

**NI 43-101**  
**2025 UPDATED RESOURCE ESTIMATE**  
**FOR THE**  
**SHASTA DEPOSIT**

Omineca Mining Division  
British Columbia, Canada  
*NTS: 094E/011UTM: 617680 E / 6359170 N (NAD 83, Zone 9)*  
*Latitude / Longitude: 57.29° / 127.11°*



Submitted to:  
**TDG Gold Corp.**

Effective Date: 29 December 2024  
Date of Submittal: 21 February 2025

**Moose Mountain Technical Services**

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## **DATE & SIGNATURE PAGES**

Herewith, our report entitled “2025 Updated Resource Estimate for the Shasta Project” dated 21 February 2025.

*“Signed and Sealed”*

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**Sue Bird, P. Eng.**  
Moose Mountain Technical Services  
Principal and V.P. of Resources

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**Dated the 21<sup>st</sup> of February 2025**

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## 1 Summary

Moose Mountain Technical Services (“MMTS”) has prepared a technical report (“the Report”) for TDG Gold Corp. (“TDG”) which includes a Resource Estimate of the Shasta deposit. The Shasta deposit is contained within TDG’s Toodoggone Portfolio in north central British Columbia, Canada.

The Portfolio consists of a contiguous approximately 54 x 10-kilometre (“km”) NW oriented elongate package of mining tenures, containing six exploration area subdomains. These include: (i) Baker Complex (containing the historic Baker “Chapelle” Mine), (ii) the Greater Shasta-Newberry (containing the historic Shasta Mine), (iii) North Oxide Peak, (iv) South Oxide Peak, (v) Bot, and (vi) Mets. The Portfolio contains a total of 111 mineral claims, 8 placer claims and 3 mining leases. The North Oxide Peak mineral claims were purchased by TDG in 2024 from Volatus Capital Corp. The South Oxide Peak minerals claims were acquired from ArcWest Exploration Inc. in 2023. Details of these mining transactions can be seen in Section 4-1, below.

As of the effective date, all the mineral claims, placer claims, and mining leases at the Toodoggone Portfolio are 100 % owned by TDG. The Shasta deposit, which is the subject of this Resource Estimate, is fully contained within the Greater Shasta-Newberry exploration subdomain.

### 1.1 Mineral Resource Estimate

The Mineral Resource Estimate (“MRE”) for the Shasta deposit has an effective date of December 29, 2024. The resource estimate is summarized in the Table below with the base case cut-off grade of 0.40 grams per tonne (“g/t”) Au Equivalent (“AuEq”) highlighted for the insitu resource and with no cutoff for the tailings since there is no method to separate the tailings by cutoff. Tonnage for the tailing storage facility (TSF) has been determined from the historical production records (TetraTech, 2015). The resource estimate has been confined to an open pit with “reasonable prospects of eventual economic extraction”. The base case cut-off grade covers the Processing + General and Administrative (“G&A”) costs of CDN\$17.00/tonne processed using the prices and smelter terms as detailed in the Notes to the Table 1-1.

**Table 1-1: Shasta Mineral Resource Estimate**

Class	AuEq Cutoff (gpt)	In Situ Tonnage and Grade					AuEq Metal (kOz)	Au Metal (kOz)	Ag Metal (kOz)
		Tonnage (ktonnes)	AuEq (gpt)	Au (gpt)	Ag (gpt)	NSR (\$CDN)			
Indicated	0.3	15,830	1.083	0.844	29.8	77.58	550.9	429.6	15,167
	0.35	14,026	1.180	0.920	32.5	84.57	532.2	414.9	14,660
	0.4	12,578	1.273	0.993	35.0	91.22	514.8	401.4	14,166
	0.45	11,300	1.369	1.068	37.6	98.11	497.4	388.0	13,667
	0.5	10,198	1.466	1.144	40.2	105.04	480.6	375.1	13,187
	1	4,579	2.406	1.885	65.1	172.39	354.1	277.5	9,584
Inferred	0.3	19,881	0.854	0.657	24.6	61.18	545.7	419.9	15,718
	0.35	17,391	0.930	0.716	26.8	66.62	519.8	400.1	14,974
	0.4	15,432	1.000	0.771	28.7	71.69	496.3	382.3	14,249
	0.45	13,762	1.070	0.825	30.6	76.70	473.6	365.2	13,548
	0.5	12,276	1.143	0.883	32.5	81.88	451.0	348.4	12,823
	1	4,610	1.890	1.497	49.1	135.47	280.2	221.9	7,282
Inferred	Tailings	276	1.367	0.968	44.9	121.83	12.1	8.6	398

## Notes to the MRE Table:

1. The Mineral Resource estimate has been prepared by Sue Bird, P.Eng., an independent Qualified Person. The effective date of the mineral resource estimate is December 29, 2024.
2. Mineral Resources are reported using the 2014 CIM Definition Standards and were estimated in accordance with the CIM 2019 Best Practices Guidelines, as required by NI43-101.
3. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all Mineral Resources will be converted into Mineral Reserves.
4. Inferred Mineral Resources are considered too speculative geologically to have economic considerations applied to them that would enable their classification as Mineral Reserves. However, it is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Measured or Indicated Mineral Resources with continued exploration and additional data.
5. The in situ Mineral Resource has been confined by a “reasonable prospects of eventual economic extraction” pit using the following assumptions, which were estimated from comparable projects:
  1. Au price of US\$2,250/oz, Ag price of US\$25/oz at an exchange rate of 0.74 US\$ per CDN\$;
  2. 99.9 % payable Au; 95.0 % payable Ag; US\$7.00/oz Au and US\$3.00/oz Ag offsite costs (refining, transport and insurance);
  3. a 1.5 % NSR royalty; and uses a 93.0 % metallurgical recovery for Au and 86.0 % recovery for Ag;
  4. Mining costs of CDN\$4.00/tonne mineralized material;
  5. Processing Costs of CDN\$15/tonne and G&A of CDN\$8.00/tonne processed;
  6. Pit slopes of 45 degrees.
6. The tailings resource is the weighted average grade of the sampling.
7. The resulting NSR equation is:  $NSR (CDN\$) = 95.79 * Au \text{ Grade} * 0.93 + 0.92 * Ag \text{ Grade} * 0.86$
8. The resulting AuEq equation is:  $AuEq = Au + Ag * 0.00887$
9. The bulk density of the deposit is based on 2021 & 2022 measurements and is 2.61 throughout the deposit and 2.00 for overburden.
10. Numbers may not sum due to rounding.

There are no other known factors or issues that materially affect the MRE other than normal risks faced by mining projects in the province of British Columbia, Canada, in terms of environmental, permitting, taxation, socio-economic, marketing, and political factors.

## 1.2 Terms of Reference

All currencies are expressed in Canadian dollars (\$CDN). Mineral Resources and Mineral Reserves are estimated using the 2019 edition of the Canadian Institute of Mining, Metallurgy and Exploration (CIM) Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Best Practice Guidelines) and are reported using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

## 1.3 Project Description and Location

### 1.3.1 Location

The Property is located approximately 430 kilometres northwest of Prince George, British Columbia, as shown on Figure 4-1. The Property's is centered at 57.47° latitude and -127.11° longitude. Most of the claims are within NTS map sheet 94E/06, with lesser sections in NTS map sheets: 94E/07, 94E/03, 94E/02, and 94E/11.

### 1.3.2 Mineral Tenure

The total Portfolio comprises 111 mineral claims, 8 placer claims, and 3 mining leases, which total 41,708.7 hectares (“ha”). As of the effective date, all mineral claims and mining leases are 100% held by TDG BC Assets Corp., a wholly owned subsidiary of TDG Gold Corp. which operates with the Free Miners Certificate (“FMC”) client number 287962.

## 1.4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The property is road-accessible, and the most practical route is to turn off at the Finlay-Nation forest service road located 148 kilometres north of Prince George, along Highway 97 towards the town of Mackenzie, British Columbia. Depending on the season, the property is also accessible by float plane on Black Lake, and by conventional landing gear at the gravel runway Sturdee airstrip. Approximate temperatures range from a minimum of -32°C in January to a maximum of +30°C in August. Snowfall accumulations can reach up to two metres over the winter months (Smith, 2019).

Infrastructure on the Property includes the historical 200 tonne per day (“tpd”) Baker mill, tailings storage facilities, limited surface and underground equipment, and a seasonal 50-person camp facility.

The Shasta deposit area is situated in moderate terrain with elevations ranging from about 1,200 metres a.s.l. along Jock Creek in the eastern part of the property to over 2000 metres a.s.l. in the upper most ridgelines in the central and western parts of the Property. Most of the Property is above the tree line which is at an elevation of about 1,630 metres a.s.l. Oxide Peak elevations extend from just below 1300 metres a.s.l. in the Belle Lakes area to almost 2200 metres a.s.l. at Mount Gordonia. Mountain peaks in the Mets area average 1980 m ASL, rising abruptly from the major valleys.

## **1.5 History**

The original Shasta group of claims were staked in 1972 by Shasta Mines and Oil Ltd. Esso Minerals Canada Ltd. optioned the property in 1987 and carried out two seasons of exploration. Homestake Mining Canada Ltd. purchased Esso Minerals Canada Ltd.’s interest in the Shasta property in the spring of 1989, and continued exploration during the summer of 1989, with a program of exploration and delineation drilling as well as geochemical and geophysical surveys. By the end of the 1989 field season, total exploration work included 5,140 geochemical soil samples, 200-line km of VLF-R and 4.0-line km of IP geophysical surveys, 4.0 km of backhoe trenches, geological mapping at 1:10,000 and 1:1,000 scales, 13,774 m of exploration diamond drilling and 1,093 m of delineation and condemnation diamond drilling.

In 1990, Sable mined the JM and Creek zones, by both open pit and underground methods, and completed 285 m of diamond drilling in 5 holes (Smith, 2019). Sable completed a small test pit on the Creek zone, and mined and processed 15,000 tons (Craft, 2007). Underground operations resumed in 2007, and between 2008 and 2012, Sable mined approximately 105,000 tons from the Creek zone (TetraTech EBA Inc., 2015; Smith A., 2019).

Please refer to Section 6 of this report for details on the history of the other deposits.

## **1.6 Geology**

The regional geology surrounding the Property has not seen any significant research or changes in understanding since the 2020 technical report and is described as an area measuring approximately 1500 square kilometres in the Toodoggone region that extends from the Kemess South mine area northwestwards to the Chuckachida River. The region occurs within the Intermontane Belt and is underlain by strata of the Stikine Terrane, which consists of Paleozoic to Mesozoic island arc assemblages and overlying Mesozoic sedimentary sequences. The oldest rocks exposed in the region consist of crystalline limestone of the Devonian Asitka Group. They are unconformably overlain by mafic volcanic rocks of the Upper Triassic Takla Group. Takla Group volcanic rocks are in turn overlain by bimodal volcanic and sedimentary strata of the Lower Jurassic Toodoggone Formation of the Hazelton Group (Smith, 2019).

Toodoggone Formation pyroclastic and epiclastic volcanic rocks are a predominantly calc-alkaline andesitic to dacitic subaerial succession. Toodoggone volcanic rocks display broad open folds with attitudes generally less than 25° dipping predominantly to the west (Smith, 2019).

Please refer to Section 7 of this report for details on the geology and mineralization of each significant deposit within the Property.

## **1.7 Drilling**

Drilling on the Shasta deposit that has collar locations verified consists of 385 drillholes totalling 40,458m of drilling and 24,911m of assayed length.

Please see Section 10 of this report for drill details on the other deposits of the Property.

## **1.8 Sampling and Analysis**

### **1.9 Data Verification**

Data has been verified by twinned holes and comparison of current drilling to historic. Collars were verified in the field for all drillholes used in the resource estimate. Underground workings were walked where accessible. Certificate checks were made with only a few minor discrepancies noted. The QP concludes that the database used for the Shasta modelled grades is suitable for the current Inferred resource estimate.

### **1.10 Conclusions and Recommendations**

The QP concludes that the mineral resource estimate for the Shasta deposit contained in this Report warrants further exploration as the deposit remains open along strike and down-dip. In addition, the Oxide Peak and Bot deposits represent excellent exploration potential deposits. The historical Baker mine contains numerous exploration targets with additional targets between the Shasta and Baker deposits. The Mets deposit, with a near surface historical resource estimate has good drill targets for follow-up and re-examination of the resource potential.

The following recommendation are made by the QP:

- Exploration for the 2025 field season at all 5 targets areas mentioned above for a total budget of CDN\$15,850,000, as detailed in Section 26 of this report.
- Future drilling programs should continue to employ QAQC sample inclusion rates consistent with current practice to include blanks, field duplicates, coarse reject duplicates, and CRMs and twinning of holes where warranted.
- Continue to do metallurgical testing on differing alteration types.
- Trade-off study on dore vs. concentrate.

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**List of Abbreviations used throughout the report:**

- *T* tonnes (Metric)
- *Mt* Millions of tonnes
- *k* thousands
- *ROM* Run of Mine
- *S/R* Strip Ratio
- *LoM* Life of Mine
- *NPV* Net Present Value
- *Ktpa* kilo tonnes per annum
- *GME* General Mine Expense
- *CPS* Central Processing Site
- *USD* US Dollars
- *CAD* Canadian Dollars
- *M* millions
- *BC* British Columbia
- *EPCM* Engineering, Procurement, and Construction Management
- *CSA* Canadian Securities Administration
- *UTM* Universal Transverse Mercator
- *SG* Specific Gravity
- *RC* Reverse Circulation
- *DH* Drillhole
- *GSC* Geological Survey of Canada
- *PSA* Pit Slope Angles
- *BFA* Bench Face Angles
- *OX* Oxidized Coal
- *FOB* Freight on Board
- *SMU* Service Meter Unit
- *NOH* Net Operating Hours
- *PEA* Preliminary Economic Assessment
- *PFS* Preliminary Feasibility study
- *EA* Environmental Assessment
- *ENS* Electronic Navigation Systems



## **2 Introduction**

Moose Mountain Technical Services (“MMTS”) has prepared a technical report (“the Report”) for TDG Gold Corp. on their Toadoggone Portfolio located approximately 430 kilometres northwest from Prince George, British Columbia. TDG Gold Corp and TDG BC Assets Corp (a wholly owned subsidiary of TDG Gold Corp; collectively “TDG”) is a Vancouver based precious, base and critical metal exploration company focused on operations in the Toadoggone Mining Camp of British Columbia.

The report includes a detailed Resource Estimate on the Shasta deposit. The report also contains additional geologic information and brief summaries of recent exploration work outside the Shasta deposit area, with recommendations for future exploration activities within the Portfolio claims group.

### **2.1 Terms of Reference**

All currencies are expressed in Canadian dollars (\$CDN) unless otherwise noted. Mineral Resources and Mineral Reserves are estimated using the 2019 edition of the Canadian Institute of Mining, Metallurgy and Exploration (CIM) Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Best Practice Guidelines) and are reported using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

### **2.2 Qualified Persons**

Sue Bird, P.Eng. of Moose Mountain Technical Services serves as the qualified persons (QPs) for this Technical Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in compliance with Form 43-101F1.

### **2.3 Site Visits and Scope of Personal Inspection**

Sue Bird visited the Property from July 19 through July 21, 2021 (3 days) , September 16 to September 19, 2021 (4 days), to review the progress and results of the 2021 drilling and again in July 19-20, 2022 (2 days). During the site visits, the historical core was examined, numerous collars of historical drilling were located, and samples were obtained for assay and re-assay. Drill pad locations, drilling and sampling protocols, the core storage, and the QA/QC procedures were also reviewed with pertinent drillholes inspected. The deposits visited include Shasta, Mets, Baker, and Oxide Peak. The previous mine workings at Shasta were examined including the two small open pits and all accessible drifts.

### **2.4 Effective Dates**

The effective date of the Shasta deposit Resource Estimate is December 29, 2024.

### **2.5 Information Sources**

Information sources used in compiling this Report are included in Section 27.

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### **3 Reliance on Other Experts**

The QP of this Report, Sue Bird, states that they are qualified persons for those areas as identified in the "Certificate of Qualified Person". The QP has relied on and believe there is a reasonable basis for this reliance, upon the following expert submission, which provide information regarding sections of this Report as noted below.

#### **3.1 Mineral Tenure**

The QP has not exhaustively investigated the mineral tenures, nor independently verified the legal status, ownership, or underlying contractual agreements within the Project. The QP has relied upon TDG as an expert for this information and disclaims full responsibility for the accuracy of the mineral tenures and exploration rights, as provided by TDG.

Information regarding the mineral tenures, leases, and any other tenements was provided to the QP using tables, lists, maps, and other spatial data obtained by TDG, from the Mineral Title Online ("MTO") service. The MTO provides a continuously updated mineral tenure database containing the most spatially accurate and up to date information. The mineral tenure information is used in Section 4 of the Report and in support of the Mineral Resource estimate in Section 14.

## 4 Property Description and Location

The Property is located approximately 430 kilometres northwest of Prince George, British Columbia, as shown on Figure 4-1. The Property's is centered at 57.29° latitude and -127.11° longitude. Most of the claims are within NTS map sheet 94E/06, with lesser sections in NTS map sheets: 94E/07, 94E/03, 94E/02, and 94E/11.

### 4.1 Mineral Tenure

The claims information as provided by TDG is summarized in Table 4-1. A complete list of the claims is provided in Table 4-2, with a map showing the claims outlines for the entire Property illustrated in Figure 4-3. Supporting detail mineral tenure maps are provided for the Bot, North Oxide Peak, South Oxide Peak, Baker Complex / Greater Shasta-Newberry, and Mets exploration areas in Figures 4-4, 4-5, 4-6, and 4-7, respectfully.

The Shasta Mine Lease (243454) Term has been extended until 2050, and the Baker Mine Lease (243451) Term until 2051, and the Mets lease (314708) until 2053, all with First Nation's support.

**Table 4-1: Summary of Claims**

Owner	Title Type	Number	Area (ha)
TDG BC Assets Corp.	Four Post Claim (MP4)	1	450.0
TDG BC Assets Corp.	Mineral Claim (MCX)	110	39,052.9
TDG BC Assets Corp.	Mining Lease (ML)	3	457.8
TDG BC Assets Corp.	Placer Claim (PCX)	8	1748.0
<b>Total Claims</b>		<b>22</b>	<b>41,708.7</b>

#### 4.1.1 Fully Executed Oxide Peak Option Agreement with ArcWest Exploration Inc.

On December 23, 2019, Locrian Resources Inc. (now TDG) entered into an option agreement to explore ArcWest's Oxide Peak Property. The Oxide Peak Property consisted of 8,490 hectares of prospective exploration tenures directly north of TDG's Baker Complex and Greater Shasta-Newberry target areas. TDG could complete the option agreement by executing the following exploration requirements:

- By December 31st, 2020, funding \$400,000 of exploration expenditures on the Property.
- By December 31st, 2021, funding cumulative aggregate exploration expenditures of \$900,000 on the Property, including a minimum 1,000 meters of drilling.
- By December 31st, 2022, funding cumulative aggregate exploration expenditures of \$2,400,000 on the Property, including an additional minimum 1,000 meters of drilling.

TDG completed approximately \$3.3 million of exploration expenditures on Oxide Peak, including 2,050 metres of diamond drilling and identifying several targets prospective for the discovery of porphyry copper +/- gold systems (Dorion 2022, 2023).

As per the terms of the agreement, TDG has also paid ArcWest \$100,000 CAD, and issued 412,031 shares of TDG common stock. TDG granted ArcWest a 2% net smelter royalty ("NSR") on Oxide Peak. 1% of this NSR may be repurchased by TDG for \$1.0 million, at a future date.

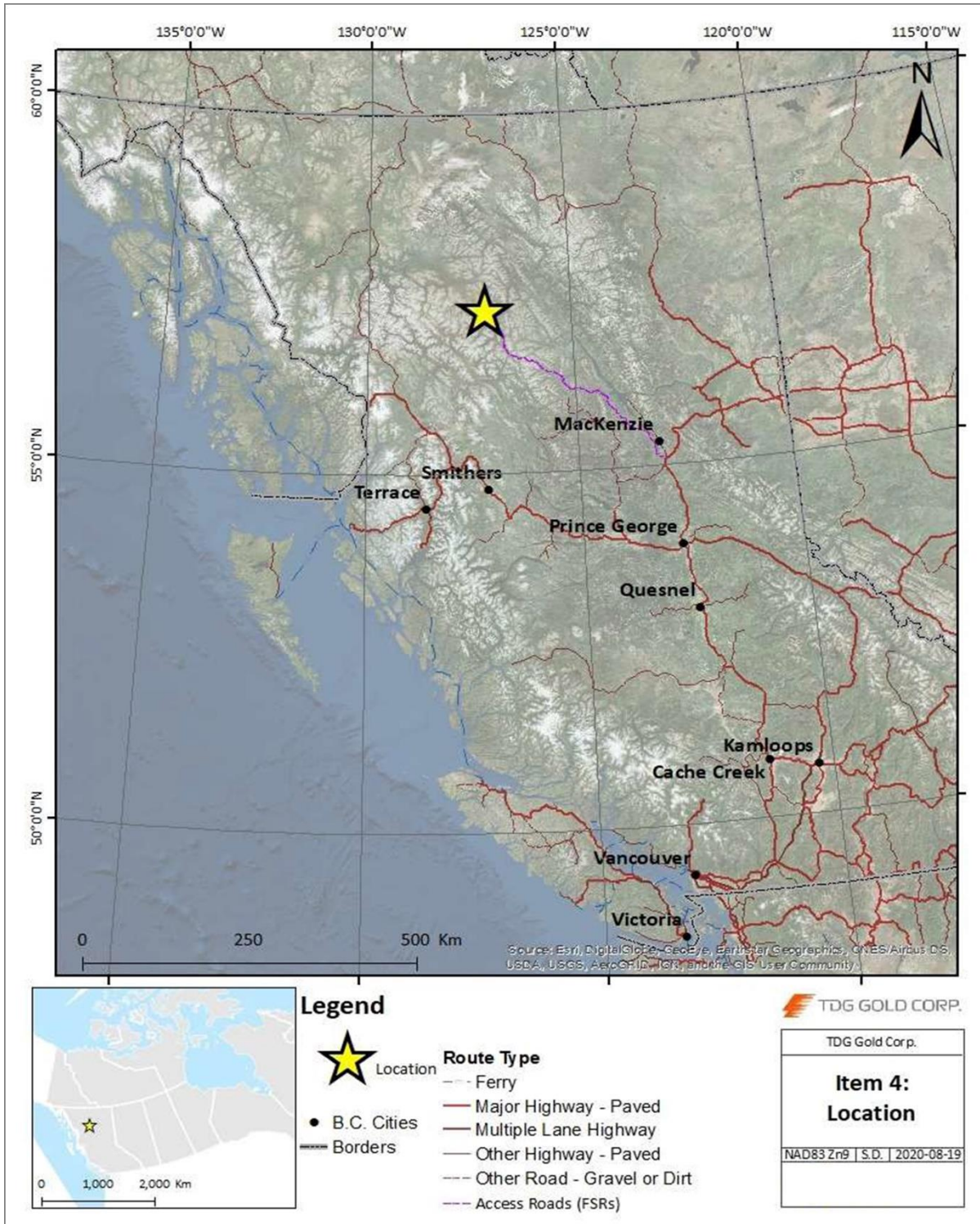
On March 14, 2024, TDG completed the acquisition of a 100% interest in the Oxide Peak mineral tenures. The former option agreement with ArcWest in respect of the Oxide Peak Property has been terminated.

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#### **4.1.2 Oxide Peak North (formerly “To-Do”) Mineral Tenure Purchase Agreement with Volatus Capital Corp.**

On August 02, 2024, TDG announced that it had entered into an agreement for the acquisition of approximately 9,600 ha of mineral tenures contiguous with its Baker Complex and Greater Shasta-Newberry projects. The tenures comprise 10 mineral claims.

Pursuant to the Purchase Agreement, TDG acquired the mineral tenures from Volatus Capital Corp. for total consideration of \$200,000 of which \$100,000 was cash (paid) and \$100,000 was through the issuance of 752,445 common shares (issued) of TDG.



**Figure 4-1: Location Map of the Property**

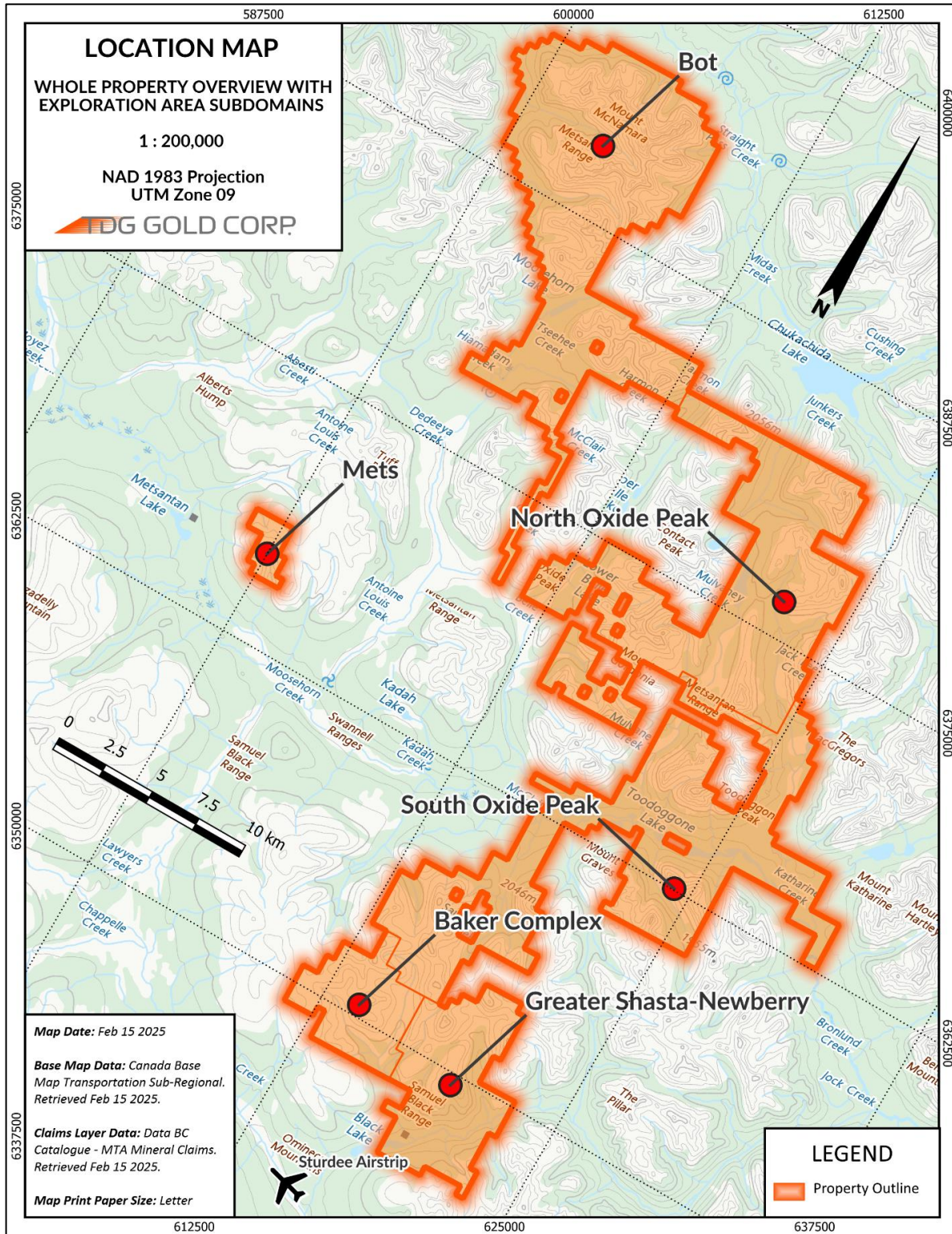
**Table 4-2: TDG Toodoggone Property Mineral Tenures**

MINING LEASES								
Title Number	Owner	Title Type	Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
243451	287962 (100%)	Mineral	Lease	094E	1980/SEP/10	2025/SEP/10	GOOD	157.8
243454	287962 (100%)	Mineral	Lease	094E	1990/JUN/13	2025/JUN/13	GOOD	100.0
314708	287962 (100%)	Mineral	Lease	094E	1993/APR/30	2025/APR/30	GOOD	200.0
<b>TOTAL MINERAL LEASES</b>								<b>457.8</b>
MINERAL CLAIMS								
Title Number	Owner	Title Type	Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
350639	287962 (100%)	Mineral	Claim	094E	1996/SEP/11	2034/DEC/21	GOOD	450.0
505423	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	70.0
505424	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	70.0
505425	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	70.0
505426	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	70.0
505427	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	577.5
505428	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	70.0
505429	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	612.3
505430	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	560.0
505431	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	437.7
505432	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	175.1
505434	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	105.0
505435	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	280.2
505436	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	245.1
505438	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	35.0
505439	287962 (100%)	Mineral	Claim	094E	2005/FEB/01	2034/DEC/21	GOOD	52.5
505460	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	69.9
505471	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	87.4
505472	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505473	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	69.9
505474	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	69.9
505475	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505476	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505478	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	69.9
505480	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	52.5
505482	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	70.0
505485	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	52.5
505487	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505490	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505492	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505633	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	70.0
505634	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505635	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505636	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	70.0
505637	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	52.5
505638	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
505639	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	52.5
505640	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	70.0
505641	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505642	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505643	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505644	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	70.0
505645	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5

Title Number	Owner	Title Type	Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
505646	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505647	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505649	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	52.5
505651	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505652	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	35.0
505653	287962 (100%)	Mineral	Claim	094E	2005/FEB/02	2034/DEC/21	GOOD	17.5
527360	287962 (100%)	Mineral	Claim	094E	2006/FEB/09	2034/DEC/21	GOOD	17.5
535688	287962 (100%)	Mineral	Claim	094E	2006/JUN/14	2034/DEC/21	GOOD	104.9
1028576	287962 (100%)	Mineral	Claim	094E	2014/MAY/28	2026/FEB/28	GOOD	17.3
1032456	287962 (100%)	Mineral	Claim	094E	2014/NOV/29	2026/FEB/28	GOOD	17.3
1040240	287962 (100%)	Mineral	Claim	094E	2015/NOV/30	2026/FEB/28	GOOD	34.6
1040255	287962 (100%)	Mineral	Claim	094E	2015/DEC/01	2026/FEB/28	GOOD	86.5
1040264	287962 (100%)	Mineral	Claim	094E	2015/DEC/01	2026/FEB/28	GOOD	69.3
1047530	287962 (100%)	Mineral	Claim	094E	2016/OCT/31	2034/DEC/21	GOOD	821.8
1048078	287962 (100%)	Mineral	Claim	094E	2016/NOV/26	2026/FEB/28	GOOD	17.3
1051249	287962 (100%)	Mineral	Claim	094E	2017/APR/06	2026/FEB/28	GOOD	1,731.8
1051343	287962 (100%)	Mineral	Claim	094E	2017/APR/10	2026/FEB/28	GOOD	380.9
1051375	287962 (100%)	Mineral	Claim	094E	2017/APR/12	2026/FEB/28	GOOD	190.3
1051462	287962 (100%)	Mineral	Claim	094E	2017/APR/18	2026/FEB/28	GOOD	346.4
1051463	287962 (100%)	Mineral	Claim	094E	2017/APR/18	2026/FEB/28	GOOD	520.3
1054165	287962 (100%)	Mineral	Claim	094E	2017/AUG/20	2026/FEB/28	GOOD	1,735.5
1054166	287962 (100%)	Mineral	Claim	094E	2017/AUG/20	2026/FEB/28	GOOD	416.9
1054171	287962 (100%)	Mineral	Claim	094E	2017/AUG/20	2026/FEB/28	GOOD	607.6
1054172	287962 (100%)	Mineral	Claim	094E	2017/AUG/20	2026/FEB/28	GOOD	554.8
1054174	287962 (100%)	Mineral	Claim	094E	2017/AUG/20	2026/FEB/28	GOOD	537.1
1058606	287962 (100%)	Mineral	Claim	094E	2018/FEB/13	2026/FEB/28	GOOD	277.9
1059602	287962 (100%)	Mineral	Claim	094E	2018/MAR/28	2033/DEC/01	GOOD	139.6
1060401	287962 (100%)	Mineral	Claim	094E	2018/MAY/03	2026/FEB/28	GOOD	1,142.6
1065953	287962 (100%)	Mineral	Claim	094E	2019/JAN/22	2034/DEC/21	GOOD	17.5
1069493	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	1,483.5
1069494	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	734.1
1069499	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	803.7
1069500	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	104.8
1069501	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	419.2
1069502	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	69.9
1069503	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	69.9
1069506	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	17.5
1069507	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	17.5
1069508	287962 (100%)	Mineral	Claim	094E	2019/JUL/06	2034/MAY/14	GOOD	17.5
1069549	287962 (100%)	Mineral	Claim	094E	2019/JUL/08	2034/MAY/14	GOOD	52.3
1069557	287962 (100%)	Mineral	Claim	094E	2019/JUL/09	2034/MAY/14	GOOD	1,062.4
1070901	287962 (100%)	Mineral	Claim	094E	2019/SEP/07	2034/MAY/14	GOOD	226.7
1074364	287962 (100%)	Mineral	Claim	094E	2020/FEB/03	2026/JUN/21	GOOD	418.6
1074385	287962 (100%)	Mineral	Claim	094E	2020/FEB/04	2026/JUN/21	GOOD	715.3
1074386	287962 (100%)	Mineral	Claim	094E	2020/FEB/04	2026/JUN/21	GOOD	488.5
1074387	287962 (100%)	Mineral	Claim	094E	2020/FEB/04	2026/JUN/21	GOOD	313.8
1074413	287962 (100%)	Mineral	Claim	094E	2020/FEB/05	2034/DEC/21	GOOD	17.5
1074440	287962 (100%)	Mineral	Claim	094E	2020/FEB/06	2026/JUN/21	GOOD	1,219.8
1074441	287962 (100%)	Mineral	Claim	094E	2020/FEB/06	2026/JUN/21	GOOD	1,585.9
1076921	287962 (100%)	Mineral	Claim	094E	2020/JUN/23	2034/MAY/14	GOOD	2,348.7
1076922	287962 (100%)	Mineral	Claim	094E	2020/JUN/23	2034/MAY/14	GOOD	1,010.0

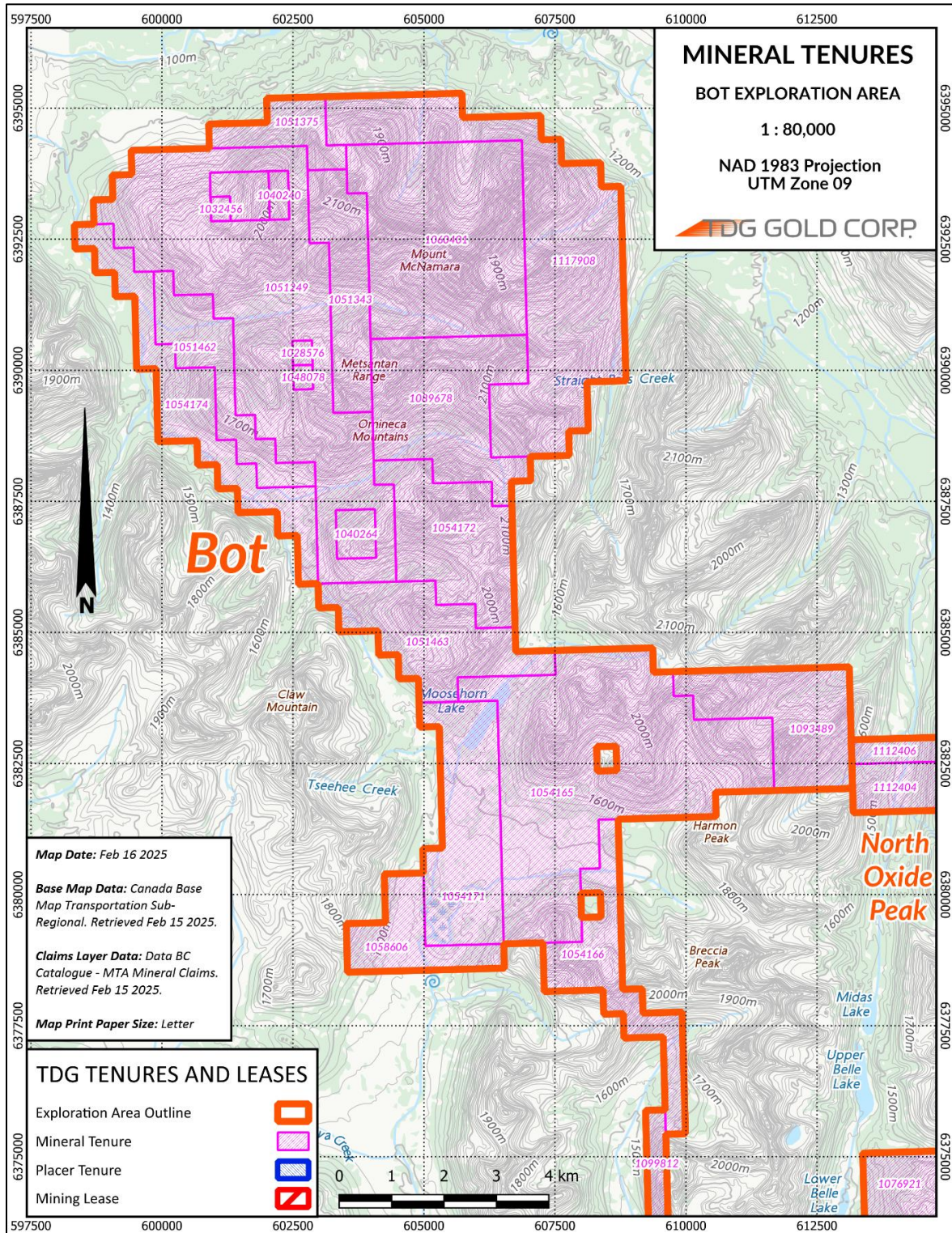
Title Number	Owner	Title Type	Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
1079935	287962 (100%)	Mineral	Claim	094E	2020/DEC/07	2026/JUN/21	GOOD	1,739.8
1079937	287962 (100%)	Mineral	Claim	094E	2020/DEC/07	2026/JUN/21	GOOD	1,738.3
1079938	287962 (100%)	Mineral	Claim	094E	2020/DEC/07	2026/JUN/21	GOOD	644.0
1085720	287962 (100%)	Mineral	Claim	094E	2021/NOV/26	2026/JUN/21	GOOD	781.8
1088894	287962 (100%)	Mineral	Claim	094E	2022/JAN/19	2034/DEC/21	GOOD	35.0
1088901	287962 (100%)	Mineral	Claim	094E	2022/JAN/19	2034/DEC/21	GOOD	87.4
1088907	287962 (100%)	Mineral	Claim	094E	2022/JAN/19	2034/DEC/21	GOOD	35.0
1089678	287962 (100%)	Mineral	Claim	094E	2022/JAN/21	2026/FEB/28	GOOD	693.0
1093489	287962 (100%)	Mineral	Claim	094E	2022/FEB/25	2026/FEB/28	GOOD	503.2
1094530	287962 (100%)	Mineral	Claim	094E	2022/MAR/30	2032/DEC/01	GOOD	244.1
1098236	287962 (100%)	Mineral	Claim	094E	2022/OCT/20	2025/APR/20	GOOD	52.4
1099812	287962 (100%)	Mineral	Claim	094E	2022/DEC/12	2026/FEB/28	GOOD	208.7
1112404	287962 (100%)	Mineral	Claim	094E	2024/APR/11	2026/FEB/28	GOOD	1,649.4
1112405	287962 (100%)	Mineral	Claim	094E	2024/APR/11	2026/FEB/28	GOOD	520.8
1112406	287962 (100%)	Mineral	Claim	094E	2024/APR/11	2026/FEB/28	GOOD	433.9
1114749	287962 (100%)	Mineral	Claim	094E	2024/JUL/31	2026/JUN/21	GOOD	453.3
1117908	287962 (100%)	Mineral	Claim	094E	2024/DEC/04	2025/DEC/04	GOOD	1,350.5
<b>TOTAL MINERAL CLAIM</b>								<b>39,502.9</b>
<b>PLACER CLAIMS</b>								
Title Number	Owner	Title Type	Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
1080585	287962 (100%)	Placer	Claim	094E	2021/JAN/14	2026/DEC/01	GOOD	261.3
1081120	287962 (100%)	Placer	Claim	094E	2021/FEB/11	2026/DEC/01	GOOD	69.7
1081121	287962 (100%)	Placer	Claim	094E	2021/FEB/11	2026/DEC/01	GOOD	104.5
1088922	287962 (100%)	Placer	Claim	094E	2022/JAN/19	2026/FEB/20	GOOD	140.1
1088933	287962 (100%)	Placer	Claim	094E	2022/JAN/19	2027/APR/22	GOOD	262.4
1094796	287962 (100%)	Placer	Claim	094E	2022/APR/01	2026/FEB/20	GOOD	437.7
1094797	287962 (100%)	Placer	Claim	094E	2022/APR/01	2027/APR/22	GOOD	262.5
1102988	287962 (100%)	Placer	Claim	094E	2023/MAR/10	2026/FEB/20	GOOD	210.0
<b>TOTAL PLACER CLAIMS</b>								<b>1,748.0</b>
<b>TOTAL - ALL CLAIM TYPES</b>								<b>41,708.7</b>





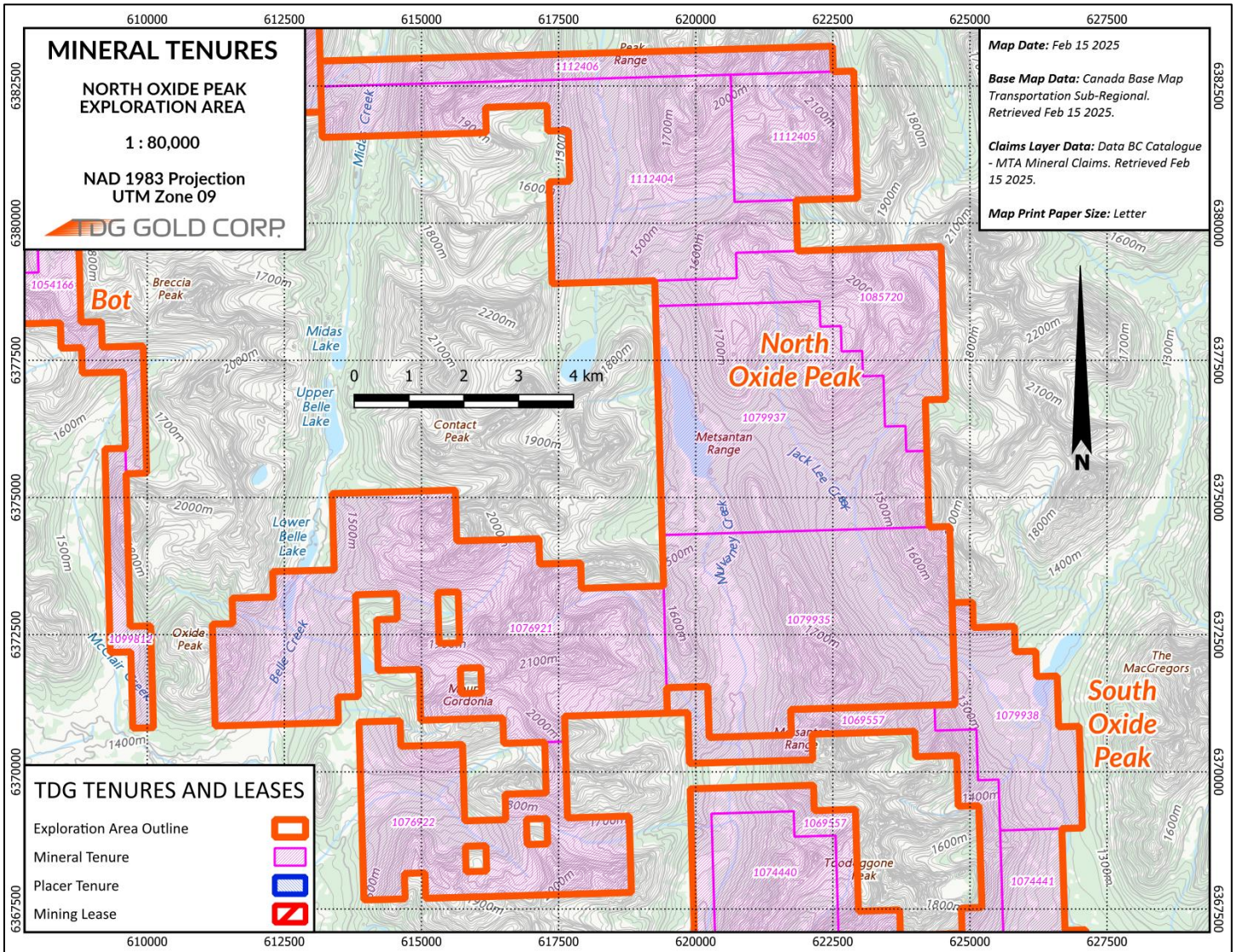
(Source: TDG Gold, 2025)

**Figure 4-2: Total Project Mineral Tenures Location Map**



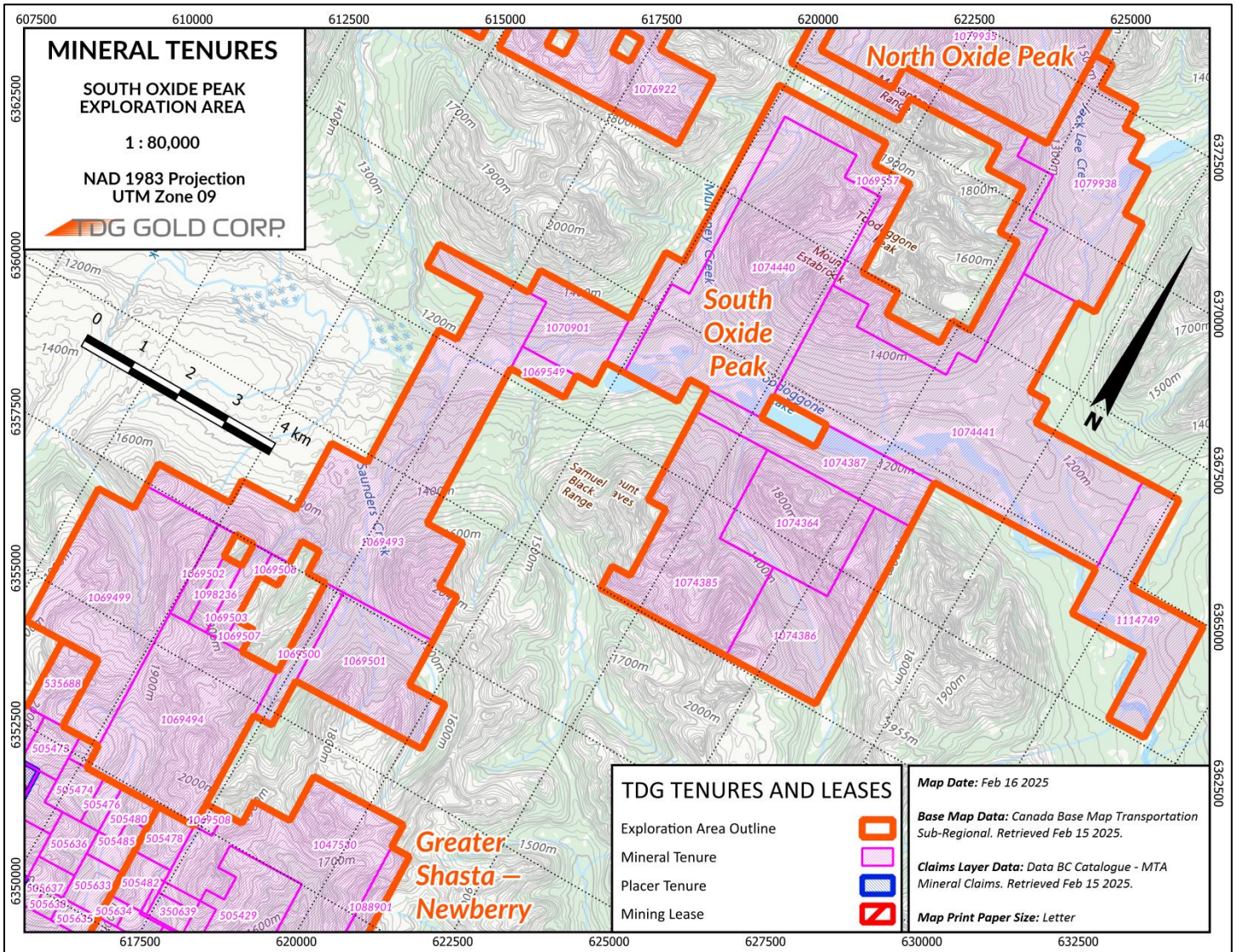
(Source: TDG Gold, 2025)

**Figure 4-3: Bot Exploration Area Mineral Tenures Map**



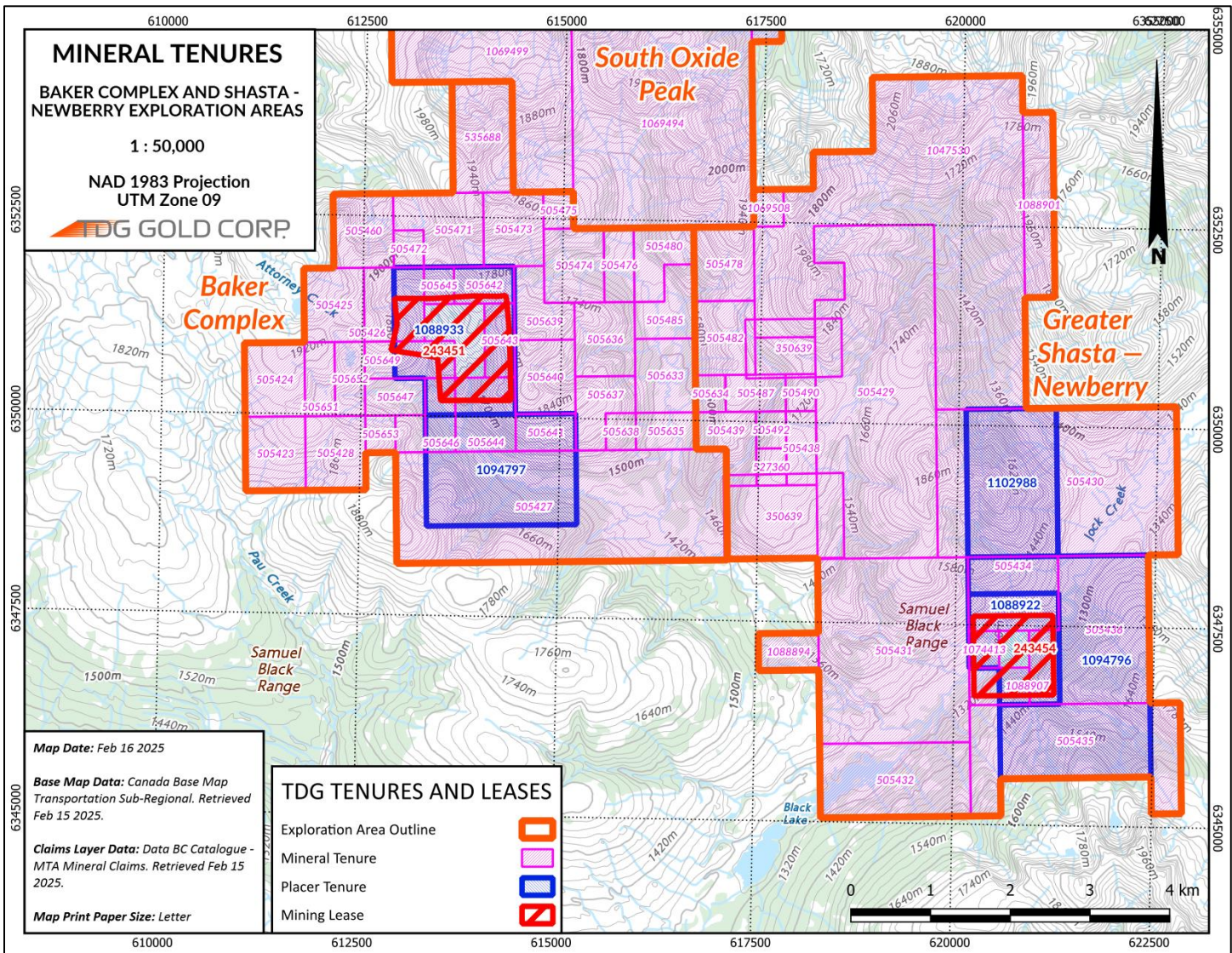
(Source: TDG Gold, 2025)

**Figure 4-4: North Oxide Peak Exploration Area Mineral Tenures Map**



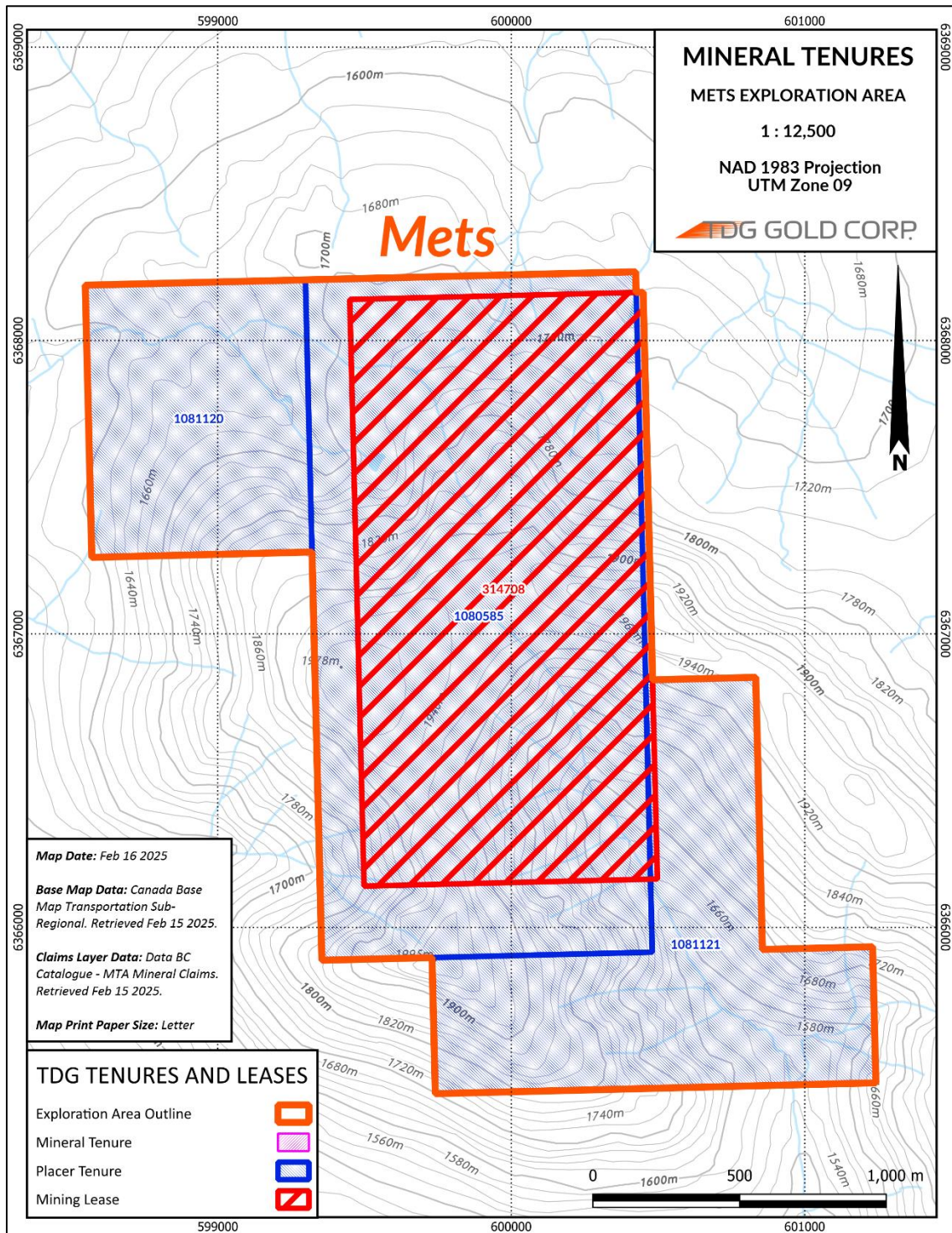
(Source: TDG Gold, 2025)

**Figure 4-5: South Oxide Peak Exploration Area Mineral Tenures Map**



(Source: TDG Gold, 2025)

**Figure 4-6: Combined Baker Complex / Greater Shasta – Newberry Exploration Area Mineral Tenures Map**



(Source: TDG Gold, 2025)

**Figure 4-7: Mets Exploration Area Mineral Tenures Map**

## 4.2 Permitting, Environmental Liabilities, and Other Issue

### 4.2.1 Mackenzie Land and Resource Management Plan

The Property is not directly encumbered by any provincial or national parks, or other protected areas. The Project lies fully within the Mackenzie Land and Resource Management Plan ("LRMP"). LRMPs provide strategic level direction for

managing Crown land resources and identify ways to achieve community, economic, environmental, and social objectives. The Mackenzie LRMP recognizes the importance of mineral resources and mining and, in that regard, provides the following direction (Smith, 2019): “Minerals Objective – Maintain opportunities and access for mineral exploration, development and transportation while having due regard to impacts on other resource values. Provide opportunities for exploration and development of mineral resources within the regulatory framework and consistent with the management intent of this zone. Accommodate localized impacts of advanced exploration and development activities with existing legislation. There is no intention or direction suggested in the objectives and strategies for this zone to cause undue operational approval delays by government for development or exploration proponents.”

#### **4.2.2 Permits**

TDG holds a Mines Act permit M-189 for 175 hectares including historical mine workings at Baker A and B veins, Baker mill and camp, tailings storage facilities, forestry road and historical mine workings at Shasta, as shown in Figure 4-8. TDG has exploration permits (“MX”) for all of the exploration sub-domains except the North Oxide Peak project. TDG has also been awarded a Special Use Permit for the Forestry Road through its properties.

#### **4.2.3 Liabilities and Bonding**

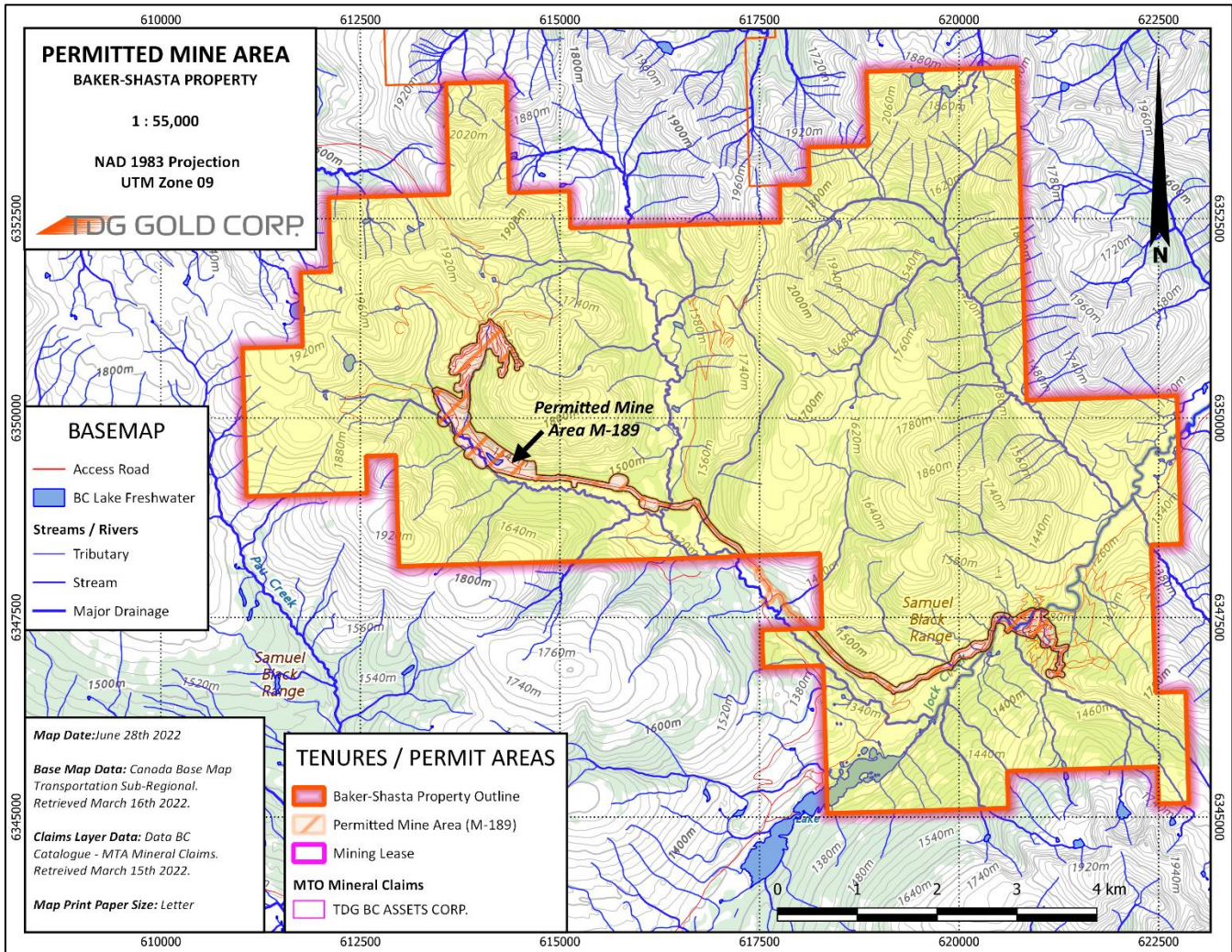
Significant liabilities exist on the Property in the form of historical mine construction, operations and development infrastructure including, tailings storage facilities, a waste dump site, a mill site, a camp site, and other mining related infrastructure, disturbance, and equipment.

Reclamation and closure bonding has been agreed with the BC Ministry of Energy, Mines and Low Carbon Innovation including a schedule of payments at 0 (completed), 12 (completed) and 24 (completed) months. Annual compliance activities include a comprehensive environmental monitoring program, annual tailings storage facilities safety inspection and inspection of water diversions related to the tailings storage facilities

The author is not aware of any other known significant factors or risks related to the Project that may affect access, title or the right or ability to perform exploration work on the property.

#### **4.2.4 Surface Rights**

A complete land title review of surface ownership has not been conducted at this time, but TDG is aware that the mineral claims comprising the Project consist of Crown Land for which surface access and rights of use for mineral development can be obtained.



(Source: TDG Gold, 2022)

**Figure 4-8: Permit Boundary issued - Mines Act permitted M-189**



### 4.3 Indigenous & Traditional Territories

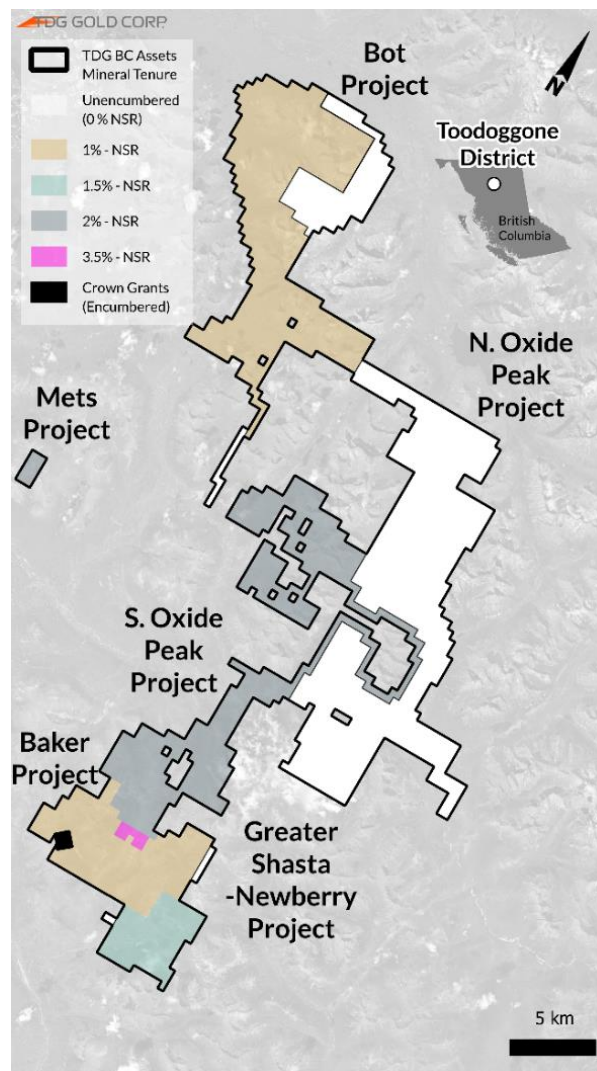
TDG recognizes the inherent rights and title of Indigenous peoples which informs our work as we engage in meaningful ways through all phases of exploration and regulatory processes. TDG commits to early, respectful, and active engagement with Indigenous peoples and their communities and seek to build mutually beneficial partnerships that result in shared prosperity and reduced uncertainty for all parties involved.

TDG expects to build positive lasting relationships with the First Nations that have an expressed interest around the Property. TDG has utilized its dedicated Indigenous Engagement Advisor (who is now their VP of Sustainability) to advance engagement through letters, calls, and emails.

Formal agreements have been reached and signed with the First Nations that have expressed interest in the project area to seek prior input before advancing on work proposed.

### 4.4 Royalties

The following royalty information is presented in Figure 4-9 and was provided by TDG (TDG, 2025).



(Source: TDG, 2025)

Figure 4-9: Royalty Information

#### **4.4.1 Baker-Shasta, Mets, and Bot**

The Baker, Shasta and Mets portions of the Property are subject to a 1% Net Smelter Return ("NSR") payable to Sable Resources Ltd. ("Sable") pursuant to an agreement between Talisker and Sable dated April 18th, 2019. At Shasta, a 0.5% NSR is held by Royal Gold Inc. ("Royal Gold") via International Royalty Corporation of which Royal Gold is the parent company. The Royal Gold NSR was acquired on October 1st, 2008, from Barrick Gold Inc. ("Barrick") which Barrick had acquired as part of its acquisition of Homestake Canada Inc. ("Homestake"). Homestake had been granted an NSR by Sable when it acquired the Shasta claims from Homestake in a transaction dated December 19th, 1994. David Javorsky, a private individual, holds a 2.5% NSR on the "Wild Rose Claims" portion of the Baker property.

The Mets mining lease has an additional 1% NSR to Cold Stream Exploration.

#### **4.4.2 South Oxide Peak**

Certain of the mineral claims forming the Oxide Peak property are subject to a 2% NSR held by Seven Devils Exploration Ltd. ("Seven Devils") as agreed to in a mineral property purchase agreement between ArcWest and Seven Devils of August 6th, 2018. Under the terms, 1% of the NSR may be acquired for \$1,000,000. In the Oxide Peak earn-in agreement signed between TDG and ArcWest on December 22nd, 2019, ArcWest received a 2% NSR on the entire of Oxide Peak portion of the Property of which 1% may be acquired for \$2,000,000. Where the Seven Devils and ArcWest NSRs overlap, the ArcWest NSR is subject to a Royalty Cap, as defined in the Oxide Peak earn-in agreement, whereby a 2% NSR is the maximum royalty payable by TDG.

### **4.5 Agreements**

#### **4.5.1 Amalgamation Agreement**

The following is summarized from TDG Gold, (2021):

On December 11, 2020, the Company completed a reverse take-over transaction whereby the Company acquired all the issued and outstanding common shares of TDG BC Assets Corp. (formerly TDG Gold Corp.) ("TDGBC") by way of a three-cornered amalgamation ("Amalgamation") between the Company, TDGBC, and 1266834 B.C. Ltd. ("Numco"), a wholly owned subsidiary of the Company.

Immediately prior to the completion of the Amalgamation:

- the issued and outstanding common shares of the former Kismet were consolidated on a 2:1 basis.
- the Company changed its name from Kismet to TDG.

Pursuant to the Amalgamation:

- the Company issued the former shareholders of TDGBC 25,244,928 common shares (one share for every three shares of TDGBC).
- the shareholders of Kismet retained 2,000,000 common shares valued at \$600,000.
- the officers of Kismet retained 200,000 options valued at \$34,195. The fair value of the options was determined using the Black-Scholes option pricing model with the following assumptions: a risk-free interest rate of 0.25%; an expected volatility of 100%; an expected life of 1-3 years; a forfeiture rate of zero; and an expected dividend of zero.
- TDGBC amalgamated with Numco as one company under the name TDG BC Assets Corp., a wholly owned subsidiary of the Company.

On completion of the Amalgamation, the former shareholders of TDGBC own more shares of the Company than the former shareholders Kismet and accordingly the Amalgamation has been treated as a reverse take-over transaction with

the financial statements of TDGBC being the continuing financial statements of the Company and Kismet being the company acquired.

Concurrent with the Amalgamation, the Company completed a private placement for gross proceeds of \$4,033,610.

Also, concurrent with the Amalgamation, the Company issued 18,973,699 common shares to Talisker Resources Ltd. to acquire the Baker-Shasta, Mets, and Bot projects. The common shares of the Company began trading on the TSX-V on December 17, 2020, under the ticker symbol TDG.

#### **4.5.2 Asset Purchase Agreement**

TDG entered into an asset purchase agreement dated July 7<sup>th</sup>, 2020 (the “Asset Purchase Agreement”) with Talisker pursuant to which TDG agreed to purchase, and Talisker agreed to sell, the Baker Project, the Shasta Mine and the Baker mill infrastructure and equipment, the Chappelle property, the Bots property, and the Mets lease (collectively, the “Talisker Properties”), all of which are in the Toodoggone region of British Columbia.

Per the terms of the Definitive Purchase Agreement announced Feb 14, 2024, TDG has paid \$100,000 and issued 412,031 common shares of TDG (the “TDG Shares”) to ArcWest. TDG has also granted a 2% net smelter returns royalty on Oxide Peak to ArcWest, of which 1% may be repurchased by TDG for \$1.0 million. The TDG Shares will be subject to a four-month hold period under applicable securities laws expiring July 15, 2024, as well as certain orderly sales requirements agreed to between TDG and ArcWest. The former option agreement with ArcWest in respect of the Oxide Peak property has been terminated.

## 5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

### 5.1 Accessibility

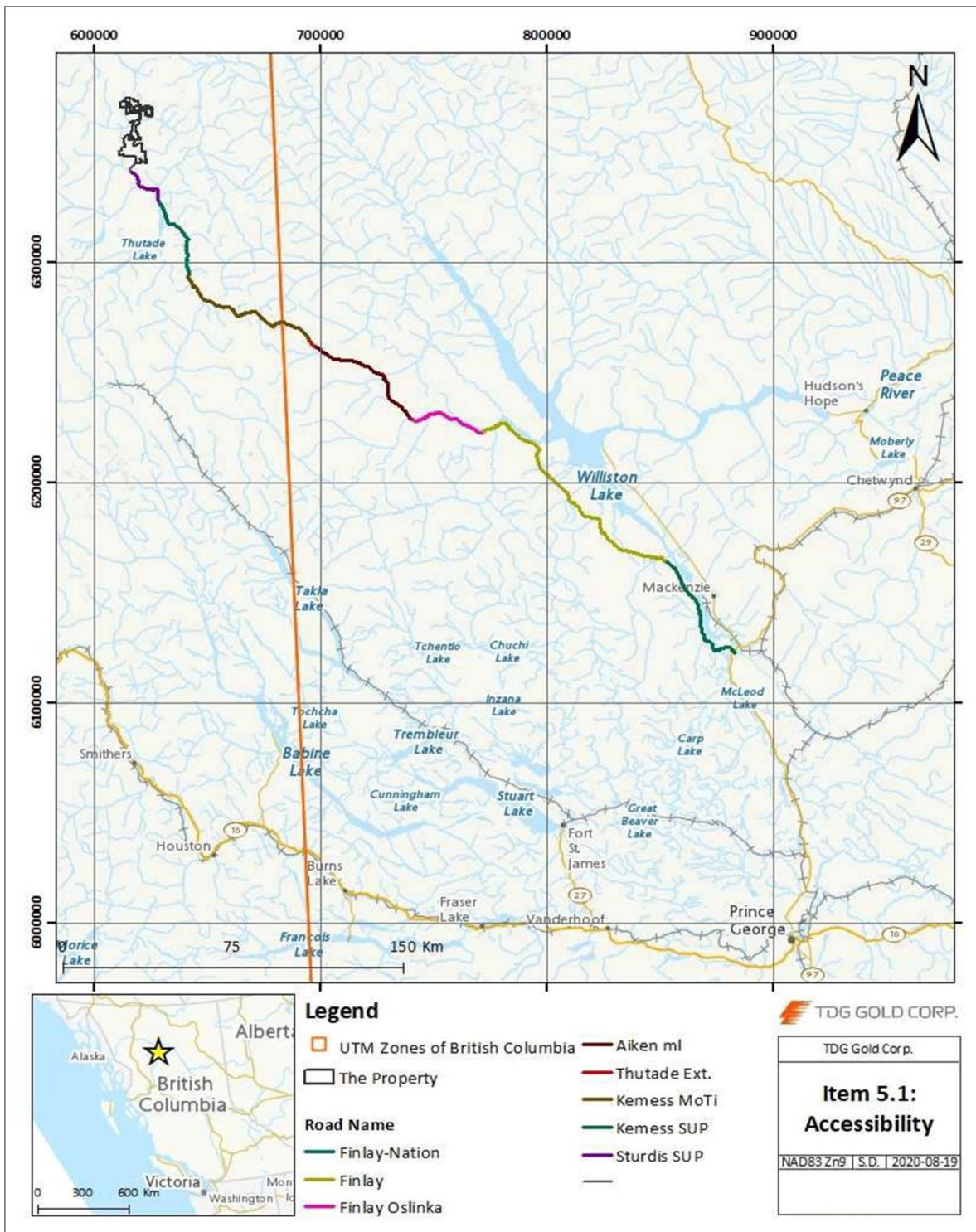
The property is road-accessible all year round. The most practical route is to turn off at the Finlay-Nation forest service road located 148 kilometres north of Prince George, along Highway 97 towards the town of Mackenzie, BC.

Figure 5-1 displays the Omineca Resource Access Road (ORAR) network from the Highway 97 turnoff required to access the Property. The total driving distance using the described route from Prince George, British Columbia, to the Property is approximately 577 km.

Depending on the season, the property is accessible by float plane on Black Lake and by standard landing gear plane on the Sturdee airstrip. The Sturdee airstrip is located approximately 9 km south-southeast and 8 km southwest from the Baker and Shasta mine sites, respectively. During the winter, a ski-plane can be used. The non road connection portions of the Portfolio are accessed from helicopter, based on the Baker Camp.

**Table 5-1: Road network from Highway 97 (turn-off at TDG Property)**

FSR / MOTI / SUP (Access Roads)	RR (Range Road) Frequency	Road Distance (km)	RR Junction from Highway 97 Distance
Finlay-Nation	RR2	62	HWY 97/Finlay-Nation: 62km
Finlay	RR-5 / RR-6 / RR-7	119.5	Finlay-Nation/Finlay: 181.5km
Finlay-Oslinka	RR-8	38	Finlay/Finlay-Oslinka: 219.5km
Aiken ml	RR-6	61	Finlay-Oslinka/Aiken ml: 280.5km
Thutade Ext MOTI	RR-6	3.5	Aiken ml/Thutade ext: 284km
Kemess MOTI	RR-6	72	Thutade ext/Kemess MoTi: 356km
Kemess SUP	RR-6	44	Kemess MoTi/Kemess SUP: 400km
Sturdis SUP	RR-6	23	Kemess SUP/Sturdis SUP: 423km
<i>unnamed trails</i>	LAD 2	6	Sturdis SUP/ <i>unnamed trails</i> : 429km



(Source: TDG Gold, 2020)

**Figure 5-1: Access to the Property**

## 5.2 Climate

The climate of the Project can be described as cool continental with cool summers and cold winters. The summer field season typically extends from the beginning of June to late September. The temperatures and weather can be quite erratic during this period and sporadic rain and snow showers can occur at any time. Approximate temperatures range from a minimum of -32°C in January to a maximum of +26°C in June. Snowfall accumulations can reach up to two metres over the winter months (Smith, 2019). At the Bot property, the mean annual precipitation ranges from 50 to 75 cm, most of this occurring as rainfall during the summer months. Average temperatures vary from -20°C in winter to +12°C in the summer. The onset of winter conditions limits exploration past October, and snow can persist at higher elevations until late June.

## 5.3 Local Resources

The closest major supply centre by air is Smithers, about 300 km to the south. Smithers has a population of about 6,000 and services roughly 15,000 people living in the Bulkley Valley region. It is a major service centre along the Yellowhead Highway ("Highway 16") and along the Canadian National Railway ("CNR") line midway between Prince George and the port city of Prince Rupert (Smith, 2019).

Smithers has an extensive history of supporting mineral exploration and mining development in north-central and northwest B.C., including major past producing mines such as Bell and Granisle in the Babine Lake area, Equity Silver near Houston, Kemess South in the Toodoggone region, and Eskay Creek and Snip in the Iskut River area. Smithers has an available and skilled workforce for exploration and mining and is the operational base for many companies that provide a range of services, such as contract diamond drilling, to mining exploration companies.

The closest supply centre by road is Mackenzie, a driving distance of about 400 km to the southeast of the Project. Mackenzie has a population of about 4,500 and provides services to a primarily forestry-based economy (logging, softwood lumber and pulp manufacturing facilities). Active logging includes areas serviced by the Findlay Forest Service Road and the ORAR corridors several hundred kilometres northwest of the town. Mackenzie also provides services to the Mt. Milligan copper-gold mine, a major open-pit operation owned and operated by Centerra Gold, located approximately 95 km to the west. CNR operates a 37 km spur line that connects Mackenzie to its mainline, providing rail service to the ports of Vancouver and Prince Rupert. Mackenzie is supported by the larger industrial hub city of Prince George, population 70,000, located 183 km to the south (Smith, 2019).

## 5.4 Infrastructure

The closest major infrastructure facility is at the site of previous operator, Kemess South mine which is currently on "care and maintenance". The current owner is Centerra Gold Inc. ("Centerra") who have been exploring in the area since 2018. A Feasibility Study of the Kemess Underground project was conducted in 2016, and a Preliminary Economic Assessment of Kemess East was done in 2017, both by then-owner Aurico Metals Inc. Existing facilities include electrical power connected to the B.C. Hydro grid via a 340 km powerline extending from Mackenzie; a 1,424 m gravel airstrip now serviced periodically by flights from Smithers and Prince George; a large mine camp that provides room and board to the workforce; and an all-weather road that connects to major supply centres to the south (Smith, 2019).

Infrastructure located on the Shasta-Baker Property consists of the 200 tpd Baker mill, a tailings storage facilities, limited surface, and underground equipment, and seasonal 50 persons camp facilities.

## 5.5 Physiography

### 5.5.1 Baker Complex & Greater Shasta – Newberry

Shasta-Baker is situated in moderate terrain with elevations ranging from about 1,200 metres a.s.l. along Jock Creek in the eastern part of the property to about 1,900 metres a.s.l. in the central and west parts of the property. Most of the property is above tree line which is at an elevation of about 1,630 metres a.s.l. Below tree line, sparse cover consists of

birch and willow shrubs and scattered groves of white spruce and sub-alpine fir. In alpine areas, dwarf shrubs, grassy meadows, lichens, and rocky tundra are common. Bedrock exposures are relatively scarce and are primarily limited to ridges and steeper creek gullies. Several creeks are present on the property; these have been used for exploration water sources into October before freezing. Most creeks on the property appear groundwater fed (Smith, 2019).

### **5.5.2 South Oxide Peak**

The Oxide Peak project is located within the Metsantan Range, one of the Swannell Ranges of the Omineca Mountains. The property occupies an area of deeply incised, glaciated mountainous terrain with elevations extending from just below 1300 metres a.s.l. in the Belle Lakes area to almost 2200 metres a.s.l. at Mount Gordonia, near the northern boundary of the property.

The geomorphic form of the northern half of the Oxide Peak claim area is represented by three steep sided, block like mountain ranges centered on Oxide Peak, Mt. Gordonia and Toodoggone Peak. Elevation ranges from 1300 metres a.s.l. in the valley bottoms to 2200 metres a.s.l. on Mt. Gordonia. These highlands are separated by low broad glacial valleys of Bell Creek and Mulvaney Creek. In general, each mountain block is separated from the other by a linear, flat to gently undulating valley of less than 1 kilometre to greater than 3 kilometres in width. The width of these valleys is usually devoid of outcrop and filled with glacial outwash.

The southern portion of Oxide Peak covers an area of mainly northerly draining mountainous terrain of moderate relief ranging from 1300 metres a.s.l. at the northern edge to 2050 metres a.s.l. on local peaks. Vegetation ranges from widely spaced jack pine and spruce at Toodoggone River, through stunted balsam and willows at tree line at 1600 metres a.s.l., to barren rock with patchy balsam and sedges at higher elevation. The central, northward flowing streams follow alpine glacial valleys. Hills are covered by variable thickness of till, overlain by talus slides at higher elevations.

The entire Oxide Peak claim group lies within the Spruce-Willow-Birch Bio-geoclimatic Zone, with vegetation cover occurring in the main valleys, surrounding broad alpine areas. A variety of wildlife inhabits the area including black bears, grizzlies, wolves, fox, moose, and caribou.

Seasonal temperatures vary from -35° C in winter and over 30° C during the 4 months of summer. The mean daily temperatures for July and January are approximately 14° C and -15° C to -20° C, respectively. Precipitation between 50 and 75 centimetres occurs annually, with most during the winter months as snow cover of approximately 2 metres.

The optimal time for surface exploration on the Oxide Peak property is between mid-late June and early October.

### **5.5.3 Mets**

The Mets project lies within the Cassiar Mountains physiographic subdivision of the Interior Plateau. The region is entirely glaciated and is characterized by wide U-shaped drift-filled major valleys and deeply incised V-shaped interior upland valleys. Mountain peaks in the area average 1980 m ASL, rising fairly abruptly from the major valleys. The topography of the areas underlain by Toodoggone volcanic rocks is usually more subdued than in those areas underlain by Takla Group volcanic rocks toward the east.

### **5.5.4 Bot/North Oxide Peak**

The Bot property is moderately rugged, with elevations ranging between 1250 and 2500 metres above sea-level (masl). Slope gradients commonly reach 60 percent. Most of the property is covered by a talus at elevation. Tree line is at approximately 1600 masl. Drainage is provided by several small creeks which feed into the Chukichida River, a tributary of the Stikine River.

Overburden depth is variable, ranging from 0m (outcrop) to 20m depending on location, but averages somewhere between 1 and 4 m over much of the property. Bedrock surface below the overburden is glacially modified, being highly irregular or hummocky.

## **6 History**

Historically, the Baker claims (formerly referred to as Chappelle) and the Shasta group claims were divided due to separate ownership. The Baker/Chappelle and Shasta groups contain the past producing mines: DuPont/Baker 'A' and Multinational 'B' mines, and the Shasta mine. Sable merged the properties to create the Baker Project, which forms the modern claim shape.

In 1824, explorer Samuel Black noted many unusually colorful gossans in the headwaters of the Findlay River system. In 1915, prospector Charles McClair mined alluvial gold from the gravels of a creek north of Toodoggone Lake that would later bear his name. In 1929, Cominco explored several base metals showings in the region (Smith, 2019).

Kenneco Explorations (Western) Limited staked the Chappelle claims in 1969. Conwest Exploration Ltd. optioned the property in 1973 from Kenneco and constructed an airstrip at Blake Lake and a road to the property prior to dropping the option in 1974. DuPont of Canada Exploration Limited acquired the property in 1974 and in 1979 the decision to put the property into production Dupont/Baker mine was made. Multinational Mining Inc. acquired the mineral rights from Dupont in 1985. Sable acquired the Dupont/Baker mill infrastructure in 1989 from Dupont to process material from the Shasta mine and subsequently acquired Multinational Mining Inc. and their claims (Smith, 2019).

As a combined Baker-Shasta property, Sable conducted an exploration program in 2017 which included a 116-sample stream sediment geochemistry survey, a 10 line-km IP survey, a 982-line-km property-wide ZTEM airborne geophysical survey and drilled 1811.86 metres over 5 diamond drillholes (Smith, 2019). All 5 drillholes encountered extensive pyrite-magnetite-quartz mineralization, hosted in Takla group basalts and feldspar porphyry dikes/sills, but returned disappointing assays for gold and copper. For a detailed review of the 2017- 2019 period, readers are recommended to review the 2019 released NI 43-101 by Eurocontrol Technics Group Inc. (Smith, 2019).

### **6.1 Baker Complex**

The Baker group, formerly referred to as the Chappelle group, was discovered in 1969 by Kennco Explorations (Western) Limited. Several quartz vein structures were identified, which included the discovery of the 'A' vein.

#### **6.1.1 'A' Vein Mine**

Conwest Exploration Ltd. optioned the property in 1973 and constructed an airstrip at Black Lake and a road to the property prior to driving a 200-metre adit to further the explore 'A' vein. Underground diamond drilling was carried out during this time, but no encouraging results were returned, and the property option was terminated in 1988 (Carter, 1988).

In 1974, DuPont of Canada Exploration Limited acquired the property and completed 8,700 metres of diamond drilling and 460 metres of underground development on the 'A' vein structure over a five-year period. The mine was put into production as the Baker mine in 1979, and an airstrip was constructed at Sturdee River Valley to facilitate air freighting of all equipment which included a 90 tpd mill (Carter, 1988). Referred to as the DuPont/Baker 'A' deposit at the time, the Baker Mine was operated by DuPont Canada during the period of 1981 to 1983 as an underground and open-pit gold-silver mine. The operation involved a 90 tpd whole ore cyanidation plant, using the Merrill-Crowe process (Carter, 1988). Sable acquired the Baker site, including the processing facility in 1989 and subsequently modified it to a flotation circuit with optional concentrate cyanidation (Smith, 2019).

#### **6.1.2 'B' Vein Mine**

The Multinational 'B' deposit, located adjacent to Adit Creek and upstream of the 'A' deposit, was a high-grade gold-silver-copper deposit from which flotation concentrates were shipped off-site. This mine was intermittently operated by Sable between 1991 and 1997 (Craft, 2003).



No reliable historical resource or reserve estimate could be located for either the Multinational 'B' or DuPont 'A' deposits. Craft (2001) reports that DuPont of Canada Exploration Ltd. produced 95,000 tons from the DuPont 'A' between 1981 and 1983, at an average production grade of 0.9 oz/t gold equivalent and that Sable produced 17,500 tons from the Multinational 'B' deposit at a grade of 0.5 oz/t gold, 5 oz/t silver, and 1% copper (Smith, 2019). The B-vein saw much of its exploration between 1986 and 1988, with a total of 11,935 metres of drilling completed over 104 holes (Smith, 2019).

### **6.1.3 Black Gossan**

The Black Gossan target saw sporadic exploration between 1997 and 2017. In 2002, at the Black Gossan, 9 Diamond Drillholes were drilled by Sable, two trenches were excavated, and a soil grid was expanded (ARIS, 2020). In 2004, Sable drilled three holes into the Black Gossan Zone. This was to be a progressive program that explored deeper into the zone. The deepest hole that was to go 600 m was stopped at 166.76 m due to squeezing ground. The drilling did demonstrate that a copper-gold system exists and is increasing in grade with depth (ARIS, 2020). In 2006, at the Black Gossan, Sable Resources drilled two NQ sized diamond drillholes, totaling 170.7 metres. These were abandoned at the porphyry target due to poor ground conditions. The holes intersected propylitic altered Takla Group volcanics over their entire length. Pyrite accounted for 1 to 2 per cent and was the only sulphide noted. No assays were completed (ARIS, 2020). In 2017, 3 of the 5 diamond drillholes tested the Black Gossan zone: BK17-01, BK17-02, and BK17-05. The total metres drilled on the Black Gossan zone in 2017 was 1,153.97 metres of the 1,811.86 drilled metres completed that year.

## **6.2 Shasta**

The original Shasta group of claims were staked in 1972 by Shasta Mines and Oil Ltd., who later changed their name to International Shasta Resources Ltd. Prospecting, soil and rock geochemical surveys, geological mapping, and magnetometer surveys were carried out between 1973 and 1975 by W. Meyers and Associates Ltd on behalf of the owner. Most of this work was carried out on the south side of Jock Creek. In 1978, the property was optioned by Asarco Ltd. But due to poor results from resampling of old trenches, the option was terminated. Newmont Exploration Canada Ltd. optioned the property in 1983 and during the next two years staked additional claims. Newmont Exploration Canada Ltd. completed extensive soil geochemical, geological, and geophysical surveys, and completed 2,675m of diamond drilling. Newmont Exploration Canada Ltd.'s drilling identified the Creek Zone and two other mineralized structures, the Rainier and Jock Zones (Holbek P., 1988; Smith A., 2019).

Esso Minerals Canada Ltd. optioned the property in 1987 and carried out two seasons of exploration. The exploration programs involved geological mapping, soil geochemistry and VLF-R geophysical surveys, backhoe trenching and diamond drilling. The main result of this work was the discovery of the JM and O-Zones (Smith, 2019).

Homestake Mining Canada Ltd. purchased Esso Minerals Canada Ltd.'s interest in the Shasta property in the spring of 1989, and continued exploration during the summer of 1989, with a program of exploration and delineation drilling as well as geochemical and geophysical surveys. By the end of the 1989 field season, total exploration work included 5,140 geochemical soil samples, 200-line km of VLF-R and 4.0-line km of IP geophysical surveys, 4.0 km of backhoe trenches, geological mapping at 1:10,000 and 1:1,000 scales, 13,774 m of exploration diamond drilling and 1,093 m of delineation and condemnation diamond drilling. Cumulative expenditures by Newmont Exploration Canada Ltd., Esso Minerals Canada Ltd. and Homestake Mining Canada Ltd. to the end of 1989 totaled approximately \$2.8 million (Holbek P. M., 1991). In 1989 International Shasta Resources Ltd. and Sable completed a mining and assignment agreement whereby Sable would mine 100,000 tonnes and process it at the Baker mill which Sable had recently acquired the rights to. Sable mined the JM and Creek zones, by both open pit and underground methods, and completed 285 m of diamond drilling in 5 holes (Smith, 2019).

In 1990, Homestake Mining Canada Ltd. continued to work the property, and completed 9.27-line km of geochemical soil sampling, 14.94-line km of VLF-R geophysical surveys, and 4,777 m of BQ-thinwall diamond drilling in twenty-seven holes. Following the exploration program in 1990, Homestake Mining Canada Ltd. dropped the option, and Sable

acquired the Shasta property from International Shasta Resources Ltd. Sable continued to operate the mine under the mining and assignment agreement until 1991 (Smith, 2019).

Sable resumed exploring the property in 1994, and between 1994-1998 completed 1,968 m in over 32 diamond drillholes. Exploration again resumed in 2003, and between 2003 and 2010 Sable completed 6,929 m of diamond drilling in 89 holes (Craft E.M., 2005; Smith A., 2019).

On a seasonal basis in 2004 and 2005, Sable completed a small test pit on the Creek zone, and mined and processed 15,000 tons (Craft, 2007). Underground operations resumed in 2007, and between 2008 and 2012, Sable mined approximately 105,000 tons from the Creek zone (TetraTech EBA Inc., 2015; Smith A., 2019).

### **6.3 South Oxide Peak**

A summary of the exploration history of the Toadoggone district is presented in Diakow et al. (1993) with the earliest placer mining in the district recorded in the mid 1920's at McClair Creek, located within the central portion of the Oxide Peak claim group.

Bradford (2019) summarizes the exploration history of the northern half of the Oxide Peak claim group, which includes: the Oxide Peak, Mt. Gordonia, Tarn, and Falcon targets. A ground magnetometer survey was completed by Red Rock Mines in the northern part of the property near Mount Gordonia in 1970 as a follow-up on the discovery of bornite and copper staining (McKelvie, 1970). In 1974, Union Miniere carried out geological mapping, soil sampling, and an EM survey in the eastern part of the property (Burgoyne, 1974). A variety of small geochemical (soil and rock) sampling programs were carried out north and south of Mount Gordonia in the 1980's, as well as a 110 line-kilometer airborne magnetic survey was flown in 1986 (Woods, 1988). This survey outlined two large magnetic highs on the east side of Belle Creek valley. In 1980 SEREM carried out a program of geological mapping, and soil and silt sampling around the Oxide Peak alteration zone along the northwestern portion of the current Oxide Peak claim group (Crawford & Vulimiri, 1981). Additional mapping and sampling were carried out in Yeager & Ikona (1986) and Lyman (1988). Stealth Minerals carried out the most extensive geochemical sampling program on the Gordonia and Oxide Peak areas in 2004 (Kuran & Barrios, 2005), collecting 628 rock samples, 30 soils, and 10 silt samples, as well as doing portable infrared mineral analyses (PIMA) of 274 rock samples. This program detailed widespread high Cu, Au, Ag, and other base metal anomalies. Seven Devils Exploration carried out a small prospecting and geochemical sampling program in 2016, collecting 26 rock samples, and assessing the prospectivity of the Oxide Peak, Gordonia, Tarn and Falcon zones for porphyry copper-gold deposits.

The Saunders region is the main target historically explored with the southern half of the Oxide Peak claim group; this region includes the Saunders prospect (Minfile #: 094E 017), Golden Neighbor developed prospect (Minfile #: 094E 037), Som showing (Minfile #: 094E 040), Golden Neighbor showing (Minfile #: 094E 152), Camp 1 showing (Minfile #: 094E 153), Saunders South showing (Minfile #: 094E 154), Saunders North showing (Minfile #: 094E 155), Saunders Northwest showing (Minfile #: 094E 156), and Saunders Southwest showing (Minfile #: 094E 157). The earliest recorded exploration work, involving geological mapping and sampling, was completed by Cominco Ltd. on the Som showing in 1969. No work was completed on the in the immediate area during 1969 and 1971. Between 1971 and 1998 geological mapping, sampling, and prospecting was completed by Kennco Exploration (Canada), Denson Mines, Bow River Resources, Golden Rule Resources, and Great Western Petroleum. In 1987, five diamond drillholes totaling a length of 605.02 m were completed by Lacana Ex. targeting a fault zone with intense argillic alteration (Johnston, 1987). Drilling identified quartz veins and silicified volcanics with frequent chalcopyrite, sphalerite, and lesser galena, molybdenite, pyrite and scheelite (Johnston, 1987). Assays did not recognise any significant gold or silver values (Johnston, 1987). An airborne magnetic geophysical survey was completed in 1973 by McPhar Geophysics Ltd. on behalf of Kennco Exploration (Canada) (Smith & Mullan, 1973).

Although explored intermittently from 1969, much of the exploration work completed on the southern portion of the Oxide Peak claim group was completed by, or on behalf of, Stealth Minerals Ltd. between 2003 and 2007 (Dawson, 2008). Prospecting, stream sampling and an airborne helicopter magnetic and radiometric survey were completed in 2003 (Kuran, 2004). Further geological mapping, prospecting, and sampling to follow-up on the previous year's results in 2004 and 2006 and to confirm potential extensions and continuity of mineralized structures and zones (Smith, 2005; Barrios and Kuran, 2006). The property was revisited in 2007 to sample the Saunders vein system, Copper Breccia and Som showings, and a total of 914 metres over seven diamond drillholes within the Saunders prospect and 903.15 metres over two holes on the Som showing was completed (Dawson, 2008).

#### **6.4 North Oxide Peak**

Prospecting work at the North Oxide Peak (formerly "To Do") property was influenced by the gold recovered at the artisanal placer mine at McClair Creek which started production in the mid-1920's. This caught the attention of local prospectors which paved the way for companies to do systematic exploration in the 1980s looking for copper potential as well.

In 1985, Hemlo Explorations Ltd. worked at the southern part of the property south of the Toadoggone River, completing grid and contour soil sampling in selected areas. This was followed in 1987 by Mt. Graves Explorations Inc. who conducted reconnaissance geological mapping, stream, and grid soil sampling, which resulted in the discovery of anomalous precious metal values in rocks, silts and soils.

Other works by Skylark Resources in 1987, immediately south of Toadoggone River, comprised of prospecting combined with two soil sample lines which delineated anomalous gold spots but no mineralized showings.

This area which is covered by the modern mineral titles 1074386 and 1074387, were also prospected and some rock outcrop and ridge float samples were collected. To the north of the Toadoggone River, Du Pont collected stream sediment samples over a district scale reconnaissance program, along with rock samples and geological mapping.

In 2022 Volatus Capital Corp. collected 19 samples and conducted 169 km of airborne VTEM and Radiometric surveys at the To Do claims. The results were anomalous for Cu and Au, with results up to 1.43% Cu and 0.857 g/t Au, respectively.

#### **6.5 Mets**

The Mets deposit was discovered by Golden Rule Resources Ltd. in 1980 and is currently covered by Mining Lease # 314708. The property hosts several quartz-barite breccia zones for which Golden Rule, from surface diamond drilling and trenching. Golden Rule defined a historical "measured geological resource" of 143,321 tonnes @ 11.31 g/t Au on the "A" Zone (Evans, 1988). This historical estimate was completed before NI43-101 Standards of Disclosure for Mineral Projects and uses categories other than those stipulated for current use. The author has not done sufficient work to classify the above historical estimates as a current mineral resource or reserve. The author has been unable to verify data or work, or the key assumptions, methods or parameters used to prepare the historical resource estimate. The historical resource estimate should not be considered as a current mineral resource or mineral reserve.

Cheni Gold Mines optioned the property in July 1992. From the above historical resource estimate, Cheni estimated a "probable geological reserve" of 75,000 tons grading 0.384 oz. Au per ton (Cheni, 1992). This revised historical estimate was completed before the coming into force of NI 43-101 Standards of Disclosure for Mineral Projects. It uses categories other than those stipulated for current use. By September 1992, Cheni had developed the property (using trackless equipment) with a 60 m decline to crosscut the A Zone and a 120 m-long exploration drift along the zone, mining about 2,300 tonnes of ore and 3,700 tonnes of waste. After the underground program, Cheni estimated diluted reserves of 53,357 tonnes @ 12.0 g/t Au (Cheni Gold Mines Inc., 1992). Later in 1992, with additional data, Cheni re-calculated mineable reserves to be 48,564 tonnes @ 11.62 g/t Au. The reduction of reserves was in part due to a grade reduction based on underground sampling of the zone (Smith, 2019). The author has not done sufficient work to classify the above

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historical estimates as a current mineral resource or reserve. The author has been unable to verify data or work, or the key assumptions, methods or parameters used to prepare the historical resource estimate. The historical resource estimate should not be considered as a current mineral resource or mineral reserve.

## **7 Geological Setting and Mineralization**

### **7.1 Regional Geology**

The regional geology surrounding the Property has not seen any significant research or changes in understanding since the 2020 technical report and is described as an area measuring approximately 1500 square kilometres in the Toodoggone region that extends from the Kemess South mine area northwestwards to the Chuckachida River. The region occurs within the Intermontane Belt and is underlain by strata of the Stikine Terrane, which consists of Paleozoic to Mesozoic island arc assemblages and overlying Mesozoic sedimentary sequences. The oldest rocks exposed in the region consist of crystalline limestone of the Devonian Asitka Group. They are unconformably overlain by mafic volcanic rocks of the Upper Triassic Takla Group. Takla Group volcanic rocks are in turn overlain by bimodal volcanic and sedimentary strata of the Lower Jurassic Toodoggone Formation of the Hazelton Group (Smith, 2019). Toodoggone Formation pyroclastic and epiclastic volcanic rocks are a predominantly calc-alkaline andesitic to dacitic subaerial succession. Toodoggone volcanic rocks display broad open folds with attitudes generally less than 25° dipping predominantly to the west (Smith, 2019).

Potassium-argon dating of hornblende and biotite indicate that the age of Toodoggone volcanism ranges from 204 to 182 Ma. This age range appears to be divisible into two main groups: an older, lower stage of volcanism dominated by andesitic pyroclastics and flows characterized by widespread propylitic and zeolitic alteration; and a younger, upper stage of volcanism dominated by andesitic ash-flow tuffs which generally lack significant epithermal alteration (Diakow, Panteleyev, & Schroeter, 1993). All the known epithermal gold-silver deposits and occurrences are restricted to the lower Toodoggone Formation volcanics and underlying units (Smith, 2019).

Unconformably overlying volcanic strata of the Toodoggone Formation are sedimentary strata of Cretaceous age, including fine-grained clastics of the Skeena Group and chert pebble conglomerates and finer grained clastics of the Sustut Group. These sediments are structurally unaffected and are horizontal, forming cap rocks to high-standing plateaus primarily on the western edge of the Toodoggone region (Smith, 2019).

Late Triassic to Middle Cretaceous intrusions is exposed throughout the Toodoggone region. The most significant of these in terms of precious metal and porphyry mineralization are Early Jurassic granodioritic to quartz monzonitic bodies known as the Black Lake Suite of Intrusions. These intrusions host porphyry copper- gold mineralization in several localities, including the former Kemess South mine and several other deposits on the Kemess property in the southeastern part of the Toodoggone region (Smith, 2019).

A northwest-trending set of younger, steeply dipping faults and half-grabens are the principle structures found in the region. Major structural breaks are postulated to have been caused by, or be the result of, a northwest- trending line of volcanic centres (Diakow, Panteleyev, & Schroeter, 1993). Small stocks are also aligned northwesterly, suggesting they were also influenced by the same structural trend. Subsequent to volcanism and intrusion, younger faults are recognizable as northwest-trending lineaments (Smith, 2019).

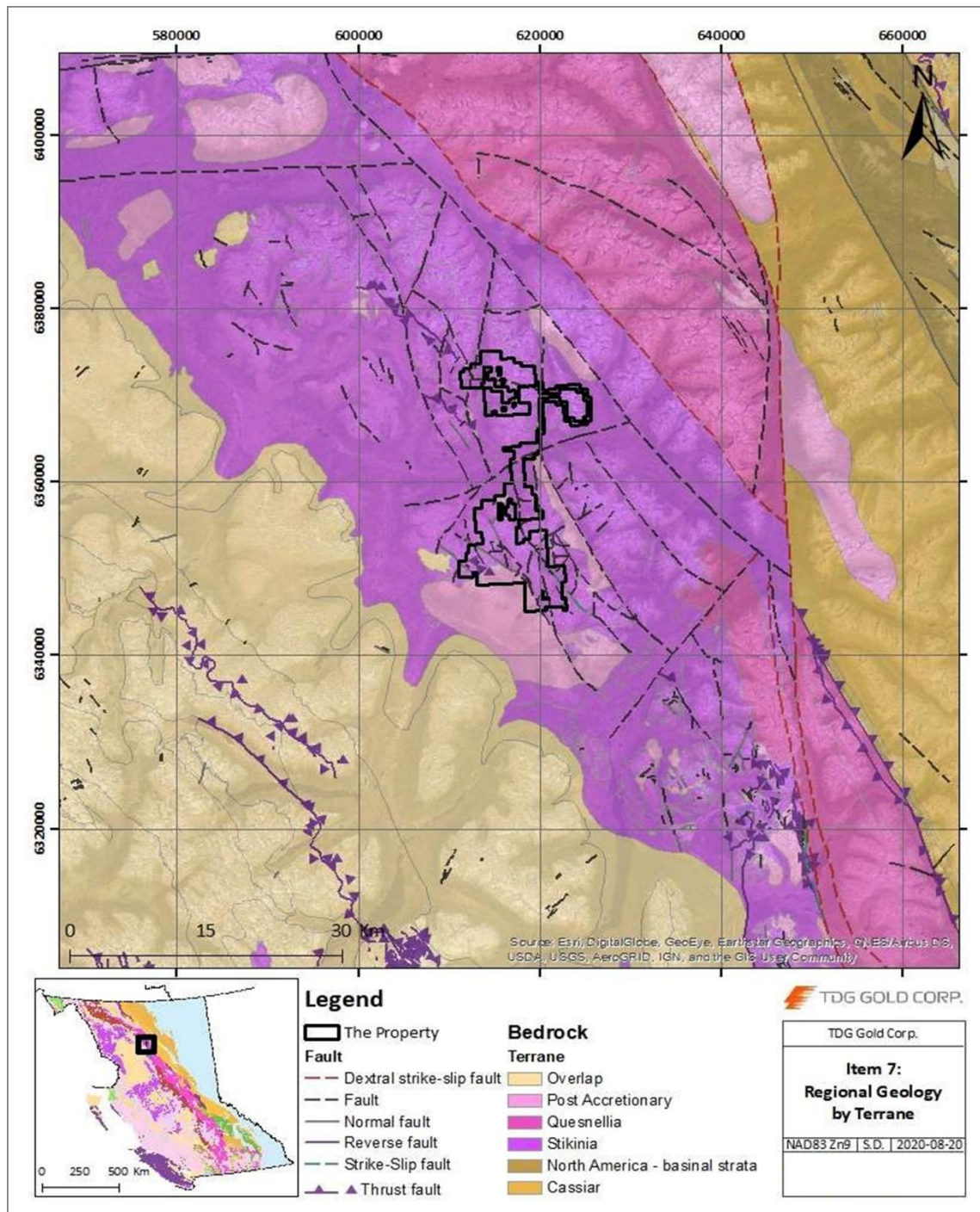
Regional geology of the Toodoggone River district was compiled in Diakow et al. (1985) and revised by Diakow (2006). The following general summary of the regional geology and metallogeny of the northern Toodoggone district is adapted by Bradford (2019) from McBride and Leslie (2014): “The Toodoggone volcanic sequence, which appears to underlie most of the Oxide Peak Property, occurs in the northeastern part of the Intermontane tectonic belt, within the Stikine and northern Quesnel terranes. This lower Jurassic unit, comprising calc-alkaline latite and dacite subaerial volcanic rocks of distinctive lithologies and comagmatic plutons, accounts for most of the island arc-forming Hazelton Group rocks exposed between the Finlay and Chukachida Rivers. Unconformably underlying this sequence is the late Triassic Takla Group, dominated by island arc basaltic to andesitic flows, tuffs and breccias with subordinate sedimentary clastics and limestone. The oldest rocks of the region, intensely deformed late Carboniferous to Permian Asitka Group volcanics

and sedimentary rocks, are of limited extent, cropping out in uplifted blocks and around pluton margins as in the Baker mine area. Continental clastic sediments of the Cretaceous Sustut Group unconformably cap the volcanic successions. The stratigraphy of the region is summarized in Table 7-1 with regional maps in Figure 7-1 and Figure 7-2 of the terrane and stratigraphic units of the area respectively.

Associated with an elongate, northwesterly trending, volcanic-tectonic structural development, the Toodoggone volcanics represent a voluminous accumulation of material over a 90 km by 25 km area within an asymmetric collapse feature in a continental arc setting. Two eruptive cycles are recognized within the Toodoggone. The lower cycle is characterized by plateau forming dacitic ash-flow and air-fall tuffs interspersed with and followed by latite flows and lahars. Following an erosional event which partially unroofed previous co-magmatic plutons, the upper cycle proceeded with explosive dacite pyroclastic eruptions, culminating with voluminous ashflow tuff accumulations. A variety of mineral deposit types are related to the Toodoggone eruptive cycles and co-magmatic events (Diakow et al., 1991; During et al., 2009). These include gold- and silver-rich, low-sulphidation epithermal systems characterized by quartz veins, stockworks and breccias with associated adularia, sericite, and calcite; high-sulphidation systems with associated fine-grained silica, alunite, barite, and clay; and porphyry copper-gold systems within and marginal to early Jurassic plutons. The common type of sericite adularia mineral occurrence is typified by the Lawyers and Shasta deposits. The acid sulphate deposits include the Ranch (BV/Al), Baker and Silver Pond prospects. The Kemess South mine and the Kemess North and Kemess East deposits, examples of copper - gold porphyry systems, are characterized by chalcopyrite, pyrite and minor molybdenite (+/- magnetite) occurring as disseminations and polyphase quartz stockworks.”

**Table 7-1: Regional Stratigraphy of the Toadoggone Region (Diakow et al., 1993; Smith, 2019)**

Period	Group	Formation	Lithology
Upper and Lower Cretaceous	Sustut	Brothers Peak	Nonmarine conglomerate, siltstone, shale, sandstone; minor ash- tuff
		TangoCreek	
<b>Major Unconformity</b>			
Lower Cretaceous to Middle Jurassic	Bowser Lake		Marine and nonmarine shale, siltstone, and conglomerate
<b>Comfortable Contact</b>			
Middle and Lower Jurassic	Spatsizi Hazelton	Toadoggone	Marine equivalent of the Hazelton Group; shale siltstone and conglomerate, subordinate fine tuffs
			Subaerial andesite to dacite flow and tuffs, rare basalt, and rhyolite flows; subordinate volcanic siltstone to conglomerate; rare limestone lenses
			Black Lake Intrusive Suite: Granodiorite and quartz monzonite
<b>Unconformity</b>			
Upper Triassic	Takla		Submarine basalt to andesite flows and tuffs, minor limestone, and argillite
<b>Unconformity</b>			
Lower Permian	Asikta		Limestone, chert, argillite
<b>Major Terrane Boundary Fault</b>			
Cambrian & Proterozoic			Siltstone, shale, sandstone, limestone; regionally metamorphosed to greenschist and amphibolite grade



**Figure 7-1: Regional Geology surrounding the Property by Terrane and arranged by Age. 1:500,000**



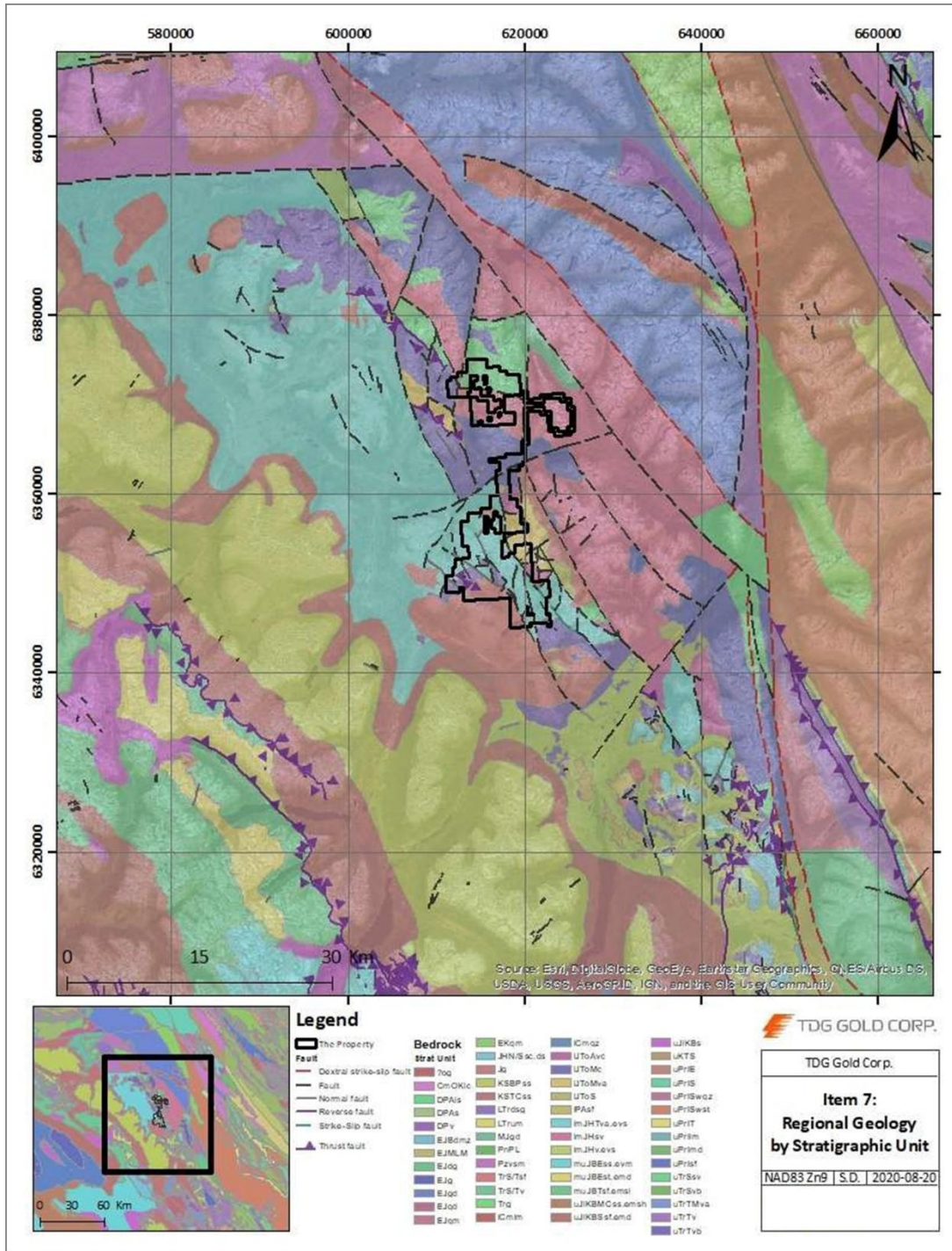


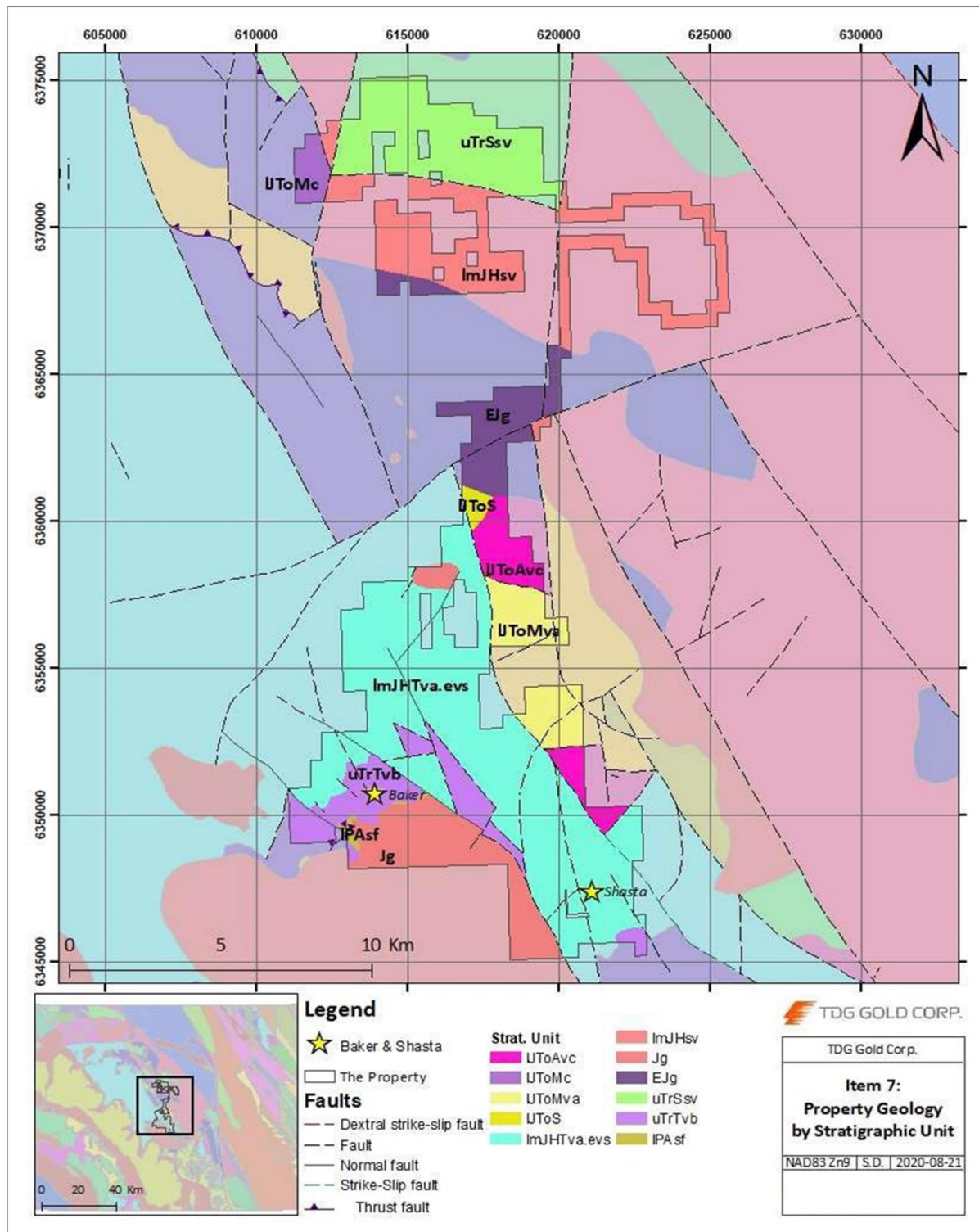
Figure 7-2: 1:500,000 Regional Geology surrounding the Property by Stratigraphic Unit; arranged Alphabetically

## 7.2 Property Geology

The property geology is divided into four sections: Baker Complex, Greater Shasta-Newberry, North and South Oxide Peak and Mets. The overall geological understanding of the Baker and Shasta claims have not changed significantly since the 2019 technical report, the following sections have been either paraphrased or are directly quoted from Smith (2019). Stratigraphic units from regional government mapping completed by the GSC (Evenchick et al., 2007) and BCGS (Mihalynuk et al., 1996), which includes the bedrock geology of the Property are displayed in Table 7-2 and Figure 7-3.

**Table 7-2: Summary of Stratigraphic units within the Property Boundary**

Strat. Unit	Strat. Age	Strat. Name	Primary Rock Type	Belt	Terrane
IJToAvc	Lower Jurassic	Toodoggone Volcanics - Attycelley Member	volcaniclastic rocks	Intermontane	Stikinia
IJToMc	Lower Jurassic	Toodoggone Volcanics - McClair Member	andesitic volcanic rocks	Intermontane	Stikinia
IJToMva	Lower Jurassic	Toodoggone Volcanics - Metsantan Member	andesitic volcanic rocks	Intermontane	Stikinia
IJToS	Lower Jurassic	Toodoggone volcanics - Saunders Member	dacitic volcanic rocks	Intermontane	Stikinia
ImJHsv	Lower Jurassic to Middle Jurassic	Hazelton Group	marine sedimentary and volcanic rocks	Intermontane	Stikinia
ImJHTva.evs	Lower to Middle Jurassic	Hazelton Group - Toodoggone Formation	andesite	Intermontane	Stikinia
Jg	Jurassic		undivided intrusive rocks	Intermontane	Post Accretionary
EJg	Early Jurassic		intrusive rocks, undivided	Intermontane	Stikinia
uTrSsv	Upper Triassic	Stuhini Group	marine sedimentary and volcanic rocks	Intermontane	Stikinia
uTrTvb	Upper Triassic	Takla Group	mafic lava	Intermontane	Stikinia
IPAsf	Lower Permian	Asitka Group	argillite	Intermontane	Stikinia



**Figure 7-3: Property Geology by Stratigraphic unit; arranged by Age**

### 7.2.1 Baker

The western “Chappelle Group” claims of the Baker section of the Property are primarily underlain by an uplifted fault block of Takla Group volcanics in thrust contact with Asikta limestone both having been intruded by quartz monzonite of the Black Lake stock. The stock is exposed at the southern margin of the property and has locally altered the limestone to an epidote-diopside skarn along their contact. The limestone also occurs towards the south of the property and forms

the prominent cliffs of Castle Mountain. Broken and iron-oxide-stained augite phyric andesite to basalt flows of Takla Group are the dominant rock types on this part of the property and are the principal host of mineralization at the DuPont/Baker 'A' and Multinational 'B' deposits. To the north, upper cycle Toodoggone formation volcanics of Diakow (1990) are present in fault contact with Takla Group rocks. Numerous hornblende-feldspar porphyritic apophyses of the Black Lake stock intrude and brecciate the Takla host rocks. The similar composition to the overlying Toodoggone volcanics suggests that these may be feeders for the overlying volcanism (Smith, 2019).

Dominant structures on the Baker section of the Property consist of steeply dipping normal faults, and north to northwest-trending strike-slip faults. One of the latter (the Saunders fault) borders the Shasta deposit to the east (Figure 7-2) and has an estimated ~5 km right-lateral displacement (Diakow, Panteleyev, & Schroeter, 1993). Several of the Toodoggone area deposits, including Lawyers, Baker, and Shasta lie near northwest-trending faults. Diakow (1990) proposed that these deposits lie along the margin of a fault-bounded trough which may have ponded later volcanics and localized hydrothermal fluids during extension.

Alteration for the property consists of regional scale propylitic alteration of chlorite-epidote +/- calcite and pyrite. At the deposit scale, the Chappelle group of claims has undergone intense propylitic chlorite-epidote-pyrite alteration, and locally strong sericitic alteration (Smith, 2019).

Numerous hornblende-feldspar porphyritic apophyses of the Black Lake stock intrude and brecciate the Takla host rocks. The similar composition to the overlying Toodoggone volcanics suggests that these may be feeders for the overlying volcanism. The largest of these, intrusions, the Black Lake stock, extends 9 kilometres southeast from the Baker property. Its composition varies from granodiorite to quartz monzonite. Radiometric potassium-argon dates obtained by the Geological Survey of Canada on hornblende from this pluton indicate an emplacement age of 186 Ma. Another pair yielded ages of 189 Ma and 200 Ma on biotite and hornblende respectively (Diakow 1993). Two small syenomonzonite intrusions occur immediately to the north of the Black Lake stock near the A vein. Highly altered quartz feldspar porphyry which appears to be a late phase of the syenomonzonite intrusions, occurs immediately to the north of the A vein. The main portion of this porphyry unit lies at the fault contact between Asitka Group and Takla Group rocks near the western end of the A vein.

Dike-like apophyses of this body, varying from 1 to 30 metres in thickness, subparallel and intersect the northeast extension of the A vein (Smith, 2019).

### **7.2.2 Shasta**

To the east the "Shasta Group" claims, and locally the "Chappelle Group" claims, the project area is underlain primarily by volcanic rocks of the Jurassic Toodoggone Formation. The Toodoggone Formation is a compositionally uniform subaerial volcanic succession that consists of six lithostratigraphic members divided into Lower and Upper Eruptive Cycles (Table 7-2). The members are comprised of high potassium, calcalkaline latite and dacite volcanic strata emplaced along a north-northwest trending, elongate volcano-tectonic depression (Diakow et al., 1993). The Attycelley and Saunders members are the predominant volcanic units to the east and north of the Project area (Smith, 2019).

At Shasta, structurally controlled mineralized zones also have northwest trends, and may similarly reflect syn- to immediately post-volcanic normal fault activity. Small stocks in the area are also aligned northwesterly, suggesting they were also influenced by the same structural trend. Subsequent to volcanism and intrusions, younger faults are recognizable as northwest-trending lineaments (Smith, 2019).

Alteration for the property consists of regional scale propylitic alteration of chlorite-epidote +/- calcite and pyrite. The lower grade regional alteration has been overprinted at Shasta by extensive potassic (quartz- adularia) alteration assemblage associated with a low-sulphidation epithermal system (Smith, 2019).

### **7.2.3 Mets**

The Mets developed prospect consists of a tabular core of silicified rock in three separate but genetically linked zones: the A Zone (and its extension), the Footwall Zone and the 400 South Zone. The A zone has a strike length of 140 m, a true thickness of 6 to 10 m and a vertical extent of up to 75 m; it strikes 340° and dips 70°-85° to the west. A mineralized shoot within the A Zone has a gentle northwest plunge (Smith, 2019).

The A Zone is hosted by a quartz-barite breccia zone which occurs near the vertical contact between a footwall andesite and a hangingwall dacite unit. Steeply-dipping, thin breccias generally are higher in grade; when the breccia orientation flattens, as it does at depth, grades drop off rapidly. Native gold is the primary ore mineral present with rare occurrences of electrum, argentite, tetrahedrite, pyrite and galena. Gold occurs as free grains and flakes 0.005-2 mm in diameter, adjacent to fragments of quartz and barite within the breccia system. Sulphide mineralization is practically nonexistent in the A Zone (Smith, 2019).

At its northern end, the A Zone is truncated by the N75 fault, a vertical graben structure striking 050° and dipping 80° south. The block of rock north of the fault is down dropped, with up to 110 m of vertical displacement. In 1987, deep drilling north of the fault intersected a 4 m wide quartz breccia body (the N75 or A Extension Zone).

The Footwall Zone is a quartz-carbonate breccia body situated within the footwall andesite unit. It has been exposed over a 260 m strike length and is interpreted to strike 340°, with an indeterminate dip. It pinches and swells with a maximum width on surface of 4 m. Its Ag:Au ratio is 2:1 or greater contrasting with an Au:Ag ratio of 10:1 or greater for the A Zone.

Alteration at the Mets deposit consists of an extensive outer propylitic zone (epidote, chlorite, and pyrite) and a proximal advanced argillic zone (sericite, kaolinite, dickite) enveloping inner silicic (quartz +/- barite) zones, in both the hangingwall and footwall rocks to the silicic zones. Argillic alteration is primarily developed within the footwall side of the deposit where the alteration envelope can range up to 40 m in thickness (Evans, 1988; Smith A., 2019).

### **7.2.4 Oxide Peak**

The current contiguous Oxide Peak Claim Group has never been explored simultaneously, as such there is not a complete property-wide geological assessment to date. The northern half of the Oxide Peak claims, referred to as the Oxide Creek, Gordonia, and Falcon area, have been worked separately from the Saunders area (southern half) of the claim group.

The most recent geological compilation by Diakow (2006) includes the Oxide Peak property east of McClair Creek and the Belle Lakes and describes the general stratigraphy north of the Toadoggonne River as the following:

- McClair Pluton: Early Jurassic quartz monzonite (Black Lake plutonic suite).
- Late Triassic Takla Group includes basalt and andesite lava flows; typically fine- to medium-grained clinopyroxene-plagioclase porphyries and aphanitic lavas; typically massive and inherently difficult to subdivide (uTTa); also sandstone and siltstone; drab olive green, dominated by plagioclase and lesser pyroxene grains; bedded section between lava flows of unit uTTa (uTTs).
- Early Jurassic Hazelton Group, Upper Toadoggonne Formation: includes conglomerate and sandstone dominated by fine-grained basaltic detritus that is presumably derived in part from units TJv or uTTa; reworked polymictic lapilli tuffs and breccias; heterolithic unit comprising diffusely layered very thick beds (TJs); also basalt and andesite lava flows characterized by crowded plagioclase 1 mm long or less and relatively fresh pyroxene; minor pyroxene bearing sandstone interbeds (TJv); also dacite ash-flow tuff, light green to maroon, texturally variable including non-welded, locally lithic rich, and thick (100-150 m) welded columnar jointed zones; diagnostic

accidental pyroclasts include pink, quartz-biotite dacite porphyry and biotite-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base (TG).

The gently to moderately north dipping Takla - Hazelton unconformity is mapped along the south flank of Mount Gordonia in the north-central part of the property. A U/Pb zircon age date of  $194.7 \pm 0.4$  Ma was obtained from a site about 0.5 kilometres southeast of the peak (Diakow, 2006).

#### **7.2.4.1 Target Areas - Oxide Creek, Mt. Gordonia, Drybrough and Falcon**

In 2005, Stealth Minerals compiled at 1:10,000 scale geological map of the then named Gordo-Too-Oxide claims; now considered the northern half of the Oxide Peak claim group that covers the prospective areas of Oxide Creek, Mt. Gordonia and Falcon (Barrios and Kuran, 2005). This mapping was focussed on Mt. Gordonia. The following is an adapted description of the geology within the Oxide Creek-Mt. Gordonia-Falcon area from Barrios and Kuran (2005) illustrated in Figure 7-4.

The oldest unit in the Toodoggone is the Permian Asitka Group, which includes limestones, cherts and calcareous-siltstones and mudstones. There are also Permian lapilli tuffs, porphyry andesitic and dacitic lava flows forming pendants adjacent to the Duncan Plutons. No Permian units were identified during the 2005 mapping program. Asitka limestones were mapped 3 km north of the Mt. Gordonia (Barrios & Kuran, 2005), and there are limestones 3 km northeast of the Oxide Peak.

Stratigraphically above the Permian Group is the upper Triassic Takla group. Takla rocks are primarily identified by plagioclase and augite basalt porphyry flows, fine-grained/aphanitic green-grey volcanic flows, and rare limestone lenses. This unit is represented as uTTv in Figure 7-4. Takla volcanics cover a large portion of the northern Oxide Peak claim group. Majority of the rocks along the western claim boundary were fine-grained Takla Group, often with weakly-moderately propylitic-altered andesitic-basalt flows.

There is also a sediment package (uTTs) in the Takla Group; light-dark green coloured sandstone and siltstones which are well sorted with occasional augite and plagioclase crystals. Both volcanic and sedimentary Takla rocks were identified on the claim. A two-kilometre-long exposure of green Takla siltstones and mudstones located in the south measured up to 200-250 m thick with individual beds up to 2 m thick. Bedding measurements from these sediments strike generally NW between  $290^\circ$  and  $310^\circ$  and dip shallowly to the NE between  $19^\circ$  and  $25^\circ$ . The eastern portion of the ridge, however, has a significantly different bedding, striking north at  $003^\circ$  to  $010^\circ$  dipping  $50^\circ$ - $60^\circ$ . The sediments on the eastern part of this ridge are believed to be part of the Junkers Member Toodoggone rocks (TJs).

Barrios and Kuran (2005) recognised the importance of marker beds within the lower Jurassic Toodoggone rocks for determining the stratigraphy. The most significant marker bed is the Graves member ash flow tuff (TG). The Graves member ash flow tuff (pyroclastic) is identified by up to 40% lithic fragments including the diagnostic pink aphanitic rhyo-dacitic fragments and biotite-hornblende-bearing granitic fragments. Plagioclase with rare quartz and biotite comprise the matrix of the Graves member. Welded sections in the Graves member occur in selective locations. Welding of the Graves Member was noted on the ridge south of Crater Lake. Welding through this section was primarily identified by elongated cavities in the rock where welded fragments have since been eroded.

Fragments in the Graves Member on a large portion of the claim group were difficult to see on fresh surfaces. Fragments in these areas were easier to make out on weathered surfaces and adjacent float samples. There is also a fragmental ash flow tuff (pyroclastic) as part of the Junkers Member (TJp). This fragmental rock is a matrix supported ash flow with subangular-subrounded clasts typically  $>64$  mm and up to 80 cm. Distinguishing between these two ash flows is important to correctly stratigraphically identify rocks units.

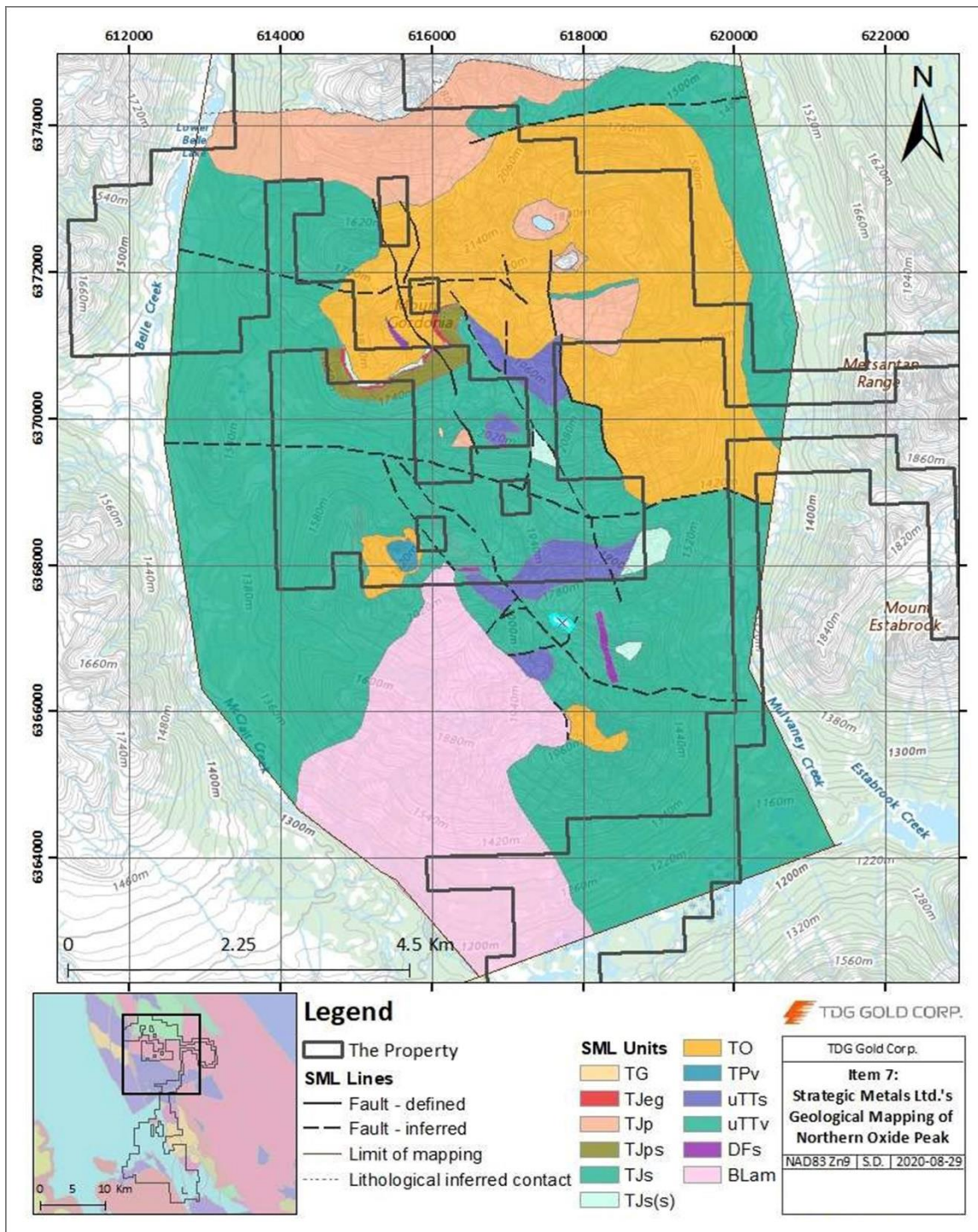
The Junkers Member includes the ash flow tuff (TJp); a debris flow conglomerate unit (TJcg); tuffaceous sandstones and interbedded siltstones/mudstones (TJs); andesite flows (TJa) and rhyolite to dacite flows (TJr).

Mount Gordonia provides an excellent stratigraphic section of the Junkers Member rocks. The lower most unit is a rare quartz-phyric andesite flow TJa(q) which lies above the Triassic Takla volcanics.

Above this unit are the Junkers pyroclastic (TJp) unit interbedded with sandstones (TJs) denoted in this case as (TJsp). The conglomerate unit (potentially evidence of a lahar) lies above the pyroclastic /sedimentary unit and is between 10 and 15 metres thick. This unit has an oxidized red muddy matrix with subangular to rounded boulders of monolithic medium-grained andesite porphyry as recognised by the BCGS. Coarse bladed feldspar lavas (basaltic-andesitic in composition) with a characteristic red oxidation including liesegang rings, and oxidized pyroxenes are found above the conglomerate unit. The above Junkers Member units are shallowly dipping (20-25°) towards the N to NW. The upper most unit on Mt. Gordonia are Graves Member ash flow tuffs- up to 70m thick. Junkers Member andesite lava flows (TJa) located in the southeast portion of the historical Gordo claims are characterized by their grey-green to hematite-red oxidized groundmass, up to 30% subhedral plagioclase between 2 and 5 mm and up to 3-5% sub-vitreous clinopyroxene phenocrysts. Lower Jurassic Pillar Member andesite lava flows (TPv) have a similar composition to the TJa lava flows, therefore marker beds such as the Graves Member are important in deciding which andesite lava flow belongs to which group.

A quartz-monzonite body intruding into Takla volcanics in the southern portion of the property is shown in Figure 7-4. This Black Lake type (BLqm) intrusive was described as an equigranular quartz-monzonite, identified by 70% coarse-grained anhedral sub-porphyritic plagioclase and interstitial K-spar; 5-20% fine- to coarse- grained, euhedral to anhedral hornblende; 10-15% fine-medium quartz; trace of biotite, magnetite and titanite (sphene). Black Lake intrusives are of early Jurassic age. It is likely that this intrusive is connected to a quartz monzonite intrusive located immediately south of the Toodoggone River.

Detailed mapping has not been completed to the east or west of Mt. Gordonia. Geological observations made in 2004 suggest the eastern margin of the Oxide Peak property is underlain by Toodoggone Group volcanic rocks comprised mainly of reddish fine lapilli tuff and include feldspar porphyry, rhyo-dacite flows and polyolithic volcanic conglomerate. This intrusive body is in the order of 2 km wide and 3 km long. Oxide Creek/Peak to the west is an oxidized gossanous mountain located on the west side of Bell Creek. Observations in 2004 (Kuran & Barrios, 2005) suggest that the lithology of Oxide Peak is mainly Toodoggone volcanics separated by a major east-west structure along Oxide Creek. Lithologies on the north side of Oxide Creek are believed to be Takla and Asitka volcanics.



(Source: Barrios and Kuran, 2006)

**Figure 7-4: Geology of the Northern Section of Oxide Peak; Mt. Gordonia and Falcon**

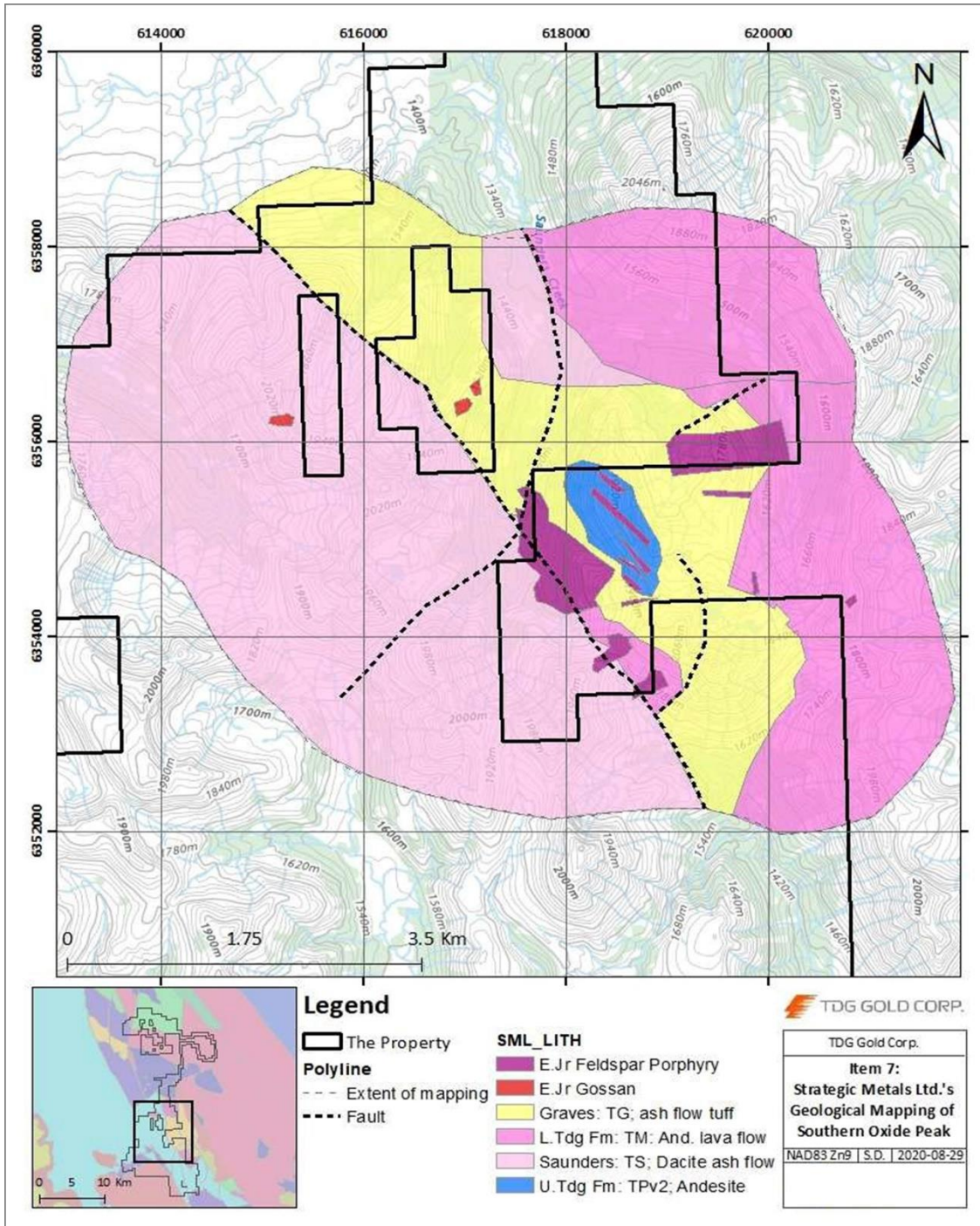


#### **7.2.4.2 Local Geology: Saunders**

The Saunders region is centred mainly on volcanic members of the Toodoggone Formation. The property geology of the Saunders area shown in Figure 7-5 was compiled after Barrios and Kuran (2006) after conducting outcrop mapping at 1:20,000 scale during the 2006 field season.

Toodoggone volcanics are intruded on the northeast by a northwest-elongated granodiorite stock. To the south the Toodoggone Formation is in contact with uplifted blocks of Takla Group volcanic rocks that are, in turn, intruded by granodiorite of the Black Lake stock. Porphyritic andesite flows of the Metsantan Member (TM), mapped in the eastern part of the property, host the pyrite-chalcopyrite-bornite veins and breccia of the Copper Breccia showing. Gossans, quartz-sericite-pyrite altered rocks, and both the Saunders North and South showings are located along the trace of the Saunders Fault. Low sulphidation epithermal quartz-sulphide veins of Saunders Main showing are located along a subsidiary north-south trending fault in lithic and crystal tuffs of the Saunders Member.

All four Toodoggone members are intruded by felsic granitoid dykes. As shown on Figure 7-5, a set of feldspar-phyric monzonite porphyry dykes intrudes the Pillar, Metsantan and Graves members in a dominantly northwestern trend at Golden Neighbour 1 and 2 and Copper Breccia showings. Dykes range up to about 10 m wide, but one outcropping of monzonite porphyry is interpreted to represent a dyke or stock about 350-400 m wide.



(Source: Barrios and Kuran, 2006)

**Figure 7-5: Geology of the Southern Section of Oxide Peak; Saunders Prospective Area**

### 7.3 Mineralization

The Toadoggone region is host to several mineral deposit types including epithermal gold-silver mineralization, calc-alkalic porphyry copper-gold mineralization, and occasional iron or copper (+/- gold-silver) skarn mineralization. All these styles of mineralization are genetically related to Early Jurassic volcanic and intrusive activity in an extensional setting (Diakow, Panteleyev, & Schroeter, 1993). A list of known occurrences is summarized in Table 7-3.

Epithermal gold-silver mineralization is hosted primarily by strata of the Toadoggone Formation, to a lesser degree by coeval intrusions, and locally within strata of the Takla Group. Epithermal mineralization is generally structurally controlled, and both vertical and lateral zoning in mineralization and alteration are common (Panteleyev, 1986).

Porphyry copper-gold mineralization at Kemess is spatially and genetically associated with Black Lake Suite intrusions which have intruded Takla Group volcanic and sedimentary rocks. High-sulphidation epithermal mineralization systems formed at ca. 201 – 182 Ma and coincide with district wide plutonism and porphyry copper +/- gold +/- molybdenum mineralization, whereas low-sulphidation systems formed later at ca. 192 – 162 Ma, commonly coinciding with the emplacement of felsic dykes and Toadoggone Formation volcanism (Duuring, et al., 2009).

**Table 7-3: List of known MINFILE Occurrences within the Property Boundary (ARIS, 2020)**

MINFILE #	Official Name	Other Name(s)	Status	Ranked Commodity	Deposit Type	Character	Classification
094E 218	DUKE	DUKE 1-2	Showing	Silver; Gold; Copper	Cu+/-Ag quartz veins	Vein and/or Disseminated	Hydrothermal and/or Epigenetic
094E 017	SAUNDERS	SAUNDERS MAIN	Prospect	Silver; Gold; Copper; Lead	Epithermal Au-Ag: low sulphidation	Breccia and/or Vein	Epithermal
094E 157	SAUNDERS SOUTHWEST	SAUNDERS	Showing	Silver	Epithermal Au-Ag: low sulphidation	Breccia and/or Vein	Epithermal and/or Epigenetic
094E 292	GORDO 2A	GORDO 2	Showing	Gold; Silver; Zinc	Epithermal Au-Ag: low sulphidation	Disseminated and/or Vein	Epigenetic and/or Hydrothermal
094E 050	SHASTA	SABLE	Past Producer	Gold; Silver; Zinc; Copper; Lead	Epithermal Au-Ag: low sulphidation	Stockwork and/or Breccia	Epithermal
094E 235	JD-HAIRY	HAIRY	Unknown	Gold; Silver	Epithermal Au-Ag: low sulphidation	Vein	Epithermal and/or Epigenetic
094E 294	GORDO 2C	GORDO 2	Showing	Gold; Silver; Copper	Epithermal Au-Ag: low sulphidation	Vein	Epigenetic and/or Hydrothermal
094E 296	GORDO 5B	GORDO 5	Showing	Gold; Silver; Copper	Epithermal Au-Ag: low sulphidation	Vein	Hydrothermal and/or Epigenetic
094E 297	GORDO 5C	GORDO 5	Showing	Gold; Silver; Copper	Epithermal Au-Ag: low sulphidation	Vein	Hydrothermal and/or Epigenetic
094E 026	BAKER	BAKER MINE	Past Producer	Gold; Silver; Copper; Zinc; Lead	Epithermal Au-Ag: low sulphidation	Vein	Epithermal
094E 293	GORDO 2B	GORDO 2	Showing	Gold; Copper	Epithermal Au-Ag: low sulphidation	Vein	Epithermal and/or Hydrothermal
094E 295	GORDO 5A	GORDO 5	Showing	Gold; Silver; Copper	Epithermal Au-Ag: low sulphidation	Vein and/or Breccia	Hydrothermal and/or Epigenetic
094E 093	METS	A	Past Producer	Gold; Silver; Copper; Lead	Epithermal Au-Ag: low sulphidation	Vein and/or Breccia	Epithermal
094E 072	PAU	MASON 1	Prospect	Gold; Silver; Lead; Zinc; Copper	Epithermal Au-Ag: low sulphidation	Vein and/or Breccia	Epithermal and/or Skarn

MINFILE #	Official Name	Other Name(s)	Status	Ranked Commodity	Deposit Type	Character	Classification
094E 145	SILVER REEF		Showing	Gold; Silver	Epithermal Au-Ag: low sulphidation	Vein and/or Breccia	Epigenetic and/or Epithermal
094E 151	DAVE PRICE	ARTFUL DODGER	Prospect	Silver; Gold	Epithermal Au-Ag: low sulphidation	Vein and/or Breccia	Epithermal and/or Epigenetic
094E 027	CASTLE MOUNTAIN	CASTLE 1-4	Showing	Silver; Zinc; Lead; Copper; Gold	Pb-Zn skarn	Stratabound and/or Podiform	Skarn and/or Replacement
094E 298	GORDO 5D	GORDO 5	Showing	Silver; Copper; Lead; Zinc	Polymetallic veins Ag-Pb-Zn+/-Au	Vein	Hydrothermal and/or Epigenetic
094E 212	TO 2	SAM	Showing	Zinc; Copper; Lead; Silver; Gold	Polymetallic veins Ag-Pb-Zn+/-Au	Vein	Hydrothermal and/or Epigenetic
094E 205	GRAVY	GRAVY 1-2	Showing	Silver; Gold; Lead; Zinc; Copper	Polymetallic veins Ag-Pb-Zn+/-Au	Breccia	Hydrothermal and/or Epigenetic
094E 206	GRAVY EAST	GRAVY (EAST)	Showing	Lead; Zinc; Copper	Polymetallic veins Ag-Pb-Zn+/-Au	Breccia and/or Stockwork	Hydrothermal and/or Epigenetic
094E 253	REGAL	MAC	Showing	Gold; Silver; Copper	Porphyry Cu +/- Mo +/- Au	Stockwork and/or Vein	Porphyry and/or Epithermal
094E 254	STOCKWORK ZONE	MAC	Showing	Copper	Porphyry Cu +/- Mo +/- Au	Vein and/or Stockwork	Porphyry and/or Hydrothermal
094E 255	SILVER CIRQUE	MAC	Showing	Lead; Zinc; Copper; Silver; Gold	Porphyry Cu +/- Mo +/- Au	Disseminated and/or Stockwork	Porphyry and/or Epithermal
094E 256	NORTH IRON ZONE	MAC	Showing	Copper	Porphyry Cu +/- Mo +/- Au	Disseminated and/or	Porphyry
094E 302	BLACK GOSSAN	CLANCEY	Showing	Gold; Silver; Lead; Zinc	Porphyry Cu +/- Mo +/- Au	Disseminated and/or Stockwork	Porphyry

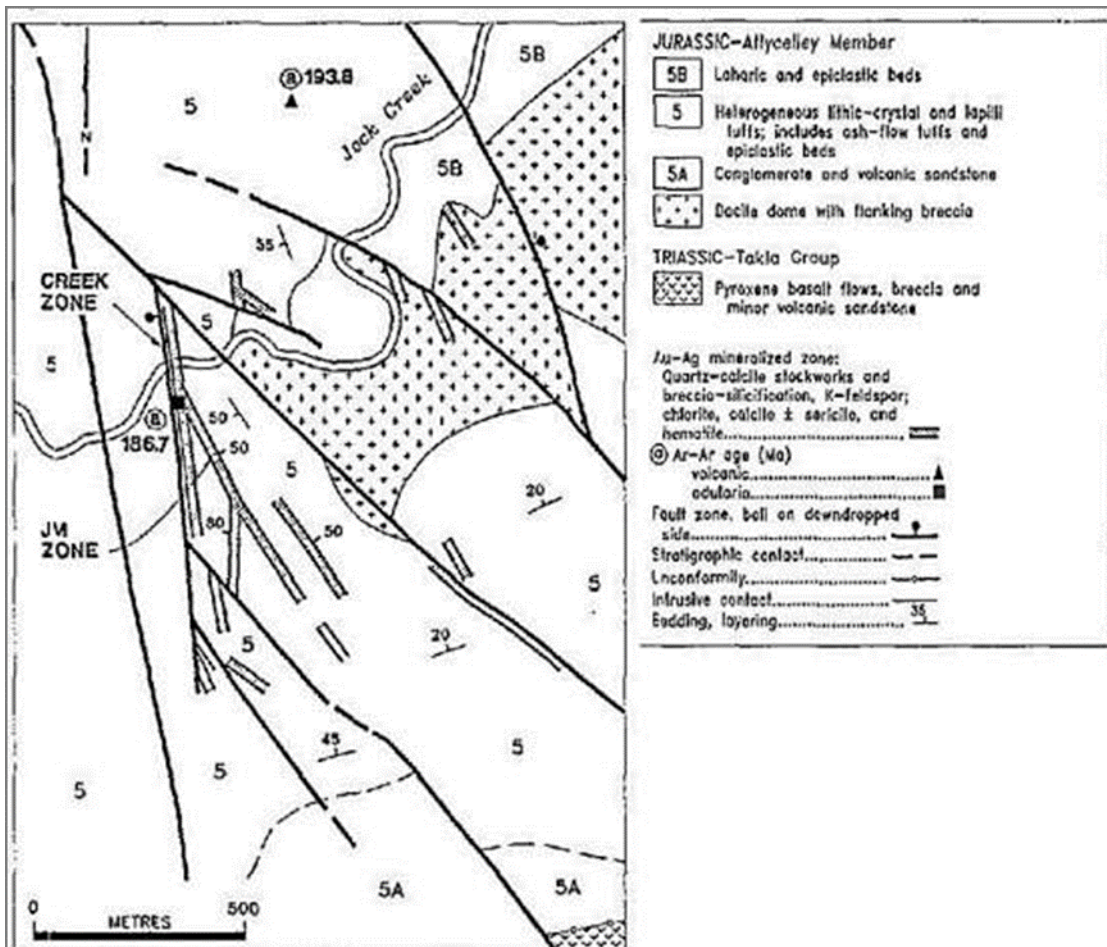
### 7.3.1 Mineralization - Shasta

The Shasta deposit is an epithermal multiphase quartz-carbonate stockwork vein/breccia deposit containing significant silver and gold mineralization. It is spatially related to a dacitic dome of Lower to Middle Jurassic age. Mineralized zones are hosted by pyroclastic rocks that were deposited on the flank of the coeval dacite dome. The pyroclastic rocks, which unconformably overlie Stuhini Group volcanic rocks, belong to the Attycelley Member of the Upper Volcanic Cycle of the Toodoggone Formation (Smith, 2019).

The Shasta deposit comprises several tabular to curvilinear mineralized zones, of which the Creek and JM zones are the largest. The Creek zone strikes approximately N-S, has a known length of over 1 km and a variable true width average about 35m of mineralization considered significant to a potential open pit mine. The current modelled depth is about 300 m at a dip of about 50° west but is open at depth. The JM zone strikes at approximately 340° for over 1 km and width averaging about 25m dipping at about 80° east. Modelled depth is currently about 300m. These attitudes produce an inverted "V" geometry that plunges shallowly to the northwest. Rocks hosting the deposit are probably equivalent to the Attycelley Member of the Toodoggone Formation, described by Diakow (1993) as green to mauve lapilli ash tuffs and lapilli-block tuffs with minor ash-flows, lava flows and epiclastic rocks (Marsden & Moore, 1990; Smith A., 2019).

The structure of the area is dominated by north- to northwest-trending normal and/or dextral strike-slip faults, with trends like the mineralized zones; later northeast-trending faults truncate mineralization. It is likely that syn-volcanic

normal faults have been remobilized by younger transpressional tectonic activity. In the mine area, the most prominent northerly trending structure is the Shasta fault, which strikes  $180^{\circ}$  and dips  $50^{\circ}$  west. This fault separates pyroclastic host rocks in the footwall from overlying epiclastic rocks in the hanging wall as shown in Figure 7-6. The Shasta fault displays post-mineralization movement, forming the hanging wall to the Creek zone near surface, but curving away from this zone at depth. In the JM zone, a late-stage carbonate vein (CB vein) forms the hanging wall to mineralization. The CB vein, which is essentially parallel to the JM zone, is semi-continuous over 200 m and varies from a 1.5 m wide vein to a 15 cm wide gouge-filled seam. Given that both the CB vein and the Shasta fault are parallel to zones of mineralization and form the hanging wall of the mineralized zones, it is likely that these structures were the result of post-mineralization movement on faults that initially controlled permeability and focused hydrothermal fluids (Thiersch et al., 1997; Smith A., 2019).



(Source: Diakow et al., 1993)

**Figure 7-6: Geology and select Mineralization from the Shasta Deposit**

Mineralized zones consist of cross-cutting, multi-stage quartz-calcite stockwork and breccia veins up to 30m wide, enclosed by salmon-pink alteration envelopes up to 100 m wide. Individual stockwork veins are massive to crudely banded and 1 to 75 cm thick. Breccia veins pinch and swell along strike and down dip within the stockwork zones, forming discontinuous, subparallel or en-echelon pods up to 15 m wide, and consist of hydrothermally altered wall rock and vein fragments cemented by quartz and/or calcite. They range from narrow single stage breccias of “jigsaw” type, to wider multi-stage breccias with repeatedly fractured and re-cemented fragments 1 to 100 cm in diameter.

Based on mineral assemblages described below, hydrothermal alteration associated with the deposit can be classified as propylitic, potassic and sericitic. Propylitic alteration is regional in extent, and adjacent to the deposit grades into potassic assemblages over several metres. Potassic alteration is directly associated with quartz stockworks and veins, forming broad pinkish haloes that surround stockwork zones. Sericite locally overprints potassic alteration. Propylitic alteration consists of an assemblage of chlorite, albite, epidote, calcite, and pyrite. Lapilli are generally chloritized, and plagioclase phenocrysts are replaced by fine-grained chlorite and epidote; however, primary textures are usually well preserved. Potassic alteration is characterized by replacement of plagioclase phenocrysts and lapilli by K-feldspar and minor calcite, and pervasive silicification of the groundmass.

Mass balance calculations based on whole rock geochemistry indicate that potassic alteration was accompanied by significant additions of K and Si, and a loss of Na (Thiersch 1997). The intensity of alteration is related directly to quartz vein density and, in areas of high vein density, secondary K-feldspar and quartz completely obscure primary textures. Epidote is present only in areas of weak potassic alteration and is associated primarily with late-stage fractures. Sericitic alteration occurs in minor, irregular patches throughout the deposit area, and appears to be associated with late-stage faulting and post-mineralization hydrothermal activity. Sericitic assemblages consist of fine-grained sericite, quartz and pyrite that replace the original mineralogy and generally destroy primary textures.

Veins and breccia cement consist mainly of quartz and calcite. Quartz is dominant at higher levels and in the periphery of stockwork zones, and calcite is more abundant at lower levels and in the central part of the breccia zones. Quartz is characteristically fine-grained and locally chalcedonic, whereas calcite tends to be relatively coarse-grained. Veins commonly display multistage crack and fill textures, although open space-filling textures are also observed. Vugs are rare but are more common in calcite veins than in quartz veins. Minor chlorite and hematite, and rare late-stage barite are also present in veins.

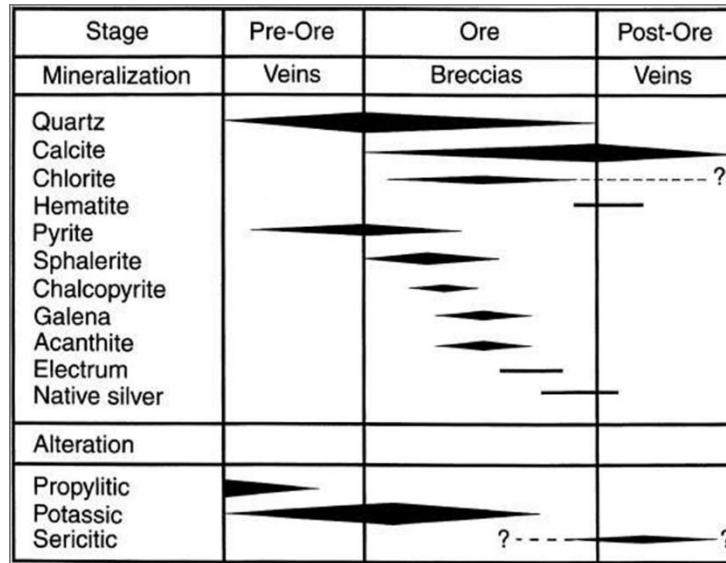
Chlorite occurs typically as fine selvages along vein walls or between calcite layers in banded veins, and is particularly abundant in high-grade breccias, where it forms up to 20% of the gangue. Hematite is restricted to post-ore calcite veins. Cross-cutting veins and breccias attest to multiple episodes of fracturing and infilling.

Quartz-only veins formed early, whereas calcite-only veins are always late in the sequence of alteration/mineralization. Multi-stage veins typically show evidence of sequential filling of the fracture, beginning with fine-grained quartz at the vein wall, followed by euhedral crystalline quartz, and medium- to coarse-grained calcite. At the transition from quartz to calcite, the two minerals are commonly intergrown, and were evidently co-precipitated.

Multiple stage breccias are composed typically of silicified wall rock and quartz vein fragments cemented by quartz and calcite, or calcite alone. In order of decreasing abundance, sulfide and precious metal minerals consist of pyrite, sphalerite, galena, chalcopyrite, acanthite, native silver and electrum. These minerals are typically fine-grained and occur with chlorite at vein margins and are conspicuous at the contact between quartz and calcite zones in mixed quartz-calcite veins and breccias. The sulfide and precious metal minerals constitute generally less than 5% of the rock within the ore zones. Nevertheless, high-grade breccias may contain >10% sulfides, and yield assays as high as 1,015 g/t Au, 8.8% Ag, and several percent Cu, Pb and Zn (Thiersch et al., 1997; Smith, 2019).

Paragenetic relationships described already can be represented by a sequence consisting of pre-mineralization, mineralization and post-mineralization stages as shown in Figure 7-7. In the pre-mineralization stage, euhedral pyrite was deposited in early quartz veins, with minor sphalerite and chalcopyrite. At the onset of deposition, veins were reopened and/or brecciated, resulting in pyrite catalases. This was followed by deposition of most of the sphalerite and chalcopyrite, and subsequently galena, argentite, electrum, and native silver (in this order) precipitated in the spaces created by renewed fracturing. Quartz was the main gangue mineral deposited during the early ore stage and was joined

by calcite at the peak of precious metal mineralization. In the post-mineralization stage, minor amounts of hematite were deposited in generally barren calcite veins (Smith, 2019).



(Source: Thiersch, 1997)

**Figure 7-7: Paragenetic Sequence - Shasta Deposit Mineralization – Dave Price Prospect**

The Dave Price prospect is located approximately 7.5 kilometres north-northwest of the Shasta mine site and is underlain by Toodoggone Formation volcanic rocks of the upper volcanic cycle. These consist of a heterogeneous mixture of green, grey, and mauve lapilli ash and lesser block tuff, with lesser interspersed ash flows and lava flows and interbedded epiclastics of the Attycelley Member and partly welded, crystal-rich dacitic ash flows of the conformably overlying Saunders Member (Smith, 2019).

Mineralization consists of a network of quartz-sericite-pyrite brecciated veins in an elliptical shaped alunite clay cap approximately 600 metres in diameter. Earlier property work identified this clay cap as being part of a jarositic vent rim. Four separate zones of alteration have been identified and collectively comprise the prospect. Pyrite is the only metallic mineral identified within these alteration zones (Smith, 2019).

Two of these quartz breccia systems were sampled prior to trenching in 1987 and yielded assay values ranging from 0.1 to 1.7 grams per tonne silver and 0.005 to 0.045 gram per tonne gold (Gower, 1988). A trench, 12 metres long by 2 metres wide and averaging 1.5 metres deep, was blasted on one of these zones in 1987. Subsequent chip sampling across this trench yielded anomalous silver and gold. Sample DP-87-1001, a 20-centimetre chip sample from the east wall at the southern end of the trench, analyzed 1.71 grams per tonne gold, 215.9 grams per tonne silver and 0.005 per cent copper (Gower, 1988). Sample material consisted of bluish silica with jarosite, pyrite and altered crystal tuff fragments (Smith, 2019).

### 7.3.2 Mineralization - Baker

Previously described propylitic and sericitic alteration on the property has weathered areas to a gossanous rust color. An assemblage of quartz-sericite-chlorite-pyrite gives way to an argillic clay assemblage proximal to veins. Milky quartz veins are the principal host to economic mineralization, and commonly exhibit polyphase breccia, and vuggy textures. Gold-silver mineralization is associated with pyrite, sphalerite, galena, and chalcopyrite, with precious metal mineralization in the form of electrum and acanthite (Smith, 2019).

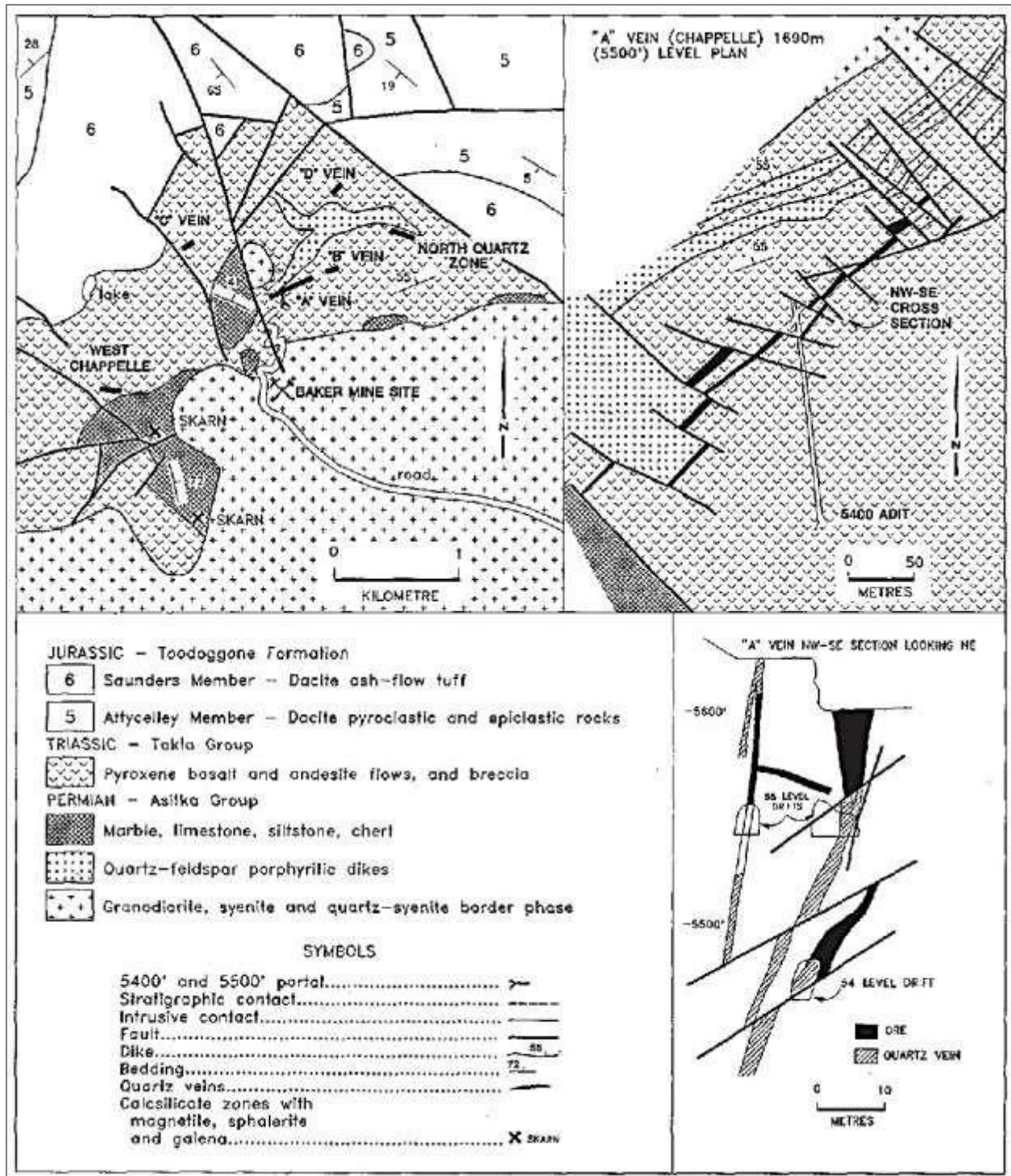
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Mineralization occurs within steeply dipping structures on the property, commonly with a northeast strike. The hypabyssal hornblende-feldspar porphyry has exploited these structures, and silicification with or without mineralization, occurs along these intrusive contacts. Wallrocks are variably silicified and altered to sericite, clay minerals and carbonate with intensity increasing with proximity to vein structures (Smith, 2019).

The main production occurring on the Chappelle Group claims was at the Dupont/Baker 'A' vein, a fault-controlled quartz vein system composed of two or more subparallel veins which strike northeast and dip from 80 degrees southeast to approximately 70 degrees northwest. The quartz vein system has been traced for a strike length of 435 metres and across a width varying from 10 to 70 metres. Individual veins within the system vary from 0.5 to 10 metres in width. Drilling indicated that the vein system persists for at least 150 metres vertically from surface.

The A vein system is cut by numerous cross faults which offset portions of individual veins, commonly for 1 to 15 metres and in one instance, for an inferred plan offset of 30 metres in a small graben structure. Most of the faults are northwest striking normal and reverse faults dipping to the northeast, and dip-slip strike faults dipping at shallow angles, generally to the southeast. Wallrocks, particularly in the hanging wall, are badly broken. The quartz vein is broken into segments less than 30 metres in length. A variety of quartz vein textures and crosscutting relationships indicate a complex history of veining with multiple depositional stages. Much of the quartz is massive and drusy, whereas a distinctive earlier ribboned variety is common, particularly near vein contacts. The quartz varies in colour from white to grey to dark grey (Smith, 2019).





(Source: Diakow et al., 1993)

Figure 7-8: Geology and select Mineralized Zones - Dupont/Baker 'A' Mine

Gold-silver values are generally associated with highly fractured and occasionally brecciated white to grey, vuggy quartz veins containing 1 to 10 per cent pyrite, and to a lesser extent occur in silicified wall rock. Xenoliths of altered andesite and dacite frequently occur in the veins. The only other common gangue mineral is carbonate, which fills fractures (Smith, 2019).

Higher grade mineralization is associated with grey quartz, which occasionally contains visible argentite, commonly associated with disseminated grains of pyrite, chalcopyrite, and very minor sphalerite. High grade gold-silver values occasionally occur in narrow (1 to 5 centimetres) crosscutting silicified shears. Visible gold is rare. Significant precious metals were found to be contained in a flat-lying shoot 200 metres in length by 3 metres wide and extending to a depth of 40 metres below surface (Smith, 2019).

Polished section, x-ray diffraction, and electron microprobe studies indicate that pyrite is the dominant mineral, constituting about 90% of sulphide mineralization. It occurs as euhedral grains and includes blebs of chalcopyrite, electrum, argentite, bornite and sphalerite. Sphalerite constitutes about 3% of the sulphides and is commonly enclosed in pyrite. Argentite is commonly interstitial between pyrite, chalcopyrite, and gold. Electrum is frequently associated with argentite. The form of occurrence of gold is like that of argentite and electrum. Bornite occurs as blebs in pyrite or with chalcopyrite. Galena occurs as rare discrete disseminated grains. Chalcocite forms thick coatings on chalcopyrite and covellite forms a thin coating on both chalcocite and chalcopyrite in the oxidized part of the A vein (Smith, 2019).

### **7.3.3 Mineralization - Pau**

The Pau prospect is located approximately 2.5 kilometres southwest of the former Baker mine (094E 026) and is underlain by the dominant lithologies of augite feldspar phyric andesitic flows of the Takla Group and feldspar porphyry of the Toodoggone Formation. Other lithologies cropping out in the vicinity include limestone and marble of the Asitka Group, and porphyritic andesitic crystal and lithic tuffs and breccias. Structurally the units in the area are intensively disrupted by steep dipping northeast-striking faults (Smith, 2019).

Mineralization consists of galena, tetrahedrite, argentite, chalcopyrite and sphalerite hosted in quartz veins, breccias and silicification forming a zone that has been traced over a strike length more than 80 metres with apparent surface widths between 4 and 12 metres. Minor amounts of chalcedony are found in some quartz veins. The Asitka Group limestone is locally metamorphosed to a pale green actinolite-bearing calcsilicate skarn. Skarn mineralization includes galena, chalcopyrite, sphalerite, and pyrite. Most of both types of mineralization occur near the intrusive contact (Smith, 2019).

Property exploration consisting of soil, silt and rock geochemistry, geological mapping and prospecting, and ground magnetic surveys by Cheni Mines from 1980 to 1982, led to the discovery of a zone of intense quartz veining and silicification. This zone became known as the Black Pete zone. Hand trenching was completed over the zone and assay values up to 3.77 grams per tonne gold and 298.28 grams per tonne silver across 1 metre were obtained (Reid, 1987). In 1985 and 1986, bulldozer and backhoe trenches were dug. Assay values up to 164.9 grams per tonne gold and 2694.85 grams per tonne silver over 3 metres were obtained (Reid, 1987; Smith A., 2019).

In 1987, diamond drilling was undertaken to determine the continuity at depth of gold and silver mineralization in quartz veins, breccias and silicified zones. Core from eight drillholes, totaling 1122.13 metres, was intensely fractured indicating the area is strongly faulted. Continuity of ore intersections between drillholes was also poor. The best assay values were from drillhole 87PM6. A 0.5-metre intersection from 98 to 98.5 metres analyzed 3.08 grams per tonne gold and 1165.7 grams per tonne silver (Reid, 1987). These values were from within a broader 21.6-metre-wide anomalous zone yielding weighted averages of 100.46 grams per tonne silver and 0.31 gram per tonne gold (Reid, 1987). The upper 10.6 metres consisted of a volcanic breccia with a density of irregular quartz stringers followed by a quartz vein 10 metres wide (Smith, 2019).

Significant but sporadic gold mineralization was intersected in all other drillholes. Drillhole 87PM3 intersected a 0.72-metre-wide quartz vein, from 27.53 to 28.5 metres, which yielded 600.9 grams per tonne silver and 2.74 grams per tonne gold (Reid, 1987). Drillhole 87PM4 intersected a 0.75-metre quartz vein which analyzed 157.7 grams per tonne silver and 0.343 gram per tonne gold (Reid, 1987). An 8.92-metre-wide quartz vein intersected in drillhole 87PM1 analyzed 123.42 grams per tonne silver and 0.343 gram per tonne gold over a 1-metre interval (Reid, 1987; Smith A., 2019).

#### **7.3.4 Mineralization - Castle Mountain**

The Castle Mountain showing is located approximately 1.2 kilometres southwest of the former Baker mine (094E 026) and is underlain by limestone of the Asitka Group and volcanic rocks of the Takla Group. Dark green augite plagioclase phyric andesite to basalt flows with lesser interbedded siltstone, tuffaceous sediments and chert comprise lithologies of the Takla Group. These lithologies have in turn been intruded by Early Jurassic granodiorite to quartz monzonite of the Black Lake stock (Smith, 2019).

The intrusion of the Black Lake stock has led to the development of skarn mineralization at the Castle Mountain showing, which was first recognized and explored by Cominco in the early 1930s. Sphalerite, galena, chalcopyrite, magnetite, pyrite and pyrrhotite mineralization is sporadically distributed in pods rarely more than 1 to 2 metres long but are traceable over a strike length of 304 to 426 metres in a zone up to 3 metres thick.

Associated skarn mineralogy includes green amphibole, garnet, and epidote. Silver content is erratic and ranges up to 1714.28 grams per tonne but averages closer to 68.57 to 102.85 grams per tonne; gold values are generally low. The highest values from assays were 9.25 grams per tonne gold, 1904.91 grams per tonne silver and 76.7 per cent lead from a small skarn lens on the Castle Mountain 3 Crown grant. Another small lens on the Castle Mountain 4 Crown grant yielded trace gold, 47.99 grams per tonne silver, 32.5 per cent zinc, 3.9 per cent lead and 0.79 per cent copper (Floyd & White, 1986; Smith A., 2019).

#### **7.3.5 Mineralization - Silver Reef**

The Silver Reef showing is located approximately 1 kilometre southeast of the Shasta minesite and is underlain by the Attycelley and overlying Saunders members of the Toodoggone Formation volcanics. The Attycelley Member (a pyroclastic series) unconformably overlies pyroxene feldspar phyric basalt flows and breccias of the Takla Group. To the north of the Silver Reef showing, the Attycelley Member consists of dacitic feldspar quartz crystal tuffs, chloritic and heterolithic lapilli tuffs, and an underlying feldspar-quartz-biotite porphyry flow. These units all contain characteristic orange-weathering plagioclase feldspars. The Saunders Member (an epivolcaniclastic series) consists of green to maroon feldspar phyric tuffs, heterolithic agglomerates, lahars, and ash tuffs.

Locally the volcanic rocks of the Toodoggone Formation are feldspathized and silicified in quartz vein and brecciated vein stockwork zones. These zones weather a distinctive pink-white and are frequently accompanied by limonite and jarosite staining. Composition of these veins is 30 to 70 per cent feldspar in a dark green matrix containing small vitreous quartz crystals and finely disseminated pyrite. Brecciated zones within veins contain elongate drusy cavities 2 to 10 millimetres wide. Manganese oxide staining is common on quartz crystals.

Extensive silicification is common in country rocks adjacent to breccia zones (Smith, 2019).

The main exposure, in a steep bluff on trend with the Shasta mine, strikes approximately 300 degrees with an easterly dip of 50 to 90 degrees. Here the altered zone is 1 to 3 metres wide, consisting mainly of silicified stockwork bands in unaltered fresh volcanics. Mineralization is minimal in veins from this zone and samples assayed negligible precious and base metals. Sample 32130 yielded the highest precious metals values; 1.028 grams per tonne silver and 0.27 gram per tonne gold (Fairbank & Croft, 1981; Smith A., 2019).

Two distinct zones occur 450 and 700 metres east of the main zone respectively. These zones trend northwestward and dip steeply northeast. One band was traced for about 100 metres along strike. Variable amounts of pyrite (up to 15 per

cent) occur in veins and jarosite alteration is common. Four small trenches were blasted to uncover fresh vein material. Assay results from these trenches were up to 0.04 per cent lead, 0.02 per cent zinc, 0.686 gram per tonne silver and 0.343 gram per tonne gold (Fairbank & Croft, 1981; Smith A., 2019).

Silicification in the northeast zone is limited. Vein material assayed only trace amounts of base and precious metals (Assessment Report 9886). Assay results from soil samples at this zone indicated strong lead, zinc, silver, and gold anomalies, suggesting the possibility of mineralized vein material nearby (Fairbank & Croft, 1981; Smith A., 2019).

### **7.3.6 Mineralization - JD-Hairy**

The JD-Hairy was discovered in 1995 by AGC Americas Gold when a grab sample taken from quartz veins in silicified intermediate to mafic volcanics analysed 18.5 grams per tonne gold and 143.2 grams per tonne silver (Krause, 1996). The area is underlain by volcanic rocks (dacite?) of the Upper Triassic Stuhini (Takla) Group.

Rocks of the Lower Jurassic Toodoggone Formation, Hazelton Group occur nearby to the south (ARIS, 2020).

In 1995, AGC Americas Gold Corp acquired 6 new claims totaling 120 units which tie onto the eastern boundary of their JD property (see 094E 171). This initial program was set up to sample gossans or zones of alteration seen on the property. Work was largely restricted to the Hairy in the north and Spur in the south. It resulted in the discovery of the JD-Hairy showing (094E 235). Work on the Spur occurred around the Falcon A2 (094E 185) and Falcon A1 (094E 184) (ARIS, 2020).

In 2004, Stealth Minerals held the Gordo Group of claims which covered the Joanna occurrences and the Falcon occurrences (094E 185 and 185) to the south and Oxide Peak occurrences (094E 179, 180 and 181) to the west. Stealth collected 854 rock samples for analysis and 274 samples were taken PIMA rock spectroscopy for alteration identification (Kuran & Barrios, 2005). Ten silt and 30 soil samples were also taken (ARIS, 2020).

Refer to the Joanna West showing (094E 175) for details of the Joanna work History. The JD-Hairy appears to be within the northern boundary of the Joanna property that was worked on in the 1980s (ARIS, 2020).

### **7.3.7 Mineralization - Gordo 2B-2C, 5A-D**

Mt. Gordonia is located within the far north of the Oxide Peak claim group and is a collection of copper showings. The occurrences within the Property boundary include Gordo 2B (MinFile #: 094E 293), Gordo 2C (MinFile #: 094E 294), Gordo 5A (MinFile #: 094E 295), Gordo 5B (MinFile #: 094E 296), Gordo 5C (MinFile #: 094E 297), Gordo 5D (MinFile #: 094E 298).

The showings are similar in geology, notably underlain by a thick sequence of volcanic rocks consisting of green and purple feldspar porphyritic andesite flows, cherty andesites and porphyritic andesitic pyroclastics, ranging from tuff to agglomerate. Outcrops consisting of pink monzonite dykes and small stocks are scattered around the occurrence and are related to Early to Middle Jurassic plutons to the northwest and south. Mineralization is commonly associated with large gossanous areas that can be traced for several tens of metres across the ridge.

Mineralization consisting of chalcopyrite, galena, sphalerite, and pyrite occur in quartz veins. Alteration consists of associated envelopes of silicification, carbonate and argillic alteration, and oxidization and leaching (Burgoyne, 1974). The Gordo 2C area is underlain by dacitic rock of the Upper Triassic Stuhini (Takla) Group.

Sample (#192822) of quartz vein with pyrite and chalcopyrite assayed 0.84 gram per tonne gold, 21.3 grams per tonne silver and greater than 1 per cent copper (Kuran & Barrios, 2005).

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### **7.3.8 Mineralization - Black Gossan**

The Black Gossan occurs in a fault block of Upper Triassic Takla (Stuhini) Group andesite to basalt. To the northeast and southwest, the Upper Triassic Takla rocks are in fault contact with Toodoggone formation volcanics. Strong propylitic alteration is pervasive, with argillic alteration assemblages on fault surfaces. Strong oxidized pyritic and gossanous alteration forms a prominent supergene cap over the target (Smith, 2019).

Drilling in 2002 yielded only low values with one of the best being 0.14 gram per tonne gold and 2.2 grams per tonne silver and 88 parts per million copper (Craft, 2003). This 1.83 metre drill interval contained pyritic veins with up to 8 per cent pyrite (Smith, 2019).

It is reported (Craft, 2007) that to the north of the Black Gossan zone, is the Clancey showing which consists of vuggy zinc-lead quartz veinlets, in weakly propylitic Takla volcanics. This association of zinc-lead veinlets distal to copper-gold porphyry systems has been established at the nearby Kemess South Mine and is thought to support the interpretation of the Black Gossan being a porphyry system (Smith, 2019).

## 8 Deposit Types

The Toodoggone district within the Stikine terrane of northeastern British Columbia is described as one of the few districts in the world which host a significant number of preserved Early Jurassic high- and low-sulphidation epithermal-type deposits (Bouzari, Bissig, Hart, & Leal-Mejia, 2019). These deposits are described by Bouzari et al. (2019) as “a thick (>2km) succession of Early Jurassic sub-aerial andesitic and dacitic volcanic rocks of Toodoggone Formation. These and underlying strata were probably covered by thick successions (>4 km) of Jurassic and Cretaceous Bowser and Sustut basin clastic strata that protected and facilitated preservation of the epithermal deposits during subsequent, post-Late Cretaceous uplift.”

Table 8-1 displays the frequency of deposit types in the Toodoggone region, which are mostly defined as Epithermal Au-Ag low sulphidation, Epithermal Au-Ag-Cu high sulphidation, and Cu±Mo±Au Porphyry deposits. Note on the 60 of the 311 known mineral occurrences (ARIS, 2020) without a listed deposit type within the Toodoggone area: 31 occurrences have Cu listed as the primary commodity and 52 occurrences have a status of Showing, with remaining occurrences listed as Prospects.

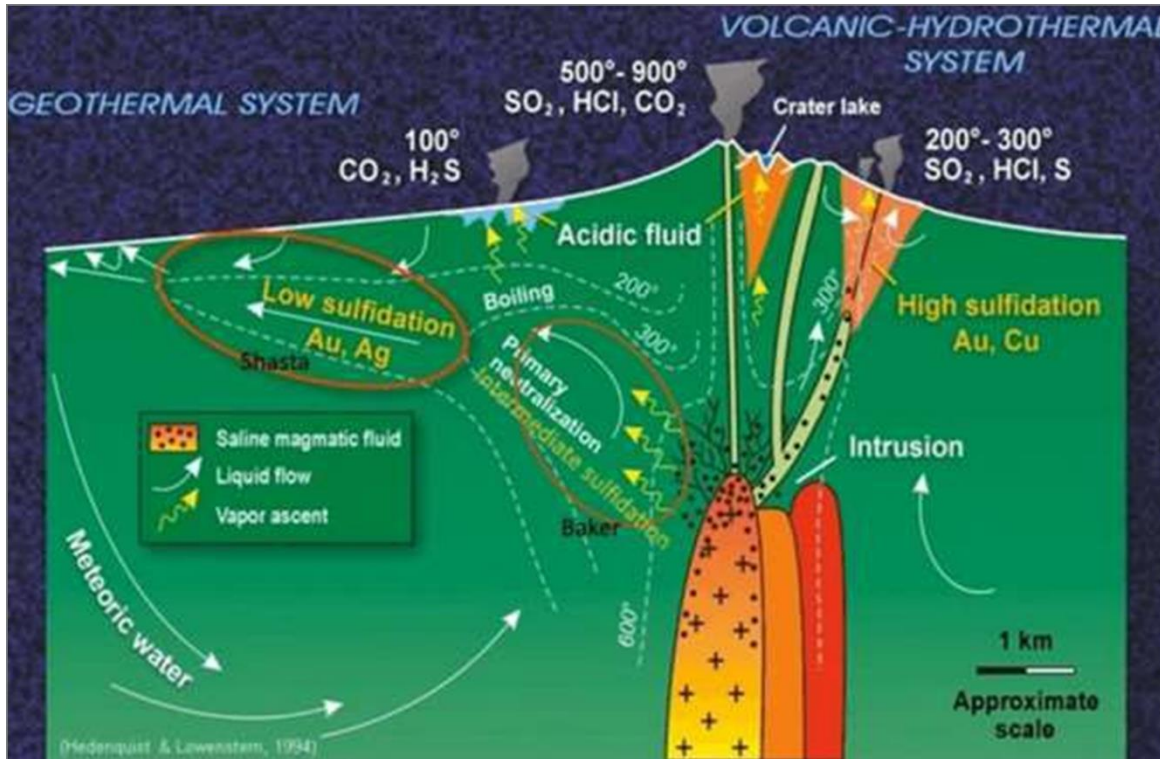
**Table 8-1: Frequency of Deposit Types within 1:500K clip of the Property boundary**

Deposit Type	Count	Percentage
Alaskan-type Pt±Os±Rh±Ir	3	0.96%
Alkalic porphyry Cu-Au	1	0.32%
Anthracite	2	0.64%
Au-quartz veins	4	1.29%
Cu skarn	11	3.54%
Cu±Ag quartz veins	7	2.25%
Epithermal Au-Ag: low sulphidation	123	39.55%
Epithermal Au-Ag-Cu: high sulphidation	30	9.65%
Fe skarn	2	0.64%
Intrusion-related Au pyrrhotite veins	2	0.64%
<i>not listed</i>	<i>60</i>	<i>19.29%</i>
Pb-Zn skarn	17	5.47%
Polymetallic veins Ag-Pb-Zn±Au	10	3.22%
Porphyry	1	0.32%
Porphyry Cu±Mo±Au	27	8.68%
Surficial placers	1	0.32%
Tholeiitic intrusion-hosted Ni-Cu	1	0.32%
Unknown	1	0.32%
Vein breccia stockwork	5	1.61%
Volcanic redbed Cu	1	0.32%
Volcanic-hosted U	2	0.64%

Deposit types in the Toodoggone region genetically links the epithermal Au-Ag and Cu-Au porphyry mineralization to Early Jurassic volcanic and intrusive activity in an extensional setting (Diakow, Panteleyev, & Schroeter, 1993).

The descriptions of deposit types in this section are based, in large measure, on the B.C. Geological Survey’s Bulletin 86, titled “Geology of the Early Jurassic Toodoggone Formation and Gold-Silver Deposits in the Toodoggone River Map Area, Northern British Columbia” (Diakow et al., 1991 & 1993; Duuring et al., 2009; Smith A., 2019). Figure 8-1 displays a cross-section of the deposit types and their zonal relationships for Baker and Shasta.

Porphyry copper and epithermal gold-silver deposits typically form in the upper parts of large magmatic- hydrothermal systems that result from fluids generated from the crystallization of intermediate composition calc-alkalic igneous magmas in island and continental margin arcs (Sillitoe, 2010; Bouzari et al., 2019).



(Source: Hedenquist & Lowenstern, 1994)

**Figure 8-1: Schematic Epithermal Mineralization Relative to Sub- Volcanic Intrusions**

Sections 8.1 – 8.5.1 are summarized from Smith (2019).

### 8.1 Epithermal – Low Sulphidation

Low sulphidation epithermal gold-silver deposits are also called adularia-sericite or quartz-adularia types which form in high-level (epizonal) to near-surface environments. They consist of quartz veins, stockworks and breccias, commonly exhibiting open-space filling textures and are associated with volcanic-related hydrothermal or geothermal systems. The deposits occur within volcanic island and continent-margin magmatic arcs and/or continental volcanic fields in an extensional structural setting.

The depth of formation of these high-level deposits is from surface (in hot springs systems) to about 1 km below surface along regional-scale fracture zones related to grabens, resurgent calderas, flow-dome complexes and rarely, maar diatremes. Settings also include extensional structures (normal and splay faults, ladder veins and cymoid loops, etc.) in volcanic fields; locally graben or caldera-fill clastic rocks are present. High-level, subvolcanic stocks and/or dykes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are present and are related to underlying intrusive bodies.

The age of this type of epithermal mineralization varies. Tertiary deposits are most abundant world-wide but in B.C. Jurassic deposits are important. Mineralization appears closely related in time to the host volcanic rocks but invariably it is slightly younger in age.

Silicification of host rocks is extensive, occurring as multiple generations of quartz and chalcedony commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite-kaolinite assemblages. Intermediate argillic alteration (kaolinite-illite- montmorillonite [smectite]) forms adjacent to some veins and advanced argillic alteration (kaolinite-alunite) may form at the tops of mineralized zones. Propylitic alteration dominates at depth and peripherally. Weathered outcrops are often characterized by resistant quartz +/- alunite 'ledges' flanked by extensive bleached, clay-altered zones with supergene alunite, jarosite, and limonite.

## **8.2 Epithermal – Intermediate Sulphidation**

Most intermediate sulphidation epithermal veins show a metal signature comprising gold and silver, with lesser zinc, lead, and copper. Total sulphide content typically ranges from 5 to >20% (by volume) with pyrite > sphalerite > galena > chalcocopyrite (if present). Sphalerite is usually vertically zoned from black, iron-rich (Fe>Zn), higher temperature species at depth, through brown and red, to yellow, iron-poor (Zn>Fe), low temperature species at shallower levels. Tellurides may be common in some systems—selenides are uncommon. Manganese is often present (usually in association with carbonate gangue). Tetrahedrite-tennantite may be present.

Quartz and carbonate are the dominant gangue minerals (the commercially worth-are often less minerals within a mineral deposit that surround, or are intergrown with, the minerals of economic interest) in intermediate sulphidation epithermal systems. Barite, gypsum, anhydrite and manganiferous silicates may be locally important. Pyrite is the dominant sulphide gangue.

Multiple episodes of quartz deposition are the norm as evidenced by cross-cutting quartz phases and varied quartz textures. Vein-filling crustiform and comb quartz are common which reflects the higher temperature of formation as compared to low sulphidation quartz veins. Equant space-filling, saccharoidal, fine crystalline and open space quartz flooding may be present. Colloform banded quartz (ginguro texture) and other boiling textures typical of low sulphidation epithermal systems are generally not present.

Vein-filling carbonate is the dominant gangue in the upper parts of intermediate sulphidation epithermal veins. The Ca/Mg carbonate end members (calcite, Mg-calcite, and dolomite) form at the deepest levels, whilst Fe/Mn carbonate end members (siderite and rhodocrosite) form at shallower levels under cooler conditions.

Carbonates may form fine crustiform bands which alternate with thin quartz-rich carbonate bands, especially within the transition zone from quartz-dominant to carbonate-dominant phases. Blocky and massive vein-filling carbonate is common. Barite, if present, generally forms vein fill in the uppermost parts of the system. Gypsum and anhydrite may be present as late phases in the uppermost parts of intermediate sulphidation epithermal systems.

The majority of intermediate sulphidation deposits form steeply dipping veins which may contain bonanza gold grade shoots (especially within quartz-base metal sulphide veins and breccias). Within a given district, multiple veins are common and typically form sub-parallel to anastomosing vein swarms, as is typical within the Baguio District, Phillipines. Vein breccias and larger breccia bodies (e.g. the Rosia Montana Deposit: Lexa, 1999) may be developed. Vein breccias especially may be high grade even within narrow vein deposits.

Stockworks are common in the hangingwall of deposits—they range from narrow selvages that extend metres from veins and silicified structures to extensive stockworks that may be of sufficient density and grade to justify an open pitable bulk tonnage mine. Disseminated mineralization is less common but important in some deposits such as Creede in the USA and San Cristóbal in Bolivia (Wilson & Motton, 2015).

Alteration minerals in intermediate sulphidation epithermal gold systems are zoned in a similar manner to that of gangue mineralogy. Proximal to mineralization quartz-sericite dominates at depth whilst carbonate dominates in the shallower



parts of the system. Pyrite is ubiquitous. Further from mineralization illite-smectite passes outwards to epidote-chlorite (prophylic).

Intermediate sulphidation systems are generally distinctly zoned. Ores tend to be dominated by quartz-pyrite- base metal sulphides at depth and become more carbonate rich at the expense of these phases at progressively shallower levels. Carbonate deposition may also postdate and cross-cut earlier quartz sulphide phases as the fluid system cools and collapses. Barite, gypsum, and anhydrite, if present, are formed in the uppermost parts of the system and/or are the latest depositional event.

Gold mineralization predominantly develops in association with base metal sulfide deposition. Whilst most base metal sulphides are deposited with quartz, minor base metal sulphide mineralization extends into the carbonate event in many deposits, as evidenced in the Baguio District, Philippines, where carbonate veins may be significantly gold mineralized (especially where manganoan carbonates are present, e.g. the Sangilo deposit) (Wilson & Motton, 2015).

Gold typically occurs in its native state, either as inclusions in pyrite and/or base metal sulfides, intergrown with carbonate, or filling fractures and vugs in earlier quartz, and generally does not pose metallurgical problems.

Unlike low sulphidation epithermal gold-silver deposits (in which boiling is the main mechanism for deposition of metals) which typically have relatively restricted vertical precious metal interval of approximately 200 to 250 metres, Intermediate sulphidation systems can have precious metal intervals that extends over 100s to potentially >1 kilometre.

### **8.3 Epithermal – High Sulphidation**

High sulphidation epithermal deposits are also called acid-sulphate, quartz-alunite, alunite-kaolinite-pyrophyllite or advanced argillic types. They occur as veins, vuggy breccias and sulphide-silica replacement pods to massive lenses within volcanic host rocks associated with high level hydrothermal systems marked by acid-leached, advanced argillic and silicic alteration. Their setting is usually within extensional and trans-tensional environments, commonly in volcano-plutonic continent-margin and oceanic arc and back-arc settings. They occur in zones with high-level magmatic emplacements where strato-volcanoes and other volcanic edifices are constructed above plutons.

Deposits are commonly irregular in shape, controlled in part by host rock permeability and the geometry of ore-controlling structures. Multiple, cross-cutting composite veins are common; texturally the mineralization is characterized by vuggy, porous silica derived as a residual product of acid leaching. Hydrothermal breccias and massive wallrock replacements associated with fine grained quartz are also common features associated with high sulphidation deposits.

Mineralization consists of pyrite, enargite/luzonite, chalcocite, covellite, bornite, gold, electrum, and less commonly chalcopyrite, sphalerite, tetrahedrite/tennantite, galena, marcasite, arsenopyrite, silver sulphosalts and tellurides including goldfieldite. Two types of ore are commonly present: (i) massive enargite-pyrite and/or (ii) quartz-alunite-gold. Gangue mineralogy consists principally of quartz-pyrite or quartz-barite; carbonate minerals are absent.

Alteration minerals consist principally of quartz, kaolinite/dickite, alunite, barite, hematite, sericite/illite, amorphous clays, pyrophyllite, andalusite, diaspore, corundum, tourmaline, and native sulphur with subordinate amounts of dumortierite, topaz, zunyite and jarosite. Advanced argillic alteration is a common alteration type and can be aerially extensive and visually prominent. Quartz occurs as fine-grained replacements and as vuggy, residual silica in acid-leached rocks. Weathered rocks may contain abundant limonite, jarosite, goethite and/or hematite, generally in a groundmass of kaolinite and quartz. Fine-grained supergene alunite veins and nodules are common.

Ore controls in volcanic edifices are commonly caldera ring and radial fractures, (particularly at their intersections), fracture sets in resurgent domes and flow-dome complexes, and hydrothermal breccia pipes and diatremes. Faults and breccias in and around intrusive centers appear to be important controls. Permeable lithologies can also be favorable

host rocks, capped in some deposits by less permeable, hydrothermally altered silica, clay, and alunite-bearing 'lithocaps'. The deposits can occur over considerable depths, ranging from high- temperature solfataras (sulfurous fumaroles) at the paleosurface down into cupolas of intrusive bodies at depth.

#### **8.4 Porphyry**

The porphyry deposit type consists of bulk tonnage-style copper-molybdenum-gold mineralization commonly related to feldspar porphyritic intrusions. Core areas consist of intrusive-hosted, disseminated copper sulphides, largely chalcopyrite and bornite, commonly with accessory molybdenum and gold. Mineralization is spatially associated with the core intrusion, but not necessarily confined to it. Stocks are typified by concentric zones of potassic, phyllic (sericitic) and propylitic alteration, commonly with argillic (clay) alteration and overlying zones of advanced argillic alteration. Some secondary (supergene) mineralization commonly occurs near-surface, marked by oxidation of sulphide minerals and enrichment of economic minerals. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization.

The Kemess South and North copper-gold deposits belong to the calc-alkaline variety of the porphyry deposit type, which are adjacent properties and are further described in 23.3.1 and 23.3.2 of this report. Pyrite, chalcopyrite, and magnetite are associated with well-developed quartz stockwork veins and veinlets within potassically-altered zones hosted by porphyritic quartz monzonite intrusions and adjacent wall rocks. The Jurassic age mineralization is spatially, temporally, and genetically associated with the intrusions. Alkaline porphyry copper-gold deposits are associated with syenitic and other alkalic rocks and are a distinct deposit type.

Pyrite is the predominant sulphide mineral in porphyry deposits. Magnetite and rarely hematite are abundant in some deposits. Ore minerals include chalcopyrite, molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite, and barite. Gangue minerals in mineralized veins are mainly quartz with lesser biotite, sericite, K-feldspar, magnetite, chlorite, calcite, epidote, anhydrite, and tourmaline. Many of these minerals are also pervasive alteration products of primary igneous mineral grains.

Alteration mineralogy consists of quartz, sericite, biotite, K-feldspar, albite, anhydrite/gypsum, magnetite, actinolite, chlorite, epidote, calcite, clay minerals and tourmaline. Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic host rocks by biotite-rich rocks (biotite 'hornfels') that grade outward into propylitically-altered rocks. The older alteration assemblages in copper-bearing zones can be partially to completely overprinted by later potassic, phyllic and less commonly argillic alteration assemblages. Rarely, in the uppermost parts of some porphyry deposits, advanced argillic (kaolinite-pyrophyllite) alteration is present.

#### **8.5 Exploration Model**

The primary exploration targets on the Property are structurally controlled veins, stockworks or breccia style low-to-intermediate sulphidation epithermal gold-silver deposit like the deposits that have seen past production on the property.

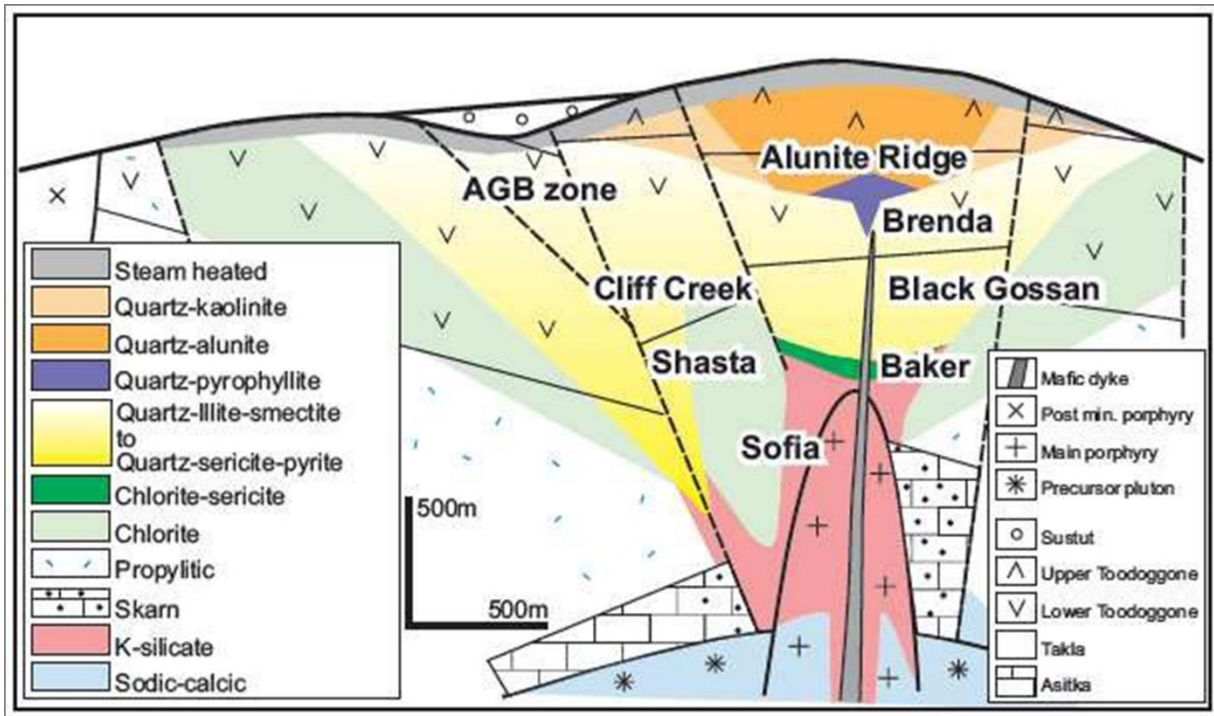
A secondary, but no less important target type is a bulk-tonnage porphyry style of mineralization associated with the large gossanous pyrite alteration zone covering much of the Chappelle claims. The demonstrated genetic link of the Dupont/Baker 'A' and Multinational 'B' veins to porphyry fluids (Duuring, et al., 2009), and the broad alteration zone of Chlorite-Epidote-Pyrite to Quartz-Sericite-Chlorite-Pyrite consistent with alteration seen at the nearby Kemess underground deposit and general Porphyry alteration models, suggest a buried porphyry deposit may be present on the property.

The depth potential of the Dupont/Baker 'A' and Multinational 'B' veins, as well as the peripheral veins, remains under-tested. The lowest holes on both previously mined zones have significant intercepts in holes 74-16 intersecting 1.2 metres at 0.58/0.24 oz/short ton Au/Ag, and M87-24 intersecting 1.83 metres at 0.091/0.06 oz/short ton Au/Ag respectively (quoted intervals are considered historical in nature and have not been confirmed by the author). The genetic model of intermediate sulphidation veins does not depend on a boiling zone relative to the paleosurface such as in low-sulphidation veins, and as such, the potential vertical extent of mineralization can reach up to 1 km (Smith, 2019).

#### **8.5.1 2020 Model**

Bouzari et al. (2019) suggests that new age relationships show epithermal-type deposits formed contemporaneously with pluton emplacement and porphyry type K-silicate alteration at depth. Age dating, complemented with field observations, alteration assemblages, vein types, trace metal concentrations and the evaluation of fluid inclusions indicate that some of the epithermal-type veins that were previously classified as low-sulphidation have alteration features indicative of shallow-level porphyry systems (Bouzari, Bissig, Hart, & Leal-Mejia, 2019). Bouzari et al. (2019) states: "K-silicate alteration also occurs in several valley cuts into the deeper exposed plutons in the district such as at Black Gossan, suggesting that porphyry-level alteration is exposed" and describes the occurrence of quartz-magnetite ± pyrite ± chalcopyrite mineralization from drillholes at the historical Baker mine indicate a transition towards porphyry alteration just 100-150 metres below the surface. The transition to a porphyry center is further supported by the high concentrations of Cu, Mo, W, and Sn (which are typically enriched in the core of porphyry system) relative to Sb, As, Ag, Li, and Tl (which are typically enriched in shallow level above porphyry systems). A normalized-element ratio index, the MDRU Porphyry Index (MPI<sub>x</sub>) is developed and applied to the Toodoggone district. This index indicates the Baker mine has a distinct porphyry character and that other deposits or prospects which include Shasta and Black Gossan to also have notable porphyry affinities. Results from this study indicate that there are a range of mineralization types in the central Toodoggone district from the deep porphyry to shallow epithermal environments which formed episodically over the period from ca. 196 to 186 Ma. A new framework proposed herein indicates the potential for exploration of porphyry-type copper mineralization in areas previously known for epithermal mineralization (Bouzari, Bissig, Hart, & Leal-Mejia, 2019).

Bouzari et al. (2019) suggests implications for future exploration in the Toodoggone region, and places the Baker, Shasta and Black Gossan portions of the Property in different locations, shown in Figure 8-2, versus the traditionally accepted exploration model project locations presented in the low-to-intermediate sulphidation model presented in Figure 8-1.



(Source: Diakow et. al, 1993, Sillitoe, 2010, Bouzari, 2019)

**Figure 8-2: Cross section of the Toadoggonne district showing Deposits Relative to Porphyry Alteration**

## 9 Exploration

Exploration at the Toodoggone Portfolio has been conducted over a number of subsequent seasons by TDG from 2020 to present. The scope of exploration efforts and the delineation / prioritization of various target areas has changed as TDG acquired more land through option agreements, claim staking, and mineral tenure purchases. The current land position of TDG is a contiguous block roughly 10 kilometers wide and over 54 km in length extending from the Sturdee Airstrip in the south to the Chuckachida River in the north to north of Mount McNamara in the northern portion. Mets exists as a non-contiguous property approximately 14 km west of South Oxide Peak.

For clarity sake, the exploration programs which have been conducted by TDG at the various exploration subdomains (*ie.* Bot, North Oxide Peak, South Oxide Peak, Baker Complex, Greater Shasta-Newberry, and Mets) are presented in order from north to south, and in order from the initial tenure acquisition to the most recent work completed up to the Effective Date.

All other work prior to 2020 on the Toodoggone Portfolio is considered historical, summarized in Section 6.

### 9.1 Bot Exploration Programs

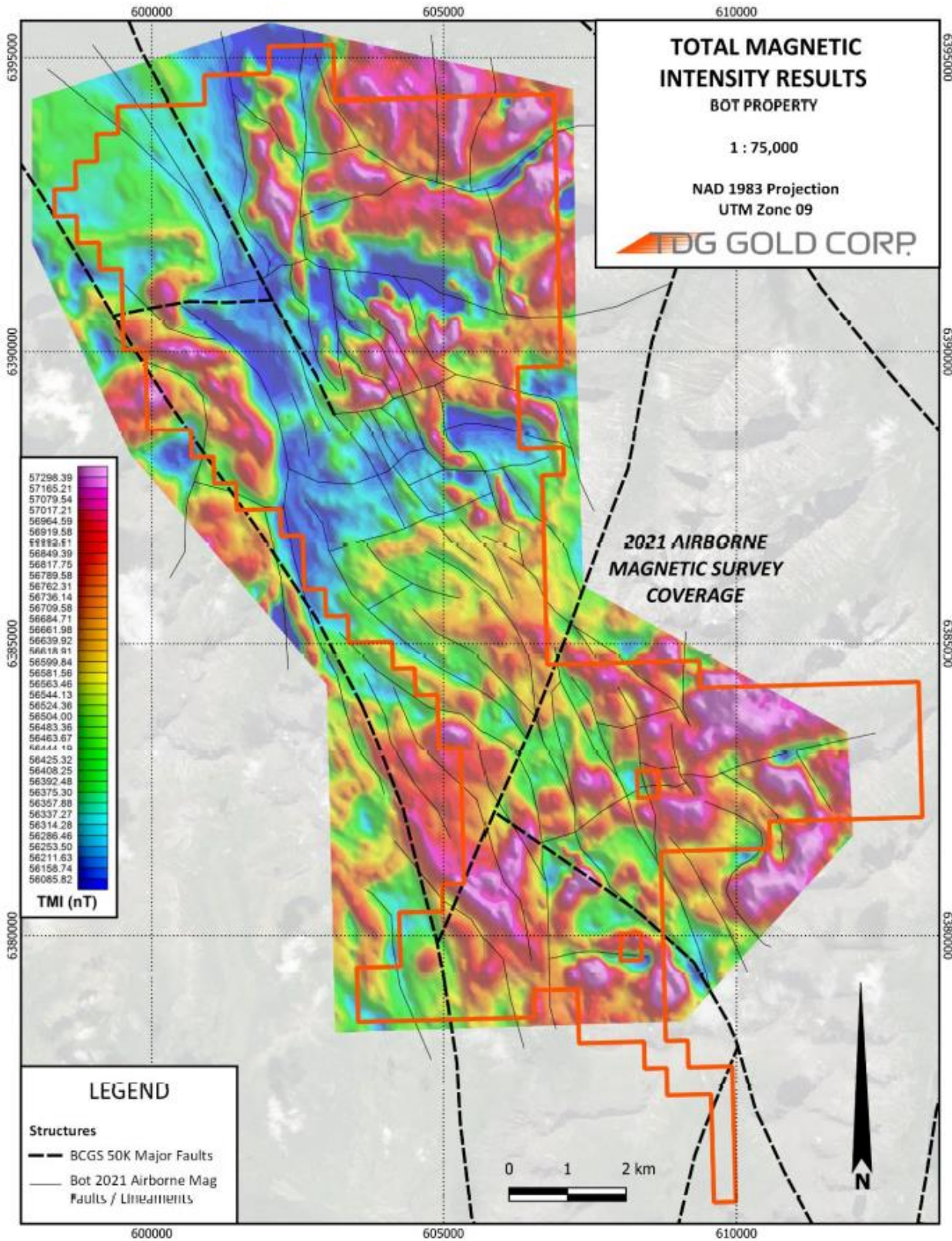
The Bot tenure block is comprised of 24 mineral claims, totaling 12,694 hectares and is 100% owned by TDG BC Assets Corp., with the centre of the tenure block at (608,073E / 6,385,693N). The Property is restricted to helicopter access, with the nearest staging road as close as 7 kilometres away via the Ranch Road. Staging for the exploration work programs at Bot was out of TDG's Baker Camp. The Baker Camp is vehicle accessible using the 570-km service road network from Mackenzie Junction, B.C., or considerably shortened to a 12-km drive via a fixed wing or helicopter flight to the Sturdee Airstrip.

#### 9.1.1 Bot 2021 Exploration Season

During the 2021 exploration season, TDG completed an airborne magnetometer and radiometric survey, performed by Precision GeoSurveys Incorporated, of Langley, BC. The survey was successfully completed August 27 to September 1, 2021, on nearly the entirety of the BOT Property. A total of 1,459 line-km was flown over an area of 132.6 km<sup>2</sup>. The Bot survey block was flown at 100 m line spacing at a heading of 072°/252°. Tie lines were flown at 1,000 m spacing at a heading of 162°/342°.

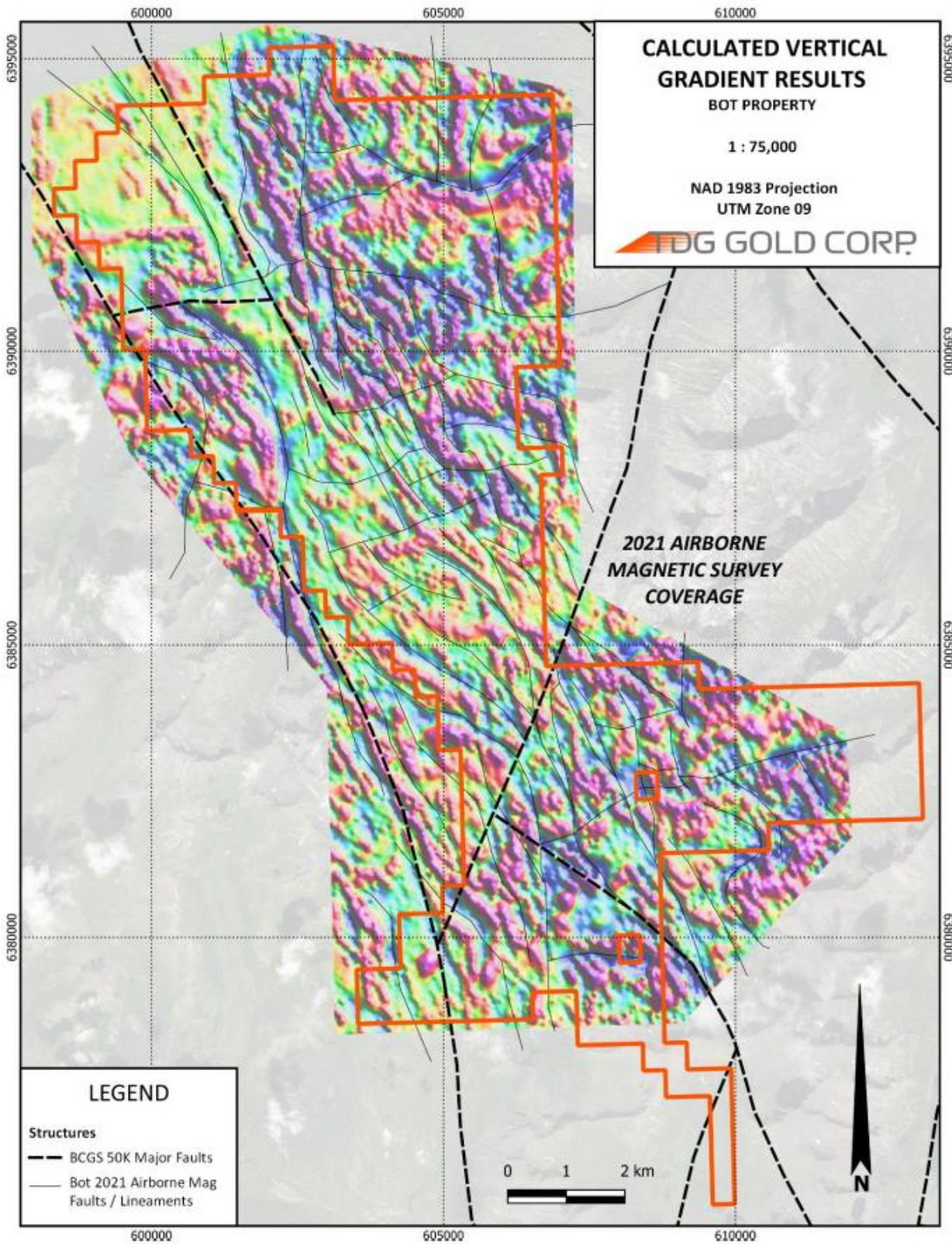
This survey provided high-quality magnetic and radiometric data to supplement the existing database of geochemistry and geophysics to assist in prioritizing target zones for follow up work.

The final magnetic survey data was delivered to TDG following the completion of the survey. Imagery production includes: CHG ("Calculated Horizontal Gradient"), CVD ("Calculated Vertical Gradient"), eTh ("Thorium Count"), eU ("Uranium Count"), K ("Potassium Count"), KThRatio ("Potassium-Thorium Ratio"), KURatio ("Potassium-Uranium Ratio"), RMI ("Residual Magnetic Intensity"), RTP ("Reduced to Pole"), TC ("Total Count"), ThKRatio ("Thorium-Potassium Ratio"), TMI ("Total Magnetic Intensity"), UKRatio ("Uranium-Potassium Ratio"), and Ternary Image. The TMI and CVD results are seen in Figure 9-1 and 9-2 below.



(Source: TDG Gold, 2021)

**Figure 9-1: 2021 Bot Total Magnetic Intensity Results Map**



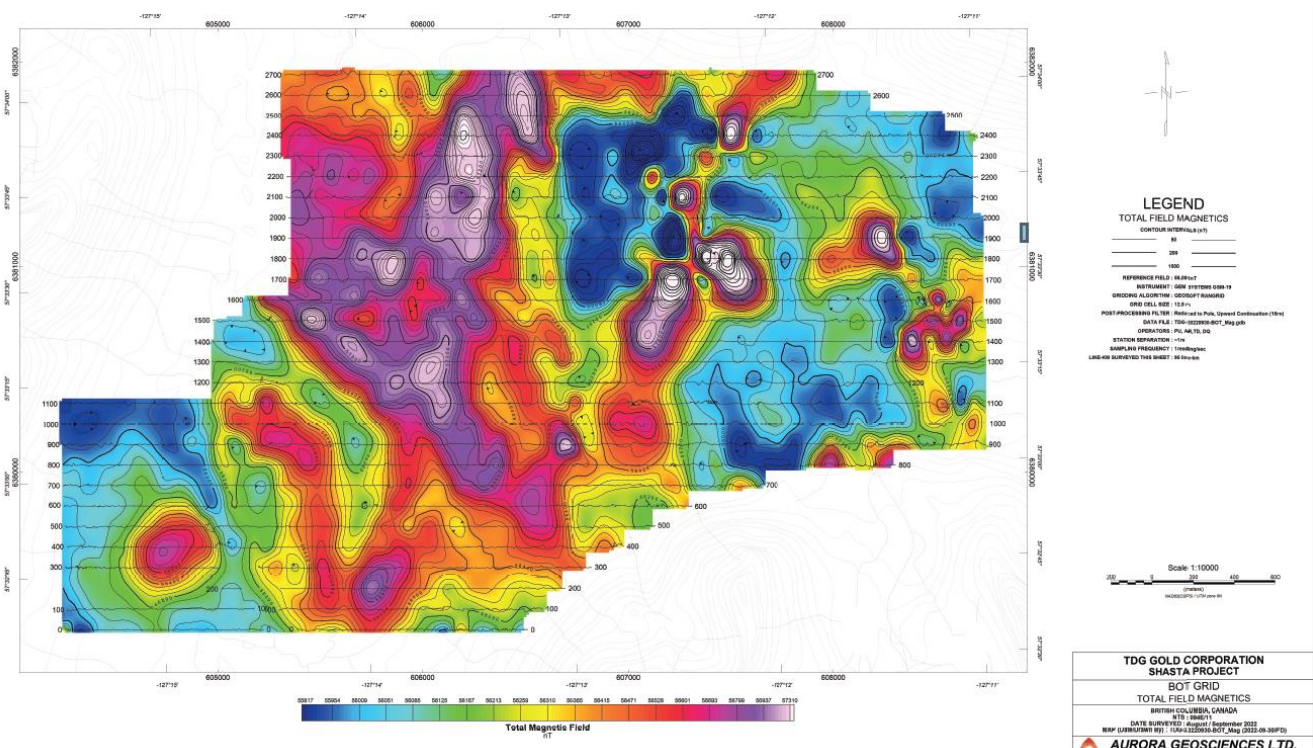
(Source: TDG Gold, 2021)

**Figure 9-2: 2021 Bot Calculated Vertical Gradient Results Map**

### 9.1.2 Bot 2022 Exploration Season

During the 2022 exploration season, TDG completed a 94.5-line kilometre ground-based magnetic geophysical survey (Aurora Geosciences Ltd.), a property-wide airborne hyperspectral survey (SpecTIR LLC), and geochemical sampling (select grab, composite chip, and stream sediments) completed during geological reconnaissance by TDG technical field staff.

The ground-based magnetometer survey was completed on the Property between August 25th and August 30th, 2022. A total of 94.5-line km was walked over an area of approximately 11.9 km<sup>2</sup>. The BOT survey grid was walked at 100-metre line spacing at a heading of 090°/270°. The magnetometer survey executed by Aurora Geosciences Ltd provided high-quality magnetic data to supplement the existing database of geochemistry and geophysics to assist in prioritizing target zones for follow up work. The results of the magnetic survey are seen in Figure 9-3, below.

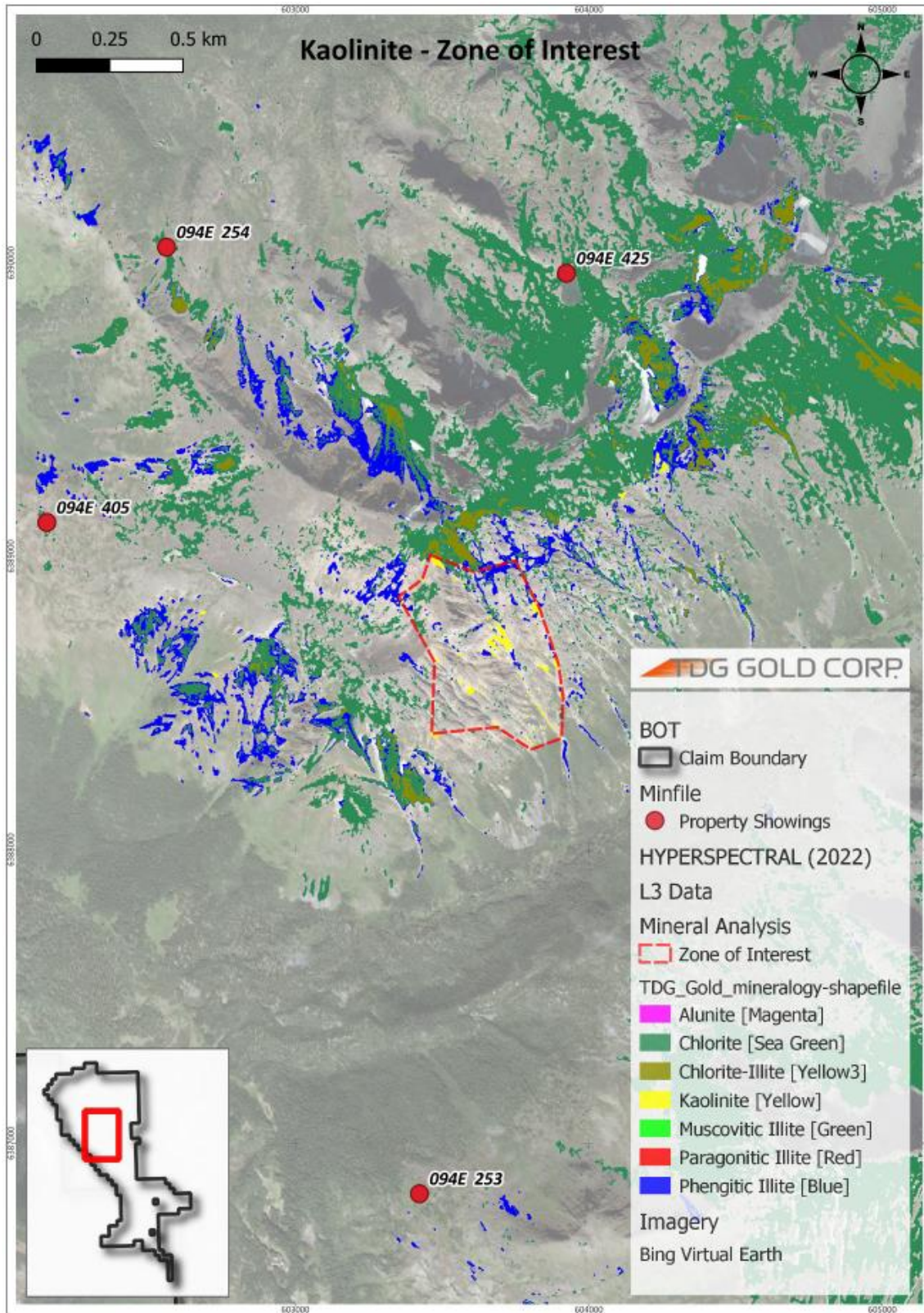


(Source: TDG Gold, 2025)

**Figure 9-3: Bot 2022 Ground Magnetic Survey TMI Results**

The hyperspectral survey was completed by SpecTIR LLC between August 19th and 21st, 2022. The imagery displays notable trends in L3 data mineralogies, including a zone of interest in the central region of the Property marked by a 700 x 500 metre area of kaolinite. The area associated with the zone of interest (Figure 9-4) is the only occurrence of kaolinite detected by the hyperspectral survey on the Property.

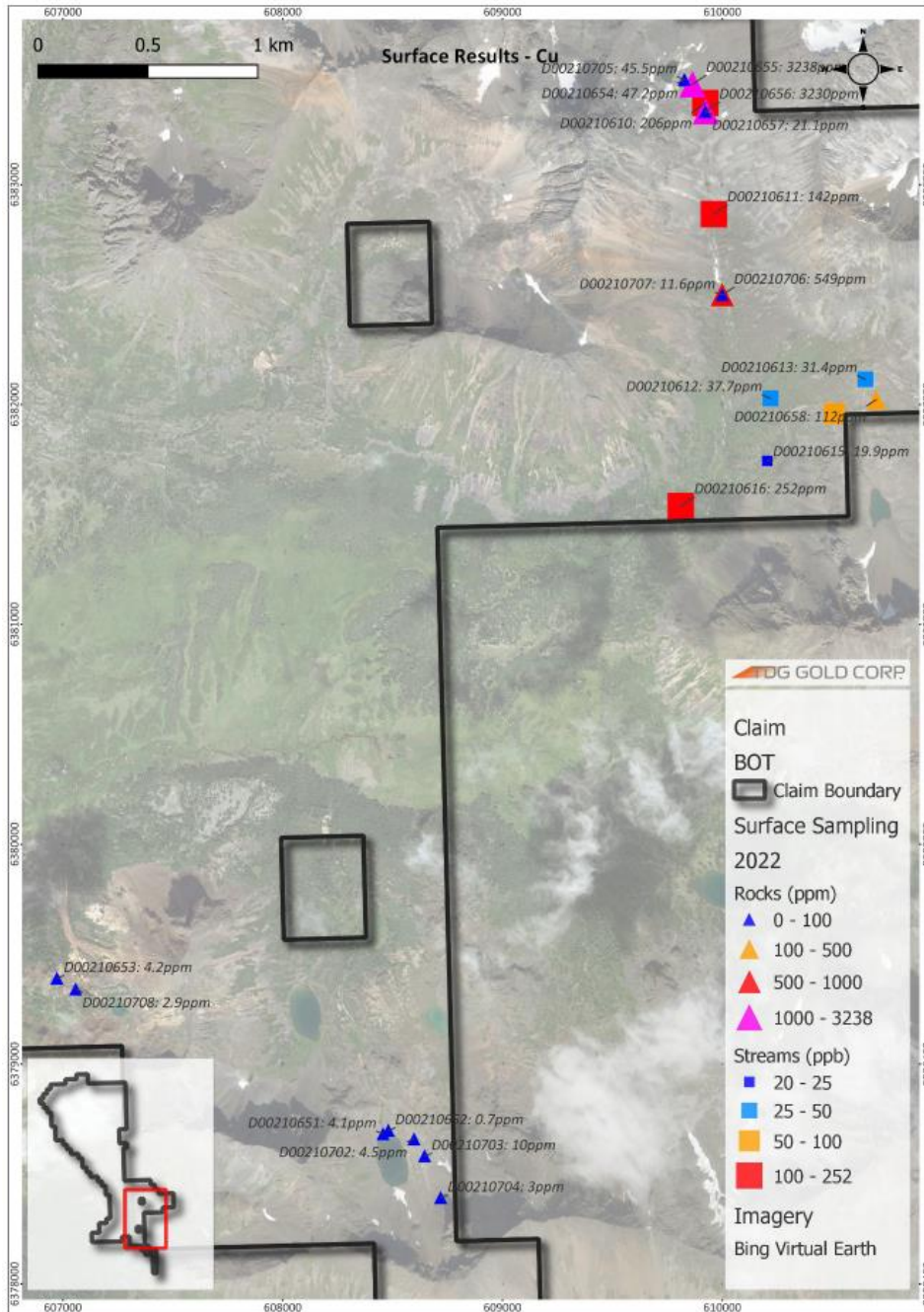




(Source: TDG Gold, 2022)

**Figure 9-4: Bot 2022 Hyperspectral Survey Kaolinite Anomaly Map**

Additional geochemical sampling work was also completed at Bot in 2022. Select grab and composite chip sampling was completed between August 23rd and August 27th, 2022. A total of 13 select grab, 2 composite chip, and 7 stream sediment samples were collected during geological reconnaissance. Surface assays returned 0.7 to 3,238 ppm Cu and <0.01 to 0.67 g/t Au in rocks and 19.9 to 252 ppm Cu and 10 to 91 ppb Au in streams. The brief sampling completed during 2022 surface reconnaissance confirms Au and Cu anomalies in the southeastern area of the Property (Figure 9-5).



(Source: TDG Gold, 2022)

**Figure 9-5: Bot 2022 Sampling Copper Gold Results Map**

### 9.1.3 Bot 2023 Exploration Season

The 2023 work program consisted of a property-wide, reconnaissance level geochemical survey. The respective survey, a lithic drainage sediment (“LDS”) sampling program, returned a total of 175 samples (Figure 9-6).

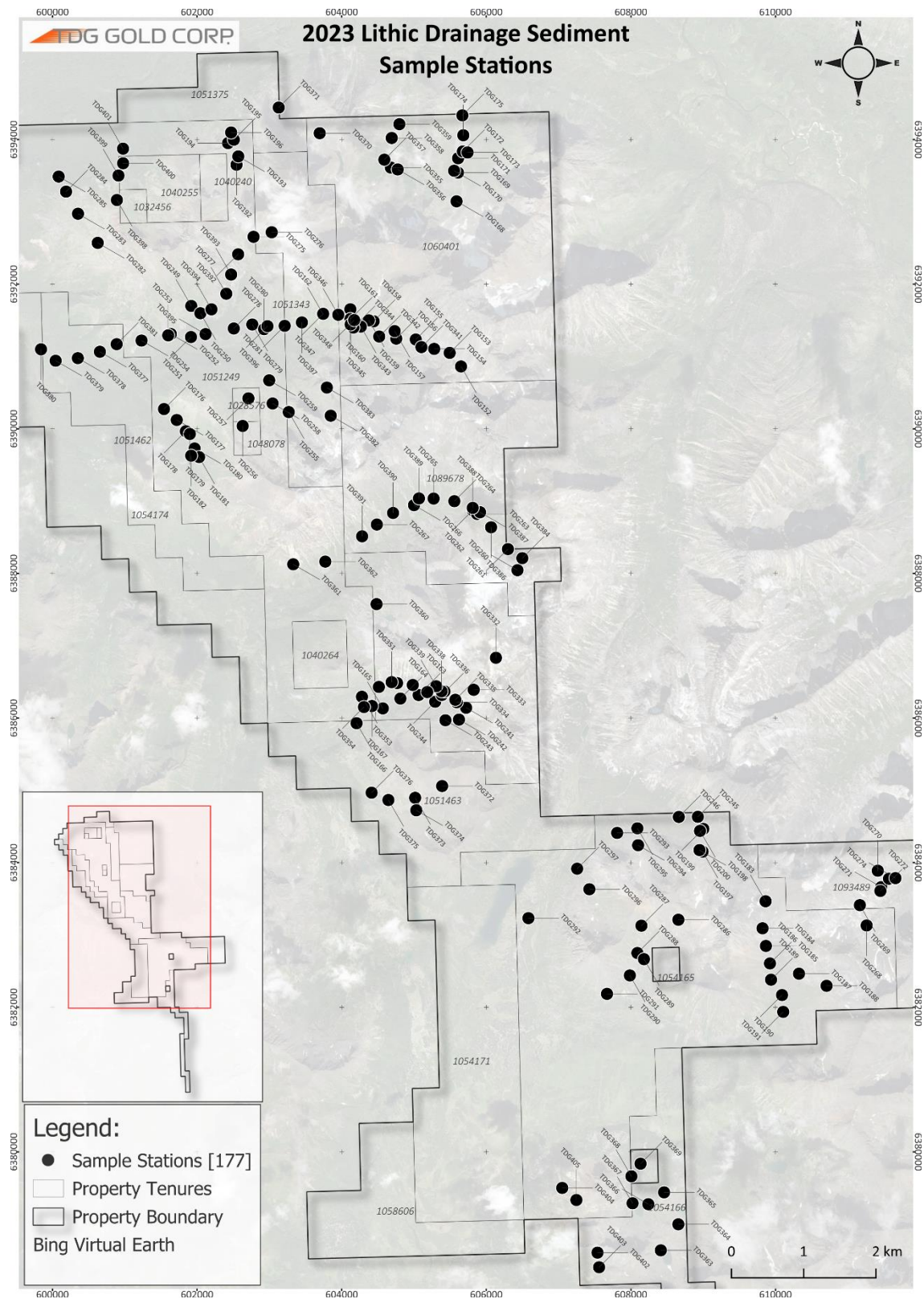
LDS samples were retrieved using the perforated pan, sieves (20 mesh) and digging equipment (shovel, spade, mattock). Wearing the proper protective person equipment, a LDS sample station was dug to a target depth (1.5 – 2x deeper than the pan), ideally in a calmly flowing section of drainage. Using a pH-TDS metre, the pH, temperature, salinity, and conductivity of the sample site was recorded.

Other recorded observations included relative tributary order, slope, width, and flow intensity of the site location. If the drainage was dry, an ample amount of sample material was bagged and washed later. Fitted for the perforated pan, sieves (1”, ¼”, No. 10, 20 and 40) were used in fining order over the perforated pan and washed until enough sample material was collected and then placed into a Kraft sample bag with a unique station ID (TDG23-###) and sample tag (Sample ID). Sample information was later recorded into a sample shipment and a laboratory-issued submission form. A strict chain of custody was followed, from sampling to transportation.

LDS samples returned metal determinations from below lower reporting limit (“BDL”) to 25 ppm Au, BDL to 11.1 ppm Ag, 3.4 to 1,275 ppm Cu, 0.2 to 39.9 ppm Mo, 2.1 to 290 ppm Pb, and 22.4 to 817 ppm Zn. Results maps for the 2023 LDS sampling program can be seen below in Figure 9-7 to 9-10.

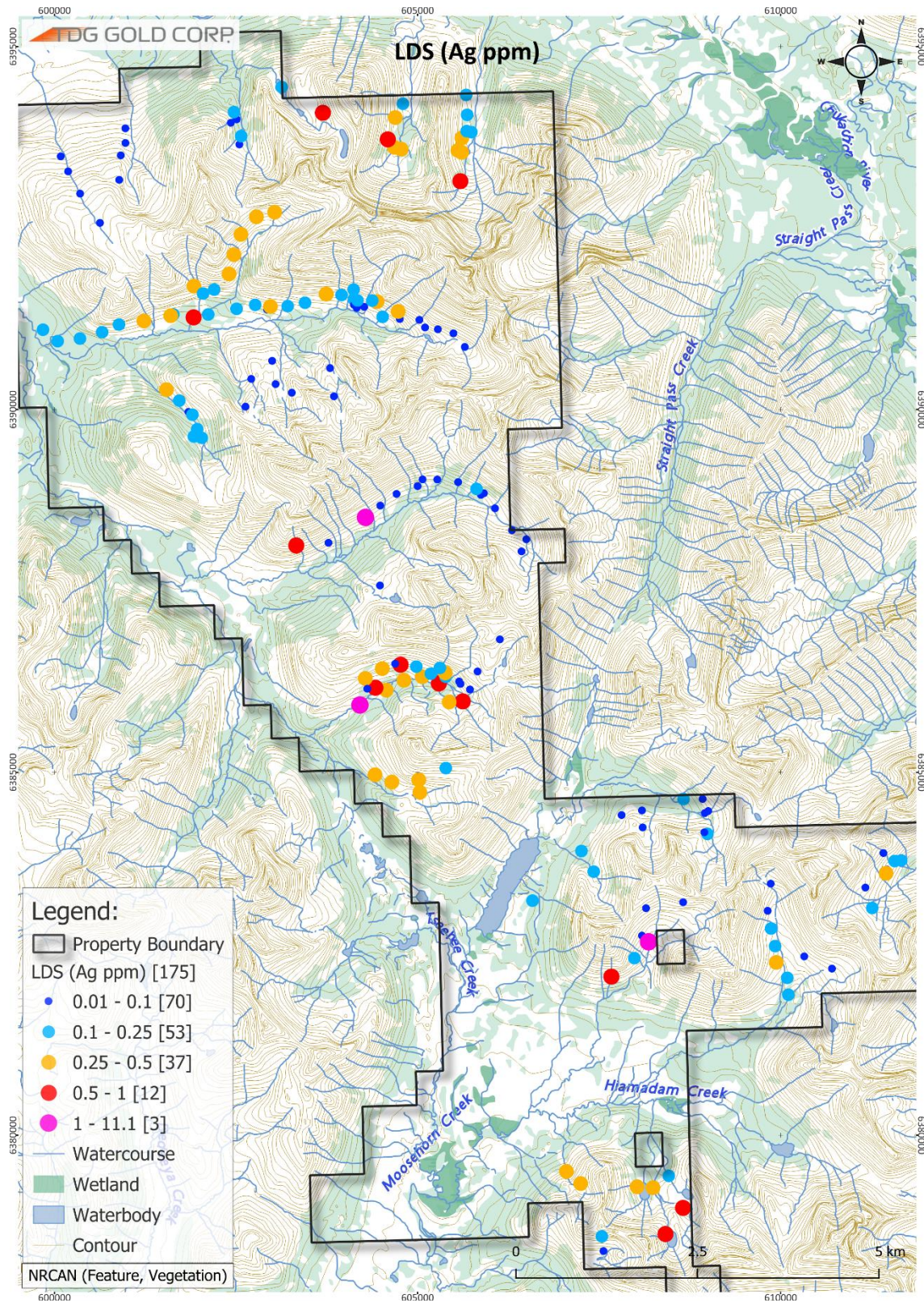
Anomalies detected in the 2023 LDS sampling program at Bot are listed as follows:

- Silver (Figure 9-7): Elevated Ag along the ‘Mac 3 Skarn’ drainage, a central region (north of Moosehorn Lake), and the cirque system south of Hiamadam Creek.
- Gold (Figure 9-8): Sporadic Au-anomalies with subtle highlights around ‘Mac 3 Skarn’ and ‘Moose’ MINFILE showings and north of Moosehorn Lake area.
- Copper (Figure 9-9): Distinct Cu-anomaly in the northeastern area of the Property. Other areas include drainages surrounding the ‘Moose’ and the cirque system south of Hiamadam Creek. Cu is strongly depleted in most drainage basins north and south of ‘Regal’ and notably depleted in the ‘Mac 5 Southwest’ and ‘Silver Cirque’ drainages. The NE copper anomaly is well zoned and clearly warrants a detailed follow up program.
- Molybdenum (Figure 9-10): Strongly elevated Mo in the eastern block area, around ‘Moose’. Mo appears to contrast Cu between the two northern E-W drainage. Mo is depleted in the northeastern most drainages (Silver Cirque area).



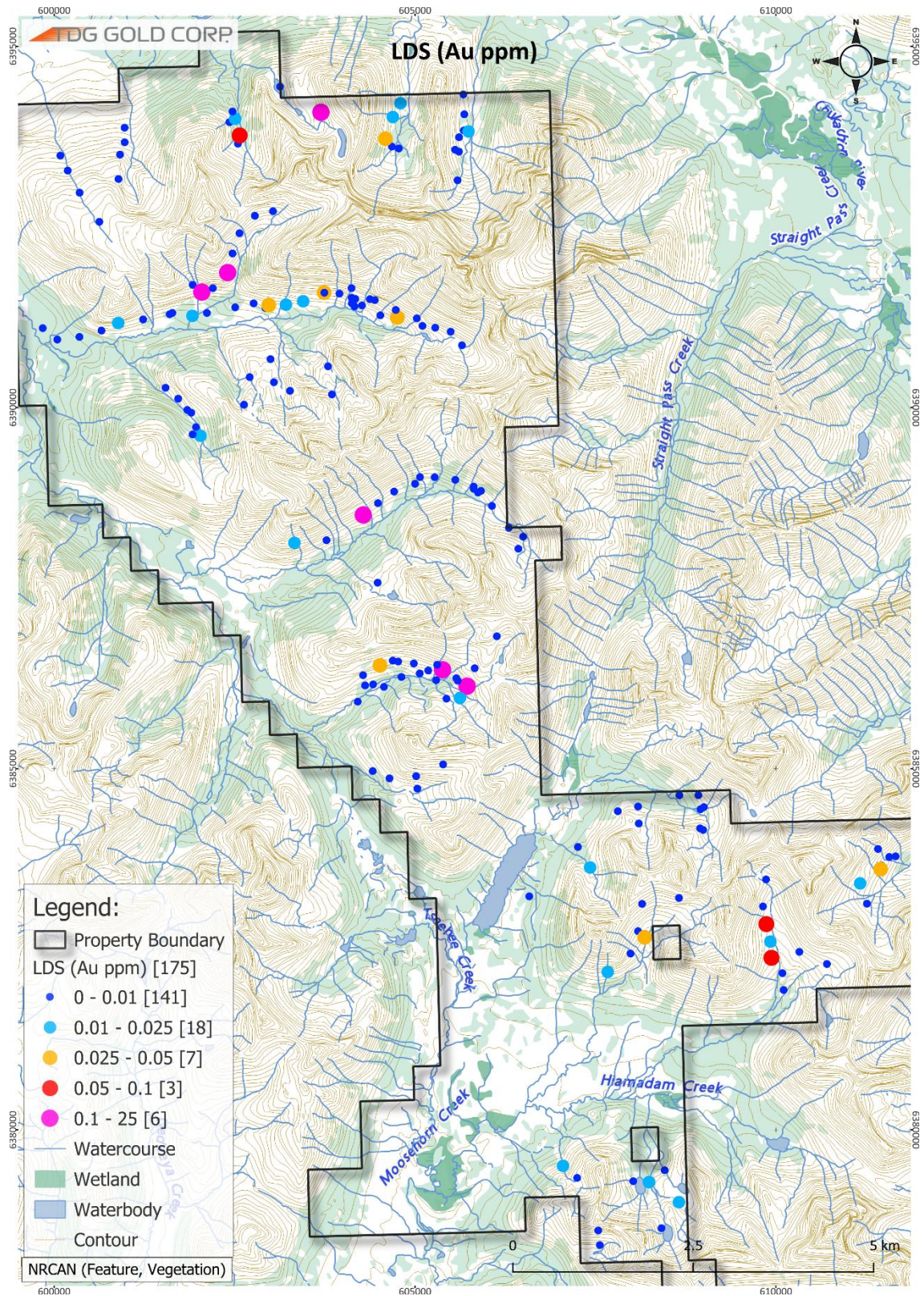
(Source: TDG Gold, 2023)

**Figure 9-6: Bot 2023 LDS Sample Location Map**



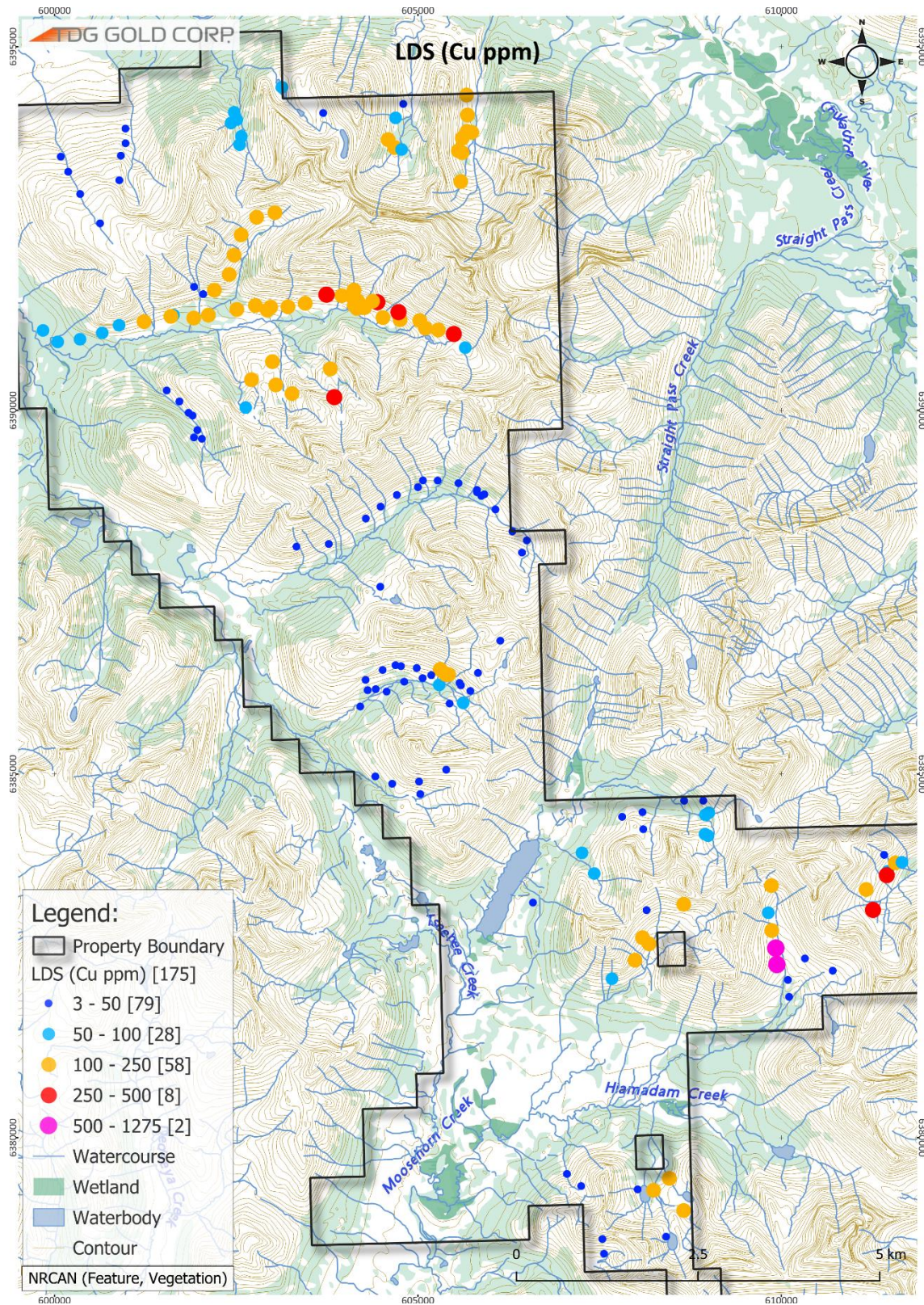
(Source: TDG Gold, 2023)

**Figure 9-7: Bot 2023 LDS Sample Silver Results Map**



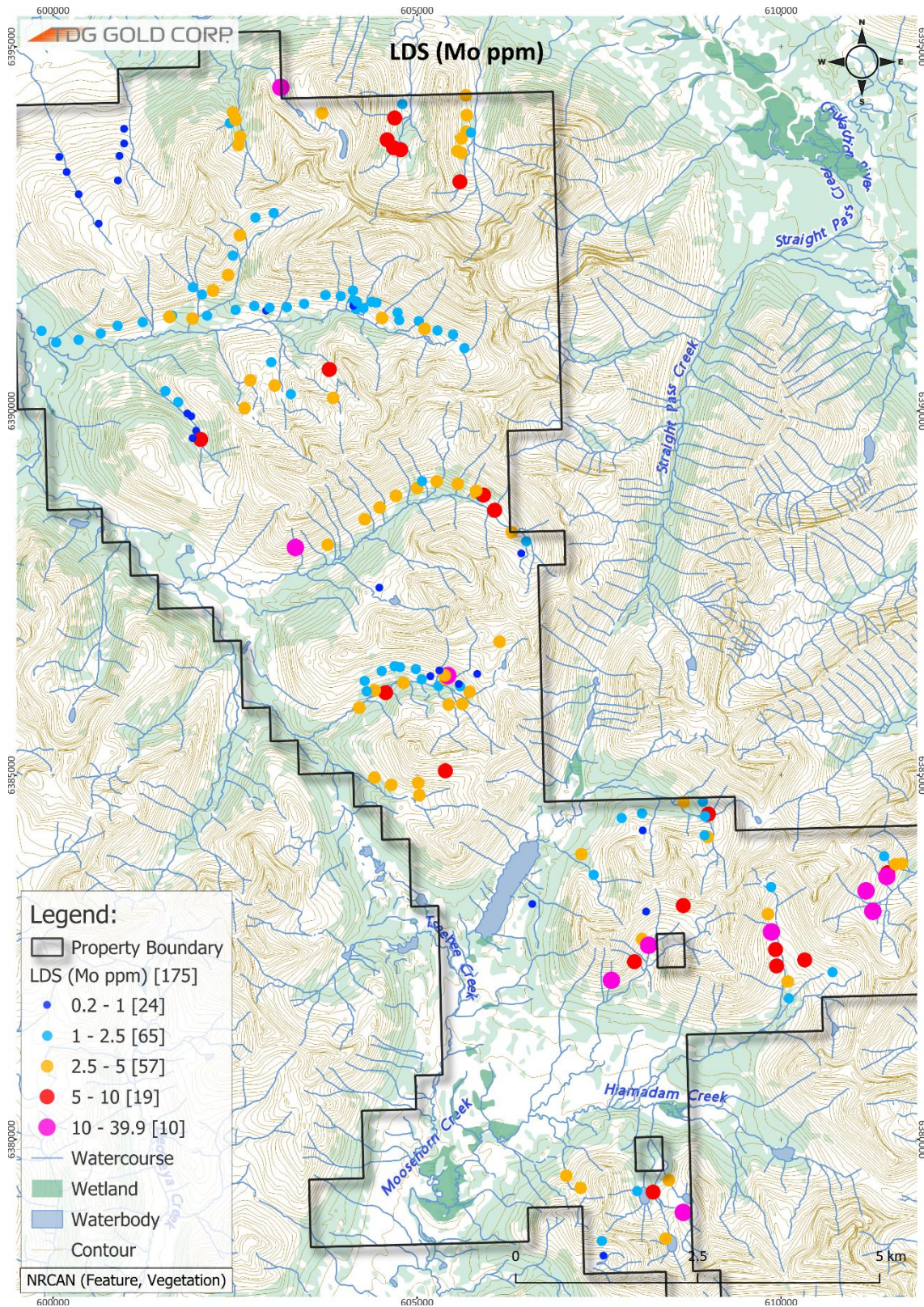
(Source: TDG Gold, 2023)

**Figure 9-8: Bot 2023 LDS Sample Gold Results Map**



(Source: TDG Gold, 2023)

**Figure 9-9: Bot 2023 LDS Sample Copper Results Map**



(Source: TDG Gold, 2023)

**Figure 9-10: Bot 2023 LDS Sample Molybdenum Results Map**



#### 9.1.4 Bot 2024 Exploration Season

The 2024 work program consisted of a follow up geochemical survey on targets identified historically and by geological and geochemical work outline in the 2023 Bot Assessment Report. The targets refined 'Erebus' and 'Etna' were defined based on Lithic Drainage Samples ("LDS") samples returning concentrations ranging from below lower reporting limit ("BDL") to 25 ppm Au, BDL to 11.1 ppm Ag, 3.4 to 1,275 ppm Cu, 0.2 to 39.9 ppm Mo, 2.1 to 290 ppm Pb, and 22.4 to 817 ppm Zn.

The 2024 geochemical survey was completed from August 2nd to August 13th, 2024 on the northern portion of the BOT tenure block. Rock samples were taken by geologists and geotechnicians working in teams of two across the steep valleys, sampling a variety of rock types and alteration present, with increased sampling in areas which displayed increased mineralization. Outcrop samples were taken with hammers and geotools using proper personal protective equipment. Subcrop and float samples were taken where outcrop were covered by vegetation or on talus slopes. Geologists described the lithology, alteration, and mineralization present within the outcrop and rock samples, and measured available structural features in outcrop using a compass. Location data was collected by handheld Garmin GPS units. Field work was contracted to Plainview Geoscience Ltd, later joined by samplers from Big Rock Exploration, contracted to sample from August 9th to August 13th, who both worked alongside TDG staff.

Rock sampling was a combined strategy of regional geochemistry sampling and prospecting. Effort was made to include a variety of rock types across the area, while following up areas with increased mineralization, including staining visible from secondary copper minerals.

Rocks were collected in polybags with unique sample ID numbers. Samples weighed from 0.34 to 2.83 kilograms averaging 1.20 kg. A hand-sample or 'chip' sample was retained for each sample as future reference. A strict chain of custody was followed. Rocks samples were placed into security-sealed rice bags for transportation to the laboratory. TDG staff delivered all rock samples to Bandstra Transportation Systems in Prince George, B.C., ultimately to the Bureau Veritas Commodities Canada Ltd. laboratory in Vancouver B.C.

Samples were prepared and analysed under the following codes: PRP90-250 for sample prep, FA430 for Au and AQ251-EXT for Ag, base metals and trace elements, with MA401 run for over limits on Ag and Cu. BV is an accredited laboratory and information about methodology can be found on the BV website.

Certified Reference Materials ("CRM") and blank materials ("Blanks") were inserted into the sample series to comprise 12.2% of total samples respectively. Pulp duplicates were run every 20 samples by the laboratory. No other field based QAQC controls were added. The labs internal QAQC also used blanks, duplicates and certified references.

A total of 324 rock samples were sampled during the 2024 program. The results are presented below for Au, Ag, Cu, Mo, Pb, and Zn. A table of summarized stats for the reported elements is presented below.

- **Gold:** Slightly elevated in outcrop in the centre of the southern side of the main valley, with rare samples up to 1.38 and 1.85 ppm Au as well as elevated in float samples to the eastern edge of the sample area.
- **Silver:** elevated Ag in outcrop in the centre of the sample area, with highest values in outcrop on the north side of the valley (as well as highest overall value (134 ppm) in float. Sporadic elevated Ag to the south-west, and in float to the north-east
- **Copper:** elevated copper values are found across the property, with stronger anomalies towards the centre of the survey area with several areas of elevated Cu. The highest determination contained 11% Cu.
- **Molybdenum:** Molybdenum is highly elevated in the central region of the survey area with a strong Mo anomaly present in a glacial cirque with several values of Mo >100 ppm.

- **Lead:** Pb is increased to edges of the survey area, with lower relative Pb values found in the centre. High Pb is found in samples sporadically throughout the area.
- **Zinc:** elevated Zn is found on the northern side of the main valley, as well as the south-west and north-east edges of the survey area. Rare high Pb samples in the central areas.

**Table 9-1: Bot 2024 Season Rock Sampling Statistics**

Element	Min (ppm)	Max (ppm)	Mean (ppm)	$\sigma$ (ppm)
Au	BDL	1.85	0.03	0.14
Ag	0.001	134.0	1.5	8.7
Cu	0.4	110,000	1370	6788
Mo	.3	374.6	7.6	33.6
Pb	0.2	212.6	4.75	14.6
Zn	1.1	953.4	44.8	74.3

*BDL: Below detection limit;  $\sigma$ : Standard Deviation*

## 9.2 Oxide Peak (North and South) Exploration Programs

The Oxide Peak tenure block is comprised of 28 mineral claims, totaling 21,176 hectares and is 100% solely owned by TDG BC Assets Corp. The Oxide Peak tenures are separated into two major exploration areas, the North and South blocks.

The North Oxide Peak exploration area is an amalgamation of the historic “North Block” of the formerly Oxide Peak tenures and the To-Do tenures acquired in 2024. North Oxide Peak comprised of 8 mineral claims which total 10,223 hectares. The North Oxide Peak exploration area contains the Oxide Creek target, which was drill tested by TDG in 2022.

The South Oxide Peak exploration area is an amalgamation of the historic “South Block” of the formerly Oxide Peak tenures and a second set of claims which were acquired by TDG through mineral staking. The Oxide Peak South exploration area is comprised of 20 mineral claims for a total of 10,953 hectares. The South Oxide Peak exploration area contains the Drybrough target, which was drill tested by TDG in 2021.

Oxide Peak (North and South) is restricted to helicopter access, with the nearest staging road as close as 5 kilometres away near the Baker Camp. Staging for the exploration work programs was completed out of TDG’s Baker Camp. The Baker Camp is vehicle accessible using the 570-km service road network from Mackenzie Junction, B.C., or considerably shortened to a 12-km drive via a fixed wing or helicopter flight to the Sturdee Airstrip.

### 9.2.1 Oxide Peak (North and South) 2020 Exploration Season

Precision GeoSurveys Inc. was commissioned by TDG between dates July 27th – July 29th, 2020, to complete a 931-line kilometre Magnetics-Radiometrics airborne survey over the Oxide Peak exploration area.

The survey was flown as Block A (North) and Block B (South) totaling 931 line-km. Block A totaled 442-line km and block B totaled 489 line-km. The east-west survey flight lines were spaced at 100 metres and flown at a nominal terrain contouring clearance of 40 metres. The mean survey height was 49 metres for block A and 43 metres for block B. Figure 9-11 shows the surveyed areas and preliminary target areas.

Preliminary interpretation has identified several magnetic and/or radiometric anomalies coincident with or proximal to areas of documented mineralization. Some of these have been previously documented but the Precision GeoSurvey data provides the most advanced measurements to date on the property.

**Block A - Oxide Creek:**

- At the western limit of the project area, the eastern slope of Oxide peak is underlain by gossanous chlorite-epidote-pyrite and silica-clay-sericite-pyrite altered intermediate volcanic rocks. This area is defined in the 2020 airborne survey as a coincident magnetic high-radiometric high oriented north- northwest for 1700 metres and up to 750 metres in width. Both magnetic and radiometric highs are open north of Oxide Creek and extend north beyond the claim boundary. Several altered and variably mineralized intrusive dykes ranging in composition from monzodiorite to quartz monzonite are recognized at lower elevation in Oxide Creek. With assays up to 1,988 ppm Cu, 21 ppm Mo and 77 ppb Au, proximity to a buried, untested porphyry system is inferred.

**Block A – Belle Creek:**

- The most prominent magnetic feature in Block A is a strong northerly oriented magnetic high east of Oxide Peak and immediately east of Belle Creek with a large circular lobe 1.5 kilometres in diameter, at the southern claim boundary. This area is believed to be underlain by Takla volcanic rocks in an uplifted block but is unexplained based on known geology. Radiometric highs flanking this magnetic feature along the eastern margin and to the southwest require investigation in the field.

**Block A – Gordonia-Tarn:**

- A regional scale broadly coincident magnetic high and radiometric high characterizes the geophysical response at Mt. Gordonia and the area of extreme topographic relief to the east at Tarn Lake. There is a reasonable correlation with a the stratigraphically higher Graves Member of the Upper Toodoggone formation described as a unit of dacitic ash flow tuffs with clasts of intrusive porphyries and quartz monzonite. These clasts may represent underlying feeder intrusions of similar composition. Linear breaks may represent structures as possible host to high copper, gold, silver mineralization in the area.

**Block B – Saunders Creek**

- The extreme northern part of the Block B airborne survey, north of the Toodoggone River, is underlain by the McLair Pluton, a quartz-monzonite phase of the Early Jurassic Black Lake suite, intruding late Triassic Takla volcanics. The area is expressed as broad, moderate to strong magnetic high. South of the Toodoggone River, magnetic data displays a strong northwest fabric that may represent the southern extension of the McLair Creek fault, a structure enveloped by quartz-sericite-pyrite alteration and mineralization on the JD property roughly 6 kilometres to the north.

**Block B – Saunders**

- The southern part of the Block B survey is underlain predominantly by a dacite ash-flow tuff of the Saunders member, lower Toodoggone. This entire area is expressed as a radiometric high in the geophysical dataset. There is a spatial relationship between local high grade low-sulphidation, epithermal Au-Ag veins and the northern margins of a prominent magnetic high central to the Sanders area.

**Block B – North of Baker Mine**

- A strong magnetic high in the southwestern project area is immediately southeast of the Lawyers low-sulphidation, epithermal Au-Ag vein system and immediately north of the Baker Mine area. Follow up surface exploration is recommended to evaluate this anomaly.

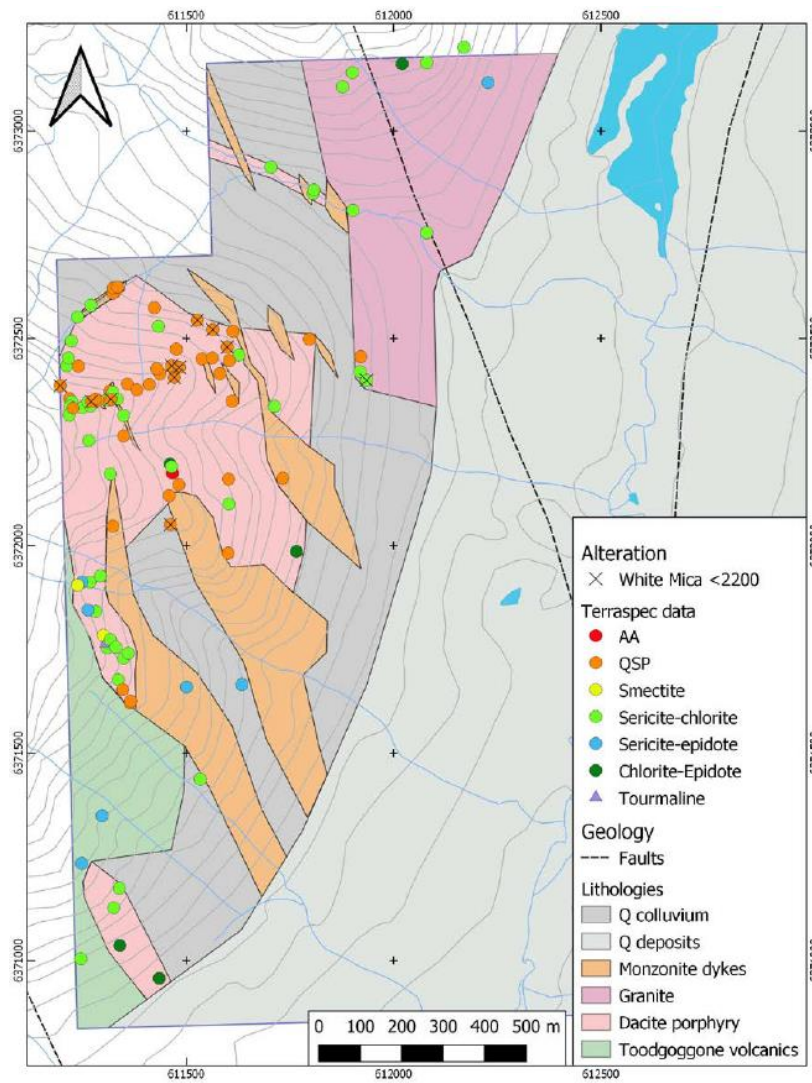
Peter E. Walcott & Associates also carried out Induced Polarization (“IP”) surveying on the (North) Oxide Peak Property, in the period between August 16th and 26th, 2020, as a geophysical contractor. The area surveyed is located at the north-west Oxide Peak property boundary targeting known copper mineralization, and displays the magnetic anomaly referred to as ‘Oxide Creek’, identified during the 2020 airborne magnetics survey.

The Survey parameters for the 2020 IP survey consisted of a pole-dipole array with dipole spacing at 100 metres ( $a=100$ ) utilizing a 6-channel receiver ( $n=6$ ). Four lines were oriented at UTM azimuth  $075^\circ$ , orthogonal to the regional NNW oriented airborne magnetic trend. These four lines were spaced 500 metres apart ranging from 2.5 to 2.7 kilometres in length. A fifth line oriented at UTM azimuth  $344^\circ$ , parallel to the regional magnetic trend, was surveyed to transect mineralized intrusive rocks outcropping in Oxide Creek. Total line-kilometres surveyed consisted of 11.9 kilometres within a  $5 \text{ km}^2$  area.

The western section of the survey area is underlain by gossanous andesite to basalt flows and volcanoclastics cut by a suite of intrusive monzonite dykes that may be interpreted as lithocap-style porphyry alteration. This epidote + chlorite altered and locally intensely sericite-silica-pyrite ("QSP") altered rock is interpreted to be Duncan member volcanic rock of the Lower Toodoggone Formation.

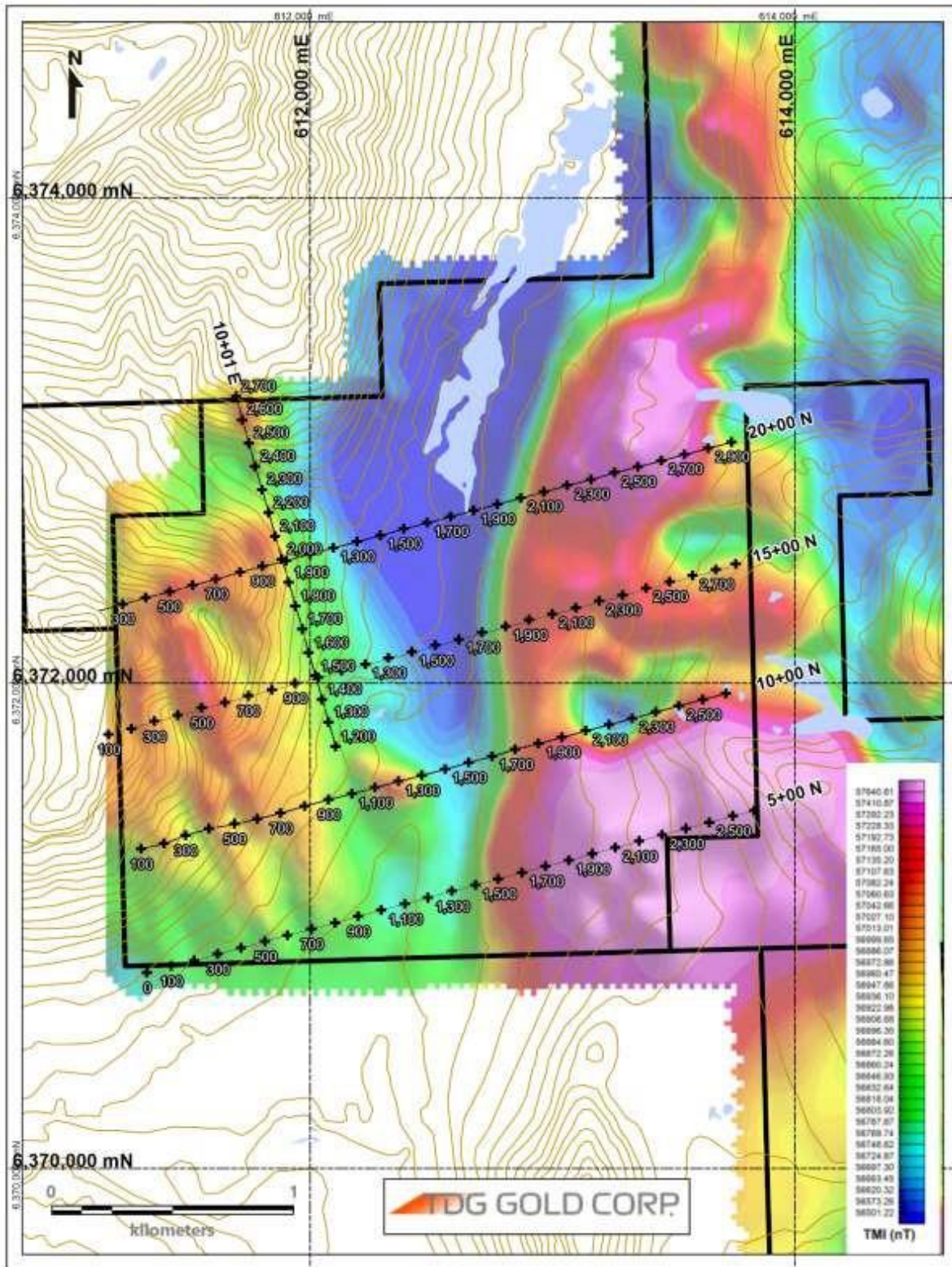
Preliminary mapping has identified an earlier feldspar megacrystic quartz monzonite phase with disseminated pyrite-chalcocopyrite and spatially related, magnetite destructive propylitic, phyllic and argillic alteration. Cu-bearing sulphide mineralization and porphyry-style veins in these rocks are cut by NNW trending, late phase biotite-feldspar monzonite dykes that are magnetic but weakly chlorite-epidote altered. Airborne magnetic highs with similar orientation occur along the eastern flank of Oxide Peak Mountain and may be related to these late dykes.

The geophysical IP survey has in part defined a moderate to strong IP chargeability high at or near the northwestern claim boundary that is roughly coincident with NNW oriented, linear airborne magnetic highs, seen at station 500 on Line 1500N, below. An orthogonal survey line 1001E surveyed across outcropping porphyritic quartz monzonite in Oxide Creek further defines the chargeability feature. Figure 9-12 shows the TMI results and Figure 9-13 through Figure 9-16 show Walcott IP Pseudo section lines.



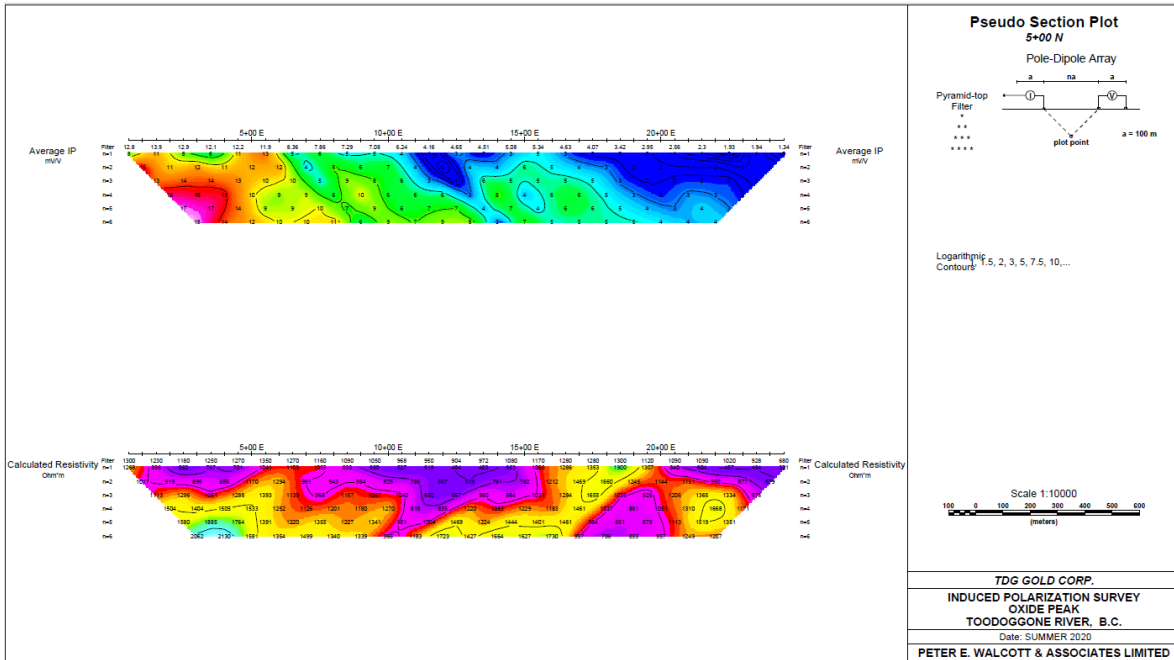
(Source: McBride, 2021)

**Figure 9-11: Geological and Alteration Map at Oxide Creek Target Area**

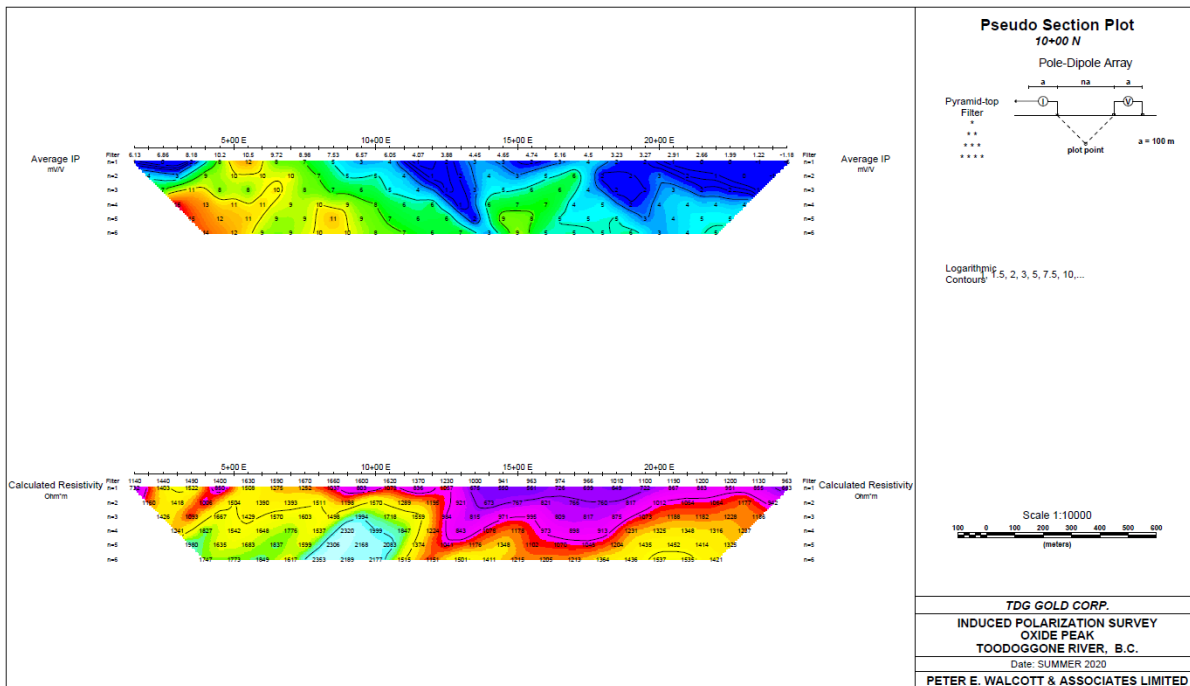


(Source: TDG Gold, 2020)

**Figure 9-12: Airborne (Precision) TMI Results at Oxide Creek Target With IP (Walcott) Lines Superimposed**

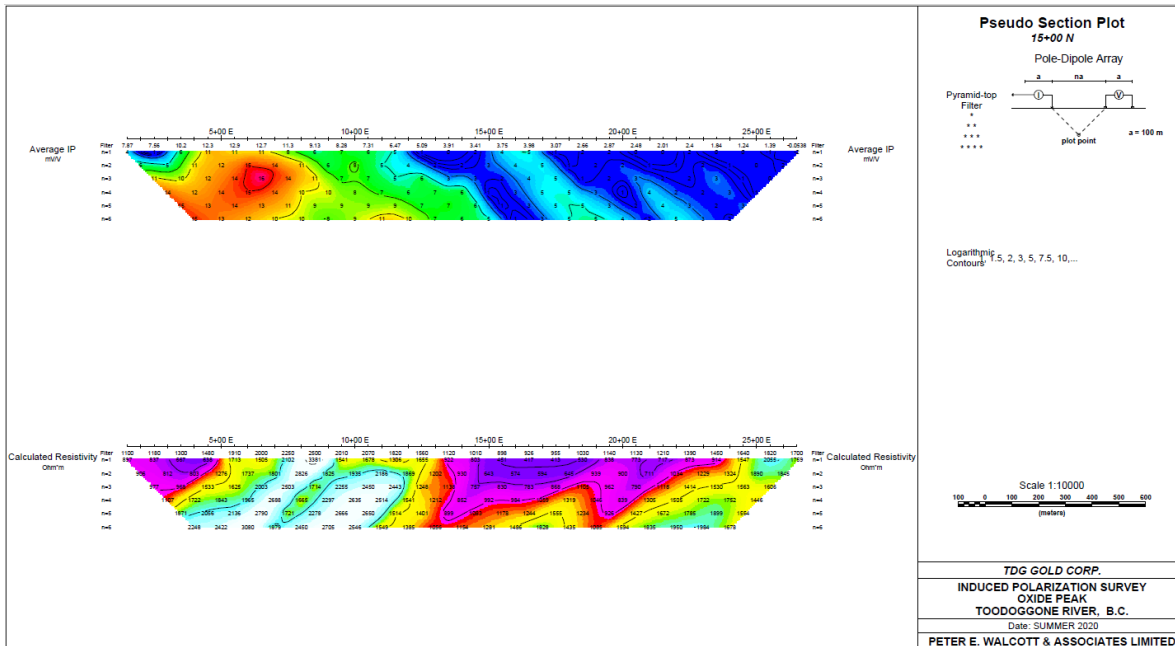


**Figure 9-13: Walcott 2020 IP Pseudo section Line 5+00N**



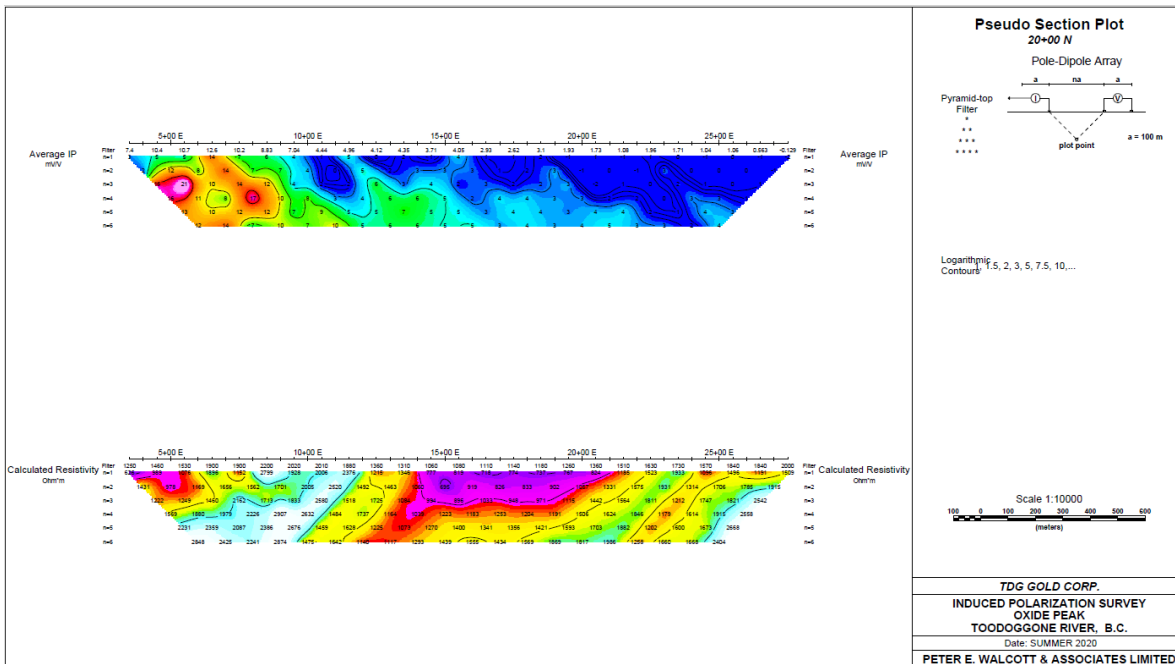
(Source: TDG Gold, 2020)

**Figure 9-14: Walcott 2020 IP Pseudo section Line 10+00N**



(Source: TDG Gold, 2020)

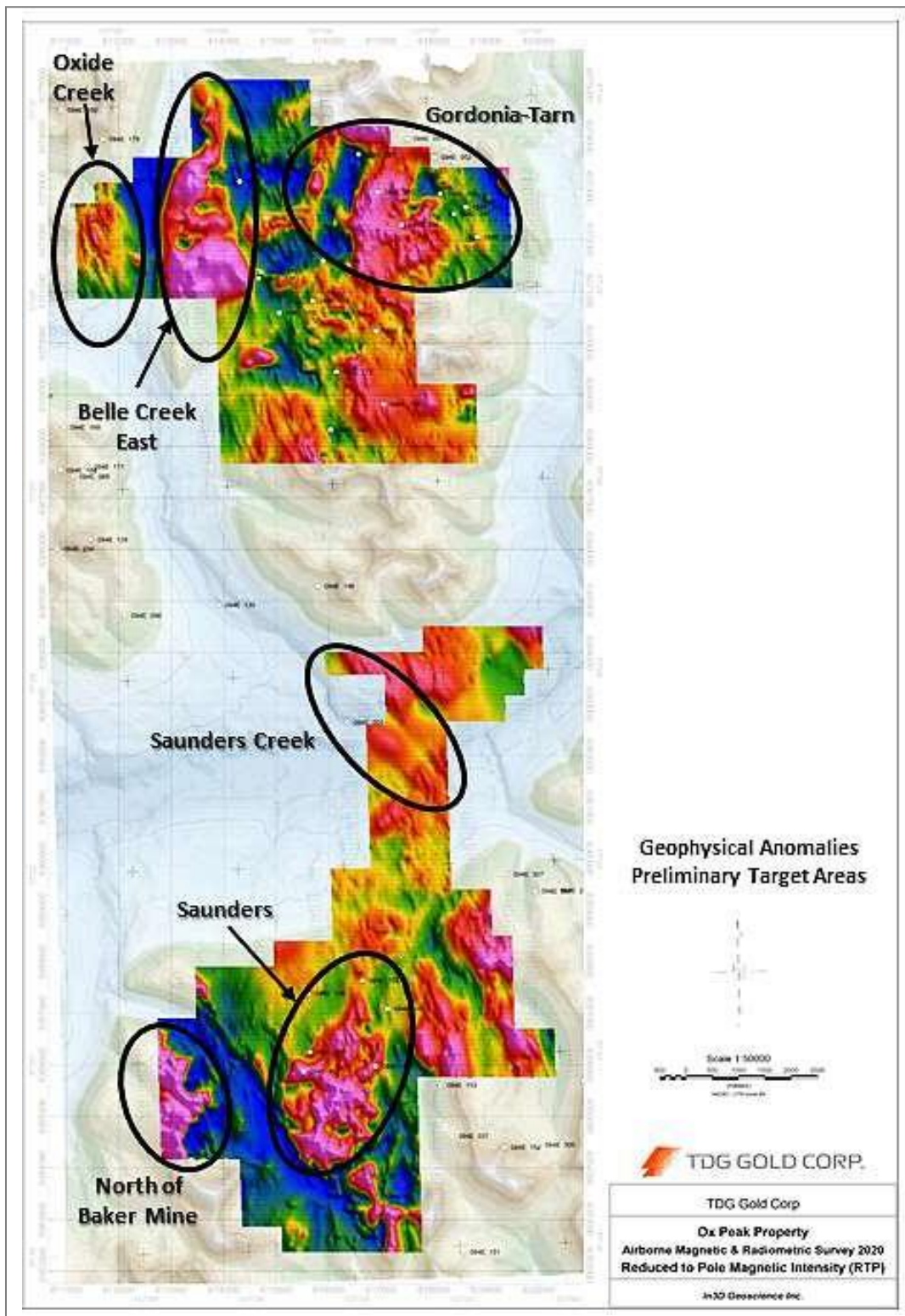
**Figure 9-15: Walcott 2020 IP Pseudo section Line 15+00N**



(Source: TDG Gold, 2020)

**Figure 9-16: Walcott 2020 IP Pseudo section Line 20+00N**





(Source: TDG Gold, 2020)

**Figure 9-17: Oxide Peak Compilation Map of Geophysical Anomalies And Target Areas**

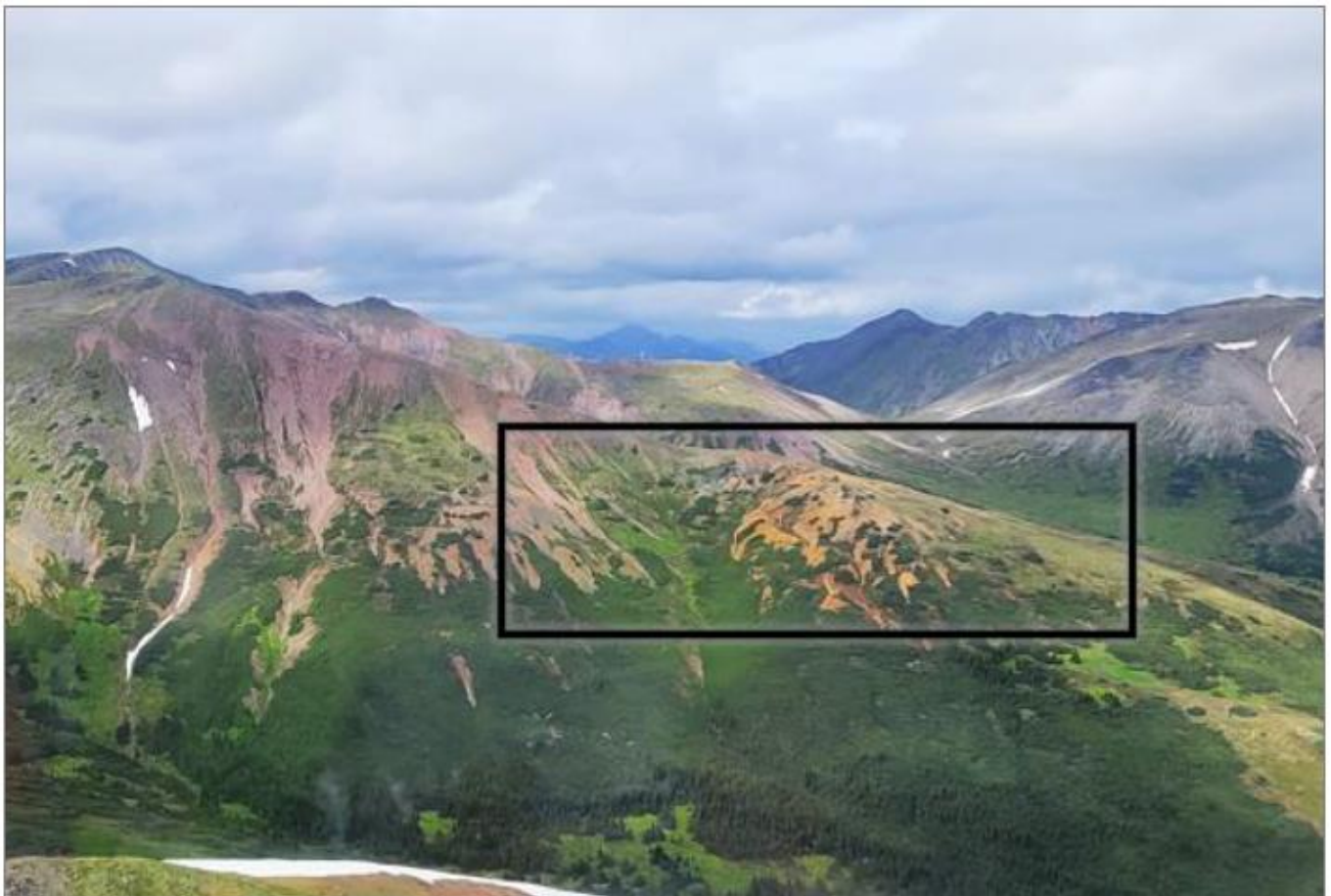
### 9.2.2 South Oxide Peak 2021 Exploration Season

In 2021, the focus of exploration on the Property was on the Drybrough zone, an area of prominent iron (Fe)-weathering (Figure 9-18) at surface and a similar colour anomaly to TDG’s Baker and Black Gossan projects. The Drybrough (previously referred to as “North of Baker Mine Anomaly” Figure 9-17 above) is a target identified as a globular, magnetic high structure and was geologically mapped at 1:2,500 scale.

McElhanney Ltd. also completed a LiDAR and orthophoto airborne survey over areas of the TDG Toodoggone portfolio, which included the Drybrough area which is included below in Figure 9-19.

A total of 1,029 m of diamond drilling was completed over two test holes at the Drybrough Target which returned anomalous values in molybdenum (Mo), zinc (Zn), gold (Au), and silver (Ag).

Details of the drill program are presented in Section 9.2.3.



(Source: TDG Gold, 2020)

**Figure 9-18: Oxide Peak Drybrough Target Area Colour Anomaly Drilled In 2021.**

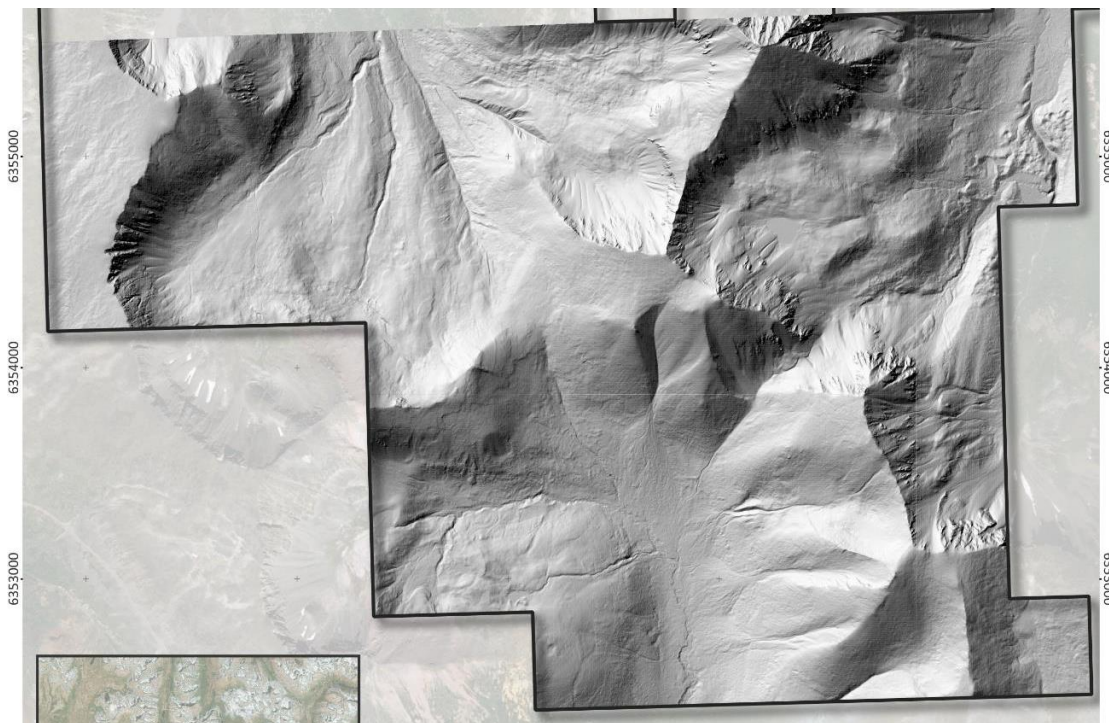
McElhanney Ltd. performed LiDAR and aerial photography acquisition for the TDG project over an area approximately 136.5 km<sup>2</sup>. A total of 345 line-km was flown over 19 flight lines, with one tie-line.

Successful data acquisition was completed on August 13th, 23rd, and September 2nd, 2021, with unsuccessful attempts on August 24th and 30th, 2021. An industry standard Teledyne Optech Galaxy T2000 system was used for LiDAR data

capture. The respective equipment was mounted on a Piper Navajo fixed wing aircraft, with digital air photography simultaneously captured using a Phase-1 iXU-RS1000 medium format camera.

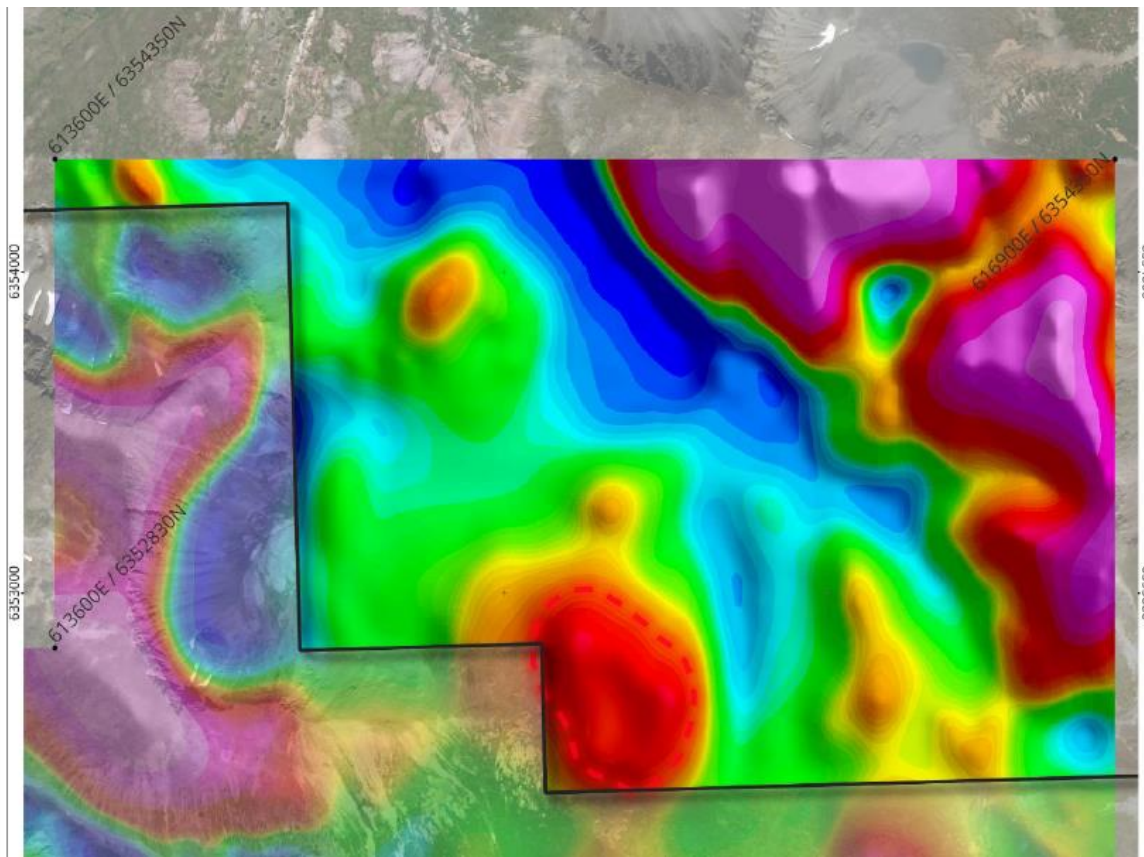
McElhanney provided the following deliverables in NAD83CSRS UTM 09 and elevations based on CGVD28 HT2 geoid model:

- 163 Bare-earth (BE) LiDAR tiles in LAS format
- 163 Non-bare-earth (NBE) LiDAR tiles in LAS format
- 163 LiDAR model key points (MKPts) tiles in LAS format
- LiDAR and photo tile index in PDF and ESRI shapefile format
- 8 shaded relief files (LiDAR interpretation imagery) 1m pixel – ecw format
- 1m DTM surface in Arc Ascii grid format
- 5m contours in ESRI shape format
- 163 20cm-pixel colour orthophoto in 1km<sup>2</sup> tif /tfw tiles
- 1 20cm-pixel orthophoto mosaic in ecw file format



(McElhanney, 2021)

**Figure 9-19: LiDAR 36.6 cm / pixel survey results map**



(Source: TDG Gold, 2020)

**Figure 9-20: Drybrough Magnetic (Red Dashed Polygon)**

### 9.3 2021 Drybrough Exploration Drill Program

Paycore Enterprises Ltd. (“Paycore Drilling”) was commissioned to complete a 2021 drill program at the Drybrough target, which was previously identified in magnetic surveys and LiDAR surveys completed earlier in 2020 and 2021, respectively. The drill program utilized a Zinex A5 surface diamond drill mounted to a cribbed wooden drill pad.

Drilling was completed between November 22<sup>nd</sup> and December 11<sup>th</sup>, 2021, using NQ-sized coring equipment. Given the late season winter conditions, Rugged Edge Holdings Ltd. (“Rugged Edge”) and Matrix Camps were contracted to lease a snowcat and safety survival shack, respectively. The drill and supplemental rentals were demobilized from the Baker camp on December 12th, 2021.

Drill site orientation was completed using a compass and location recorded using a handheld GPS. Downhole surveys were completed using a REFLEX EZ-Shot tool. Industry-standard drilling survey practices were established from diamond drill site supervision through to core processing and chain of custody sampling. The reader is referred to the respective drill contractors for best practices regarding the drilling aspect of the survey.

Once the drilled core was out of the ground and in a core box, the core was safely transported to Baker Camp’s core logging facility where it was geotechnically and geologically logged. Both respective logs are essential in the quality assurance and quality control (QA/QC) process. The geotechnical log, in general, records the recovery and recovery quality designation (RQD). The geological log records the observable properties of the drill core sample, including lithology, texture, alteration, mineralization, and structure.

Samples were mainly taken as 2-meter intervals. Samples were typically not taken across major lithological boundaries. Sample locations and associated sample numbers were marked on the core using a red lumber crayon (or similar tool).

Pre-numbered, three-part, sample analytical tags were filled out with appropriate information (Project, Drillhole Number, Sample Interval, and Date) and stapled into the core boxes at the start of each sample. All recovered drill core was sampled, from the top to bottom of the drillhole.

Drill core was cut using an electric core-cutting saw. Sample intervals were sawn in half, with one-half being placed in a poly-ore bag, pre-labelled with the associated sample number. The corresponding sample number tag was placed in the bag with the sample, with one remaining sample tag being left stapled to the core box at the appropriate location. The remaining half of sawn drill core was placed back into the core box.

Drill core samples were placed in zip-tie sealed poly-ore bags directly after cutting, supervised by TDG staff or contractors. Samples were then placed in labeled polyfiber (rice) bags and security sealed. Care was taken to ensure that the same half of the core was sampled for an entire drillhole to maintain sample consistency. Polyfiber bags were sealed with security numbered zip-ties and set aside. These rice bags were delivered by a contractor of TDG to Bandstra Transportation systems in Prince George. Bandstra delivered them directly to the analytical lab, following chain of custody procedures. Samples were ultimately delivered to an MSA Labs preparation facility in Langley, British Columbia. MSA staff inspected all bags and reported any deficiencies to the TDG staff. No deficiencies were reported.

TDG analyzed the entire length of drill core for Drybrough drillholes. TDG verified the core sample results using an industry standard QA/QC program that involved inserting blind (to the laboratory of results) Certified Reference Materials (“CRM”), where CRMs are of a known concentration, blind materials of near 0 concentration (“Blanks”) and two types of blind duplicate samples – a field level duplicate (quarter core sample) and a pulp level duplicate taken after the pulverization stage.

These QA/QC procedures are designed to test for cross sample contamination, instrumental drift and/or reproducibility of results (i.e., accuracy and precision). Although the total number of QA/QC materials (7 %, when compared to primary sample frequency) is slightly lower than industry standard (12.5 %) for logistical considerations, TDG deemed the QA/QC program ‘fit for purpose’. QA/QC samples that were inserted into the Drybrough drill cores for analysis are seen below.

**Table 9-2: Drybrough 2021 QA/QC material**

QA/QC Material	Type	Quantity	% of Primary Samples	Medium	Purpose
OREAS-222	CRM	9	2%	Greenstone	Au Accuracy/Precision
OREAS-210	CRM	7	1%	Metasediment/Basalt	Au/Cu/Ag Accuracy/Precision
Blank	Blank	10	2%	Silica	Cross Sample Contamination
Duplicate	Field	6	1%	Primary Sample	Reproducibility
Duplicate	Pulp	6	1%	Primary Sample	Reproducibility
<i>Total</i>		<i>38</i>	<i>7%</i>		

TDG utilized a laboratory registered with current ISO accreditation. The International Organization for Standardization/International Electronic Commission (“ISO/IEC”) adopted a series of guidelines for the global standardization of Quality Assurance for products and services.

For the 2021 Drybrough drill core, TDG used MSA Laboratories (“MSA”) of Langley, British Columbia. MSA’s quality system is accredited to the ISO/IEC 17025 which includes ISO 9001:2015. MSA conducted sample preparation at their preparation facility in Langley, British Columbia. Drill core samples (half core) were prepared by the PRP-910 method: (i)

Dried, (ii) crushed fine 70 % passing 2 mm, (iii) riffle split 250 grams, and (iv) pulverize 85 % passing 75 micrometres ( $\mu\text{m}$ ).

Samples were analyzed in MSA's analytical facility in Langley, British Columbia. Drill core samples were analyzed using MSA's IMS-128 – 39 elements by HF-HNO<sub>3</sub>-HClO<sub>4</sub> acid digestion, HCl leach and ICP-MS finish, using a 20 g nominal sample weight. Overlimit methods were triggered if samples were over the upper limit for IMS-128, and the subsequent appropriate analysis was undertaken, with the FAS-121 method – Au by fire assay and AAS finish, 50 g nominal sample weight, on standing order, for Au. For further information regarding analytical methods, the reader is referred to the MSA laboratory brochure.

TDG underwent internal Data Quality Analysis ("DQA") using the above QA/QC materials to ensure laboratory performance. The summary of the DQA investigation concluded that the data is of high enough quality for the purposes of evaluating the Drybrough target and is thus deemed 'fit for purpose'.

Base and precious metals (being the main elements of interest) were primarily investigated, the author would encourage additional DQA to be undertaken to use the trace element data quantitatively, if necessary, otherwise qualitative interpretations of metal content are likely the most appropriate. A summary of the DQA is as follows:

#### **CRMs**

Investigating Au, the blind CRM material in both OREAS210 & OREAS 222 performed adequate in the IMS-128 method, with only 2 samples out of 16 falling outside of the 1 standard deviation threshold.

In the fire assay (FA-121 method) there was an observed low bias with all sample falling below the -1-standard deviation (7/7) for OREAS210 and 4/8 samples falling below the -1-standard deviation for OREAS222. However, as Au concentrations in drill core samples were low, the data is 'fit for purpose' to be used qualitatively as a vectoring tool, as the data in the IMS-128 test was adequate and no overlimit Au samples were identified in the primary sequence of Drybrough drill core samples.

Investigating Ag, blind reference material OREAS210 performed adequate, and data centered on the certified value, with no outliers beyond 1 standard deviation (+/-). Conclusion: 'fit for purpose'.

Investigating Cu, blind reference material OREAS210 performed marginally with 5/7 samples biased high, above the +1 standard deviation limit. However, there were only 7 samples in the data set, and may suffer from the 'law of small sample size' – thus not a true representation of analytical performance. Conclusion: data is 'fit for purpose', for the purposes of vectoring.

#### **Duplicates**

Field and Pulp duplicate samples had a correlation coefficient of > 0.9655, except for Au Field duplicates. This correlation suggests excellent reproducibility of the laboratory equipment and procedures utilized. The 0.8174 Au correlation coefficient in Au Field duplicate samples likely is explained by the nugget effect in gold sampling.

#### **Blanks**

The blank utilized during the 2021 exploration season was 'garden stone' claimed to be 100 % (or near 100 %) Silica. DQA analysis suggests that the material had an acceptable concentration of Au and Ag (both less than 10x detection limit). However, Cu concentrations averaged 19.29 ppm (mean) and had a median of 18.3 ppm, which is greater than the threshold (0.2 ppm) of 10x the detection limit of 0.02 ppm.

This consistency of analytical bias suggests that the material used as Blank material likely had a portion of inherent Cu contamination or contained Cu itself, and the concentrations returned are not a reflection of cross sample contamination of machinery, rather blank material choice.

### QA Conclusions

These data received from MSA is deemed of high enough quality and 'fit for purpose' for the purposes of evaluating and using the data to vector towards additional mineralization of higher grades of Cu-Au-Ag mineralization. The author would recommend further DQA investigation in more detail (higher sample density across multiple programs/year) to prevent the data from being susceptible from the 'law of small sample size' if these data were to be used in the construction of a mineral resource estimate.

**Table 9-3: Drybrough Target Drill Collar Locations and Hole Parameters**

Hole ID	Prospect	Location			Orientation		Depth (m)		Drilling	
		Easting	Northing	Elevation (m)	Azimuth	Dip	Casing	Total	Start	End
OP21-001	Drybrough	615608	6352494	1615	300	-60	6	513	2021-11-22	2021-12-04
OP21-002	Drybrough	615608	6352494	1615	300	-80	9	516	2021-12-04	2021-12-11

Drillholes OP21-001 and OP21-002 had a total of 265 and 268 samples, respectively. From the 533 core samples, significant intercepts from the 2021 drilling include:

- **OP21-001**

510-513.36m (EOH): 4.11 ppm Ag over 3.36m (D00208642 – '643)

- **OP21-002**

336-346.15m: 0.16% Zn over 10.15 m (D00208830 – '835)

425-429m: 163.86 ppm Mo over 4 m (D00208881 – '882)

473-475m: 511.29 ppm Mo over 2 m (D00208906)

485-487m: 0.404 ppm Au over 2 m (D00208913)

In summary, the Drybrough target, was drill tested in 2021 to test an interpreted buried magnetic intrusion, identified from the 2021 airborne magnetometer-radiometric and LiDAR survey (see map Figure 9-21).

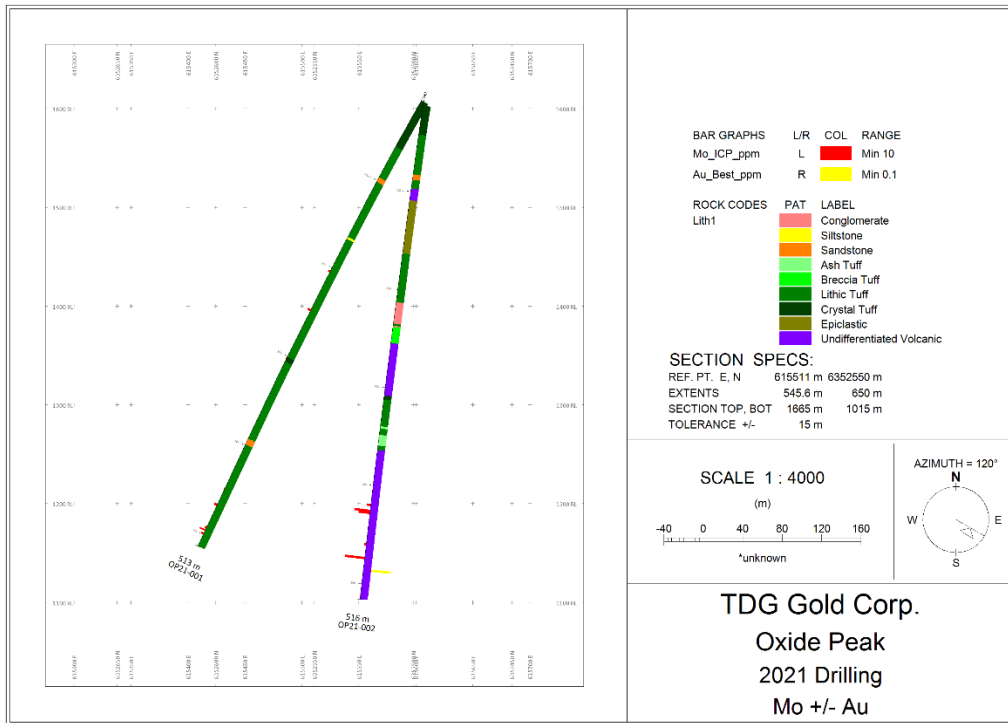
Drilling successfully identified anomalous zones of Mo, Zn, Au, and Ag mineralization. Anomalous Mo ± Au was hosted in an undifferentiated volcanics and Zn ± Ag in lithic tuffs. A more metal endowed system may be deeper, and the 2021 drilling may have been too shallow (TDG, 2022) (Figure 9-22 and Figure 9-23).



(Source: TDG Gold, 2021)

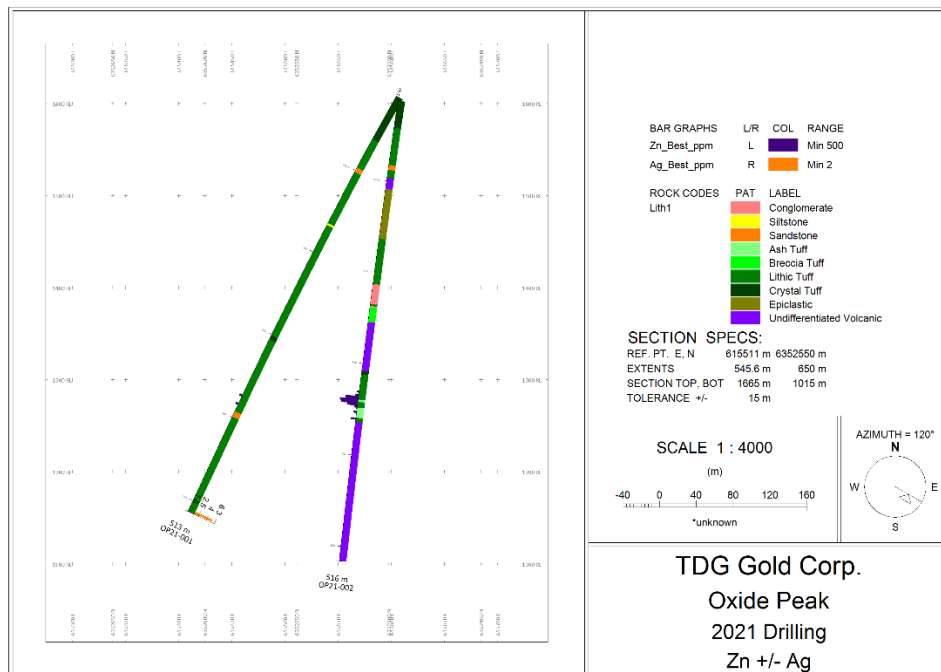
**Figure 9-21: 2021 Drybrough Target Drill Collar Location Map**





(Source: TDG Gold, 2021)

Figure 9-22: 2021 Drybrough Target Drill Section Geology and Moly – Gold Results



(Source: TDG Gold, 2021)

Figure 9-23: 2021 Drybrough Target Drill Section Geology and Zinc – Silver Results

#### 9.4 2022 North Oxide Peak Drill Program

In 2022, the focus of exploration at North Oxide Peak was the Oxide Creek target. The target is characterized as a coincident Cu-Au in soil anomaly, induced polarization anomaly, and muscovite alteration in the area of interest.

The Oxide Creek target is also associated with NNW trending monzonite dike swarms which are part of a larger regional swarm associated with the advanced-stage JD prospect, approximately 5 km to the south (Mcbride 2020). The 2022 work program included a preliminary airborne hyperspectral survey, followed by 1,021.5 m of exploration diamond drilling at Oxide Creek (Figure 9-24).

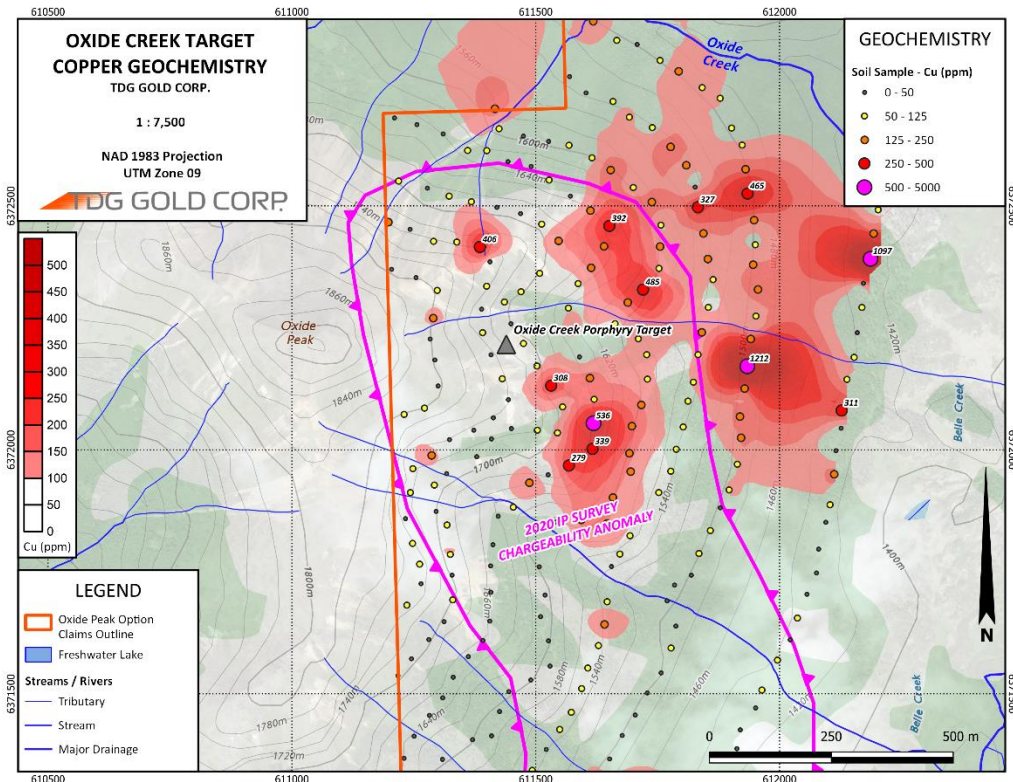


(Source: TDG Gold, 2022)

**Figure 9-24: 2022 Oxide Creek Drill Site at Oxide Peak Exploration Area**

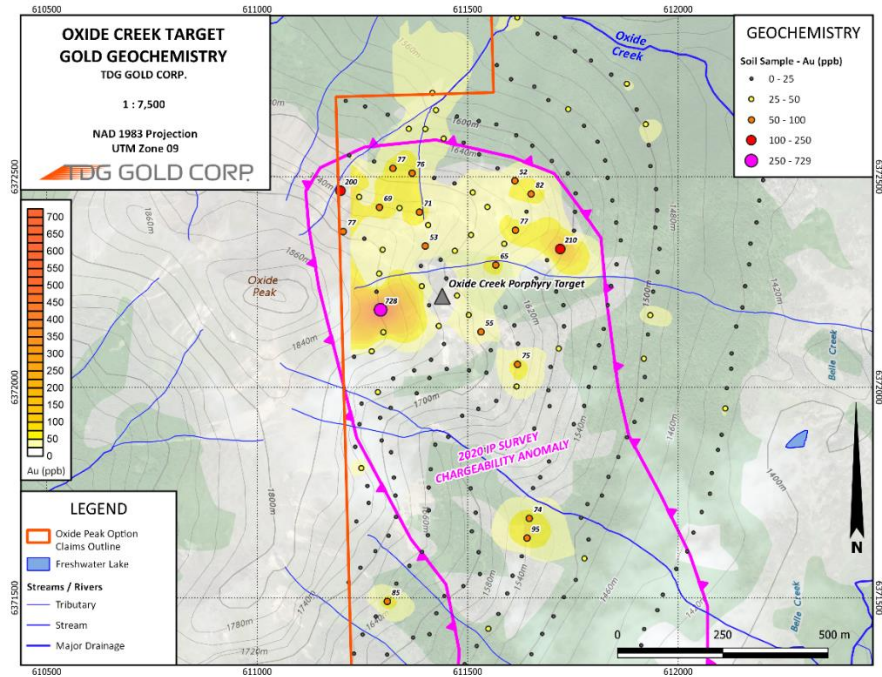
Diamond drilling was completed over two test holes, and returned anomalous values in gold (Au), copper (Cu), and molybdenum (Mo). Konaleen Drilling Ltd. was commissioned to complete the 2022 drill program.

The diamond drill, a Zinex Mining Corp. A5, was mobilized from Smithers, B.C. to site with drilling completed between September 8th and October 13th, 2022. Due to the depths of the holes, the holes were reduced from HQ to NQ core diameter, when necessary.



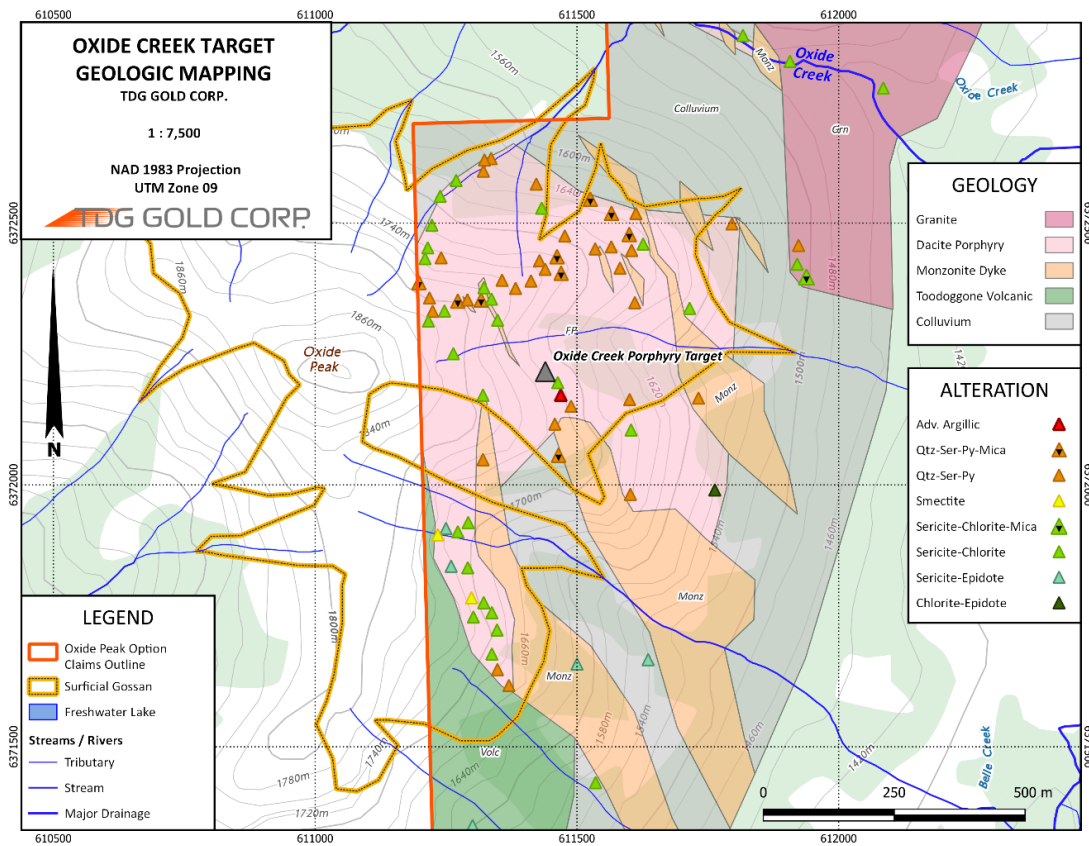
(Source: TDG Gold, 2022)

**Figure 9-25: Oxide Creek Drill Target Copper In Soil - IP Chargeability Anomaly**



(Source: TDG Gold, 2022)

**Figure 9-26: Oxide Creek Drill Target Gold In Soil - IP Chargeability Anomaly**



(Source: TDG Gold, 2022)

**Figure 9-27: Oxide Creek Drill Target Geology Alteration Map**

Long View Range, operating under C.J. Greig & Associates Ltd., were contracted for drill pad construction. Drill site orientation was completed using a compass and location recorded using a combination of handheld and differential GPS. Downhole surveys were completed using a REFLEX EZ-Shot tool.

Industry standard drilling survey practices were established from diamond drill site supervision through to core processing and chain of custody sampling. The reader is referred to the respective drill contractors for best practices regarding the drilling aspect of the survey. Once the drilled core is out of the ground and in a core box, the core is safely transported to Baker Camp’s core logging facility where it is geotechnically and geologically logged. Both respective logs are essential in the quality assurance and quality control (QA/QC) process. The geotechnical log, in general, records the recovery and recovery quality designation (RQD).

The geological log records the observable properties of the drill core sample, including lithology, texture, alteration, mineralization, and structure. Samples were mainly taken as 2 m intervals. Samples were typically not taken across major lithological boundaries. Sample locations and associated sample numbers were marked on the core using a red lumber crayon (or similar tool). Pre-numbered, three-part, sample analytical tags were filled out with appropriate information (Project, Drillhole Number, Sample Interval, and Date) and stapled into the core boxes at the start of each sample. All recovered drill core was sampled, from the top to bottom of the drillhole.

The drill core was cut using an electric core-cutting saw. Sample intervals were sawn in half, with one half being placed in a poly-ore bag, pre-labelled with the associated sample number. The corresponding sample number tag was placed in the bag with the sample, with one remaining sample tag being left stapled to the core box at the appropriate location.

The remaining half of sawn drill core was placed back into the core box (except in the case for field duplicates, where applicable).

Care was taken to ensure that the same half of the core was sampled for an entire drillhole to maintain sample consistency. Sample bags were sealed with security numbered zip-ties and set aside for bagging in sealed polyfiber (rice) bags. These rice bags were delivered by a contractor of the TDG to Bandstra Transportation systems (Prince George) and delivered directly to the analytical lab, following chain of custody procedures.

Drill core samples were placed in zip-tie sealed poly-ore bags directly after cutting, supervised by the TDG direct staff or contractors. Samples were then placed in labeled polyfiber (rice) bags and security sealed. TDG personnel, or personnel designate delivered drill core samples to a third-party laboratory preparation facility.

Laboratory staff inspected all bags and reported any deficiencies to the TDG staff. No deficiencies were reported. TDG analyzed the entire length of drill core for Oxide Creek drillholes. For drill cores that were analyzed, TDG verified the core sample results using an industry standard QA/QC program that involved inserting Certified Reference Materials (“CRM”), blank material (“Blanks”) and field duplicates.

The QA/QC procedures are designed to test for cross sample contamination, instrumental drift and/or reproducibility of results (I.e., accuracy and precision). Although the total number of QA/QC materials (8.2 %, when compared to primary sample frequency) is slightly lower than industry standard (12.5 %) for logistical considerations, TDG deemed the QA/QC program ‘fit for purpose’.

The CRMs used for the Property’s 2022 Oxide Creek drill program were OREAS-250b and OREAS-233 (OREAS, 2023). Using a Pb Fire Assay method (OREAS, 2023), OREAS 250b has a certified value (CV) of 0.332ppm Au and a 1st standard deviation of 0.011ppm Au and OREAS 233 has a certified value (CV) of 1.050ppm Au and a 1st standard deviation of 0.029ppm Au. A total of 12 Blanks were randomly inserted into the sample sequence as per the QA/QC protocol.

Blanks used for the 2022 season was gardening dolomite purchased from Canadian Tire. Blanks which returned above 5x lower detection limit included 1 sample (G672308) for Cu (ICP 21 lab method) and 1 sample (G673768) for Mo. All field duplicates for Au, Cu (ICP 21 and ICP 90 lab methods), and Mo were within an acceptable range of the original drill core sample.

A total of 1,021.5 m was completed over two drillholes. Table 9-4 displays the drillhole collar information and hole parameters. Figure 9-28 displays the 2022 drillhole collar and surface projections of the downhole trace.

**Table 9-4: Oxide Creek Target Drill Collar Location and Hole Parameters**

Hole ID	Prospect	Location			Orientation		Depth (m)			Dates (2022)	
		Easting	Northing	Elevation (m)	Azimuth	Dip	Casing	Reduced (HQ to NQ)	Total	Start	End
OP22-001	Oxide Creek	611546	6372427	1710	255	-45	19	349	480	08-Sep	28-Sep
OP22-002	Oxide Creek	611546	6372427	1710	255	-60	23	322	541.5	28-Sep	13-Oct

Drillholes OP22-001 and OP22-002 had a total of 261 and 287 samples, respectively. From the 548 core samples, significant intercepts from the 2022 drilling include:

**OP22-001**

- 19 – 38.5 m: 137 ppb Au over 19.5 m.
- 434 – 452.7 m: 32.41 ppm Mo over 18.69 m.

**OP22-002**

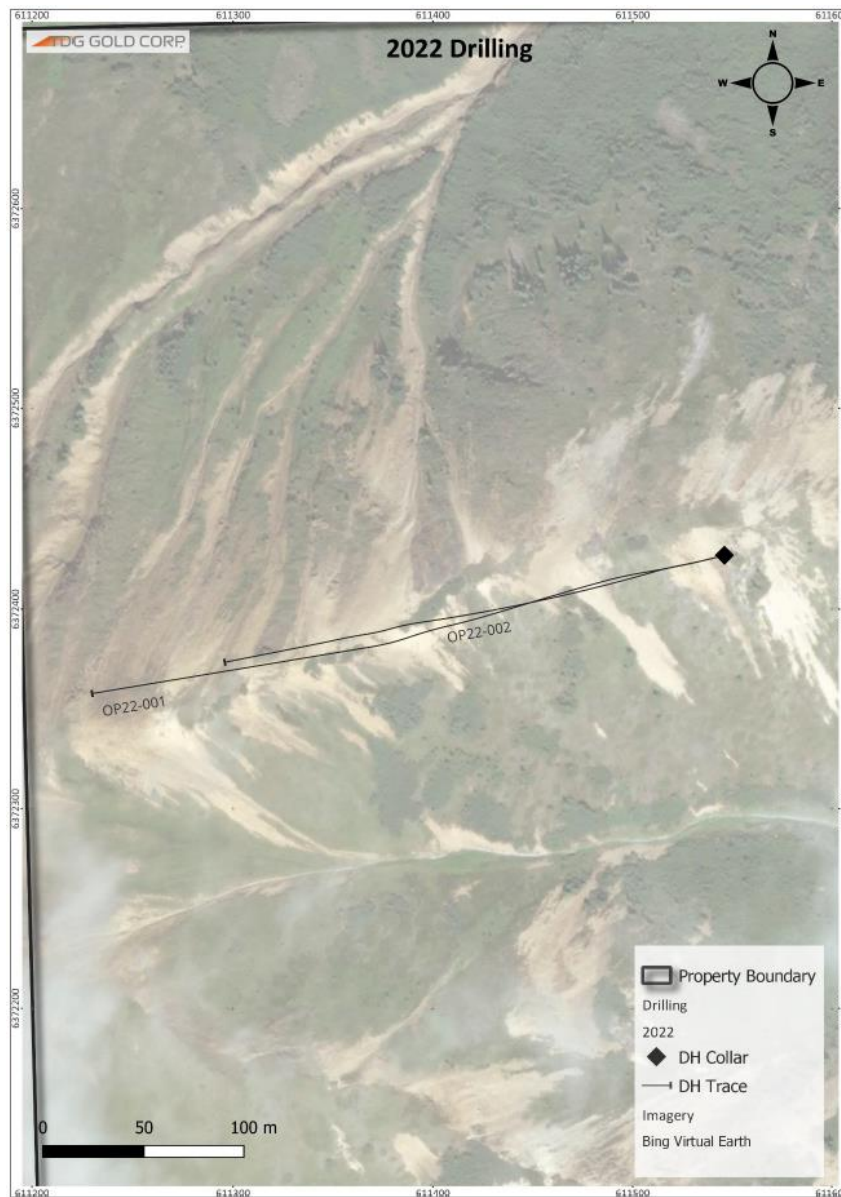
246 – 249 m: 1340 ppb Au and 0.74% Cu over 3 m.

322.5 – 341.5 m: 57.71 ppm Mo over 9 m, including 204 ppm Mo over 1.5 m.

392 – 403 m: 65.05 ppm Mo over 11.02 m, including 83.77 ppm Mo over 6 m.

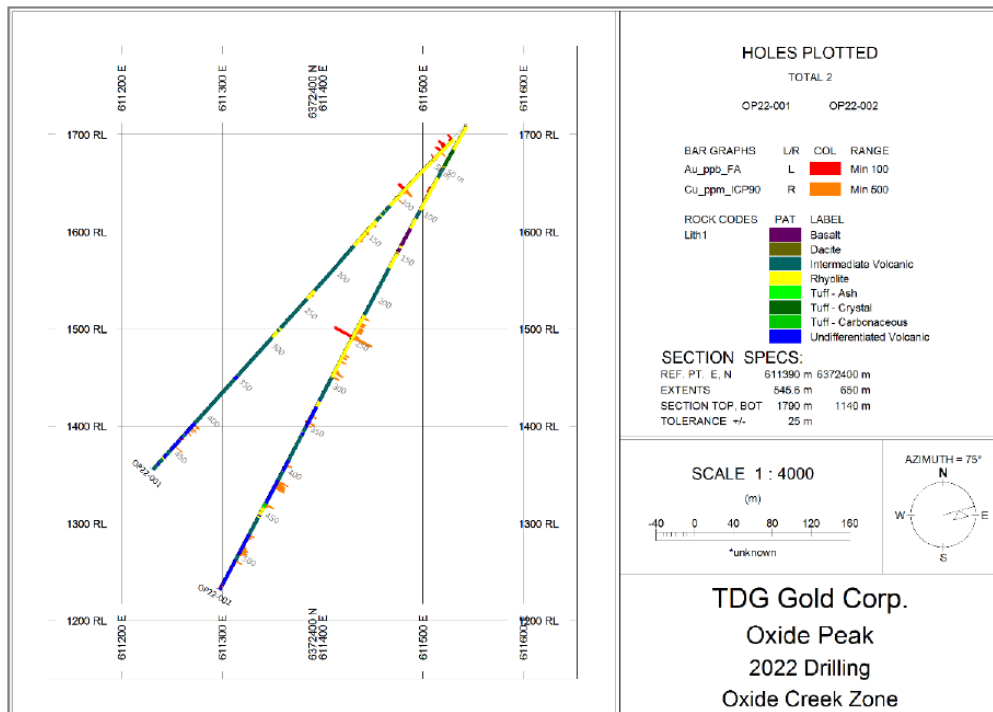
411 – 423 m: 0.13% Cu over 12 m

Sections displayed in Figure 9-29 and Figure 9-30 below illustrate the logged lithologies and anomalous results for Au-Cu and Mo encountered in the 2022 drilling program, respectively.



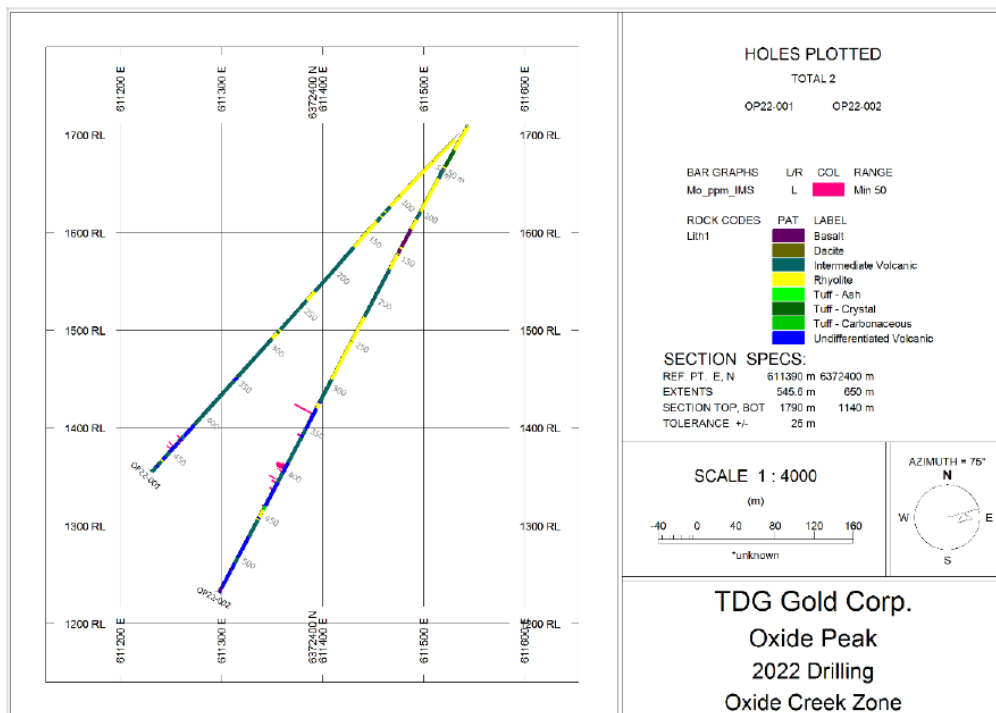
(Source: TDG Gold, 2022)

**Figure 9-28: 2022 Oxide Creek Target Drill Collar Location Map**



(Source: TDG Gold, 2022)

Figure 9-29: Oxide Creek Drill Section with Copper – Gold Results



(Source: TDG Gold, 2022)

Figure 9-30: Oxide Creek Drill Section with Molybdenum Results

## **9.5 Baker Complex and Greater Shasta – Newberry Exploration Programs**

The Baker Complex and Greater Shasta-Newberry (previously “Baker-Shasta”) exploration subdomains are the two most developed prospects at TDG’s Toadogone Property. Both have historic gold and silver production.

The Baker Complex is comprised of 35 mineral claims, 1 mining lease, and 2 placer claims totalling 3,027 hectares.

The Baker Complex contains the historic Baker “Chapelle” mine, the Baker mill, and the 50-person camp which is used to house staff and as an exploration staging point by TDG. The Baker Complex also contains the tailings storage facility along with a laydown yard, workshops, fuel storage areas, and other minor infrastructure.

Greater Shasta-Newberry which is road connected and located directly east of Baker Complex. Shasta-Newberry is comprised of 22 mineral claims, 1 mining lease and 3 placer claims, totaling 4.806 hectares. Greater Shasta-Newberry contains the historic Shasta mine and Shasta Mineral Resource, which is the main subject of this report.

Both exploration areas are vehicle accessible using the 570-km service road network from Mackenzie Junction, B.C., or considerably shortened to a 12-km drive via a fixed wing or helicopter flight to the Sturdee Airstrip.

### **9.5.1 2021 Baker Complex and Greater Shasta-Newberry Exploration Season**

During the 2021 exploration season, TDG completed: (i) rock sampling over several discrete areas within the tenure group, (ii) ground based geophysical magnetic surveys, and (iii) diamond drilling at the Shasta deposit. The diamond drilling in 2021 is discussed in Section 10.

#### **Shasta Stockpile Sampling**

A total of twelve grab samples were collected from the Shasta stockpile which is located 75 metres from the Creek Pit and has an estimated footprint 145 m long by 45 m wide and variably 5-10 m high. The stockpile consists of material removed from the underground workings and pit. The twelve samples ranged in values from 0.04 to 19.00 g/t Au and 0.60 to 95.60 g/t Ag.

#### **Baker Stockpile Sampling**

A total of three rock samples were collected from the Baker stockpile consisting of vein and weathered country rock. The samples returned grades between 1.10 g/t to 3.10 g/t Au, and 30 g/t to 90 g/t Ag. This material was likely stacked during the final days of the site working but never passed through the Baker Mill.

#### **Shasta Creek Zone Pit Sampling**

A total of 41 rock chip samples were taken in the Shasta Creek Pit over a distance of 37 m as seen in Figure 9-31 and Figure 9-32. Chip samples were taken along the stockwork body at regular intervals. The samples are not representative of true width of the breccia body. Chip sample results were determined up to 8.22 g/t Au and 123 g/t Ag.





(Source: TDG Gold, 2025)

**Figure 9-31: Location of Shasta Creek Pit and JM Zone Pit Looking Approximately South-Southwest**



(Source: TDG Gold, 2025)

**Figure 9-32: Chip Sample Location at Creek Zone Pit on SW pit wall**

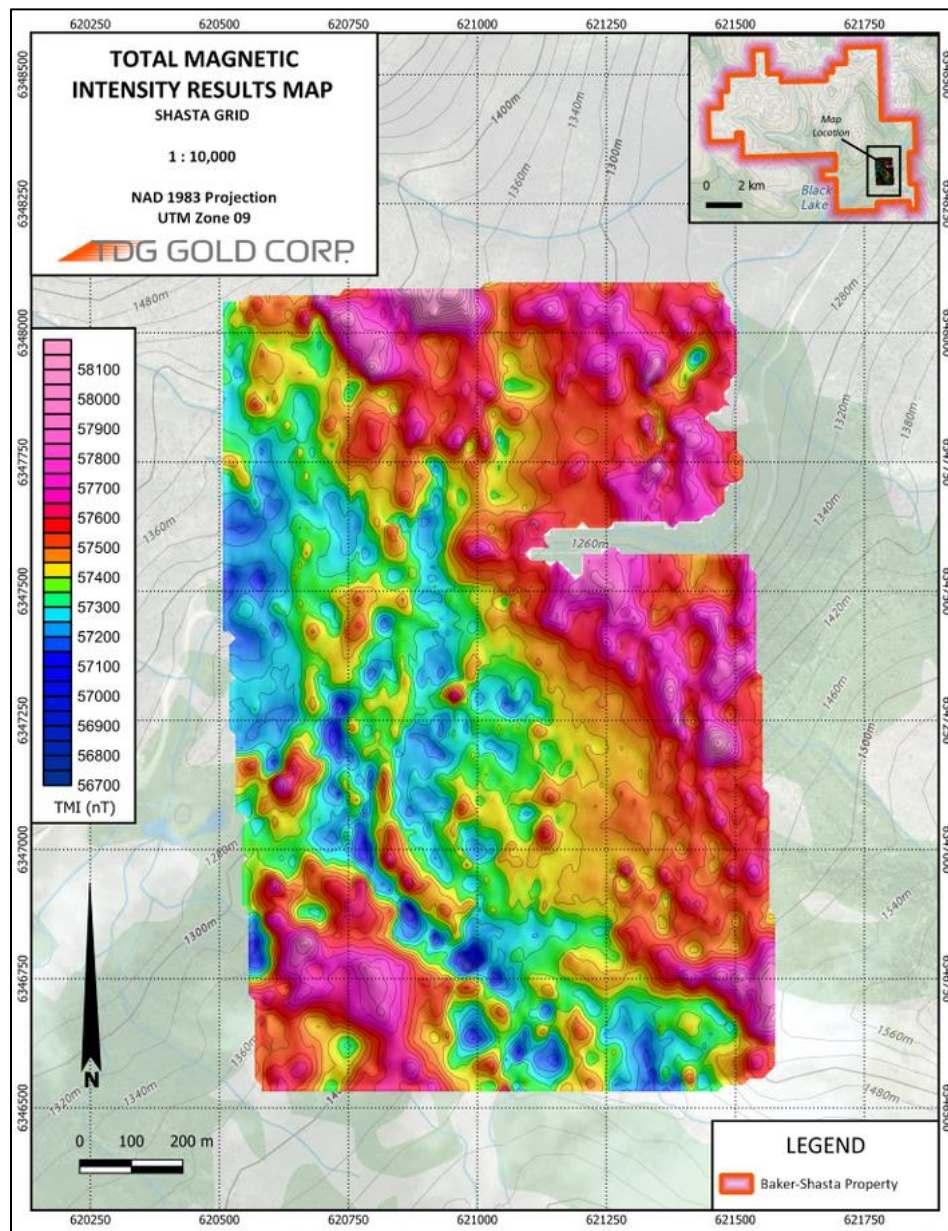
### 9.5.2 2021 Ground Geophysical Magnetic Survey

In July 2021, TDG contracted DRM Exploration Consulting (“DRM”) of Kamloops, BC to complete magnetic geophysical surveys at its Baker, Shasta, and Mets targets. DRM completed ground based magnetic surveys of 20.8 line-km and 224 hectares of realized coverage at Baker, over 33 total survey lines with 50m spacing. DRM also completed 32.5 line-km and 158 hectares of realized coverage at Shasta, over 32 total survey lines with 50m spacing. The purpose of the surveys was to measure the magnetic intensity and geometry of magnetic features within the survey area to aid in geological mapping, as well as detect structures in the underlying bedrock which could host gold mineralization.

The survey was conducted with two backpack mounted GSM-19W Overhauser “Walking” magnetometers and a stationary GSM-19T “Proton” base station unit, which was set up to record diurnal variations in the regional magnetic field during the survey. Positioning data was provided by handheld Garmin GPS64 units which were carried by each instrument operator in the field.

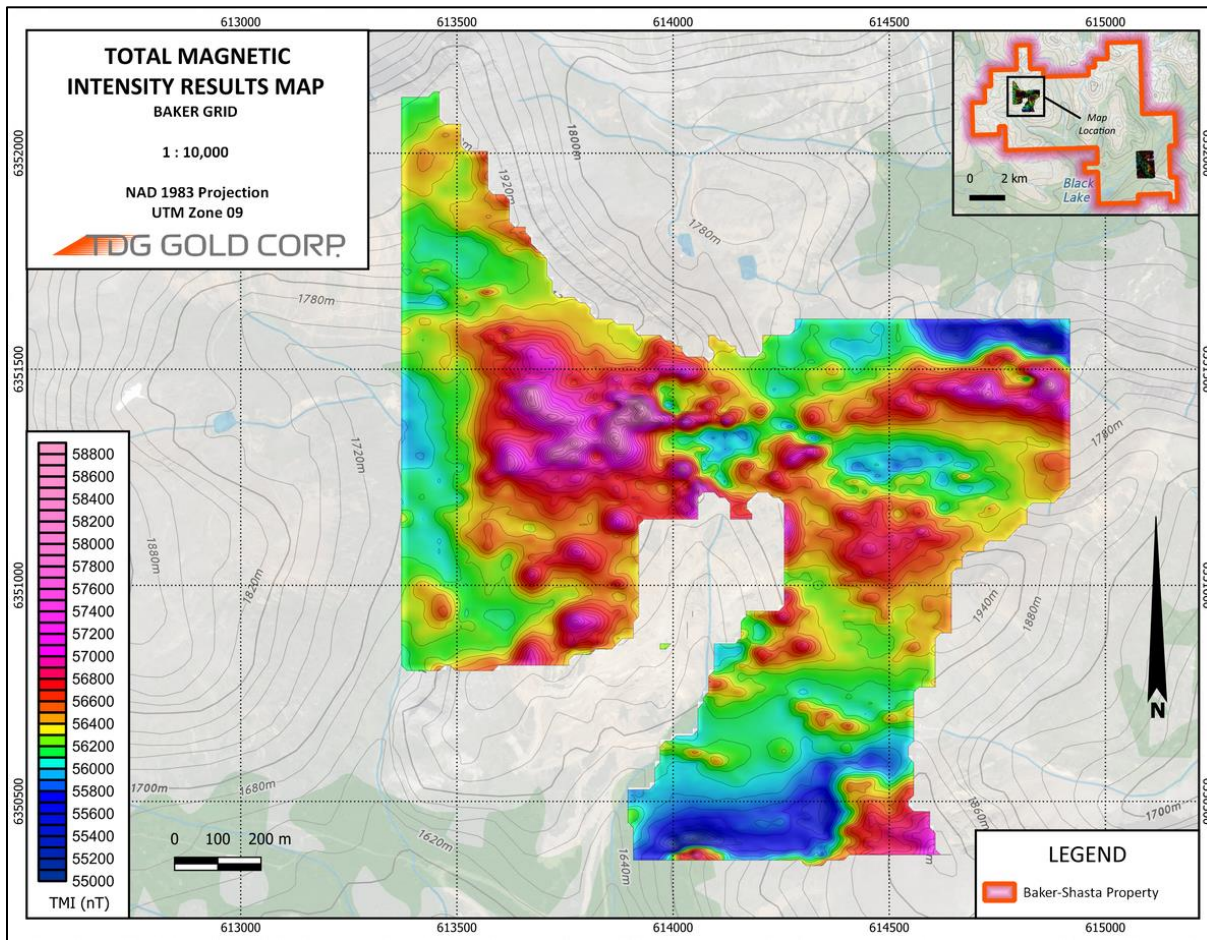
Following the completion of the survey, a set of corrections and quality control (QC) procedures were applied to the magnetic data file including diurnal correction, low-pass noise reduction, and individual operator leveling. After this QC process was completed, the data was interpolated using industry-standard Golden Surfer 12 software. After gridding, high-resolution Total Magnetic Intensity (TMI) imagery was exported as a georeferenced TIFF image with matching contour shapefile. An additional Google Earth overlay was also created from the same magnetic data.

The survey imagery contains visible magnetic features at varying scales, some of which may be considered exploration targets and extensions from known mineralized areas. The area surveyed and results of the work are shown in Figure 9-33 and 9-34 for Shasta and Baker, respectively.



(Source: TDG Gold, 2021)

**Figure 9-33: Shasta Magnetic Survey Results Map**



(Source: TDG Gold, 2021)

**Figure 9-34 Baker Magnetic Survey Results Map**

**9.5.3 2022 “Baker-Shasta” (i.e. Baker Complex and Greater Shasta-Newberry) Exploration Program**

The 2022 work programs on the “Baker-Shasta” exploration area consisted of: (i) a property-scale hyperspectral imagery survey, (ii) target scale ground-based magnetometer-VLF geophysical surveys, (iii) supporting B-horizon soil sampling and (iv) diamond drilling at the Shasta deposit. The diamond drilling in 2022 is discussed in Section 10

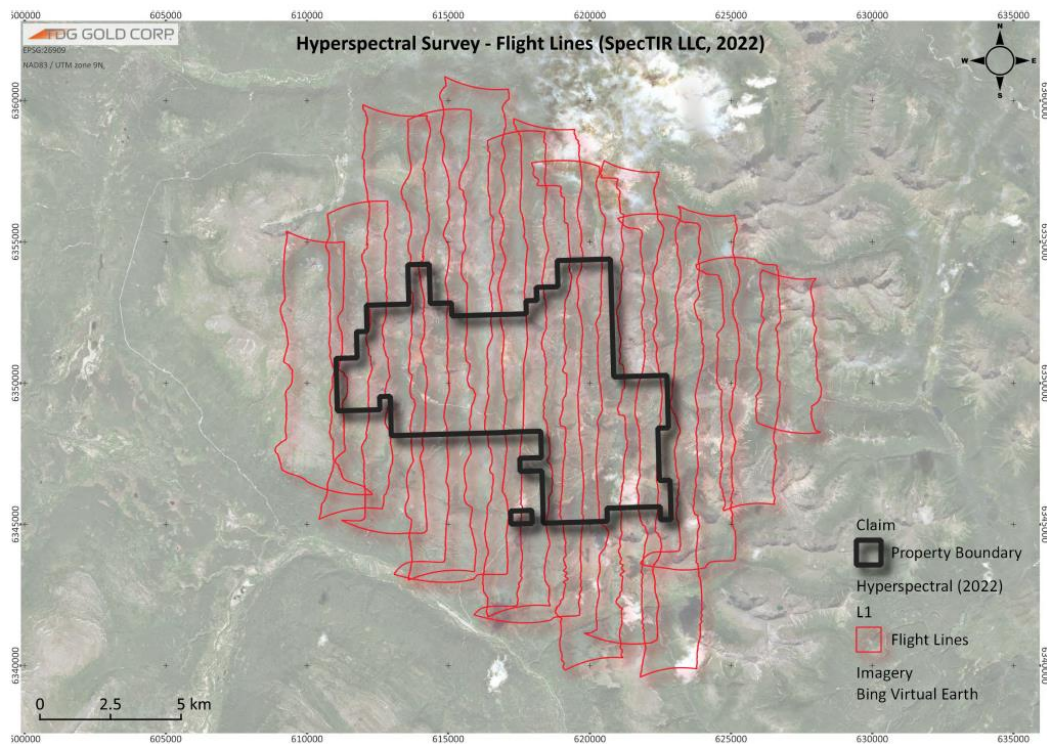
Data extrapolation and processing was completed by SpecTIR LLC and delivered with a logistics report to TDG on December 22nd, 2022. The hyperspectral survey L2 data returned from the hyperspectral survey included an imagery mosaic.

The respective L3 data returned results for mineralogy, chlorite chemistry, chlorite crystallinity, illite chemistry, illite crystallinity, and iron RGB (SpecTIR LLC, 2022), where Figure 9-36 to 9-39 display each respective L3 data result. The flight lines as completed by SpecTIR can be viewed in Figure 9-35.

The L3 data mineralogy results, as shown in Figure 9-35 include (SpecTIR LLC, 2022):

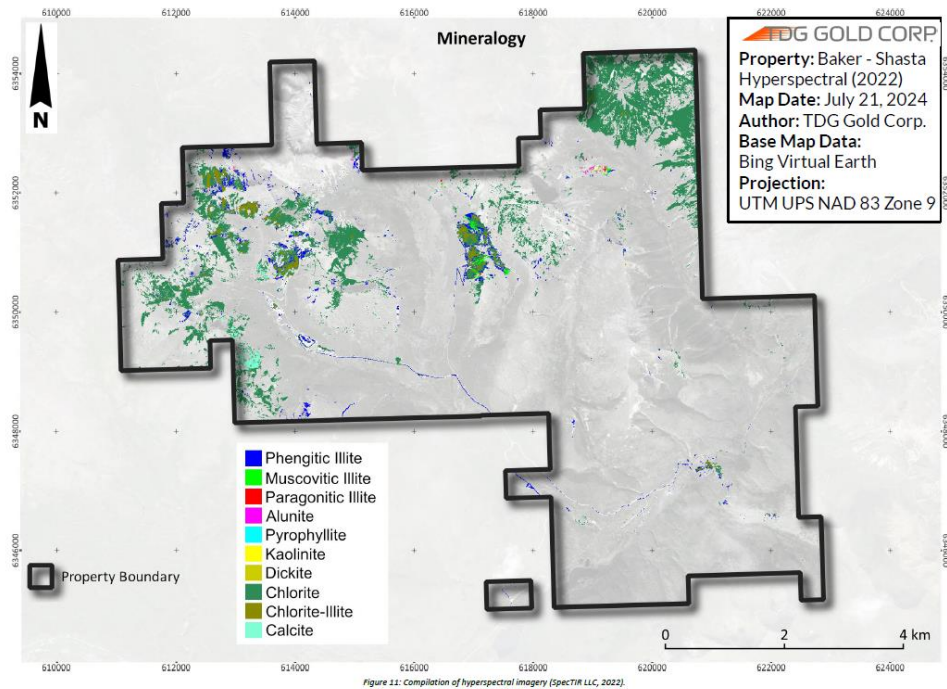
- Alunite: rarely detected on the northern sections of the Property, notably around MINFILE 094E 416 and 151.
- Calcite: detection synonymous with mapped Asitka Group around the Baker project (MINFILE 094E 027).
- Chlorite: detected throughout the northern section of the Property.

- Chlorite-Illite: detected readily throughout the Property, notably around MINFILE 094E 026, 302, and 050. The detection at Shasta (094E 050) highlights the historical open cuts and mine dump locations.
- Dickite: only detection on the Property is at MINFILE 094E 151.
- Kaolinite: rarely detected on the Property, notably at MINFILE 094E 416, 151, 406, and 026.
- Muscovitic Illite: notably detected at MINFILE 094E 302; minor elsewhere on the Property.
- Paragonitic Illite: scarcely detected, most notable around MINFILE 094E 420, 151, and 302.
- Phengitic Illite: detected readily throughout the Property and highlights main tributaries.
- Pyrophyllite: only detection on the Property is at MINFILE 094E 151.



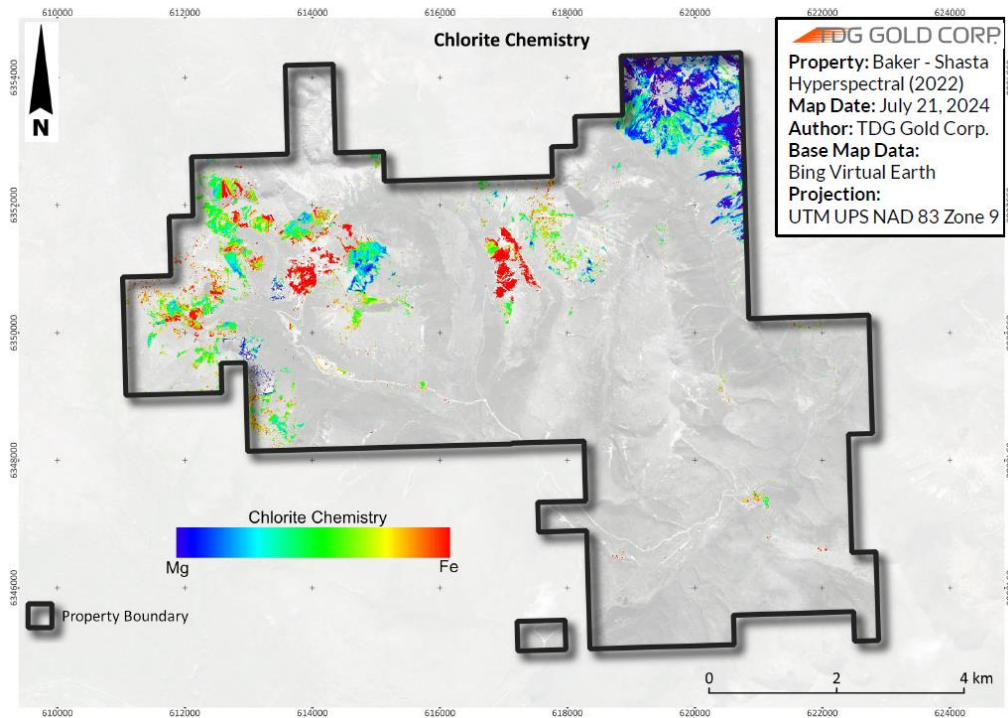
(Source: TDG Gold, 2022)

**Figure 9-35: 2022 “Baker-Shasta” Hyperspectral Survey Flight Lines**



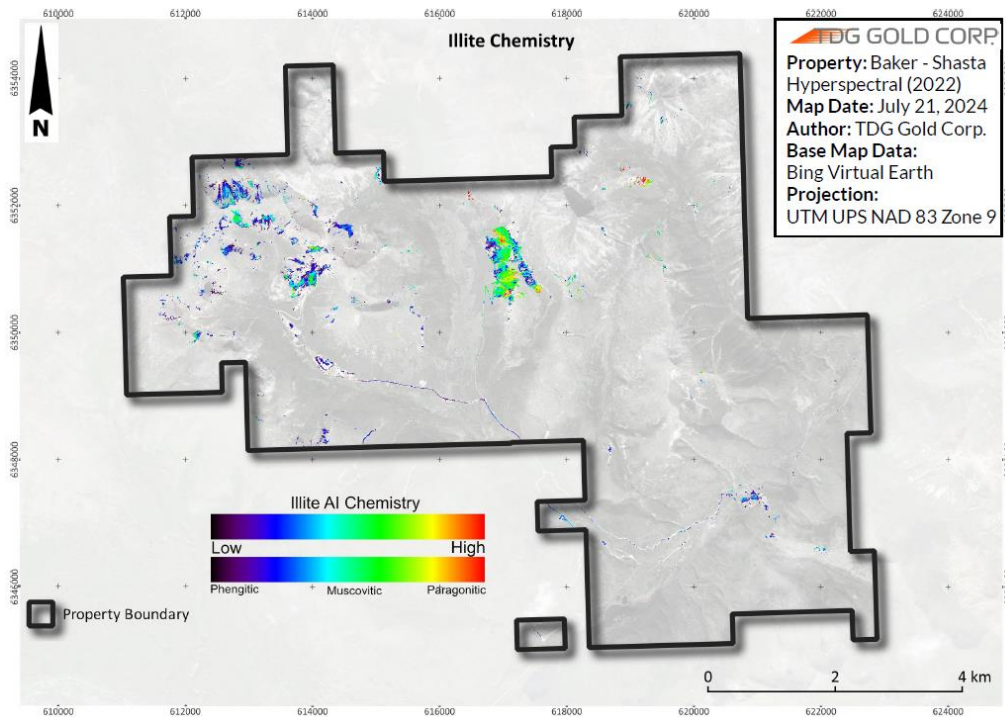
(Source: TDG Gold, 2022)

**Figure 9-36: 2022 “Baker-Shasta” Hyperspectral Mineralogy Results**



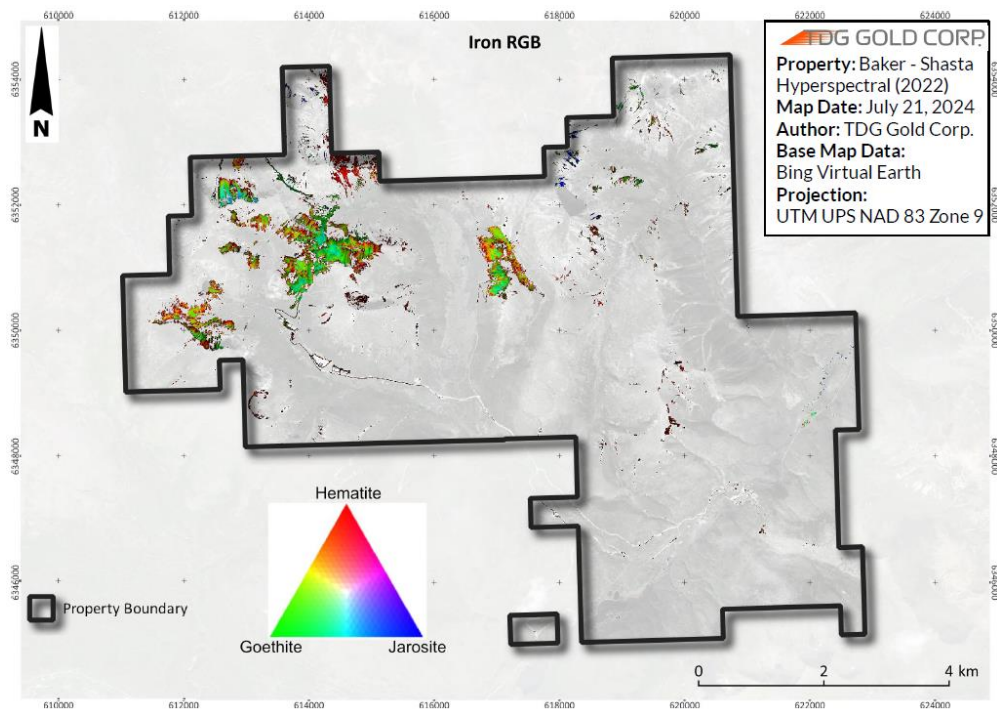
(Source: TDG Gold, 2022)

**Figure 9-37: 2022 “Baker-Shasta” Hyperspectral Chlorite Chemistry Results**



(Source: TDG Gold, 2022)

**Figure 9-38: 2022 “Baker-Shasta” Hyperspectral Illite Chemistry Results**



(Source: TDG Gold, 2022)

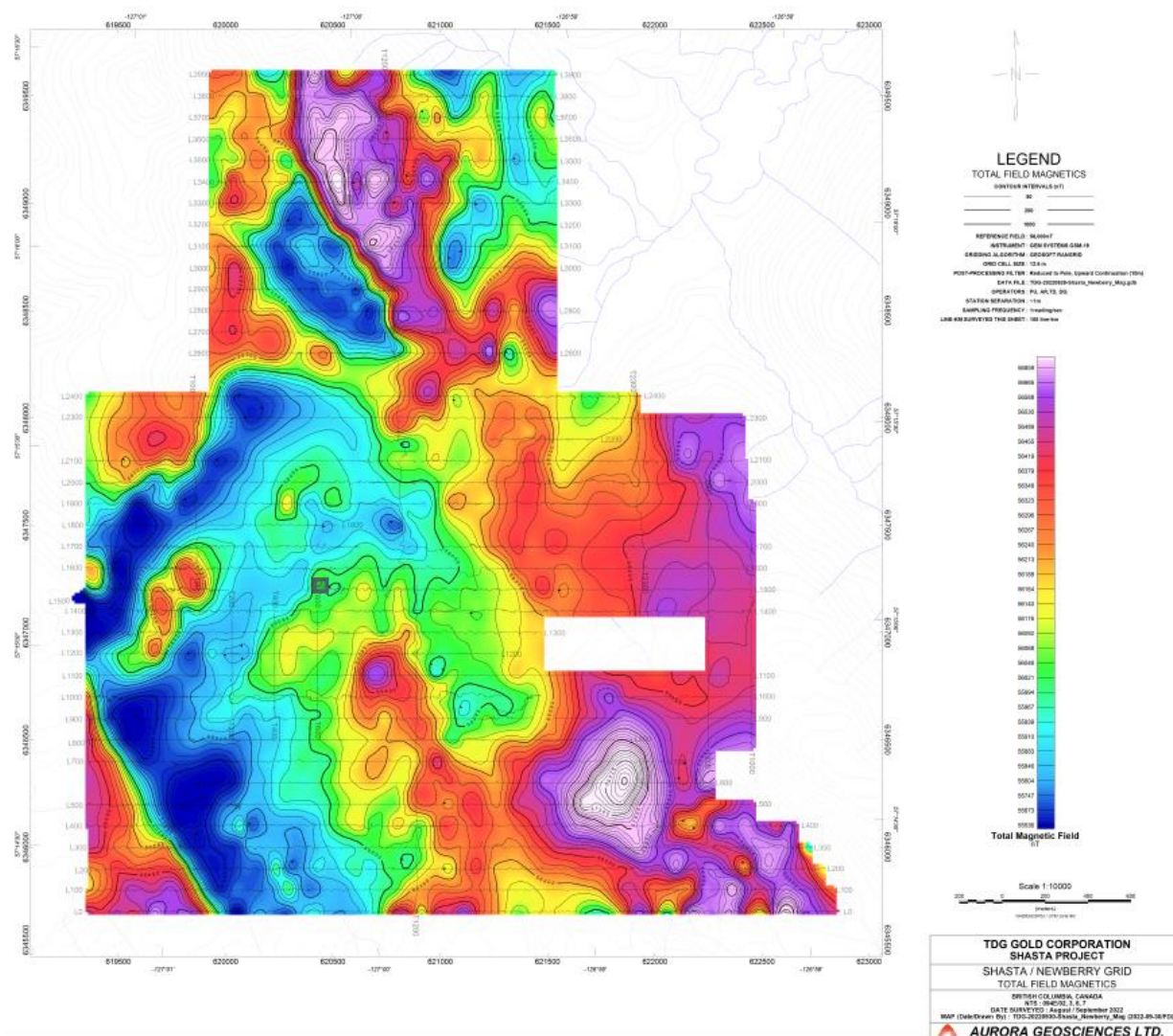
**Figure 9-39: 2022 “Baker-Shasta” Hyperspectral Fe Oxide Chemistry Results**

Aurora Geosciences Ltd. provided the personnel and equipment required to complete a ground-based magnetometer (mag) and very-low frequency (VLF) survey for TDG on the Shasta project. A crew of four, using backpack-mounted

Overhauser GSM-19 magnetometers and GEM VLF sensors, completed a total of 108.1-line km of mag-VLF geophysical surveys on the Shasta zones between August 19th to August 24th and August 31st to September 6th, 2022. Mag-VLF work at Shasta’s northern survey area (Newberry) was helicopter-assisted.

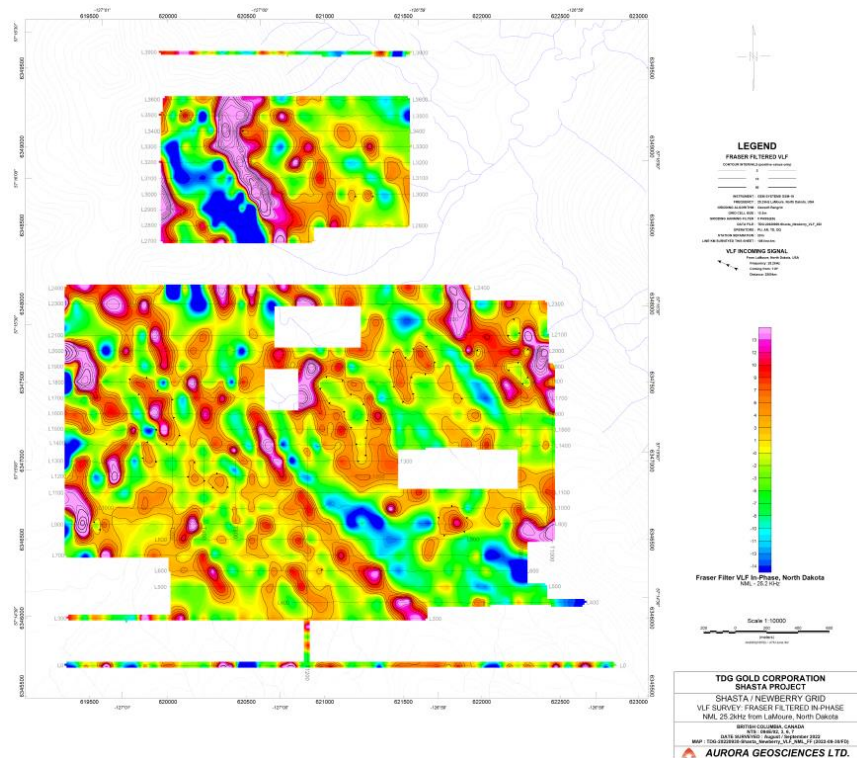
The reader is referred to Appendix B (Rocha, 2022) for a full description on the methodology for ground based mag-VLF geophysical surveys, specifications on the equipment, data processing, and deliverables.

The results of the 2022 ground-based mag-VLF geophysical survey included total magnetic field (TMF) ranging between 55,536 – 56,859 nanoteslas (nT) and VLF recordings at 25.2 KHz (NML; LaMoure, North Dakota), 24.0 KHz (NAA; Culter, Maine), and 21.4 KHz (NPM; Lualualei, Hawaii). Figure 9-40 to 9-42 display the mag-VLF results, respectively.



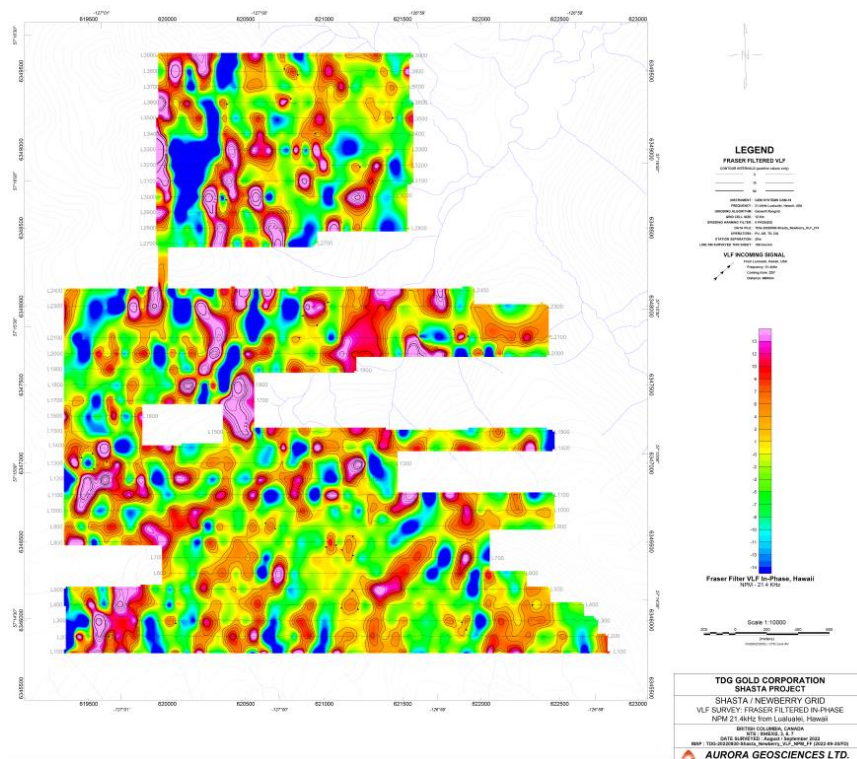
(Source: TDG Gold, 2022)

**Figure 9-40: 2022 Shasta – Newberry Grid Total Field Magnetics Results**



(Source: TDG Gold, 2022)

**Figure 9-41: 2022 VLF In-Phase Results 25.2 kHz LaMoure, ND**



(Source: TDG Gold, 2022)

**Figure 9-42: 2022 VLF In-Phase Results 21.4 kHz Lualualei, HI**



A target scale soil sampling program east of the Shasta mine was completed by TDG in 2022. Soils were completed between September 16<sup>th</sup> to 30<sup>th</sup> 2022. Soil samples were retrieved using industry-standard methods using a combination of soil auger, shovel, pick mattock and/or trowel. Wearing the proper protective person equipment, a soil station was dug to target the B-horizon, also known as the subsoil. The B-horizon is often greatly composed of material illuviated (washed in from) layers above it, mostly clay, iron, aluminum oxides (deposited by illuviated water), and minerals that formed in the layer.

The average depth from surface of the B-horizon on the Shasta property was 0.34 m, ranging from 0.1 to 0.8 m. When the target horizon was reached, a sample was collected and placed into a Kraft or polyethylene soil sample bag with a unique sample tag (Sample ID). Sample weights of soil sample material collected during the 2022 season the Shasta property ranged from 0.37 to 3.65 kg, averaging 1.18 kg. Sample information was later recorded into a sample shipment and a laboratory issued submission form.

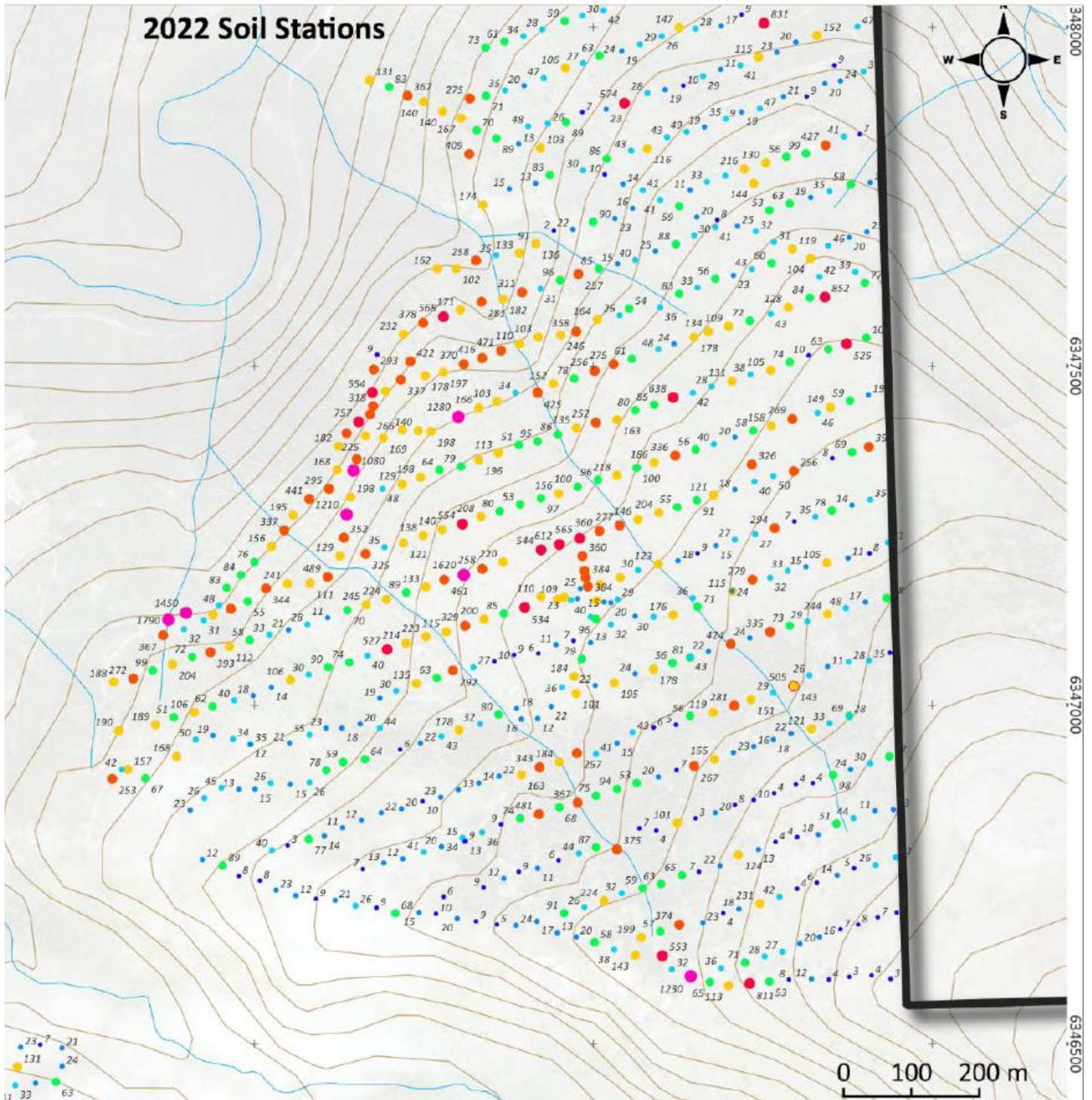
A strict chain of custody was followed, from sampling to transportation. All 2022 surface sampling were sent to SGS laboratories, in Burnaby, British Columbia. SGS is an accredited laboratory. The reader is referred to the SGS brochure (SGS, 2020) for a detailed review of the detectable ranges of reported analytes for each determination. Once shipped to SGS Labs in Burnaby, the stream sediment samples were further sieved to a 180 mesh, weighed and analyzed for Au, Pt, Pd, and ICP-AES. Samples were subjected to a 4 Acid Digest, and an ICP-MS finish QAQC was completed in the field as soil duplicate stations at an average of every 20 stations.

All 674 reported soil samples were retrieved in B-horizon soils. The soils were regularly observed as brown coloured material with partial manganese and/or iron oxide staining on the lithic fragments. The soil samples returned strong Au anomalism, between <1 to 1,790 ppb Au, averaging 112.83 ppb Au, with 7 samples returning over 1,000 ppb Au. Figure 9-43 displays the Au-in-soil results from the 2022 sampling program.

The 2022 hyperspectral survey imagery is anomalous in terms of detected mineralogy, most notably at the Dave Price MINFILE area. Imagery shows detections for alunite, chlorite, dickite, kaolinite, muscovitic ± paragonitic ± phengitic illite, and pyrophyllite. The zone of interest is noted by a concentric anomalous mineralogy signature. Dickite and pyrophyllite are not detected anywhere else on the Property, where alunite and kaolinite are rarely detected and usually proximal to a documented mineral occurrence. Figure 9-44 displays the hyperspectral survey identified zone of interest.

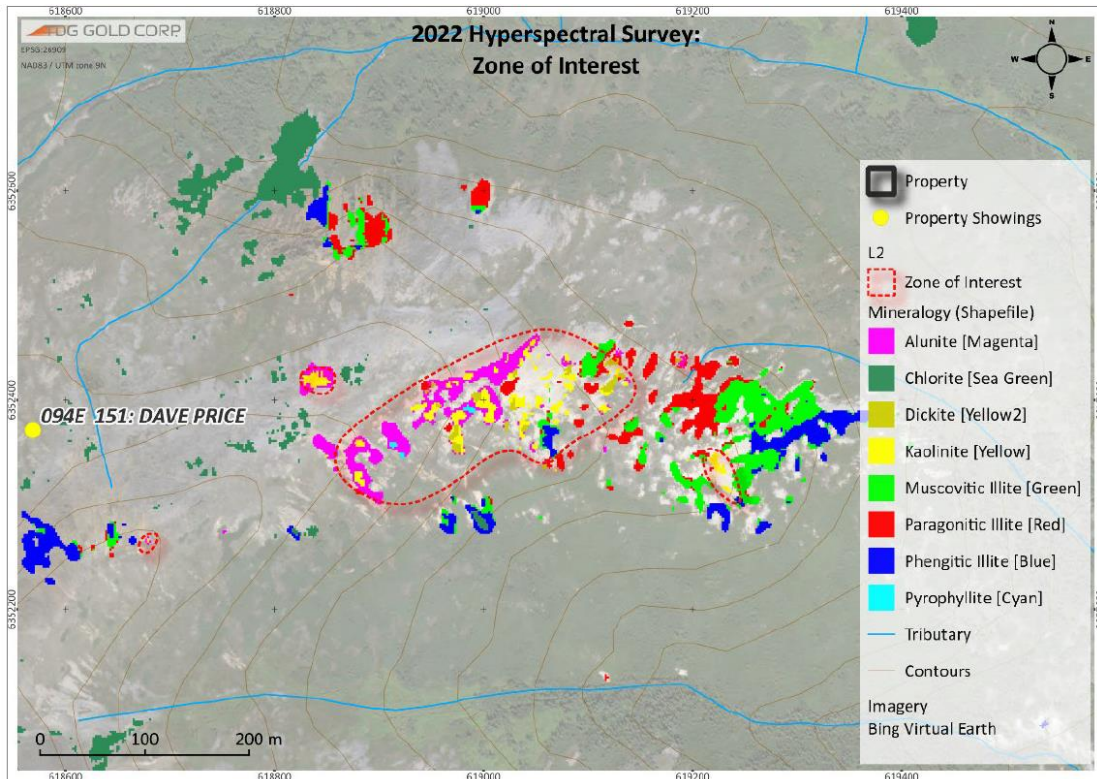
From the 674 reported soil samples retrieved during the 2022 season, 210 returned over 100ppb Au. The anomalous soils are generally concentrated in an approximately 25-ha area, ranging from 600 to 1000 meters east of Shasta's historical mine production area. The large Au-in-soil anomaly and a prominent NNW-SSE trending lineation, coincides well with geological survey mapping. See below Figure 9-45.

This soil anomaly is a very high caliber target for follow up exploration drilling in the upcoming 2025 season.



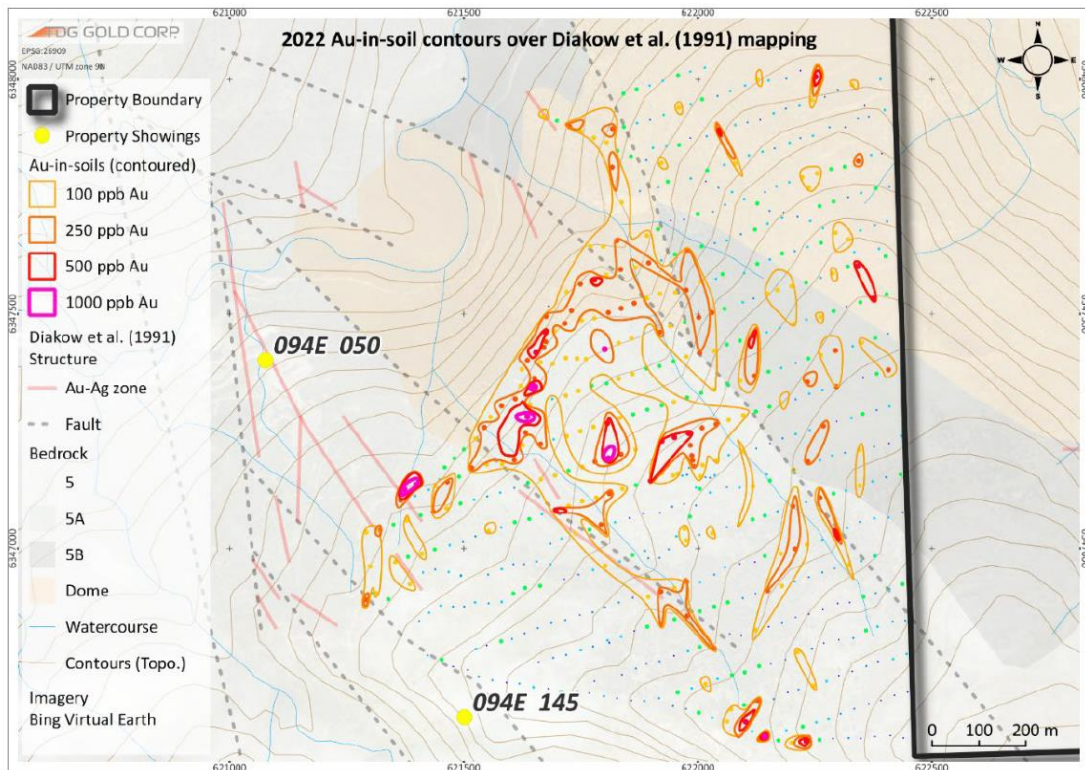
(Source: TDG Gold, 2022)

**Figure 9-43: 2022 Soil Sampling Gold Results East of Shasta Mine**



(Source: TDG Gold, 2022)

**Figure 9-44: 2022 SPECTIR Hyperspectral Survey 'Dave Price' Area of Interest**



(Source: TDG Gold, 2022)

**Figure 9-45: Shasta Soil Sampling Results with Au-in-Soil Contours over geology**

### 9.5.4 2022 Greater Shasta-Newberry ‘Shasta Placer’ Exploration Season

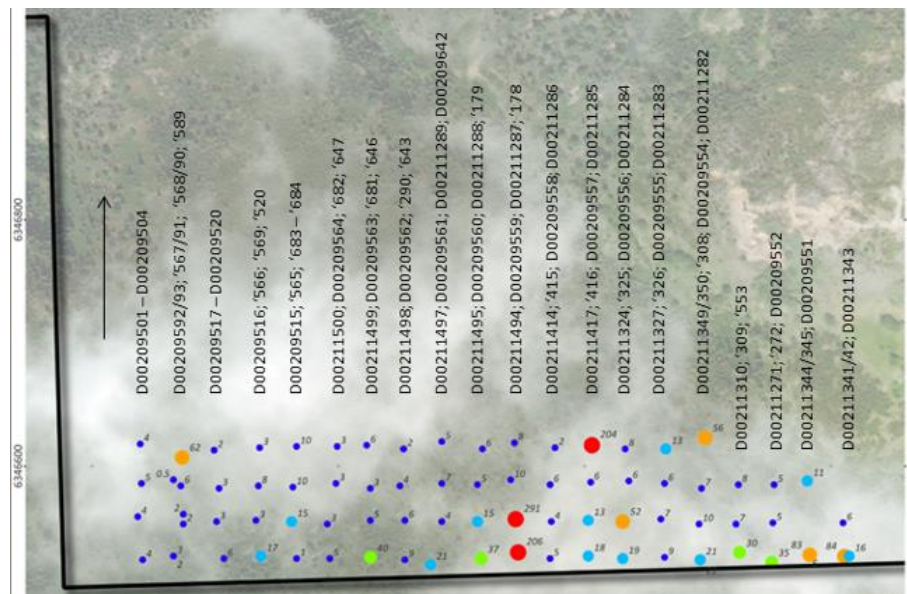
The placer claim, ‘Shasta Placer’ (#1088922), was staked to retain title to placer mineral in the area of the past producing Shasta mine and deposit. The placer title includes the Shasta project’s historical mined area and prospective zones which are part of the current resource estimate.

The reader is referred to the Mineral Tenure Act for clarification on terms (i.e., ‘placer claim’, ‘placer mineral’) and overlapping mineral, lease, and claim registrations. At the time of reporting, tenure number 1088922 (Shasta Placer) is in good standing.

Soils were completed at ‘Shasta Placer’ between September 27<sup>th</sup> to October 2<sup>nd</sup> 2022. Soil samples were retrieved using industry-standard methods using a combination of soil auger, shovel, pick mattock and/or trowel. Wearing the proper protective person equipment, a soil station was dug to target the B-horizon, also known as the subsoil. The B-horizon is often greatly composed of material illuviated (washed in from) layers above it, mostly clay, iron, aluminum oxides, and minerals that formed in the layer.

A strict chain of custody was followed, from sampling to transportation. All 2022 surface sampling were sent to SGS laboratories, in Burnaby, British Columbia. SGS is an accredited laboratory. The reader is referred to the SGS brochure (SGS, 2020) for a detailed review of the detectable ranges of reported analytes for each determination. Once shipped to SGS Labs in Burnaby, the samples were further sieved to a 180 mesh, weighed and analyzed for Au, Pt, Pd, and ICP-AES. Samples were subjected to a 4 Acid Digest, and an ICP-MS finish QAQC was completed in the field as soil duplicate stations at an average of every 20 stations.

The soil samples returned between <1 to 291 ppb Au, averaging 20.86 ppb Au. See figure 9-46, below.



(Source: TDG Gold, 2022)

Figure 9-46: 2022 ‘Shasta Placer’ Soil Sample Gold Results

### 9.5.5 2022 ‘Shasta Placer’ Desktop Study Utilizing McElhanney Airborne LiDAR data

A desktop review of available legacy data was performed to ascertain whether the components of placer formation could be present and where within the project area. This included a brief survey of potential bedrock sources, liberation and transport processes, concentration mechanisms and potential for preservation.

A dense 2021 TDG sponsored Light Detection and Ranging (“LiDAR”) survey dataset to provide a base map for the exercise to evaluate the placer potential of the Jock Creek area around the Shasta Au-Ag Deposit. The raw LiDAR point cloud data provided by the contractor in the American Society for Photogrammetry & Remote Sensing (“ASPRS”) LASer (“LAS”) format was filtered and non-ground hits removed leaving a point cloud with a random, but very dense set of “bare earth” points using the built-in codes within the LAS files. This point cloud was then gridded using a Natural Neighbor gridding algorithm on a 1x1 m grid with removal of outliers.

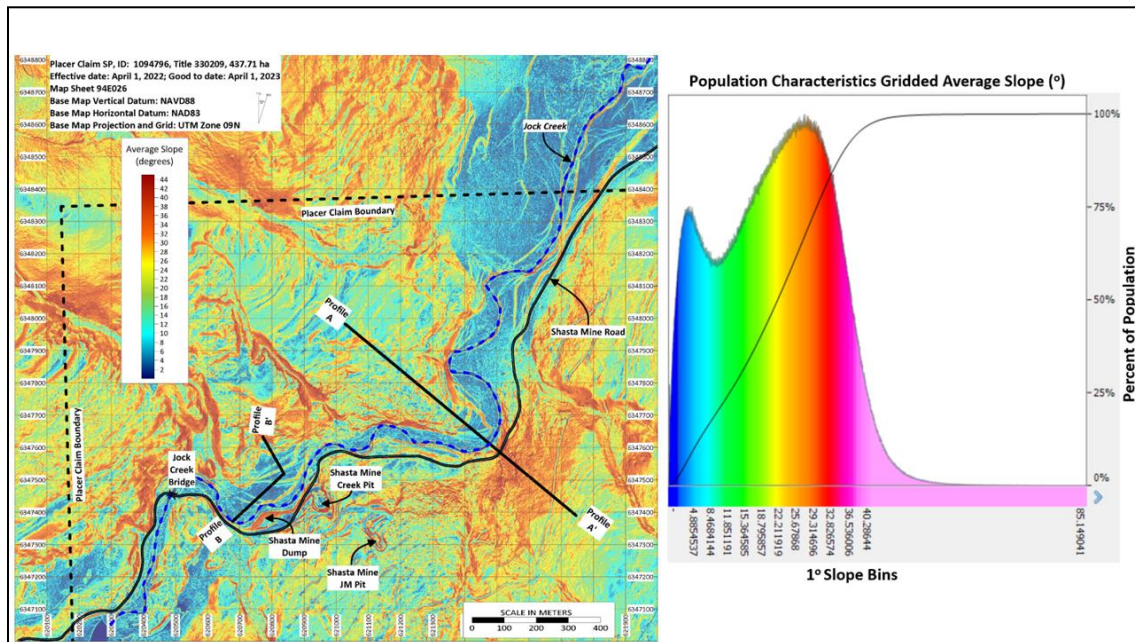
The original bare earth point cloud had approximately 4-10 ground “bare earth” hits per square meter providing a very high accuracy and precision base map. The Natural Neighbor gridding method interpolates grid values by weighting neighboring data points based on proportionate areas. It is an “exact” gridding method in that it will not extrapolate grid values beyond the data limits. The ground surface beneath areas of dense vegetation and water are not measured by the LiDAR sensor and produce areas of poor image resolution on gridding, but this was only a problem in a few areas and the gridding routine was allowed to extrapolate across those areas (except for water). The data was smoothed to remove gridding artifacts, and a high-resolution shaded relief map was generated to highlight surficial features.

Various derivatives of the bare earth topographic gridded surface were generated and used to identify areas with common geomorphological characteristics, define, and refine boundaries of interpreted fluvial landforms and features. These derivatives included simple slope maps, plan and profile curvature maps and slope aspect maps. Interpretation emphasis was placed on delineating larger features that might have the potential size to warrant field investigations and that might be permissive for hosting placer gold concentrations. The geological study was completed by, TDG consultant, Christopher Dail, with further compilation completed by the author.

### **Jock Creek Placer Targets**

The plan map outlines areas of interpreted fluvial geomorphological features of sufficient size and character to potentially warrant future on-the-ground investigations. Features tentatively identified include terraces, alluvial fans, landslide deposits, point bars and longitudinal bars. There are numerous smaller features and other types of landforms present, but those delineated are likely the most pertinent to evaluation of the area’s placer potential.

The overview of the study for the geological desktop study is shown in Figure 9-47.



(Source: TDG Gold, 2022)

Figure 9-47: Overview of 2022 'Shasta Placer' Desktop Study Area With Cross Section Lines

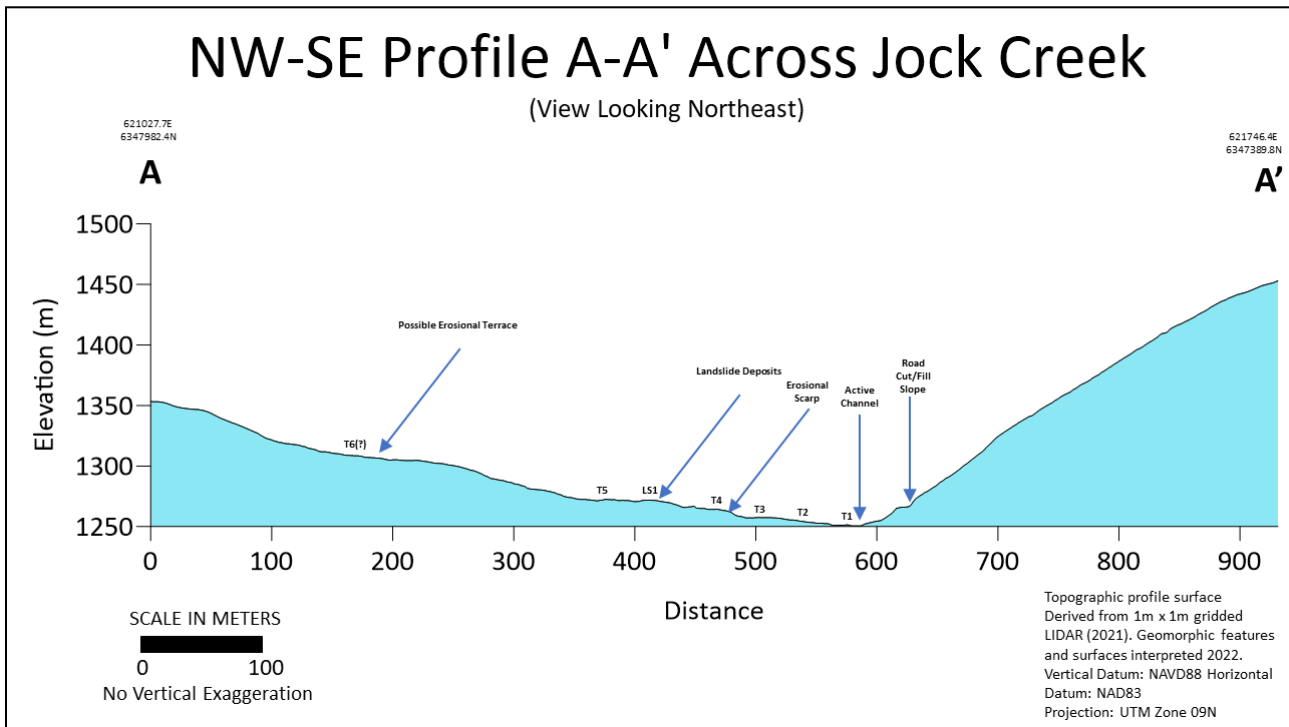
### Terraces

Larger terraces are delineated and prefixed and labeled with the letter 'T,' and several examples are shown in Figure 9-48 and 9-49, below. Higher numbers infer older ages on the terraces. There is relatively high confidence on the terraces T1 through T4 and preliminary field examinations during 2022 confirmed the presence of terrace deposits on several of these interpreted surfaces near the Shasta Mine complex on the north and south sides of Jock Creek. T1 is effectively the high-water mark floodplain of Jock Creek.

The terraces at lower elevations represent accretionary or depositional deposits whereas some of the more speculative terraces at higher elevations above the modern floodplain may represent former glacial features (such as relict hanging valleys) or erosional terraces. The terraces themselves do not necessarily represent the best placer targets, but where the terraces have been incised or occur along meanders in Jock Creek they may serve as traps.

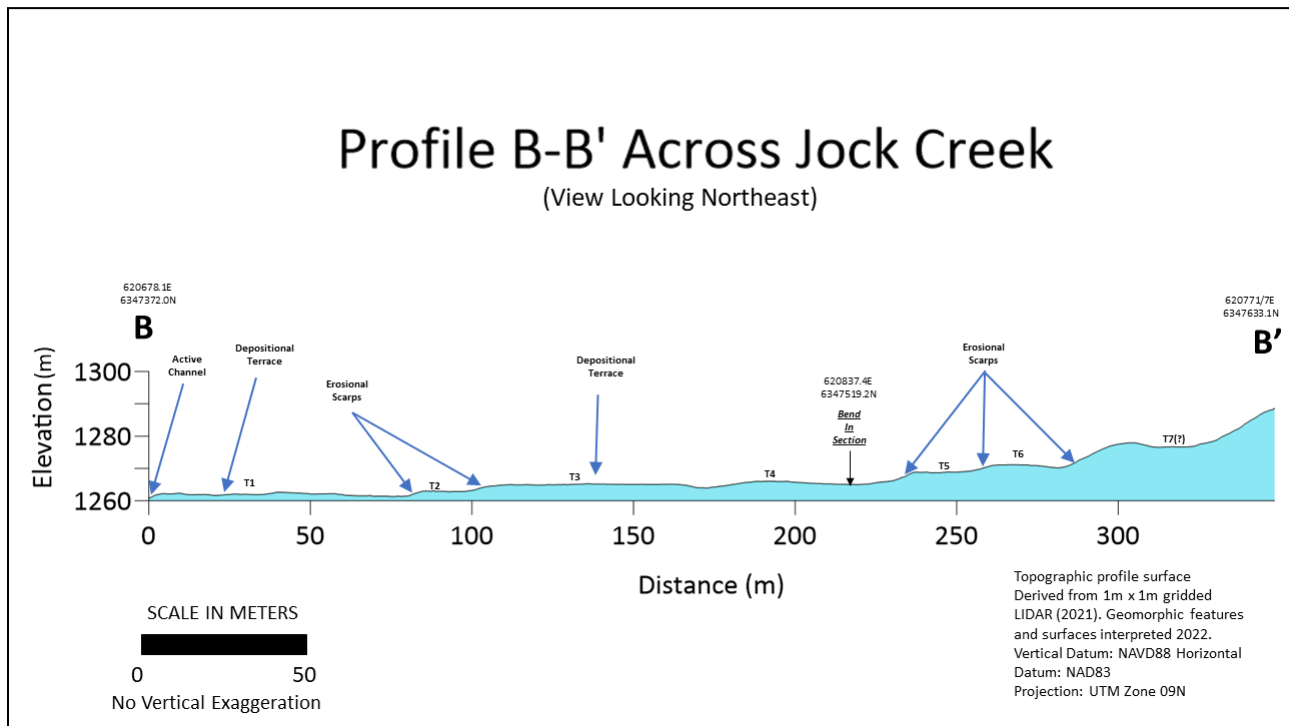
### Point Bars

Larger point bars developed on the inside curves of Jock Creek meanders and are opposite the thalweg (the deepest and fastest portion of the active stream channel). The upstream end of point bars represents an abrupt change in stream velocity, ideal for reducing the hydraulic carrying capacity of the stream current and the reduction of energy can result in the deposition of heavy minerals along the leading edge (upstream) of the point bar. Several areas contain stacked point bars indicating long term deposition in this permissive setting and could result in multiple placer layers within a small area. Winnowing of these point bars by the active channel can result in even further concentration of the heavy mineral suite by removal of the lower density gangue minerals leaving linear zones of enriched grades within larger lower grade point bars. Figure 9-50 and 9-51 displays the identified point bar placer targets.



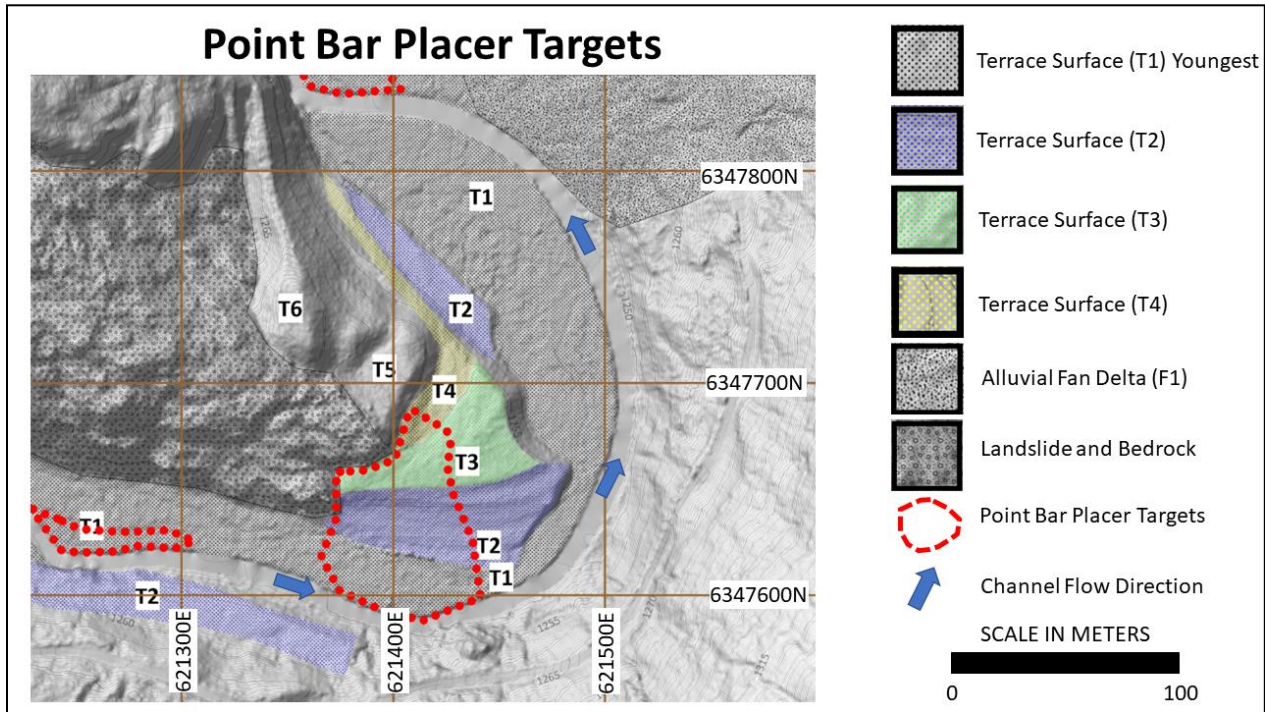
(Source: TDG Gold, 2022)

**Figure 9-48: 2022 'Shasta Placer' Desktop Study Terrace Profile A-A'**



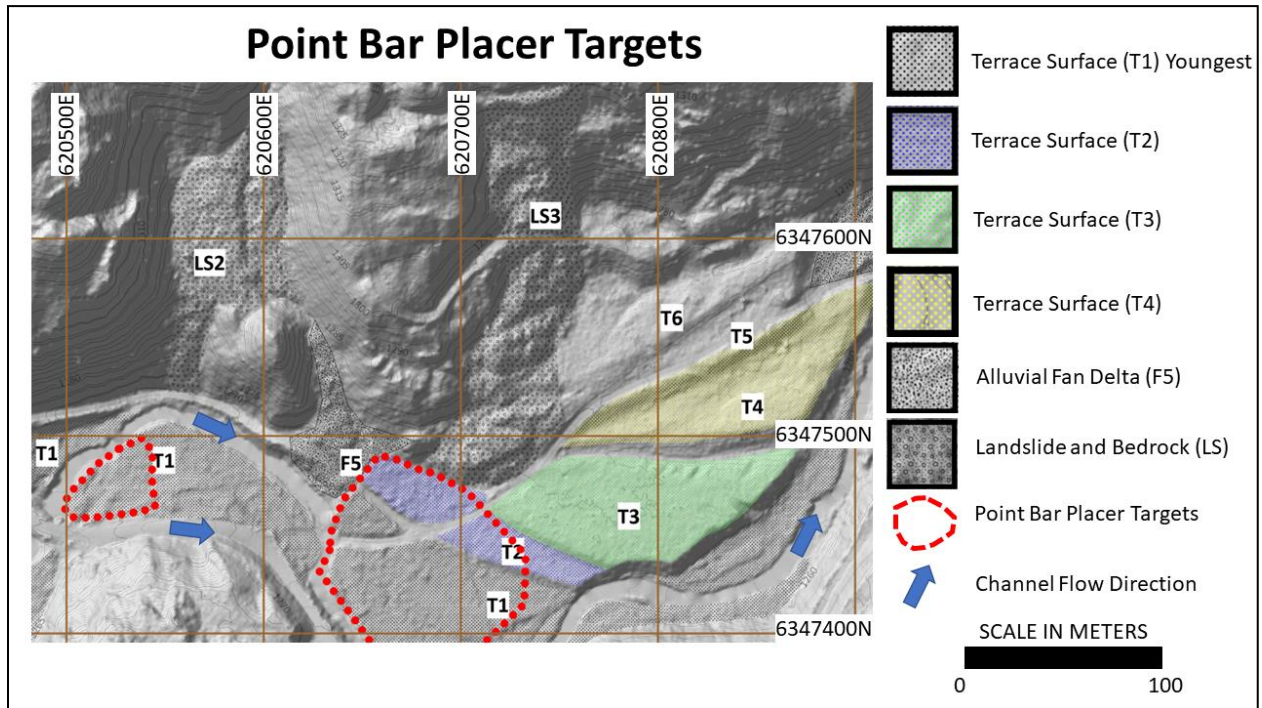
(Source: TDG Gold, 2022)

**Figure 9-49: 2022 'Shasta Placer' Desktop Study Terrace Profile B-B'**



(Source: TDG Gold, 2022)

**Figure 9-50: 2022 'Shasta Placer' Desktop Study Point Bar Target Area 1**



(Source: TDG Gold, 2022)

**Figure 9-51: 2022 'Shasta Placer' Desktop Study Point Bar Target Area 2**

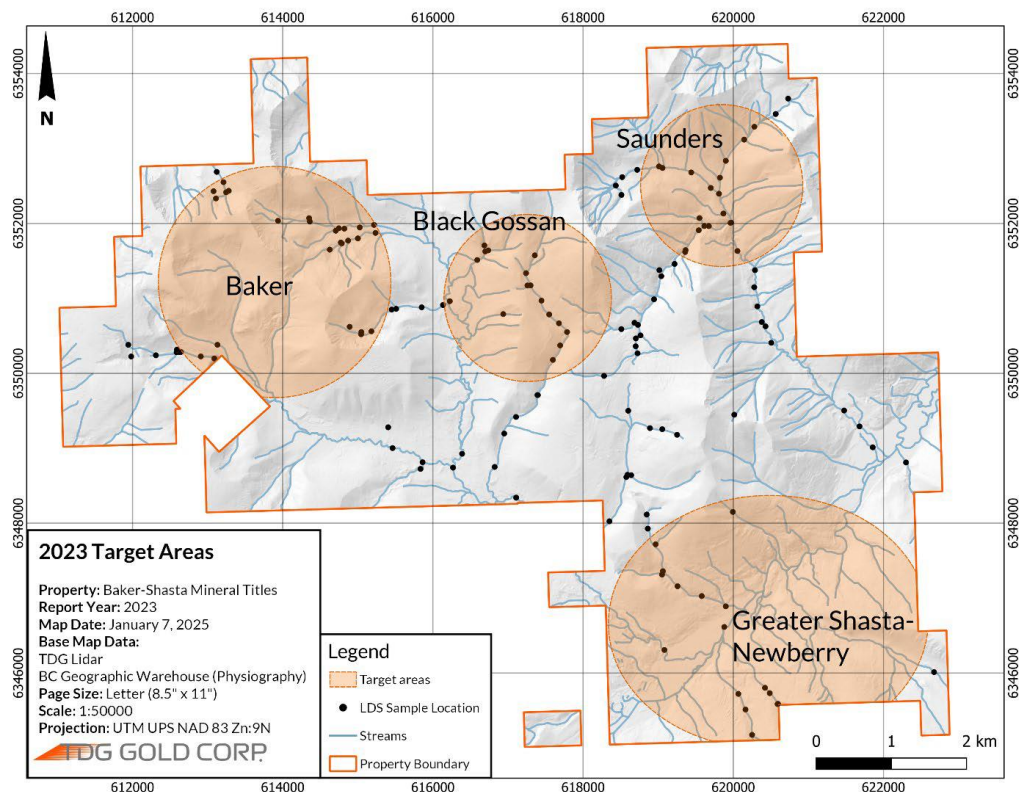


### 9.5.6 2022 ‘Shasta Placer’ Desktop Study Conclusion

The 2022 geochemical survey returned anomalous Au-in-soils. The encouraging soil sampling results, complemented with geological studies completed by TDG consultants and staff, warrant further investigation to determine whether the Shasta PCX has economic placer potential.

### 9.5.7 2023 Greater Shasta-Newberry Exploration Season

The 2023 work program at Greater Shasta-Newberry included (i) 87-line km of magnetometer-VLF geophysical survey, (ii) geochemical surveys consisting of 144 lithic drainage sediment (“LDS”), (iii) 34 geochemical soil samples and, (iv) 48 geochemical rock samples.



(Source: TDG Gold, 2022)

Figure 9-52: 2023 “Baker-Shasta” Target Areas and LDS Sample Sites Map

### 9.5.8 2023 Geochemical Lithic Drainage Sampling (LDS) Program

The 2023 work at Baker Complex – Shasta-Newberry included a Lithic Drainage Sampling (“LDS”) program, which is an advanced stream sediment sampling technique designed to collect single-phase wet fluvial lithic sediment eliminating bias from seasonal variation and organic chemical components. This technique was developed by Zastavnikovich (1987) utilizing a proprietary instrument (the ‘Barakso Pan’) to collect the geological material. The Barakso pan is a perforated/pressed stainless steel pan with no contribution of base or precious metals (Zn, Cu, Pb, Au, Ag) to the alloy to reduce the potential for contamination.

Lithic Drainage Samples (LDS) were collected by geologists and geotechnicians working in teams of two accessing streams and ephemeral draws over the period from July 12 to August 28<sup>th</sup>, 2023. Minconsult Mineral Exploration was contracted to assist with sampling.

Samples were collected from streams ranging from 0.5- 9.0 m wide, (median 1.5m wide) in streams and dry sediment was collected from ephemeral stream beds. Working in teams of two or three, geotechnicians would collect material

with a shovel from the high-energy fluvial locations including mid-stream bars and high overflow channels. When available, temperature and pH of streams were recorded at the time of sampling, as well as the relative stream flow and slope and any other pertinent hydromorphic or geomorphic information.

Sediment was wet sieved at the collection site into the Barakso Pan to isolate a specific lithic silt fraction. Coarse material was sieved with a 20-mesh sieve to remove the finer clay fraction from the pan by gently washing the sediment in the flowing water of the stream to remove any light organic matter.

The remaining material is carefully placed in a Kraft bag and given a unique sample tag (Sample ID). Any dry samples collected were sieved and cleaned in the next available stream (downstream of the next samples site). Samples weights of silt samples collected on the Property ranged from 0.50 to 0.94 kg, averaged 0.73 kg of silt, and were completely dried in their Kraft bags before shipping to the lab. See Figure 9-53 and 9-54 for example of wet and dry samples with locations as shown in Figure 9-55.

Samples for the 2023 geochemical survey on at the Property were handled via rigorous chain of custody, through sample collection, processing, and delivery to the ALS Global laboratory in either North Vancouver or Kamloops, B.C. The geological material was sampled remote sites on the Property and brought to TDG's Baker Mine site for final processing by geologists and technicians.

The material selected for sampling was and then placed in closed kraft bags, then in security-sealed rice bags before being delivered directly by TDG staff (or authorized third party) from the Baker Mine site, to Bandstra Transportation Systems in Prince George, ultimately to the ALS Global facility in North Vancouver or Kamloops, B.C. Samples were prepared and analyzed following procedures: SCR-41 for sample preparation, AU-ICP21 for Au and ME-MS41L and/or ME-MS61 for Ag and trace elements (where applicable). ALS Global is an ISO accredited laboratory and information about methodology can be found on the ALS Global website, in the analytical guide.

Quality Assurance/Quality Control ("QAQC") is maintained internally at the lab through rigorous use of internal certified reference materials ("CRMs"), blanks, and duplicates. Field duplicates were collected every 20 samples across the Baker-Shasta property. No additional QAQC program was administered by TDG. If a QAQC sample returns an unacceptable value an investigation into the results is triggered and when deemed necessary, the samples that were tested in the batch with the failed QAQC sample are re-tested.



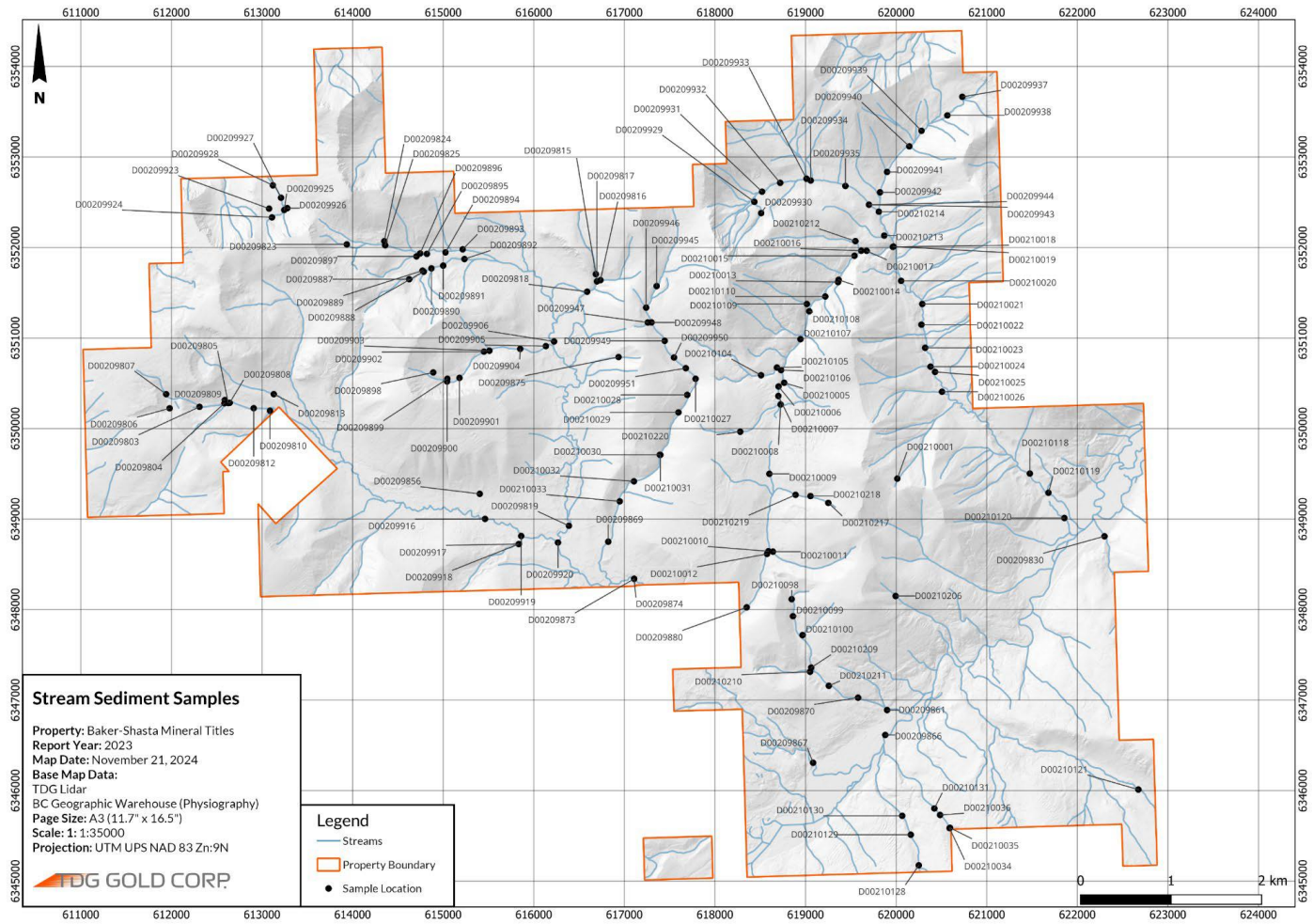
(Source: TDG Gold, 2022)

**Figure 9-53: Example of a 'Wet' LDS Site and Completed Sample**



(Source: TDG Gold, 2022)

**Figure 9-54: Example of a 'Dry' LDS Sample Site and Completed Sample**



(Source: TDG Gold, 2023)

**Figure 9-55: 2023 Geochemical Survey LDS Sample Sites (Sample IDs Labelled)**

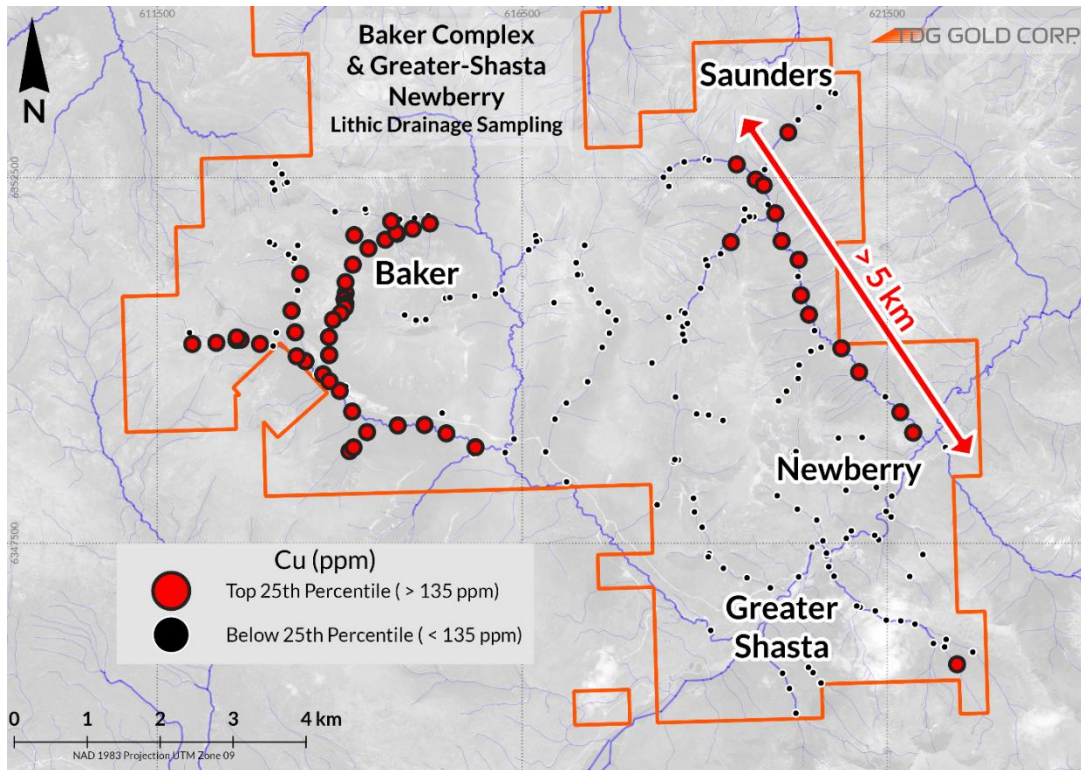
A total of 144 LDS samples were taken during the 2023 geochemical survey. Figure 9-57 to 9-60 present the results for Au, Ag, Cu, Mo, respectively. Table 9-5 displays summarized stats for the reported element determinations

**Table 9-5: Statistics of Analytes from 2023 LDS Sampling Program**

Element	Min (ppm)	Max (ppm)	Mean (ppm)	$\sigma$ (ppm)
Au	BDL	>25	0.52	4.42
Ag	0.02	52.70	1.46	5.93
As	3.10	165.00	23.24	21.88
Bi	0.01	11.10	0.53	1.06
Cu	4.17	1815.00	119.37	255.18
Mo	0.12	29.20	3.82	4.18
Pb	4.04	458.00	37.60	46.32
Sb	0.29	4.99	1.24	0.81
Sn	BDL	7.97	0.91	0.72
Te	BDL	3.47	0.27	0.40
W	0.07	33.20	1.09	3.05
Zn	33.90	1865.00	270.28	261.36

BDL: Below detection limit;  $\sigma$ : Standard Deviation

The results indicate loci of higher Cu-Au-Mo against a background of elevated Cu across extensive portions of the Baker Complex (Figure 9-56). Higher Au-Ag concentrations are dominant in areas where Au-Ag epithermal mineralization is already known to exist, which helps to validate the LDS survey approach.



(Source: TDG, 2024)

**Figure 9-56: Lithic Drainage Results Cu Percentiles**

The maps above and below show consistently elevated Cu concentrations across the Baker Complex and Greater Shasta-Newberry. The top quartile of assay results for Cu-Au appears to be concentrated into two, large footprint areas: (i) the broader area around the historical Baker mine, which was explored for its gold-silver potential, and (ii) Saunders, which has historically seen minimal exploration and evaluation for its mineral potential.

This multi-element coincident data strongly supports the concept that Baker represents a large-scale mineralized system, as does the data for Saunders (TDG, 2024).

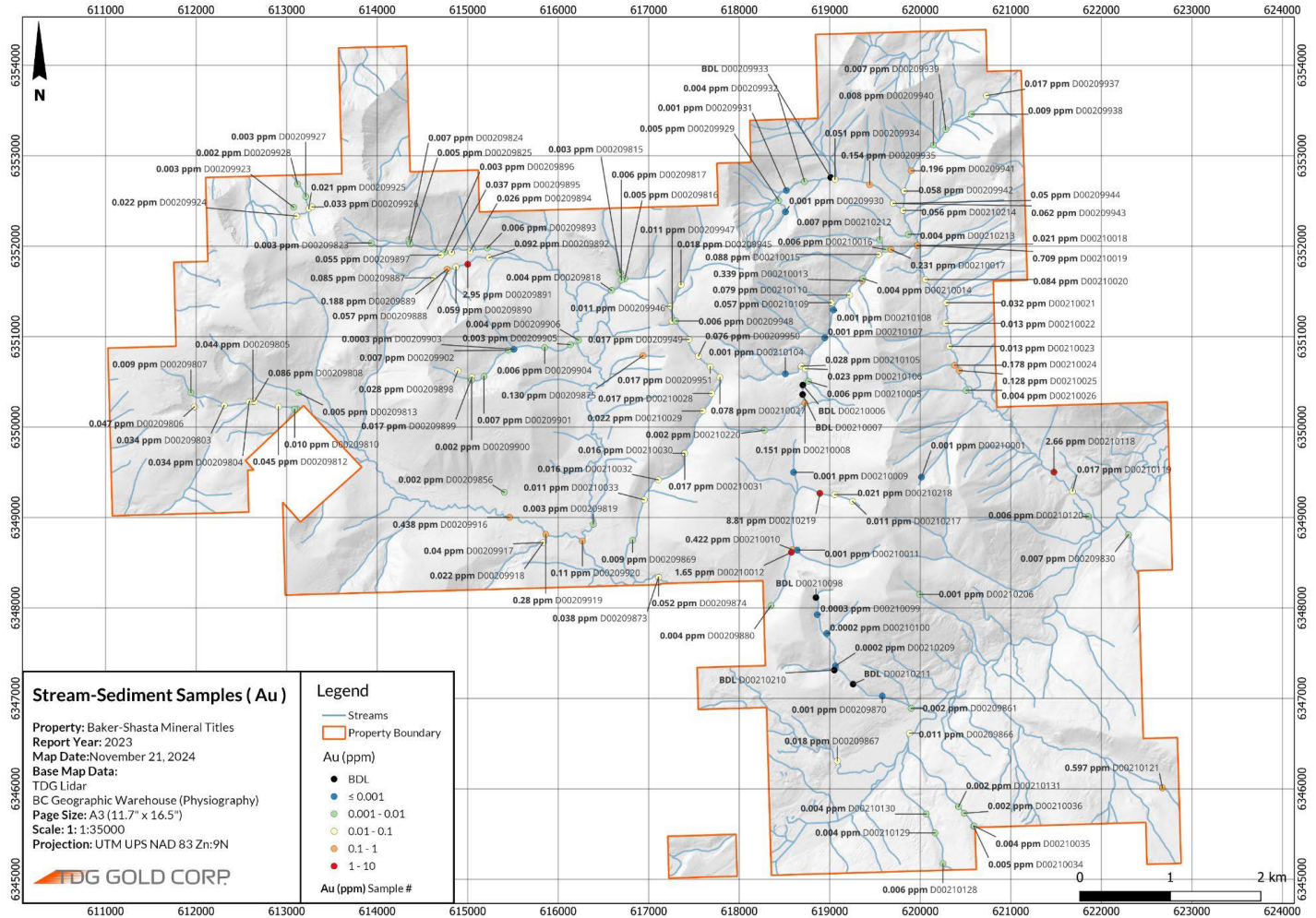
### Baker Mine Area Target

The Baker mine area is marked by a distinctive 15 km<sup>2</sup> circular, dome-like physiographic feature. Within and around this dome-like landscape feature, extensive gossans indicative of a high sulphide endowment and widespread porphyry alteration coincide with multiple geochemical and geophysical anomalies. Historical drilling undertaken at Baker was shallow and focused on Au-Ag epithermal mineralization.

### Saunders Target

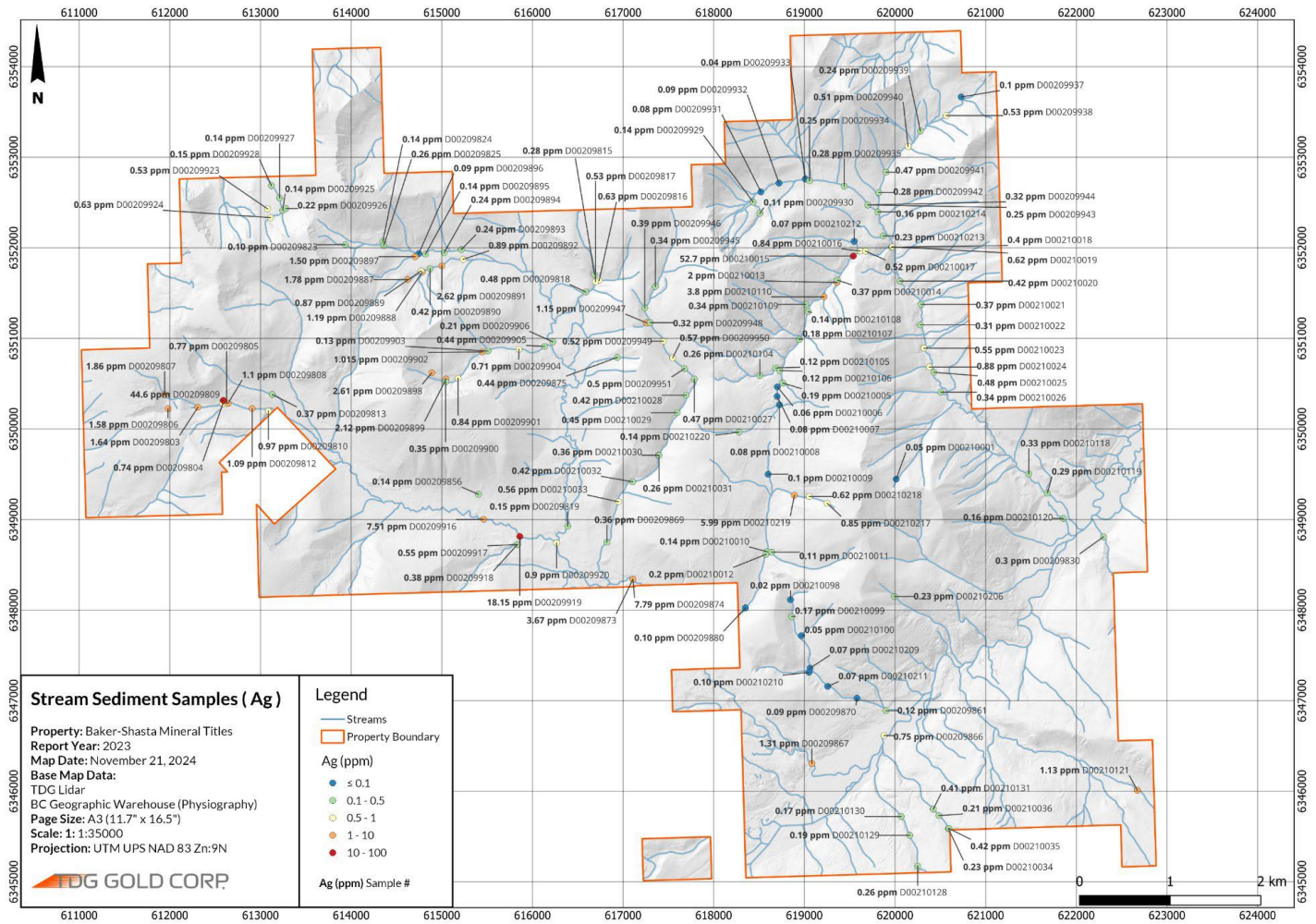
The Saunders target area covers 10 km<sup>2</sup> and has never been drill tested. It comprises multiple historical prospects with minimal exploration.

The LDS survey results indicate the presence of the highest stream sediment pathfinder element anomalies across the whole Greater Shasta-Newberry exploration area. Cu and Mo concentrations within the Saunders area are in the top 5% of all the samples collected in the 2023 survey.



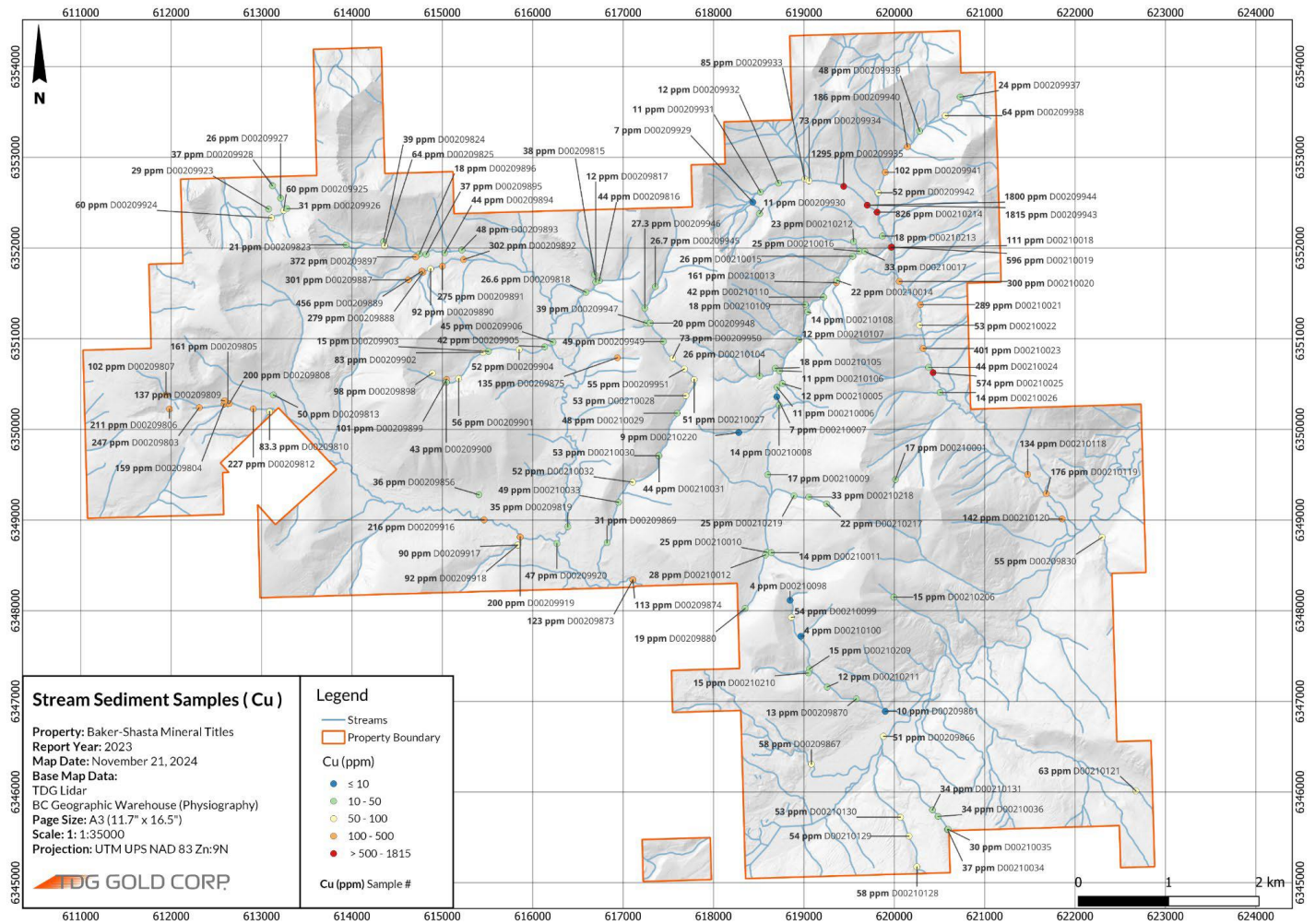
(Source: TDG Gold, 2023)

Figure 9-57: 2023 Geochemical Sampling LDS Gold Results Map



(Source: TDG Gold, 2023)

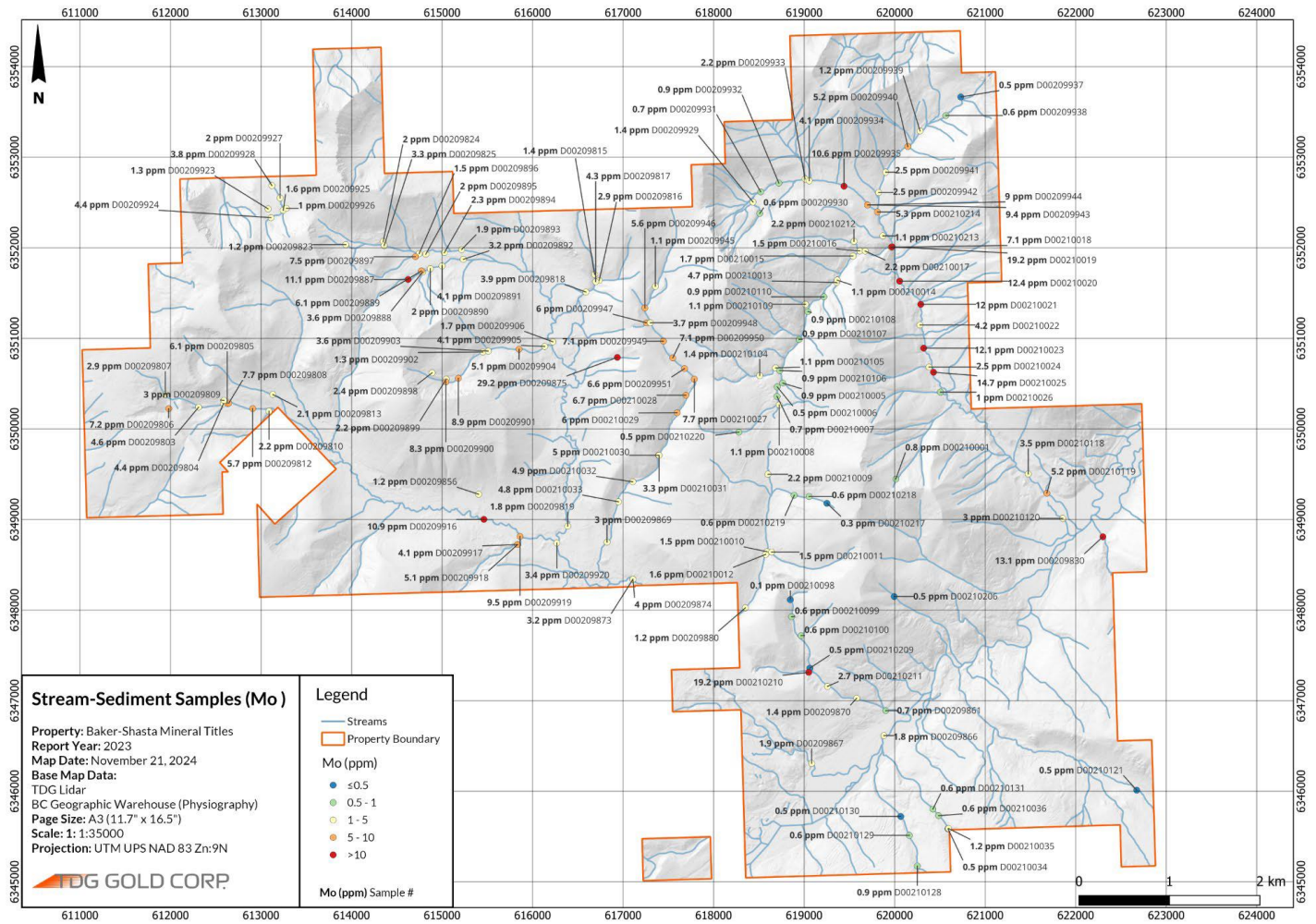
Figure 9-58: 2023 Geochemical Sampling LDS Silver Results Map



(Source: TDG Gold, 2023)

**Figure 9-59: 2023 Geochemical Sampling LDS Copper Results Map**





(Source: TDG Gold, 2023)

Figure 9-60: 2023 Geochemical Sampling LDS Molybdenum Results Map

### 9.5.9 2023 Geochemical Rock Sampling Program – Baker-Shasta

Rocks samples collected during the 2023 field season were retrieved at the Baker area by TDG geologists. 90 chip and grab samples were collected in total, with 48 reported collected outside of the Baker Mining Lease (#243251). Figure 9-60 presents rock sample locations and Au, Ag, and Cu concentrations. Chip samples were made in widths up to 10 m, averaging 2.7 m. Location data was recorded using handheld Garmin GPS units.

Sampling traverse routes were aided by Light Detection and Ranging (“LiDAR”) maps of the area. Samples were described in detail, with the geologist recording lithology, alteration, veining and mineralization present within the rock samples. Measurements of veins and structures were also taken at outcrops when available. Samples given unique sample ID numbers, placed into mesh polyester sample bags and dried thoroughly before shipping to the lab.

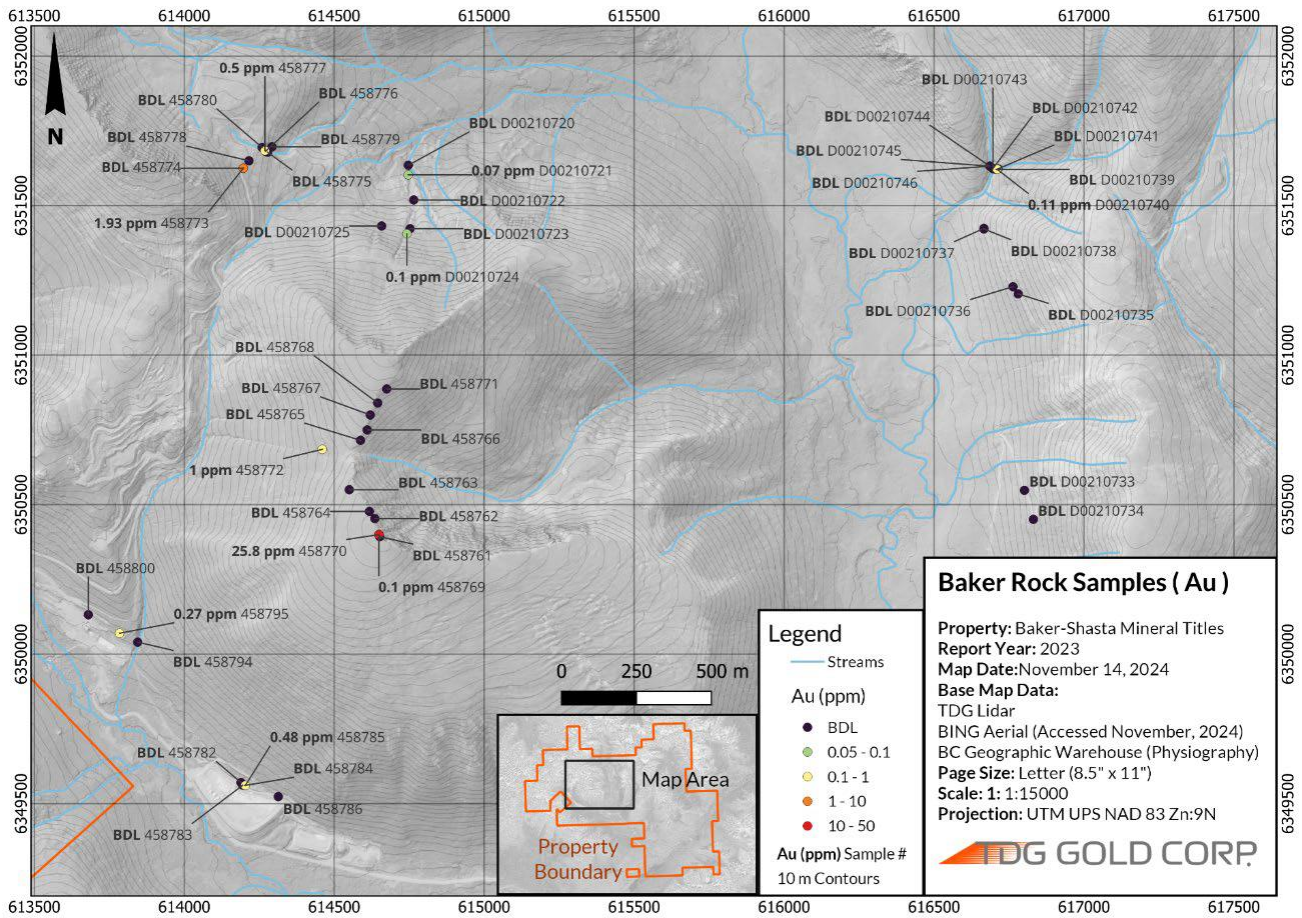
Samples were handled via rigorous chain of custody through sample collection, processing, and delivery to the ALS Global Laboratory in North Vancouver, B.C. Samples in polyester bags were placed in security sealed rice bags before being delivered from the Baker Mine site to Bandstra Transportation Systems in Prince George, ultimately to the ALS Global Facility in North Vancouver, B.C. Samples were prepared and analysed following procedures: PREP-31BN for sample preparation, AU-GRA21 for Au, ME-ICP61 for Ag and all other elements, with OG-62 for over limits (Pb, Zn).

Rocks sampled across the Baker area are representative of the geology of the area, including augite phyric porphyritic basalts typical of the Takla Group, fine to coarse grained andesitic tuffs and crystal tuff, intrusive coarse grained syenite/monzonites, granites/granodiorites of the Black Lake Plutonic Suite as well as carbonate rocks from the Asitka Group. Late very fine-grained basalt and felsic dikes are observed crosscutting the syenite/monzonite. These displayed a variety of alteration across the area, including argillic alteration, silicification, propylitic alteration, Fe-Ox (i.e. gossans), and minor potassic alteration.

Mineralization identified within rock samples were by pyrite and magnetite dominant, and chalcopyrite, sphalerite, galena and molybdenite subordinate. Table 9-6 presents a statistical summary of the results and Figure 9-61 to Figure 9-63 presents Au, Ag, and Cu concentrations, respectively.

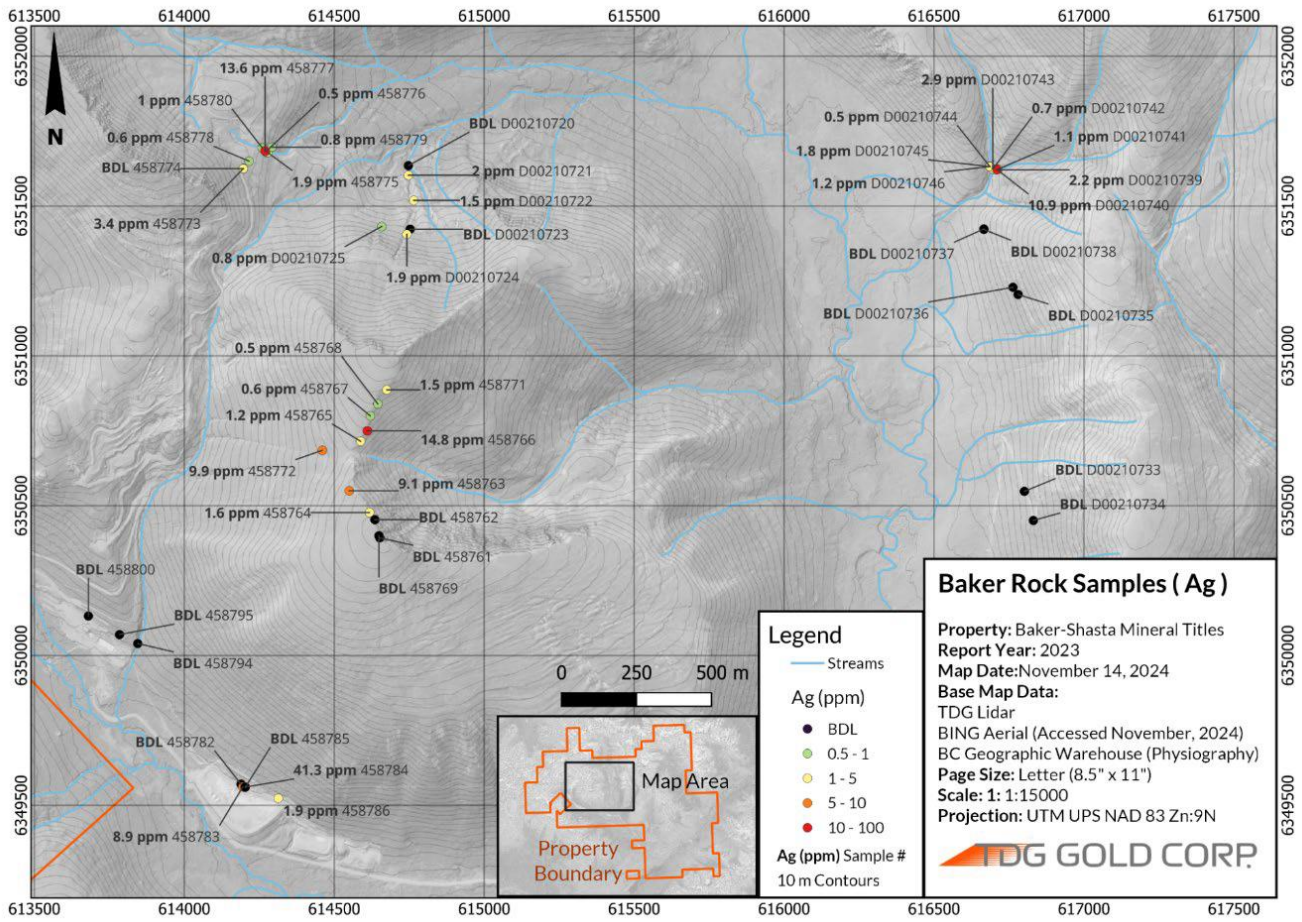
**Table 9-6: Statistics of Analytes from 2023 Rock Sampling Program**

Element	Min (ppm)	Max (ppm)	Mean (ppm)	$\sigma$ (ppm)
Au	BDL	25.80	0.59	3.73
Ag	BDL	94.9	4.7	14.9
Cu	2	4290	219	699
Pb	5	9880	241	1422
Zn	11	14500	495	2187
<i>BDL: Below detection limit; <math>\sigma</math>: Standard Deviation</i>				



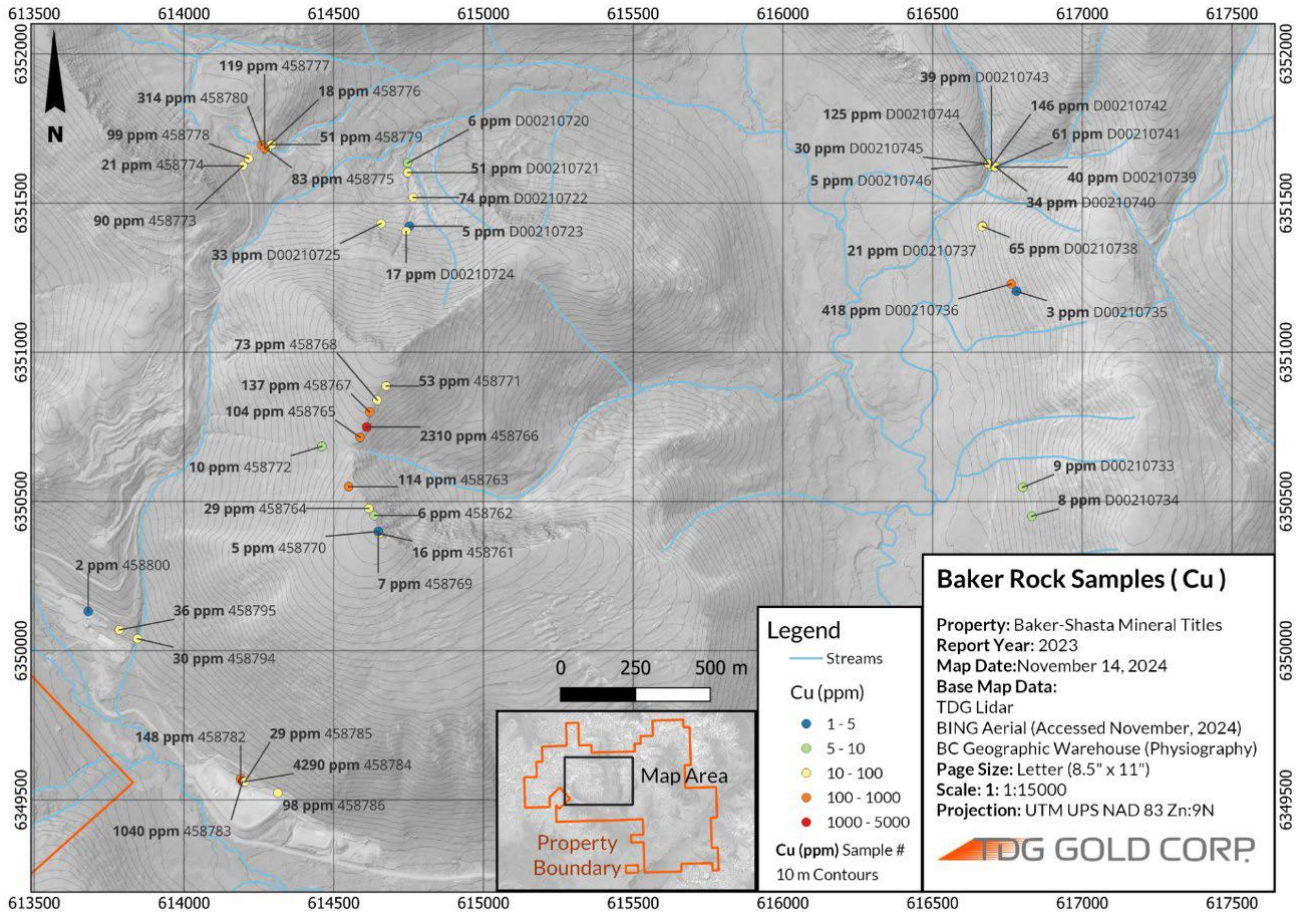
(Source: TDG Gold, 2023)

Figure 9-61: 2023 'Baker Complex' Geochemical Rock Sampling Gold Results Map



(Source: TDG Gold, 2023)

**Figure 9-62: 2023 'Baker Complex' Geochemical Rock Sampling Silver Results Map**



(Source: TDG Gold, 2023)

**Figure 9-63: 2023 'Baker Complex' Geochemical Rock Sampling Copper Results Map**

### **9.5.10 2023 Geochemical Soil Sampling Program – Baker-Shasta**

The soil sampling program completed in 2023 consisted of a small survey completed in the Saunders target, about five kilometers NNW of the Shasta mine, see Figure 9-64 below. Soil samples were collected in a single traverse on August 29<sup>th</sup>, 2023. The program consisted of 34 total soil B-horizon soil samples. This area was selected as a soil sampling program to follow up on anomalous LDS results obtained in 2022. Samples were collected adjacent to the main anomalous creek gully in two lines on parallel ridges. Silver King Helicopters Ltd. of Smithers, BC provided helicopter support.

Soil samples were retrieved using industry-standard methods using a combination of soil auger, shovel, pick mattock and/or trowel. Wearing the proper personal protective equipment, a soil station was dug to target the B-horizon, also known as the subsoil. The B horizon is often greatly composed of material illuviated (washed in from) layers above it, mostly clay, iron, aluminum oxides and minerals that formed in the layer.

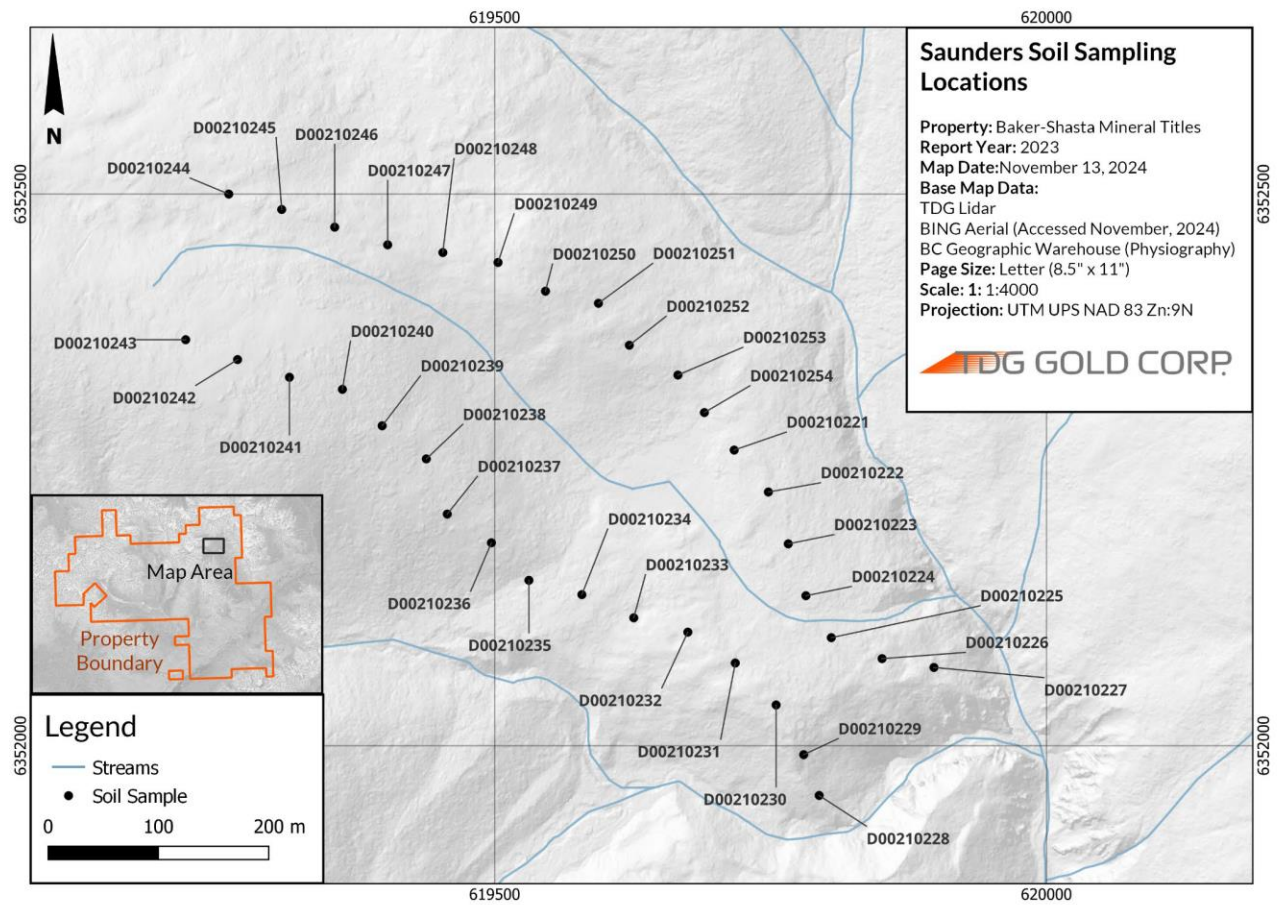
When the target horizon was reached, a sample was collected and placed into a Kraft or polyethylene soil sample bag with a unique sample tag (Sample ID). Sample weights of soil sample material collected during the 2023 season the Shasta property ranged from 0.31 to 0.60 kg, averaging 0.45 kg. Sample sites utilized for the soil survey are presented below in Figure 9-64.

A strict chain of custody was followed, from sampling to transportation. Samples were delivered by TDG Staff from Baker Camp to Bandstra Transportation Systems in Prince George, B.C., and ultimately to ALS Global laboratory in Kamloops, B.C., and North Vancouver, B.C. for analysis. Samples were prepped according to PREP-41 and sieved to -80 mesh and analysed with Au-AA23 for Au and ME-MS41L for Ag, base metals and trace elements. ALS Global is an ISO accredited laboratory and information about methodology can be found on the ALS Global website, in the analytical guide.

Quality Assurance/Quality Control (“QAQC”) is maintained internally at the lab through rigorous use of internal certified reference materials (“CRMs”), blanks, and duplicates. If a QAQC sample returns an unacceptable value an investigation into the results is triggered and when deemed necessary, the samples that were tested in the batch with the failed QAQC sample are re-tested.

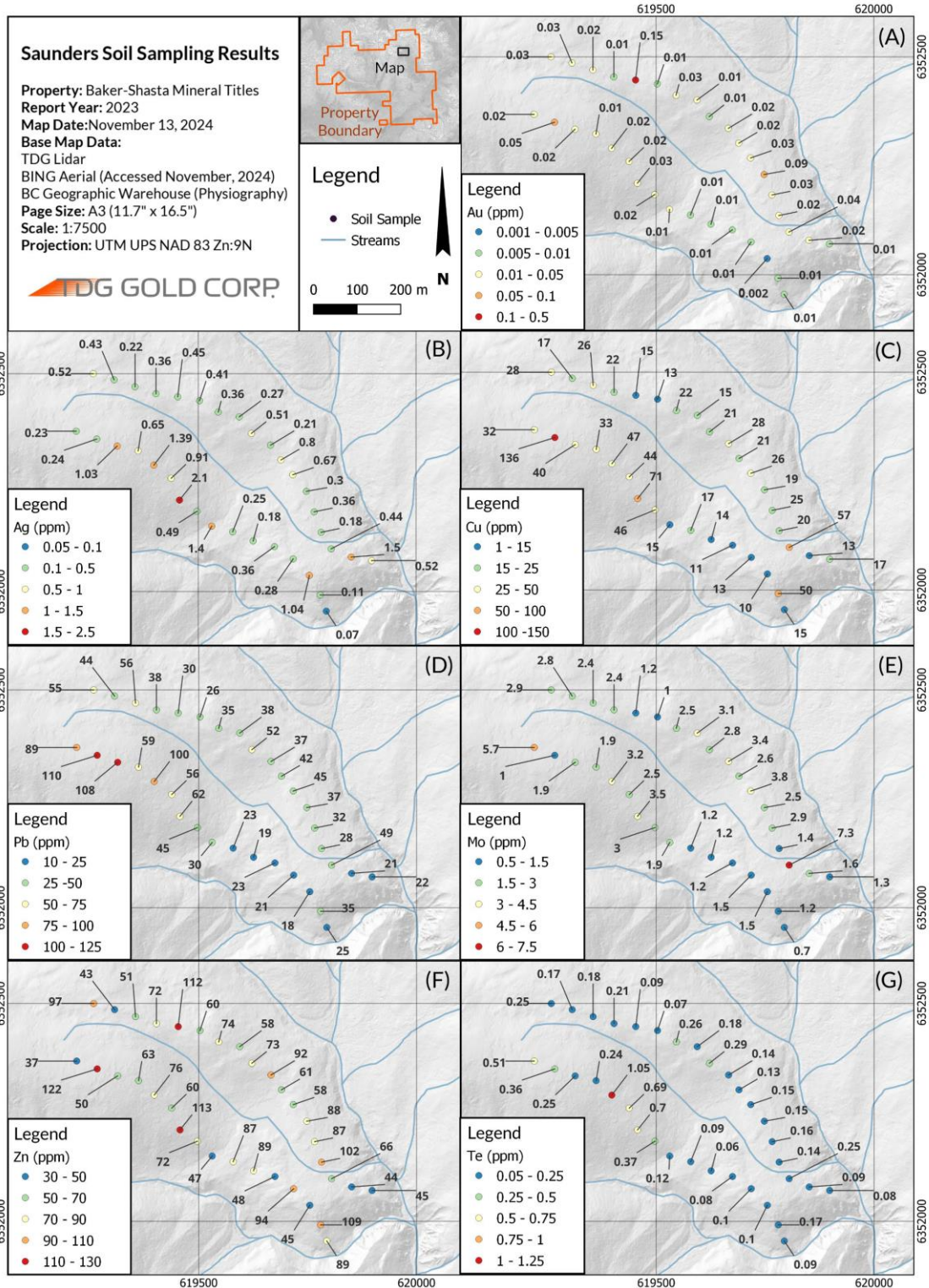
All 34 soil samples taken at Saunders were retrieved from B-horizon soils. They are described as brown to light red-brown silty soil to silt-sand mixtures, with rounded to angular sand fragments. The soil samples returned 1.5 to 146 ppb Au, averaging 24 ppb Au and 0.07 to 2.1 ppm Ag, averaging 0.6 ppm Ag.

Figure 9-65 presents analytes (Au, Ag, Cu, Mo, Zn, and Te) in soil results from the 2023 sampling program.



(Source: TDG Gold, 2023)

**Figure 9-64: 2023 Soil Sampling Sites at the 'Saunders' Target Area 5 km north of Shasta Mine**



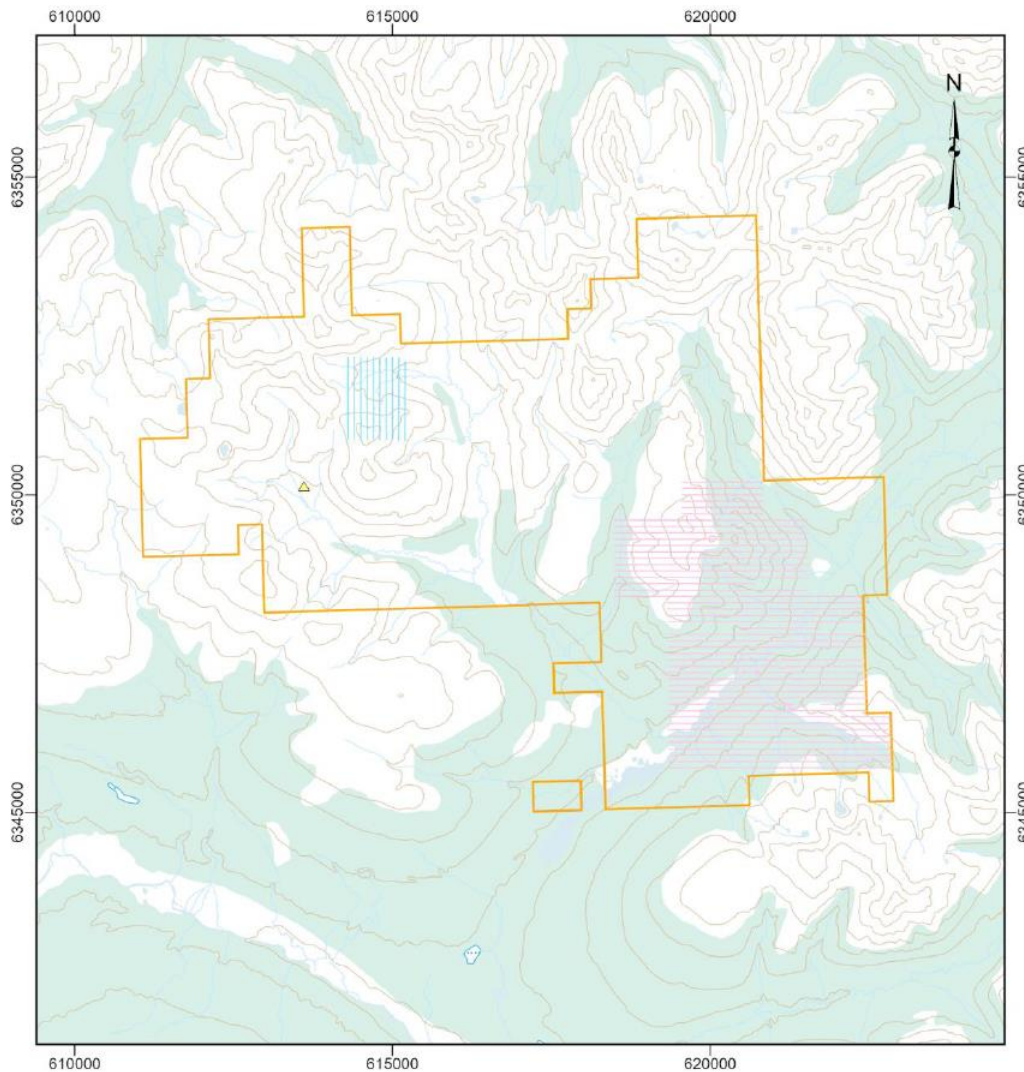
(Source: TDG Gold, 2023)

**Figure 9-65: 2023 Soil Sampling Results Multi Element Plot at 'Saunders' Target**



### 9.5.11 2023 Ground Geophysics Program – Baker-Shasta

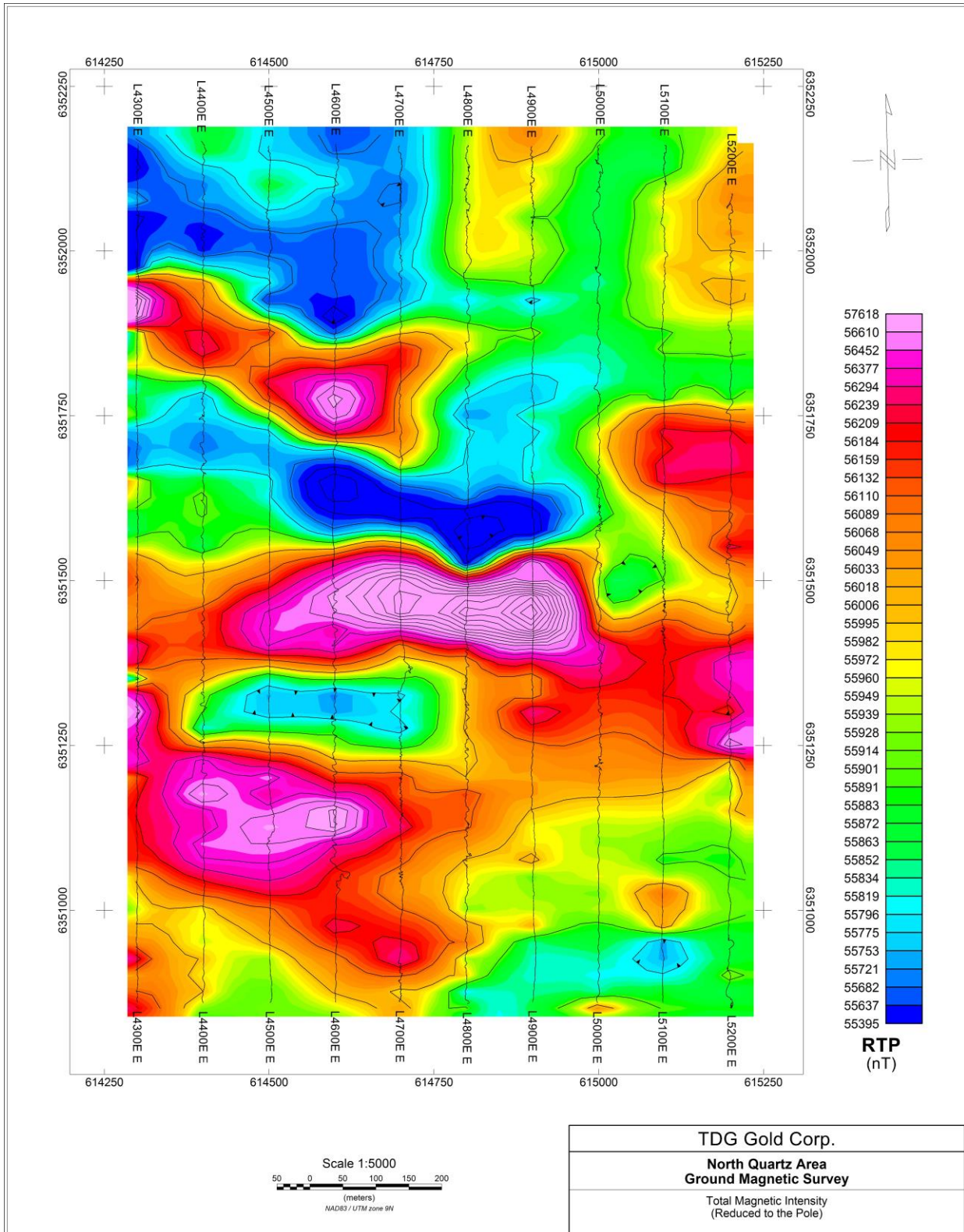
Aurora Geosciences Ltd. completed a ground-based magnetometer and very-low frequency electromagnetic (“VLF-EM”) survey on the Shasta-Newberry and North Quartz targets from October 4<sup>th</sup> to October 19<sup>th</sup>, 2023 (Figure 9-66). The two-person field crew completed 96 line-km of the Mag-VLF survey using GEM Systems GSM-19 magnetometers and accessed the sites using a light-duty truck. For the Shasta-Newberry Grid, new data was merged with Mag-VLF data collected in 2022 by Aurora Geosciences Ltd to expand and infill the 2022 survey.



(Source: TDG Gold, 2023)

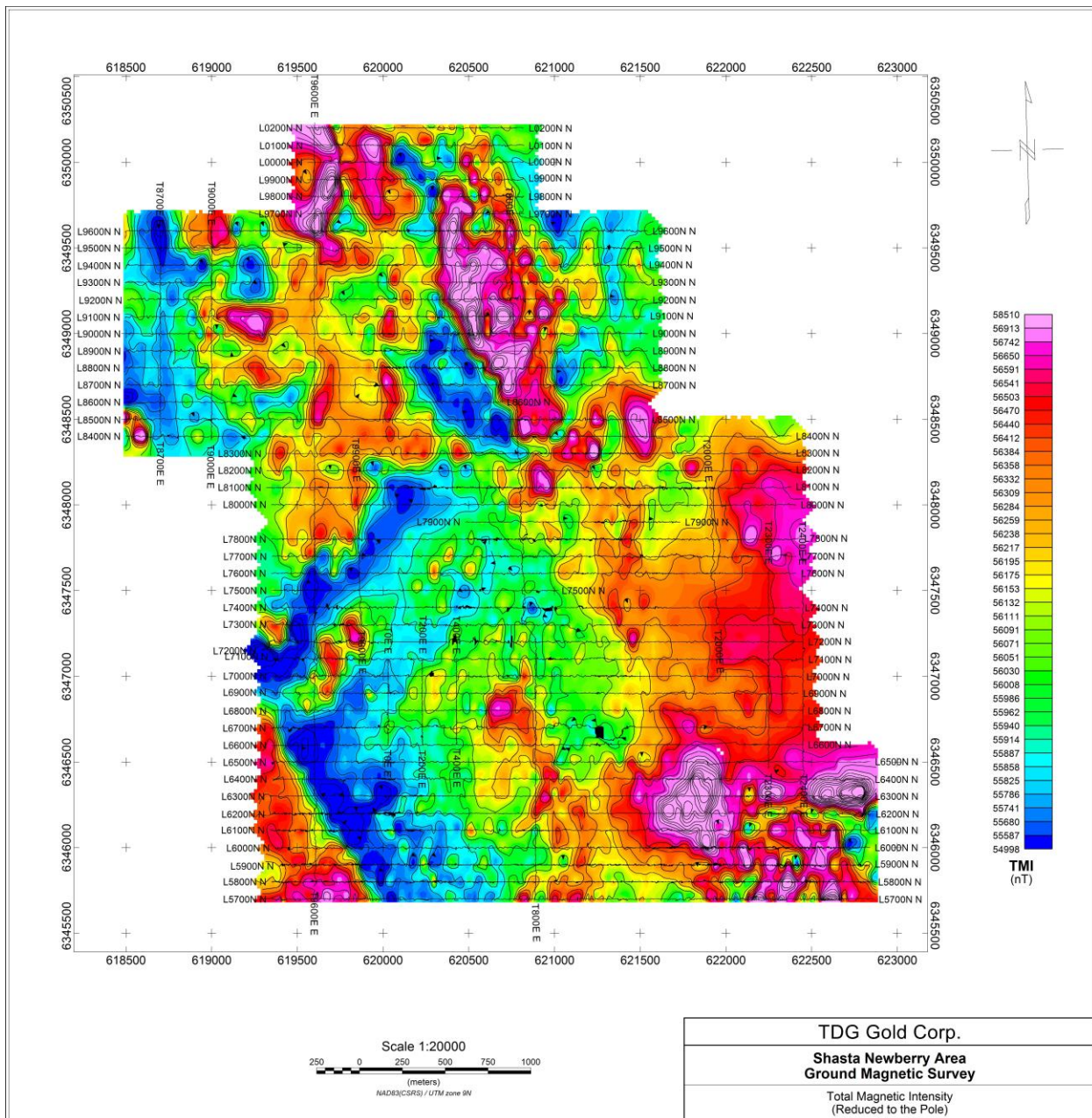
**Figure 9-66: 2023 North Quartz and Shasta Newberry Ground Magnetic / VLF-EM Survey Plan**

The results of the 2023 ground-based mag-VLF geophysical survey included total magnetic intensity (“TMI”) ranging between 54,998 – 58,510 nanoteslas (“nT”) and VLF recordings at 24.8 kilohertz (“KHz”) (NLK; Jim Creek, Washington), 24.0 KHz (NAA; Culter, Maine), and 21.4 KHz (NPM; Lualualei, Hawaii). Figure 9-67 and Figure 9-68 present the results for the TMI from the North Quartz and Shasta-Newberry grids, respectively.



(Source: TDG Gold, 2023)

**Figure 9-67: North Quartz Grid Total Magnetic Field Results**



(Source: TDG Gold, 2023)

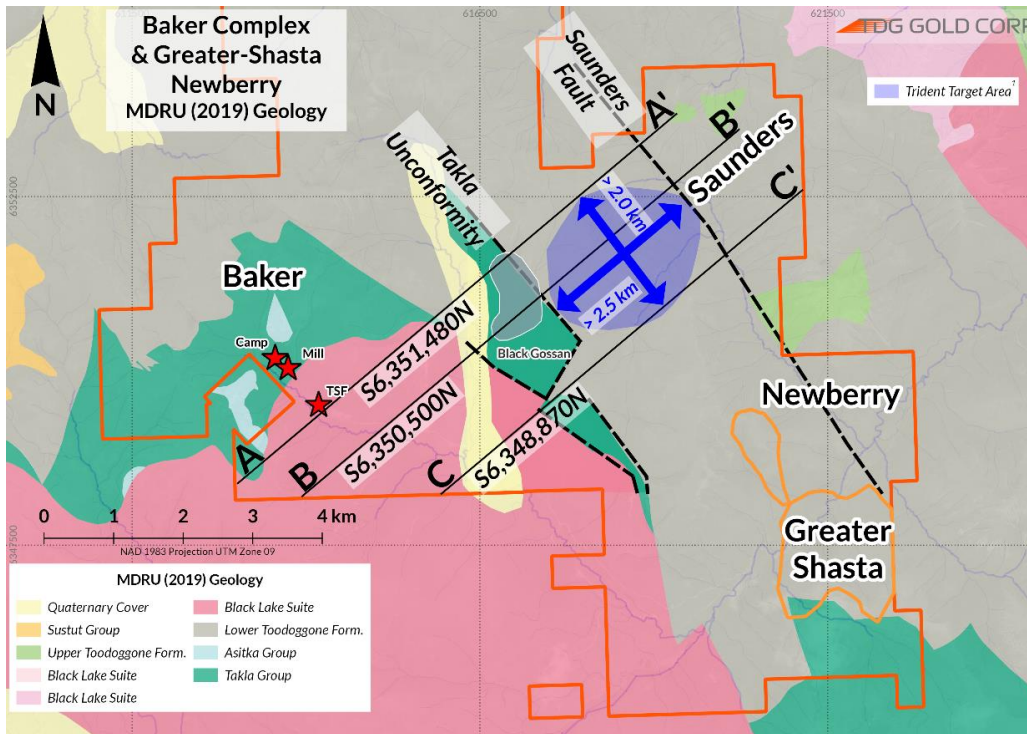
**Figure 9-68: 2022 - 2023 Combined Shasta – Newberry Grid Total Field Magnetics Results**

### 9.5.12 2024 Greater Shasta-Newberry and Baker Complex Exploration

In 2024 after post-field data compilation and analysis of the LDS and other technical data collected in the 2023 season, the Saunders area was upgraded in priority by TDG. Saunders was further characterized as displaying additional geological features, physiography, and geophysical signatures with the potential to host an intrusive related copper-gold-molybdenum porphyry (TDG, 2024).

#### Trident Target

This new target (see below Figure 9-69) was named “Trident” and covers at least 5 km<sup>2</sup> is open to the northwest and southeast and has never been drill tested. Additional details are presented below.

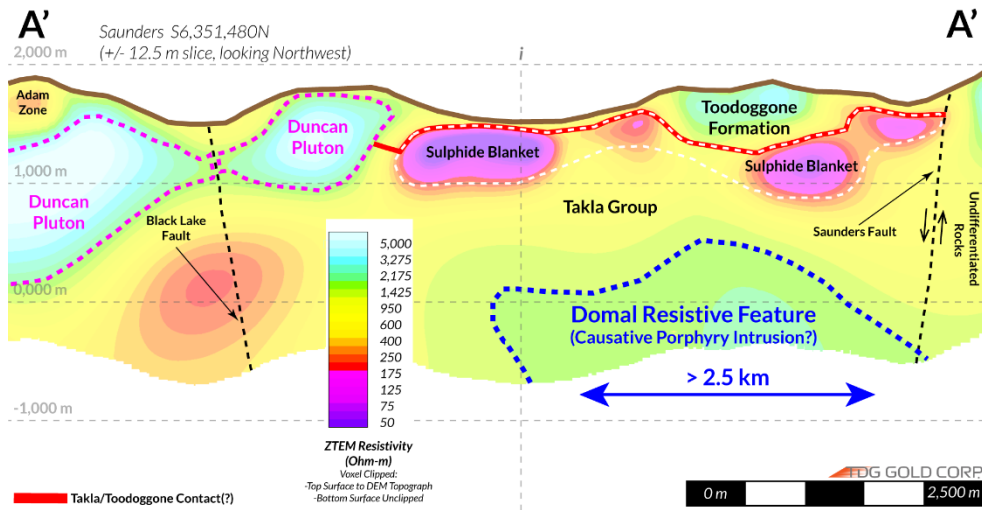


(Source: TDG 2024)

**Figure 9-69: Trident target (blue polygon) within the Saunders at Greater-Shasta Newberry**

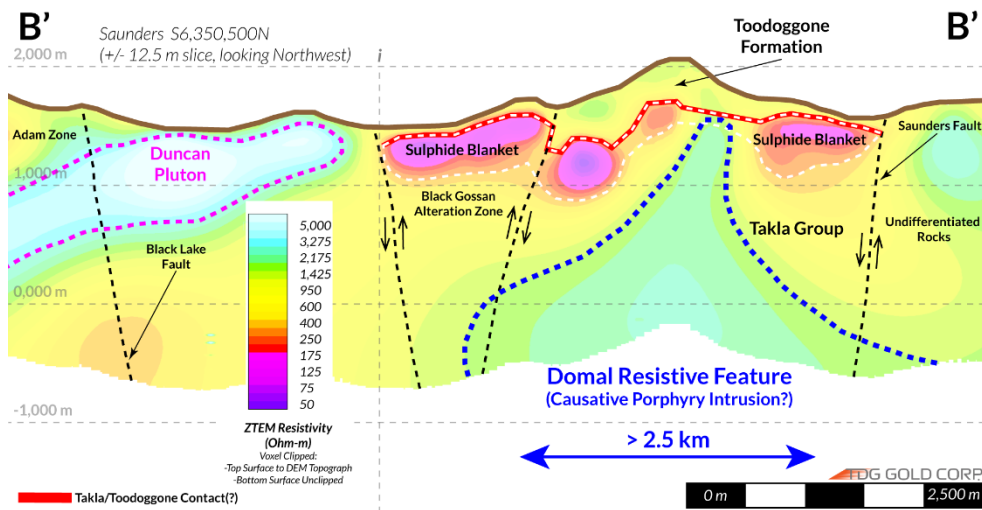
In early 2024, TDG completed the compilation of the existing information for the new Trident target. Data suggests the presence of an interpreted causative intrusion, appearing as a buried, dome-like high resistivity feature covered with blanket-like zone of lower resistivity (Figure 9-70 through Figure 9-72). The low resistivity feature is interpreted to be a zone of higher sulphide content associated with the phyllic (quartz-sericite-pyrite) altered cupola of the intrusion at or near a major regional unconformity – between the Toodoggone Formation above and the Takla Group rocks below.

Economic metal concentrations in B.C. style porphyries are typically located adjacent to regional-scale unconformities, such as deposits at **KSM** and **Brucejack** situated at the so-called 'Kyba-Nelson Red Line' at the unconformity between the Stuhini and Hazelton groups of rocks within B.C.'s Golden Triangle.



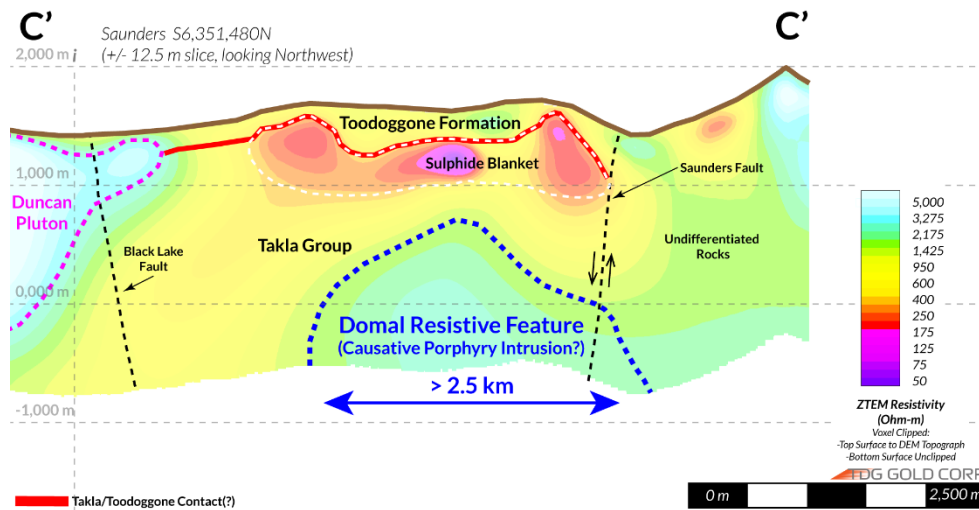
(Source: TDG 2024)

Figure 9-70: Northern Cross Section through Black Gossan & Saunders



(Source: TDG 2024)

Figure 9-71: Central Cross Section through Black Gossan & Saunders



(Sources: TDG 2024)

**Figure 9-72: South Cross Section through Black Gossan & Saunders**

The Saunders area within the Baker Complex comprises several historical prospects with limited past exploration focused on epithermal Au and silver. There has been little follow-up and no drilling despite widespread, coincident geophysical and base/precious metal geochemical anomalies consistent with the possible presence of a poorly exposed to shallowly buried large porphyry system.

The Saunders area (Figure 9-69) lies at the intersection of several regional-scale structural zones and coincides with very strong airborne electromagnetic and magnetic anomalies typically associated with intrusions in this part of the Toodoggone Belt. Alteration observed by past operators included high aluminous-high sulphidation assemblages, with minerals such as pyrophyllite, alunite, diaspore and clays in large gossans as well as multiple exposures of dikes and small stock like-bodies exhibiting porphyry style alteration and copper +/- molybdenum mineralization.

TDG’s 2022 airborne hyperspectral survey confirmed the presence of these assemblages and expanded the known footprint of them over a broad area coincident with the catchments and headwaters of the highly anomalous LDS stream sediment sample sites. Much of the higher elevation areas within the target footprint are overlain by interpreted post-mineralization volcanic rocks as illustrated in the attached figures. However, the results of the high-density LDS survey sampling smaller catchments above and below the post-mineral volcanic cover contacts were effective in outlining prospective target areas in the underlying package.

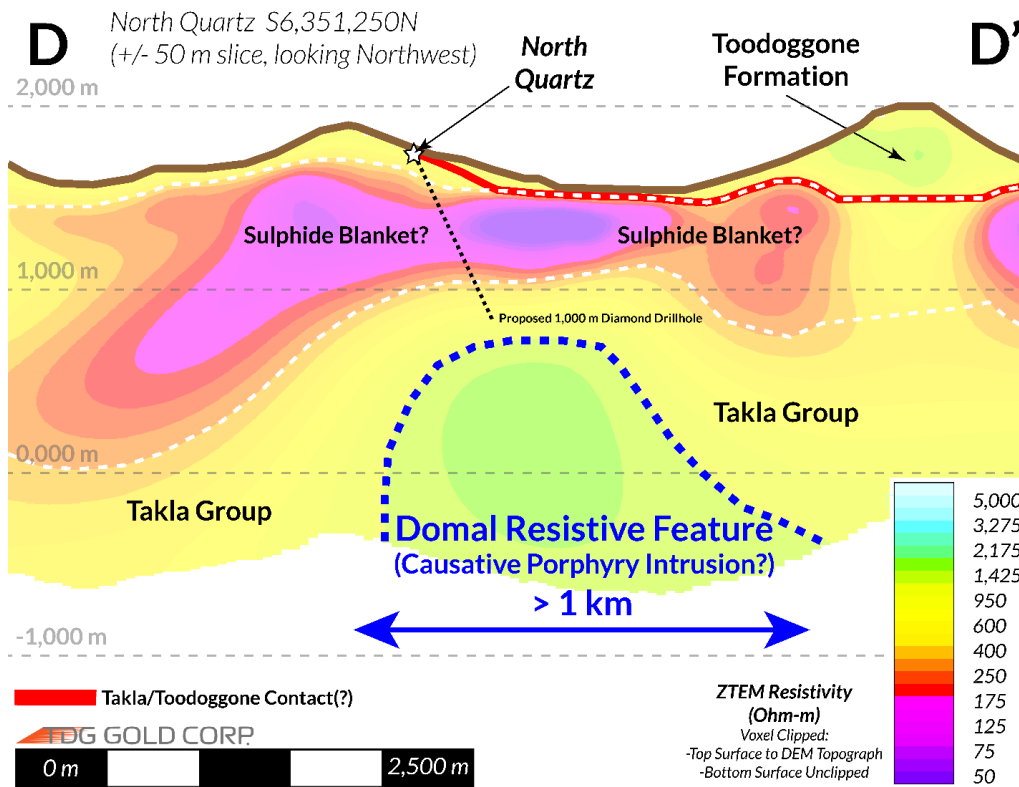
### North Quartz Target

After offseason data compilation and analysis, TDG provided a second targeting update focused on the copper-gold-molybdenum (“Cu-Au-Mo”) porphyry potential at the North Quartz target (Figure 9-73). North Quartz is located 4 km west of the Trident and is bounded by TDG’s 100% owned Drybrough target to the north and TDG’s former producing Baker Mine to the southwest (Figure 9-75). North Quartz historically had only shallow drillholes, all reporting appreciable base metal concentrations. In 2023, Drill information combined with historical and modern soil geochemistry and geophysics (9-74) to vector towards a potential porphyry target located beneath North Quartz in a road accessible target area covering at least 5 km<sup>2</sup>.



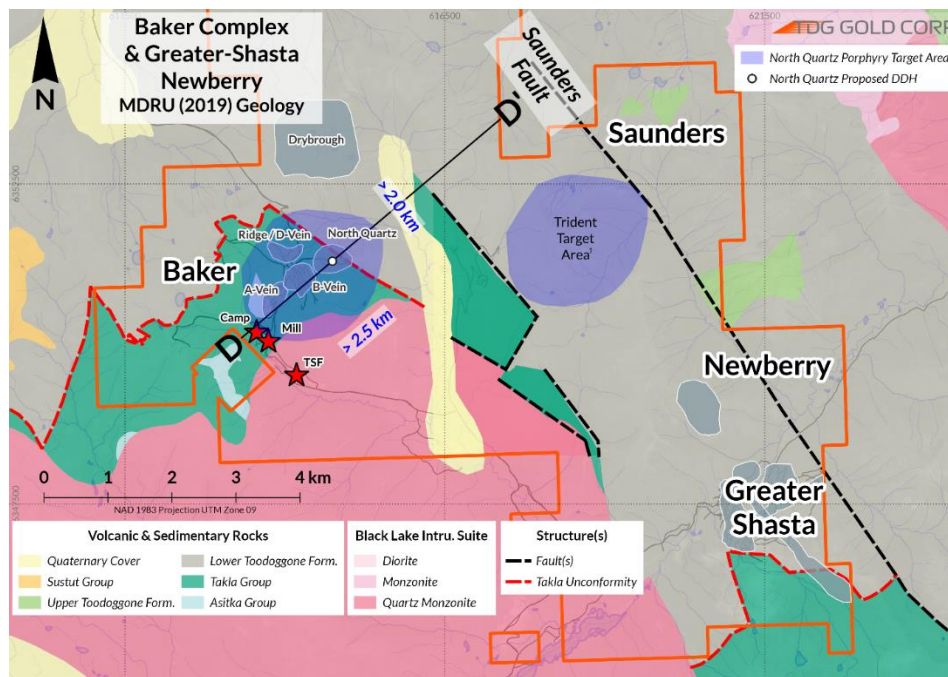
(Source: TDG Gold, 2024)

**Figure 9-73: View of North Quartz Prospect, View looking west-northwest**



(Source: TDG Gold, 2024)

**Figure 9-74: ZTEM Cross Section through North Quartz target**



(Source: TDG Gold, 2024)

**Figure 9-75: North Quartz in relation to Saunders and Trident Targets at Greater Shasta-Newberry**

The North Quartz target area was discovered in the early 1970s and had several generations of ground-based prospecting and sampling campaigns outlining anomalous copper-molybdenum-lead-zinc-gold-silver (“Cu-Mo-Pb-Zn-Au-Ag”) concentrations in soil samples, stream sediment samples draining the area, trenches, and shallow drillholes. At least 7 precious and base metal rich quartz-sulphide veins were identified with orientations orthogonal to the Baker A- and B-Veins, suggesting the mineralization may be related, but not directly to the historical Baker Mine. Historical soils from the North Quartz target area outline an open ended 400 m x 450 m multi-element soil anomaly defined by Cu > 100 part per million (“ppm”) (ranging from 120-375 ppm); Pb > 100 ppm (ranging from 60-1320 ppm); Zn > 100 ppm (ranging from 100-255 ppm); Mo > 3 ppm (ranging from 3-300 ppm); Ag > 1.5 ppm (ranging from 1.5-9 ppm) and Au > 20 parts per billion (“ppb”) (ranging from 20-180 ppb).

Historical drilling included completion of 2,930 metres in 28 shallow holes of which only 23 % was assayed (assayed core / total hole length) for precious metals and an even smaller amount for base metals.

The Saunders area, Trident target, and North Quartz are high priority targets for the upcoming 2025 exploration season.

## 9.6 Mets Exploration Programs

The Mets exploration area consists of a single Mining Lease and 3 placer claims, totalling 638 hectares. Mets is located 23 kilometres by road from TDG’s Baker camp. Mets has seen previous drilling and historic underground development but has never been put into production.

### 9.6.1 2021 Mets Exploration Season

In 2021, TDG completed a ground-based magnetometer survey consisting of 25 line-km that has highlighted several trends. TDG also completed geological grab sampling over historical collar locations.

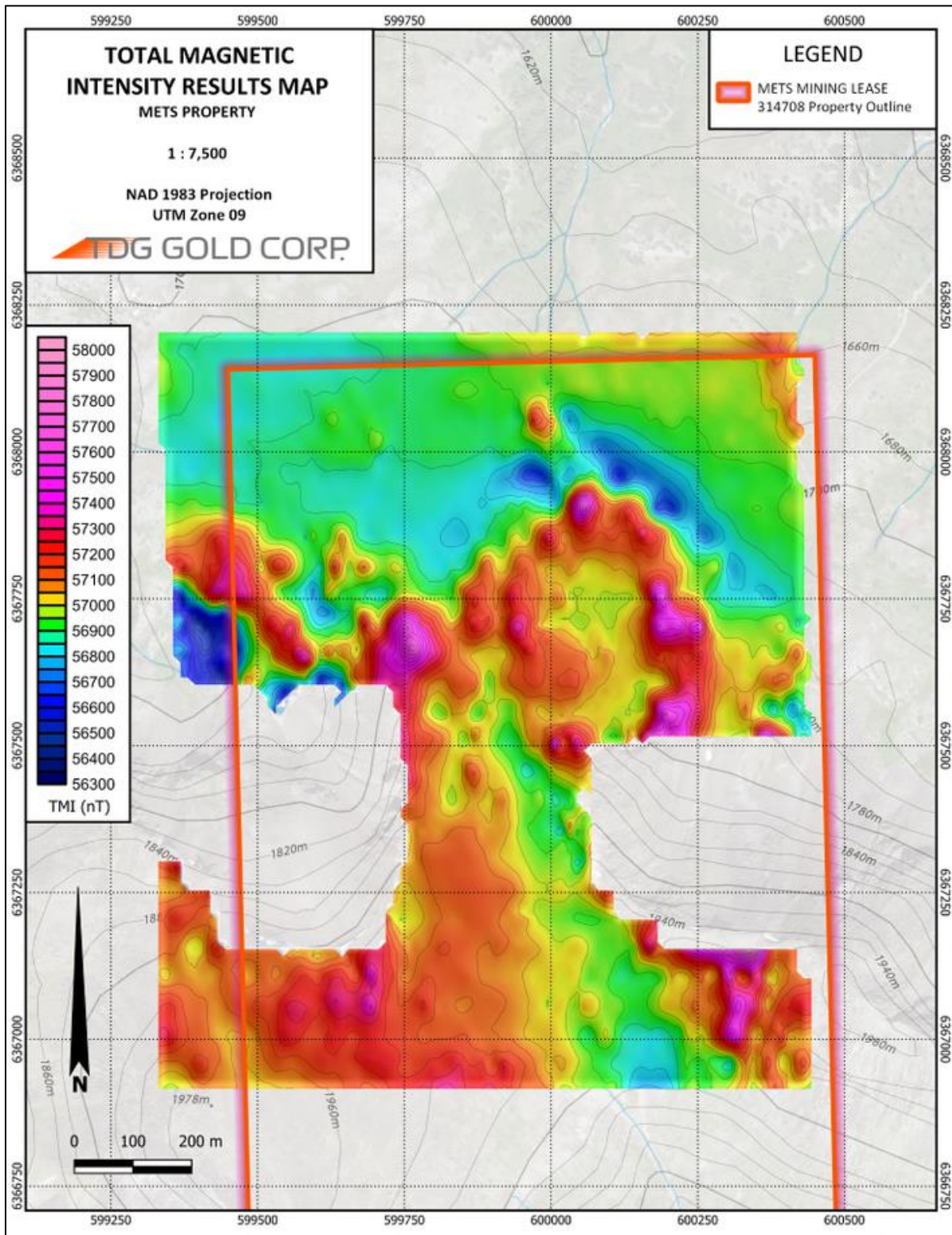


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### **Ground Magnetometer Survey**

Using GEMS Overhauser 19W magnetometer units, a total of 25 line-km of ground-based magnetometer surveys were completed in 2021 on Mets. Magnetic data imagery highlighted several trends, interpreted by Company geologists to coincide with the historically trenched and drilled tested mineralization trends. The magnetic survey was conducted using GSM-19W Overhauser “Walking” magnetometers and a stationary GSM-19T Proton “Base Station” unit. “Walking” magnetometers recorded in situ magnetic field intensity while the “Base Station” recorded diurnal variations in the regional magnetic field during the survey. Positioning data was provided by handheld Garmin GPS64 units which were carried by each instrument operator in the field. Following the completion of the survey, a set of corrections and Quality Assurance / Quality Control (“QA/QC”) procedures were applied to the magnetic data, including diurnal correction, low-pass noise reduction, and individual operator leveling.

After this QA/QC process was completed, the data was interpolated using industry-standard Golden Surfer 12 software. After interpolation, high-resolution Total Magnetic Intensity (“TMI”) imagery was exported as a georeferenced TIFF image with matching contour shapefile.



(Source: TDG Gold, 2023)

**Figure 9-76: Mets Magnetic Survey Results Map**

### Rock Sampling Program

Select grab sampling was completed by Company geologists while completing general reconnaissance of the historically producing Mets property. Samples were selected based on the proximity to historical trenches and drillhole collars, targeting the quartz ± quartz-barite veins.

Data for geological field samples include mineralogy, texture, alteration, and/or structure, and is located using a Garmin GPS64. Field notes are recorded in a field book and/or tablet computer. A rock hammer is used to separate the sample from its exposure and placed into a polyurethane bag with unique sample tag is place in the respective bag and secured using a zip-tie and subsequently placed in security sealed rice bags. The respective samples are then shipped as a batch to a third-party lab.

Highlights of the results include grab samples yielding 32.90 g/t Au and 27.61 g/t Au.

**Table 9-7: Mets Grab Sampling Locations With Au Ag Results**

Sample ID	Easting	Northing	Au (g/t)	Ag (g/t)
C00125601	600172	6367207	<0.005	0.20
C00125602	600110	6367269	<0.005	1.85
C00125603	600056	6367432	<b>32.90</b>	1.74
C00125604	599951	6367497	0.050	0.48
C00125605	599965	6367521	0.040	0.23
C00125606	599976	6367540	<0.005	0.15
C00125607	600033	6367549	<0.005	0.14
C00125608	600051	6367518	<0.005	0.13
C00125609	600058	6367494	<0.005	0.62
C00125610	600107	6367556	<0.005	0.59
C00125262	600053	6367326	<b>4.25</b>	0.42
C00125263	600064	6367362	<b>27.61</b>	<b>7.25</b>

QA/QC Samples were submitted to SGS Canada’s (“SGS”) laboratory facility in Burnaby, B.C., following a chain of shipping custody from TDG to SGS, for preparation and analysis. The SGS facility is accredited to the ISO/IEC 17025 standard for gold assays, and all analytical methods include internal quality control materials at set frequencies with established data acceptance criteria. As a result of SGS’ rigorous internal QA/QC protocols, TDG did not submit external (blind) QA/QC materials, using a ‘fit for purpose’ approach with the analytical data. Samples were analyzed following the procedures on the SGS website, in the analytical guide.

### 9.6.2 2023 Mets Exploration Drill Program

TDG completed a diamond drill program at the Mets exploration area in 2023 totaling 428.4 meters. Three drillholes (MT23-01, 02, 03) were completed to verify historic intercepts at the Mets A-Zone and two additional drillholes (MT23-04, 05) were completed at the A-Zone as infill along potential projected trends between historic intercepts. Diamond drilling was completed over five test holes, and all drillholes returned strongly anomalous values in gold.

Konaleen Drilling Ltd., of Smithers, BC was commissioned to complete the 2023 drill program. The diamond drill, a Zinex Mining Corp. A5, was mobilized to site on August 17<sup>th</sup>, 2023, with drilling completed by September 3<sup>rd</sup> 2023. The collars were located and recorded using Global Positioning System (“GPS”) Real Time Kinematics (“RTK”) system with high precision.



(Source: TDG Gold, 2023)

**Figure 9-77: 2023 Mets Drilling at DDH MT23-001 Collar**

Industry standard drilling survey practices were established from diamond drill site supervision through to core processing and chain of custody sampling. The reader is referred to the respective drill contractors for best practices regarding the drilling aspect of the survey. Once the drilled core was out of the ground and in a core box, the core was safely transported to Baker Camp's core logging facility where it was geotechnically and geologically logged. Both respective logs are essential in the quality assurance and quality control (QA/QC) process. The geotechnical log, in general, records the recovery and recovery quality designation (RQD).

The geological log records the observable properties of the drill core sample, including lithology, texture, alteration, mineralization, and structure. Samples were mainly taken as 2 m intervals. Samples were typically not taken across major lithological boundaries. Sample locations and associated sample numbers were marked on the core using a red lumber crayon (or similar tool). Pre-numbered, three-part, sample analytical tags were filled out with appropriate information (Project, Drillhole Number, Sample Interval, and Date) and stapled into the core boxes at the start of each sample. All recovered drill core was sampled, from the top to bottom of the drillhole.

During the sampling process, HQ drill core was split in half using a mechanical core splitter. Sample intervals were split in half, with one half being placed in a poly-ore bag, pre-labelled with the associated sample number. The corresponding sample number tag was placed in the bag with the sample, with one remaining sample tag being left stapled to the core box at the appropriate location. The remaining half of split drill core was placed back into the core box (except in the case for field duplicates, where applicable).

Care was taken to ensure that the same half of the core was sampled for an entire drillhole to maintain sample consistency. Drill core samples were placed in zip-tie sealed poly-ore bags directly after cutting, supervised by the TDG direct staff or contractors. Samples were then placed in labeled polyfiber (rice) bags and security sealed. Sample bags were sealed with security numbered zip-ties and set aside for bagging in sealed polyfiber (rice) bags. These rice bags were delivered by a contractor of the TDG to Bandstra Transportation systems (Prince George) and delivered directly to the MSA Labs in Langley BC, following chain of custody procedures.

Laboratory staff inspected all bags and reported any deficiencies to the TDG staff. No deficiencies were reported. TDG analyzed the entire length of drill core for Mets drillholes. Samples were prepared and analyzed following procedures: CRU-240, SPL-415, PPU-510 for sample preparation, FAS-221 for Au and IMS-235 for Ag and trace elements. Overlimit concentrations (> 20 ppm Au) of precious metals were analyzed (where applicable) by MSC-550. Information about methodology can be found on the MSA Labs website, in the analytical guide.

TDG verified the core sample results using an industry standard QA/QC program that involved inserting Certified Reference Materials (“CRM”), blank material (‘Blanks’) and field duplicates. The QA/QC procedures are designed to test for cross sample contamination, instrumental drift and/or reproducibility of results (i.e., accuracy and precision). Although the total number of QA/QC materials (8.2 %, when compared to primary sample frequency) is slightly lower than industry standard (12.5 %) for logistical considerations, TDG deemed the QA/QC program ‘fit for purpose’.

**Table 9-8: 2023 Mets Drill Program Collar Location and Hole Parameters**

Hole ID	Prospect	Location			Orientation		Depth (m)	Core Size	Drilling	
		Easting	Northing	Elev (m)	Azimuth	Dip			Start	End
MT23-001	A-Zone	600049	6367333	1919	70	-50	67.5	HQ	2023-08-17	2023-08-20
MT23-002	A-Zone	600038	6367301	1928	70	-50	82.6	HQ	2023-08-21	2023-08-23
MT23-003	A-Zone	599983	6367399	1888	70	-50	136.7	HQ	2023-08-24	2023-08-28
MT23-004	A-Zone	600049	6367360	1909	70	-50	67.5	HQ	2023-08-28	2023-08-30
MT23-005	A-Zone	600018	6367400	1891	40	-60	74.1	HQ	2023-09-01	2023-09-03

Selected results from the 2023 Mets exploration drilling program are presented below.

**MT23-001** was completed in the Mets A-Zone and intercepted:

- 11.1 g/t Au over 20.0 metres from 19.0 m downhole depth, including 21.3 g/t Au over 7.0 m from 24.0 m downhole depth



(Source: TDG Gold, 2023)

**Figure 9-78: Drill core photo of MT23-001 which graded 21.30 g/t Au over 7.0 m at 24.0 m depth**

**MT23-002** was completed in the Mets A-Zone and intersected:

- 5.1 g/t Au over 8.6 m from 45.0 m downhole depth, using a cut off grade of 3.0 g/t Au.

**MT23-003** was completed in the Mets A-Zone and intersected:

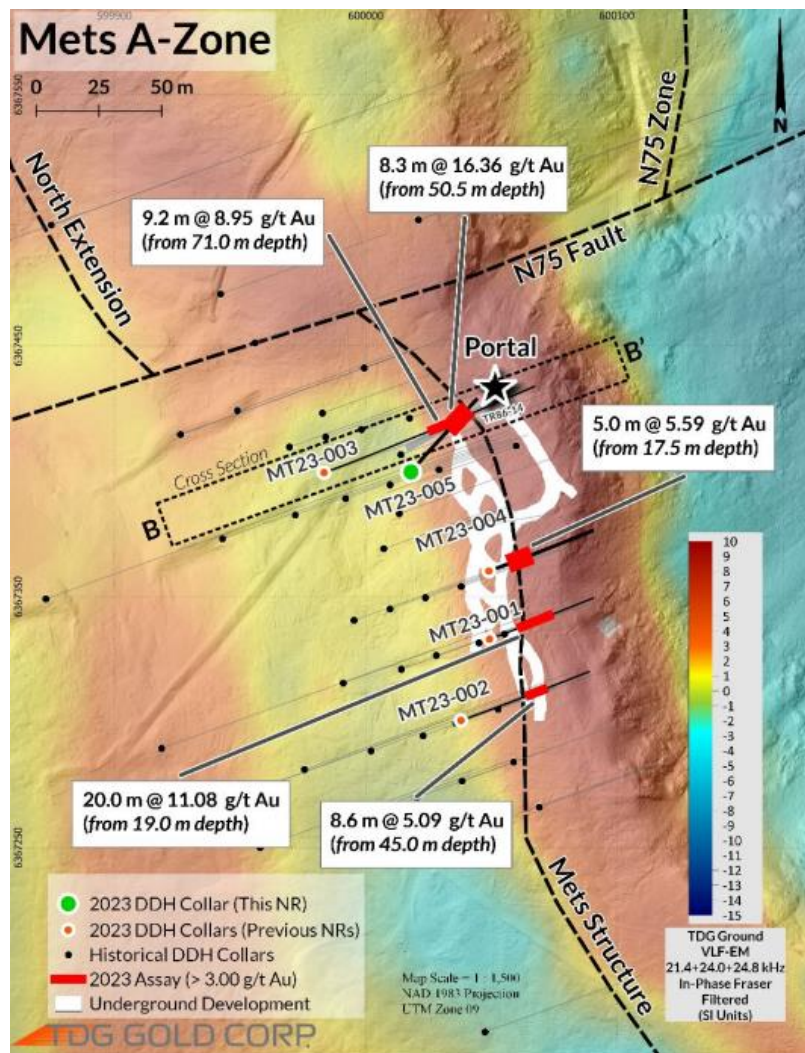
- 8.95 g/t Au over 9.2 m from 71.0 m downhole depth using a cut-off grade 3.0 g/t Au.

**MT23-004** was completed in the Mets A-Zone (infill) and intersected:

- 5.59 g/t Au over 5.0 m from 17.5 m downhole depth, using a cut off grade of 3.0 g/t Au.

**MT23-005** was completed in the Mets A-Zone and intersected:

- 16.36 g/t Au over 8.3 m from 50.5 m downhole depth using a cut-off grade of 3.0 g/t Au.



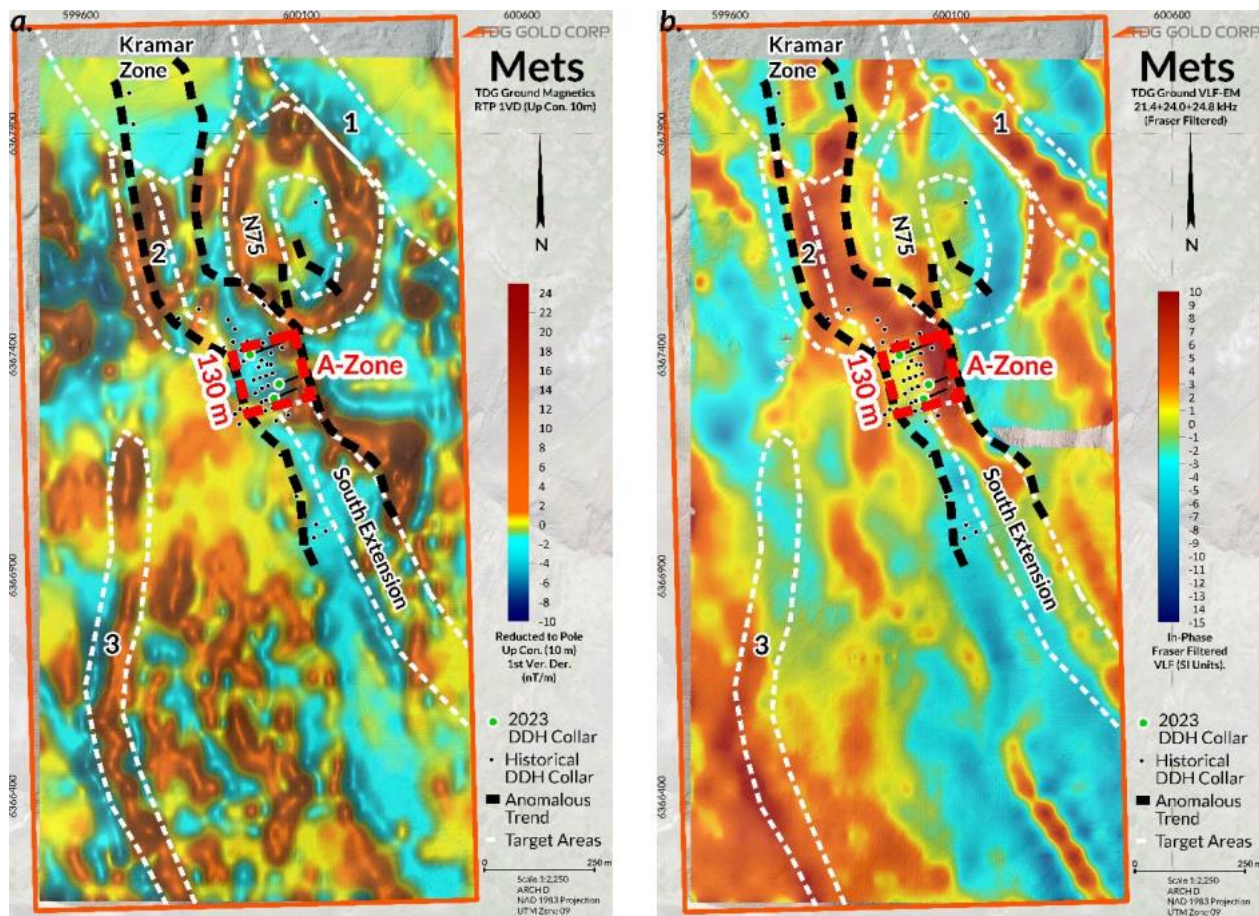
(Source: TDG Gold, 2023)

**Figure 9-79: 2023 Mets Drilling Program Plan Map with VLF-EM Results**

Concurrent with the 2023 drilling program, TDG also completed geophysical surveys in 2023 at the Mets mining lease. Ground Magnetic and Very Low Frequency Electromagnetic (“VLF-EM”) surveys were completed covering the entire Mets mining lease (Figure 9-79).

The new geophysical data identifies the known high-grade A-Zone at Mets within an anomalous trend, traced over 1,300 metres as illustrated in Figure 9-80. Furthermore, the surveys provide evidence that limited historical drilling within this trend appears to have been located too distal and/or too shallow to intersect the interpreted geophysical anomalies.

TDG’s geophysics has also identified three new target areas on Mets where there has been no historical drilling. In total, TDG has now identified 3,850 m of prospective trends within the Mets mining lease. Target generation will continue over the winter, with the aim of prioritising targets for a larger diamond drill program in the future.

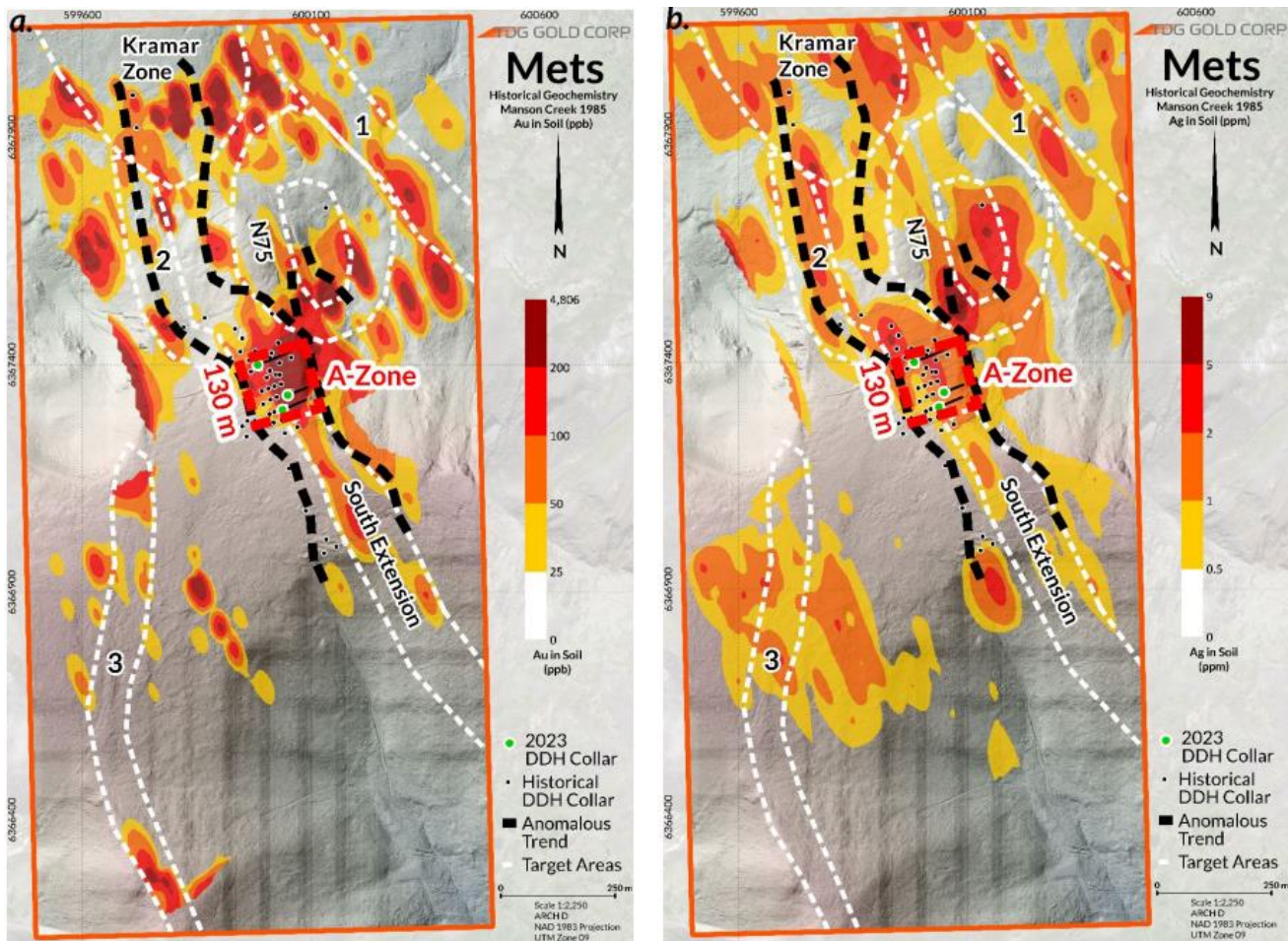


(Source: TDG Gold, 2023)

**Figure 9-80: 2023 Mets Combined TMI – VLF-EM Geophysics Results with A-Zone Extension**

The most prominent feature from the survey is a pronounced multi-kilometer long, open ended Total Magnetic Intensity (TMI) low that is coincident with the A-Zone mineralized area. District-scale airborne magnetic surveys conducted in the past suggests that this feature is part of a much more extensive north-northwest magnetic feature trending through and beyond the center of the Mets prospect - one of several similar features crossing the mining lease. Additional linear VLF conductive features have been identified coincident with the major north-northwest magnetic feature which could be an important orientation to control on mineralized structures. Figure 9-81 illustrates these features.

Very Low Frequency electromagnetic geophysical surveys are useful tools for identifying magnetic and conductive geophysical features that can correspond to faults, structures and geological contacts that may host appreciable precious and/or base metal mineralization. TDG conducted a high resolution, property-wide Mag-VLF survey over the Mets mining lease to characterize the geophysical signatures of the known high-grade Au mineralization around the A-Zone, and to use that signature as a tool to explore across the entire Mets property.



(Source: TDG Gold, 2023)

**Figure 9-81: Gridded Mets Historic Au and Ag in Soil results projected over 2023 Mag and VLF-EM target areas**

**Target #1 – Northeast Mets (650 m long)**

Target 1 is located approximately 500 m northeast of the Mets A-Zone and extends beyond the limits of the survey grid in this area, having a minimum potential length on Mets of approximately 650 m. This target is defined by a distinctive linear TMI low, strong conductive VLF feature and corresponds to a linear historical Au and Ag in soils anomaly. These features are very similar to the high-grade, drill-defined portion of the A-Zone and there has been no known drilling or trenching along this target.

**Target #2 – North A-Zone Extension (550 m strike length)**

Located approximately 300 m west-northwest of the Mets A-Zone, this feature may represent a faulted offset of the A-Zone, displaced to the west. This feature extends at least 550 m and consists of a distinctive linear TMI low, strong conductive VLF response, and within a broad soil anomaly connected to the A-Zone. This target had very limited drilling in the northern flanks, but the area with the strong geophysical response has not been drilled to date.

**Target #3 – Mets Southwest (1,000 m strike length)**

This feature lies approximately 400 m southwest of, and is subparallel to, the A-Zone and consists of a 1 km long, linear TMI high and corresponding low, coincident strong VLF response and a large Ag-dominant Au-subordinate soil anomaly. This feature has never been drill tested.



## 10 Drilling

### 10.1 Drilling - Shasta

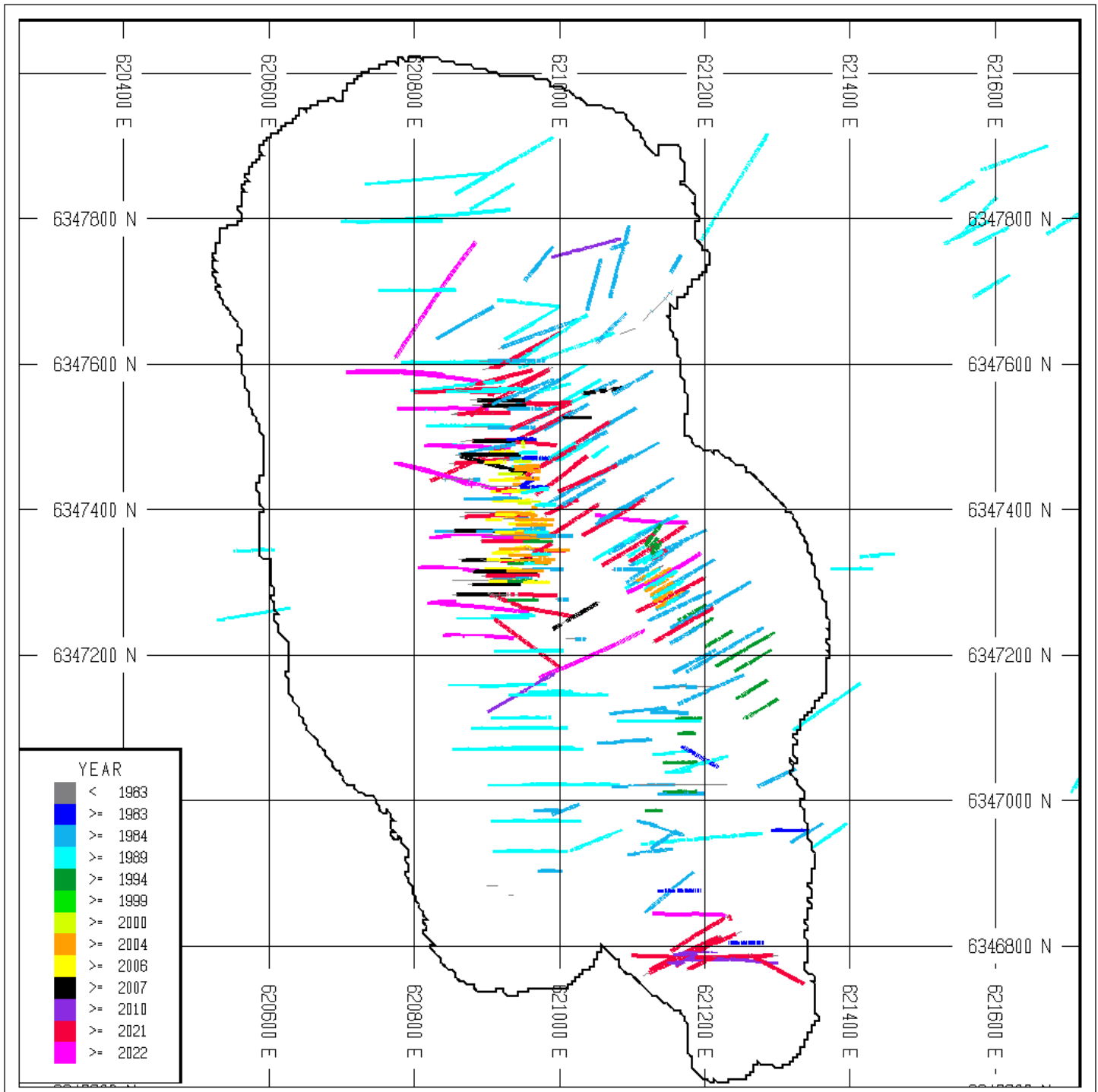
The Shasta diamond drilling database as provided to MMTS by TDG Gold represents the compilation of data produced by several different operators over a period of close to 40 years and 17 drill programs. These are listed in Table 10-1 along with the number of drillholes within the resource by year and the actual number of sample intervals utilized for this current resource estimation.

All data acquired before 2021 is considered historic. For several historical drilling campaigns between 1988 and 2007 MMTS and TDG Gold were not able to locate ARIS Reports or other original documentation to perform certificate checks on the assays for these years. This data has been validated as discussed below.

**Table 10-1: Total Drillhole Database - Shasta**

Year	Drillhole Database				Source
	# Drillholes	Total Length (m)	Assayed Length (m)	% Assayed	
1983	9	673	513.9	76%	Aris Report 11715
1984	18	1,223	1,223	100%	PF861856 (Project Files)
1987	24	2,383	1,422	60%	<a href="#">Aris Reports 17519/16698</a>
1988	31	3,665	1571.7	43%	N/A
1989	63	6,087	2,777	46%	N/A
1990	27	4745.8	1806.2	38%	Aris Report 20821
1991	13	978.42	143.12	15%	N/A
1994	20	1442.2	298.01	21%	N/A
1995	4	243.29	26.52	11%	N/A
1998	9	298.75	169.19	57%	Aris Report 26004A
2003	8	262.73	59.29	23%	N/A
2004	27	1,486	467.04	31%	Aris Report 27653A
2005	6	162.8	64.64	40%	N/A
2006	20	1,519	421.4	28%	Aris Report 29168
2007	19	1,583	1582.72	100%	2024 Certificates
2010	12	890	222.8	25%	2024 Certificates
2021	55	7,404	7,394	100%	2021 SGS Certificates
2022	20	5,413	4,749	88%	2022 Certificates
<b>Total</b>	<b>385</b>	<b>40,458</b>	<b>24,911</b>	<b>62%</b>	

Figure 10-1 is a plan map of the drilling on the Shasta deposit showing the year drilled.



(Source: MMTS, 2025)

**Figure 10-1: Plan view of Shasta Drillholes and Year Drilled**

The 2021 drilling campaign is highlighted by several strongly Au and Ag mineralized intervals, SH21-040B for instance intercepted 9.8g/t Au and 150g/t Ag over 17m and SH21-022 intercepted 13m of 7.4g/t Au and 750g/t Ag. Table 10-2 lists significant intercepts from the 2021 drill program. The AuEq formula used for the table is  $Au = Au + Ag/80$ , which differs slightly from the AuEq equation used for the resource estimate because prices have changed, and recoveries

have not been accounted for in this table. The tables and AuEq grades match the News Releases (NRs) previously disclosed.

TDG Gold re-assayed 326 samples from pre-existing core from the 2007 drilling campaign completed by Sable Resources Ltd. However, the report of that year was not made available, the collar locations of the holes could not be confirmed to date and as such the data has been excluded from the resource estimation.

**Table 10-2: Selected 2021 Significant Intercepts as disclosed in News Releases**

Hole	From (m)	To (m)	Length (m)*	Au g/t	Ag g/t	AuEq g/t
SH21-001	19.0	29.0	10.0	0.32	32.35	0.72
SH21-003	55.0	78.5	23.5	0.61	56.51	1.28
SH21-003	90.5	103.5	13.0	0.82	61.19	1.59
SH21-004	63.5	65.0	1.5	1.33	5.63	1.40
SH21-004	69.0	102.5	33.5	1.03	40.66	1.53
including	69.0	73.5	4.5	6.45	224.21	9.26
SH21-005	62.0	68.0	6.0	2.25	40.44	2.76
SH21-005	92.0	121.0	29.0	1.78	89.42	2.89
including	95.0	99.0	4.0	8.18	396.32	13.14
SH21-006	27.5	123.0	95.5	0.98	29.11	1.35
SH21-007	67.6	106.0	38.4	0.71	31.91	1.11
SH21-008	58.0	121.3	63.3	2.03	68.79	2.89
including	72.0	79.0	7.0	7.90	219.75	10.64
SH21-012	53.2	56.2	3.0	1.38	48.02	1.98
SH21-013	75.0	83.0	8.0	0.43	23.35	0.72
SH21-014	56.5	58.0	1.5	0.65	38.40	1.13
SH21-015	22.9	29.0	6.1	6.76	4.75	6.82
and	92.1	93.5	1.4	5.78	208.00	8.38
SH21-016	55.7	129.6	74.0	0.49	8.20	0.59
SH21-017	35.2	94.0	58.9	0.70	38.72	1.18
and	109.5	132.0	22.5	0.42	19.84	0.66
SH21-018	35.5	37.0	1.5	0.37	0.46	0.38
SH21-019	39.5	43.5	4.0	0.62	25.33	0.93
SH21-020	132.5	134.0	1.5	0.19	47.23	0.78
SH21-021	18.5	162.4	143.9	0.33	9.68	0.45
incl	61.0	62.5	1.5	3.78	161.00	5.79
SH21-022	15.1	16.5	1.4	4.42	193.00	6.83
and	100.3	116.5	16.2	7.22	816.67	17.42
including	102.0	103.5	1.5	10.16	2035.00	35.60
	113.5	115.0	1.5	50.17	4871.00	111.06
SH21-023	15.0	104.0	89.0	0.27	9.03	0.38
SH21-024	25.9	27.4	1.5	0.66	50.65	1.29
SH21-025	60.8	134.5	73.7	1.06	29.46	1.43
including	60.8	82.5	21.7	2.62	75.21	3.56
SH21-026	33.5	227.5	194.0	1.10	25.44	1.41
including	122.6	142.0	19.4	2.03	41.22	2.55
including	124.0	125.5	1.5	21.31	359.00	25.80
including	214.0	223.0	9.0	8.40	25.36	8.72
including	217.0	218.5	1.5	39.63	53.13	40.29

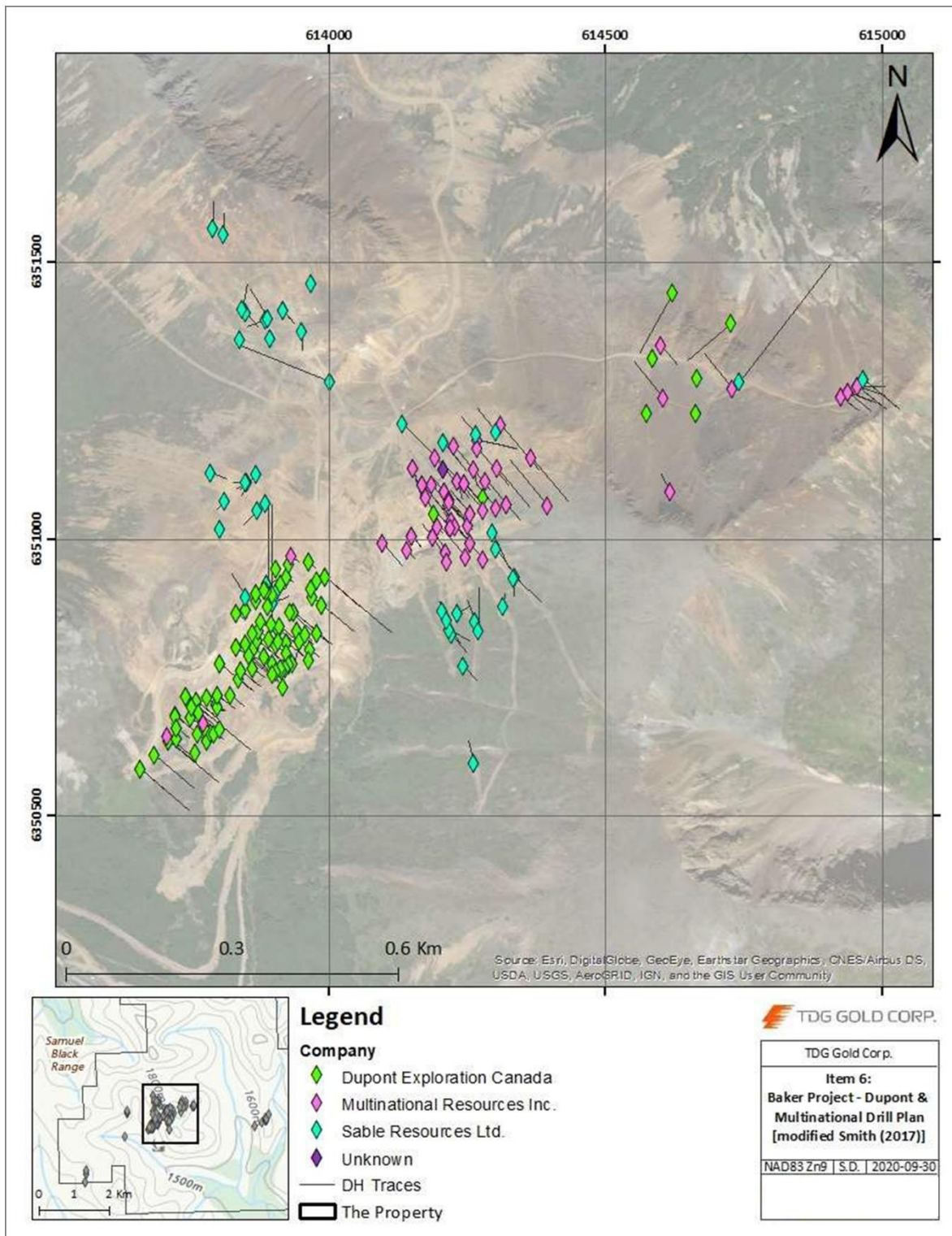
Hole	From (m)	To (m)	Length (m)*	Au g/t	Ag g/t	AuEq g/t
SH21-027	36.7	50.0	13.3	1.71	39.25	2.20
including	46.4	47.6	1.2	13.75	293.00	17.41
and	58.9	110.0	51.1	0.21	7.34	0.31
SH21-029	4.5	120.0	115.5	0.77	39.49	1.27
including	19.5	22.8	3.3	4.89	326.26	8.97
SH21-030	35.5	81.3	45.8	1.00	57.42	1.72
including	48.7	53.7	5.0	6.53	308.27	10.38
SH21-031	83.0	155.6	72.6	0.56	16.19	0.77
including	90.3	97.8	7.5	2.91	76.06	3.86
SH21-032	1.0	122.9	121.9	0.34	14.54	0.52
SH21-035	6.1	15.0	8.9	1.59	13.35	1.76
including	6.1	7.5	1.4	6.67	23.45	6.96
including	164.2	167.0	2.8	5.77	215.26	8.46
SH21-036	38.0	73.7	35.7	0.49	26.09	0.81
SH21-037	127.3	153.5	26.2	1.81	24.36	2.11
SH21-039	6.0	41.1	35.1	1.29	89.91	2.41
SH21-040	47.9	63.3	15.4	3.35	103.88	4.65
including	55.5	60.0	4.5	8.61	215.34	11.30
SH21-040B	50.7	127.0	76.3	3.33	51.47	3.97
including	59.0	93.0	34.0	7.19	104.53	8.49
SH21-044	51.5	133.6	82.1	0.35	16.99	0.56
including	51.5	67.5	16.0	1.26	46.26	1.84
including	54.6	59.1	4.5	2.57	75.97	3.52
SH21-045	7.7	53.0	45.3	0.65	23.85	0.94
including	19.8	27.0	7.2	1.27	70.18	2.15
including	37.5	53.0	15.5	1.08	29.79	1.46

## 10.2 Drilling - Baker

A summary of the previous drilling done at the Baker is provided in the table below. There are some historical years where not all drill intervals or assay records are available (ie. 1989, 1994 drill records at Baker are incomplete). Drilling from 1974-1984 concentrated on the "A" Vein, with drilling from 1986-1988 on the "B" Vein, as illustrated in Figure 10-2. Additional drilling by Sable Resource Ltd. focused on peripheral targets and showings known as Black Gossan, West Chapelle, "C" Vein, "D" Vein, Knob, Perry Mason, and the North Quartz zones, as illustrated in Figure 10-3. Of note is the low percentage of total drill length that has been assayed at Baker.

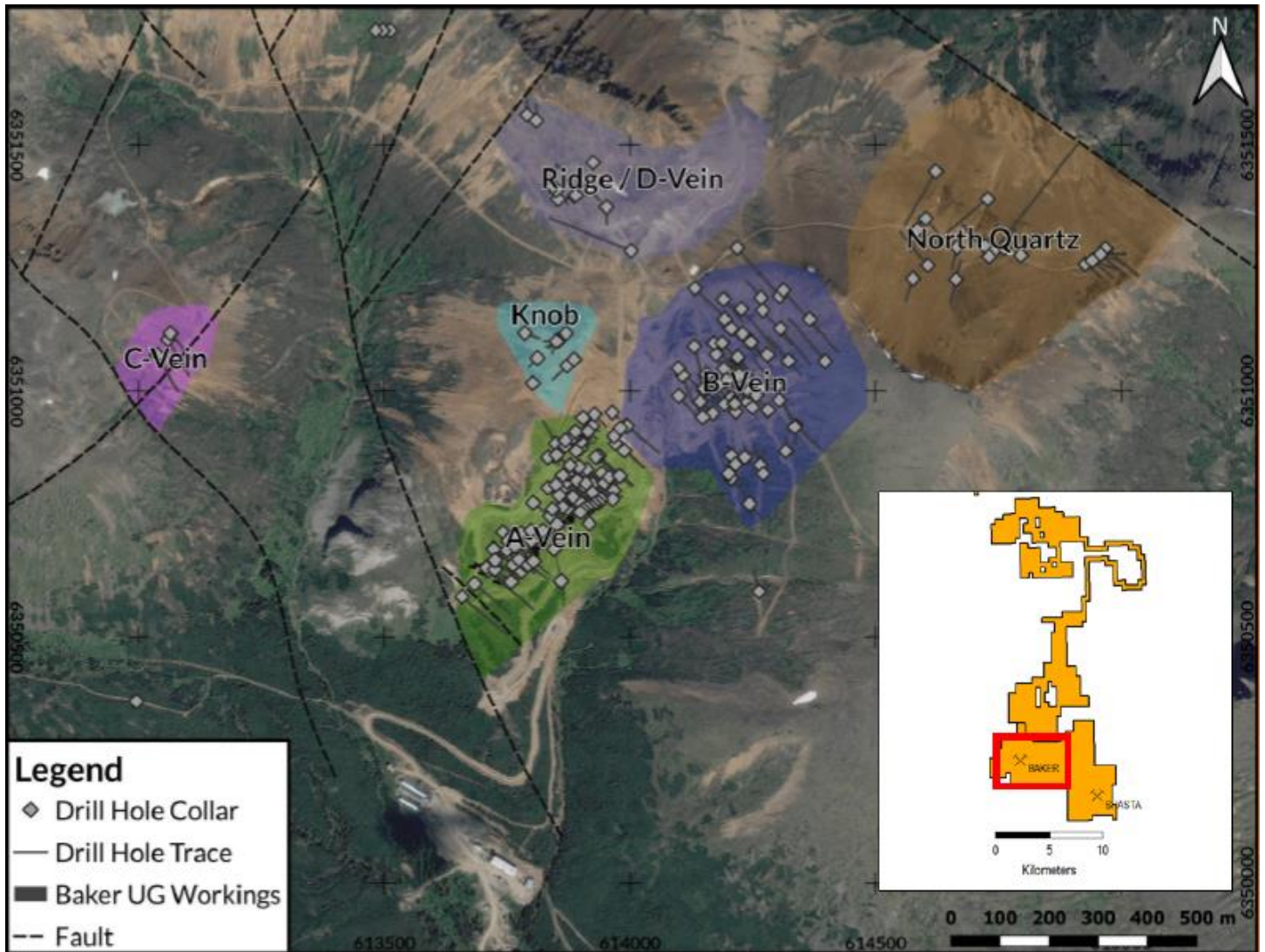
**Table 10-3: Historical Drill Program Details - Baker**

Year	Total for all the Baker Deposit			
	# Drillholes	Total Length (m)	Assayed Length (m)	% Assayed
1973	11	546	0	0%
1974	20	2,306	326	14%
1975	24	2,641	225	9%
1976	20	820	198	24%
1979	38	2,988	234	8%
1981	3	458	49	11%
1982	23	1,322	81	6%
1983	34	2,095	102	5%
1985	7	240	0	0%
1986	23	2,034	375	18%
1987	36	4,739	598	13%
1988	24	2,272	357	16%
1989	1	unknown	0	na
1994	11	898	21	2%
1997	8	578	179	31%
1998	22	1,430	239	17%
1999	16	829	145	17%
2000	8	282	0	0%
2001	5	417	33	8%
2002	14	1,065	54	5%
2004	8	1,134	180	16%
2006	5	669	16	2%
2017	5	1,812	639	35%
<b>Total</b>	<b>366</b>	<b>31,575</b>	<b>4,053</b>	<b>13%</b>



(Source: TDG Gold, 2020)

**Figure 10-2: Plan view of Baker Drillholes by Owner**



(Source: TDG Gold, 2022)

**Figure 10-3: Plan view of Baker Drillholes by Showing**

Assay intervals of note are summarized in the table below for the “A” and “B” veins of the Baker deposit.

**Table 10-4: Selected Historical Significant Intercepts – Baker**

"A" Vein Intercepts				
DHID	From (m)	Length (m)	Au (g/t)	Ag (g/t)
DD74-01	53	4.7	1.8	14
	69	5.2	0.28	7
DD74-10	70	7.6	32	704
	including	3.7	66	1450
DD74-13	56	9.1	13	105
	including	5.9	20	151
S83-04	19	11	1.5	81
	including	3.5	2.5	129
M88-19	including	3.7	1.8	117
	42	7.6	1.6	23
	including	4.4	2.4	38
"B" Vein Intercepts				
DHID	From (m)	Length (m)	Au (g/t)	Ag (g/t)
DD86-01	42	3.3	0.9	2
	47	3.8	0.7	0.3
	66	3.1	2.2	175
DD86-10	97	3.6	6.9	18
DD86-14	47	10.4	6.6	101
	including	4.5	13.7	227
DD86-19	39	16.8	14.6	28
DD86-23	33	8.8	31	392

### 10.3 Drilling – Oxide Peak

In 1987, five diamond drillholes totaling a length of 605.02 m were completed by Lacana Ex. targeting a fault zone with intense argillic alteration (Johnston, 1987). Drilling identified quartz veins and silicified volcanics with frequent chalcopyrite, sphalerite, and lesser galena, molybdenite, pyrite and scheelite (Johnston, 1987). Assays did not recognise any significant gold or silver values (Johnston, 1987).

In 2007, a total of 914 metres over seven diamond drillholes within the Saunders prospect and 903.15 metres over two holes on the Som showing was completed (Dawson, 2008).

In 2021 two holes were drilled for 1,029m of diamond drilling. OXP21-01 intersected 4.11g/t Ag over 3.36m at the end of the drillhole (510m downhole depth) at the Drybrough target which was delineated by the airborne magnetic and radiometric survey flow in in August/September 2021.

### 10.4 Drilling – Mets

Historical drilling at Mets is summarized in Table 10-5, with a plan map of drillholes illustrated in Figure 10-4.



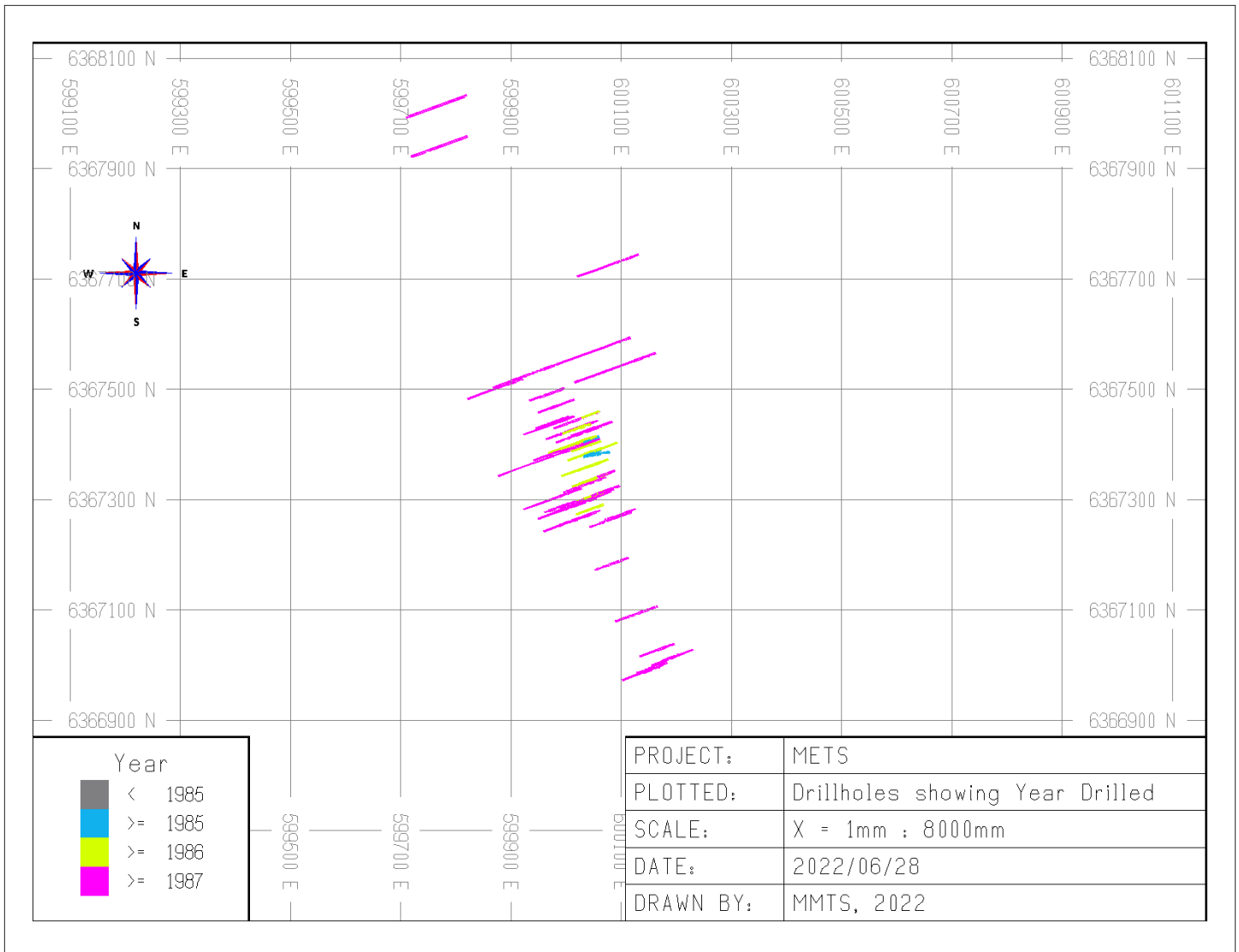
**Table 10-5: Historical Drill Program Details – Mets**

Year	Total for all the Mets Deposit			
	# Drillholes	Total Length (m)	Assayed Length (m)	% Assayed
1985	4	231	120	52%
1986	20	1,652	448	27%
1987	40	6,061	1,641	27%
<b>Total</b>	<b>64</b>	<b>7,944</b>	<b>2,208</b>	<b>28%</b>

Assay intervals of note are summarized in the table below for the Mets deposit.

**Table 10-6: Selected Historical Significant Intercepts – Mets**

Mets				
DHID	From (m)	Length (m)	Au (g/t)	Ag (g/t)
MT87-55	53	46.4	3.57	2.36
	including	11.8	13.93	2
MT86-05	53	42.4	3.52	2.27
MT86-08	22	26	9.52	1.92
	including	17.52	13.97	1.28
MT87-31	86	7	1.34	1.05
MT87-50	163	25	0.6	2.27
	including	2.3	5.92	3.23



**Figure 10-4: Plan View of Mets Drillholes and Year Drilled**

## **11 Sample Preparation, Analysis and Security**

2021 and 2022 drill core data summarized in this section and utilized for Resource Estimation at Shasta has been collected by TDG Gold. The sample preparation, analyses and security procedures implemented by TDG Gold meet standard practices in most cases. Refinements to several protocols are required to achieve the best possible quality control (QC) of sampling. The data collected is of adequate quality and reliability to support the estimation of Mineral Resources to the level of Inferred Resources as presented in this report.

Substantial historical drill core data as collected by previous operators has been utilized for Resource Estimation and will be included in this section, where applicable. Descriptions and quantities of samples are limited to drilling within the immediate Shasta deposit resource area; various drilling outside of the deposit area are not considered relevant to this section.

TDG Gold has spent considerable time and effort in 2022 and 2023 to validate historical drill core results by re-sampling existing half core from holes drilled in 1987-1990 as well as 2007 and 2010. Only the 2007 and 2010 re-sampling results were used in the resource estimation because the integrity of sampling methods for earlier core is not considered to industry standard due to issues with core storage and completeness.

### **11.1 Drill Core Sample Preparation at Site**

For the 2021 and 2022 diamond drilling campaigns, HQ drill core was transported from the rig to the core preparation site at the Baker camp site. Geotechnical data (core recovery and RQD) was recorded by field assistants, geological core logging and sample interval selection was completed by qualified geologists. Sample intervals vary in length from 0.3m to 3m, honouring geological contacts, with an average sample length of 1.3m. To maximize sample precision in mineralized intervals, the geologist provided core cutting guidance by drawing a center line on the core to be sampled. A sample sheet was provided to the core cutter containing sample numbers and from-to intervals as well as field duplicate sample designations. In addition to the sheet, a professional sample tag booklet system was used, with a sample tag with hand-written from-to information attached to the box at each sample interval start, while a corresponding tag was placed in the sample bag along with the core sample. The sample tag books have been retained for future reference. Each core box was photographed both dry and wet before cutting.

TDG Gold collected half-core as primary sample while the other half of the core remained in the box for future examination and reference. The sampled half core was cut into quarter core for field duplicate sampling purposes (sampling precision) at regular intervals. A common 1.5m HQ half-core sample interval at Shasta generates about 5.6kg of material to send for analysis, while duplicate material averaged 2.77kg at the same core length.

Re-sampling of core from 35 historical drillholes was completed in 2021 and 2023. Relogging, resampling and assay program were handled via rigorous chain of custody, through sample collection, processing, and delivery to SGS in Burnaby (2021) or the ALS Global laboratory in either North Vancouver or Kamloops, B.C. The drill core was logged, photographed, and sampled at TDG's Baker Mine site and processed by geologists and technicians. The drill core selected for sampling was either: (i) already split from previous sampling (mechanized core splitter or rarely diamond saw) and sample intervals were utilized (where applicable) to follow along historical sampling intervals or (ii) intervals with no previous sampling were split using mechanical splitter. The drill core selected for sampling was and then placed in zip-tied polyurethane bags, then in security-sealed rice bags.

### **11.2 Drill Core Security**

A Chain of Custody form is used to track the samples once they leave the core facility at Baker. Only project level staff are involved with the selection and preparation of samples, using security tags and/or zip ties to seal rice bags which contain 2-5 samples at a time. Samples were transported from the Baker/Shasta site to Bandstra in Prince George, either

by TDG Gold personnel or a third-party freight contractor, with Bandstra delivering the samples directly to the SGS laboratory facilities in Burnaby, BC, or ALS Global in Kamloops or North Vancouver, BC. Remaining core is currently being stored in a locked-up and heated building at site, and lab rejects and pulps of the 2021-2023 programs have been returned from the respective labs to be stored at a secure facility.

### 11.3 Drill Core Sample Prep and Analysis at the Laboratory

TDG Gold contracted SGS Labs. to provide analytical services for all core samples taken in 2021, including re-sampling material of historical drill core from 2007. For the 2022 drilling campaign and the 2023 re-sampling project, TDG sent all core samples to ALS Canada Ltd. in Kamloops where the samples were prepped to pulp before they were sent on to be digested and analyzed at ALS’s North Vancouver facilities. Tailings samples were taken in 2024 and analyzed by Bureau Veritas (BV). A brief description of the methodology at BV is reported in chapter 11.6.

#### 11.3.1 Sample protocol at SGS

All 2021 samples have been prepared and analysed at SGS Labs. facilities in Burnaby, British Columbia. SGS Labs is independent of TDG Gold and is ISO 17025 accredited.

In general, all samples were analysed using the four-acid digestion (GE\_ICP40Q12) with a regular ICP finish for 19 elements and the ICP-MS finish for another 30 elements, including Ag. Au grade was generally determined using method GE\_FAI50V10, except for 381 samples for which GE\_FAI50V5 was used. Samples exceeding 10g/t Au within this group of 381 were re-run using fire assay with gravimetric finish (GO\_FAG37V or GO\_FAG50V), and no sample exceeded the 100g/t Au upper reporting limit of GE\_FAI50V10. Samples exceeding 100g/t Ag in GE\_ICP40Q12 have automatically been re-analysed using GO\_ICP42Q100 (higher analyte dilution to 100ml) or GO\_FAG37V.

Lab-internal quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~11%. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and duplicates if samples have been taken through the sample reduction process. Instrument calibration is performed for each batch or work order and calibration checks are analyzed within each analytical run.

The SGS method summaries are as follows:

Prep (G\_PRP): The received sample is weighed to obtain an initial weight, and dried, if received wet or if specified by the customer. The dried sample is crushed to 75% passing 2 mm using a Boyd Crusher. The crushed sample is split via a riffle splitter or Rotating Sample Divider (RSD) to divide the sample into a ~250g sub-sample for analysis and the remainder is stored as a reject. Pulverizing is performed using a vibratory mill and hardened chrome steel or agate ceramic (mortar and pestle) but may depend on the analysis requested and sample type. Samples are pulverized to 85% passing 0.075 mm (200 mesh). For internal quality control, SGS adheres to the parameters shown in Table 11-1.

**Table 11-1: SGS Internal Preparation Parameters**

Crushing / Pulverizing Parameters	Frequency	Quality control Requirements
Barren Wash	Between jobs or when equipment requires	ensure equipment is clean
Prep. Blank	At the start of the job	Monitor contamination with each job.
First Sample	At the start of every job, and every 50 samples	75% pass (crush); 85% pass (pulverizing)
Prep. Duplicate	~ 50 samples	First split at crush
Prep. Replicates	~ 50 samples	Sample aliquot taken at weighing from same pulp bag (after pulverization)

GO\_FAI50V10: Weighed representative samples (50g) are mixed with flux and fused using lead oxide at 1100°C, followed by cupellation of the resulting lead button. The bead is dissolved using HCl and HNO<sub>3</sub> and the resulting solution is submitted for analysis. The digested sample solution is analyzed by inductively coupled plasma Optical Emission Spectrometer (ICP-OES). The reporting limit for Au, Pt, and Pd is 0.01 g/t, with an upper reporting limit of 100 g/t for all 3 elements.

GE\_FAI50V5: essentially the equivalent to GO\_FAI50V10 but optimized for exploration samples instead of ore grade samples. Its overall lower dilution factor results in lower detection for Au compared to GO\_FAI50V10.

GO\_FAG50V (ore grade Au samples): Weighed (50g) representative samples are mixed with flux and fused using lead oxide at 1100°C, followed by cupellation of the resulting lead button. The bead is transferred into porcelain crucibles; silver is removed by heating gently with dilute HNO<sub>3</sub>. The amount of the analyte is determined using Gravimetric analysis on a micro balance. The lower reporting limit is 0.5 g/t.

GO\_FAG37V (ore grade Ag samples): Weighed representative samples are mixed with flux and fused using lead oxide at 1100°C, followed by cupellation of the resulting lead button. The bead is digested using 1:1 HNO<sub>3</sub> and HCl and the resulting solution is submitted for analysis. Any gold and/or silver in the sample is extracted into a lead button. The lead is removed by cupellation, resulting in the isolation of the gold and silver metals in a bead which can be measured gravimetrically. The concentration of gold is determined by atomic absorption spectrometry, while the silver is determined by difference and is corrected to a series of proofs to adjust for furnace losses. The method has a lower reporting limit of 10 g/t Ag.

GE\_ICM40Q12 (includes GE\_ICP40Q12): Weighed (0.2g) representative samples are digested with HCl, HNO<sub>3</sub>, HF and HClO<sub>4</sub> and heated until dry. The residue is then dissolved in HNO<sub>3</sub> and HCl. The digested sample solution is analyzed by inductively coupled plasma Mass Spectrometer (ICP-MS) and inductively coupled plasma Optical Emission Spectrometer (ICP-OES).

GO\_ICP42Q100 (ore grade Ag/Cu/As/Pb/Zn among others): 0.2g of ore grade samples are digested using HNO<sub>3</sub>, HCl, HF and HClO<sub>4</sub>. The digested sample solution is analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). Samples are analyzed against known calibration materials to provide quantitative analysis of the original sample.

### **11.3.2 Sample Protocol at ALS**

The received sample gets weighted and logged into the ALS global tracking system. All rock chip and drill core samples then get fine crushed to a target of 70% passing 2mm (CRU-31). This is standard procedure for any samples of which a representative split will be pulverized. A 1kg split of the crushed material gets pulverized to a target of 85% passing 75micron (PUL-32). The splitting is performed using a riffle splitter (SPL-21).

Au-ICP22: a prepared sample (50g) is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal doré bead. Dilute nitric acid is added to the doré bead to remove Ag, then hydrochloric acid is utilised to decompose the Au, with each step including heating via microwave oven. The digested solution is cooled, diluted to a final volume of 4 mL with de-mineralised water, and analysed by inductively coupled plasma atomic emission spectrometry against matrix-matched standards. Lower and upper detection limits are 0.001g/t and 10g/t, respectively.

Au-GRA22/Ag-GRA22: a prepared sample (50g) is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents to produce a lead button. The lead button containing the precious metals is cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed, and weighed as gold. Silver, if requested, is then determined by the difference in weights. Detection limits are 0.05g/t (lower) and 10,000g/t (upper).

Au-AA25: a prepared sample (30g) is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal doré bead. Dilute nitric acid is added to the doré bead to remove Ag, then hydrochloric acid is utilised to decompose the Au, with each step including heating via microwave oven. The digested solution is cooled, diluted to a final volume of 10 mL with de-mineralised water, and analysed by atomic absorption spectroscopy against matrix-matched standards. The lower detection limit is 0.01g/t and the upper limit is 100g/t.

ME-MS61: the prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analysed by a combination of inductively coupled plasma-atomic emission spectrometry (ICP-AES) and inductively coupled plasma-mass spectrometry with results corrected for spectral or isotopic interferences. The reporting range for Ag is 0.01-100g/t.

#### **11.4 Drill Core QA/QC Summary and Details**

TDG Gold's quality assurance (QA) protocol involved the use of standard practice procedures for sample collection as described above, supervised by experienced geologic staff during data collection. Quality control (QC) measures as implemented by the company included in-stream sample submittal of blind OREAS standard reference materials (CRM or STD) of appropriate Au and Ag grades, external blind blanks of different composition and fraction size, field duplicate sampling and pulp duplicate splits at the lab.

QA/QC performance was graphically tracked by TDG Gold's geologic staff, with a detailed review of the data by MMTS for this report. For the blanks, 5\* detection limit (LOD or DL) and 10\*LOD of the respective analysis methods for both Au and Ag were used as 'warning' and 'failure' thresholds for cross-sample contamination.

For the blind CRMs, +/-2 to +/-3 standard deviations (SD) from expected value (EV) as per certification (COA) were included in the control graphs to identify any single inaccurate results (outliers), as well as a variable moving average line to help determine bias, trend and overall accuracy of Au and Ag results. A process control chart for Au was maintained that graphed the EV-normalized performance of all CRMs over time which includes the analyses of the re-sampled core.

To monitor reproducibility of results during the sampling and preparation process, TDG Gold selected regular intervals within the sample stream for 2 types of sample duplication: field duplicates (FD) for core sampling precision and pulp duplicates (PD) for analytical precision. Pulp duplicates were requested in 2021 and in 2023 during resampling of historical core, but not for the 2022 drilling campaign. Field duplicate sampling on the other hand was not performed during the 2023 resampling campaign, but in 2021 and 2022. All pulp duplicate results are in addition to the lab-internal quality control pulp duplicates which have not been reviewed in detail for this report.

The duplicate data were plotted directly against the corresponding original samples, and a linear regression plus  $R^2$  was calculated to assess level of correlation and bias. Any strong outliers were reviewed for potential misclassification using the full suite of analytical results and the reported sample weight in relation to the recorded sample interval and the adjacent samples.

Check-assaying has not been included into the QA/QC protocols at Shasta to date.

Control sample insertion rates for 2021 to 2023 are shown in

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Table 11-2. The QA/QC data produced during re-sampling of 2007 core (2021 and 2023) and 2010 core (2023) is shown separately from the 2021 drill campaign data (2007 and 2010 columns). Also, the 2021 column includes the insertion counts of the blanks and standards used during Au re-analysis at SGS (marked with \*). 2023 re-sampling assay results of historical core (1987-1990) were not used in the resource estimations and is therefore not included here.

**Table 11-2: Control Sample Insertion Rate**

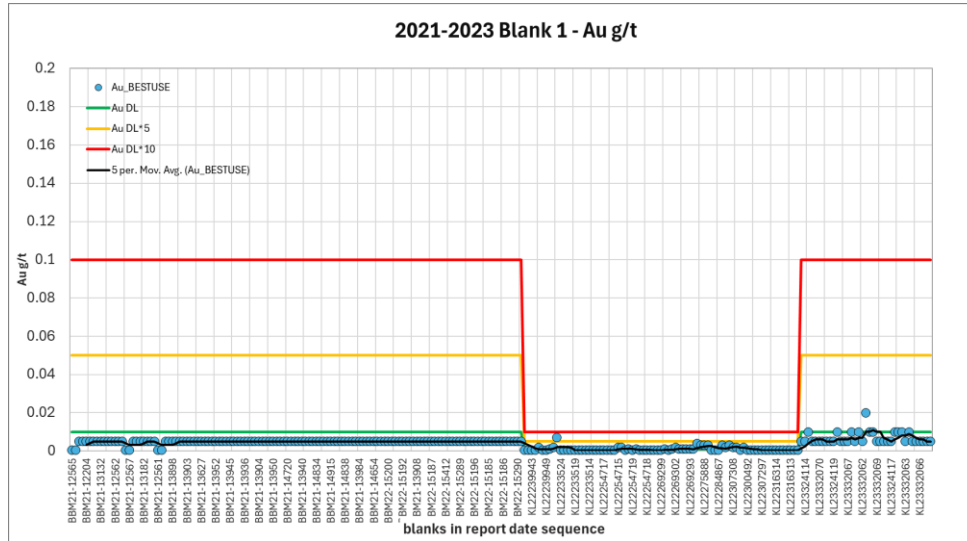
Sample type	Material description	2007 resampled		2010 resampled		2021		2022		2023		all years		overall
		count	% of total	count	% of total	count	% of total	count	% of total	count	% of total	count	% of total	
HCORE	1/2 core sample (primary)	316	30.0%	168	63.6%	5,435	81.6%	3,029	89.0%	0	0.0%	8,948	73.5%	87.5%
WCORE	Full core sample (primary)	569	54.1%	78	29.5%	0	0.0%	0	0.0%	647	81.4%	1,294	10.6%	
ORIG_field	Field original (1/4 core)	7	0.7%	0	0.0%	65	1.0%	75	2.2%	0	0.0%	147	1.2%	
ORIG_pulp	Pulp parent	34	3.2%	4	1.5%	197	3.0%	0	0.0%	35	4.4%	270	2.2%	
DUP_field	Field duplicate (1/4 core)	7	0.7%	0	0.0%	65	1.0%	75	2.2%	0	0.0%	147	1.2%	
DUP_pulp	Pulp duplicate	34	3.2%	4	1.5%	197	3.0%	0	0.0%	35	4.4%	270	2.2%	3.4%
Blank	Blank material	39	3.7%	5	1.9%	119	1.8%	77	2.3%	37	4.7%	277	2.3%	3.4%
Blank rerun		0	0.0%	0	0.0%	134*	2.0%	0	0.0%	0	0.0%	134	1.1%	
OREAS-210	Certified reference material	0	0.0%	0	0.0%	36	0.5%	0	0.0%	0	0.0%	36	0.3%	5.7%
OREAS-218		6	0.6%	0	0.0%	44	0.7%	0	0.0%	0	0.0%	50	0.4%	
OREAS-222		3	0.3%	0	0.0%	82	1.2%	0	0.0%	0	0.0%	85	0.7%	
OREAS-228		1	0.1%	0	0.0%	21	0.3%	0	0.0%	0	0.0%	22	0.2%	
OREAS-233		0	0.0%	0	0.0%	135*	2.0%	75	2.2%	0	0.0%	210	1.7%	
OREAS-250b		0	0.0%	0	0.0%	134*	2.0%	74	2.2%	0	0.0%	208	1.7%	
OREAS-501d		17	1.6%	2	0.8%	0	0.0%	0	0.0%	19	2.4%	38	0.3%	
OREAS-506		13	1.2%	1	0.4%	0	0.0%	0	0.0%	14	1.8%	28	0.2%	
OREAS-607b		6	0.6%	2	0.8%	0	0.0%	0	0.0%	8	1.0%	16	0.1%	
Check assays		0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0.0%
	<b>Total intervals sampled</b>	926	88.0%	250	94.7%	5,697	85.5%	3,104	91.2%	682	85.8%	10,659	87.5%	
	<b>Total blanks</b>	39	3.7%	5	1.9%	253	3.8%	77	2.3%	37	4.7%	411	3.4%	
	<b>Total STDs</b>	46	4.4%	5	1.9%	452	6.8%	149	4.4%	41	5.2%	693	5.7%	
	<b>Total duplicates</b>	41	3.9%	4	1.5%	262	3.9%	75	2.2%	35	4.4%	417	3.4%	
	<b>Total check-assays</b>	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
	<b>Total</b>	1,052	100%	264	100%	6,664	100%	3,405	100%	795	100%	12,180	100%	



### 11.4.1 Blanks

TDG Gold has utilized 3 separate blank materials over time: Blank 1 represents a coarse quartz purchased from OREAS, blank 2 a pre-pulverized unmineralized rock, and blank 3 a Garden Centre limestone crush.

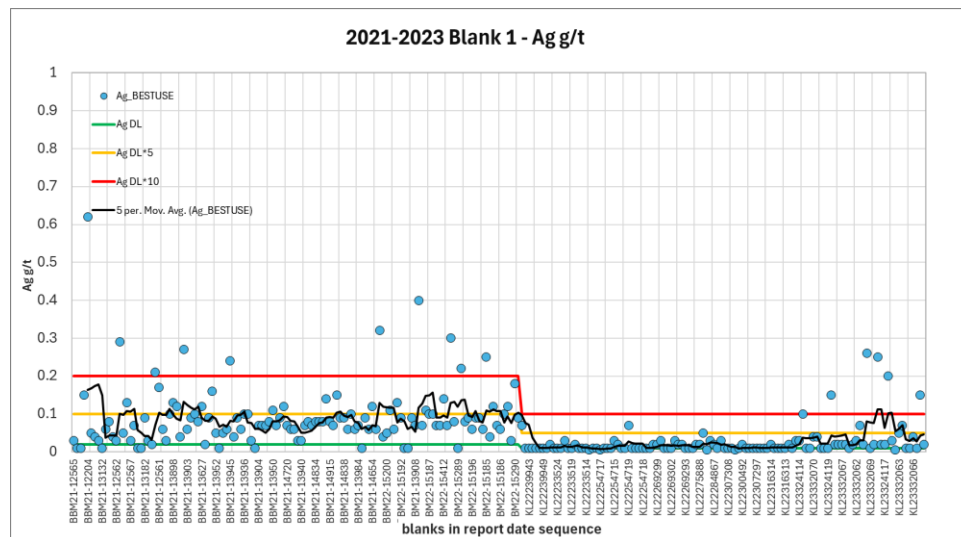
Inserted blanks performed well, no significant contamination due to lab sample preparation was detected for Au, and no re-runs were triggered (Figure 11-1). Changes in contracted laboratory and requested analytical methods led to shifts in detection limits for Au and Ag, respectively, as displayed as green, orange, and red lines in the following graphs.



(Source: MMTS, 2025)

Figure 11-1: Blank 1 Performance - Au

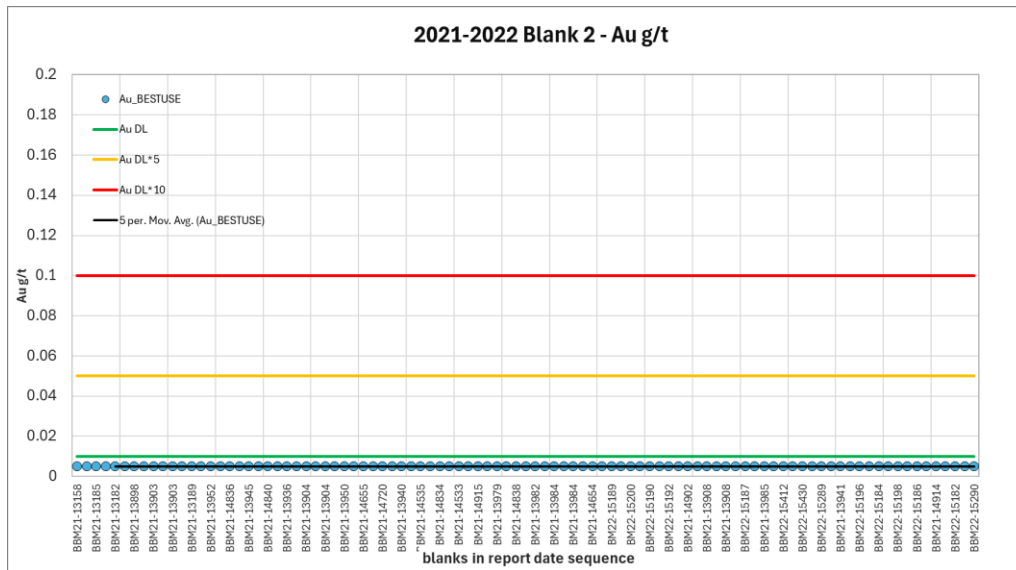
Select 2021 and 2023 blanks exceeded the 10\*DL Ag limits after being inserted within or right after strongly mineralized intervals but given the still very low results (<1g/t), this is not considered a meaningful contamination concern (Figure 11-2).



(Source: MMTS, 2025)

Figure 11-2: Blank 1 Performance – Ag

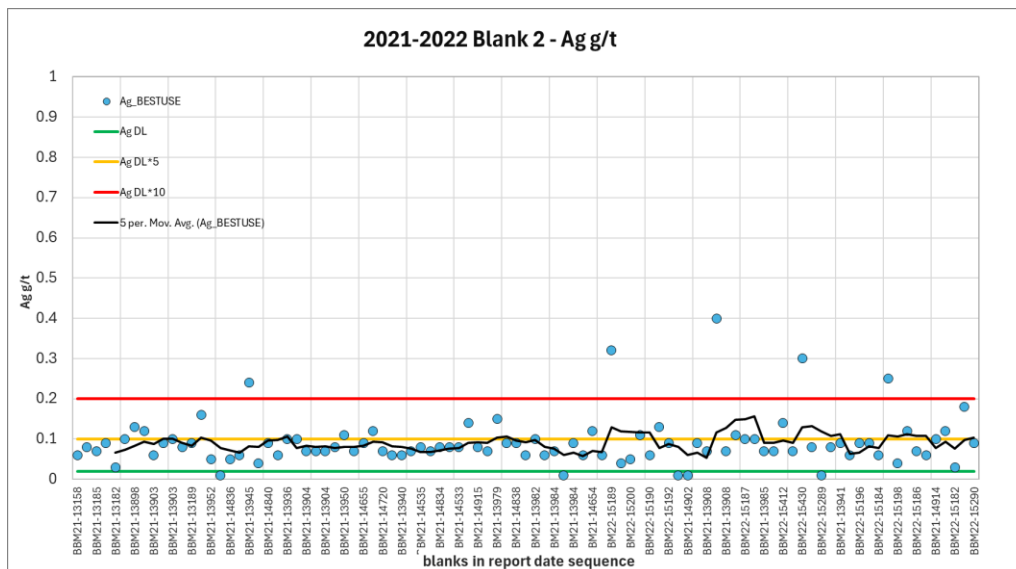
All Au analyses for Blank 2 report as <DL of 0.01g/t, shown as 0.5\*DL in Figure 11-3.



(Source: MMTS, 2025)

Figure 11-3: Blank 2 Performance - Au

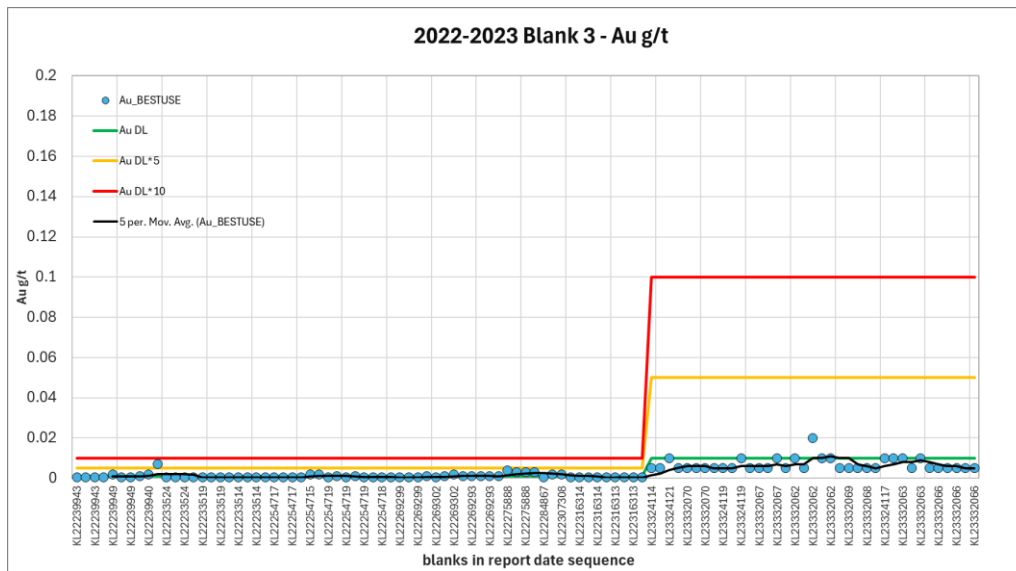
Blank 2 shown in Figure 11-3, despite being purchased as ‘unmineralized’, clearly contains a natural background Ag concentration of approx. 0.1g/t. Five blank 2 exceed the 10\*DL failure line at 0.2g/t, but the preceding samples were found to be not or only weakly mineralized, indicating that natural variability is the likely cause for the ‘failures’.



(Source: MMTS, 2025)

Figure 11-3: Blank 2 Performance - Ag

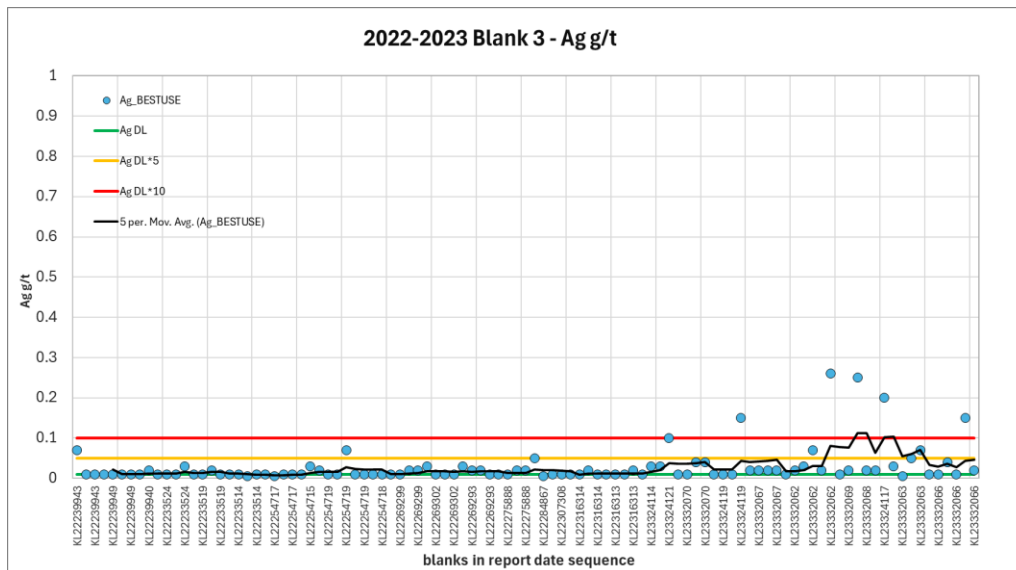
Zero failures in the Blank 3 population for Au demonstrates very good prep work performance at ALS in Kamloops, BC (Figure 11-4).



(Source: MMTS, 2025)

Figure 11-4: Blank 3 Performance - Au

5 of 101 Ag results for Blank 3 exceed the failure line in total (Figure 11-5) but given the lack of trend or grouping, the overall very low Ag grade (all 5 are below 0.3g/t), and the flawless result for Au in those same blanks indicate that this should not be a concern for resource modelling.



(Source: MMTS, 2025)

Figure 11-5: Blank 3 Performance - Ag

In summary, no significant cross-sample contamination could be identified.

### 11.4.2 Certified Reference Material

Between the 2021-2022 drilling campaigns and the 2021 and 2023 re-sampling of historical core, TDG Gold has utilized 9 different OREAS standards (STD, CRM) with Au grades ranging from 0.23 g/t to 8.7 g/t to assess analytical accuracy. Several of the CRMs are also Ag certified, with expected values ranging from 0.07 g/t to 7.8g/t. Table 11-3 and Table

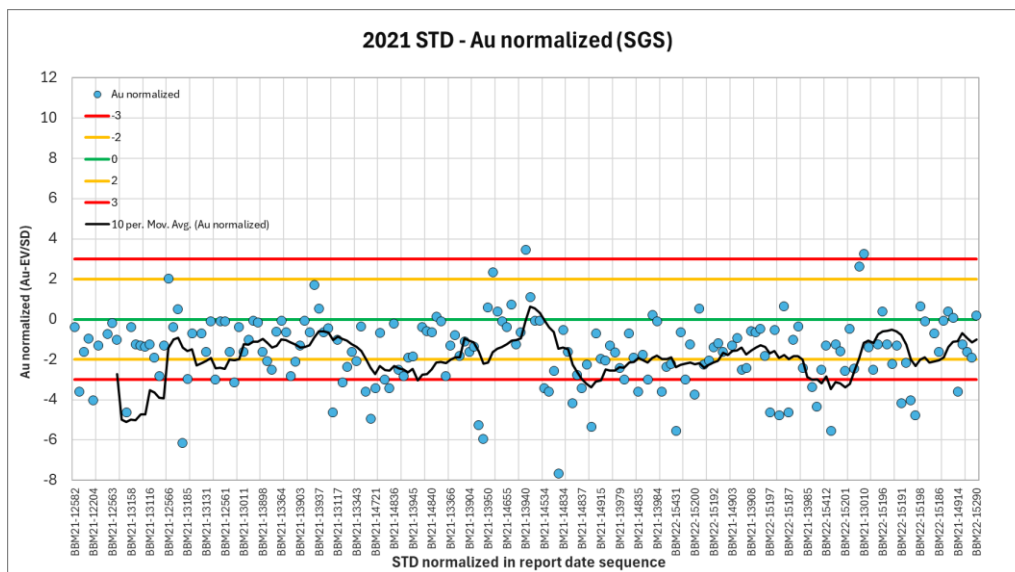
11-4 details count and overall performance for Au in each standard irrespective of analytical method but separated by laboratory (SGS and ALS).

The Au results in Figure 11-6 to Figure 11-8 are normalized using a simple z-score formula of  $(Au - Au\ EV) / SD$  with EV (expected value) being the certified value as calculated by OREAS based on independent assay data from >20 labs and SD the respective absolute standard deviation for the same data population.

In 2021, the CRM performance at SGS is overall poor with 8.7% of all data classified as 'low failures' as per  $\pm 3SD$  failure threshold definition and high failures minimal (Table 11-3). The failure rate for the 4 CRMs used for drilling and re-sampling in 2021 is unacceptable at 20.7% and illustrates the inconsistent performance (Figure 11-6). Equally, and certainly strongly influenced by the high count of low failures, the average Au results for the 4 standards used during drilling and re-sampling in 2021 are 3.6% to 6.5% lower than the expected value when calculated as absolute relative difference (ARD).

**Table 11-3: CRM Simple Statistics SGS**

CRM	Year used	Count	EV Au (g/t)	AVG Au (g/t)	ARD	Low Fail	High Fail	% Fail	Comment
OREAS-210	2021	36	5.49	5.294	-3.6%	2	0	5.6%	drilling
OREAS-218	2021	50	0.531	0.498	-6.4%	15	1	32.0%	drilling/re-sampling
OREAS-222	2021	85	1.223	1.146	-6.5%	23	1	28.2%	drilling/re-sampling
OREAS-228	2021	22	8.73	8.399	-3.9%	0	0	0.0%	drilling/re-sampling
OREAS-233	2022	135	1.05	1.075	2.4%	0	0	0.0%	SGS rerun only
OREAS-250b	2022	134	0.332	0.333	0.3%	0	0	0.0%	SGS rerun only
<b>Total</b>	<b>2021-2022</b>	<b>462</b>				<b>40</b>	<b>2</b>	<b>9.1%</b>	



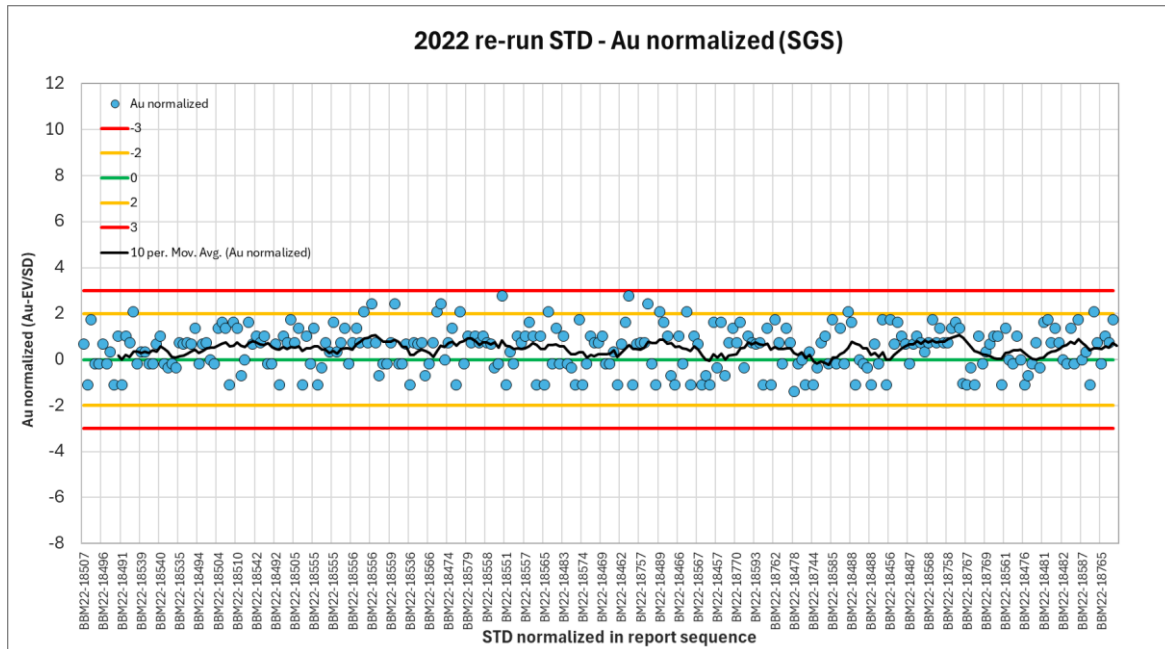
(Source: MMTS, 2025)

**Figure 11-6: PCC, Data Normalized - Au (SGS)**

Triggered by this unacceptably low Au bias of approx. 5%, the majority of the 2021 drilling samples were re-run by SGS (Au only) in Q2 of 2022, using the existing pulps and the same fire-assay method GO\_FAI50V10 but controlled by a new set of 2 blind OREAS standards introduced at appropriate rates of approx. 5.8%. To expedite the process in this second round of analyses, an exception was made for approx. 1,300 samples that reported <LOD in the first round, these were not re-assayed again. The two CRMs utilized for the SGS Au re-run program (OREAS-233 and OREAS-250b) show no failures and a comparatively homogenous performance with an acceptable weak high bias of approx. 1.3% (Figure 11-7).

Consequently, all re-run Au data was prioritized over the original 2021 results for resource modeling purposes.

109 select pulps were re-submitted for re-assaying at SGS, including multiple insertions of a new blind CRM (OREAS 505) which consistently recorded below expected certified value as well, confirming the bias as illustrated in Figure 11-7 below. Subsequently, the exact same sample subset was sent to Bureau Veritas in Vancouver, BC, for an independent re-assay using method FA350 (fire assay with 2ppb DL), and again fresh blind CRM material (OREAS 505) was inserted into the sample stream. The Bureau Veritas assay results came in slightly below the Expected Value (EV) on average but well within defined warning limits, therefore not confirming the low Au bias in CRM OREAS 505 as shown by SGS.



(Source: MMTS, 2025)

**Figure 11-7: PCC, Data Normalized – Au re-run (SGS)**

As shown in Table 11-4, TDG Gold’s shift to ALS Global for geochemical analysis of drill core samples has led to a much-improved performance of the accuracy control samples for the 2022 drilling campaign as well as the 2023 re-sampling of 2007 and 2010 drill core, though the selection of a new set of standards (including the two CRMs utilized during the SGS Au re-run program in 2022) probably has contributed to the superior results.

OREAS-233 and OREAS-250b were inserted during sampling of drill core in 2022 when ALS’s Au-ICP22 trace-level fire-assay method with ICP-AES finish on a 50g cut was requested. Their performance is acceptable with two low failures on 144 results (approx. 1.3%) and an overall weak but consistent low bias, particularly in OREAS-250b.

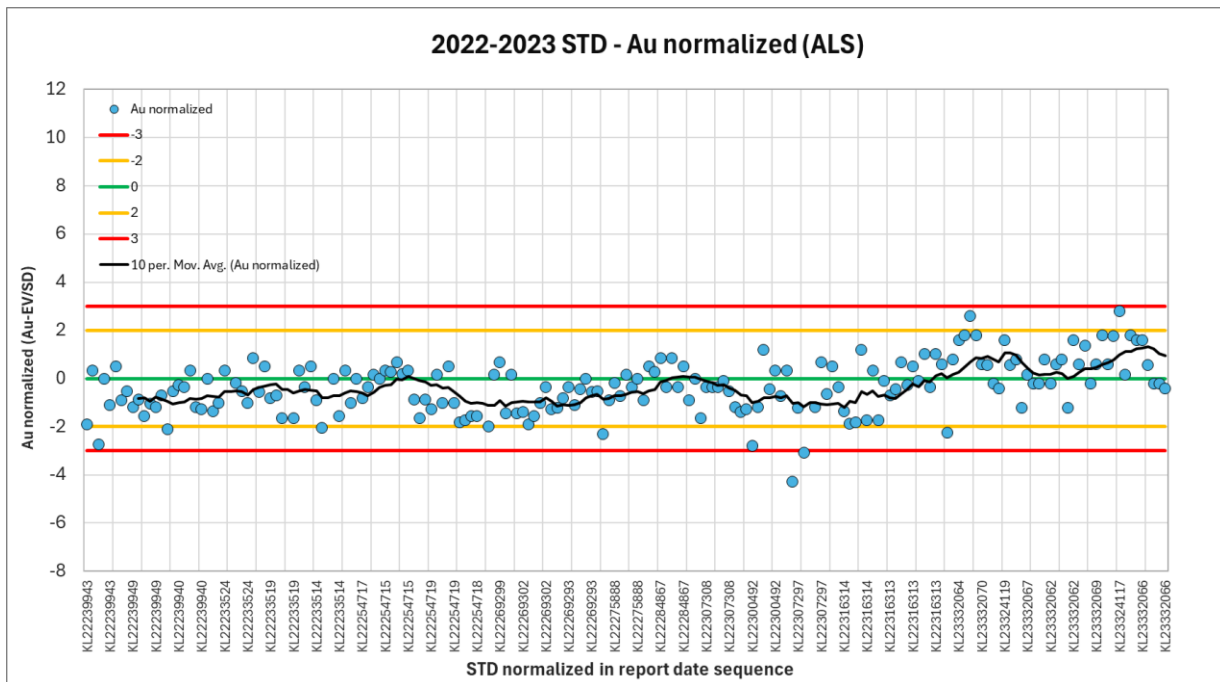
3 separate standards were inserted 41 times during the 2023 re-sampling of 2007 and 2010 drill core and the assay results for Au are weakly biased high at approx. 2% without any failures.

The reported assays as summarized in Table 11-4 and graphed in Figure 11-8 are acceptable with 175 of 185 results plotting within the +/-2SD warning thresholds and only two failures but indicate a consistent high bias of approx. 2% when the Au-AA25 method is being used (2023).

**Table 11-4: CRM Simple Statistics ALS**

CRM	Year used	Count	EV Au (g/t)	AVG Au (g/t)	ARD	Low Fail	High Fail	% Fail	Comment
OREAS-233	2022	73	1.05	1.045	-0.4%	0	0	0.0%	drilling
OREAS-250b	2022	71	0.332	0.320	-3.6%	2	0	2.7%	drilling
OREAS-501d	2023	19	0.232	0.237	2.1%	0	0	0.0%	re-sampling
OREAS-506	2023	14	0.364	0.374	2.7%	0	0	0.0%	re-sampling
OREAS-607b	2023	8	0.696	0.705	1.3%	0	0	0.0%	re-sampling
<b>Total</b>	<b>2022</b>	<b>185</b>				<b>2</b>	<b>0</b>	<b>1.1%</b>	

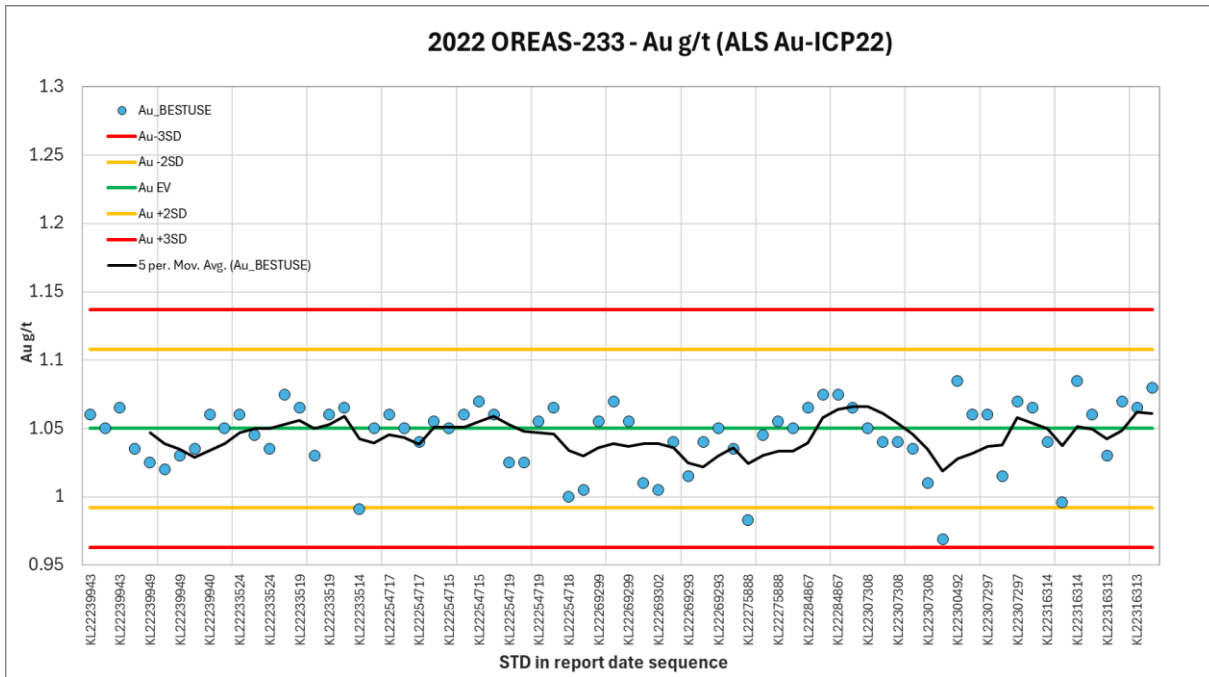
2022 ALS data show a good performance with 2 low outliers and a weak low bias, and the 2023 ALS Au assay results are biased slightly high without any data exceeding the failure thresholds.



(Source: MMTS, 2025)

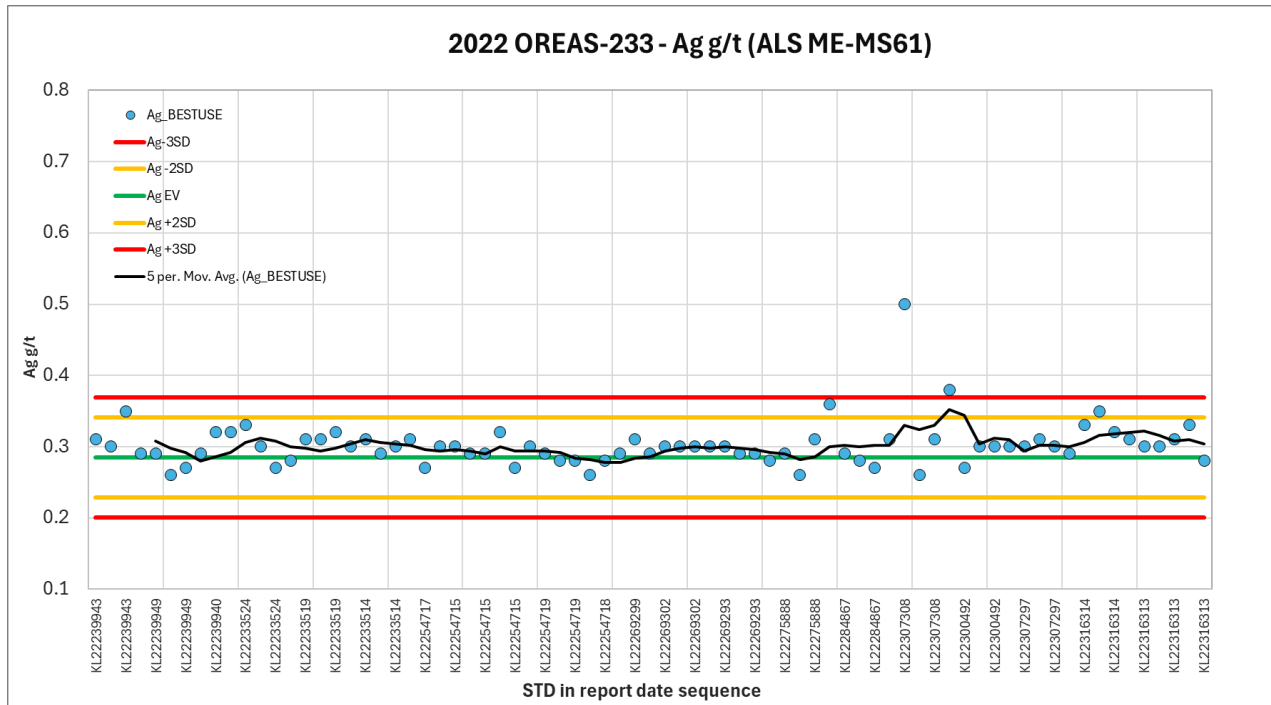
**Figure 11-8: PCC, Data Normalized - Au (ALS)**

The following graphs detail the actual Au and Ag results for standards inserted during the 2022 drilling campaign. The reported concentrations are overall accurate. Figure 11-9 and Figure 11-10 illustrate that re-assaying should have been requested for certificate KL22307308 as Au displays a short-lived but strong negative trend and Ag results are inconsistent at the same time, including one high outlier.



(Source: MMTS, 2025)

**Figure 11-9: CRM OREAS-233 - Au**

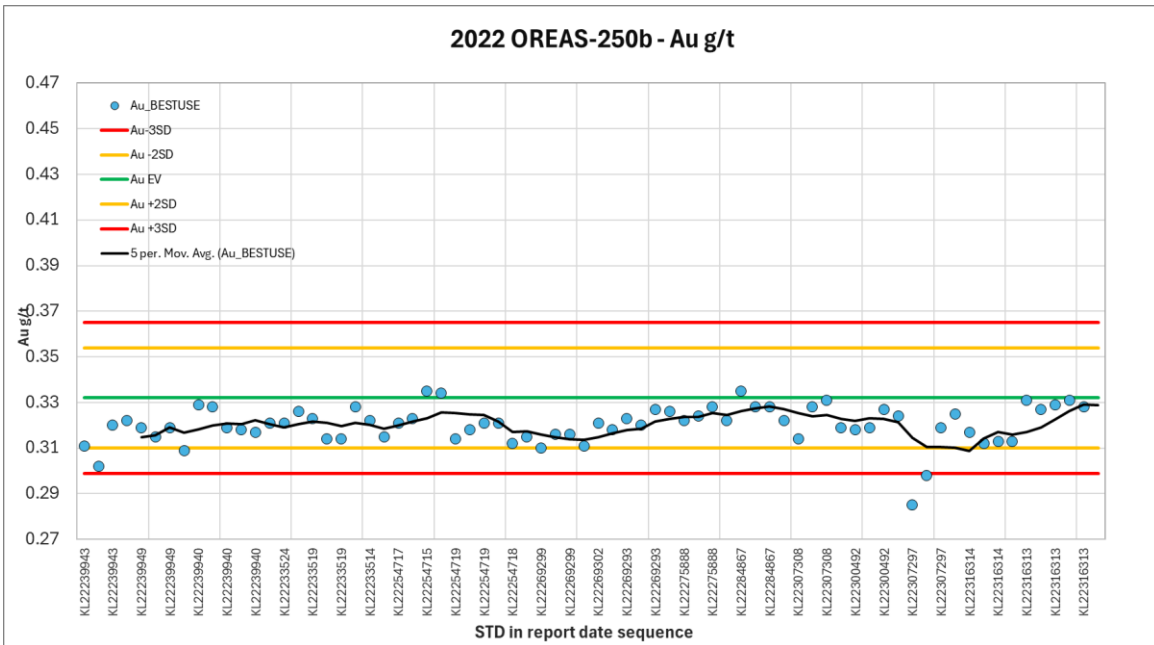


(Source: MMTS, 2025)

**Figure 11-10: CRM OREAS-233 - Ag**

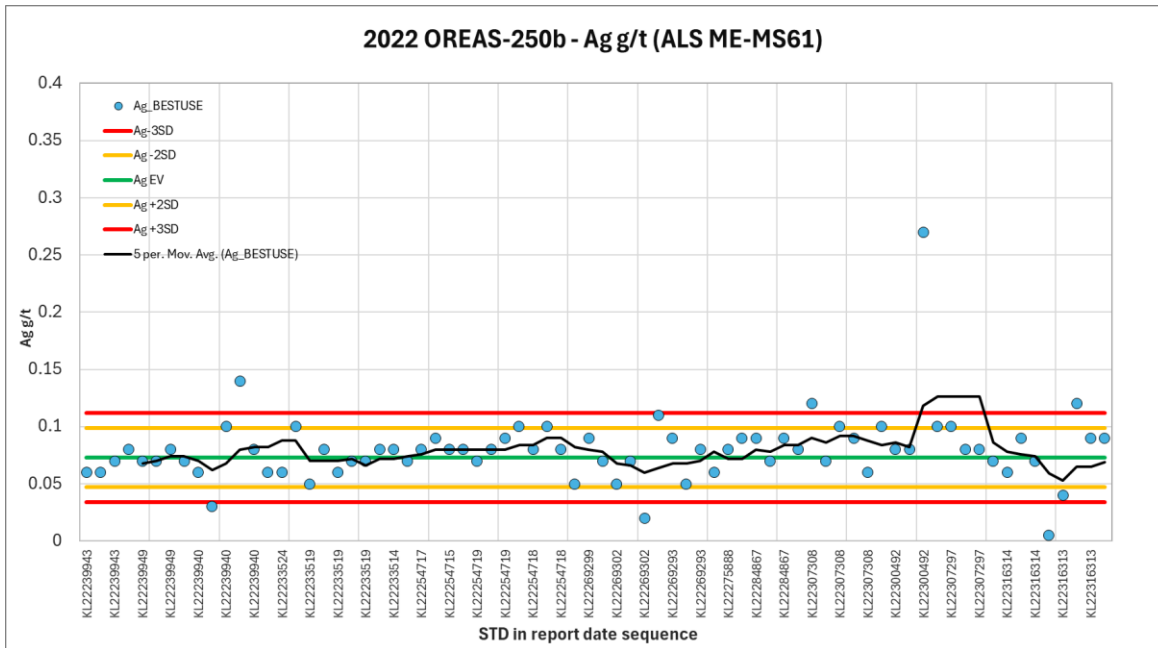
Figure 11-11 demonstrates the very consistent low bias in Au for OREAS-250b that resulted in the -3.6% error listed in Table 11-4. In addition, two consecutive OREAS-250b standards fail low in certificate KL22307297, but OREAS-233 performs relatively well at the same time and the Ag results are also acceptable, so a re-run request was not triggered.





(Source: MMTS, 2025)

Figure 11-11: CRM OREAS-250b - Au



(Source: MMTS, 2025)

Figure 11-12: CRM OREAS-250b - Ag

MMTS finds the CRM performances acceptable as they are overall accurate and precise, the low bias of Au in OREAS-250b indicates that 2022 sample results could be slightly conservative.

### 11.4.3 Field Duplicates

Field duplicates (FD) of 2021 (SGS) and 2022 (ALS) are shown together in both a scatter and a HARD plot for each metal (half the absolute relative difference). The direct original vs. duplicate comparison is acceptable for both Au (Figure

11-13) and Ag (Figure 11-15), with good correlations as shown by the  $R^2$  of 0.8 and 0.85, respectively, moderate scatter in the Au plot, and no significant bias for either metal. This demonstrates good reproducibility of results when generated by sampling quartered HQ-sized diamond drill core at Shasta.

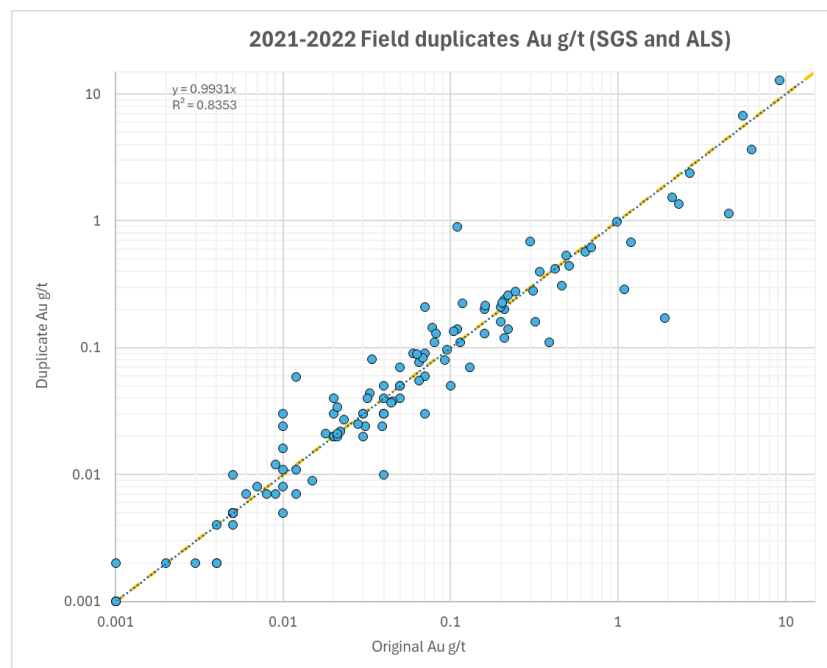
No field duplicates were taken during the 2023 re-sampling project because the remaining half of historical core was determined to not be in suitable condition to do so representatively after having been split mechanically at the time.

Au means for the original-duplicate samples (un-weighted intervals) are 0.349 and 0.34g/t, respectively, essentially matching the Au mean of all 2021-2022 primary samples (0.33g/t). MMTS views these data as representative and acceptable (Table 11-5).

Figure 11-14 illustrates that for Au 82% of all field duplicate pairs report below the 30% HARD which is an acceptable result for the deposit style. It must be noted that 23 of 147 sample pairs reported below detection for both original and duplicate, strongly influencing the graph by increasing the population below the 30% HARD line. Removing all those data from the plot reduces the % of the population <30% HARD to 78% which is still acceptable.

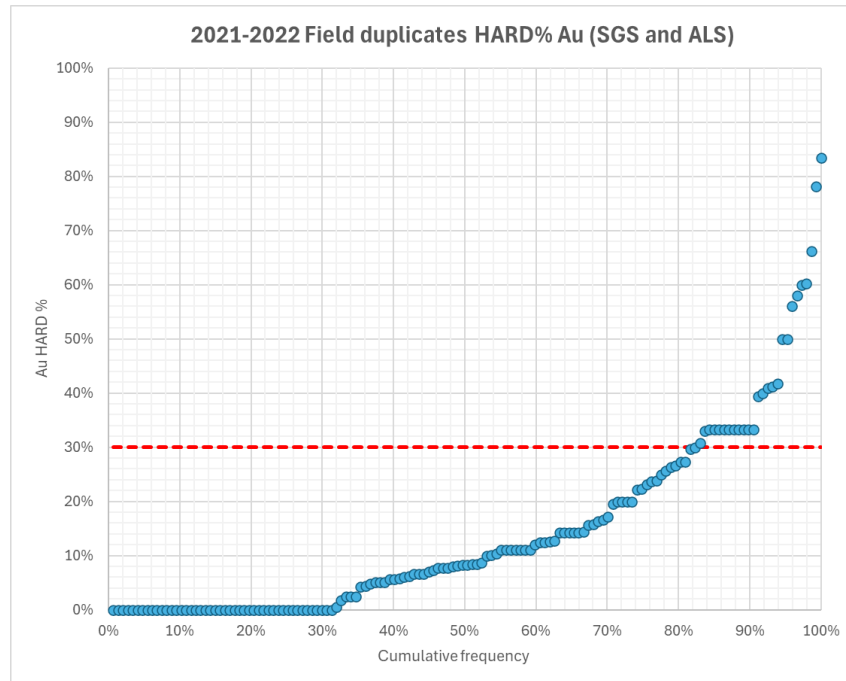
**Table 11-5: Field Duplicate Summary Statistics for Au and Ag**

TDG Gold FD	Primary	Duplicate	TDG Gold FD	Primary	Duplicate
	Au (g/t)	Au (g/t)		Ag (g/t)	Ag (g/t)
Count Numeric	147	147	Count Numeric	147	147
Minimum	0.001	0.001	Minimum	0.02	0.01
Maximum	9.23	12.83	Maximum	427	658
Mean	0.349	0.340	Mean	12.98	15.92
Median	0.03	0.03	Median	1.66	1.68
Range	9.22	12.82	Range	427	658
Standard Deviation	1.26	1.35	Standard Deviation	62.8	74.0



(Source: MMTS, 2025)

**Figure 11-13: Field Duplicates Scatter Plot - Au**



(Source: MMTS, 2025)

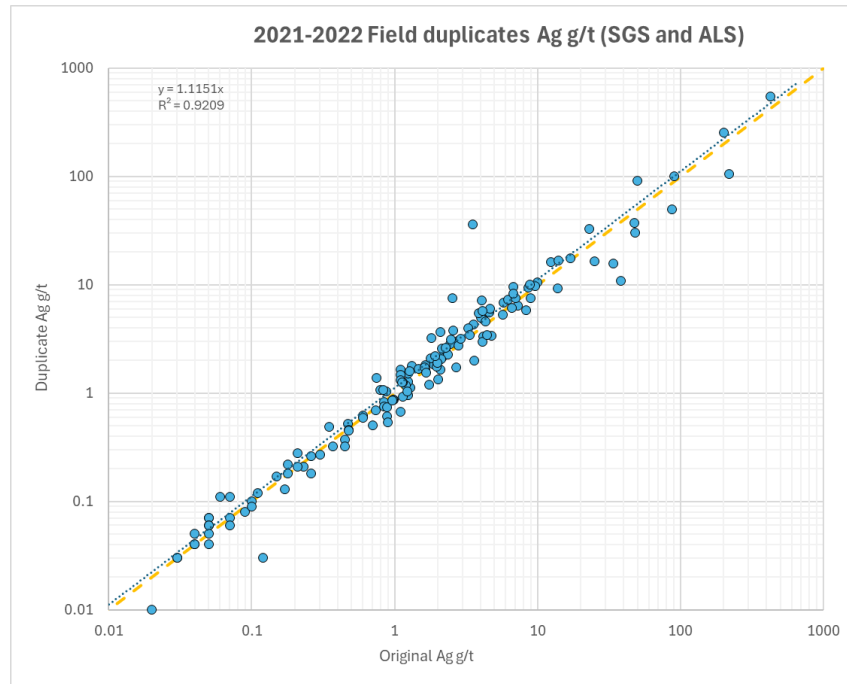
**Figure 11-14: Field Duplicates HARD% Plot - Au**

The mean Ag grade of 15.9 g/t for the field duplicate pairs (un-weighted) exceeds the mean of the 2021-2022 primary sample Ag grades which is 11.4g/t but that calculation is strongly influenced by one very high duplicate result of 658g/t Ag, sampled in drillhole SH21-045. The parent to this sample, while also strongly mineralized, has a significantly lower grade at 276g/t Ag. Removing this sample pair from the calculations in Table 11-5 reduces the mean to 11.5g/t Ag, very much in line with the average Ag grade of all core sample results in 2021-2022.

This pair also disproportionately influences the  $R^2$  and slope of the trend line in Figure 11-15. Removing this outlier increased the  $R^2$  to 0.92 from 0.84, as graphed.

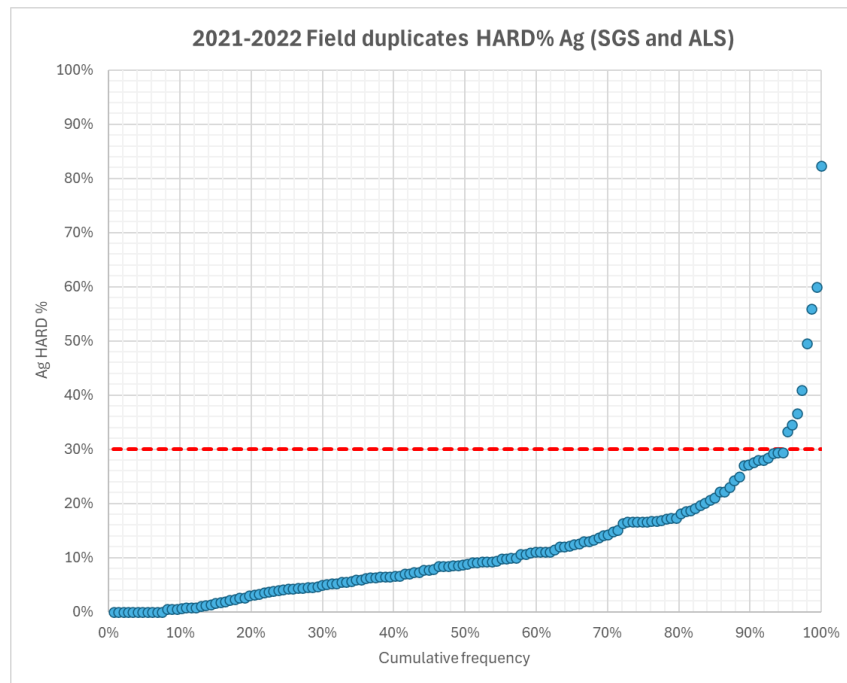
All other Ag field duplicates show very good correlation to Ag field primary data. A weak duplicate-positive bias of approx. 10% was noted mainly in the 1-10g/t Ag range.

94% of Ag data pairs fall below the arbitrary 30% HARD Ag line, which is considered a very good result (Figure 11-16).



(Source: MMTS, 2025)

**Figure 11-15: Field Duplicates Scatter Plot - Ag**



(Source: MMTS, 2025)

**Figure 11-16: Field Duplicates HARD% Plot – Ag**

The reproducibility at the core sample stage at Shasta is acceptable.

#### 11.4.4 Pulp Duplicates

In 2021, TDG Gold requested 74 pulps from 6,019 core samples (approx. 1.2%) to be split and analysed separately, generating pulp duplicate data to determine the quality control the errors of the final procedural steps at SGS, i.e. fusion, cupellation, digestion, and analysis. In addition, 126 pulp duplicates were produced during the 2022 Au re-run of 2021 drill core samples, in which case no Ag assays are available.

The basic statistics of the pulp duplicates are summarized in Table 11-6, illustrating that the means of both Au and Ag are lower, with medians similar.

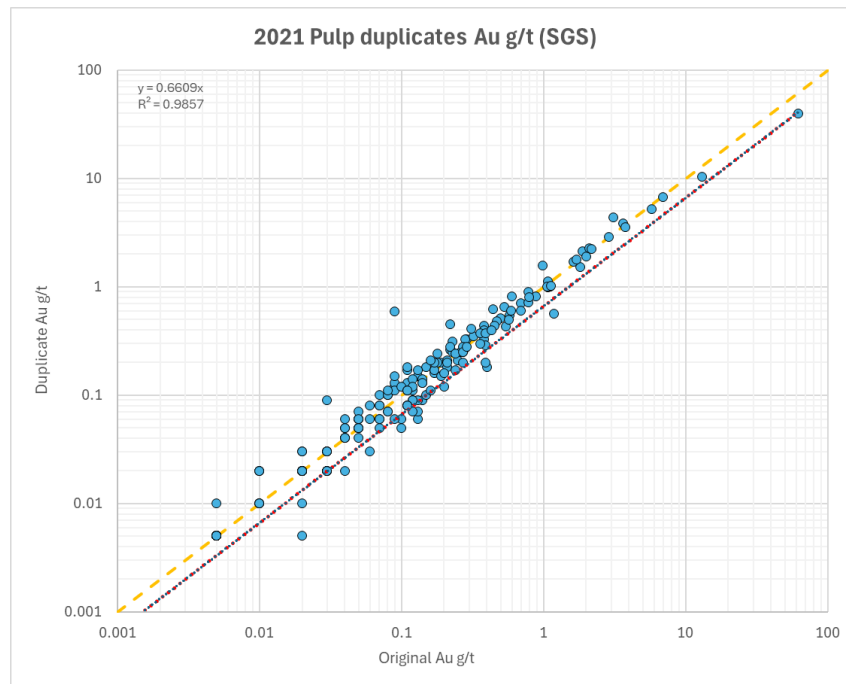
The scatter plot in Figure 11-17 visualises a wide range of Au concentration for the selected samples (SGS 2021 including the 2022 re-run data) and demonstrates a good correlation between original and duplicate, despite the relatively strong scatter at the 0.1-0.5g/t grade range. The highest-grade pulp pair reported poorly with 62.46g/t Au in the original and 40.02g/t Au in the duplicate and pushes the trendline towards original-positive. Removing this single outlier pair improves the trendline slope to 0.89 from 0.66 which is the number shown in Figure 11-17.

MMTS therefore does not have concerns of systematic bias and considers the data acceptable.

The HARD plot for Au shown in Figure 11-18 demonstrates that 85% of SGS pulp duplicate data plots below 30% HARD Au, including all higher-grade pairs. This is above industry expectation for pulp duplicates of Au. With respect to the 10% HARD threshold used in Figure 11-18 and Figure 11-20, 63.5% (Au) and 68.9% (Ag) plot below the line, respectively.

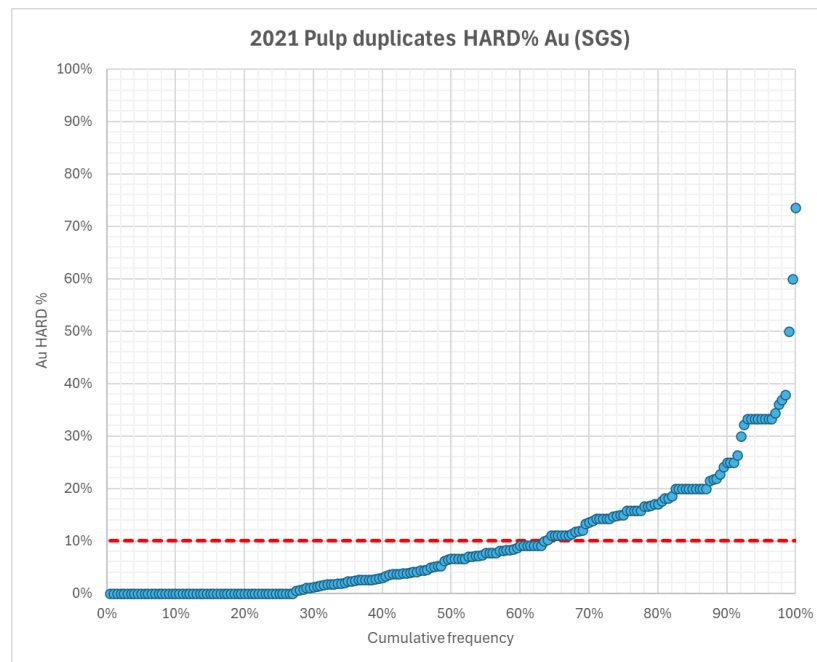
**Table 11-6: Pulp Duplicates Summary Statistics SGS**

TDG Gold PD	Primary	Duplicate	TDG Gold PD	Primary	Duplicate
	Au g/t	Au g/t		Ag g/t	Ag g/t
Count Numeric	200	200	Count Numeric	74	74
Minimum	0.0005	0.0005	Minimum	0.01	0.01
Maximum	62.46	40.02	Maximum	2035	1935
Mean	0.75	0.63	Mean	39.9	37.9
Median	0.11	0.11	Median	2.04	2.07
Range	62.46	40.02	Range	2035	1935
Standard Deviation	4.56	3.01	Standard Deviation	237	225



(Source: MMTS, 2025)

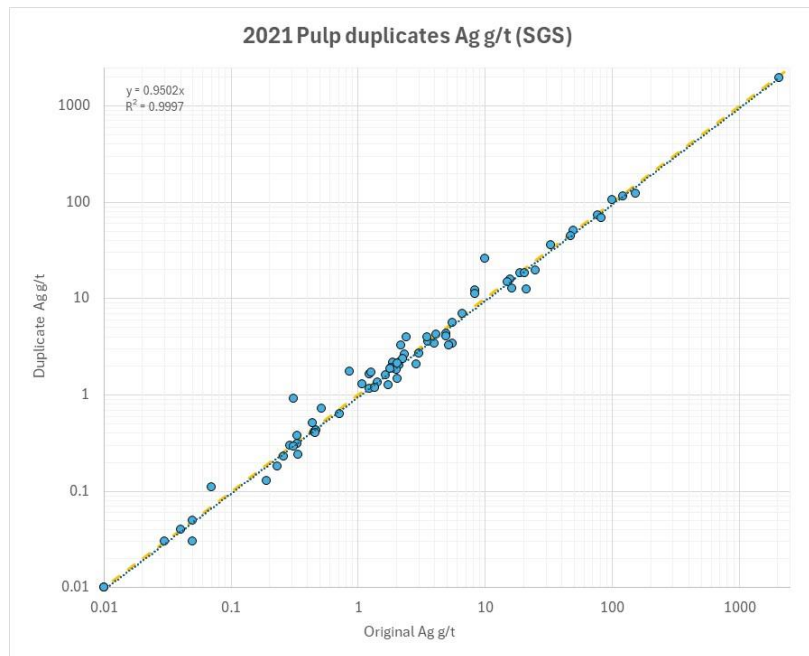
**Figure 11-17: Pulp Duplicates Scatter Plot – Au (SGS 2021)**



(Source: MMTS, 2025)

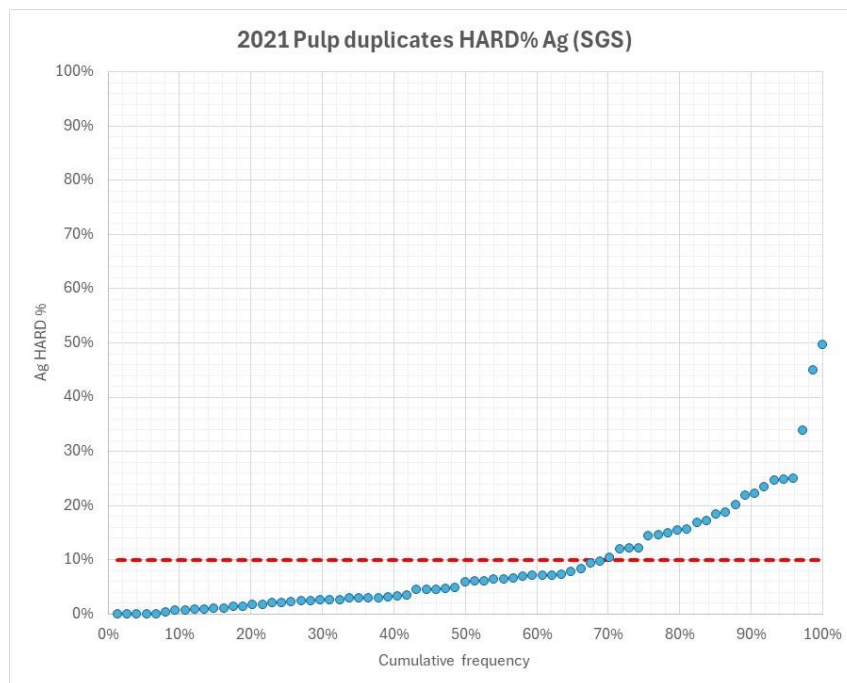
**Figure 11-18: Pulp Duplicates HARD% Plot – Au (SGS 2021)**

For Ag, lab precision is very good across a wide and representative range of grades (<1g/t to 200g/t) as illustrated in Figure 11-19 below. The HARD plot for Ag in Figure 11-20 also shows very good results with 95% below 30% difference and almost 70% below 10% difference.



(Source: MMTS, 2025)

**Figure 11-19: Pulp Duplicates Scatter Plot – Ag (SGS 2021)**



(Source: MMTS, 2025)

**Figure 11-20: Pulp Duplicates HARD% Plot – Ag (SGS 2021)**

The pulp duplicate results as reported by SGS indicate acceptable precision during this last stage of sample size reduction.

No pulp duplicates were ordered in 2022, but for the re-sampling of 2007 and 2010 core in 2023, ALS was instructed to take 35 pulp duplicates across 682 core samples for a rate of approx. 5.1%. Table 11-7 shows that the ALS pulp duplicate

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results overall correlate well with the ALS original results for both Au and Ag. However, 6 reasonably low-grade pairs of this small population have a relatively high absolute relative difference (see Figure 11-22) which results in a poorer HARD% plot with only 82.8% of data below the 30% HARD line for Au (74% under 10% HARD). They are also easily identified in Figure 11-21 as the data points furthest from the centre line (yellow dash).

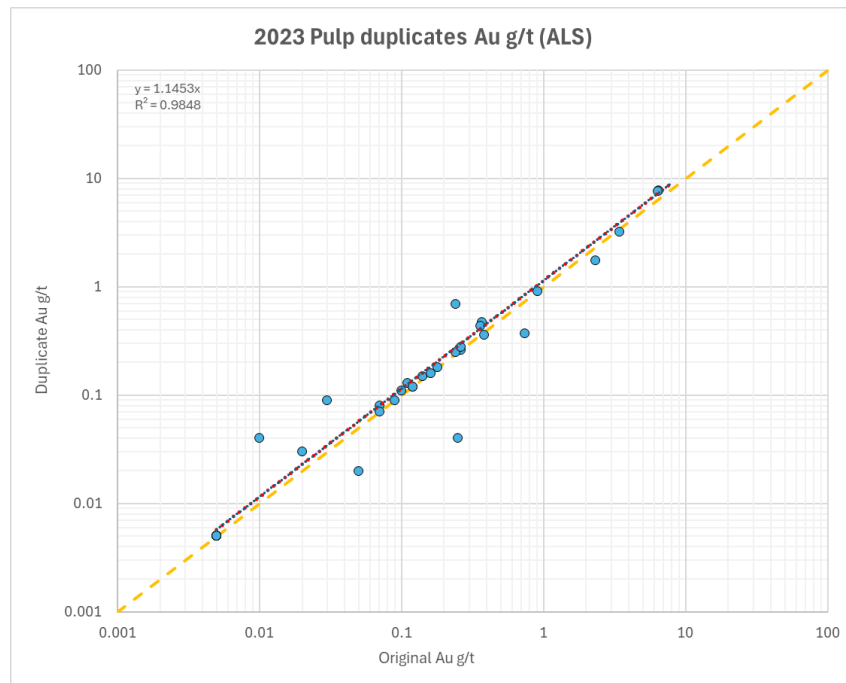
For Ag, both the  $R^2$  at 0.997 in Figure 11-23 and the <30% HARD at 100% (Figure 11-24) are very good but the overall grade distribution of the selected pulps is inconsistent with approx. 25% of the data grouping at 10-20g/t and the 20-100g/t grade not represented at all.



**Table 11-7: Pulp Duplicates Summary Statistics ALS**

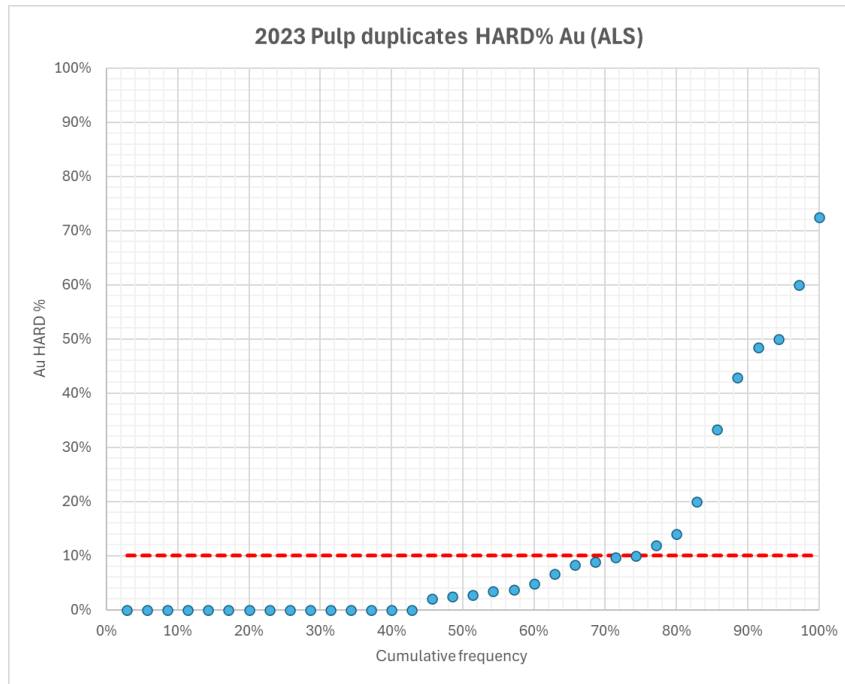
TDG Gold PD	Primary	Duplicate
	Au g/t	Au g/t
Count Numeric	35	35
Minimum	0.005	0.005
Maximum	6.41	7.79
Mean (weighted)	0.68	0.74
Median	0.12	0.12
Range	6.41	7.79
Standard Deviation	1.58	1.84

TDG Gold PD	Primary	Duplicate
	Ag g/t	Ag g/t
Count Numeric	35	35
Minimum	0.04	0.04
Maximum	286	294
Mean (weighted)	19.9	19.3
Median	6.44	5.94
Range	286	294
Standard Deviation	52.5	53.1



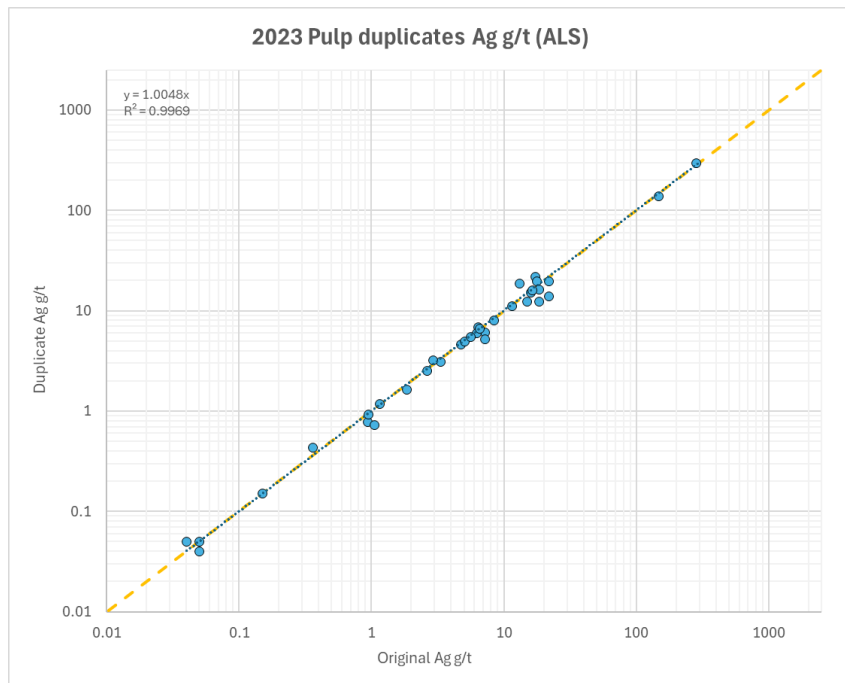
(Source: MMTS, 2025)

**Figure 11-21: Pulp Duplicates Scatter Plot – Au (ALS 2023)**



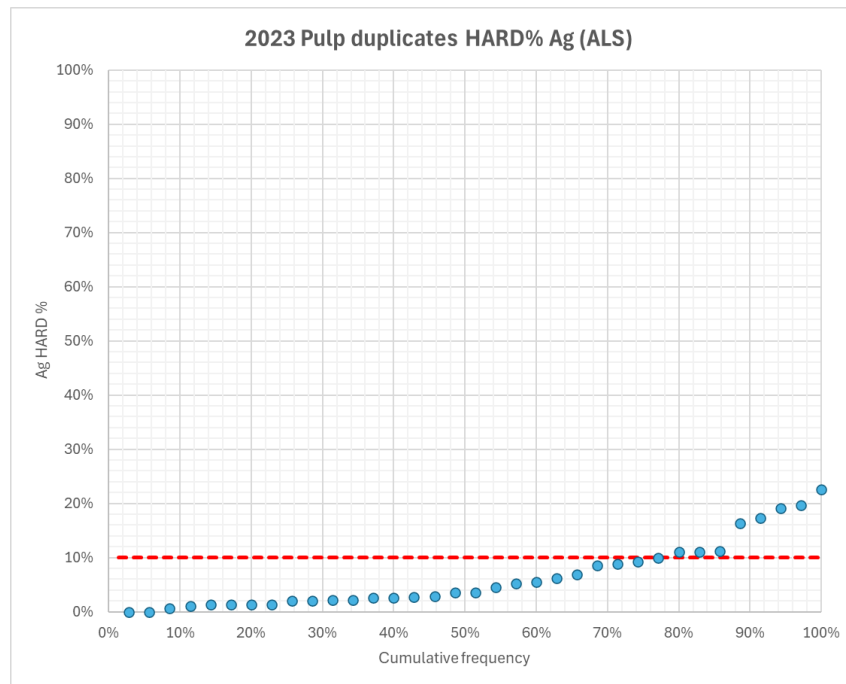
(Source: MMTS, 2025)

**Figure 11-22: Pulp Duplicates HARD% Plot – Au (ALS 2023)**



(Source: MMTS, 2025)

**Figure 11-23: Pulp Duplicates Scatter Plot – Ag (ALS 2023)**



(Source: MMTS, 2025)

**Figure 11-24: Pulp Duplicates HARD% Plot – Ag (ALS 2023)**

### 11.5 Historical Drill Core Data

Limited information is available about sampling protocols, laboratory procedures, lab internal and external QAQC for all data the pre-dates 2021, and for some years no records could be located as shown in Table 10-1. The following paragraphs are largely taken directly from the respective annual reports.

In Aris Report 11715 of 1983, Newmont exploration drilled a total of 9 holes on the property, resulting in 674m of BQ-sized core, that was split in half, with one half getting sent Chemex Labs in North Vancouver to be analysed for Au and Ag by way of fire assay. There is no record of QAQC samples.

For 1987, authors P. Holbeck and P. Tiersch for Esso Minerals Canada reported the following in Aris Report 17519:

“The diamond drill program was conducted from August 26 to October 1, 1987. Twenty-four BQ diameter holes, for a total of 2369m, were drilled with a J.K. Smit-300 diamond drill rig. The drill contractor was J.T. Thomas Diamond Drilling Ltd. Of Smithers, B.C. Drill mobilization was from Smithers. A Hughs 500D helicopter, supplied by Northern Mountain Helicopters Ltd., was used for drill moves between the first nine holes. The drill rig was then transferred to skids and the remaining moves made with a Caterpillar D6 tractor.

Drill core was logged on site using the GEOLOG format of Lynx Geosystems Inc. Core is stored in racks near the camp area at UTM coordinates N6347270/E620850.

Core was manually split over irregular length intervals within the altered and/or mineralized sections of the hole. Split core was shipped to Acme Analytical Laboratories Ltd. in Vancouver for silver and gold assays. Assay method was fire assay with atomic absorption finish on one assay-ton (29g) sub-samples. Reproducibility of gold and silver assays commonly exceed 20% variation over the typical concentration range (0.1-10.0 g/t Au). Causes of this poor reproducibility are currently being investigated. Assay results are included within the drill logs. Assay lab reports are contained in Appendix III.”

In 1990, M.D. McPherson and H. Oiyé reported for Homestake Mining in Aris Report 20821 that “the diamond drill program was conducted from July 4 to July 7, 1990. A single BQ-thinwall hole was drilled, using a JKS300 diamond drill contracted from Van Alphen Diamond Drilling of Smithers, BC. Drill moves were accomplished with a John Deere 750 tractor supplied by the drill contractor. The location of the drillhole collar was surveyed by A.A. de Bruynes of Smithers, BC.

Drill core was logged using the GEOLOG format from Lynx Geosystems Inc. Of Vancouver, BC. The core is stored in racks at the Shasta camp at UTM coordinates N6347270/E620850. The drill log can be found in appendix I. The core was manually split and shipped to Min-En Laboratories in Smithers, BC, for gold and silver assaying. Analytical data is in Appendix II.”

Appendix II of report 20821 shows the copy of a certificate by Min-En Laboratories that indicates that 26 samples were analysed, though the certificate contains data of 67 samples. 3 STDs and 3 blanks have been inserted by the lab itself and the lab report is in g/tonne.

Aris Report 26004A details the 1998 drill results. Core samples were analysed for Au and Ag at the site lab and recorded by hand in oz/T next to the respective sample numbers. No further detail about lab methods and procedures has been given.

E.W. Craft detailed in Aris Report 27653A that for the 2004 drill program “all assaying was carried out by IPL in Vancouver. The assay certificates are attached to the report in Appendix 6. The selected core sections were split in a mechanical splitter. In the first shipment, the total of the sample was shipped for assay. In subsequent shipments the split sample was crushed to ¼ inch and run through a riffle splitter twice to cut the sample to ¼, this was then shipped for assay with the splitter rejects bagged, tagged, and stored on site for future reference if required.”

Copies of 4 IPL certificates are available towards the end of the report. For Au, used a fire assay method with AAS finish, while Ag was analysed by fire assay and gravimetric finish. Reporting was in g/mt for both elements. IPL used 18 sample repeats, 2 lab blanks, and one CRM inserted twice for internal controls.

In Aris Report 29168 for the year 2006, E.W. Craft reported that “20 DD holes of NQ size were drilled at Shasta for a total of 1518.5m, with Britton Brothers of Smithers, BC, as the drilling contractor.” Collars were reported in mine grid coordinates and the hole names (DD06-01 to DD06-22) differ from today's names (SH06-01 to SH06-22). “Core was logged, split and fire assayed for gold and silver at the Baker camp facility roughly 11 km west of the deposit, where the core is now stored. Random check samples and duplicates were sent to ALS Chemex Labs in North Vancouver to verify onsite assays. The results of the ALS Chemex check assays and the onsite assays were consistent. ”

The Baker camp assay results are in oz/t for both Au and Ag, lab internal QAQC sample inserts could not be identified from the report. ALS Chemex certificates for random check samples and duplicates as mentioned above are not available in the report.

For the 2010 drill campaign, Joel Gillham of Sable Resources Ltd. in Aris Report 33171 only provided information for 2 of 13 holes drilled that season, DDH10-08 and DDH10-13 (renamed to SH10-08 and SH10-13). The remaining holes of the program were drilled on a mining lease and assay results have become available through scans of hard copies located at the Baker Mill assay lab.

As per Gillham, “a total of 324 m of NQ diamond drilling was completed in 2 holes for the program outlined in this report. The drill rig used was an AR 125, contracted from DJ Drilling Ltd of Aldergrove BC. The drill pads were constructed using Sable’s D6D Caterpillar dozer and 345B Caterpillar excavator, the drill rig was moved with the 345B

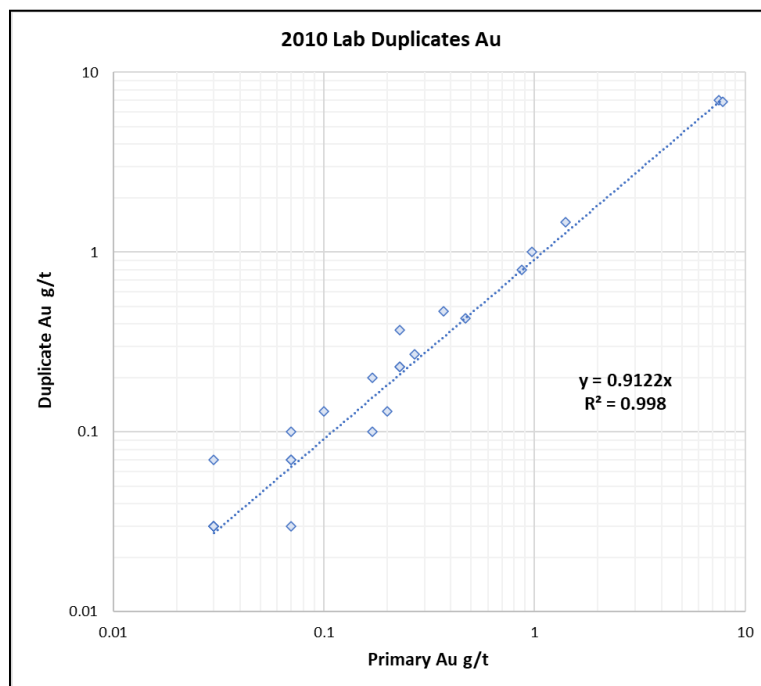
excavator. Drill core was logged at the Baker Mill site, and is stored there at the core-yard, with approximate coordinates of Lat 57.28° N and Long 127.11° W. All coordinates for drillholes are consistent with the Shasta mine grid, which is based loosely on the last four digits of a UTM grid referenced to NAD27.

Drill core was split on-site and delivered to the Baker Mill Assay Lab for analysis by fire assay. Assay sample numbers are made up from two digits for the year, another two digits for the hole number, and eight digits for the from and to interval (in metres) without decimals or dashes. For example, the sample # for the interval 99.2 to 101.0 from hole DD10-03 would be 100309921010.

All assays for this drill program were completed at the Baker Mill Assay Lab. Delivered split-core was prepared in the lab for analysis by crushing with a bench-top jaw crusher. Crushed sample was then put through a riffle splitter to produce a 200-300g split, which was then pulped by a ring and puck pulveriser.

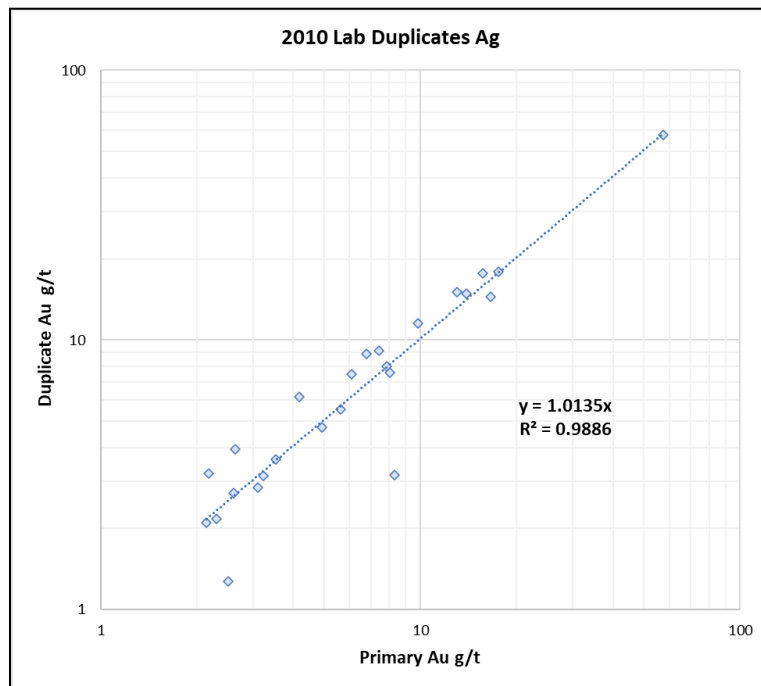
A 30g sample of the pulverised pulp was weighed on a triple beam balance and added to a crucible along with the assay flux (borax, soda ash, silica, and litharge) and known quantity of silver. The crucible is then fused at 1060 °C for about 60 minutes before being poured into a mould to separate the slag from the gold-silver containing lead button. The lead button is then cupelled at 950 °C to remove the lead leaving an Au-Ag dore prill. The dore prill is weighed on a microbalance before being parted with nitric acid to produce gold flake, which is then annealed and weighed gravimetrically on the microbalance.”

For holes DDH10-08 and DDH10-13, 5 lab duplicate analyses are available, while the scanned original (hand-written and partially illegible) assay reports for the samples from all other holes in 2010 offer a more comprehensive and quantitatively appropriate set of QA/QC in form of lab duplicates, lab blank and lab CRM insertions for each hole. The lab duplicate performance is shown Figure 11-25 and Figure 11-26 for Au and Ag respectively, illustrating acceptable results. DDH10-12 was apparently not sampled.



(Source: MMTS, 2022)

**Figure 11-25: 2010 Lab Duplicate Performance – Au**



(Source: MMTS, 2022)

**Figure 11-26: 2010 Lab Duplicate Performance – Ag**

## 11.6 Tailings Facility Sampling

In 2024, TDG Gold drilled and sampled the tailings in the tailings storage facility 1 (“TSF1”). 96 tailings samples were collected from 11 drillholes and the company-internal QA/QC protocols as described under 11.1 and 11.2 were being followed. Table 11-8 details the insertions of blanks, standards, and field duplicates. OREAS-233 was selected as the lone certified reference material. Bureau Veritas was contracted to analyze the samples, using the following methods:

**PRP90-250:** Received samples are entered into the Laboratory Information Management System (LIMS), weighed, dried and crushed to ensure that greater than 70% pass a 2mm sieve. A 250g split (riffle splitter) of the crushed material is then pulverized to greater than 85% passing a 75µm sieve.

At random intervals and at the start of each shift QC testing is completed on both crushed and pulverized material to ensure that the above specifications are met.

**FA-430:** 30g of prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a silver inquart. Firing the charge at 1050°C liberates Ag, Au and PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950°C to render a Ag, Au and PGEs dore bead. The bead is then digested with nitric and hydrochloric acids for instrumentation determination (AAS). The detection window is 0.005 to 10g/t.

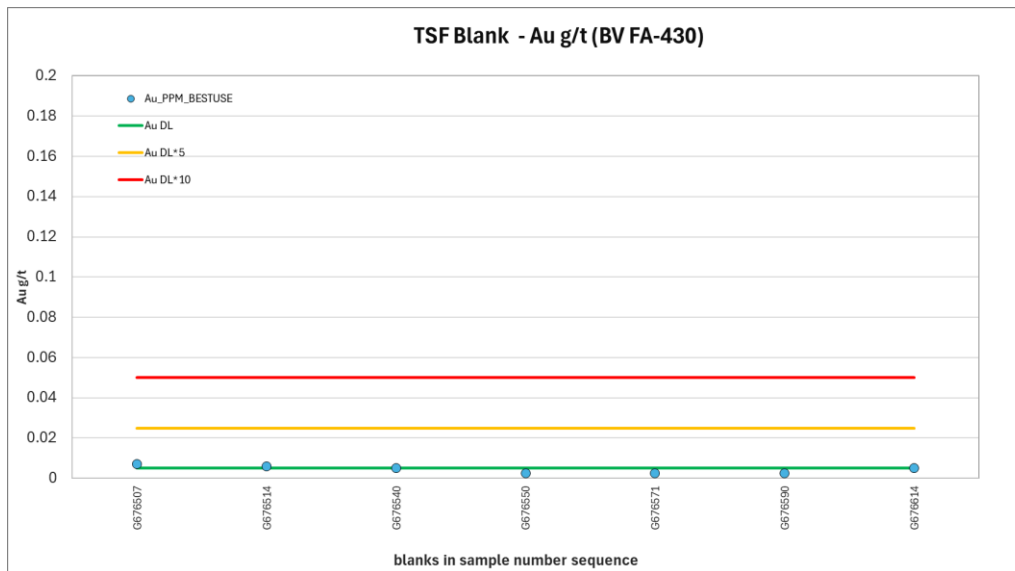
**AQ-251x:** 15g of the prepared sample are digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO<sub>3</sub> and DI H<sub>2</sub>O for one hour in a heating block or hot water bath. Sample is made up to volume with dilute HCl. Analytical finish is via a combination of ICP-ES and ICP-MS. The AQ-251 extended package reports 53 elements. The lower detection limit for Ag is 2ppb.

Table 11-8: 2024 TSF Drilling Summary Statistics

Sample type	Material description	2024 TSF		overall
		count	% of total	
WCORE	Primary sample (sand)	88	74.6%	81.4%
ORIG_field	Field original (1/2 sample)	8	6.8%	
DUP_field	Field duplicate (1/2 sample)	8	6.8%	6.8%
Blank	Blank material	7	5.9%	5.9%
OREAS-233	CRM	7	5.9%	5.9%
Check assays		0	0.0%	0.0%
	<b>Total</b>	<b>118</b>	<b>100%</b>	

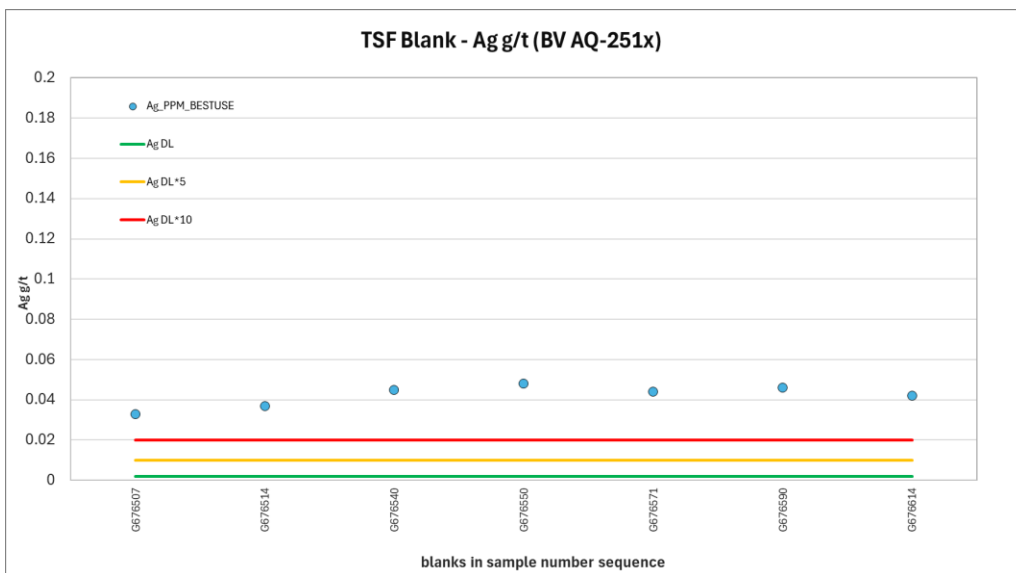
### 11.6.1 TSF Blanks

The 7 inserted blanks graphed in Figure 11-27 (Au) and Figure 11-28 (Ag) do not indicate any meaningful cross-sample contamination despite the Ag values exceeding the definition of ‘failure’ in all cases. This is interpreted as a function of the exceedingly low detection limit at 2ppb and likely represents the natural background concentration in the blank material.



(Source: MMTS, 2025)

Figure 11-27: Blank performance - Au (BV 2024)

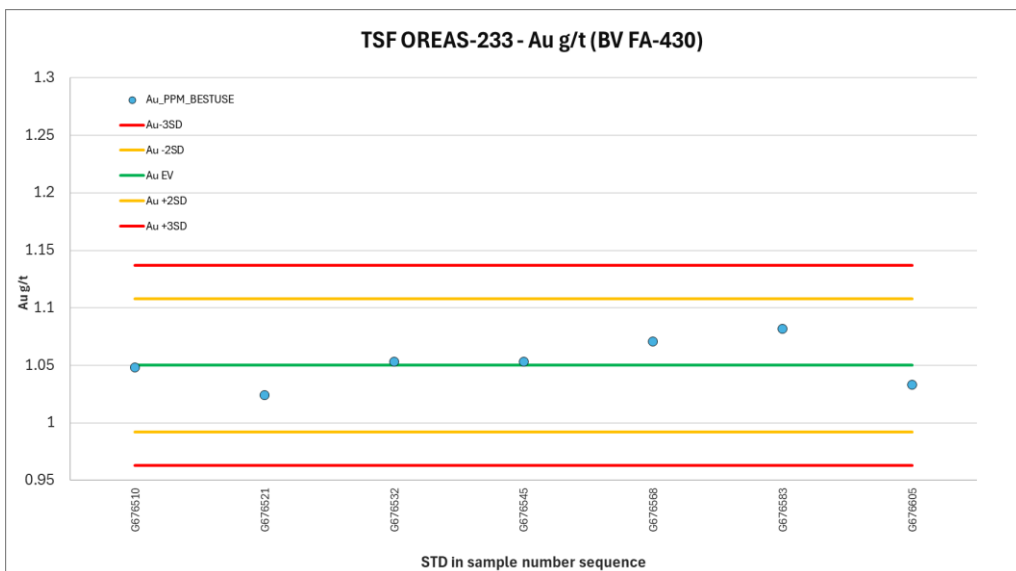


(Source: MMTS, 2025)

**Figure 11-28: Blank performance - Ag (BV 2024)**

**11.6.2 TSF CRM OREAS-233**

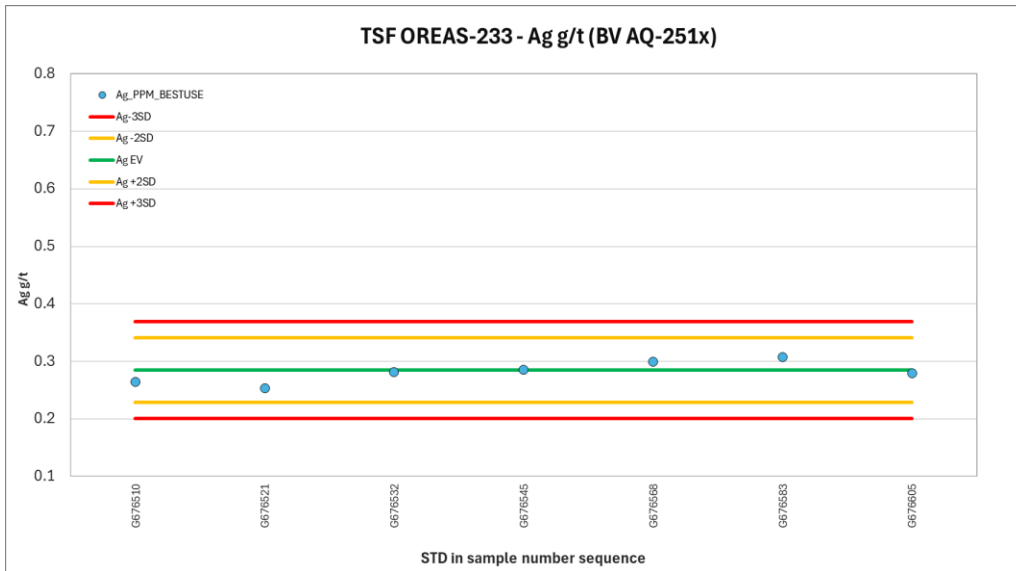
OREAS-233 was inserted into the sample stream at reasonably regular intervals of approx. every 15 samples but because some are very short, only 7 of 11 drillholes are effectively controlled for accuracy. The performance of both Au and Ag is very good (Figure 11-29 and Figure 11-30) though it is noted that the certified Ag concentration of OREAS-233 at 0.285g/t does not sufficiently represent the encountered Ag grades of the sampled TSF material (average of 44g/t). MMTS recommends using a different standard for any additional work.



(Source: MMTS, 2025)

**Figure 11-29: CRM OREAS-233 - Au (BV 2024)**



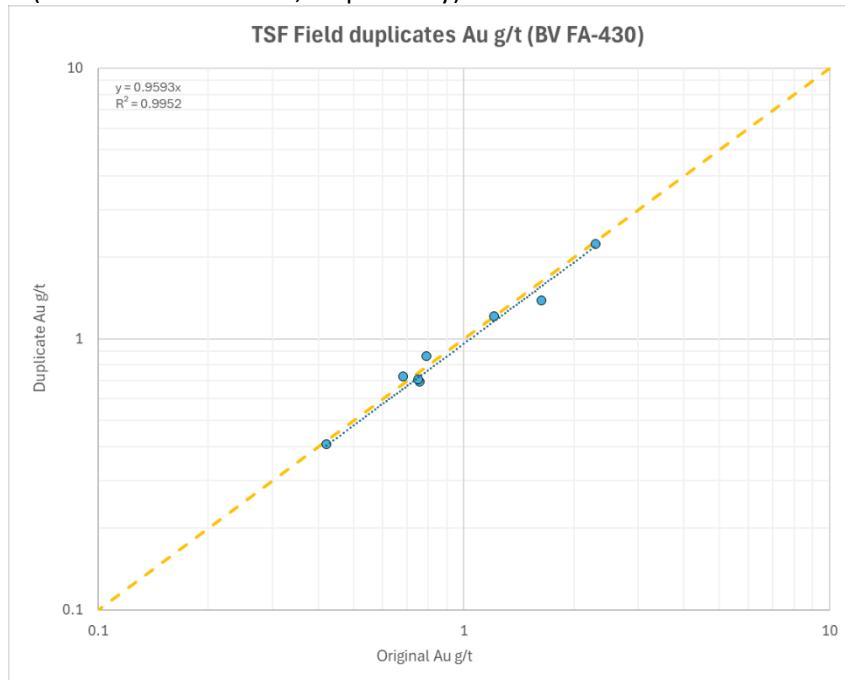


(Source: MMTS, 2025)

Figure 11-30: CRM OREAS-233 - Ag (BV 2024)

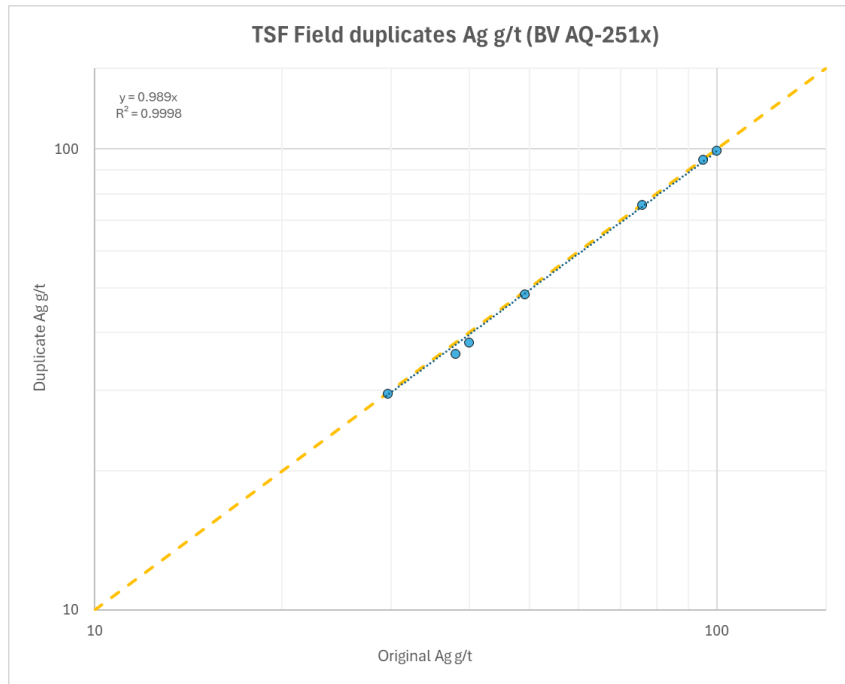
### 11.6.3 TSF Field Duplicates

To control sampling precision, 8 field duplicates were taken by splitting the recovered material in half. Reported sample weights for the original-duplicate pairs indicate that this was done diligently. The grade ranges for both Au (Figure 11-31) and Ag (Figure 11-32) are representative of the grade distribution within the TSF sample population and correlations are very good ( $R^2$  of 0.995 and 0.998, respectively).



(Source: MMTS, 2025)

Figure 11-31: Field Duplicates Scatter Plot – Au (BV 2024)



(Source: MMTS, 2025)

**Figure 11-32: Field Duplicates Scatter Plot – Ag (BV 2024)**

## **12 Data Verification**

### **12.1 2024 TSF Assay Data validation**

Provided assay results of all 123 TSF samples submitted to Bureau Veritas in October 2024 were validated against the lab certificate and no inconsistencies were identified for Au or Ag.

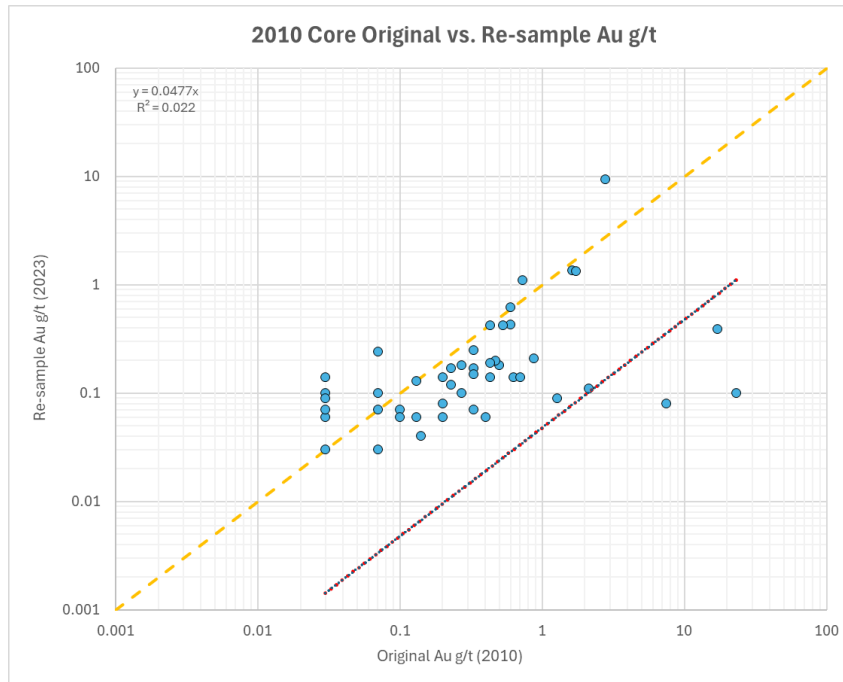
### **12.2 2023 Historical Core Resampling Assay Data Validation (2007-2010)**

The 795 samples generated by resampling core of 2007 (10 holes) and 2010 (2 holes) were analyzed by ALS and a compilation of the assay data including the supporting drillhole information was provided to MMTS. No inconsistencies were found in the Au and Ag assay results when comparing against original ALS certificates. MMTS notes that while all core samples taken were classified as 'whole core' (WCORE) by TDG Gold, the variability in the ratio between sample interval and reported sampled weight indicates that the resampled material was sometimes quarter core, other times half core, which should have been recorded as such in the assay database. Only one inconsequential sampling issue was detected in DH SH07-11 (20-22m), this interval is not mineralized.

2007 core was not analyzed at the time but the original 2010 assay data for drillholes SH10-04 and SH10-05 is available for direct sample-by-sample comparison with the 2023 ALS results of the re-sampled core, a total of 68 matching or almost matching intervals including one interval for which two sub-intervals could be combined and the data averaged (weighted).

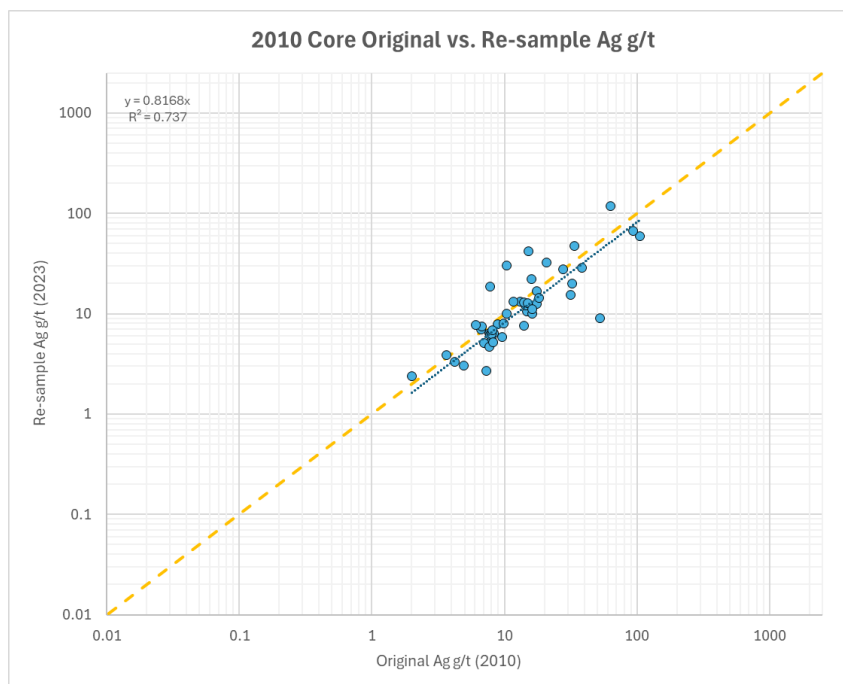
The Au data correlate poorly primarily because several of the original high-grade results could not be reproduced in 2023, in particular 3 consecutive samples taken in SH10-005 (40m to 42.7m) that indicated a strongly mineralized interval of around 10g/t over 2.7m (0.1g/t Au over 2.7m in 2023) and one sample in SH10-004 at 29-29.3m that ran 17g/t Au originally and returned <0.5g/t in 2023 (Figure 12-1).

Some variability in the distribution of Au in core is expected at Shasta, as demonstrated in Figure 11-13 graphing the 2021-2022 field duplicate performance. Also, the reproducibility of Ag grades is much better (Figure 12-2) which, considering the strong spatial correlation of Au and Ag, indicates that the poor precision in the Au data is likely natural and not caused by sample error.



(Source: MMTS, 2025)

**Figure 12-1: 2010 vs. 2023 Scatter Plot – Au**



(Source: MMTS, 2025)

**Figure 12-2: 2010 vs. 2023 Scatter Plot – Ag**

### 12.3 2022 Core Sample Assay Data Validation

MMTS has reviewed all 2022 assay data including the accompanying drillhole and sample information and found no direct evidence of assay data errors or omissions. +10% of Au and Ag data was validated against original certificate records. 2 mislabelled CRMs were corrected for this report. MMTS noticed that 3 of 75 field originals were sampled as

half core, in contrast to the field duplicates which were all quarter core. Approx. 30 sample interval inconsistencies were noted, indicated by sample weight to core interval ratios. MMTS recommends reviewing core sample pictures and adjusting from-to information in the database accordingly.

#### **12.4 2021 Field Sampling and Lab Sample Weight Records**

During the review of the 2021 drill data and lab reports, MMTS noted several inconsistencies with regards to the designation of field (FD) and pulp (PD) duplicates but also sample intervals. Using original lab certificates, in particular the reported sample weight as received, and TDG Gold core box photos including sample tags, these inconsistencies were corrected, and the respective sample intervals adjusted in time for resource estimation.

Data from certificates BBM21-14835 and BBM21-14836 (drillhole SH21-034) indicate a strong sample weight variability that is not supported by the recorded sample interval/core length and remains unexplained.

#### **12.5 2021 Core Sample Assay Data Validation**

The 2021 drill program resulted in 98 original lab certificates, all of which were available to MMTS in multiple formats. For Au and Ag assay result validation purposes, 488 intervals (8.5% of utilized data) across 21 certificates and drillholes were randomly selected from the data package used for resource estimation and electronically compared against said originals. For Au, not a single discrepancy was found, however for Ag 30 samples indicated a rounding error at very low grades (<0.05g/t) which is inconsequential.

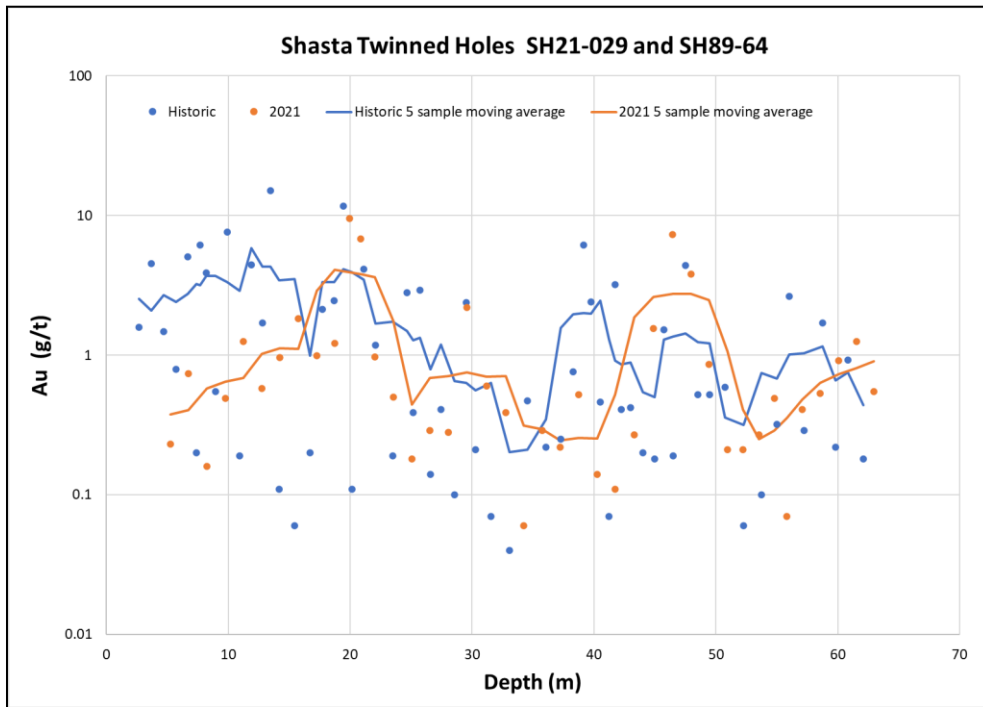
#### **12.6 Historical Assay Validation**

MMTS was only able to validate historical assays of drill campaigns for which Aris Reports or Shasta/Baker lab original records are available, as listed in Table 10-1.

All available Au and Ag data from these years was validated by comparison of the Certificates and Drill logs with the database. Any observed discrepancy was recorded, and the respective interval classified into one of 6 confidence groups or flagged for correction. Years without historical reports were flagged as lowest confidence. Overall, the utilized Au and Ag data was found to match historical records, and the few errors that were identified during validation (typos and minor data shifts) were corrected and the corrected data subsequently used for resource estimation.

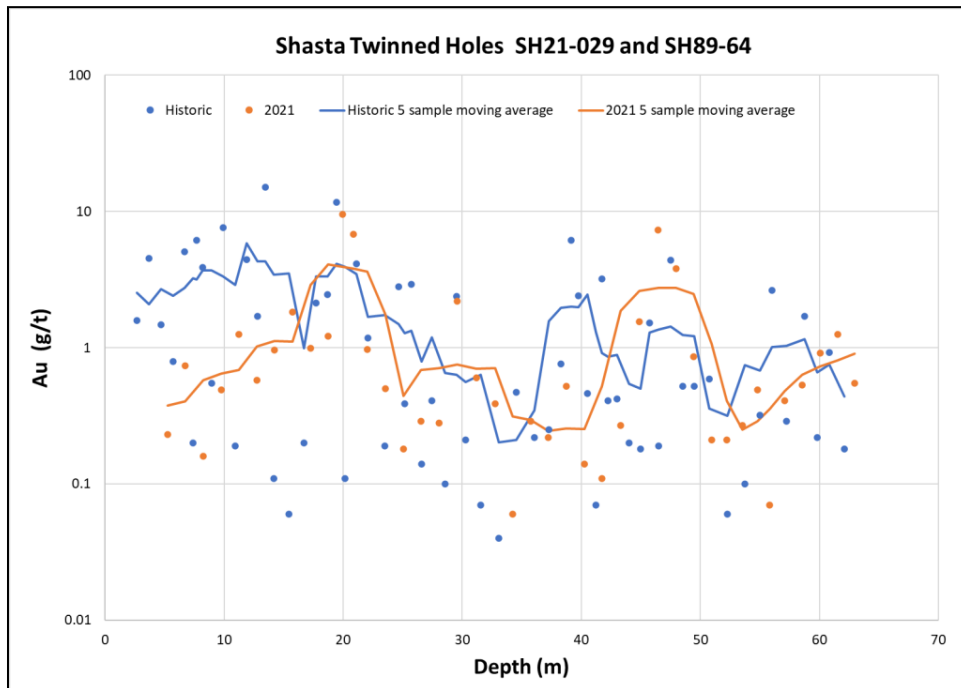
#### **12.7 Twinning of Historical Drillholes**

Holes SH21-026 and SH21-029 function as twins of historical holes SH87-23 and SH89-64, respectively, with acceptable comparability between historical and current results. Figure 12-3 and Figure 12-4 demonstrate the variability of Au grade over aligned hole depth, using calculated sample interval mid-points. MMTS considers the data comparable.



(Source: MMTS, 2022)

**Figure 12-3: Downhole Au Distribution in DH SH21-029 and SH89-64**



(Source: MMTS, 2022)

**Figure 12-4: Downhole Au Distribution in DH SH21-026 and SH87-23**

## **13 Mineral Processing and Metallurgical Testing**

The Baker mill was originally designed to process the mill feeds from the Baker mine at a mill feed rate of 100 short tons per day (st/d) and was upgraded to approximately 200 tonnes per day (t/d).

The mill used conventional processing methods. Comminution consisted of two stages of crushing and one stage of ball mill grinding. The gold and silver recovery process used at the early stage of the operation was whole-ore cyanide leaching followed by Merrill Crowe treatment to recover gold and silver from the leaching solution. Due to changes in mineralogical property in the late operation, the processing flowsheet was modified by incorporating a flotation pre-concentration circuit to recover gold and gold-bearing minerals into a flotation concentrate, which was further treated by cyanide leaching and Merrill Crowe process to recover gold and silver from the concentrate. The flotation tailings bypassed the cyanide leaching circuit and was disposed, together with the leach residue, to the tailings storage facility ("TSF"). Ore from the Shasta deposit was intermittently processed at the Baker mill between 1989-1991 and 2008-2012 before the mill was put under care and maintenance.

It is assumed that metallurgical test programs were on Baker and Shasta feed material was done prior to and in conjunction with operations, but no records have been found. There is also no metallurgical test work available for Oxide Peaks or Mets. Therefore, the only known test work is that which was done by TDG Gold Corp. in 2021 and 2022.

### **13.1 Mineralogy**

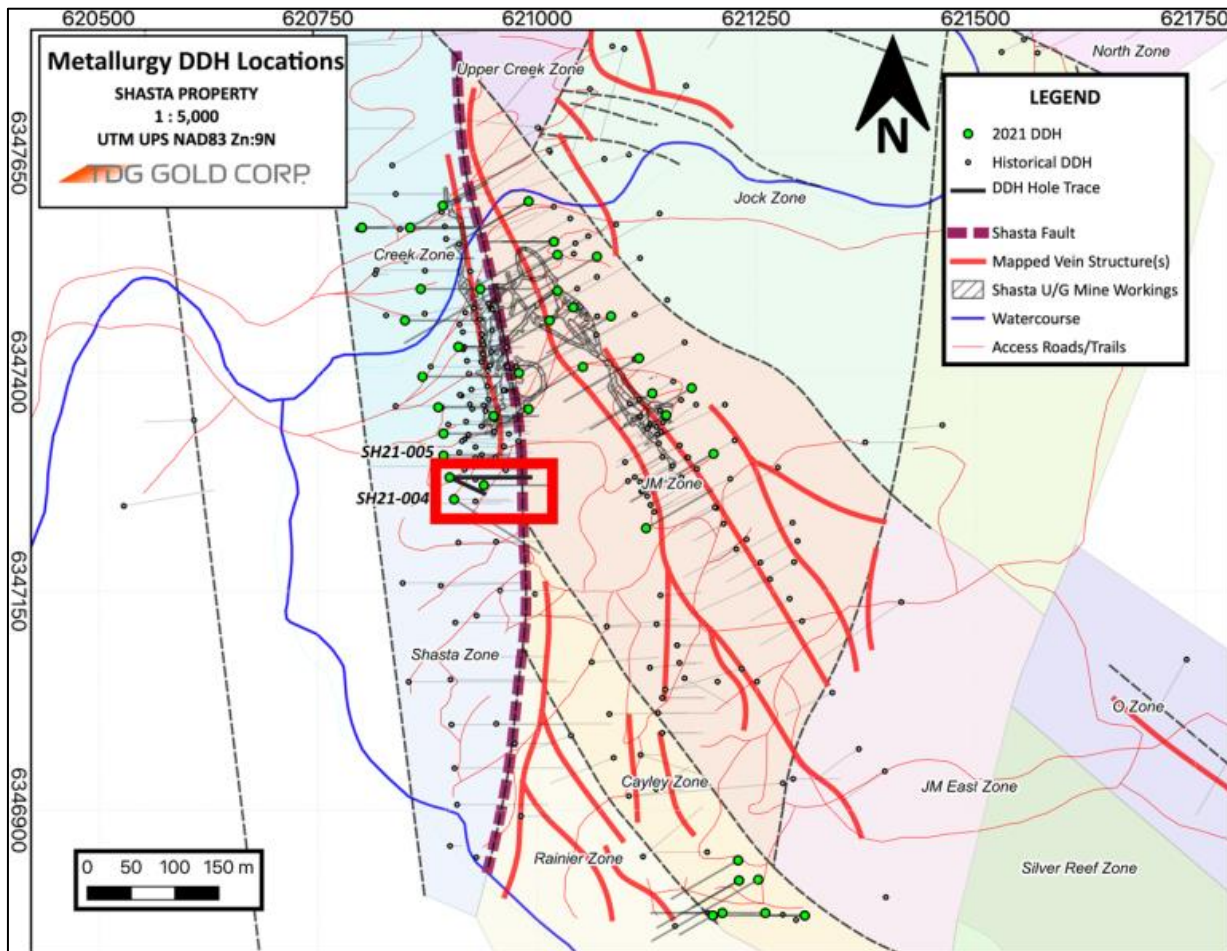
At Baker and Shasta economic gold-silver values are generally associated with highly fractured and occasionally brecciated quartz veins containing pyrite, and to a lesser extent occur in silicified wallrock. Higher grade mineralization is associated with grey quartz, which occasionally contains visible argentite, commonly associated with disseminated grains of pyrite, chalcopyrite, and very minor sphalerite.

### **13.2 Metallurgical test work 2021/ 2022**

The 2021/2022 metallurgical program consisted of analysis conducted by Bureau Veritas Minerals (BVM) Metallurgical Division; an accredited facility located in British Columbia. Analysis was provided by TetraTech Canada Inc. Tests were done on grindability, gravity concentration, flotation, direct cyanidation, and a combination of flotation and flotation concentrate cyanidation.

#### **13.2.1 Sample Origin and Grade**

Two 20kg composite samples were constructed from diamond drillholes SH21-004 and SH21-005 from the 2021 drilling program. Figure 13-1 shows their location.



(Source: TDG, 2023)

**Figure 13-1: Metallurgical Sample Locations**

### 13.2.2 Comminution

Bond ball mill tests were conducted on the two composites. The Bond ball mill work index was measured to be 16.4 kWh/t for Sample #2 and 17.4 kWh/t for Sample #1, which are classified as moderate hardness for ball mill grinding.

### 13.2.3 Gravity Concentration

Gravity concentration testing was conducted on each of the two samples using two-pass centrifugal concentration followed by panning on the concentrates produced from the centrifugal concentration. The test results indicate that the two samples may contain free nugget gold grains, especially for Sample #2. Approximately 37.6% of the gold and 12.8% of the silver in Sample #2 were concentrated into the pan concentrate containing 349.7 grams per tonne (“g/t”) Au and 4,816 g/t Ag. Compared to Sample #2, Sample #1 appears less responsive to the gravity concentration procedure, only 15.9% of the gold was recovered into the pan concentrate with 48.3 g/t Au and 892 g/t Ag.

### 13.2.4 Flotation

The flotation test results indicate that the two samples responded well to the flotation procedure at a coarse primary grind size of 80% passing approximately 200 µm. The gold (“Au”) recovery reporting to rougher flotation concentrates ranged from 97.2% to 99.0% for Sample #2 and 93.3% to 97.2% for Sample #1 at different primary grind sizes, ranging from approximately 80% passing (P80) 72 µm to 209 µm. The average silver (“Ag”) recoveries to the rougher flotation concentrates were 90.3% for Sample #1 and 96.4% for Sample #2.



### 13.2.5 Direct Cyanidation

The cyanide leach test results show both Sample #1 and Sample #2 responded well to the direct cyanidation. The average gold extraction rates were 87.3% for Sample #1 and 95.0% for Sample #2. On average the silver extraction rates were 72.5% for Sample #1 and 76.9% for Sample #2. The test results also indicate that the cyanide leaching kinetics were relatively rapid, approximately more than 70% and 50% of the gold were respectively extracted from Sample #1 and Sample #2 within a leaching retention time of 7 hours. The total leach retention time was 48 hours. The test results are summarized in Table 13-1 .

The reagent consumptions generally are at reasonable levels. The average sodium cyanide (NaCN) consumptions were 0.62 kilograms per tonne ("kg/t") and 0.83 kg/t respectively for Sample #1 and Sample #2. The average hydrated lime (Ca(OH)<sub>2</sub>) consumptions were low, at 0.43 kg/t for Sample #1 and 0.35 kg/t for Sample #2 separately.

**Table 13-1: Direct Cyanidation Results – Head Samples**

Sample ID	Particle Size	Calculated Head, g/t		Extraction, %		Consumption, kg/t	
	P80, µm	Au	Ag	Au	Ag	NaCN	Lime
Sample 1	143	0.60	29	84.7	72.7	0.63	0.46
Sample 1	103	0.63	29	87.9	75.8	0.55	0.44
Sample 1	72	0.60	32	89.3	69.1	0.69	0.38
Sample 2	148	2.11	78	93.4	73.2	0.82	0.34
Sample 2	107	2.14	78	95.1	77.0	0.82	0.34
Sample 2	72	2.27	77	96.4	80.5	0.85	0.36

### 13.2.6 Flotation + Cyanidation

Using the bulk flotation procedure developed from the flotation tests, gold bearing bulk concentrates were produced from the 20-kg head samples at a primary grind size of 80% passing 200 µm. The concentrates were then reground at three different particle sizes, ranging from 80% passing 15 µm to 49 µm and then cyanide leached for 48 hours at a sodium cyanide concentration of 2 grams per litre ("g/L"). The test results are shown in Table 13-2.

**Table 13-2: Flotation + Flotation Concentrate Regrinding and Cyanidation**

Sample ID	Flotation*							Cyanidation			Flotation + Cyanidation	
	Calculated Head Grade*, g/t		Concentrate Grade g/t		Recovery %			Regrind size, P80	Extraction, %		Recovery, %	
	Au	Ag	Au	Ag	Au	Ag	Mass	µm	Au	Ag	Au	Ag
Sample 1	0.71	23	6.6	205	94.3	88.4	10.1	49	93.0	73.3	87.7	64.8
								38	94.5	73.4	89.1	64.9
								19	93.4	73.9	88.0	65.4
Sample 2	1.90	68	18.3	639	98.0	96.0	10.2	47	96.0	78.4	94.1	75.3
								37	96.7	80.4	94.8	77.2
								15	96.3	79.0	94.3	75.8

\* at a primary grind size of 80% passing approximately 200 µm; based on flotation head

In general, the reground flotation concentrate responded well to the cyanidation. In the tested regrind size range, the gold and silver extractions were not sensitive to the regrind size. On average, gold and silver extractions were approximately 93.6% Au and 73.5% Ag for the Sample #1's concentrate and 96.3% Au and 79.2% Ag for the Sample #2's concentrate. Overall gold and silver recoveries (flotation + cyanidation) are calculated to be 88.3% Au and 65.0% Ag for Sample #1 and 94.4% Au and 76.1% Ag for Sample #2 respectively. The test results show that reagent consumptions, including sodium cyanide, are at the reasonable levels.

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### **13.2.7 Conclusions**

The samples tested responded well to gold and silver recoveries by conventional flotation, direct cyanidation and a combination of flotation and cyanidation treatments, which is similar to the historical processing flowsheet used at the Baker mill. Some of the gold occurs as coarse nugget grains which are amenable to gravity concentration.

Direct cyanidation achieved extraction percentages of 84.7% to 96.4% for gold, and 69.1% to 80.5% for silver (see Table 13-1). Flotation testing delivered recoveries of 94.3% and 98.0% for gold, and 88.4% and 96.0% for silver (see Table 13-2). Flotation concentrate regrind and cyanidation delivered recoveries of 87.7% to 94.8% for gold, and 64.8% to 77.2% for silver.

The results suggests that gold and silver recoveries for mineralized material from Shasta are responsive to conventional process technology. For the purpose of evaluating Mineral Resources, it is reasonable to use 94.8% Au recovery and 77.2% Ag recovery, which are the results of the best single set of conditions using flotation concentrate regrind and cyanidation.

### **13.2.8 Recommendations**

For the next stage of testing TDG plans to undertake further metallurgical testing on various mineral samples, especially the samples representative to different lithological and alteration domains and spatial locations.

## 14 Mineral Resource Estimate

### 14.1 Summary

The Mineral Resource Estimate (MRE) for the Shasta deposit has an effective date of December 29, 2025. The resource estimate is summarized in the Tables below with the base case cut-off grade of 0.40g/t Au Equivalent (AuEq) highlighted for the insitu resource and with no cutoff for the tailings since there is no method to separate the tailings by cutoff. Tonnage for the tailing storage facility (TSF) has been determined from the historical production records (TetraTech, 2015). The insitu resource estimate has been confined to an open pit with “reasonable prospects of eventual economic extraction”. The base case cut-off grade covers the Processing + General and Administrative (“G&A”) costs of CDN\$17.00/tonne processed using the prices and smelter terms as detailed in the Notes to the Table.

**Table 14-1: Shasta Mineral Resource**

Class	AuEq Cutoff (gpt)	In Situ Tonnage and Grade					AuEq Metal (kOz)	Au Metal (kOz)	Ag Metal (kOz)
		Tonnage (ktonnes)	AuEq (gpt)	Au (gpt)	Ag (gpt)	NSR (\$CDN)			
Indicated	0.3	15,830	1.083	0.844	29.8	77.58	550.9	429.6	15,167
	0.35	14,026	1.180	0.920	32.5	84.57	532.2	414.9	14,660
	0.4	12,578	1.273	0.993	35.0	91.22	514.8	401.4	14,166
	0.45	11,300	1.369	1.068	37.6	98.11	497.4	388.0	13,667
	0.5	10,198	1.466	1.144	40.2	105.04	480.6	375.1	13,187
	1	4,579	2.406	1.885	65.1	172.39	354.1	277.5	9,584
Inferred	0.3	19,881	0.854	0.657	24.6	61.18	545.7	419.9	15,718
	0.35	17,391	0.930	0.716	26.8	66.62	519.8	400.1	14,974
	0.4	15,432	1.000	0.771	28.7	71.69	496.3	382.3	14,249
	0.45	13,762	1.070	0.825	30.6	76.70	473.6	365.2	13,548
	0.5	12,276	1.143	0.883	32.5	81.88	451.0	348.4	12,823
	1	4,610	1.890	1.497	49.1	135.47	280.2	221.9	7,282
Inferred	Tailings	276	1.367	0.968	44.9	121.83	12.1	8.6	398

#### Notes to the MRE tables:

- The Mineral Resource estimate has been prepared by Sue Bird, P.Eng., an independent Qualified Person. The effective date of the mineral resource estimate is December 29, 2024.
- Mineral Resources are reported using the 2014 CIM Definition Standards and were estimated in accordance with the CIM 2019 Best Practices Guidelines, as required by NI43-101.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all Mineral Resources will be converted into Mineral Reserves.
- Inferred Mineral Resources are considered too speculative geologically to have economic considerations applied to them that would enable their classification as Mineral Reserves. However, it is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Measured or Indicated Mineral Resources with continued exploration and additional data.
- The in situ Mineral Resource has been confined by a “reasonable prospects of eventual economic extraction” pit using the following assumptions, which were estimated from comparable projects:
  - Au price of US\$2,250/oz, Ag price of US\$25/oz at an exchange rate of 0.74 US\$ per CDN\$;
  - 99.9 % payable Au; 95.0 % payable Ag; US\$7.00/oz Au and US\$3.00/oz Ag offsite costs (refining, transport and insurance);
  - a 1.5 % NSR royalty; and uses a 93.0 % metallurgical recovery for Au and 86.0 % recovery for Ag;
  - Mining costs of CDN\$4.00/tonne mineralized material;
  - Processing Costs of CDN\$15/tonne and G&A of CDN\$8.00/tonne processed;
  - Pit slopes of 45 degrees.
- The resulting NSR equation is:  $NSR (CDN\$) = 95.79 * Au \text{ Grade} * 0.93 + 0.92 * Ag \text{ Grade} * 0.86$
- The resulting AuEq equation is:  $AuEq = Au + Ag * 0.00887$
- The bulk density of the deposit is based on 2021 & 2022 measurements and is 2.61 throughout the deposit and 2.00 for overburden.
- Numbers may not sum due to rounding.

There are no other known factors or issues that materially affect the MRE other than normal risks faced by mining projects in the province of British Columbia, Canada, in terms of environmental, permitting, taxation, socio-economic, marketing, and political factors.

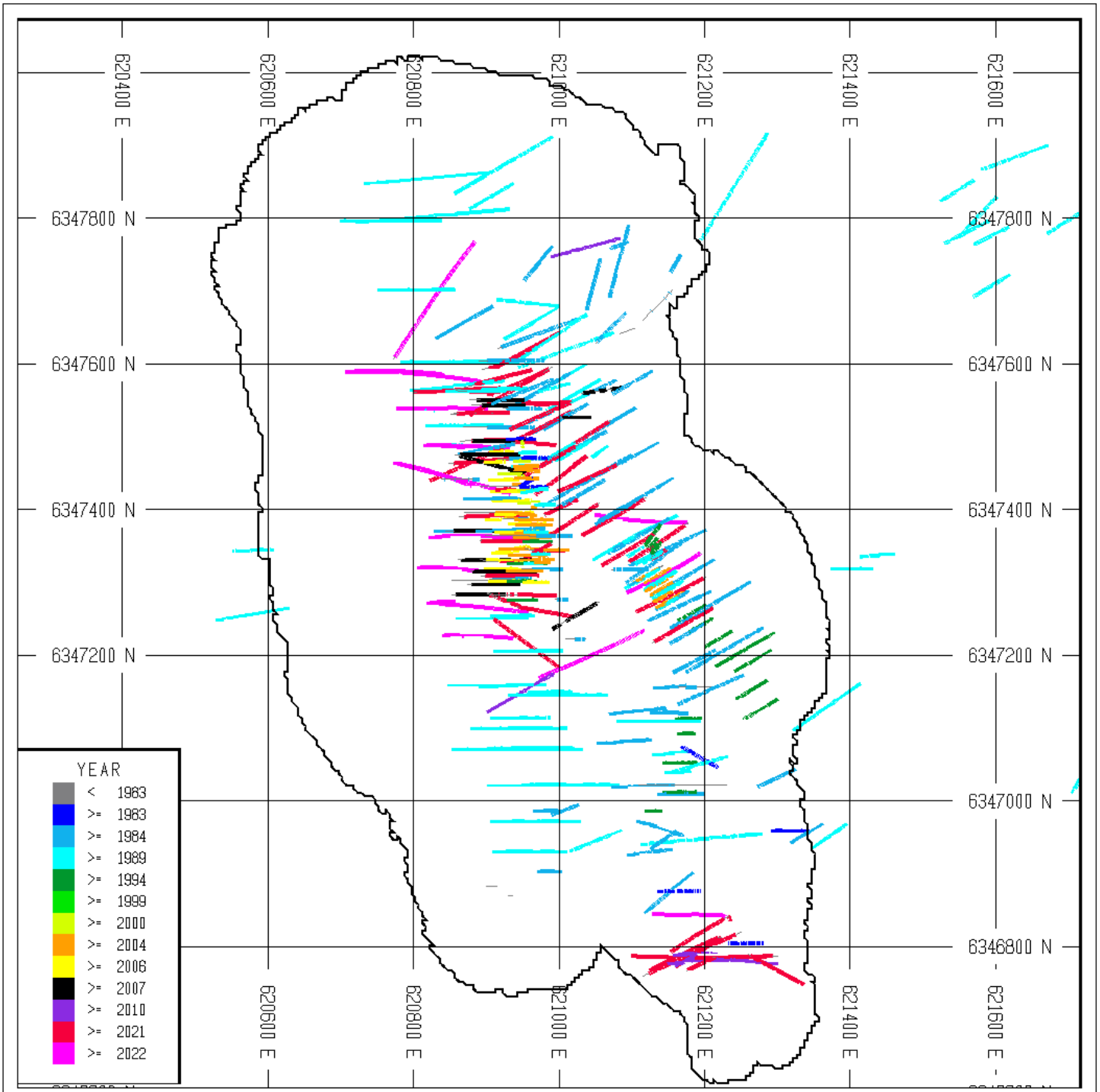
### 14.2 Key Assumptions and Data used in the Resource Estimate

A summary of the drillholes used for the resource estimate of the Shasta deposit is summarized in the Table below. Figure 14-1 is a plan map of all drillholes for the insitu Shasta Resource. An additional 11 holes with an average depth of 4.85m (53m of assaying) have been drilled at the Tailings Storage Facility to estimate the grade of the tailings for inclusion in the resource estimate as illustrated in the plan map of Figure 14-2.

Twinning of historical drillholes at Shasta returned acceptable results as discussed in Section 12.4 and comparison of 2021 drilling to historical drilling does not indicate significant bias.

**Table 14-2: Summary of Drillholes and Assays used in the Shasta Resource Estimate**

Year	Drillhole Database				Source
	# Drillholes	Total Length (m)	Assayed Length (m)	% Assayed	
1983	9	673	513.9	76%	Aris Report 11715
1984	18	1,223	1,223	100%	PF861856 (Project Files)
1987	24	2,383	1,422	60%	<a href="#">Aris Reports 17519/16698</a>
1988	31	3,665	1571.7	43%	N/A
1989	63	6,087	2,777	46%	N/A
1990	27	4745.8	1806.2	38%	Aris Report 20821
1991	13	978.42	143.12	15%	N/A
1994	20	1442.2	298.01	21%	N/A
1995	4	243.29	26.52	11%	N/A
1998	9	298.75	169.19	57%	Aris Report 26004A
2003	8	262.73	59.29	23%	N/A
2004	27	1,486	467.04	31%	Aris Report 27653A
2005	6	162.8	64.64	40%	N/A
2006	20	1,519	421.4	28%	Aris Report 29168
2007	19	1,583	1582.72	100%	2024 Certificates
2010	12	890	222.8	25%	2024 Certificates
2021	55	7,404	7,394	100%	2021 SGS Certificates
2022	20	5,413	4,749	88%	2022 Certificates
<b>Total</b>	<b>385</b>	<b>40,458</b>	<b>24,911</b>	<b>62%</b>	



(Source: MMTS, 2025)

**Figure 14-1: Plan view of Drillholes by Year with Outline of Holes used for Resource Estimate**

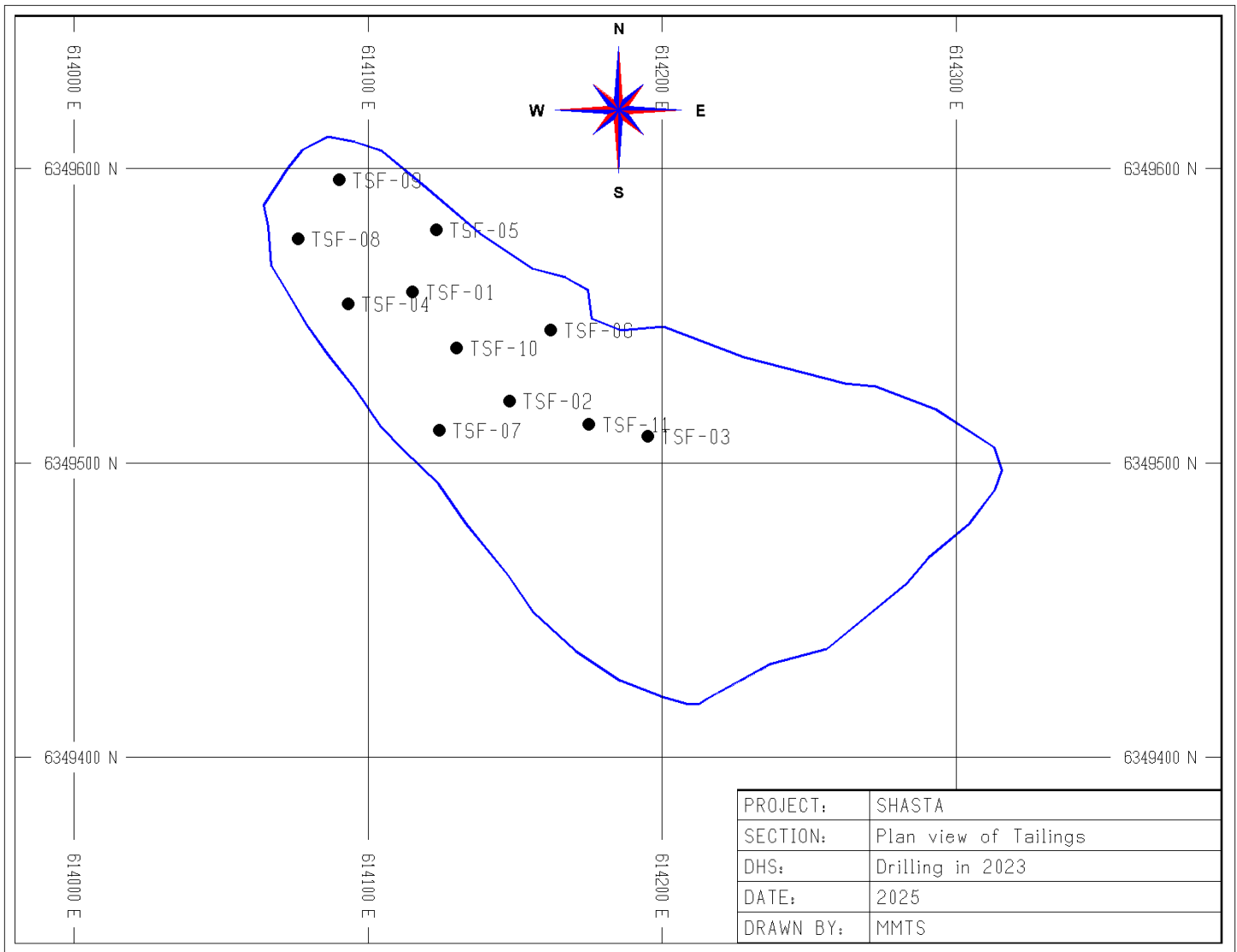


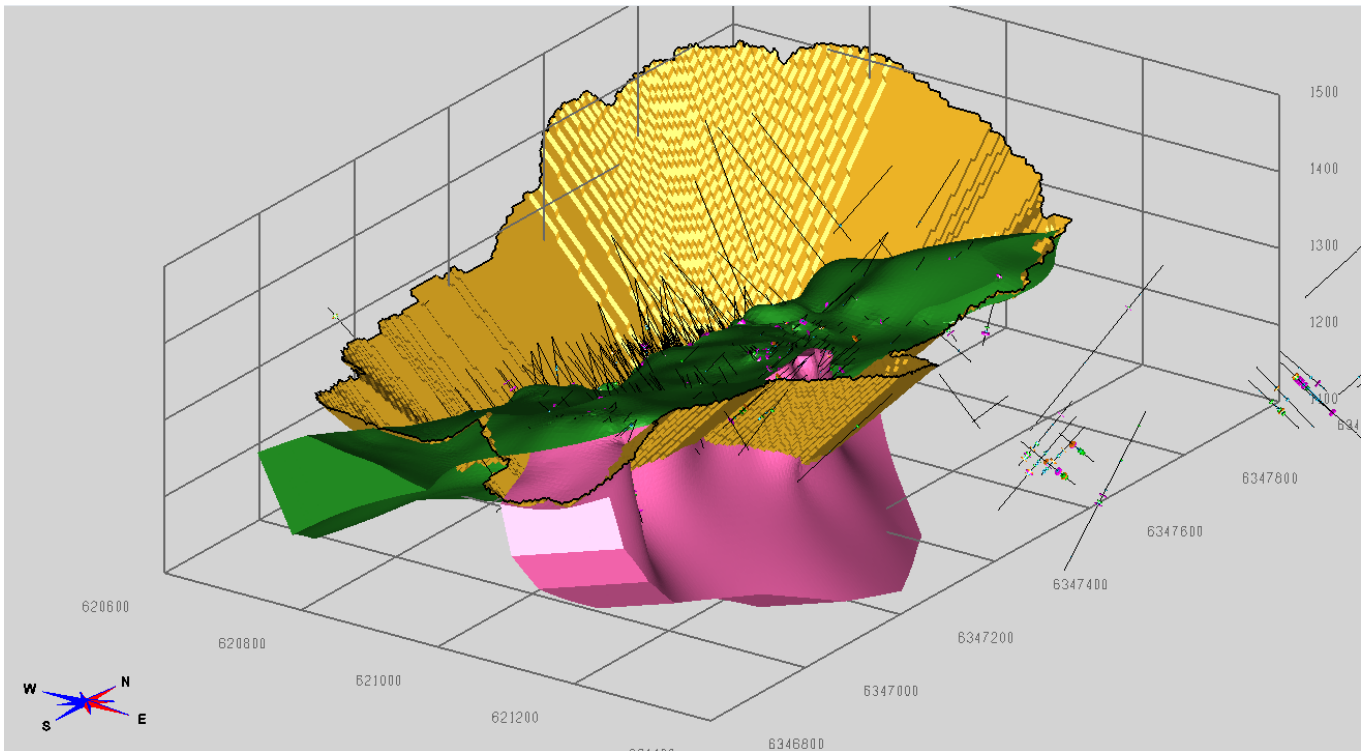
Figure 14-2: Plan view of THE 2023 Drillholes AT THE Tailings Storage Facility

### 14.3 Geologic Models

Gold and Silver mineralization at Shasta occurs in two main trends named the Shasta (or Creek) Zone and the JM zone. The western Shasta Zone is associated with the Shasta Fault. It strikes north (azimuth = 0 degrees) and dips between approximately 20 and 45 degrees west. The eastern JM Zone is sub-vertical with a strike of approximately 340 degrees.

Au and Ag mineralization crosses lithological and alteration boundaries. The Shasta zone is associated with the Shasta fault, but the fault is not a hard boundary since economic mineralization occurs on both sides of it. Therefore, economic grade has been used as the primary basis of 3D modeling at both areas.

The domains target 0.15 g/t AuEq. One domain has been modeled for each of the Shasta and JM zones. In the northern area of the deposit where the zones converge the Shasta zone is clipped to the JM zone because Variography shows the vertical orientation to be the stronger of the two directional trends. The domains are shown in Figure 14-3, with the resource pit shape and the drillhole traces also plotted for reference. The domain solids have been clipped to the overburden surface prior to use in coding the model for interpolations.



(Source: MMTS, 2025)

**Figure 14-3: Shasta (green) and JM (pink) Domains – Looking Northwest**

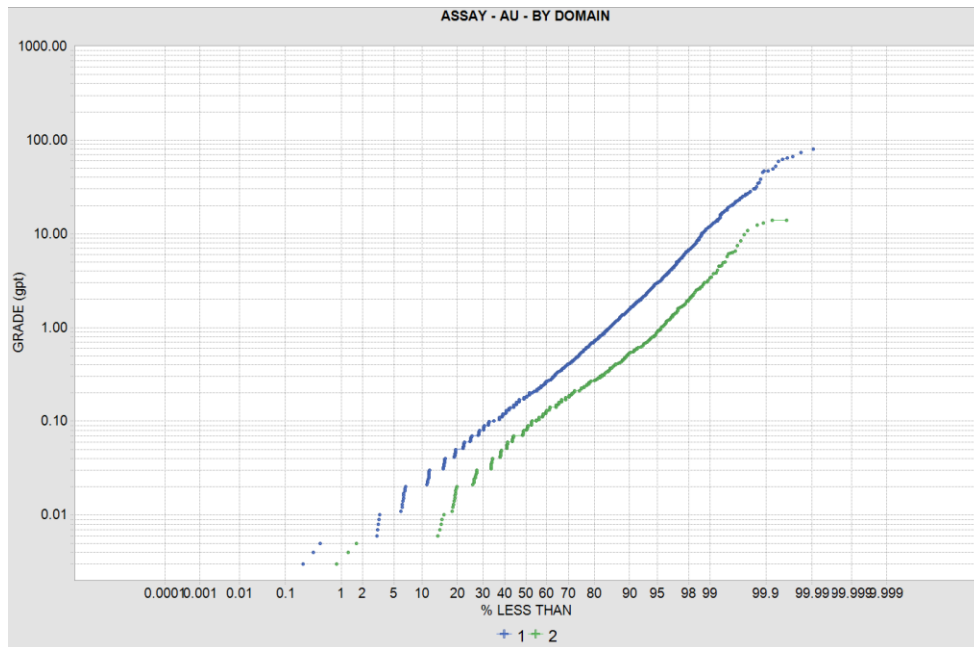
#### 14.4 Assay Statistics, Capping, and Outlier Restriction

The assay statistics were examined using boxplots, histograms, and cumulative probability plots (CPPs). Figure 14-4 and Figure 14-5 are CPPs for the Au and Ag by domain respectively.

The capping values for each area and domain are summarized in Table 14-3. Also summarized in this Table are the Outlier Restriction values used during interpolation. These are shown here for clarity on how the high-grade outliers have been confined during interpolations. This is discussed further in Section 14.8 which summarizes the block modelling parameters.

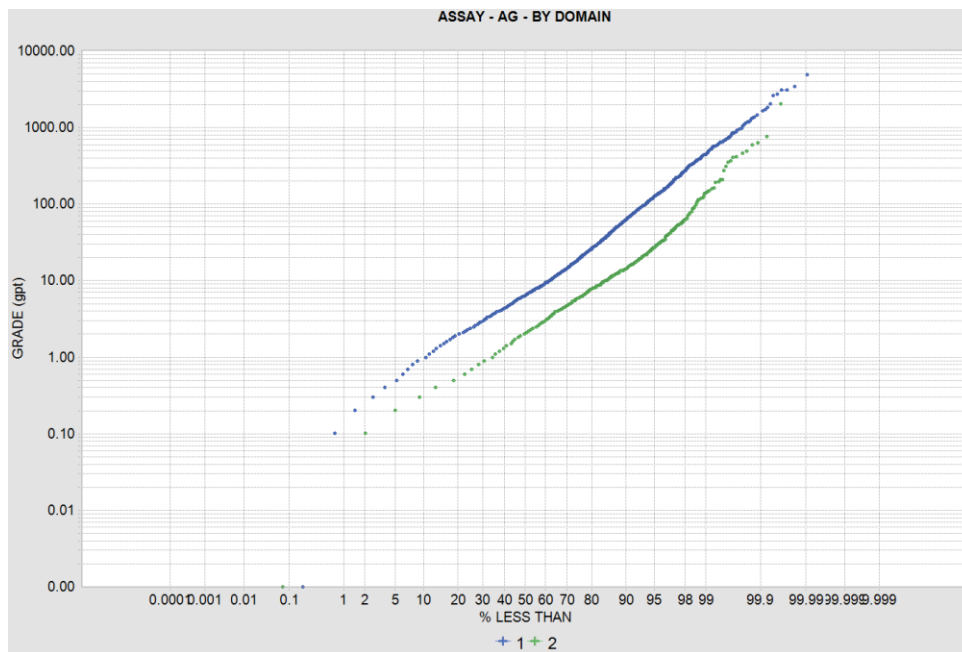
**Table 14-3: Summary of Capping and Outlier Restriction by Domain**

DOM	Assay Capping Values				Composite Outliers			
	Au (g/t)	# capped	Ag (g/t)	# capped	Au (g/t)	# of outliers	Ag (g/t)	# of outliers
1	100	1	5000	1	30	10	5	5
2	50	1	3000	1	5	9	1000	2



(Source: MMTS, 2025)

**Figure 14-4: CPP of Au Assay Grades by Domain**



(Source: MMTS, 2025)

**Figure 14-5: CPP of Ag Assay Grades by Domain**

Assay and composite statistics for the capped gold grades are summarized in Table 14-4, illustrating that the composited grades equal assayed grade and therefore compositing has not introduced a bias. Also illustrated is that the grade distribution is generally lognormal. The Coefficient of Variation (C.V.) is somewhat high for some domains, but it further restricted during interpolation by Outlier Restrictions.

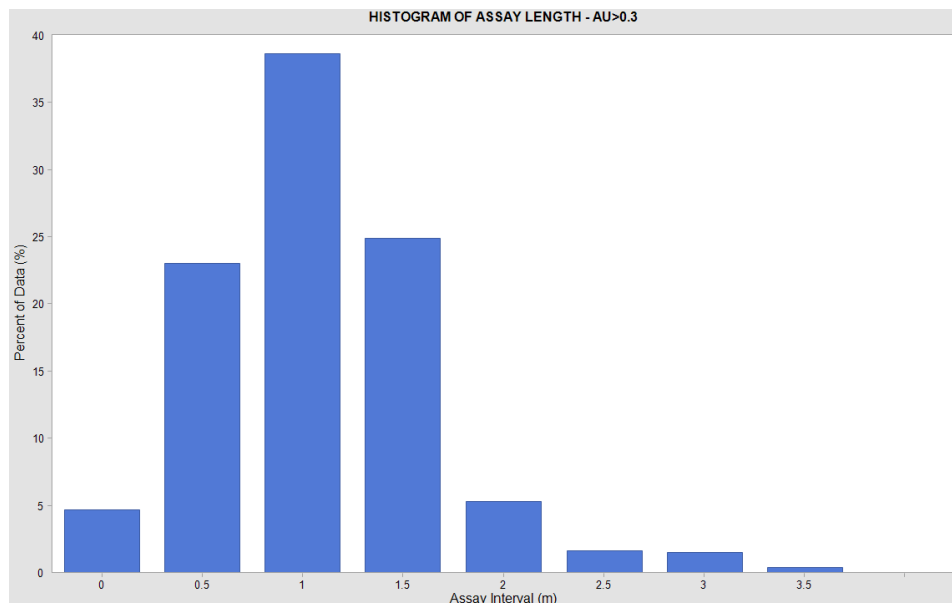


**Table 14-4: Assay Statistics Compared to Composite Statistics**

Source	Parameter	Capped					
		Au		Ag		Au	Ag
		1	2	1	2	All	All
Assays	Num Samples	10,982	2,412	10,984	2,412	13,394	13,396
	Num Missing	455	110	453	110	565	563
	Minimum (g/t)	0.001	0.001	0.00	0.00	0.001	0.00
	Maximum (g/t)	100	50	5000	3000	100	5000
	Wtd. Mean (g/t)	0.732	0.2998	28.02	11.4	0.6569	25.13
	Weighted CV	3.86	4.68	4.00	7.74	4.02	4.32
Composites	Num Samples	7,543	1,588	7,544	1,588	9,131	9,132
	Num Missing	1863	463	1862	463	2326	2325
	Minimum (g/t)	0.001	0.001	0.00	0.10	0.001	0.00
	Maximum (g/t)	48.429	25.265	3090.7	1522.2	48.429	3090.7
	Wtd. Mean (g/t)	0.7413	0.3053	28.56	11.56	0.6654	25.6
	Weighted CV	3.08	3.29	3.25	5.30	3.19	3.45
<b>Difference (%)</b>		<b>1.3%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.8%</b>

### 14.5 Compositing

Compositing has been done on 2m composites, honoring the domain boundaries. This length is chosen to be larger than the majority of existing assay intervals within the domain, as illustrated in the histogram below (Figure 14-6).



(Source: MMTS, 2025)

**Figure 14-6: Histogram of Assay Lengths**

### 14.6 Specific Gravity Assignment

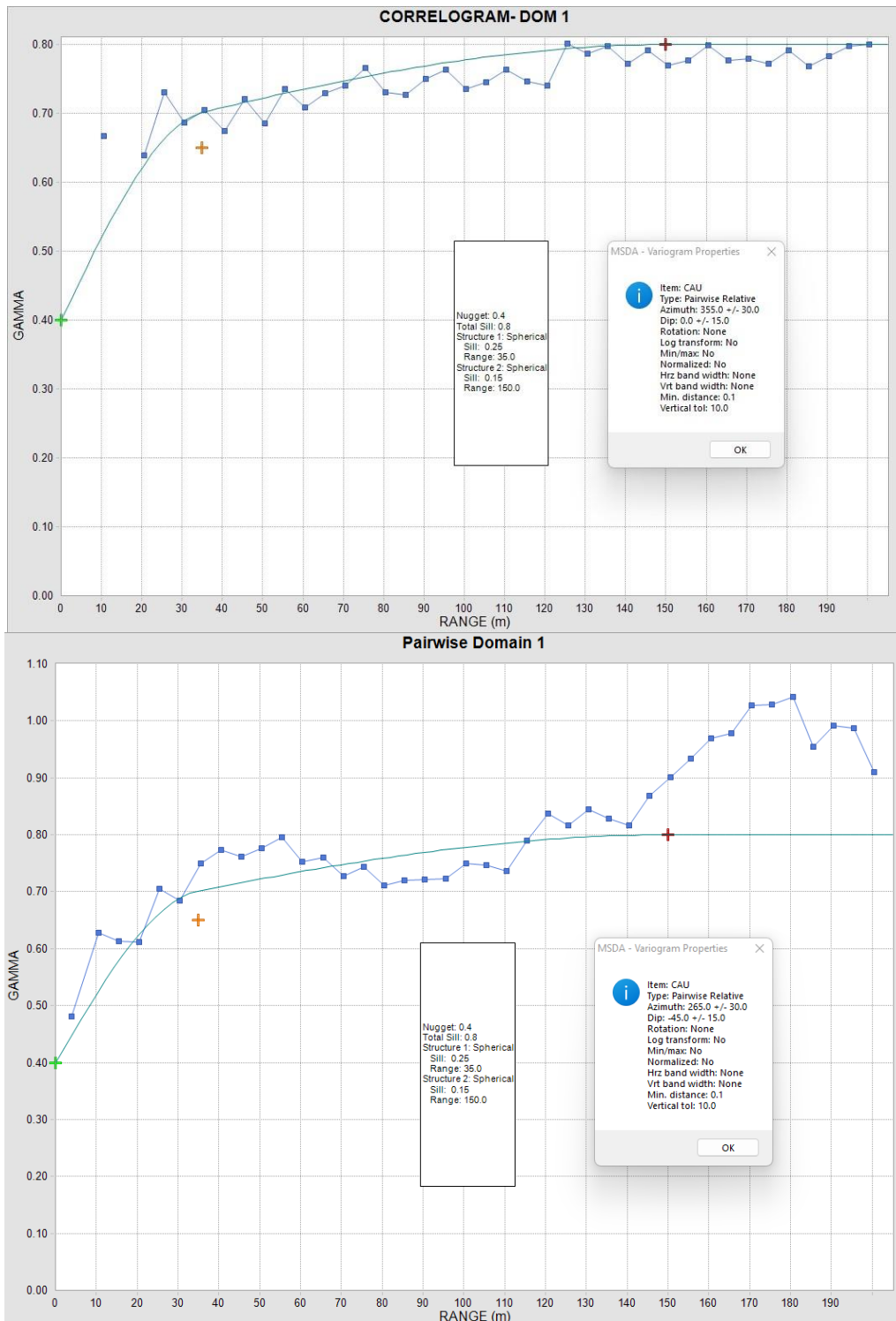
The specific gravity (sg) has been assigned based on 658 measurements of from the 2021 drilling. A value of 2.61 has been used for the mineralized domains. This is the mean sg of 188 samples with an Au grade greater than or equal to 0.25g/t. The bulk sg of the overburden is assumed to be 2.0.

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The methodology for measurement of sg is as follows: dry solids are placed in a dry graduate and then a measured volume of water (approximately 500 milliliters) is added to the this. The increase in volume caused by the dry solids displacing some of the water is then measured to determine the volume of solids. Assume the new volume is 550 c.c. The displacement, then, is 50 c.c. (550-500). Divide the weight of the dry solids (200 gr.) by the difference in volume (50 c.c.). The result, 4.00, is the specific gravity of the dry solids.

### **14.7 Variography**

Variography has been done on the two main domains to determine the primary anisotropy and aid in search distances to be used during interpolations, and in Classification. Figure 14-7 below illustrates the variogram models for Au in the Shasta domain (Domain 1) with the principal axes aligned with the Shasta fault. Similar search parameters were used for both domains.



(Source: MMTS, 2025)

**Figure 14-7: Variography of Au in the Shasta Zone**

### 14.8 Block Modelling

Block dimensions are 5m x 5m x 5m with the extent of the block model summarized in Table 14-5.

**Table 14-5: Shasta Model Extents**

Direction	Minimum	Maximum	Size	# Blocks
Easting	620,500	622,400	5	380
Northing	6,346,700	6,348,200	5	300
Elevation	1000	1,600	5	120

Search parameter orientations varied based on the mineralized zone orientations as summarized in Table 14-6. The rotation values Major, Minor and Vertical are the rotation of the principal axes about the Y-axis, X-axis, and Z-axis, respectively, using the right-hand rule with positive rotation upwards. Interpolation has been done using inverse distance (ID3) in all cases.

**Table 14-6: Summary of Search Orientations**

Rotation Axis Direction	Domain	
	1	2
Y	355	340
X	0	0
Z	45	-80

The restrictions on search distances and composite selection for each of the four passes of the interpolations are given in Table 14-7.

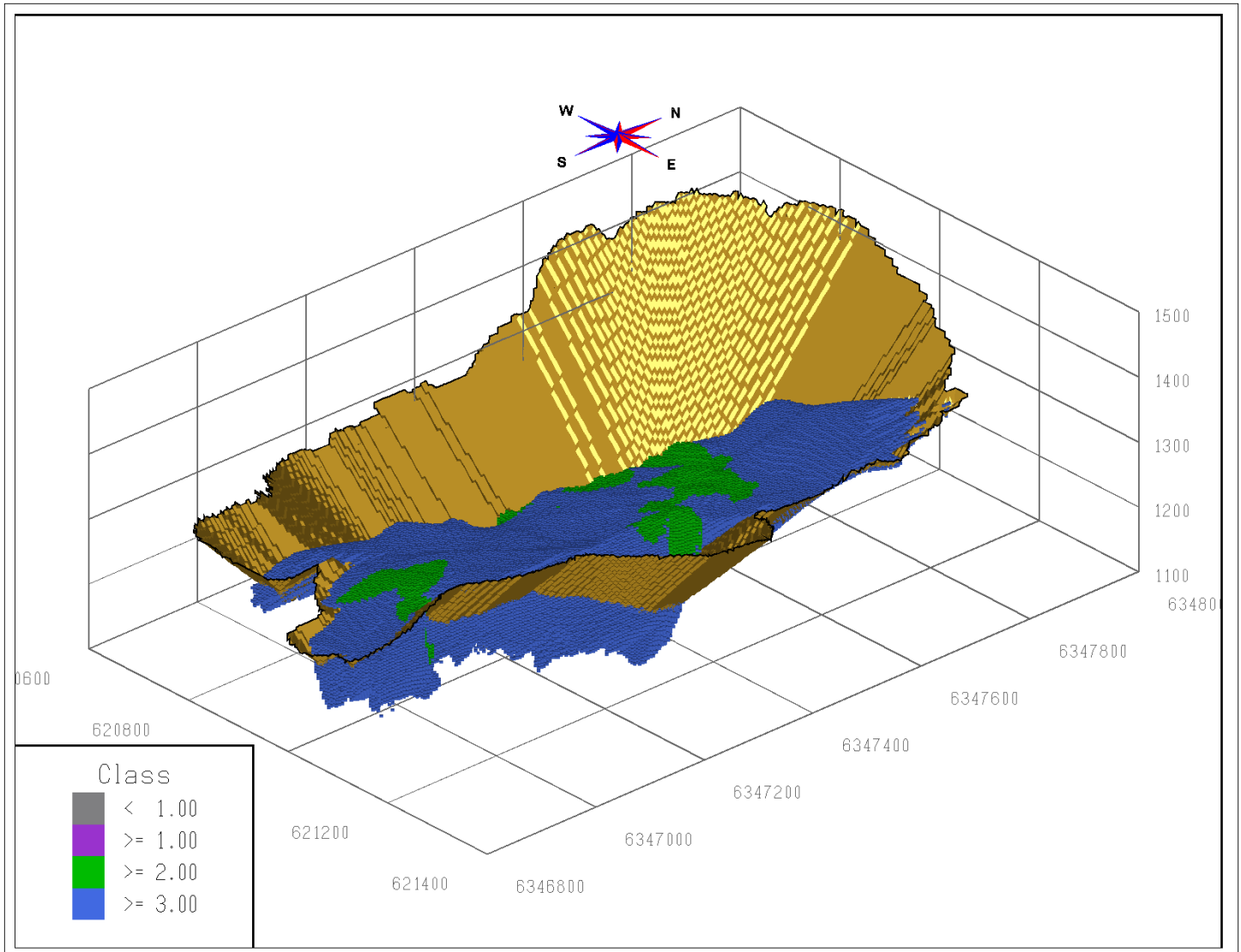
**Table 14-7: Summary of Search Distances and Composites Selection**

PASS	Distance (m)			Sample Selection			
	Y	X	Z	Min Comps	Max. Comps	Max / Hole	Max / Quad
1	25	25	10	4	12	2	2
2	50	50	10	4	12	2	2
3	100	100	15	4	12	2	2
4	150	150	25	4	12	2	2

The interpolations have also restricted the high-grade outliers to ensure that metal content is not over-estimate in any domains. The outlier values are summarized in Table 14-3 along with the capping values, for clarity on how the high grades are constrained. Composite values above the Outlier values are used in the interpolations only up to 5m from the composite.

### 14.9 Classification

The current resource estimate is classified as Inferred if the block has been interpolated with a Au grade. Blocks are then upgraded to indicated if the average distance to 2 block sis less than or equal to 50m. A check is then done to ensure continuity of Indicated and Inferred blocks. Figure 14-8 illustrates the classified blocks and the Shasta resource pit.



(Source: MMTS, 2025)

**Figure 14-8: Three-dimensional View of the Shasta Deposit Classification**

## 14.10 Model Validation

### 14.10.1 Global Grade Validation

Resource validation to ensure there was no global bias compared NN grades to those of the final grade interpolation at zero cut-off. Table 14-8 summarizes this comparison for Au and

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Table 14-9 for Ag. These tables illustrate that the difference between the de-clustered composite data (NN model) and the final modelled grades is minimal with the model showing somewhat less total metal with the difference increasing as the cutoff increases, as is desired and expected for a smoothed model.

**Table 14-8: Summary of Model Grade Comparison with De-Clustered Composites - Au**

Class	Cutoff (gpt)	Au Metal (Koz)		Difference
		ID	NN	
<b>Indicated</b>	0	487.5	498.8	-2.3%
	0.3	398.4	418.0	-4.7%
	0.35	381.3	403.0	-5.4%
	0.4	365.2	391.0	-6.6%
	0.45	350.8	378.8	-7.4%
	0.5	337.3	368.3	-8.4%
	1	242.7	285.7	-15.0%
<b>Inferred</b>	0	533.3	514.7	3.6%
	0.3	394.9	397.9	-0.8%
	0.35	367.2	375.9	-2.3%
	0.4	342.6	356.4	-3.9%
	0.45	321.8	339.8	-5.3%
	0.5	302.7	321.1	-5.7%
	1	182.0	214.4	-15.1%
<b>All</b>	0	1020.7	1013.4	0.7%
	0.3	793.3	815.9	-2.8%
	0.35	748.5	778.9	-3.9%
	0.4	707.8	747.4	-5.3%
	0.45	672.7	718.6	-6.4%
	0.5	640.1	689.4	-7.2%
	1	424.7	500.2	-15.1%

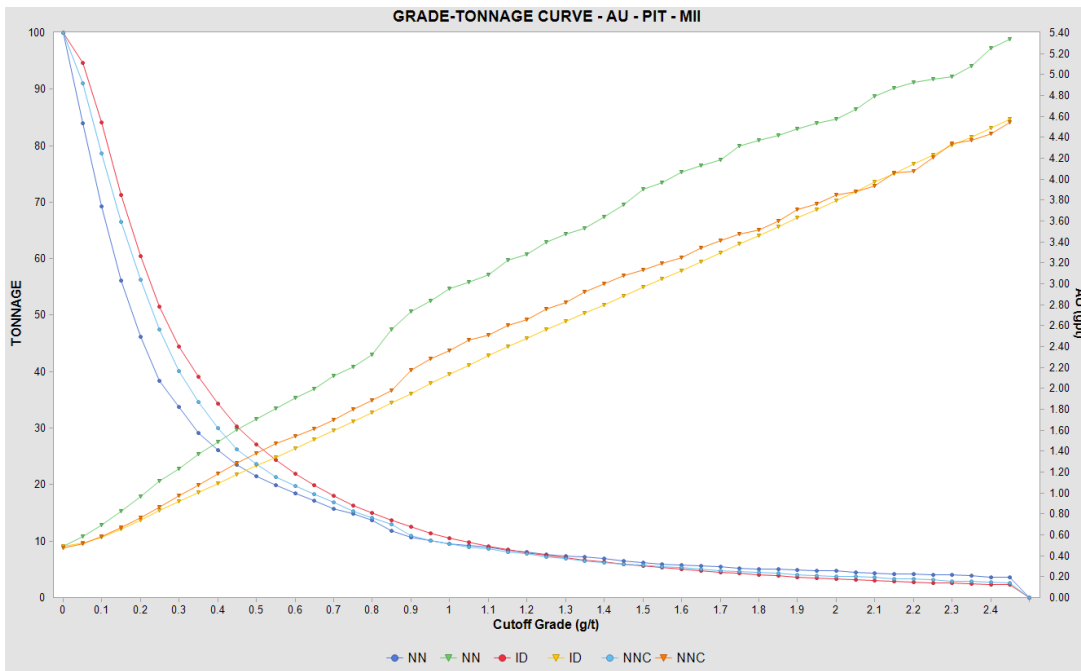
**Table 14-9: Summary of Model Grade Comparison with De-Clustered Composites - Ag**

Class	Cutoff (gpt)	Ag Metal (Koz)		Difference
		ID	NN	
Indicated	0	17,743	18,095	-1.9%
	2	17,538	17,843	-1.7%
	5	16,695	16,975	-1.6%
	10	15,006	15,543	-3.5%
	15	13,505	14,381	-6.1%
	20	12,343	13,474	-8.4%
	25	11,376	12,787	-11.0%
Inferred	0	20,448	19,556	4.6%
	2	20,224	19,204	5.3%
	5	18,892	17,856	5.8%
	10	16,138	15,689	2.9%
	15	13,730	13,974	-1.7%
	20	11,720	12,688	-7.6%
	25	10,068	11,207	-10.2%
All	0	38,192	37,666	1.4%
	2	37,761	37,052	1.9%
	5	35,590	34,840	2.2%
	10	31,141	31,233	-0.3%
	15	27,235	28,356	-4.0%
	20	24,063	26,163	-8.0%
	25	21,441	23,995	-10.6%

### 14.11 Grade-Tonnage Curves

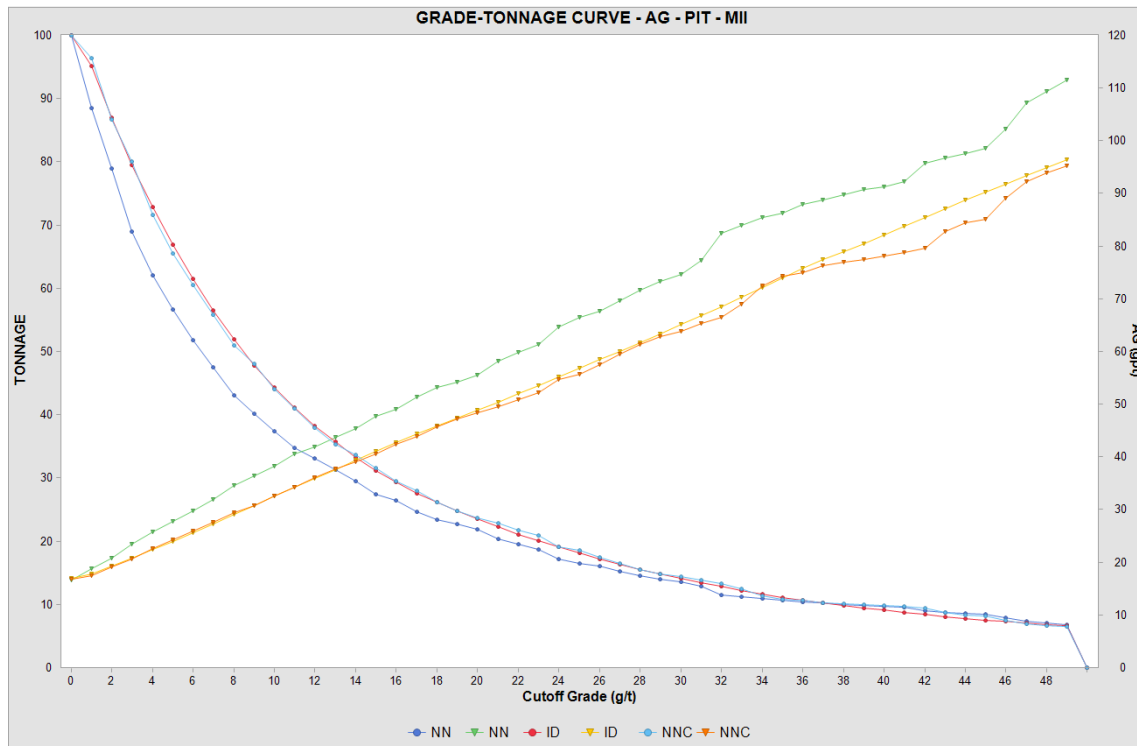
Grade-tonnage curves were created to compare interpolated grades with the de-clustered composite grades. Figure 14-9 and Figure 14-10 illustrate this comparison for Au and Ag respectively, showing increased smoothing (reduced grades and increased tonnage) as the cutoff grade increases, compared to the NN grade curves. The NN model has also been corrected for Volume-Variance affects using the Indirect Lognormal correction (ILC) to account for the reduction in variance from composite sample size to block size, as illustrated in the Grade-Tonnage figures. The final modelled grades (labelled ID in the figures) are at or below the Volume-Variance corrected Grade-tonnage curves (labelled NNC) throughout the grade distribution.





(Source: MMTS, 2025)

**Figure 14-9: Grade-Tonnage Curve Comparison for Au**



(Source: MMTS, 2025)

**Figure 14-10: Grade-Tonnage Curve Comparison for Ag**

### 14.12 Visual Comparisons

Further validation on local grade estimation has been done through visual comparisons of the modelled grades with the assay and composite grades in section, plan and through three-dimensional checks. Figure 14-11 and Figure 14-12

illustrate the block grades and assay grades in east-west cross-sections for Au and Ag respectively. The resource pit shape is also illustrated on the sections. Modelled grades show similar grade distributions and values throughout the model to that of the drillhole data.

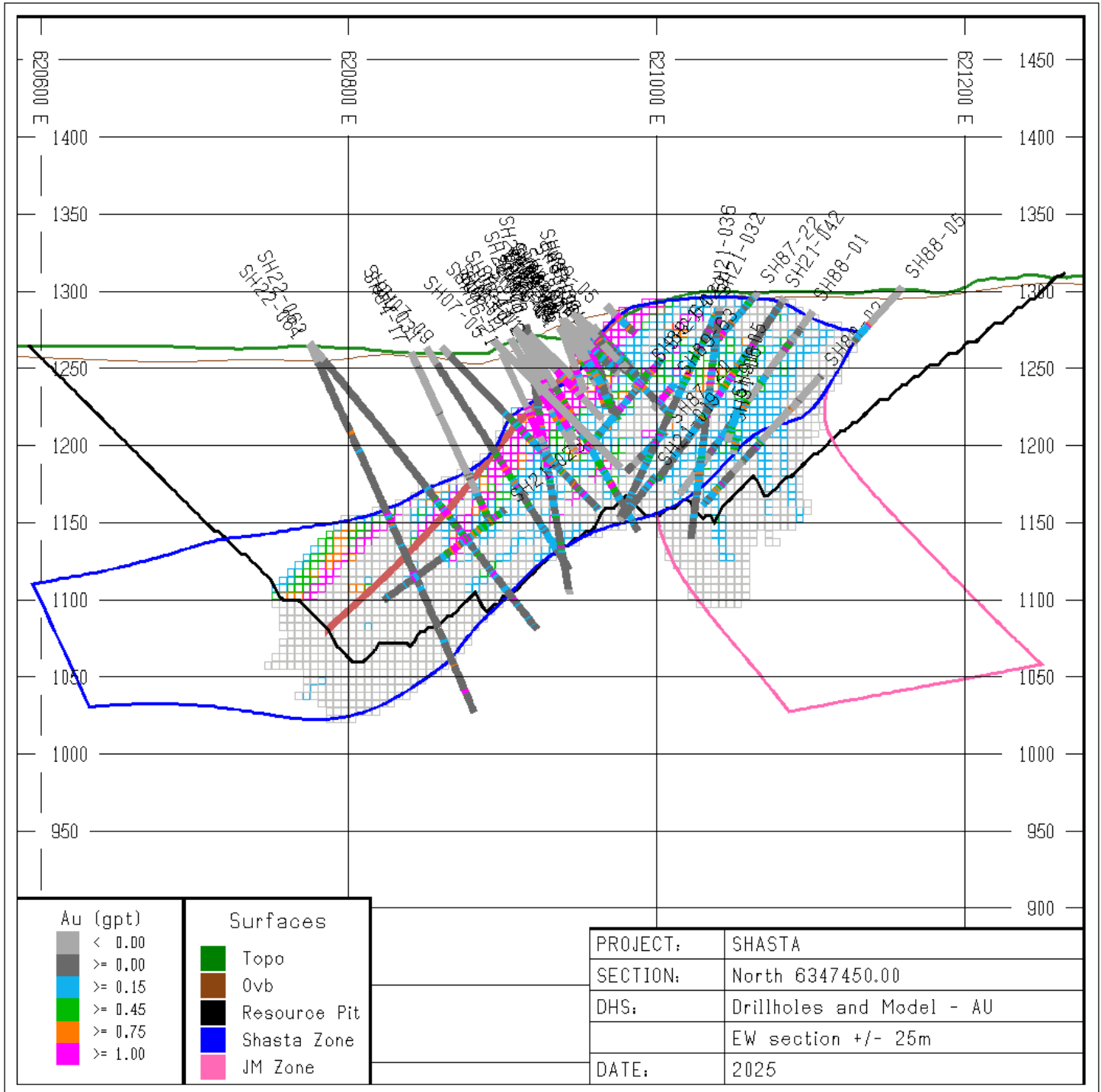


Figure 14-11: Model Compared to Assays (+/- 25m) - Au

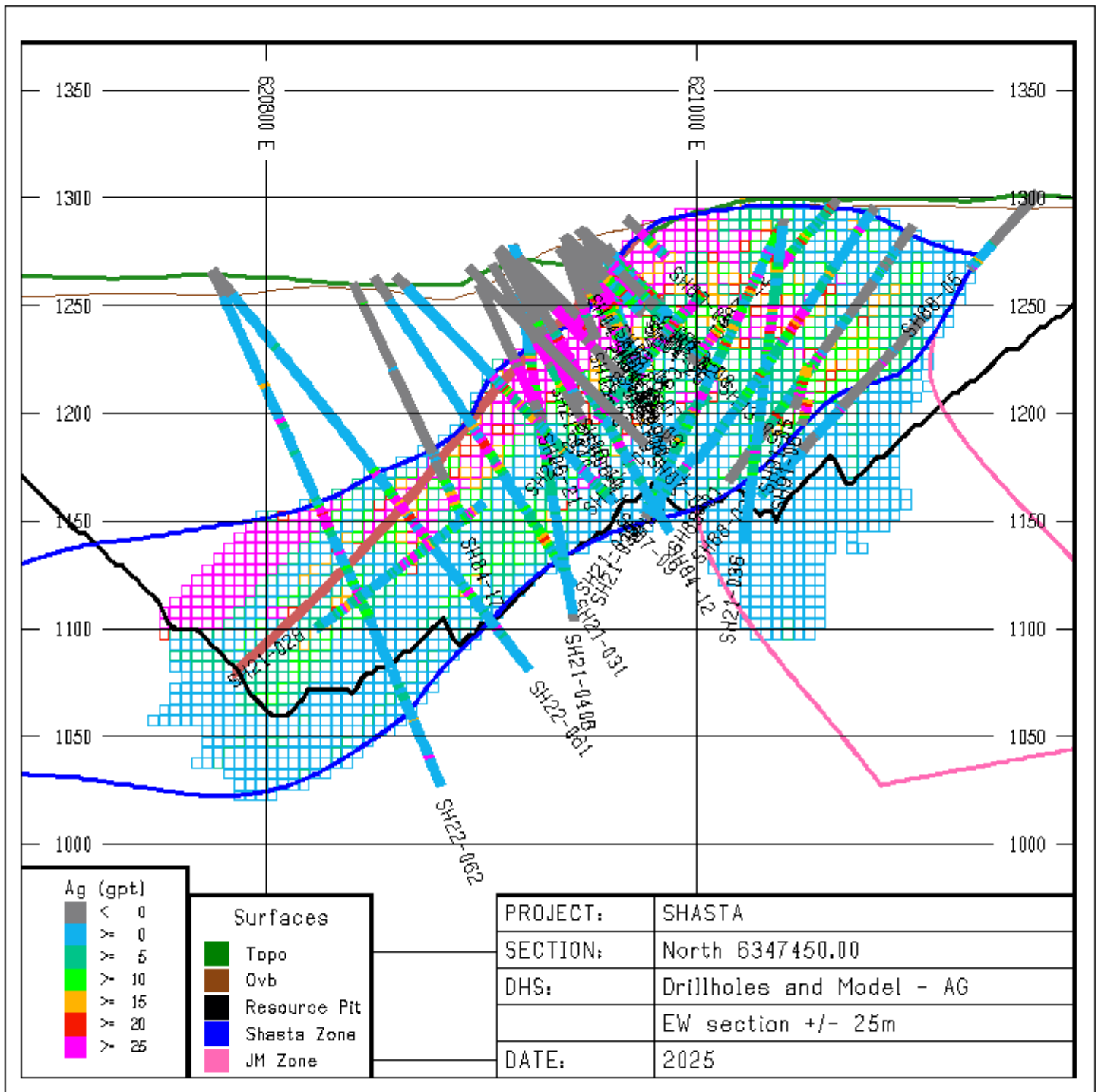


Figure 14-12: Model Compared to Assays (+/- 25m) – Ag

### 14.13 Reasonable Prospects of Eventual Economic Extraction

The metal prices, recoveries, smelter terms and net smelter prices (NSP) are summarized in Table 14-10. Metal prices for both Au and Ag are based on the Kitco 3-year trailing average price charts (Kitco, 2024) have been used.

The resulting NSR equation is:  $NSR (CDN\$) = 95.70 * AuGrade * 0.93 + 0.92 * AgGrade * 0.86$

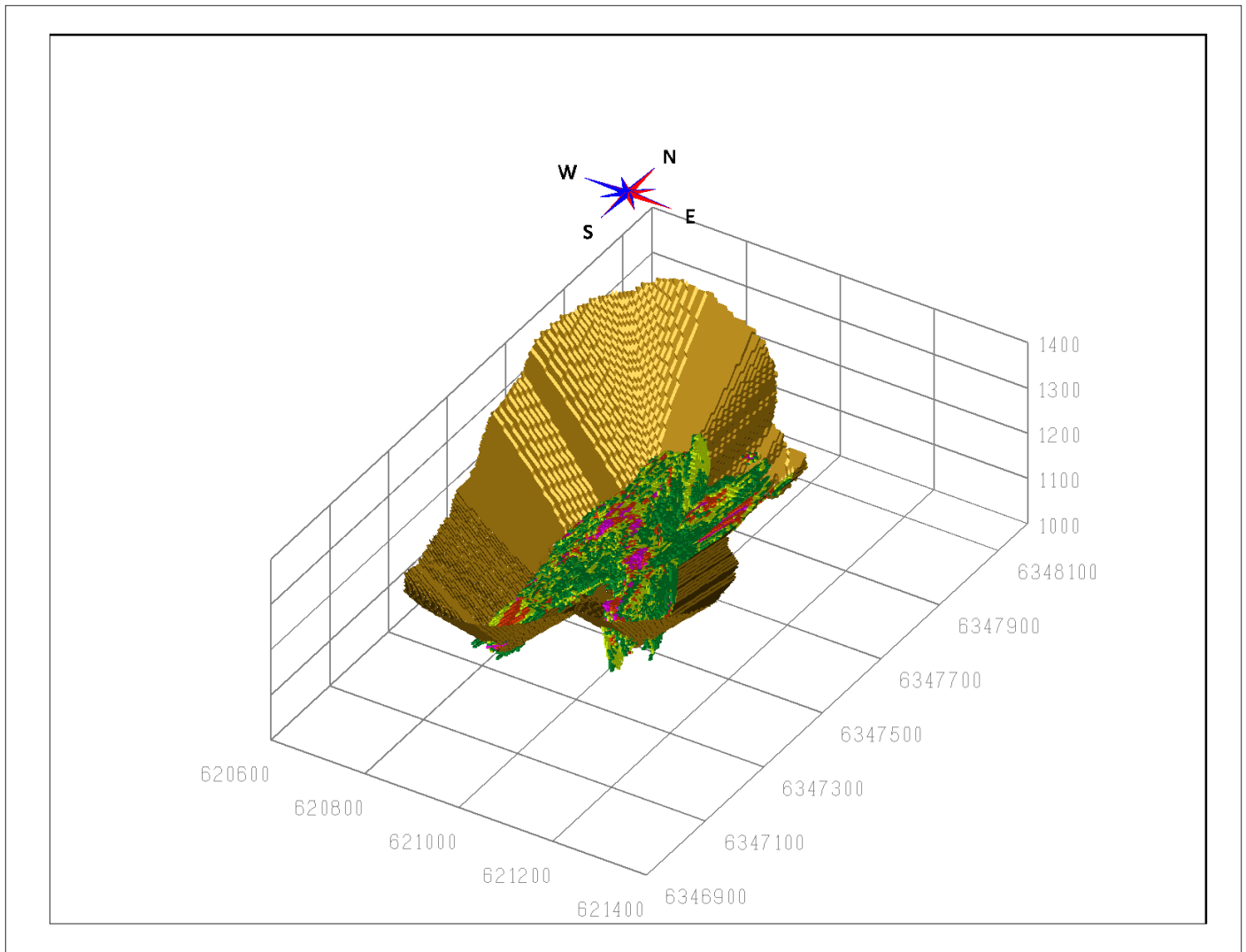
The resulting AuEq equation is:  $AuEq = Au + Ag * 0.00887$

**Table 14-10: Metal Prices, Recoveries, Smelter Terms and Net Smelter Price (NSP)**

Parameter	Value	Units
Forex	0.74	US\$:C\$
Gold Price	\$2,250.00	US\$/Oz
Gold Payable	99.90%	
Gold Offsite Costs	7.00	US\$/Oz
Au Royalty	1.5%	
Net Smelter Gold Price	\$95.70	C\$/g
	\$2,979.50	C\$/oz
Silver Price	\$25.00	US\$/Oz
Silver Payable	95.00%	
Silver Offsite Costs	3.00	US\$/Oz
Ag Royalty	1.5%	
Net Smelter Ag Price	\$0.92	C\$/g
	\$28.58	C\$/oz
Gold Process Recovery	93%	
Silver Process Recovery	86%	

Open pit resources are confined by a “reasonable prospects of eventual economic extraction” shape defined by a Lerchs-Grossman pit using the 100% case of the NSPS in the Table above, open pit mining costs of CDN\$4.00/tonne within both mineralized and non-mineralized material, and CDN\$2.00/tonne overburden. Processing Costs are estimated from comparable projects at CDN\$15/tonne and G&A of CDN\$8.00/tonne processed. All pit slopes are assumed to be 45 degrees for the Lerchs-Grossman pit.

The final resource pit with modelled AuEq grades is illustrated in Figure 14-13.



(Source: MMTS, 2025)

**Figure 14-13: Three-dimensional view looking NE of the Resource Pit showing Modelled AuEq grades**

#### 14.14 Independent Check

An independent check on the modelling has been done by George Dermer, P.Eng of MMTS who checked:

- the resource shapes
- the model coding
- the “reasonable prospect” pit shapes and inputs
- the interpolation runs

#### 14.15 Risk Assessment

A description of potential risk factors is given in Table 14-11 along with either the justification for the approach taken or mitigating factors in place to reduce any risk.

**Table 14-11: List of Risks and Mitigations/Justifications**

#	Description	Justification/Mitigation
1	Classification Criteria	Based on Variography
2	Geologic Model	Geologic interpretations and orientations of previous underground working considered when creating new geologic confining shapes for the resource interpolations. Shasta Fault, JM zone and High-grade mineralization used to determine mineralized orientations
3	Metal Price Assumptions	Cut-off is based on 3-year trailing average which are below spot prices.
4	High Grade Outliers	Capping and outlier restriction applied to ensure mean grade match data. Grade-tonnage curves show model validates well with de-clustered composite data throughout the grade distribution.
5	Processing and Mining Costs	Assumed from comparables.
6	Previous underground mining	Underground workings examined during site visit. Recent drilling did not hit un-expected voids.

## **15 Mineral Reserve Estimates**

Not Applicable.

## **16 Mining Method**

Not Applicable.

## **17 Recovery Methods**

Not Applicable.

## **18 Project Infrastructure**

Not Applicable.

## **19 Market Studies and Contracts**

Not Applicable.

## **20 Environmental Studies, Permitting and Social or Community Impact**

### **20.1 Environmental Studies**

TDG has contracted Sasuchan Environmental LP (SELP), a joint venture between Takla Nation and Environmental Dynamics Inc, and Chu Cho Environmental, owned by Tsay Key Dene Nation, to carry out environmental monitoring and reporting. TDG continues water quality monitoring and management however, no other environmental studies have been undertaken yet as the project has been in exploration.

In 2021, TDG retained Palmer Environmental through its partnership with SELP to conduct fieldwork to build a site-wide Water Balance/Water Quality conceptual model. The report represents the first model ever developed for the Baker-Shasta Property. The main assumptions and findings of the conceptual model are listed below:

- The conceptual model is limited due to the scarce or lack of quantitative data such as on-site climate data, water quality for all catchment areas, undetermined flows from mine facilities (B Pit and Shasta sedimentation pond), and mass loadings rates for water quality from mine facilities;
- The model domain is subdivided into five main catchments and the outflows of these catchments coincide with monitoring locations of permit 5809 which authorizes mine effluent discharge;
- Temperature, precipitation, and runoff data were obtained from publicly available tools developed by the BC government;
- The model assumes a negligible contribution of water from either TSF to the downstream environment;
- Palmer estimates that 99% of the flow reporting to Station 8467-3 is generated by undisturbed catchment within the model boundary;
- Of the five catchments of the model, approximately 72% of the total flow within the model domain is generated by sub-catchments A3 (0.621 m<sup>3</sup>/s) and A4 (0.517 m<sup>3</sup>/s), which are located between the Shasta and Baker mines; and
- Estimated annual runoff coefficients on disturbed areas are conservative, however actual streamflow measurements should calibrate the WBM in the future.

### **20.2 Permitting**

Currently the historical disturbed part of the site under previous mining operates under Mines Act permit M-189, Approving Work System and Reclamation Program, which includes a reclamation liability estimate of \$1,027,515.00 for the site.

The Shasta-Baker property also operates under Environmental Management Act permits PE-5807 (air discharge), PE-5808 (amended PR05808; air and refuse discharge), PE-5809 (effluent discharge), PE-5892 (effluent discharge) and PE-8467 (effluent discharge). These permits outline the maximum effluent rate of discharge and requirements for sampling, monitoring, and reporting. Reporting includes an Environmental Effects Monitoring program implemented every three years. All EMA permits were transferred to TDG on August 10, 2021, and since then TDG has been performing monitoring and reporting as per permit requirements.

TDG has submitted exploration application permits outside the Permitted Mine Area (PMA) be supported by the Baker Camp and facilities. The exploration permits obtained for multi-year area-based exploration (MYAB) applications include: (i) MX-100000137 for the Baker Complex and Greater Shasta Newberry, valid until December 15, 2025, (ii) MX-100000291 for Bot, valid until December 01, 2025, (iii) MX-100000172 for Mets, valid until October 01, 2026 and, (iv) MX-100000150 for the western portion of North and South Oxide Peak valid until December 31, 2025. These permits in



addition to developed wildlife management and archeological procedures permit new disturbances and support anticipated exploration activities.

### **20.3 Considerations of Social and Community Impacts**

TDG is committed to meaningful and transparent engagement with Indigenous nations, the public, local community members and other stakeholders as it relates to the Shasta-Baker Project (the Project; Shasta-Baker). Since acquiring the Project, TDG has committed to building relationships with four Indigenous nations in whose traditional territory the project is located. The company intends to maintain and strengthen these relationships through all phases of the Project.

#### **20.3.1 Social Setting**

The Shasta-Baker Project is in the unincorporated, and sparsely populated Stikine Region of British Columbia (BC), approximately 430 km northwest of Prince George. The nearest communities to the Project are Fort Ware, Ingenika Point, and Mackenzie to the southeast.

TDG recognizes the inherent rights and title of Indigenous peoples which informs our work as we engage in meaningful ways through all phases of exploration and regulatory processes. TDG has committed to early, respectful and active engagement with four Indigenous communities in proximity to Shasta-Baker: Kwadacha Nation, Tsay Keh Dene Nation, Tahltan Nation and the Takla Nation.

The Project is in an area of BC known for mining, with several other mining and exploration projects nearby. Other predominant industries in the area include forestry and silviculture, mining support industries, oil and gas extraction, transportation, and construction (Statistics Canada 2017).

#### **20.3.2 Engagement and Consultation**

Engagement with the four interested Indigenous nations has been ongoing since TDG acquired the Shasta-Baker Project in 2020. Engagement has included establishing points of contact for each community, informing the Nations of next steps in regulatory processes, explanations of exploration work to be undertaken, updates on the Project, sharing of work plans and employment opportunities and responses to concerns and questions raised.

Formal agreements have been signed with the Indigenous nations setting out parameters around environmental monitoring and protection, communication, benefits and capacity building, traditional activities and access, heritage resources and traditional knowledge, and employment and contracting opportunities. Correspondence and communication is ongoing, and will continue throughout the life of the Project.

As the project has just been in the exploration phase, public engagement and consultation has yet to be undertaken.

Governmental engagement has been undertaken by TDG through required regulatory processes. TDG will engage and collaborate with federal, provincial, and regional government bodies as required, and in respect to the Project and other relevant matters.

## **21 Capital and Operating Costs**

Not Applicable.

## **22 Economic Analysis**

Not Applicable.

## **23 Adjacent Properties**

### **23.1 Lawyers**

The Lawyers Group of prospects consists of a combination of quartz veins, stockwork zones and chalcedony breccia bodies that developed along northwest and north-northwest trending fracture systems. Low- sulphidation epithermal gold-silver mineralization consists predominantly of pyrite, with minor chalcopryite, sphalerite, galena, native gold, native silver, electrum and acanthite in a gangue of quartz, chalcedony, amethyst, minor calcite, and occasional barite. Three principal zones have been discovered to date and include the Amethyst Gold Breccia (AGB) Zone, the Cliff Creek Zone with its North, Central and South sub-zones, and the Duke's Ridge Zone.

The Lawyers mine was operated by Cheni from 1989 to 1992 with the first doré bar being poured on January 8th, 1989. Underground development of Cliff Creek North began in 1990 and included a 750 m access ramp, a spiral decline with five sublevels, and an incline to access two upper levels. The high-grade Phoenix Zone was discovered in 1991 and trenched, drilled, accessed, and mined by November 1992. During its four years of operation the mine produced a total of 171,246 ounces of gold and 3,546,400 ounces of silver from the AGB, Cliff Creek North and Phoenix deposits, and from test mining on one satellite property. During the mid-1990s, Cheni fully reclaimed the mine site and later allowed the mineral tenure covering the area to lapse.

The Lawyers Property is currently owned by Thesis Gold who completed a PEA on the project in 2024. (Thesis Gold, 2024 website).

### **23.2 Kemess Mineral Deposits**

The following descriptions provide the reader with background information on the sizes, styles, and modes of occurrence of the porphyry copper-gold deposits on the Kemess property, located in the southeastern part of the Toodoggone region (Smith, 2019).

#### **23.2.1 Kemess South**

The Kemess South porphyry copper-gold operation was a low-grade bulk tonnage operation. The mine was planned as a large open pit operation at a rate of 40,000 tons of ore per day, with a fifteen-year mine life. The average stripping ratio for the project over its mine life was estimated to be about 1.18 to 1. Gold-copper concentrate was trucked along the ORAR to the railhead at Mackenzie, B.C., where it was loaded into covered rail cars for shipment to the Horne Smelter in Rouyn-Noranda, Quebec, Canada (Smith, 2019).

Production commenced in April 1998 and continued without interruption until March 2011. Total production statistics include 473,376,688 tonnes mined and 228,732,478 tonnes milled, yielding 91,903,400 grams (2,954,763 oz.) gold, 4,871,000 grams (156,606 oz.) silver and 355,450,336 kg (783,633,852 lb.) copper (AuRico Gold Inc., 2012; Smith, 2019).

The Kemess South deposit is hosted by the Early Jurassic Maple Leaf intrusion, a gently inclined sill-like body of quartz monzodiorite which intrudes Takla Group volcanic and sedimentary rocks. The ore body measures 1,700 m long by 650 m wide and ranges from 100 m to over 290 m thick (Smith, 2019).

A blanket of copper- enriched supergene mineralization containing native copper overlies hypogene ore and comprises 20% of the deposit (Smith, 2019).

The highest grades of gold and copper in the deposit correlate with zones of intense quartz stockwork development, accompanied by intense potassium feldspar selvages and local magnetite stringers and disseminations. The potassic alteration is strongly developed in the western two-thirds of the deposit where it overprints earlier sericite and calcite alteration. Sericitization does not show a consistent association with gold or copper mineralization (Smith, 2019).

The above information on the Kemess South deposit, and its past production data, is not necessarily indicative of the mineralization on the Shasta-Baker Property.

### **23.2.2 Kemess North (Underground)**

Kemess North is located about 6 km north of Kemess South.

At Kemess North, a sub-volcanic quartz monzonite stock and related dykes have intruded Takla Group volcanic rocks. Porphyry-style copper-gold mineralization is hosted in potassically-altered zones developed both within the monzonite and adjacent country rock. Higher grade copper- gold mineralization is associated with stockworks, veins and disseminations of pyrite, chalcopyrite and magnetite that form as replacements of earlier ferromagnesian silicate minerals. Outward from the potassically-altered zone, the onset of a propylitic alteration assemblage of chlorite, carbonate, pyrite, pink zeolite, and minor epidote is marked by a pronounced decrease in copper and gold concentrations (SRK Consulting Inc., 2016; Smith A., 2019).

### **23.2.3 Kemess East**

The Kemess East deposit is located one kilometre east of the Kemess Underground deposit. Exploration drilling carried out by AuRico in 2013 - 2014 was guided in part by the results of a deep- penetrating induced polarization survey completed in 2006 by Quantec Geoscience. The drilling outlined a deep copper-gold mineral resource which, as of December 31, 2014, totaled 55.9 million indicated tonnes grading 0.41% Cu and 0.52 g/t Au, containing 503.7 million pounds of copper and 939,000 ounces of gold, and an additional 117.2 million inferred tonnes grading 0.34% Cu and 0.38 g/t Au, containing 871.4 million pounds of copper and 3.4 million ounces of gold. Base case commodity prices used for the resource estimate were US\$3.00 per pound for copper and US\$1,300 per ounce for gold. As the Kemess East deposit is proximal to Kemess Underground, any proposed development of the former will potentially share infrastructure with the latter (SRK Consulting Inc., 2016; Smith A., 2019).

Kemess East is typical of calc-alkaline porphyry copper-gold deposits in the western cordillera. The deposit is deeply buried; mineralization starts at an average depth of 900 m below surface and extends to 1500 m below surface. Unlike Kemess Underground, there is no significant low-grade mineralization associated with Kemess East. The deposit is mainly hosted by a potassically-altered porphyritic diorite pluton which is part of the Black Lake intrusive suite. In its eastern portion, it is hosted within potassically- altered Takla volcanic rocks. The host diorite body appears to be nearly flat lying and dipping gently to the south. Higher grade copper-gold mineralization is characterized by strong secondary biotite alteration in the plutonic rocks. Better copper and gold grades within Takla volcanic rocks are associated with potassic (biotitic) alteration assemblages. Toodoggone volcanic rocks in the Kemess East area are relatively fresh to weakly propylitically-altered, generally lack significant sulphides, and contain no ore grade mineralization (SRK Consulting Inc., 2016; Smith A., 2019).

The above information on the Kemess North, Kemess Underground and Kemess East deposits, and the proposed underground development of Kemess Underground, is not necessarily indicative of the mineralization on, or the development potential of the Property. This information demonstrates the potential for the mining of porphyry-type deposits, by bulk underground methods, in the Toodoggone region.

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## **24 Other Relevant Data and Information**

There is no known additional relevant data or information.

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## **25 Interpretation and Conclusions**

The QP interprets the geology and modelling done for this report and concludes the following:

- Historical drilling in the central and northern areas of the Shasta deposit have been verified by the 2021 drilling and are considered suitable to be used in the current resource estimate.
- The QAQC procedures for the recent drilling at Shasta are within industry standards and illustrate that the assaying is suitable for mineral resource estimation.
- The mineral resource estimate for the Shasta deposit contained in this Report warrants further exploration as the deposit remains open along strike and down-dip.
- The Mets deposit, with a near surface historical resource estimate has good drill targets for follow-up and re-examination of the resource potential.
- The Oxide Peak and Bot deposits represent excellent exploration potential deposits.
- The historical Baker mine contains numerous exploration targets with additional targets between the Shasta and Baker deposits.

## 26 Recommendations

The following table summarizes the exploration plan and budget for the up-coming field season.

**Table 26-1: Summary of Exploration Plan and Budget for 2025**

<b>Deposit</b>	<b>Exploration Plan</b>	<b>Budget</b>
<b>Bot</b>	Additional geological mapping, prospecting and rock sampling at the Erebus target to define a drill collar location. geochemical sampling (soil, rock and chip) follow up in areas of interest defined from the 2023 Lithic Drainage Survey Prospecting, geochemical sampling (soil, rock and chip) follow up in areas of interest defined from the 2023 Lithic Drainage Survey	\$250,000
<b>Mets</b>	Drill testing the potential extensions of the A-Zone for mineralized zone expansion (2,500 m) Drill testing the geophysical anomalies in the NW and NE of the property parallel to the orientation of the A-Zone	\$1,500,000
<b>North Oxide Peak</b>	Prospecting, geochemical sampling (soil, rock and chip) follow up at lower elevations from the Oxide Creek target to better understand structural controls	\$100,000
<b>Baker</b>	Drill testing the geophysical anomalies in the NW and NE of the property parallel to the orientation of the A-Zone Deep induced polarization/resistivity survey to test geological model and identify potential sulphide zones Porphyry and structural mapping campaign across the whole Baker Complex Drill test Trident and North Quartz targets for 3D stratigraphic understanding (1,500 m diamond drillholes)	\$4,000,000
<b>Greater Shasta-Newberry</b>	Drill test Down Dip/Along Strike extensions of the Shasta Deposit (10,000 m) Continue metallurgical studies for optimization of potential metal recovery utilizing different lithological and alteration domains Drill test mineralized trends (Fisher, Hood, Cody Lee, North) in Greater Shasta (5,000 m) Drill test Newberry (1,500 m) Complete ground based magnetometer and very low frequency survey in South Shasta and fill in any very low frequency electromagnetic survey gaps	\$10,000,000
<b>Total Budget</b>		<b>\$15,850,000</b>

Additional recommendation from the QP include:

- Future drilling programs should continue to employ QAQC sample inclusion rates consistent with current practice to include blanks, field duplicates, coarse reject duplicates, and CRMs and twinning of holes where warranted.
- Continue to do metallurgical testing on differing alteration types.
- Trade-off study on dore vs. concentrate.

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## **CERTIFICATE OF QUALIFIED PERSON**

I, Sue Bird, P.Eng., am a Geological and Mining Engineer with Moose Mountain Technical Services, with a business address of #210 1510 2nd St North Cranbrook, BC, V1C 3L2.

This certificate applies to the technical report titled “NI 43-101 – 2025 Updated Resource Estimate for the Shasta Deposit” that has an effective date of 29 December 2025 (the “technical report”). I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

I am a Professional Engineer in the Province of British Columbia. (#25007). I graduated with a Geologic Engineering degree (B.Sc.) from the Queen’s University in 1989 and a M.Sc. in Mining from Queen’s University in 1993.

I have worked as an engineering geologist for over 25 years since my graduation from university. I have worked on precious metals, base metals and coal mining projects, including mine operations and evaluations.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the Property from July 19 through July 21, 2021 (3 days) , September 16 to September 19, 2021 (4 days), to review the progress and results of the 2021 drilling and again in July 19-20, 2022 (2 days).

I am responsible for the entire NI 43-101 technical report.

I am independent of TDG Gold as independence is described by Section 1.5 of NI 43–101.

I have not previously authored any reports on the TDG Gold Shasta-Baker Project.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

**Dated: 21 February 2025**

*“Signed and sealed”*

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**Sue Bird, P.Eng.**