	<10	<10	52	<10	46

Appendix D: 2012 Expenditure Summary

2012 Exploration Expenditures - MAG Property
Sourdough Resources Inc.

Field Work	Rate	Days	Units	
field laborer - S. Baker	$ 275.00	20		$ 5,500.00
filed laborer - G. Sidney	$ 275.00	16		$ 4,400.00
geologist - K. Brewer	$ 500.00	24		$ 12,000.00
geologist asst - J. Costello	$ 350.00	25.5		$ 9,000.00
Field day rate	$ 100.00	85.5		$ 8,550.00
soil survey crew				$ 8,681.00
Equipment rental (see summary below)				$ 4,757.16
Mileage	0.61 per km	24	180km	$ 2,635.20
Fuel,oils, and maps				$ 93.65
Assays (see summary below)				$ 7,222.26
Report Preparation/Drafting	$ 500.00	4		$ 2,000.00
Total expenditures				**$ 64,839.27**

Equipment Rental Summary				
ATV (2)	40	24	48	$ 1,920.00
ATV tub	10	24		$ 240.00
Candig wet with operator*	549.29	4		$ 2,197.16
chainsaws (2)	10	40		$ 400.00
Total Equipment				$ 4,757.16

*provided at 75% of commercial rate

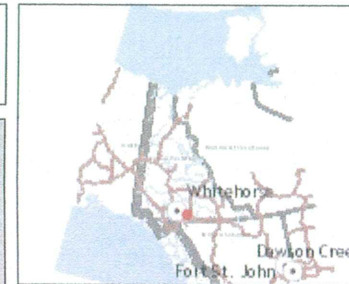
Assays	
WH12219221	$180.17
WH12250088	$4,812.54
WH12224099	$841.31
WH12267091	$101.12
WH12225401	$119.88
WH12225400	$745.75
WH12219222	$421.49
Total Assays	**$7,222.26**

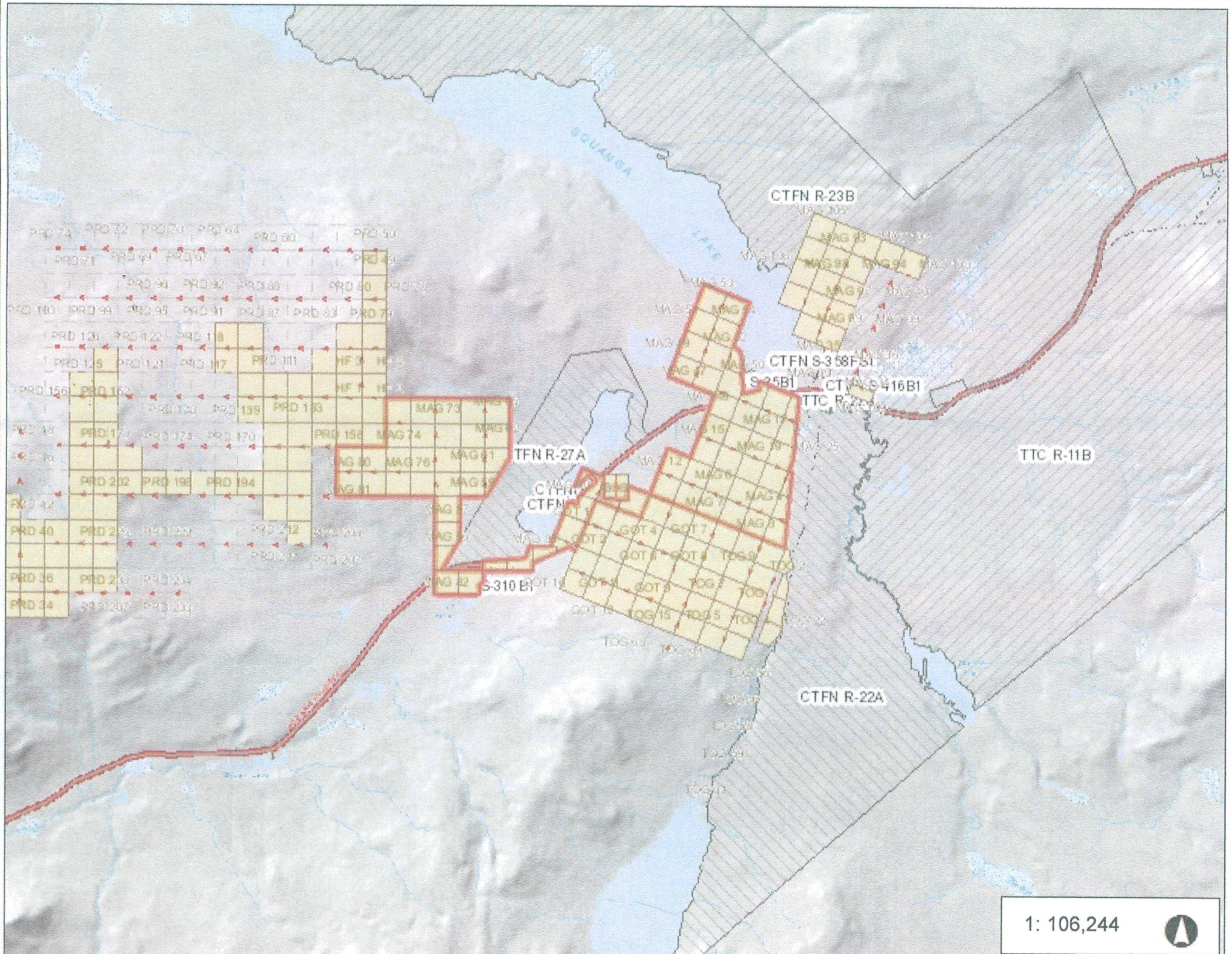
Appendix E: Figures, Maps and Tables

Mag Property - Location Map

Yukon Geological Survey

Yukon Energy, Mines and Resources





Legend

Quartz Claims (50K)
- Active and Pending
- Expired

Quartz Leases (50K)

Adjoin Quartz

Quartz Mining Land Use Perm
- Class 3
- Class 4

Quartz Staking Direction

Settlement Lands (Surveyed)
- A: Surface and Subsurface Rights
- B: Surface Rights
- FS: Fee Simple

Settlement Lands (Unsurveyec
- A
- B
- FS

Interim Protected Lands (Unsu

5.4 | 0 | 2.70 | 5.4 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Date Printed: 15-Feb-2013

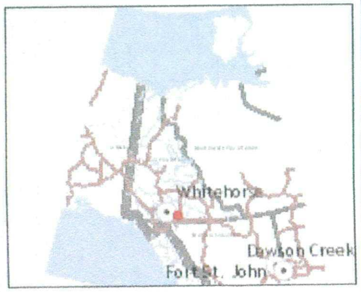
Notes

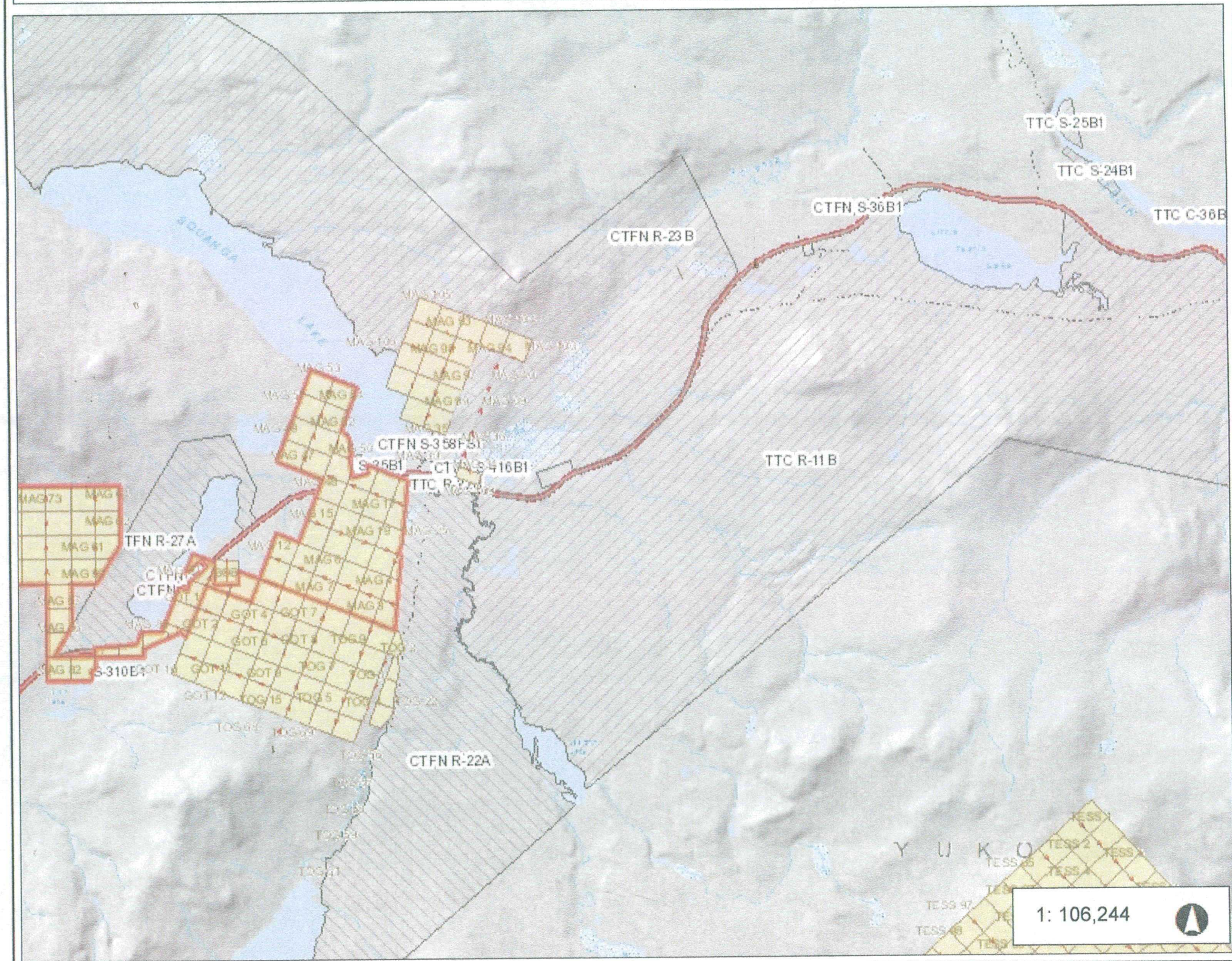
Sourdough Resources Inc. YMIP Grant - 2012

Claims and First Nations Lands
MAG Property

Yukon Geological Survey

Yukon Energy, Mines and Resources





Legend

- Placer Claims (50K)
  - Active and Pending
  - Expired
- Prospecting Leases
  - Active and Pending
  - Expired
- Adjoin Placer
- Placer Mining Land Use Permi
  - Class 3
  - Class 4
- Placer Baselines (50K)
- Placer Baselines (surveyed)
- Quartz Claims (50K)
  - Active and Pending
  - Expired
- Quartz Leases (50K)
- Adjoin Quartz
- Quartz Mining Land Use Perm
  - Class 3
  - Class 4
- Quartz Staking Direction
- Settlement Lands (Surveyed)
  - A: Surface and Subsurface Rights
  - B: Surface Rights
  - FS: Fee Simple
- Settlement Lands (Unsurveyed
  - A

Notes

Sourdough Resources Inc. 2012

5.4 0 2.70 5.4 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

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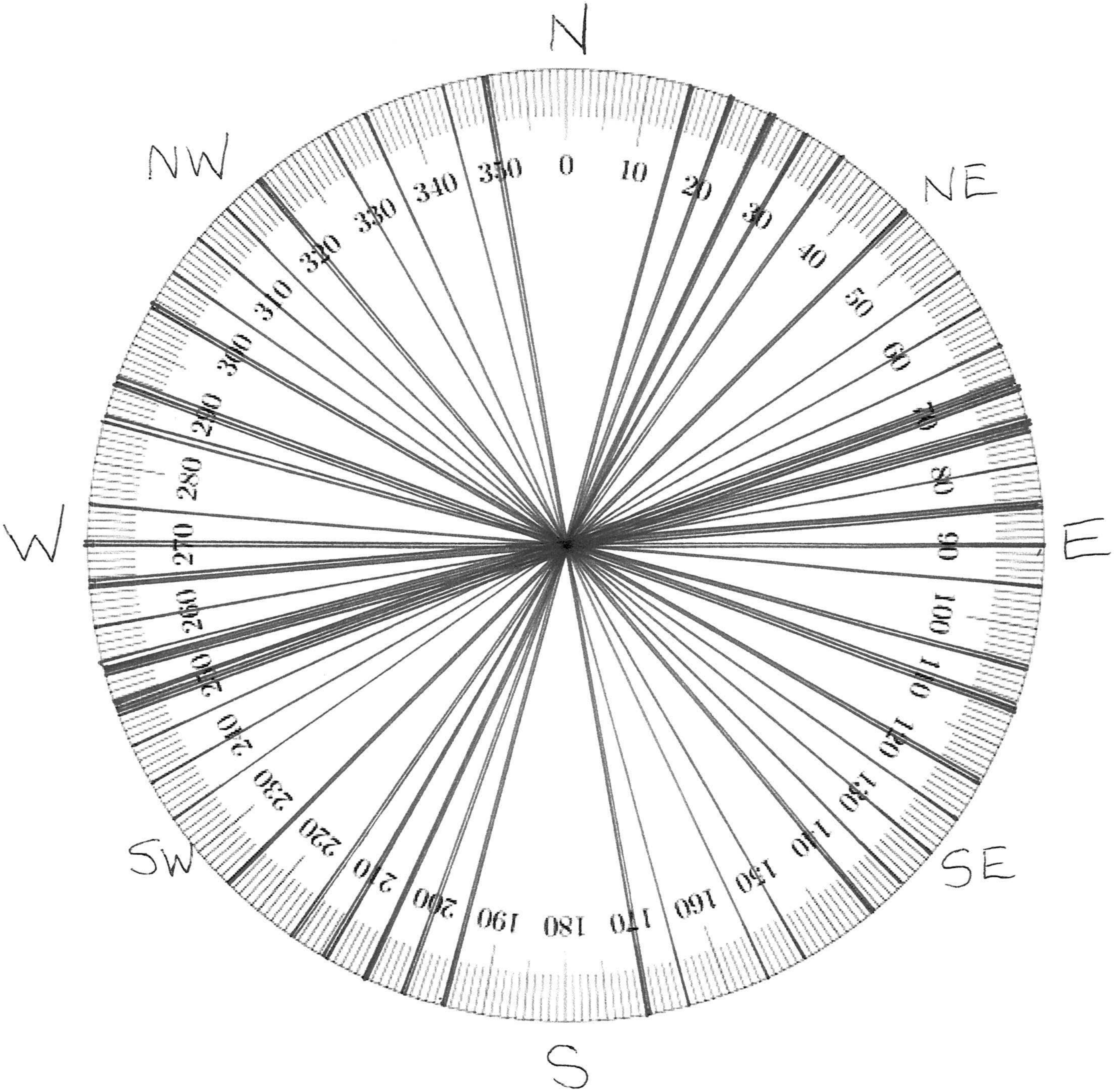
Date Printed: 20-Feb-2013

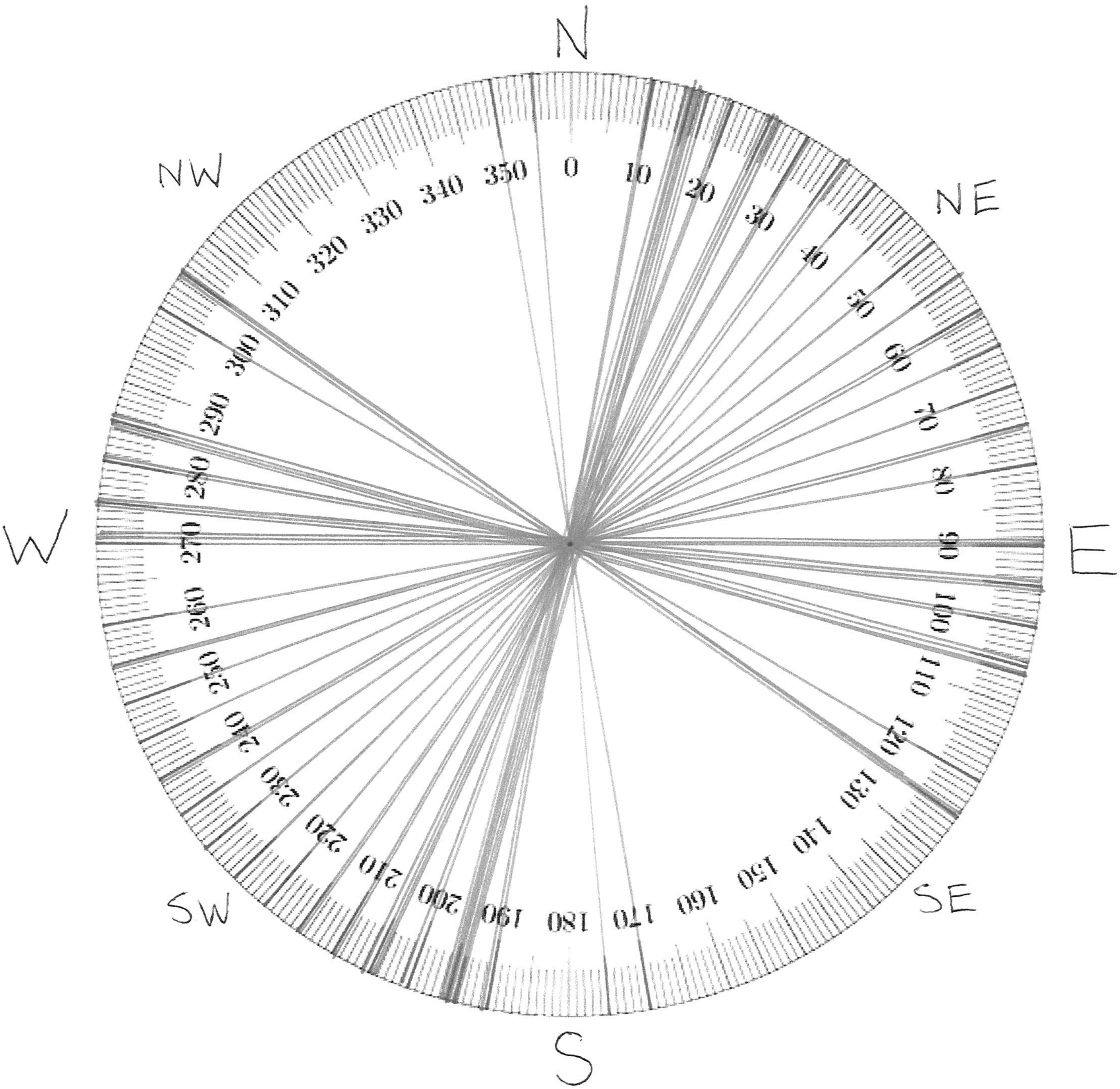


STATION 1 TILL FABRIC

575919 E, 6700026 N

UTM Zone 8

- On west side of SE → NW trending meltwater channel, near top of channel bank. Steep slope E.
- Sandy, matrix-rich glacial till w/small rocks (<20 cm diameter).



Station 2 Till Fabric

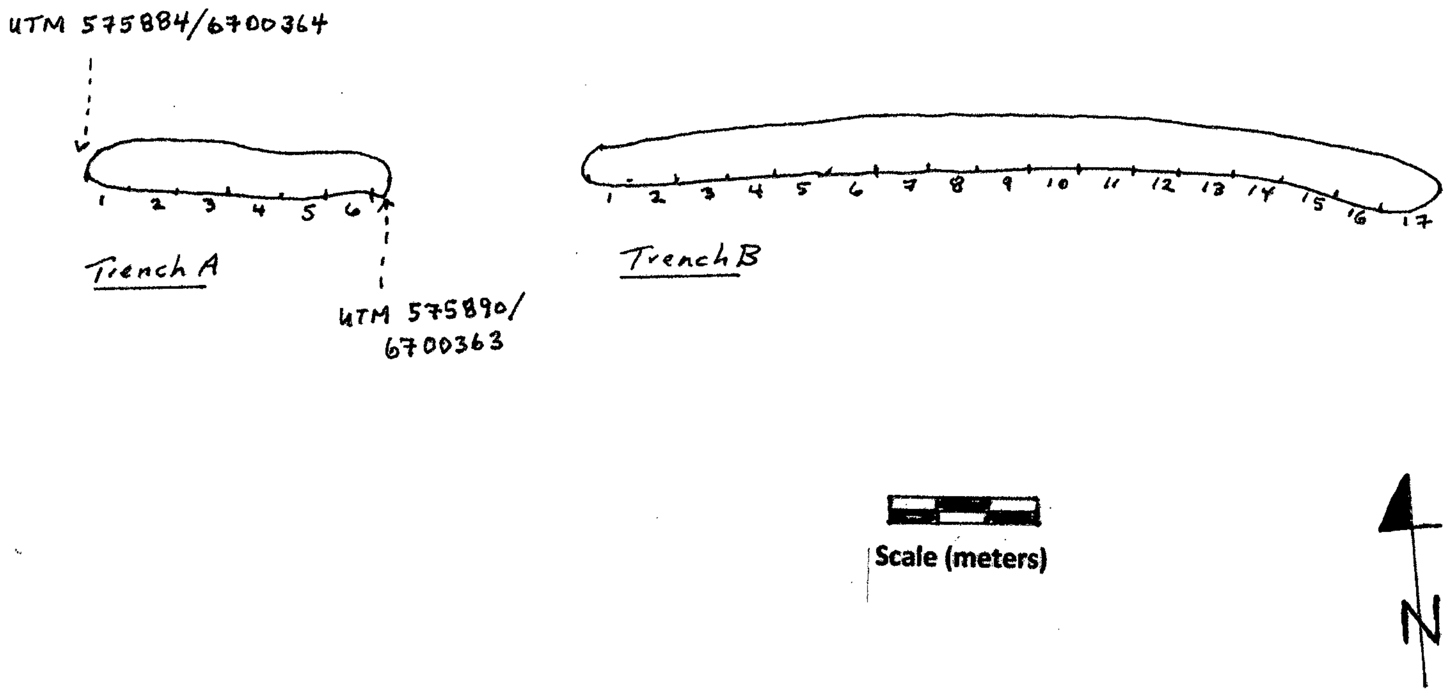
576470 E, 6699785 N

UTM Zone 8

- Western edge of "C" block, ~20 m off of trail. Gentle slope NE.
- Glacial till w/coarse matrix, lots of big rocks.

Trench and Sample Locations

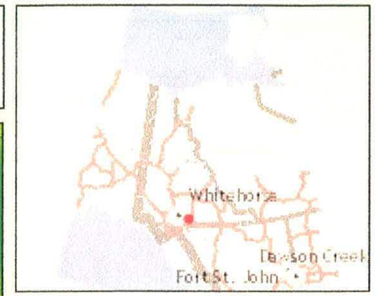
Southwest MAG Property

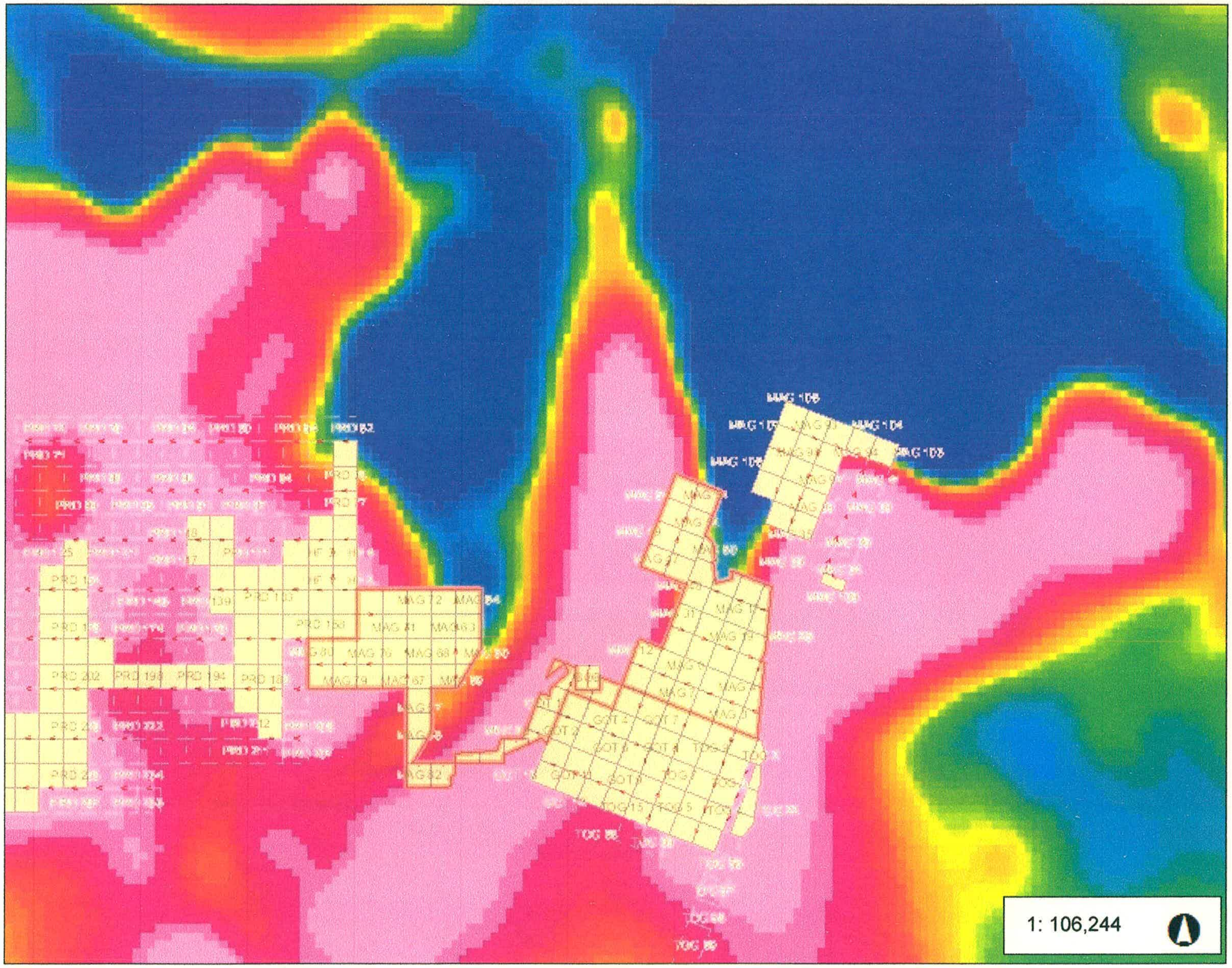


Regional Geophysics - MAG Property Area

Yukon Geological Survey

Yukon
Energy, Mines and Resources





Legend

Quartz Claims (50K)
- Active and Pending
- Expired

Quartz Leases (50K)

Adjoin Quartz

Quartz Mining Land Use Permi
- Class 3
- Class 4

Quartz Staking Direction

Residual Total Field (200m)
- Red: Band_1
- Green: Band_2
- Blue: Band_3

Notes

After Yukon Geological Survey

5.4 | 0 | 2.70 | 5.4 Kilometers

Yukon Albers

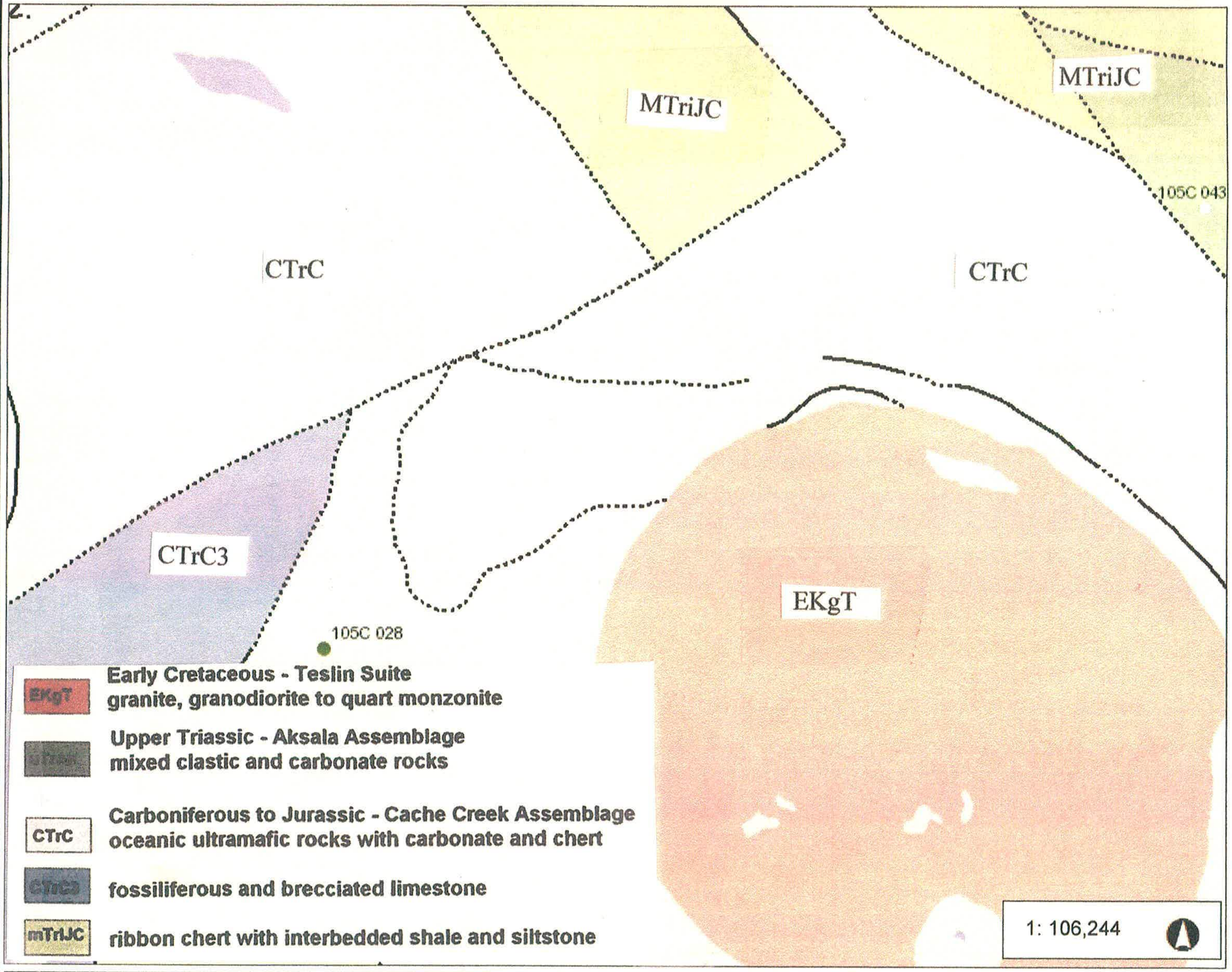
Produced from: Yukon Geological Survey MapMaker Online

Date Printed: 21-Feb-2013

Regional Geology
MAG Property

Yukon Geological Survey

Yukon Energy, Mines and Resources



Legend

Mineral occurrences (MINFILE

- Anomaly
- Deposit
- Drilled Prospect
- Open Pit Past Producer
- Open Pit Producer
- Prospect
- Showing
- Staked - No Work Recorded
- Underground Past Producer
- Unknown

Faults (250k)

- defined
- approximate
- assumed
- extrapolated
- defined
- extrapolated
- defined
- approximate
- assumed
- extrapolated
- defined
- approximate
- assumed
- extrapolated
- defined

Notes

After Yukon Geological Survey and Dunvegan Explorations Ltd. (2004)

5.4 0 2.70 5.4 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

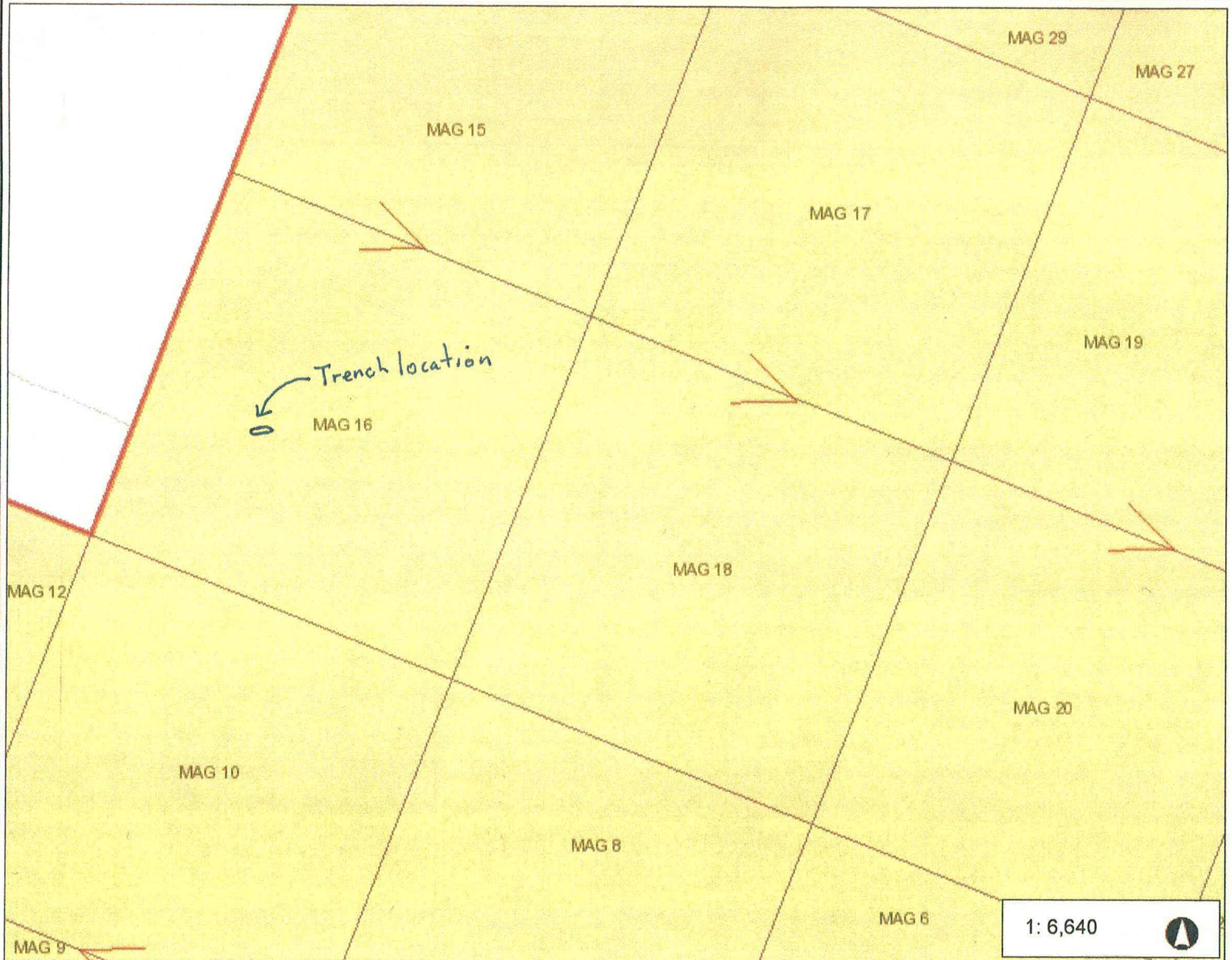
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Date Printed: 20-Feb-2013

Trench Location Map
MAG Property

Yukon Geological Survey

Yukon Energy, Mines and Resources



Legend

Placer Claims (50K)
- Active and Pending
- Expired

Prospecting Leases
- Active and Pending
- Expired

Adjoin Placer

Placer Mining Land Use Permi
- Class 3
- Class 4

Placer Baselines (50K)

Placer Baselines (surveyed)

Quartz Claims (50K)
- Active and Pending
- Expired

Quartz Leases (50K)

Adjoin Quartz

Quartz Mining Land Use Perm
- Class 3
- Class 4

Quartz Staking Direction

Settlement Lands (Surveyed)
- A: Surface and Subsurface Rights
- B: Surface Rights
- FS: Fee Simple

Settlement Lands (Unsurveyec
- A

0.3 0 0.17 0.3 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

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Date Printed: 20-Feb-2013

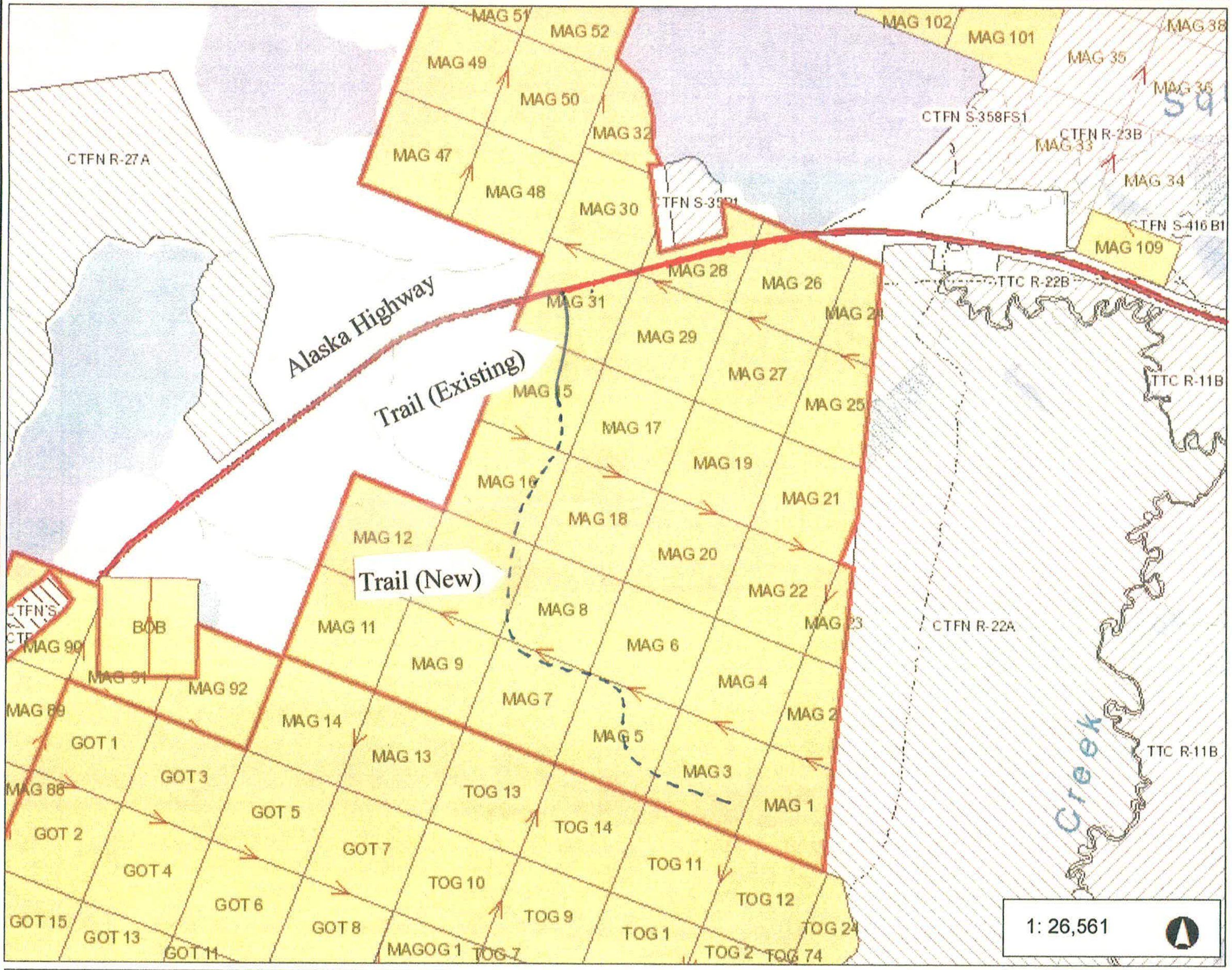
Notes

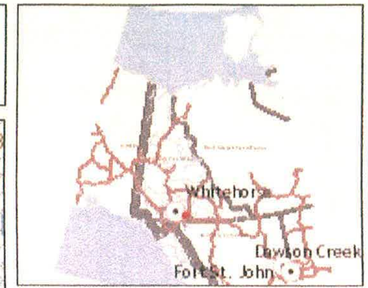
Sourdough Resources Inc. 2012

Yukon Geological Survey

Trail Location Map
MAG Property

Yukon Energy, Mines and Resources





Legend

Placer Claims (50K)
- Active and Pending
- Expired

Prospecting Leases
- Active and Pending
- Expired

Adjoin Placer

Placer Mining Land Use Permi
- Class 3
- Class 4

Placer Baselines (50K)

Placer Baselines (surveyed)

Quartz Claims (50K)
- Active and Pending
- Expired

Quartz Leases (50K)

Adjoin Quartz

Quartz Mining Land Use Perm
- Class 3
- Class 4

Quartz Staking Direction

Settlement Lands (Surveyed)
- A: Surface and Subsurface Rights
- B: Surface Rights
- FS: Fee Simple

Settlement Lands (Unsurveyec
- A

1.3   0   0.67   1.3 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Date Printed: 20-Feb-2013

Notes

Sourdough Resources Inc. 2012

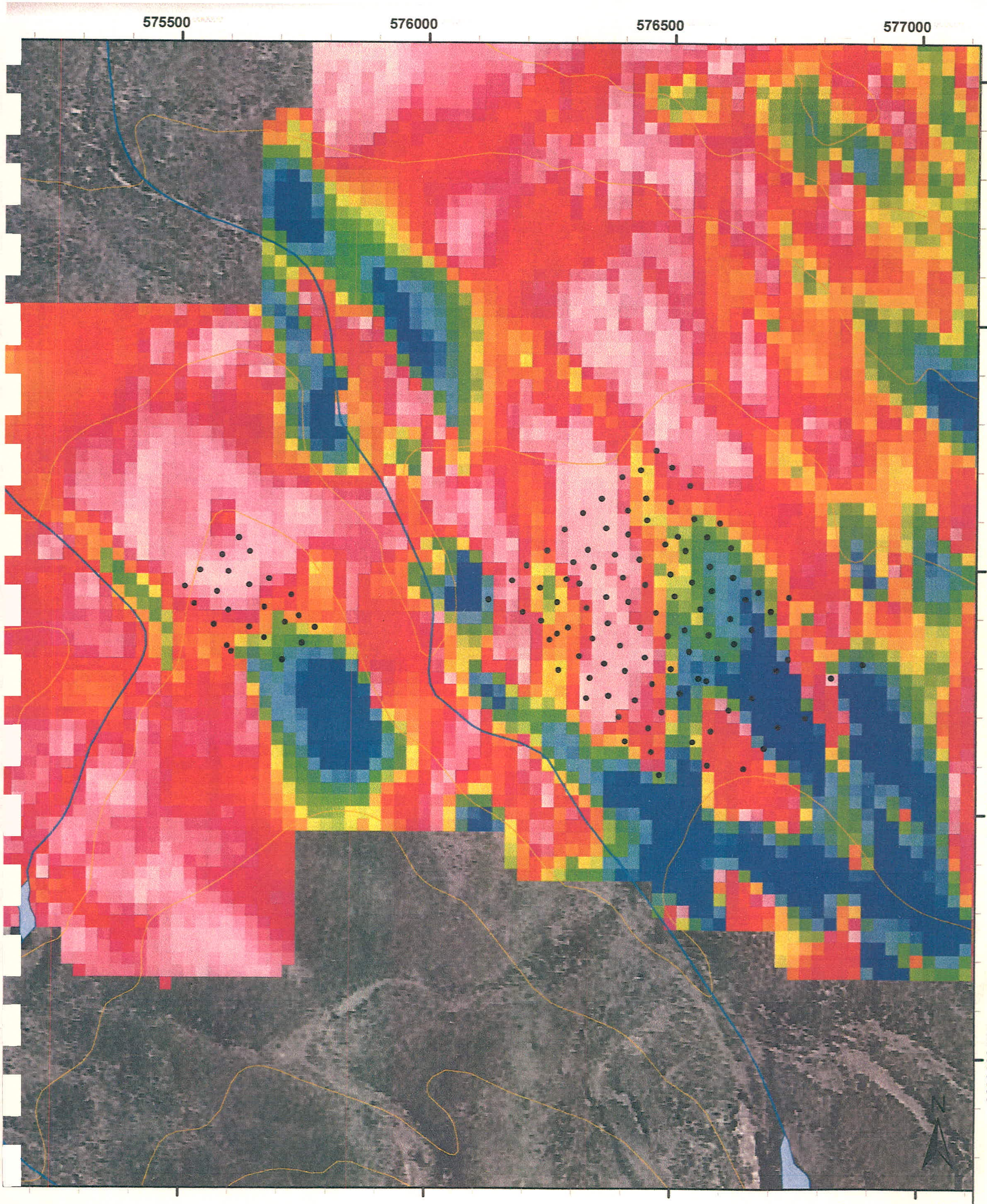
MAG Property Soils 2012

Legend

- Sample points
- Contour
- Watercourse
- Waterbody

0 62.5 125 250 375 500 Meters

1:10,000 NAD 1983 UTM Zone 8



Legend

- • Sample points
- Watercourse
- Contour
- Waterbody

MAG Property Soils 2012

0 62.5 125 250 375 500 Meters

1:10,000 NAD 1983 UTM Zone 8

MAG Claims - Sourdough Resources Inc.

NTS 105C 05 - Whitehorse Mining District

Grant No.	*RegType*	*Name*	*No.*	*Claim Owner*	*Claim Expiry Date*	*Status*
YE41593	Quartz	MAG	1	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41594	Quartz	MAG	2	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41595	Quartz	MAG	3	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41596	Quartz	MAG	4	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41597	Quartz	MAG	5	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41598	Quartz	MAG	6	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41599	Quartz	MAG	7	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41600	Quartz	MAG	8	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41601	Quartz	MAG	9	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41602	Quartz	MAG	10	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41603	Quartz	MAG	11	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41604	Quartz	MAG	12	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41605	Quartz	MAG	13	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41606	Quartz	MAG	14	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41607	Quartz	MAG	15	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41608	Quartz	MAG	16	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41609	Quartz	MAG	17	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41610	Quartz	MAG	18	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41611	Quartz	MAG	19	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41612	Quartz	MAG	20	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41613	Quartz	MAG	21	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41614	Quartz	MAG	22	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41615	Quartz	MAG	23	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41616	Quartz	MAG	24	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41617	Quartz	MAG	25	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41618	Quartz	MAG	26	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41619	Quartz	MAG	27	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41620	Quartz	MAG	28	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41621	Quartz	MAG	29	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41622	Quartz	MAG	30	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41623	Quartz	MAG	31	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE41624	Quartz	MAG	32	Sourdough Resources Inc. - 100%	3/1/2017	Active
YE62505	Quartz	MAG	47	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62506	Quartz	MAG	48	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62507	Quartz	MAG	49	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62508	Quartz	MAG	50	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62509	Quartz	MAG	51	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62510	Quartz	MAG	52	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62511	Quartz	MAG	53	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62512	Quartz	MAG	54	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62513	Quartz	MAG	55	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62514	Quartz	MAG	56	Sourdough Resources Inc. - 100%	6/3/2017	Active
YE62515	Quartz	MAG	57	Sourdough Resources Inc. - 100%	6/3/2017	Active

YE62516	Quartz	MAG	58	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62517	Quartz	MAG	59	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62518	Quartz	MAG	60	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62519	Quartz	MAG	61	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62520	Quartz	MAG	62	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62521	Quartz	MAG	63	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62522	Quartz	MAG	64	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62523	Quartz	MAG	65	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62524	Quartz	MAG	66	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62525	Quartz	MAG	67	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62526	Quartz	MAG	68	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62527	Quartz	MAG	69	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62528	Quartz	MAG	70	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62529	Quartz	MAG	71	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62530	Quartz	MAG	72	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62531	Quartz	MAG	73	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62532	Quartz	MAG	74	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62533	Quartz	MAG	75	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62534	Quartz	MAG	76	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62535	Quartz	MAG	77	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62536	Quartz	MAG	78	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62537	Quartz	MAG	79	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62538	Quartz	MAG	80	Sourdough Resources Inc. - 100%	6/3/2017 Active
YE62539	Quartz	MAG	81	Sourdough Resources Inc. - 100%	6/3/2017 Active

Sample #	Project	Sampler	Date	No Sample	Duplicate	Easting	Northing	UTM Zone	Waypoint	Weather
10684	MAG	L. Martin-Berry	12/10/2012	N	N	576476	6699579	8		Cloudy
10685	MAG	L. Martin-Berry	12/10/2012	N	N	576573	6699599	8		Cloudy
10686	MAG	L. Martin-Berry	12/10/2012	N	N	576543	6699647	8		Cloudy
10687	MAG	L. Martin-Berry	12/10/2012	N	N	576579	6699670	8		Cloudy
10688	MAG	L. Martin-Berry	12/10/2012	N	N	576616	6699712	8		Cloudy
10689	MAG	L. Martin-Berry	12/10/2012	N	N	576663	6699737	8		Cloudy
10690	MAG	L. Martin-Berry	12/10/2012	N	N	576711	6699793	8		Cloudy
10691	MAG	L. Martin-Berry	12/10/2012	N	N	576736	6699815	8		Cloudy
10692	MAG	L. Martin-Berry	12/10/2012	N	N	576888	6699804	8		Cloudy
10693	MAG	L. Martin-Berry	12/10/2012	N	N	576823	6699777	8		Cloudy
10694	MAG	L. Martin-Berry	12/10/2012	N	N	576771	6699696	8		Cloudy
10695	MAG	L. Martin-Berry	12/10/2012	N	N	576716	6699678	8		Cloudy
10696	MAG	L. Martin-Berry	12/10/2012	N	N	576688	6699635	8		Cloudy
10697	MAG	L. Martin-Berry	12/10/2012	N	N	576646	6699593	8		Cloudy
10698	MAG	L. Martin-Berry	12/10/2012	N	N	576459	6699626	8	C87	Cloudy
10699	MAG	L. Martin-Berry	14/10/2012	N	N	576327	6699735	8		Overcast
10700	MAG	L. Martin-Berry	14/10/2012	N	N	576371	6699740	8		Overcast
10701	MAG	R. Gibson	14/10/2012	N	N	576406	6699648	8	C77	Mainly cloudy
10702	MAG	R. Gibson	14/10/2012	N	N	576453	6699675	8	C78	Mainly cloudy
10703	MAG	R. Gibson	14/10/2012	N	N	576480	6699707	8	C79	Mainly cloudy
10704	MAG	R. Gibson	14/10/2012	N	N	576517	6699746	8	C80	Mainly cloudy
10705	MAG	R. Gibson	14/10/2012	N	N	576554	6699776	8	C81	Overcast
10706	MAG	R. Gibson	14/10/2012	N	N	576593	6699818	8	C82	Overcast
10707	MAG	R. Gibson	14/10/2012	N	N	576626	6699848	8	C83	Overcast
10708	MAG	R. Gibson	14/10/2012	N	N	576662	6699878	8	C84	Overcast
10709	MAG	R. Gibson	14/10/2012	N	N	576700	6699915	8	C85	Overcast
10710	MAG	R. Gibson	14/10/2012	N	N	576738	6699943	8	C86	Overcast
10711	MAG	R. Gibson	14/10/2012	N	N	576619	6700045	8	C87	Overcast
10712	MAG	R. Gibson	14/10/2012	N	N	576576	6700007	8	C56	Overcast, rain
10713	MAG	R. Gibson	14/10/2012	N	N	576540	6699974	8	C55	Overcast, rain
10714	MAG	R. Gibson	14/10/2012	N	N	576505	6699945	8	C54	Overcast, rain
10715	MAG	R. Gibson	14/10/2012	N	N	576468	6699910	8	C53	Overcast, rain
10716	MAG	R. Gibson	14/10/2012	N	N	576435	6699880	8	C52	Overcast, rain

10717	MAG	R. Gibson	14/10/2012	N	N	576395	6699842	8	C51	Overcast, rain
10901	MAG	C. Cardinal	14/10/2012	N	N	576393	6699697	8	C68	Mainly cloudy
10902	MAG	C. Cardinal	14/10/2012	N	N	576425	6699731	8	C69	Mainly cloudy
10903	MAG	C. Cardinal	14/10/2012	N	N	576461	6699764	8	C70	Mainly cloudy
10904	MAG	C. Cardinal	14/10/2012	N	N	576498	6699795	8	C71	Mainly cloudy
10905	MAG	C. Cardinal	14/10/2012	N	N	576535	6699831	8	C72	Overcast
10906	MAG	C. Cardinal	14/10/2012	N	N	576574	6699866	8	C73	Overcast, rain
10907	MAG	C. Cardinal	14/10/2012	N	N	576618	6699900	8	C74	Overcast, rain
10908	MAG	C. Cardinal	14/10/2012	N	N	576649	6699940	8	C75	Overcast, rain
10909	MAG	C. Cardinal	14/10/2012	N	N	576676	6699954	8	C76	Overcast, rain
10910	MAG	C. Cardinal	14/10/2012	N	N	576596	6700095	8	C48	Overcast, rain
10911	MAG	C. Cardinal	16/10/2012	N	N	576127	6699937	8	C1	Mainly cloudy
10912	MAG	C. Cardinal	16/10/2012	N	N	576175	6699975	8	C2	Mainly cloudy
10913	MAG	C. Cardinal	16/10/2012	N	N	576204	6700007	8	C3	Mainly cloudy
10914	MAG	C. Cardinal	16/10/2012	N	N	576246	6700037	8	C4	Mainly cloudy
10915	MAG	C. Cardinal	16/10/2012	N	N	576281	6700079	8	C5	Mainly cloudy
10916	MAG	C. Cardinal	16/10/2012	N	N	576319	6700113	8	C6	Overcast
10917	MAG	C. Cardinal	16/10/2012	N	N	576356	6700143	8	C7	Overcast
10918	MAG	C. Cardinal	16/10/2012	N	N	576397	6700187	8	C8	Overcast
10919	MAG	C. Cardinal	16/10/2012	N	N	576435	6700201	8	C9	Overcast
10920	MAG	C. Cardinal	16/10/2012	N	N	576467	6700241	8	C10	Overcast
10921	MAG	L. Martin-Berry	14/10/2012	N	N	576405	6699791	8		Overcast
10922	MAG	L. Martin-Berry	14/10/2012	N	N	576445	6699818	8		Overcast
10923	MAG	L. Martin-Berry	14/10/2012	N	N	576491	6699863	8		Overcast
10924	MAG	L. Martin-Berry	14/10/2012	N	N	576526	6699875	8		Overcast
10925	MAG	L. Martin-Berry	14/10/2012	N	N	576557	6699919	8		Overcast
10926	MAG	L. Martin-Berry	14/10/2012	N	N	576580	6699957	8		Overcast, rain
10927	MAG	L. Martin-Berry	14/10/2012	N	N	576623	6699985	8		Overcast, rain
10928	MAG	L. Martin-Berry	14/10/2012	N	N	576334	6699776	8		Overcast, rain
10929	MAG	L. Martin-Berry	14/10/2012	N	N	576363	6699805	8		Overcast, rain
08344	MAG	E. Long	14/10/2012	N	N	576570	6700066	8		Cloudy
08345	MAG	E. Long	14/10/2012	N	N	576527	6700038	8		Cloudy
08346	MAG	E. Long	14/10/2012	N	N	576496	6699990	8		Cloudy
08347	MAG	E. Long	14/10/2012	N	N	576445	6699968	8		Cloudy

10178	MAG	E. Long	14/10/2012	N	N	576267	6699867	8		Cloudy
10179	MAG	E. Long	14/10/2012	N	N	576234	6699893	8		Cloudy
10180	MAG	E. Long	14/10/2012	N	N	576267	6699932	8		Cloudy
10181	MAG	E. Long	14/10/2012	N	N	576312	6699970	8		Cloudy
10182	MAG	E. Long	14/10/2012	N	N	576341	6700004	8		Cloudy
10183	MAG	E. Long	15/10/2012	N	N	576383	6700029	8		Cloudy
10184	MAG	E. Long	15/10/2012	N	N	576410	6700070	8		Cloudy
10185	MAG	E. Long	15/10/2012	N	N	576448	6700099	8		Cloudy
10186	MAG	E. Long	15/10/2012	N	N	576496	6700136	8		Cloudy
10187	MAG	E. Long	16/10/2012	N	N	576535	6700170	8		Cloudy
10190	MAG	L. Martin-Berry	15/10/2012	N	N	576286	6699979	8		Overcast
10191	MAG	L. Martin-Berry	15/10/2012	N	N	576299	6700013	8		Overcast
10192	MAG	L. Martin-Berry	15/10/2012	N	N	576329	6700039	8		Overcast
10193	MAG	L. Martin-Berry	15/10/2012	N	N	576365	6700082	8		Overcast
10194	MAG	L. Martin-Berry	15/10/2012	N	N	576409	6700118	8		Overcast
10195	MAG	L. Martin-Berry	15/10/2012	N	N	576446	6700144	8		Overcast
10196	MAG	L. Martin-Berry	15/10/2012	N	N	576570	6699771	8		Overcast
10197	MAG	L. Martin-Berry	15/10/2012	N	N	575606	6699828	8		Overcast
10198	MAG	L. Martin-Berry	16/10/2012	N	N	575597	6699839	8		Mainly cloudy
10718	MAG	E. Long	14/10/2012	N	N	576411	6699933	8		Cloudy
10719	MAG	E. Long	14/10/2012	N	N	576369	6699888	8		Cloudy
10720	MAG	E. Long	14/10/2012	N	N	576339	6699857	8		Cloudy
10721	MAG	E. Long	14/10/2012	N	N	576312	6699820	8		Cloudy
10722	MAG	E. Long	14/10/2012	N	N	576270	6699792	8		Cloudy
10723	MAG	L. Martin-Berry	16/10/2012	N	N	575570	6699883	8		Mainly cloudy
10724	MAG	L. Martin-Berry	16/10/2012	N	N	575530	6699925	8		Mainly cloudy
10725	MAG	L. Martin-Berry	16/10/2012	N	N	575512	6699961	8		Mainly cloudy
10726	MAG	L. Martin-Berry	16/10/2012	N	N	575541	6699993	8		Mainly cloudy
10727	MAG	L. Martin-Berry	16/10/2012	N	N	575576	6699950	8		Mainly cloudy
10728	MAG	L. Martin-Berry	16/10/2012	N	N	575600	6699913	8		Mainly cloudy
10729	MAG	L. Martin-Berry	16/10/2012	N	N	575642	6699878	8		Mainly cloudy
10730	MAG	L. Martin-Berry	16/10/2012	N	N	575673	6699856	8		Mainly cloudy
10731	MAG	L. Martin-Berry	16/10/2012	N	N	575709	6699811	8		Mainly cloudy
10732	MAG	L. Martin-Berry	16/10/2012	N	N	576482	6700238	8		Mainly cloudy

10930	MAG	L. Martin-Berry	15/10/2012	N	N	576544	6700102	8		Overcast
10931	MAG	L. Martin-Berry	15/10/2012	N	N	576511	6700066	8		Overcast
10932	MAG	L. Martin-Berry	15/10/2012	N	N	576485	6700050	8		Overcast
10933	MAG	L. Martin-Berry	15/10/2012	N	N	576433	6700019	8		Overcast
10934	MAG	L. Martin-Berry	15/10/2012	N	N	576400	6699982	8		Overcast
10935	MAG	L. Martin-Berry	15/10/2012	N	N	576366	6699942	8		Overcast
10936	MAG	L. Martin-Berry	15/10/2012	N	N	576327	6699920	8		Overcast
10937	MAG	L. Martin-Berry	15/10/2012	N	N	576289	6699880	8		Overcast
10938	MAG	L. Martin-Berry	15/10/2012	N	N	576252	6699854	8		Overcast
10939	MAG	L. Martin-Berry	15/10/2012	N	N	576197	6699911	8		Overcast
10940	MAG	L. Martin-Berry	15/10/2012	N	N	576231	6699961	8		Overcast
EL001	MAG	E. Long	16/10/2012	N	N	575775	6699878	8		
EL002	MAG	E. Long	16/10/2012	N	N	575743	6699902	8		
EL003	MAG	E. Long	16/10/2012	N	N	575728	6699944	8		
EL004	MAG	E. Long	16/10/2012	N	N	575682	6699977	8		
EL005	MAG	E. Long	16/10/2012	N	N	575643	6700032	8		
EL006	MAG	E. Long	16/10/2012	N	N	575620	6700060	8		
EL007	MAG	E. Long	16/10/2012	N	N	575587	6700025	8		
EL008	MAG	E. Long	16/10/2012	N	N	575600	6699991	8		
EL009	MAG	E. Long	16/10/2012	N	N	575641	6699964	8		
EL010	MAG	E. Long	16/10/2012	N	N	575673	6699919	8		
EL011	MAG	E. Long	16/10/2012	N	N	575715	6699888	8		
EL012	MAG	E. Long	16/10/2012	N	N	575749	6699846	8		

Slope	Aspect	Physiography	Tree Cover	Ground Cover	Depth (cm)
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, old burn	Grasses, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, old burn	Sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Spruce, pine	Grasses, sphagnum moss <10 cm	95
Flat (0-5°)		Lowland Plain	Spruce, pine	Grasses, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Pine, spruce, old burn	Grasses, caribou lichen	70
Flat (0-5°)		Lowland Plain	Spruce, pine	Grasses, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, old burn	Grasses, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce	Caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine	Grasses, caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine, poplar	Caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine, poplar	Caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine	Caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine	Caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	95
Flat (0-5°)		Lowland Plain	Spruce, pine	Caribou lichen, sphagnum moss <10 cm	95
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Forbs, caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Pine, alpine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, willow	Forbs, caribou lichen, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	110
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	65
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Gentle (5-1	SW	Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80
Gentle (5-1	N	Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80

Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	50
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	50
Gentle (5-1	SW	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Steep (25-3	E	Lowland Plain	Spruce, willow	Caribou lichen, sphagnum moss <10 cm	70
Gentle (5-1	E	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	80
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	70
Gentle (5-1	NE	Lowland Plain	Spruce, willow	Sphagnum moss <10 cm	60
Gentle (5-1	NE	Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	50
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	50
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine	Caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Forbs, caribou lichen, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, caribou lichen, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine	Forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Pine, spruce, willow	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	90

Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	60
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	50
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	60
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	65
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	60
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	50
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	60
Gentle (5-15°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine	Sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	75
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	65
Gentle (5-15°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80

Gentle (5-1	N	Lowland Plain	Spruce, pine	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	100
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	90
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	70
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	85
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	95
Flat (0-5°)		Lowland Plain	Spruce, pine, willow	Grasses, forbs, caribou lichen, sphagnum moss <10 cm	80
		Lowland Plain			80
		Lowland Plain			70
		Lowland Plain			60
		Lowland Plain			60
		Lowland Plain			60
		Lowland Plain			90
		Lowland Plain			60
		Lowland Plain			70
		Lowland Plain			60
		Lowland Plain			90
		Lowland Plain			80
		Lowland Plain			70

Moisture	Colour	Horizon	Texture	Origin	Sample Quality
Moist	Yellowish orange	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Excellent
Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Excellent
Moist	Light brown	C	Clayey, sandy, rocky	Diamicton	Excellent
Moist	Yellowish orange/light brown	C	Clayey, sandy, rocky	Diamicton	Excellent
Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Excellent
Moist	Chocolate brown	B	Rocky, coarse	Diamicton	Poor
Moist	Chocolate brown	C	Rocky, coarse	Diamicton	
Moist	Yellowish orange	C	Rocky, coarse	Diamicton	Excellent
Moist	Yellowish orange/light brown	C	Clayey(III), sandy(I)	Diamicton	Excellent
Moist	Light brown	C	Rocky, coarse, sandy	Diamicton	Good
Dry	Chocolate brown	C	Rocky, coarse	Diamicton	Good
Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, sandy(I), clayey(II)	Diamicton	Good
Moist	Light grey	C	Rocky, sandy(I), clayey(II)	Diamicton	Excellent
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Wet	Light brown	C	Clayey	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C		Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(III), clayey(I)	Diamicton	Good
Moist	Light brown	C	Sandy(III)	Diamicton	Good
Moist	Light brown	C	Sandy(III)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good

Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light grey	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light grey	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light grey	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light grey	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse	Diamicton	Excellent
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, clayey	Diamicton	Excellent
Dry	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(I), clayey(III)	Diamicton	Good
Wet	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Poor
Wet	Light brown	C	Rocky, coarse, sandy, clayey	Diamicton	Poor
Dry	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Good
		C		Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Good

Moist	Chocolate brown	C	Rocky, coarse, sandy(III), clayey(I)	Diamicton	Good
Moist		C	Rocky, coarse, sandy(III), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
		C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist		C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist		C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Chocolate brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(II), clayey	Diamicton	Excellent
Dry	Light grey	C	Coarse	Diamicton	Excellent
Dry	Light grey	B	Rocky, coarse, sandy	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Excellent
Moist		C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry		C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse	Diamicton	Poor
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry		C	Rocky, coarse, sandy	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
	Light grey	C	Rocky, coarse, sandy(I)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(II)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good

Moist	Yellowish orange/light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
	Yellowish orange/light brown	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Saturated/seepage	Greenish grey	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Good
Moist	Light brown	C	Rocky, coarse, sandy(I), clayey(III)	Diamicton	Excellent
	Light brown	C	Rocky, coarse	Diamicton	Good
Moist	Yellowish orange/light brown	C	Coarse, clayey(I)	Diamicton	Good
Dry	Light grey	C	Rocky, coarse, sandy(I), clayey(II)	Diamicton	Good
Dry	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Good
Dry	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Dry	Light brown	C	Sandy, coarse	Diamicton	Excellent
Dry	Light brown	C	Rocky, coarse, sandy(I), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(III), clayey(I)	Diamicton	Good
	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Light brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good
	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(II)	Diamicton	Good
Moist	Chocolate brown	C	Rocky, coarse, sandy(II), clayey(I)	Diamicton	Good

Other Features	Notes	Photo #	Camera #
			Battery dead
Rusty rock chips			Battery dead
Rusty rock chips			Battery dead
Rusty rock chips			Battery dead
Rusty rock chips			Battery dead
Rusty rock chips	Some soil group dark green		Battery dead
	Gravel		Battery dead
Rusty rock chips	Rocky gravel		Battery dead
Rusty rock chips			Battery dead
Rusty rock chips			Battery dead
			Battery dead
Rusty rock chips			Battery dead
Quartz chips			Battery dead
		2542-2543	
			Battery dead
		3898-3899	6
		3900-3901	6
	Very sandy till, clasts 10%, <10 cm		
	Sandy till, clasts 15%, <10 cm		
	Sandy till, clasts 15%, <10 cm		
Rusty rock chips	Very, very sandy till. Clasts 10%, largest 20cm, rest are <10 cm		
	Extremely sandy, low clay, 5% clasts. In small depression.		
	Very sandy, more rocks at bottom of pit. 5-10% clasts, <10 cm		
	Way less sandy than last 2 samples. 15% clasts, <10 cm		
	Sandy till, clasts 15%, <10 cm		
	Still moderately sandy till, 15% clasts, <10 cm		
	30% clasts, <20 cm. Still sandy till.		
	Still sandy till, 15% clasts, <15 cm		
	Sandy till, clasts 15%, <10 cm		
	Sandy till, more coarse. 20% clasts, more compact.		
	20% clasts, still very sandy. Rocks <10 cm		
	Sandy till, clasts 15%, <10 cm		
	Sandy till, oxidized. Clasts 15%, <15 cm.		

	Sandy till, clasts 15%, <10 cm		
		5539-5540	2
		5541-5542	2
		5543-5544	2
	Soil is much more clayey here	5545-5546	2
	Drier soil than last station	5547-5548	2
	Lots of small, hard, dark grey nodules that break easily	5550-5551	2
	Sandier soil than last station	5552-5553	2
	Very hard to sample; hard till with very little matrix and lots of big rocks	5554-5555	2
	Still hard to sample	5556-5557	2
		5558-5559	2
	Sandier till, less compact	5560-5561	2
	Very clayey till	5562-5563	2
		5564-5565	2
		5566-5568	2
Rusty rock chips	Rusty soft rock chips	5569-5570	2
	Medium sand layer (with few small pebbles) on top of till	5571-5572	2
	Heading down into meltwater channel	5573-5574	2
	Still going down meltwater channel bank	5575-5576	2
	Bottom of channel, hard to dig. Sandier, less matrix.	5577-5578	2
	Dry/sandy, same as last station	5579-5580	2
			Battery dead
			Battery dead
			Battery dead
Rusty rock chips			Battery dead
			Battery dead
Rusty rock chips			Battery dead
Rusty rock chips			Battery dead
			Battery dead
			Battery dead
	Along cut line	2574-2575	
	Clayey - roll in ball and snake	2576-2577	
	Gravel below till	2578-2579	
	Clayey - roll in ball and snake	2580-2581	

	Ball, no snake	2592-2593	
	No ball, very sandy	2594-2595	
		2596-2597	
	No ball	2598-2599	
	Ball, no snake	2600-2601	
	Ball, no snake	2602-2603	
	Ball, no snake	2604-2605	
	Ball, no snake	2606-2607	
		2608-2609	
	No ball	2637-2638	
Rusty rock chips		8284-8285	3
		8286-8287	3
Rusty rock chips		8288-8289	3
		8290-8291	3
		8292-8293	3
		N/A	3
		8294-8295	3
	Very rocky	8295-8296	3
		8297-8298	3
		2582-2583	
	Rusty rocks	2584-2585	
		2586-2587	
		2588-2589	
	Sandy, can make a ball but not snake	2590-2591	
	Gravelly	8299-8300	3
		8301-8302	3
		8303-8304	3
	MISSING COORDINATES	8305-8306	3
Rusty rock chips	MISSING COORDINATES	8307-8308	3
Rusty rock chips		8309-8310	3
Rusty rock chips		8311-8312	3
		8313-8314	3
Rusty rock chips		8316-8317	3
Rusty rock chips		8318-8319	3

Rusty rock chips		8261-8262	3
		8263-8264	3
	Gravel/sand	8265-8266	3
		8267-8268	3
Quartz chips		8269-8270	3
		8271-8272	3
Quartz chips		8273-8275	3
		8276-8277	3
		8278-8279	3
		8280-8281	3
Rusty rock chips		8282-8283	3
	Ball, no snake	2610-2611	
	Ball, no snake	2612-2613	
	Ball, no snake	2614-2615	
		2617-2618	
Rusty rock chips		2619-2620	
		2621-2622	
		2623-2624	
		2625-2626	
		2627-2628	
		2629-2630	
	Can roll into ball and snake	2633-2634	
		2635-2636	