

Assessment Report on the

**2011 SOIL GEOCHEMICAL SURVEY**

on the

**MATSON PROPERTY, YUKON**

<b>Grant Number</b>	<b>Claim Name</b>
YC76206 – YC76231	MAT 1 – MAT 26

DAWSON MINING DISTRICT

**Date(s) Worked:** June 30, 2011

NTS Map 115N07  
UTM 516,900E; 7,039,800N (NAD 83, Zone 7)

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## SUMMARY

The Matson property owned by Silver Quest Resources Ltd. (Silver Quest) hosts an orogenic gold target. The property is less than 1 km upstream from the active Matson Creek placer operation. Matson is located in west-central Yukon approximately 15 kilometres (km) east of the Yukon-Alaska border and 90 km southwest of Dawson City (Figure 1). A total of 45 soil geochemical samples were collected over four man days on the Matson property. Soil geochemical samples outlined a zone of elevated arsenic, copper and molybdenum in the northwest area of the property.

## INTRODUCTION

This report describes a reconnaissance soil geochemical survey conducted on the Matson property by a four person crew on June 30, 2011. Work on the Matson property was completed for Silver Quest by Silver Quest employees. The author participated in the program and the Statement of Qualifications is contained within this report.

The objective of the geochemical survey was to complete follow-up work, recommended in the 2010 Assessment Report (Smith 2010).

## CLAIM DATA AND OWNERSHIP

Silver Quest Resources Ltd. acquired the Mat claims from Archer, Cathro & Associated (1981) Limited in December 2009. The Matson property comprises 26 contiguous quartz claims and covers a total area of 543.4 hectares (ha). The claim block centres on 516,900E and 7,039,800N (NAD 83, Zone 7) on NTS map sheet 115N07 as shown on Figure 2. Quartz claims are registered with the Dawson Mining Recorder. Claim data is listed below.

**Table 1 - Claim Data**

Grant Number	Claim Name	Registered Owner	Expiry Date
YC76206 – YC76231	Mat 1 – Mat 26	Silver Quest Resources Ltd.	December 5, 2015

\*Note: Expiry date assumes the acceptance of the work reported herein.



**Figure 1– Location Map**

## **PROPERTY DESCRIPTION**

### **LOCATION**

The Matson property is located on the south side of Matson Creek in west-central Yukon approximately 15 km east of the Yukon- Alaska border and 90 km southwest of Dawson City (Figure 1).

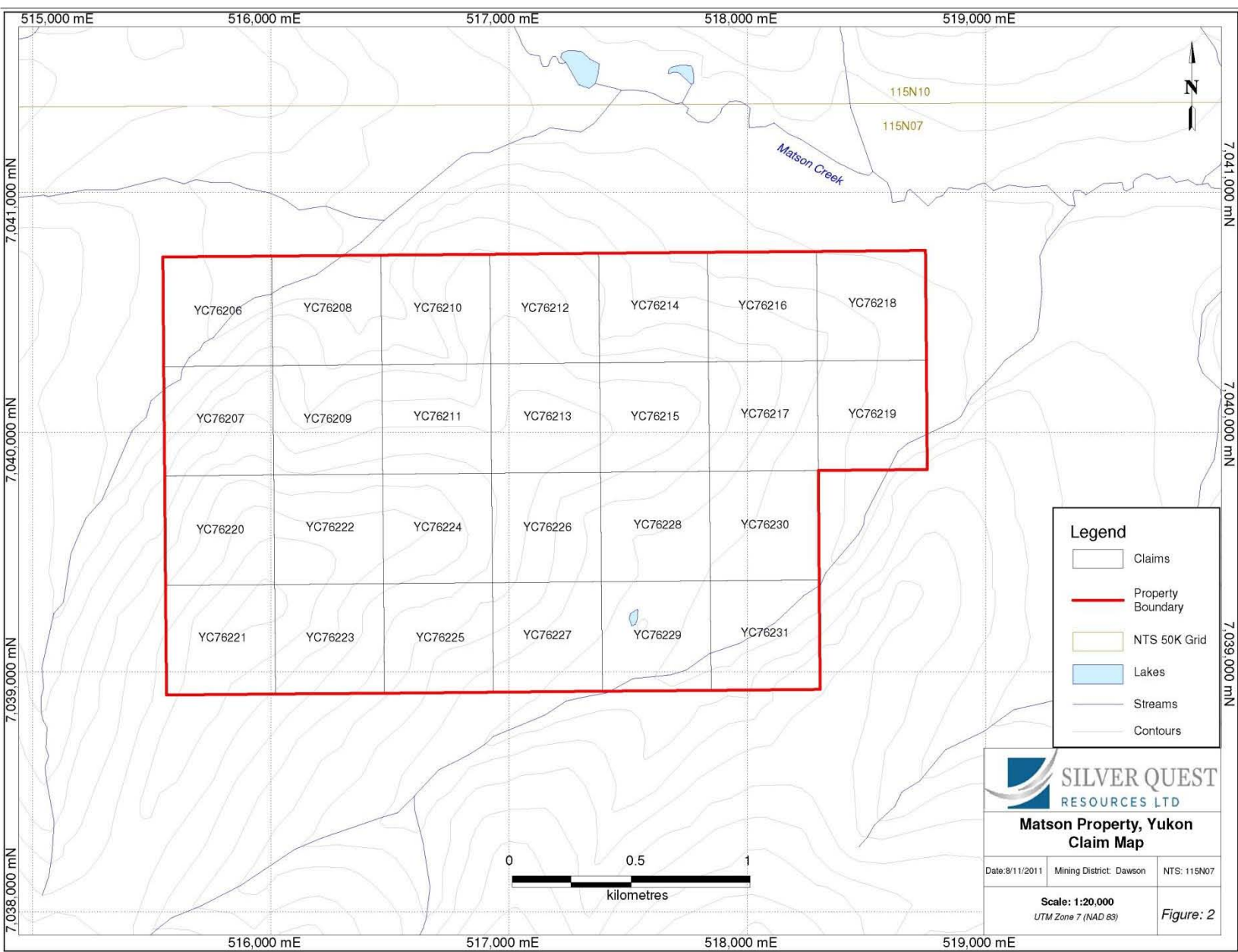
### **CLIMATE AND GEOMORPHOLOGY**

The Matson property lies within the Dawson Range in an area of gentle undulating relief. Local elevations range from 700 to 1,050 metres (m) above sea level. The higher parts of the property are thinly vegetated with stunted, aspen and spruce trees, scrub brush and thin moss cover. Lower elevations support a mixed forest of aspen and spruce with thick brush, willows and moss-covered slopes.

The Dawson Range remained unglaciated during the Pleistocene making outcrops rare, the few outcrops that are present are located along sparsely vegetated ridges and in the main creek drainages. The property is drained by tributaries of Matson Creek, which flows into the Sixty Mile River, and eventually the Arctic Ocean via the Yukon River. Climate in the region is described as sub-arctic with short mild summers and long cold winters. Permafrost was discontinuous but present while conducting the soil survey on the property.

### **INFRASTRUCTURE**

Access to the Matson property in 2011 was via a Bell 206 Long-Ranger helicopter operated by Trans North Helicopters of Whitehorse and based out of Silver Quest's 2011 Independence Camp, located on Independence Creek. There is no direct road access to the property; however access is possible to within 800 m, by a seasonal four-wheel drive road, which connects the Top of the World Highway to a placer operation at Matson Creek, 7 km east of the Matson property (Smith, 2010). A large airstrip associated with the placer operation is located approximately 3 km northwest of the property, capable of accommodating a small to medium fixed-wing aircraft. Recent placer mining activity during the 2011 summer has opened a network of bull-dozer tracks/trails that run adjacent to the main drainage and connect the ridge-top airstrip to the lower elevation access trails (Smith, 2010).



## **HISTORY**

### **PREVIOUS WORK**

There are no Minfile occurrences or public records of previous hard rock exploration on the Matson property. However, placer mining along Matson Creek between 1977 and 2006 reportedly produced 25,455 ounces of gold (LeBarge, 2007).

### **RECENT HISTORY**

ATAC Resources Ltd. staked the Mat claims in 2008 and sold it to Silver Quest in December 2009. During August 2009, Archer, Cathro & Associates collected 53 deep auger geochemical soil samples along two lines 900 m apart, with 100 m spacings on behalf of ATAC. No anomalous results were reported (Smith, 2010).

It was noted that work associated with placer mining had commenced on the Matson Creek during 2011.

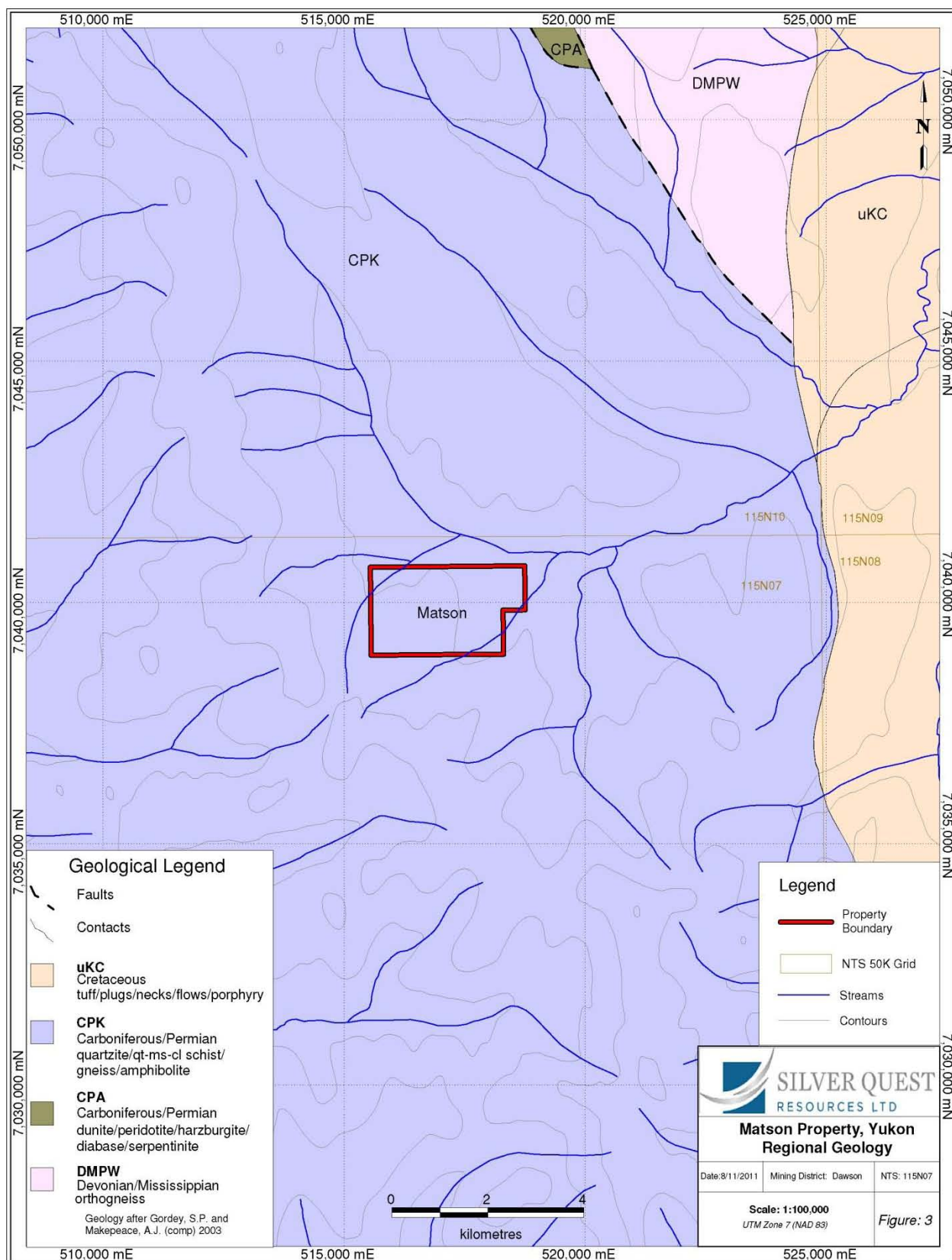
## **GEOLOGICAL SETTING**

### **REGIONAL GEOLOGY**

The Matson property is situated in the Yukon-Tanana Terrane approximately 80 km southwest of the Tintina Fault, within the Carbonaceous and Permian Klondike Schist Assemblage (CPK1) (Figure 3).

Approximately 7 km northeast of the property is an intrusion of the Upper Cretaceous volcanic suite belonging to the Carmacks Group (uKC2). This suite has been described as a volcanic succession dominated by acid vitric crystal tuff, lapilli tuff and welded tuff including feeder plugs; volcanic flow rocks; and quartz-feldspar porphyries (Gordey and Makepeace, 2003).





**Figure 3 – Regional Geology**

## **PROPERTY GEOLOGY**

The property is underlain by Carbonaceous and Permian Klondike Schist Assemblage. This unit is composed of rusty and black weathered, muscovite and/or chlorite bearing quartzite and quartz-muscovite +/- chlorite, +/- feldspar augen schist (Gordey and Makepeace, 2003).

No prospecting or mapping was undertaken on the Matson property during the 2011 program. Soil samples were noted as having an abundance of mica.

## **GEOCHEMISTRY**

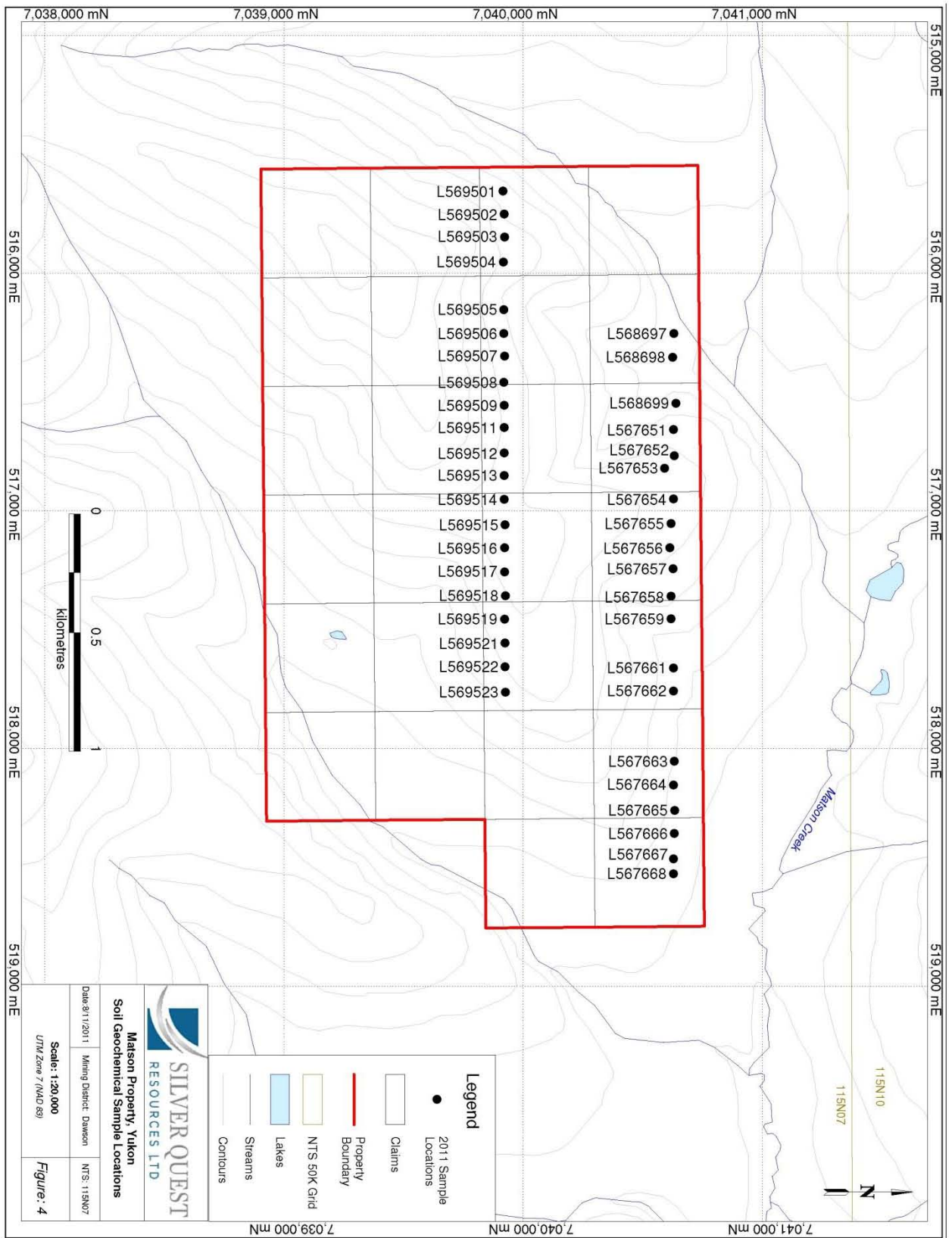
### **SOIL GEOCHEMISTRY**

The 2011 exploration program at Matson consisted of one day of work for four soil samplers on June 30. A total of 45 soil samples from two sampling lines 700 m apart were collected west to east with 100 m sample spacing (Figure 4).

All samplers were trained to use the same sampling procedures when collecting the B-horizon soil samples. Samplers began by removing a 30 centimetre cm by 30 cm section of moss mat or vegetative cover. Second, a soil pit of similar dimensions was hand excavated exposing A and B soil horizon boundaries, reaching the top of the C-horizon where feasible. The depth of the pit varied from 20 cm to 60 cm, depending on horizon thicknesses and sampling conditions. Soil material (300 grams to 400 grams) was collected from the walls of the pit utilizing a clean plastic trowel. Samples were collected and stored in standard KRAFT soil sample bags and transported to the 2011 Independence Camp in polyurethane bags for drying and subsequent analysis by a hand held X-Ray Fluorescence (XRF) device.

All sample locations were rehabilitated by back-filling the soil pit and replacing the moss mat or vegetative cover. This was done to minimize the environmental impact. Locations with permafrost or areas lacking mineral soils were not sampled. Equipment such as shovels and trowels were cleaned between samples and waterlogged samples were stored in separate polyurethane bags to minimize cross-contamination. All sample locations were recorded using a hand-held GPS. All maps and UTM coordinates are referenced to the 1983 North American

Figure 4 – Soil Geochemical Sample Locations



Datum (NAD 83), Zone 7. A complete description of soil type, depth, thickness of the sample and surrounding environment and terrain was recorded at each location.

Samples were submitted to the ALS Laboratory Group preparation facility in Whitehorse, a ISO9001 certified preparation facility. Samples were analysed by aqua regia digestion and a combination of inductively coupled plasma with atomic emission spectroscopy or mass spectroscopy (ICP-AES and ICP-MS) analysis for 51-elements including gold. Gold was also analysed by fire assay and atomic absorption spectroscopy (Au-AA23) for more accuracy. Assay certificates of analysis are presented in Appendix I at the end of this report. Assay statistics for the 2011 geochemical soil survey are listed below (Table 2), values denoted with a 'less than' symbol indicate samples are below detection limit for the given element.

**Table 2 - Matson Soil Geochemical Survey Values and Percentiles**

<b>Values</b>	<b>Au</b> (ppb)	<b>Ag</b> (ppm)	<b>As</b> (ppm)	<b>Cu</b> (ppm)	<b>Mo</b> (ppm)	<b>Sb</b> (ppm)	<b>Zn</b> (ppm)	<b>Pb</b> (ppm)	<b>W</b> (ppm)
<b>Max</b>	28.00	0.62	44.70	108.00	3.54	1.68	158.00	21.50	0.37
<b>Min</b>	<5	0.07	2.60	14.90	0.30	0.13	46.00	4.20	<0.05
<b>99<sup>th</sup></b>	23.27	0.58	41.56	100.65	3.54	1.37	130.48	21.37	0.34
<b>98<sup>th</sup></b>	18.54	0.53	38.42	93.29	3.54	1.06	102.96	21.24	0.30
<b>95<sup>th</sup></b>	5.85	0.27	35.99	78.03	2.48	0.71	89.65	18.21	0.23
<b>90<sup>th</sup></b>	<5	0.18	24.73	58.61	1.94	0.65	80.40	14.10	0.20
<b>85<sup>th</sup></b>	<5	0.16	17.91	53.29	1.71	0.60	78.55	12.88	0.19
<b>75<sup>th</sup></b>	<5	0.14	10.78	43.58	1.36	0.52	74.00	11.60	0.17
<b>50<sup>th</sup></b>	<5	0.10	6.20	32.95	0.92	0.32	66.00	10.35	0.14

## QUALITY ASSURANCE/QUALITY CONTROL

For Quality Assurance-Quality Control (QAQC) purposes, field check samples were inserted into the sample stream every 10 samples. Blanks, comprised of silica sand, were inserted on odd sample identification numbers (i.e. numbers ending in 10, 30, 50, 70, 90); while duplicates were inserted on even sample identification number (i.e. numbers ending in 20, 40, 60, 80, 100). Duplicates were acquired from the same soil pit, or from a separate pit at the same location. The field sample checks were analysed with the rest of the soil samples and resulting values were used to check the consistency of our sampling procedures and the analytical procedures used by ALS Laboratory Group. ALS Laboratory Group blanks, duplicates and standards were also used to confirm results.

A classification system was applied for QAQC samples. Field blanks for main pathfinder elements were flagged when above the 20<sup>th</sup> percentile mark for the sample population for each project area. Field duplicates past when less than a 20% variance was noted. ALS Laboratory Group standards did not pass when recorded results exceeded two standard deviations or what was deemed above thresholds by ALS Laboratory Group. Erroneous QAQC results were investigated and appropriate re-analysis undertaken when necessary.

Quality Assurance-Quality Control (QAQC) samples for Matson passed without any significant concerns. It was noted that one of three field duplicates showed moderate variances between bismuth, zinc and molybdenum. Bismuth and zinc were not used as pathfinder elements for the Matson Property. Molybdenum has been used as a pathfinder element, despite the variance, as both duplicate assay values returned elevated levels.

It was also noted that sample L569506, a laboratory duplicate returned strong variances in gold. The values returned were <5 ppb, and 17 ppb. The remainder of the values reported for the samples passed the variance test, and therefore it was concluded that the difference in gold values could be associated with a nugget effect.

## **DISCUSSIONS AND CONCLUSIONS**

Soil geochemical survey results from the Gemini property were compared to the Silver Quest soils database, which contains sample values collected between 2008 and 2011 within the Dawson Range. Anomalous value ranges were identified and applied to the thematic maps represented in this report (Figure 5). Historic sampling displayed on thematic maps may show a higher range of values of various elements; this could be attributed to an alternative soil sampling procedure.

The soil geochemical survey carried out in 2011 identified 2 anomalous gold values (Figure 5a) with associated elevated levels of arsenic (Figure 5b), copper (Figure 5c) and (+/- molybdenum (Figure 5d) towards the western edge of the property. Anomalous values of molybdenum were concentrated in the northwest corner of the property, with a broader halo of elevated arsenic.

## **RECOMMENDATIONS**

Further in-fill soil geochemical sampling is recommended within the northwest sector of the property to investigate the elevated gold, arsenic, copper and molybdenum values.



Figure 5a – Soil Geochemistry – Gold

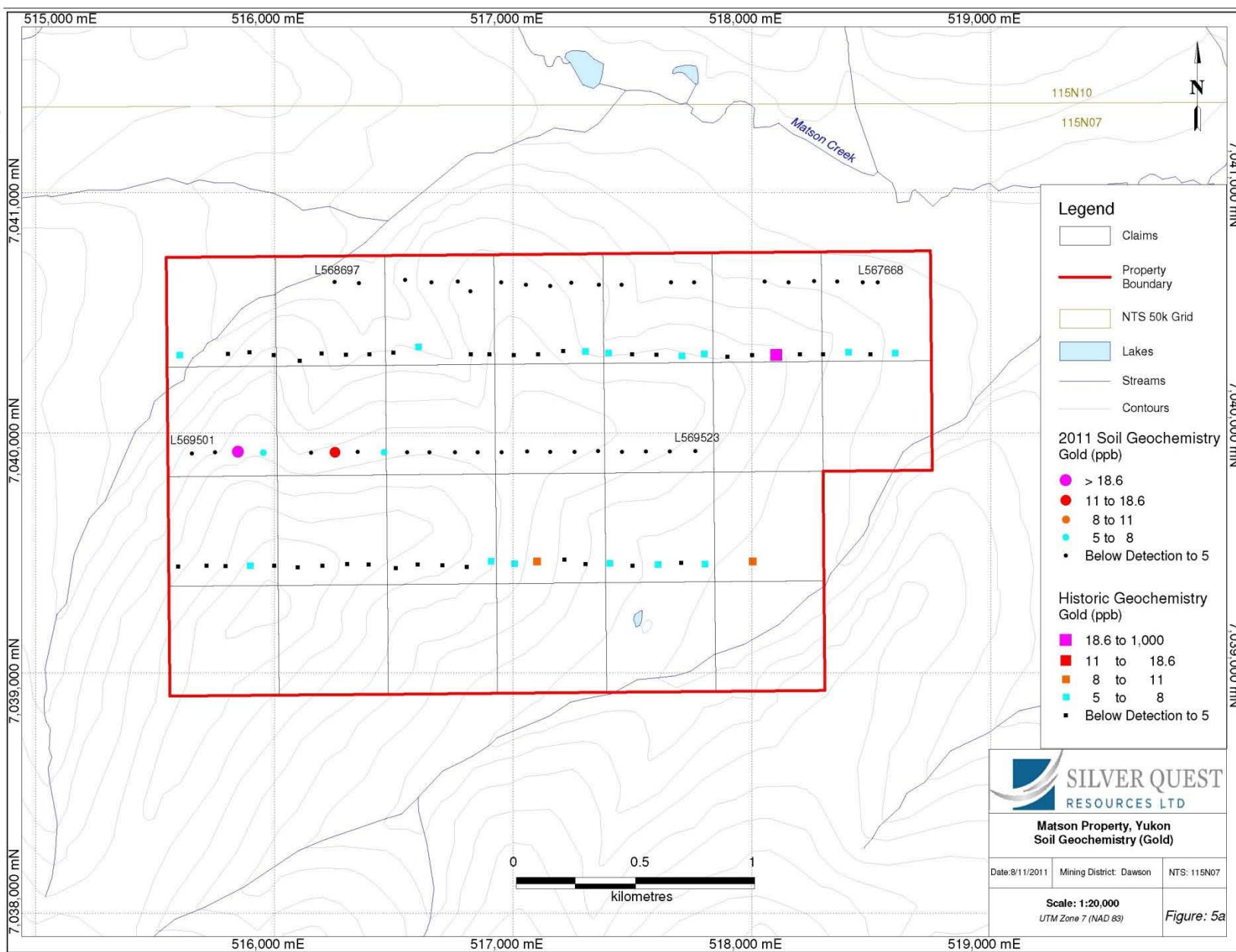
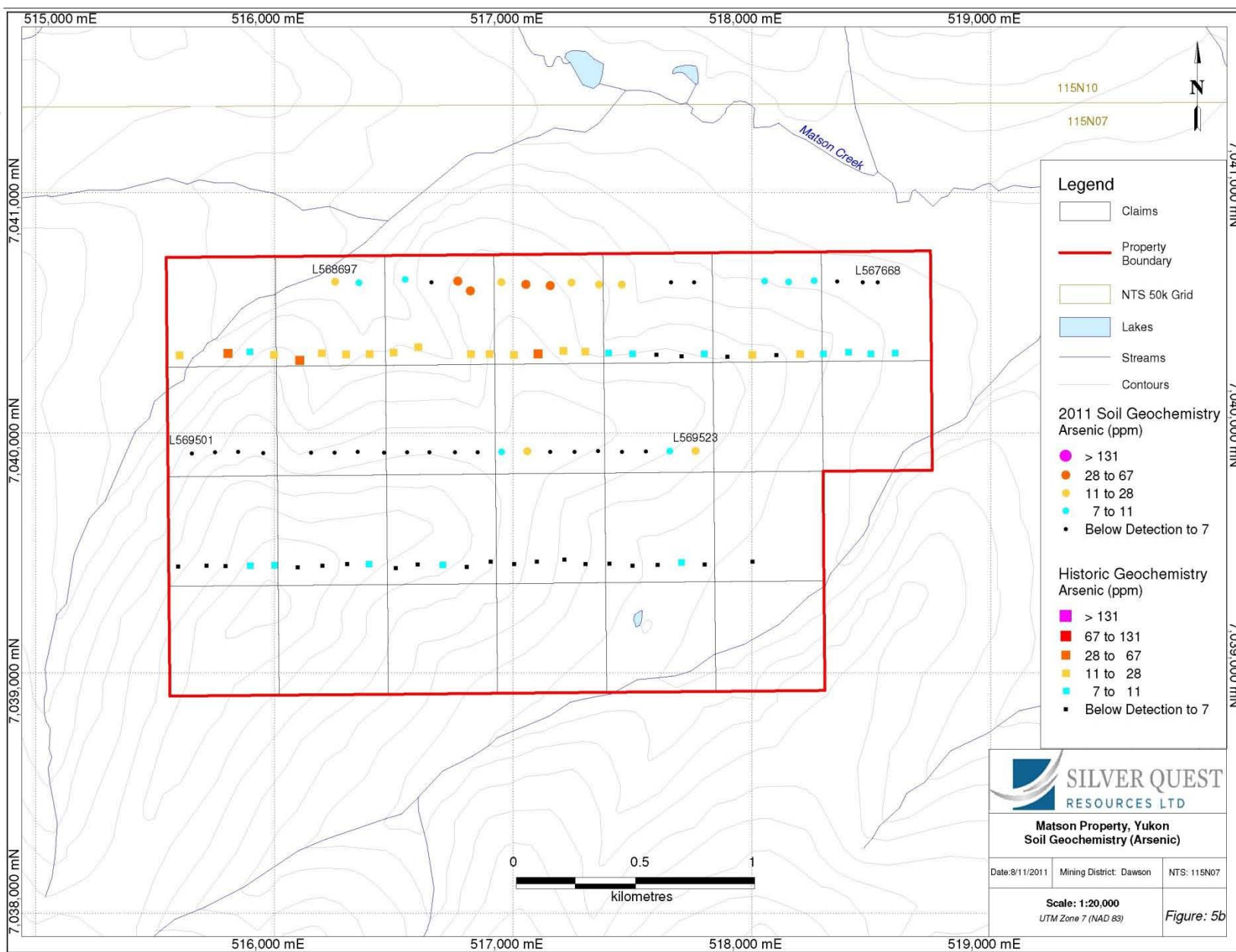


Figure 5b – Soil Geochemistry – Arsenic





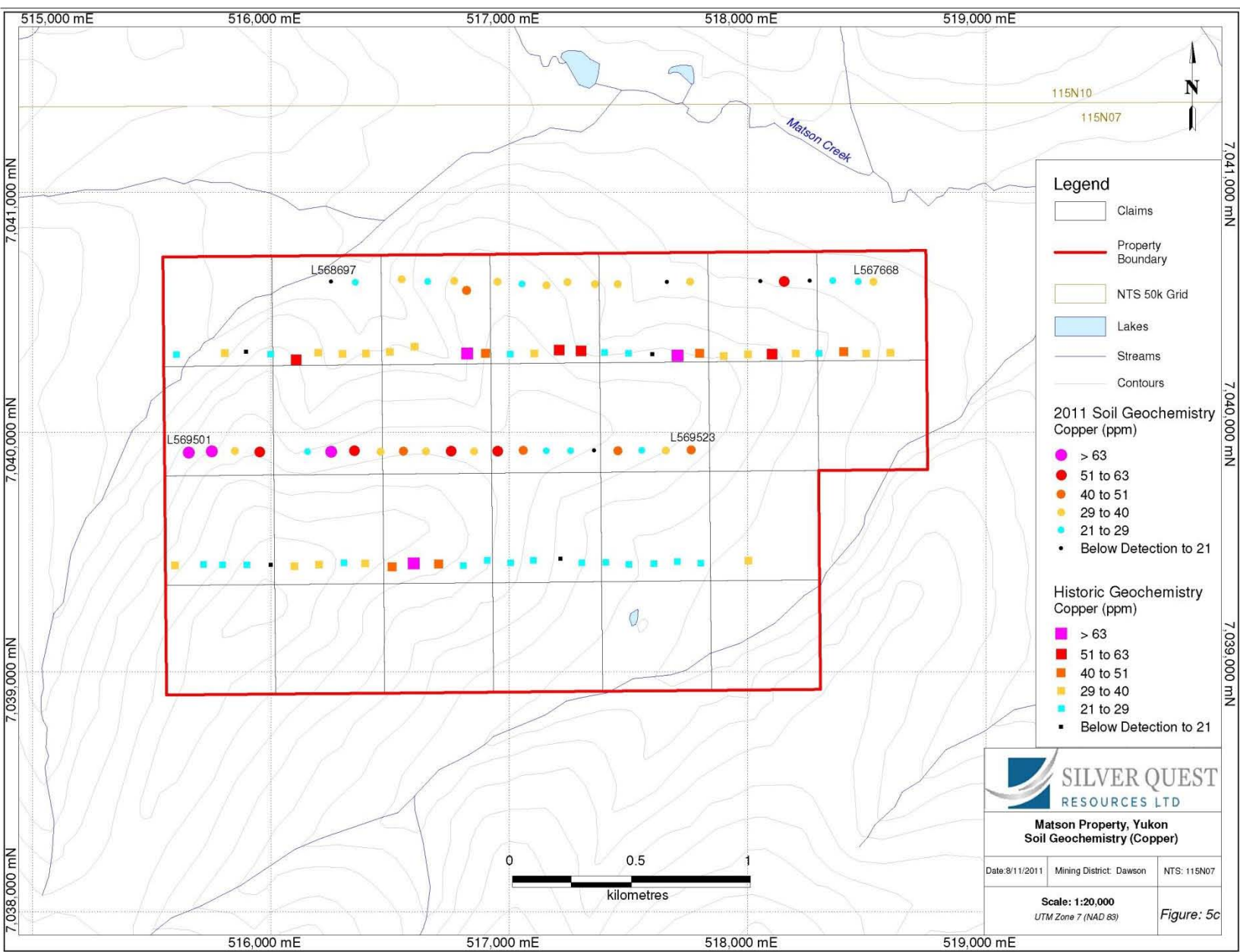
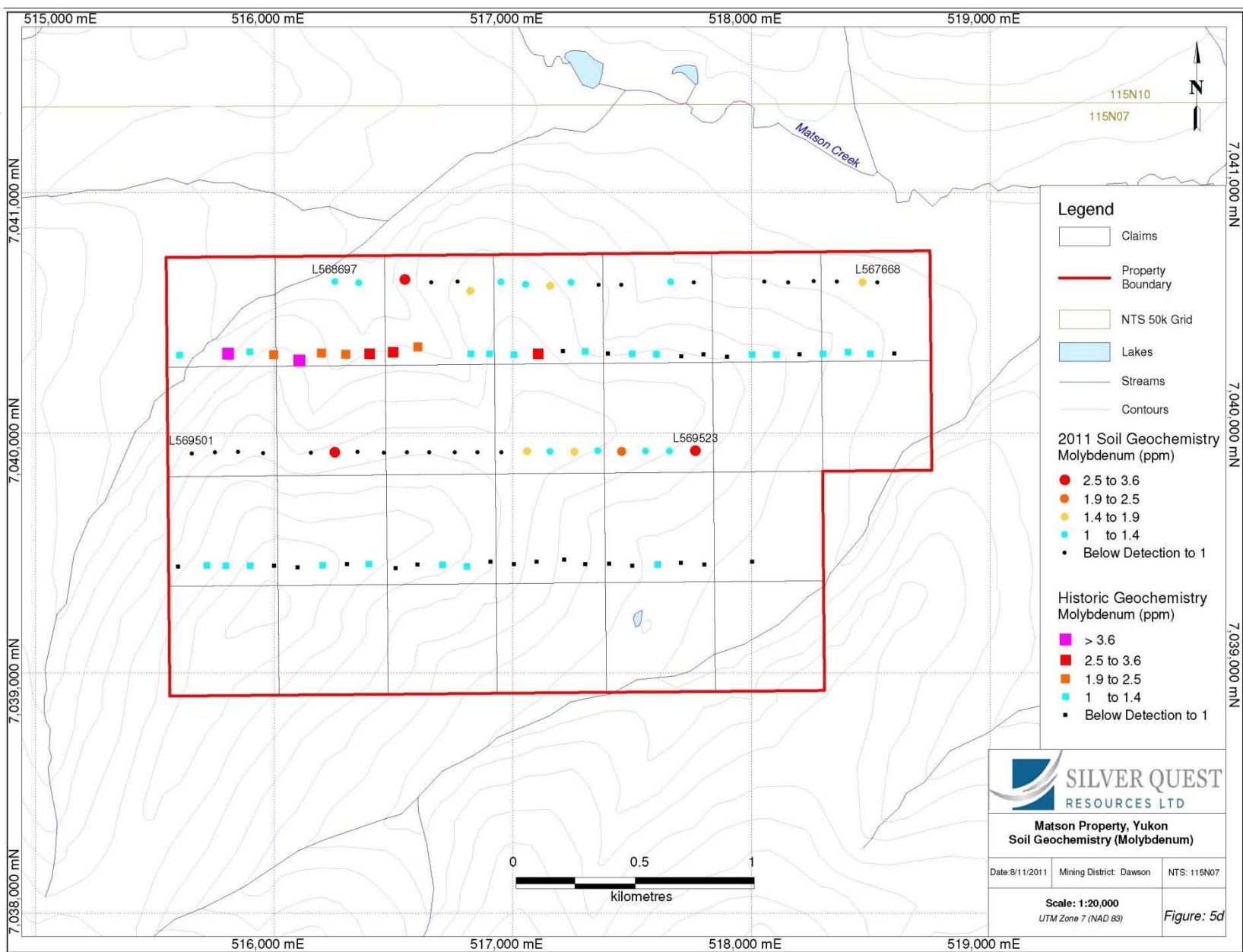


Figure 5d – Soil Geochemistry – Molybdenum



## REFERENCES

Gordey, S.P. and Makepeace, A.J. (comp.) 2003. Yukon digital geology, version 2.0; Geological Survey of Canada Open File 1749 and Yukon Geological Survey Open File 2003-9(D)

LeBarge, W.P. 2007, Yukon Placer Data 2007-Geology and mining activity of placer occurrences; Yukon Geological Survey; Placer Secretariat.

Smith, H. 2010, Assessment Report Describing Soil sampling Program at the Mat Property, ATAC Resources Ltd on behalf of Silver Quest Resources Ltd, submitted for Assessment to Yukon Mines, Energy and Resources.

## STATEMENT OF QUALIFICATIONS

I, Ryan J. F. Congdon, BSc, of Suite 1605-1146 Harwood Street, Vancouver, British Columbia, hereby certify that:

I am a graduate of the Curtin University of Perth, Australia having obtained the degree of Bachelor of Science in Applied Geology, 2005.

I am a graduate of the Curtin University of Perth, Australia having obtained the degree of Bachelor of Science in Environmental Biology, 2005.

I am a member of the Australian Institute of Mining and Metallurgy.

I have been employed in the mineral exploration and mining industry in Western Australia every field season (November-February) between 2003 and 2005.

I have been continuously employed as a geologist in the mineral exploration and mining industry since 2006.

I am currently employed as a Geologist by Silver Quest Resources Ltd. Suite 1410-650 West Georgia Street, Vancouver, British Columbia, Canada, V6B 4N8.

I am the author of the report entitled "2011 Soil Geochemical Survey on the Matson Property Yukon" dated November 15, 2011.

I participated in the geological work reported herein.

Dated this 15<sup>th</sup> day of November, 2011.

A handwritten signature in dark ink, appearing to read 'Ryan J. F. Congdon', is written over a horizontal line.

Ryan J. F. Congdon, BSc Geology

## STATEMENT OF EXPENDITURES

	<u>Quantity</u>	<u>Rate</u>	<u>Cost</u>	
Soil Samples Collected	42	\$ 40.00	\$ 1,680.00	
Sampler day(s)	4	\$ 350.00	\$ 1,400.00	
Camp Costs (per man day)	4	\$ 319.07	\$ 1,276.28	
Helicopter Hour(s)	3.75	\$ 1,550.00	\$ 5,812.50	
			<u>\$ 10,168.78</u>	
		Supervision: 12%	<u>\$ 1,220.25</u>	
		Total:	<u>\$ 11,389.03</u>	
		Claims Worked: 11	<b>\$ 1,035.37</b>	per claim

Date worked: June 30, 2011