Technical Report for the Curraghinalt Gold Project, Northern Ireland

Report Prepared for

Dalradian Resources Inc.

Report Prepared by

SRK Consulting (Canada) Inc.
3CD016.002
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Cover: Landscape at the Curraghinalt Gold Project, Northern Ireland

IMPORTANT NOTICE

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Executive Summary

Introduction

The Curraghinalt project is a pre-development gold exploration project located in Northern Ireland, United Kingdom. It is located approximately 115 kilometres west of Belfast, the capital of Northern Ireland. Dalradian Resource Inc. (Dalradian) wholly owns 100 percent of the property.

This technical report documents the Mineral Resource Statement prepared by Dalradian and SRK for the Curraghinalt gold project. This technical report was prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1.

In December 2016, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016. The economic viability was evaluated at a feasibility level and documented in a publically disclosed technical report (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with a revised geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported on December 12, 2016 are no longer valid or current. This technical report supports a revised mineral resource model only, with the sections reported in the JDS (2017) technical report that support the feasibility study now obsolete and no longer required (Sections 14 to 21).

Property Description and Ownership

The Curraghinalt project is situated in Counties Tyrone and Londonderry, Northern Ireland. The Curraghinalt gold deposit, located near the centre of the property is approximately 115 kilometres west of Belfast by road. The property measures approximately 120,000 hectares comprising six contiguous areas (DG1, DG2, DG3, DG4, DG5, and DG6), to which Dalradian has mining lease option agreements for gold and silver. Dalradian also has prospecting licences that exclude gold and silver for four areas (DG1, DG2, DG5, and DG6) with the other two areas (DG3 and DG4) under application.

Dalradian holds, through its wholly-owned subsidiary Dalradian Gold Ltd. (Dalradian Gold), a 100 percent interest, subject to four percent royalty payable to the Crown Estate Commissioners upon production of silver and/or gold. The Department for the Economy has granted to Dalradian Gold Prospecting Licences for all metals over four areas with two others under application.

Access to the property is via a number of highways and local roads from Omagh to Gortin and Greencastle. Local country roads, private roads, and farm tracks provide generally good access within the property. The topography consists of rolling hills and broad valleys. Much of the property occurs within the Sperrin Mountains, a designated Area of Outstanding Natural Beauty.

Dalradian commenced the environmental and social impact assessment at the end of 2014 to examine the potential impacts of a full mine build, as well as options for the elimination or mitigation of such impacts. The report, together with a project description, has formed the basis of a planning application for the full mine build which was submitted to the Department for Infrastructure in November 2017. During 2018, activities in permitting are expected to include preparation of responses to queries on the planning application and submission of supporting applications.

History

Gold was recognized in the gravels of the Moyola River to the east of the property in 1652, and in the 1930s, an English company reported plans for alluvial gold mining in a prospectus. Documented exploration in the area dates back to the early 1970s.

The property containing the Curraghinalt deposit was initially acquired by Ulster Base Metals (which later became Ulster Minerals) in 1981, an entity which later became a wholly-owned subsidiary of Ennex International plc (Ennex). Ennex conducted exploration on the property between 1982 and 1999, and then sold its interest in Ulster Minerals to Nickelodeon in January 2000. In February 2003, Tournigan Gold Corp (Tournigan) entered into an option agreement with Strongbow to earn an interest of up to 100 percent in the Curraghinalt deposit. In October 2009, Dalradian completed a purchase and sale agreement with Tournigan to acquire the licences, mineral rights, and surface rights (including easements).

Historical exploration on the licences has included many phases of surface drilling, trenching, soil and stream sampling, prospecting, panning, ground and airborne geophysics, underground development, underground drilling, and underground channel sampling.

Geological Setting and Mineralization

The bedrock geology of Northern Ireland is a complex assemblage of Mesoproterozoic to Paleogene rock units. It can be sub-divided into four quadrants:

- Northwest - composed predominantly of the Proterozoic Dalradian Supergroup and the early Ordovician Tyrone Igneous Complex
- Southeast - composed mainly of rocks of the Southern Uplands/Longford-Down Terrane, an allochthonous prism composed of an Ordovician and Silurian turbidite sequence
- Southwest - underlain mainly by Upper Palaeozoic sedimentary rock deposited in continental to marine environments
- Northeast - underlain by the early Palaeogene (60 – 55 Ma), subaerial Antrim Lava Group and minor underlying Paleozoic units

The local geology of the project area comprises three main rock groups:

- Dalradian metasediments in the Grampian terrane to the north of the Omagh Thrust
- The Tyrone Igneous Complex in the Midland Valley terrane south of the Omagh Thrust
- Upper Palaeozoic, Mesozoic and Palaeogene sedimentary rocks which are widely distributed throughout these terranes, particulary within the DG6 Licence.

The Mullaghcarn Formation is host to the Curraghinalt gold deposits and the Alwories prospect, and consists predominantly of semi-pelites and psammites with subordinate pelite horizons and chloritic semi-pelites. These are bounded to the south by the Omagh Thrust Fault, a moderately northwest dipping thrust fault active as late as the Carboniferous.

The Curraghinalt gold deposit is a high grade orogenic gold deposit characterized by a series of west-northwest trending, moderately to steeply dipping, stacked quartz-carbonate-sulphide veins and arrays of narrow and short extension veinlets. The mineral resource model discussed herein focusses on 21 gold-bearing quartz veins. Subordinate auriferous quartz veins exist between the main modelled veins, but their continuity is difficult to demonstrate at the current drilling spacing. The quartz-carbonate-sulphide vein system was investigated by core drilling, underground mapping, and face and channel sampling where partly exposed in underground workings. The veins range from a few centimetres to five metres wide. The veins have been traced from surface to a depth of approximately 1,200 metres. They remain open along strike and at depth. On average, the quartz veins dip between 50 degrees and 75 degrees to the north.

Exploration and Drilling

The exploration database for the Curraghinalt gold deposit includes 731 core boreholes (178,130 metres). Since 2010, Dalradian has drilled 459 core boreholes (146,910 metres) on the Curraghinalt gold deposit, and 47 core boreholes (12,987 metres) on other regional targets. In addition, airborne and ground geophysical surveys, prospecting, mapping, and geochemical surveys have been completed. Most of the drilling on the property was at the Curraghinalt deposit, including a number of underground core boreholes.

SRK reviewed the core logging and sampling procedures used by Dalradian and, as far as known, by previous operators. In the opinion of SRK, the core logging and sampling procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project. Drilling, core logging and sampling procedures followed by previous operators are, in part, difficult to assess; however, after analysis of exploration data, SRK considers that historical data are sufficiently reliable to inform geology and mineral resource models.

Sample Preparation, Analyses and Security

Exploration samples collected by Dalradian, Tournigan, and Ennex since 1984 were submitted to ALS Laboratories Ltd. (ALS) in Loughrea, Ireland. Nickelodeon submitted samples to Chemex Labs Limited (Chemex) in Vancouver for sample preparation and analyses. Both facilities are independent, commercial geochemical laboratories that operated independently from the companies.

In the opinion of SRK, the sampling preparation, security, and analytical procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project. Sample handling and preparation procedures followed by previous operators are, in part, difficult to assess. However, after analysis of exploration data, SRK considers that historical data are sufficiently reliable to inform geology and mineral resource models, especially considering that drilling and underground sample data collected by Ennex, Nickelodeon, and Tournigan amount to approximately five percent of all available exploration data available for the Curraghinalt project.

Data Verification

SRK carried out extensive reviews of exploration data collected by Ennex, Tournigan, and Dalradian between 1987 and 2018. SRK identified the following issues: lack of analytical quality control data prior to 2000, high failure rate of blank samples during discrete periods, and high failure rate of certain control samples used. However, the sampling data collected by Dalradian (71,878 core samples) far outweigh historical sampling data collected by Ennex (1,551 core samples) and Tournigan (2,289 core samples), significantly reducing the risk introduced by the use of historical data that may be less reliable. Overall, SRK considers that the exploration data targeting the Curraghinalt gold deposit are globally sufficiently reliable to inform geology and mineral resource models. The data examined by SRK do not present obvious evidence of analytical bias.

Metallurgical Testing

The metallurgical test work was summarized by Canenco Consulting Corp. (Canenco). Previous testing was undertaken on composite samples blended from various veins and from different areas of the deposit. More recent test work was carried out on flowsheet optimization composites, constructed to represent the grade, lithology, and spatial aspects of the mineral resources, evaluating both gold and silver recoveries. Test work programs were completed by independent reputable metallurgical laboratories using primarily core samples from exploration drilling, including bulk processing campaigns. These programs included characterization and mineralogical studies, comminution studies, gravity concentration tests, flotation, leach and settling tests. Historical test work results indicate that the mineralization responded well to flotation and to direct cyanide leaching for precious metal extraction.

Mineral Resource Estimates

The new mineral resource model is based on a revised geological model that considers information from 731 core boreholes (178,130 metres) and 678 underground channels/faces (2,397 metres). An additional 145 core boreholes for 46,487 metres and 181 underground channels/faces for 535 metres were drilled or sampled since the 2016 mineral resource model. The mineral resources were evaluated using a geostatistical block modelling approach by SRK constrained by 21 resource domains.

The gold mineralization at the Curraghinalt gold project is hosted in narrow, sub-parallel auriferous quartz-carbonate-sulphide veins. Twenty-one vein wireframe domains were constructed by SRK with the assistance of Dalradian. The vein wireframes were modelled on the extents of logged gold mineralized shear veins (D veins), and snapped to assays irrespective of gold grades. The veins are cut by a network of late brittle faults. The vein wireframes were offset by four main observed faults (Kiln, 105, 106, and 302). The vein offset across each fault varies between 1 to 10 metres. Other faults were also modelled but do not offset the vein wireframes in the model, due to either not showing any apparent offset or their lower confidence in location and offset.

Capping was performed by individual domain and considered core and channel composites separately. Capping for the core composites ranges from 20 to 120 g/t gold whereas in the channel composites the capping ranges from 30 to 125 g/t gold.

The spatial distribution of the gold mineralization was analysed using variograms and correlograms of the composite data on a by-domain basis. In sparsely sampled domains, SRK grouped adjacent domains to determine a regional variogram model applicable to the grouped domains.

A block model was generated with a block size of 5 m by 5 m by 5 m with subcells at at 0.50- by 0.25- by 0.50-metre resolution in the X, Y and Z axes, respectively, which was used to honour the geometry of the modelled mineralization. The block model was populated with a gold grade using ordinary kriging. Four estimation runs were used, each considering increasing search neighbourhoods and less restrictive search criteria. Only the first run allowed the use of underground channel samples. The last pass considers a secondary capping threshold to further control the influence of high grade composites in sparsely drilled areas.

The block model was classified using a combination of tools, including confidence in the geological interpretation, search radii, minimum number of boreholes and composites, variography, and estimation pass. A Measured category was assigned to blocks within a 10 by 10 by 10 metres search radii around the underground workings if informed by a minimum of two boreholes. An Indicated classification was assigned to blocks estimated in the first pass, using a minimum of two boreholes. The mean average distance of informing composites for Indicated blocks is 50 metres; while on average, these blocks are informed by six boreholes. All other blocks not classified as Measured or Indicated, whose grade was estimated in a vein domain with composites located up to 150 metres away from a borehole, were classified as Inferred. Overall, the mean average distance of composites in this category is less than 100 metres. All other blocks estimated were unclassified.

SRK examined the classification visually by inspecting sections and plans throughout the block model. SRK concludes that the parameters used to define Measured blocks reasonably reflect estimates that can be considered to be at a high confidence level, material classified as Indicated reflect estimates made with a moderate level of confidence within the meaning of CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May 2014), and all other material is estimated at a lower confidence level. Additionally, SRK applied a post-smoothing filter on the classified material to ensure continuity within the classification categories. In particular, the boundary between Indicated and Inferred is intentionally drawn as parallel or perpendicular to potential underground levels, to facilitate underground mine planning.

SRK considers that the gold mineralization is amenable to underground extraction. Through discussions with Dalradian, SRK considers that it is reasonable to report as underground the mineral resources those classified blocks above a cut-off grade of 5.0 g/t gold. This is based on a gold price of US$1,200 per troy ounce and a gold recovery of 95 percent. In the opinion of SRK, the resource evaluation reported in Table i is a reasonable representation of the gold mineral resources of the Curraghinalt gold deposit at the current level of sampling. The mineral resources have been estimated in conformity with generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines* and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. The mineral resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. The effective date of the Mineral Resource Statement is May 10, 2018.

Table i: Mineral Resource Statement*, Curraghinalt Gold Project, Northern Ireland, SRK Consulting (Canada) Inc., May 10, 2018

Resource Category	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Measured^	34	26.00	28
Indicated	6,309	14.95	3,033
Measured^ + Indicated	**6,343**	**15.01**	**3,061**
Inferred	7,722	12.24	3,038

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Underground mineral resources are reported at a cut-off grade of 5.0 g/t gold. The cut-off grades are based on a gold price of US$1,200 per troy ounce and a gold recovery of 95 percent.

^ Due to a reporting discrepancy, the Measured resources reported in the Press Release by Dalradian on May 10, 2018 differ nominally to that reported here.

Mineral Reserve Estimates

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Mining Methods

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Recovery Methods

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement However, it is envisaged that the process flowsheet would remain similar.

Project Infrastructure

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Market Studies and Contracts

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Environmental Studies, Permitting, and Social Impacts

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Capital and Operating Costs and Financial Analysis

Since the feasibility study disclosed in December 2016 is no longer current, this section is not required to support the revised mineral resource statement.

Adjacent Properties and Other Relevant Data and Information

There are no adjacent properties that are considered relevant to this technical report and there is no other relevant data available about the Curraghinalt gold project.

Conclusion and Recommendations

An additional 145 core boreholes for 46,487 metres and 181 underground channels/faces for 535 metres were drilled or sampled since the 2016 mineral resource model, representing a 35 percent increase to the borehole database by meterage. This new information considerably improves the confidence in the overall quality of the exploration database and in the continuity of the gold mineralization.

SRK witnessed the extent of the exploration work and can confirm that Dalradian's exploration work is conducted using field procedures that meet generally accepted industry best practices. SRK is of the opinion that the exploration data are sufficiently reliable to interpret with confidence the boundaries of the gold mineralization and support the evaluation and classification of mineral resources in accordance with generally accepted CIM *Estimation of Mineral Resource and Mineral Reserve Best Practices* and CIM *Definition Standards for Mineral Resources and Mineral Reserves*.

The bulk of the gold mineralization is hosted in a stacked network of narrow quartz-carbonate-sulphide veins. Twenty-one vein resource domains were modelled on the extents of logged gold mineralized shear veins (D veins), and snapped to assays irrespective of gold grades. The vein wireframes were offset by four main observed faults. Extensive geostatistical studies were carried out on the composited data to select capping levels, and derive estimation parameters. Gold, sulphur, and silver were estimated into a block model using ordinary kriging informed from capped composited data. A density was estimated into each block.

The block model was classified using a combination of tools, including confidence in the geological interpretation, search radii, minimum number of boreholes and composites, variography, and estimation pass. A Measured category was assigned to blocks within a 10 by 10 by 10 metres search radii around the underground workings informed by core and/or underground channel/face samples. An Indicated classification was assigned to blocks estimated in the first pass, using a minimum of two boreholes. The mean average distance of informing composites for Indicated blocks is 50 metres; while on average, these blocks are informed by six boreholes. All other blocks not classified as Measured or Indicated, whose grade was estimated in a vein domain, were classified as Inferred.

The re-interpretation of the vein wireframes from vein intervals as defined in sampled assays, and not 0.5-metre composites as in 2016, has the impact of reducing vein domain thickness to an average of 0.47 metres. This is accompanied by an increase in the average grade of each vein domain. Modelled vein domains delineate in-situ gold grade and do not consider a minimum mining width or potential planned mining dilution, which will likely be considered during the conversion of mineral resources to mineral reserves.

The general estimation methodology did not change in 2018; however, some veins in the south, such as Crow vein, benefited from infill drilling at depth. The overall impact of the additional step-out and infill drilling and updated vein models is a moderate increase in Indicated and Inferred tonnages, accompanied by a significant increase in average grade, resulting in a significant increase in Indicated and Inferred metal. The additional drilling also delineated areas of considerable exploration potential to be targeted in future drilling campaigns.

The updated mineral resource statement reported herein, along with a geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. With material exploration activities concluded, SRK is not in a position to make meaningful recommendations for further work on the project until the results of the updated feasibility study have been disclosed.

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1 Introduction and Terms of Reference

The Curraghinalt gold deposit is a pre-development exploration project located in Northern Ireland, United Kingdom. It is located approximately 115 kilometres west of Belfast, the capital of Northern Ireland. Dalradian Resources Inc. (Dalradian) wholly owns 100 percent of the Curraghinalt gold deposit, which is part of the Curraghinalt property (previously the Tyrone project).

Since 2016, Dalradian has completed significant infill and step-out drilling programs in addition to undergound sampling with the objective to expand the mineral resources of the project. In November 2017, SRK was retained to prepare a new Mineral Resource Statement that was disclosed publically by Dalradian in a news release on May 10, 2018.

This technical report documents the Mineral Resource Statement prepared by Dalradian and SRK for the Curraghinalt gold project. It was prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1. The Mineral Resource Statement reported herein was prepared in conformity with generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practice* and CIM *Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines*.

On December 12, 2016, Dalradian released the results of an independent feasibility study prepared by JDS Energy & Mining Inc.(JDS) for the Curraghinalt project, which was documented in a publically disclosed technical report on January 25, 2017. The results of that study are now considered obsolete and will be superseded by the results of the mineral resource update. SRK understands that JDS will update the feasibility study with the mineral resource model corresponding to the Mineral Resource Statement reported herein. Hence, this technical report solely updates technical information relevant to support the new Mineral Resource Statement that was disclosed by Dalradian on May 10, 2018.

The mineral resource model is based on exploration drilling results available to March 20, 2018, with a total of 731 core boreholes (178,130 metres) and 678 underground channel/face samples (2,397 metres).

1.1 Scope of Work

The scope of work was defined in an engagement letter executed between Dalradian and SRK in November 2017 that includes the construction of a mineral resource model for the gold mineralization delineated by drilling and underground sampling at the Curraghinalt gold deposit. During the course of the work program, the scope of the services was revised to include the compilation of an updated technical report pursuant to National Instrument 43-101 and Form 43-101F1 guidelines. This work typically involves an assessment of the following aspects of the project:

- Topography, landscape, access
- Regional and local geology
- Exploration history
- Audit of exploration work carried out on the project
- Geological modelling
- Mineral resource estimation, classification and validation
- Preparation of a Mineral Resource Statement

The scope of the services provided by SRK for this assignment focussed on the geological aspects of the project. Where relevant, additional information pertaining to the mining, processing, and environmental aspects was provided by Dalradian and other consultants involved with the feasibility study work.

1.2 Work Program

The Mineral Resource Statement reported herein is a collaborative effort between Dalradian and SRK personnel. The exploration database was compiled and is maintained by Dalradian. It was audited by SRK. The geological model and outlines for the gold mineralization were constructed by SRK with the assistance of Dalradian. The construction of the mineral resource model was a collaborative effort between between Dalradian and SRK. In the opinion of authors of this report, the geological model is a reasonable representation of the distribution of the targeted mineralization at the current level of sampling. The geological modelling, geostatistical analysis, variography, grade models, and the Mineral Resource Statement were completed by SRK between the months of March and May, 2018. The update to the Mineral Resource Statement reported herein was presented to Dalradian in a memorandum report on May 10, 2018 and was disclosed in a news release dated May 10, 2018.

The technical report was assembled in Toronto during the months of May and June 2018.

1.3 Basis of Technical Report

This report is based on information collected by SRK on various site visits performed between November 2014 and October 2017 and additional information provided by Dalradian throughout the course of SRK’s investigations. SRK has no reason to doubt the reliability of the information provided by Dalradian. Other information was obtained from the public domain. This technical report is based on the following sources of information:

- Technical discussions with Dalradian personnel
- Inspection of the Curraghinalt property area, including geological investigations of underground exposures and core
- Review of exploration data collected by Dalradian
- Information extracted from previous technical reports prepared for the property
- Additional information from public domain sources

1.4 Qualifications of SRK and Technical Report Team

The SRK Group comprises of more than 1,400 professionals, offering expertise in a wide range of resource engineering disciplines. The independence of the SRK Group is ensured by the fact that it holds no equity in any project it investigates and that its ownership rests solely with its staff. These facts permit SRK to provide its clients with conflict-free and objective recommendations. SRK has a proven track record in undertaking independent assessments of mineral resources and mineral reserves, project evaluations and audits, technical reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies, and financial institutions worldwide. Through its work with a large number of major international mining companies, the SRK Group has established a reputation for providing valuable consultancy services to the global mining industry.

Table 1 presents the qualified persons responsible for each section of this technical report. Mr. Greg Hope and Ms. Emma Brosnan of Dalradian provided the technical support and assistance related to the exploration and drilling database. Dr. James Siddorn, PGeo (APGO#1314) provided insight to offsetting faults and the structural geology controls of gold mineralization. The data review and geological modelling updates and modifications were performed by Mr. Dominic Chartier, PGeo (OGQ#874, APGO#2775). Grade estimation and associated sensitivity analyses, and mineral resource classification were performed by Dr. David Machuca, PEng (PEO#100508889) under the supervision of Dr. Oy Leuangthong, PEng (PEO#90563867). Ms. Joycelyn Smith, PGeo (APGO#2963) assisted with the compilation of the technical report,whereas the overall process was reviewed by Mr. Glen Cole, PGeo (APGO#1416). Dr. James Siddorn and Mr. Dominic Chartier have visited the property. Other SRK personnel did not visit the property.

Information about mineral processing and metallurgical testing has been compiled by Mr. Stacy Freudigmann, PEng (APEGBC #33972) of Canenco Consulting Corp. (Canenco).

Table 1: Qualified Persons Accepting Professional Liability for this Technical Report

Author	Company	Report Section(s)
Oy Leuangthong, PhD, PEng	SRK	13
David Machuca, PhD, PGeo	SRK	13
Dominic Chartier, PGeo	SRK	1-11, 13-15, and 17-26
Stacy Freudigmann, PEng	Canenco	12 and 16

By virtue of their education, membership to a recognized professional association, and relevant work experience, Dr. Leuangthong, Dr. Machuca, Mr. Chartier and Mr. Freudigmann are independent qualified persons as this term is defined by National Instrument 43-101.

Drafts of this technical report were reviewed by Mr. Cole prior to their delivery to Dalradian as per SRK's internal quality management procedures.

1.5 Site Visit

In accordance with National Instrument 43-101 guidelines, Mr. Chartier and Dr. Siddorn, and Mr. Freudigmann visited the Curraghinalt gold deposit separately accompanied by Dalradian personnel.

Mr. Freudigmann visited the project on January 26 and November 15, 2016, and April 10, June 4, and November 11, 2017 to conduct process plant site investigations, view underground workings and metallurgical sample locations, and to review core boreholes drilled on the Curraghinalt deposit and the metallurgical sampling thereof.

Dr. Siddorn visited the project from October 22 to October 27, 2017 to evaluate the structural controls on gold mineralization and review the distribution, geometry, and kinematics of post-mineralization structures that may crosscut or displace the auriferous veins.

Mr. Chartier visited the project from October 22 to October 27, 2017 to review exploration procedures, review the exploration database and validation procedures, define geological modelling procedures, examine drill core and underground workings, compare database assays with original certificates, and collect all relevant information for the preparation of a revised mineral resource model and the compilation of a technical report.

SRK and Canenco were given full access to relevant data and conducted interviews with Dalradian personnel to obtain information on the past exploration work, to understand procedures used to collect, record, store, and analyze historical and current exploration data.

1.6 Acknowledgement

SRK would like to acknowledge the support and collaboration provided by Dalradian personnel for this assignment. In particular, SRK would like to acknowledge the contribution of the Dalradian team. Their collaboration was greatly appreciated and instrumental to the success of this study.

1.7 Declaration

SRK's opinion contained herein and effective **May 10, 2018** is based on information collected by SRK throughout the course of SRK's investigations. The information in turn reflects various technical and economic conditions at the time of writing this report. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This report may include technical information that requires subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

SRK is not an insider, associate or an affiliate of Dalradian, and neither SRK nor any affiliate has acted as advisor to Dalradian, its subsidiaries or its affiliates in connection with this project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

SRK was informed by Dalradian that there is no known litigation potentially affecting the Curraghinalt project.

2 Reliance on Other Experts

SRK has not performed an independent verification of the land title and tenure as summarized in Section 3 of this report. SRK did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties, but has relied upon Dalradian’s reliance on the legal opinion of a specialist in corporate and commercial law. The reliance applies solely to the legal status of the rights disclosed in Section 3.1 and 3.2 below.

3 Property Description and Location

The Curraghinalt project (formerly the Tyrone project) is located in Counties Tyrone and Londonderry, Northern Ireland (Figure 1). The Curraghinalt gold deposit, located near the centre of the property, in County Tyrone, is approximately 115 kilometres west of Belfast by road and 15 kilometres northeast of the town of Omagh. Access to the Curraghinalt deposit is via a number of paved highways and local roads. The centre of the property is located at approximately 7.105 degrees longitude west and 54.719 degrees latitude north.

Figure 1: Location of the Northern Ireland Property and the Curraghinalt Gold Deposit

3.1 Mineral Tenure

Dalradian's Northern Ireland property measures approximately 120,000 hectares comprising six contiguous areas (DG1, DG2, DG3, DG4, DG5, and DG6), to which Dalradian has title. There are two elements comprising the titles—mining lease option agreements (Option Agreements) for gold and silver, and mineral prospecting licences that exclude gold and silver (Prospecting Licences). Both titles are controlled by two separate government bodies. Dalradian does not hold any other titles.

Dalradian holds, through its wholly-owned subsidiary Dalradian Gold Ltd. (Dalradian Gold), a 100 percent interest, subject to royalties described below, in Option Agreements and Prospecting Licences in counties Tyrone and Londonderry, Northern Ireland, United Kingdom. The Crown Estate Commissioners have entered into Option Agreements with Dalradian Gold for gold and silver on six contiguous areas referred to as DG1, DG2, DG3, DG4, DG5, and DG6 (Table 2). The Department for the Economy has granted to Dalradian Gold Prospecting Licences for all metals over four areas (DG1, DG2, DG5, and DG6) with two others under application (DG3 and DG4) [Table 2].

The Crown Estate Commissioners Option Agreements have a six-year term and can be renewed indefinitely subject to relevant conditions being met and satisfied at the Crown Estate Commissioners' discretion.

The Option Agreements for DG1 to DG6 have a renewal term expiring December 31, 2021.

The current Prospecting Licences for DG1 and DG2 (named DG1/14 and DG2/14) expire December 31, 2019. A six-year licence can be applied for four months prior to the expiration of DG1 and DG2. The Prospecting Licences for DG3 and DG4 (named DG3/11 and DG4/11) expired on April 23, 2017, and are under application for a new six-year agreement.

The Department for the Economy uses the Irish National Grid system of easting and northing for reference. The Northern Ireland property is located at approximately 257,700 mE and 386,000 mN.

The mineral resources discussed herein are located entirely on licence DG1.

Table 2: Mineral Tenure Information

Licensee	Area	Licence Number	Area (km^2)	CEC* Effective Date (d/m/y)	CEC* Date of Expiry (d/m/y)	DfE* Effective Date (d/m/y)	DfE* First Extension (d/m/y)	DfE* Second Extension (d/m/y)	DfE* Date of Expiry (d/m/y)
Dalradian	Rousky	DG1/14	167.5	01/01/2016	31/12/2021	01/01/2014	01/01/2016	01/01/2018	31/12/2019
Dalradian	Creggan	DG2/14	184.5	01/01/2016	31/12/2021	01/01/2014	01/01/2016	01/01/2018	31/12/2019
Dalradian	Strabane	DG3	248.0	01/01/2016	31/12/2021	N/A	N/A	N/A	N/A
Dalradian	Plumbridge	DG4	244.0	01/01/2016	31/12/2021	N/A	N/A	N/A	N/A
Dalradian	Claudy	DG5/16	211.1	01/01/2016	31/12/2021	01/06/2016	N/A	N/A	31/05/2022
Dalradian	Dungiven	DG6/16	177.2	01/01/2016	31/12/2021	01/06/2016	N/A	N/A	31/05/2022

* CEC = Crown Estate Commissioners; DfE = Department for the Economy

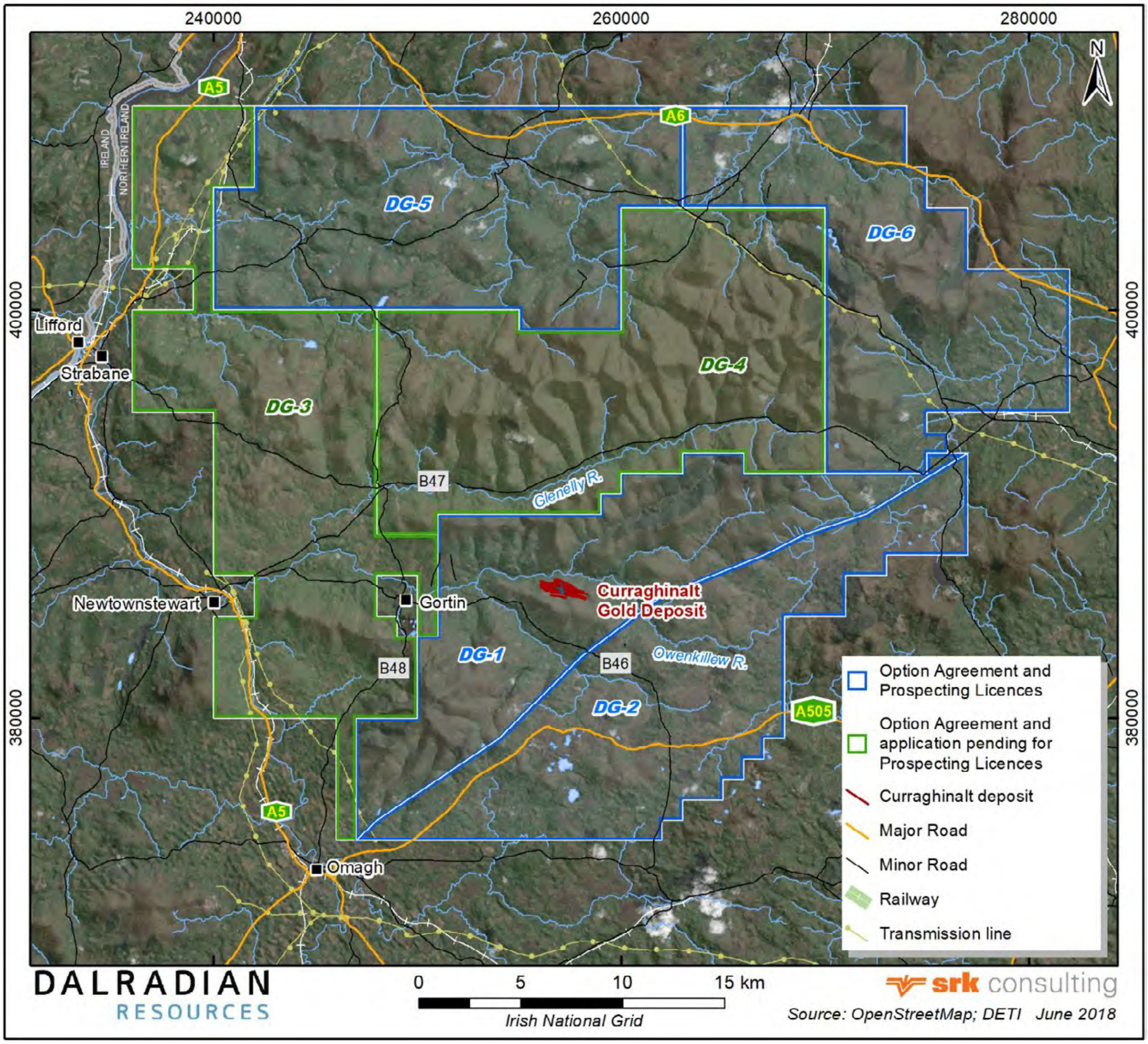


Figure 2: Land Tenure Map

Table 3 lists the required annual expenditures made on each of the four licences. Tournigan Gold Corp (Tournigan) held the licences DG1 – DG4 from 2002 to late 2009, at which time they were transferred to Dalradian. The mineral prospecting licences outline the annual general work program to be undertaken on the four licence areas.

Prospecting Licences and Option Agreements in Northern Ireland are issued for six-year periods and may be renewed (or extended), subject to relevant conditions being met and satisfied. After the end of each year, a progress work report is submitted within three months of the licence anniversary date to the licensing authorities. Included in the reports is a summary of the work performed for the year and an audited summary of the spending. At the end of each six-year period, a full reissuing application process must be undertaken, whereby a full six-year work report is submitted to the licensing bodies along with a new application for another six-year period. Renewals, extensions, and reissuing are not automatic.

Table 3: Mineral Licence Expenditure Requirements

Licence Number	Reporting Stage	From (d/m/y)	To (d/m/y)	Expenditure (GBP)
DG1/14	Reissued (further 2 years)	01/01/2018	31/12/2018	500,000
		01/01/2019	31/12/2019	500,000
DG2/14	Reissued (further 2 years)	01/01/2018	31/12/2018	75,000
		01/01/2019	31/12/2019	75,000
DG3	Under Application			
DG4	Under Application			
DG5/16	Six-year Licence	01/06/2016	31/05/2017	27,200
		01/06/2017	31/05/2018	27,200
		01/06/2018	31/05/2019	30,000
		01/06/2019	31/05/2020	30,000
		01/06/2020	31/05/2021	TBD
		01/06/2021	31/05/2022	TBD
DG6/16	Six-year Licence	01/06/2016	31/05/2017	22,800
		01/06/2017	31/05/2018	22,800
		01/06/2018	31/05/2019	25,000
		01/06/2019	31/05/2020	25,000
		01/06/2020	31/05/2021	TBD
		01/06/2021	31/05/2022	TBD

The Department for the Economy is required to consult with other departments and with public bodies concerning its intention to issue a licence. It is also required to place notices in the Belfast Gazette and at least one local newspaper. This is primarily to allow the owners of surface land within the area under application the opportunity to make their views known.

The Department for the Economy notes that a draft licence and a “letter of offer” are provided to applicants once all comments have been considered. The letter of offer may contain a number of conditions, although the Department for the Economy notes that, at the prospecting stage, it is usually sufficient for the applicant to inform all listed contacts of its plans and progress. When the conditions set out in the letter of offer are accepted and the terms of the draft licence agreed upon, the licence is executed by the Department for the Economy and the company.

The Department for the Economy states that planning permission is not required for early stage exploration under Part 16 Class A of the General Permitted Development Order (Northern Ireland) 2015 subject to specified limitations and conditions, although the local council must be informed of the planned work, including the nature and scale, time, and location of the company’s activities, and drilling locations.

3.2 Underlying Agreements

On August 30, 2017, Dalradian concluded the acquisition of the 2% net smelter return royalty on a portion of the Northern Ireland properties (as defined in a royalty agreement, dated December 13, 2004), including the Curraghinalt gold deposit from Minco plc under Rule 2.5 of the Irish Takeover Panel Act, Takeover Rules 2013. On April 23, 2018, the royalty agreement was officially terminated.

As provided in the Option Agreements, a 4 percent royalty will be payable to the Crown Estate Commissioners upon production of silver and/or gold on the Northern Ireland property.

3.3 Permits and Authorization

For exploration work, formal notice of intention to enter land to carry out work must be given, and the agreement of landowners sought, before entering any property. Compensation is generally payable to the landowner for any damage caused during exploration.

Dalradian has obtained all necessary permits and certifications from governmental agencies to allow for exploration on the property. This includes three permits for the underground exploration program (now complete), including approval from Northern Ireland regulators for a number of management plans governing items such as waste, water, noise, traffic, and dust.

3.4 Environmental Considerations

Much of the property occurs within the Sperrin Mountains, which are designated an Area of Outstanding Natural Beauty (AONB) as shown in Figure 1. In addition, there are a number of protected and special interest areas around the project. The nearest Areas of Special Scientific Interest to the project are the Owenkillew River, the Mullaghcarn/Mountfield Quarry, Murrins, Cashel Rock, Boorin Wood, and Black Bog. The nearest Special Areas of Conservation include Drumlea and Mullan Woods, Owenkillew River, and Black Bog.

Environmental baseline studies were initiated by SLR Consulting for Dalradian in June, 2010 and have included collecting data on meteorology, hydrology, hydrogeology, water quality, sediment quality, acid rock generation potential of the mineral and waste rock, flora, terrestrial and aquatic fauna, air quality, visual resources, cultural heritage resources, and the local socio-economy. Dalradian continues to gather environmental baseline data to be used in support of the environmental and social impact assessment and, in addition, more detailed site-specific environmental studies are ongoing. Dalradian does not currently have a permit for mining the Curraghinalt gold deposit.

Dalradian commenced the environmental and social impact assessment at the end of 2014 to examine the potential impacts of a full mine build, as well as options for the elimination or mitigation of such impacts. SRK UK is lead and co-ordinating environmental consultant for delivery of the environmental and social impact assessment. The report, together with a project description, has formed the basis of a planning application for the full mine build which was submitted to the Department for Infrastructure in November 2017. During 2018, activities in permitting are expected to include preparation of responses to queries on the planning application and preparation of a number of ancillary permitting applications.

Dalradian and SRK UK along with other consultants began stakeholder engagement for the environmental and social impact assessment in December 2015 with an initial meeting with the Department for Infrastructure officials. This was followed by other government agency meetings and initial community consultations in January 2016. The purpose of these meetings was to receive government agency, community, and other stakeholder feedback to input into the project description and environmental and social impact assessment. Up to November 2017, 44 meetings were held with various regulatory authorities alone. Formal stakeholder feedback on the planning application is currently being received and will continue to be addressed as the application(s) proceeds.

4 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

4.1 Accessibility

From Belfast, the capital city of Northern Ireland, the project and the nearest town, Omagh, is located approximately 115 kilometres west by paved road, more than half of which is dual carriageway (limited access highway). Access to the property is via a number of highways and local roads, including the B48 from Omagh to Gortin, and the B46 from Gortin to Greencastle. Local country roads, private roads, and farm tracks provide generally good access within the property.

Belfast supports a population of approximately 300,000 inhabitants. A domestic and an international airport serve the city, together offering frequent daily flights to the rest of the UK and Europe.

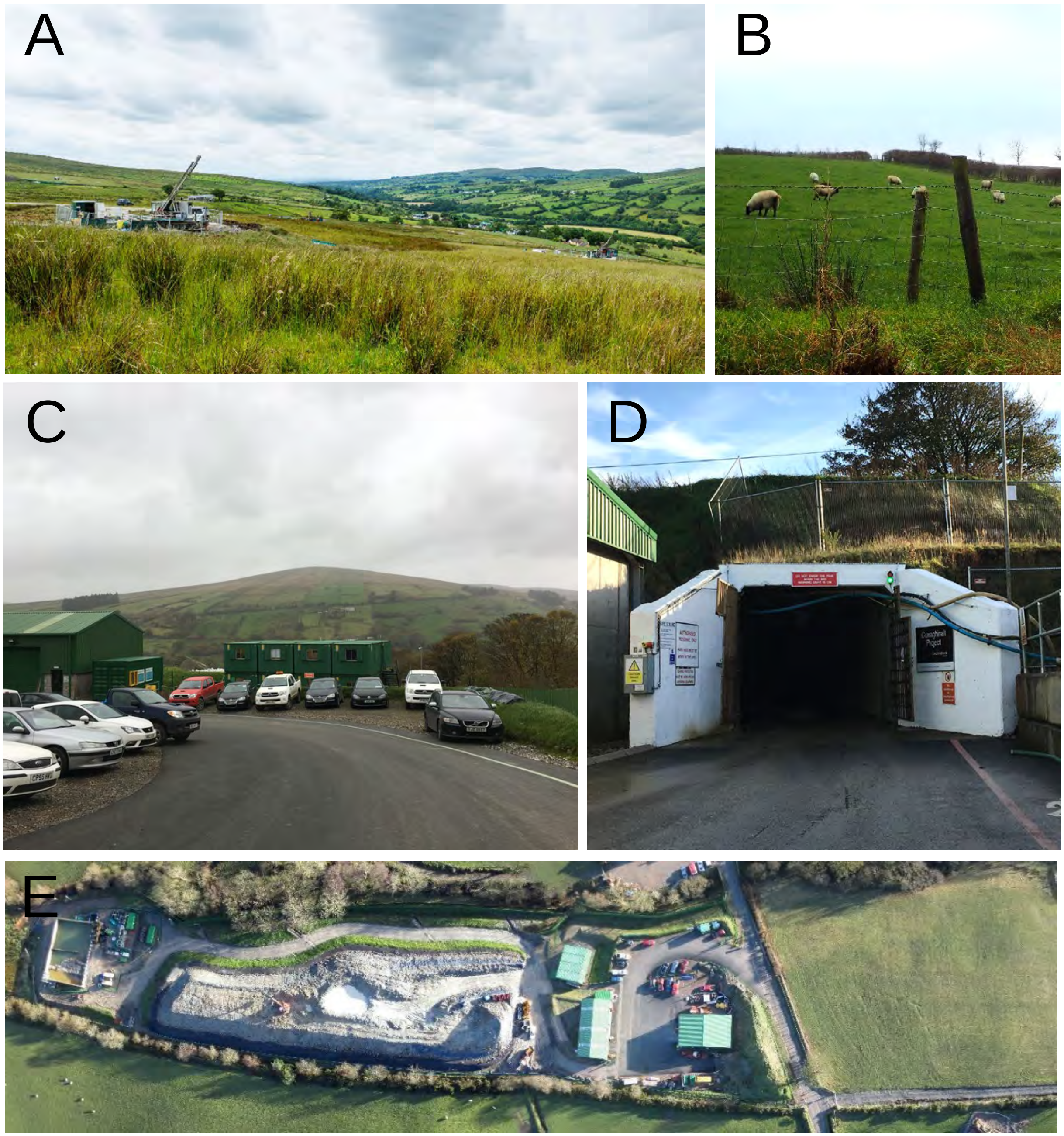
4.2 Local Resources and Infrastructure

The town of Omagh (population 22,000) provides lodging and local labour, as well as the smaller local villages of Gortin, Rousky, and Greencastle. Few experienced mining personnel are available locally, although there is a small mining industry in Northern Ireland (salt and gold), and the Irish Republic has a number of underground base metal mines. There are large quarrying and mining supply industries in Northern Ireland and Ireland. The principal economic activities in the area of the licences are sheep farming and, to a lesser extent, the raising of beef cattle.

The village of Gortin is located a few kilometres from the Curraghinalt gold deposit at the western edge of licence DG1. Dalradian has a field office there, as well as storage facilities, all of which are rented. Gortin is centrally located within the licence areas and well situated to support the exploration program. Dalradian also leases an office and core storage facility in Omagh near the road leading to Gortin. Geology and administration staff are located there, as well as the principal core logging and storage facility. The village of Greencastle and the hamlet of Rousky lie east of Gortin along the Crockanboy Road.

An electrical power substation is located at Plumbridge, approximately 22 kilometres north of Omagh and 6.5 kilometres north of Gortin, and the main 110 kilovolt (kV) power line runs just outside Omagh. Local water resources are abundant.

During 2015, surface infrastructure at the mine portal increased significantly with the construction of a water treatment plant, offices, temporary rock storage area, and workshops (Figure 3). Throughout 2015 and 2016, Dalradian completed approximately 989 metres of underground development, increasing the total development on the project to 1,785 metres with the Ennex tunneling work completed in the 1980s, including drifts, cross-cuts, raises, drilling chambers, and safety bays (Figure 3).



DALRADIAN RESOURCES

srk consulting

Photos: SRK and Dalradian June, 2018

Figure 3: Infrastructure and Typical Landscape in the Project Area

A. Drilling on the Curraghinalt Gold Deposit.

B. Sheep farm. View looking south.

C. View from mine entrance looking north.

D. Entrance to the underground adit.

E. Aerial view from 2016 of infrastructure adjacent to the underground adit.

4.3 Climate

One of the closest meteorological base station is located in Castlederg, 25 kilometres northwest of Omagh and 23 kilometres west of Gortin. Local climate conditions are temperate, with an average annual temperature of 9 degrees Celsius, and average daily temperatures varying between 4.1 degrees Celsius and 14.7 degrees Celsius throughout the year. Average annual precipitation is 852 millimetres, the majority of which falls in the winter months between September and January (average >80 millimetres per month). Snowfall is usually restricted to areas of higher elevation and occurs on 10 days or less per year. Exploration activities can generally be conducted year-round.

4.4 Physiography

The topography consists of rolling hills and broad valleys (Figure 3). Glacial deposits and peat cover much of the area, resulting in mixed forest and heathlands, as well as farmland in the valleys. Relief ranges between around 100 metres above sea level in the major river valleys to a maximum height of approximately 680 metres above sea level.

Much of the property occurs within the Sperrin Mountains, a designated Area of Outstanding Natural Beauty. Stretching from the Strule Valley in the west to the perimeter of the Lough Neagh lowlands in the east, this area presents vast expanses of moorland penetrated by narrow glens and deep valleys. In its south, the Burren area is noted for its lakes, sandy eskers, and other glacial features. There are eight such Areas of Outstanding Natural Beauty in Northern Ireland.

5 History

Information in this section is summarized from a previous technical report prepared by Micon International Ltd. (Micon, 2014).

5.1 Prior Ownership and Changes

The property containing the Curraghinalt deposit was initially acquired by Ulster Base Metals (which later became Ulster Minerals) in 1981, an entity which later became a wholly-owned subsidiary of Ennex International plc (Ennex). Ennex conducted exploration on the property between 1982 and 1999. Ennex sold its interest in Ulster Minerals to Nickelodeon in January 2000. In August 2000, the name of Nickelodeon was changed to Strongbow Resources Inc., and subsequently to Strongbow Exploration Inc. (Strongbow).

In February 2003, Tournigan Gold Corp (Tournigan) entered into an option agreement with Strongbow to earn an interest of up to 100 percent in the Curraghinalt deposit, located within a prospecting licence known as UM-11/96. Terms included staged exploration expenditures of C$4.0 million over a period of seven years, the delivery of a bankable feasibility study, and issuing shares to Strongbow at a price based on a 90-day trading average. At the same time, Tournigan entered into a similar option agreement with Strongbow for its Tyrone project (previous name of Northern Ireland property), located within prospecting licence UM-12/96. Tournigan established Dalradian Gold Ltd. (Dalradian Gold) as a wholly-owned subsidiary through which it would earn its interests in the Curraghinalt (UM-11/96) and Tyrone (UM-12/96) properties.

In the following year (February 2004), Tournigan entered into a letter agreement with Strongbow for the outright purchase by Tournigan of all of the issued and outstanding shares of Ulster Minerals through the issue of 5 million shares of Tournigan. The earlier option agreements were terminated and replaced by the letter of agreement. A net smelter return (NSR) of 2 percent held by Ennex was transferred to Minco plc. Full transfer of ownership in Ulster Minerals to Tournigan was completed in December 2004.

Tournigan then applied to the licensing authorities, and received licences TG-3 and TG-4 (for both minerals and precious metals) to the northwest of UM-11/96 and UM-12/96.

Ulster Minerals licences UM-11/96 and UM-12/96 were later renamed UM-1 and UM-2, and ultimately DG1 and DG2. During the renaming and re-registering process, the internal boundary between DG1 and DG2 was reoriented from east-west to a position that reflects the approximate location of the Omagh Thrust Fault.

In October 2009, Dalradian completed a purchase and sale agreement with Tournigan to acquire all of the issued and outstanding shares of Dalradian Gold, which included the licences, mineral rights, and surface rights (including easements) in the area of interest. The area of interest is defined in the agreement as Mineral Prospecting Licences DG1, DG2, TG-3, and TG-4; the latter two being renamed to DG3 and DG4 by the Department for the Economy after acquisition.

5.2 Previous Exploration Work

Gold was recognized in the gravels of the Moyola River to the east of the property in 1652, and in the 1930s, an English company reported plans for alluvial gold mining in a prospectus. Documented exploration in the area dates back to the early 1970s, when companies such as AMAX Exploration of the UK, Consolidated Goldfields, Selection Trust, and RioFinex completed grassroots exploration campaigns over the areas covered by DG1, DG2, DG3, and DG4. Following the 1975 report titled "The Geology and Metalliferous Mineral Potential of the Sperrin Mountains Area" by the Geological Survey of Northern Ireland (GSNI), the ground covered by the licences comprising the property received renewed interest by a number of companies. Licence DG1 has been the focus of most of the historical exploration on the property, as outlined in Table 4.

Table 4: Historical Exploration on DG1 Licence

Company	Year	Work Completed	Area
AMAX Exploration of UK Inc.	1971-1972	Soil sampling	
Glencar Explorations Ltd.	1977-1978	Soil sampling, panning	
Ennex	1983-1987	Detailed prospecting, geochemistry, geophysics	Curraghinalt
	1983-1987	71 trenches (4,483 metres)	
	1983-1987	72 core boreholes (6,938 metres)	
Dungannon	1983-1984	Stream and soil sampling, panning, and geological mapping	DE5 Licence, included Golan Burn
Dungannon/Celtic Gold	1985	Detailed soil sampling, mapping prospecting; Percussion overburden drilling (Pionjar)–107 sites; 50 RC boreholes	DE5 Licence, included Garvagh, Slievebeg
	1986-1987	Detailed soil sampling, mapping, prospecting, VLF surveys; 19 RC boreholes; 55 core boreholes	DE5 Licence, Garvagh
Ennex	1987-1989	Underground development program (797 metres) 26 underground boreholes (659 metres) 5 surface core boreholes (546 metres)	Curraghinalt
	1995-1996	60 core boreholes (5,096 metres)	Curraghinalt
	1996-1997	50 core boreholes (5,412 metres)	Curraghinalt
Nickelodeon	2000	Due diligence underground channel samples	Curraghinalt
Strongbow	2000-2003	226 mobile metal ions(MMI) geochemistry samples	Glenlark
		Ground IP geophysical survey	Glenlark
		Trench T10	Glenlark
Tournigan	2003-2007	22,910 soil samples, geophysical survey, prospecting	DG1
		26 core boreholes (4,391 metres)	Curraghinalt
		7 boreholes	Glenlark
	2007-2009	Resource Estimate (2007)	Curraghinalt
		4 deep core boreholes	Curraghinalt

The four phases of exploration at Curraghinalt, conducted by Ennex between 1983 and 1997, are summarized as follows:

Phase 1 (April 1983 to July 1987):

- Detailed prospecting, geochemistry, and geophysics
- 71 trenches (4,483 metres) and 72 core boreholes (6,938 metres)

Phase 2 (August 1987 to March 1989):

- Underground development program, including development of an adit (412 metres), lateral drifting (325 metres), and raising (60 metres)

- 26 underground core boreholes (659 metres) and 5 surface infill boreholes (546 metres)

Phase 3 (May 1995 to March 1996):

- Infill and reconnaissance drilling
- Reconnaissance drilling of veins to the southwest (60 core boreholes, 5,096 metres)

Phase 4 (June 1996 to May 1997):

- Infill drilling on 25 metres to 30 metres centres in the main vein areas (50 core boreholes, 5,412 metres)

Between 1997, when Ennex transferred its interest to Nickelodeon, and late 2002, when the agreement was signed between Strongbow and Tournigan, little work was done at Curraghinalt.

The Tournigan exploration at Curraghinalt can be divided into three phases.

Phase 1, 2003 to January 2005:

- 22,910 soil samples
- Small geophysical survey conducted
- Mapping and prospecting on the DG1 Licence area
- 26 core boreholes (4,391 metres) at Curraghinalt
- 7 core boreholes (830 metres) at Glenlark

Phase 2, January 2005 to 2007:

- 2 core boreholes (183 metres) drilled in the area of the Crowsfoot-Bend
- 24 infill core boreholes (4,721 metres) primarily on the Southeast Extension target

Phase 3, 2007 to 2009:

- 5 deep core boreholes (3,004 metres)

After completion of the 2007 to 2008 drilling program, Tournigan ceased all exploration activity at the Curraghinalt deposit. Except for some prospecting on TG-3 and TG-4 in 2008, the property remained inactive until its acquisition by Dalradian in 2009.

Exploration programs on licence DG2 initially targeted base metals; later both gold and base metals were sought. Historical exploration on DG2 is summarized in Table 5.

The principal target of interest for Ennex on the DG2 licence was the Cashel Rock showing, where a gold-mineralized silicified rhyolite breccia outcrop is exposed at surface. At this location, 15 shallow boreholes (985 metres) were drilled in a cluster with an additional six boreholes drilled in the area. Results and example sections were presented in a previous technical report by Micon International Ltd. (Micon, 2010).

Licences DG3 and DG4 have also been the subject of regional-scale exploration programs (Table 6 and Table 7). There has not been follow-up drilling on any targets on these licences.

Table 5: Historical Exploration on DG2 Licence

Company	Year	Work Completed
Consolidated Gold Fields	1970	Soil, stream and prospecting surveys
Selection Trust Exploration	1971-1972	Stream surveys, soil surveys, IP and EM surveys, trenching
Rio Tinto Finance & Exploration (RioFinex)	1972	Soil and stream surveys
	1973	Soil and stream surveys, magnetic and IP surveys, panning, trenching
	1974	Magnetic, IP, prospecting, drilling, pits, soil reconnaissance, and follow–up surveys
Glencar Explorations Ltd.	1977-1978	Panning, soil surveys
Ulster Base Metals	1982	Prospecting, VLF survey
	1983	VLF and magnetic survey, soil and deep overburden surveys, prospecting
	1984	Prospecting
	1985	Prospecting, deep overburden surveys, magnetic, IP and VLF surveys
Ennex International	1986	Drilling, prospecting, deep overburden survey, IP and magnetic surveys, panning
	1987	Trenching, drilling, prospecting, deep overburden surveys, IP, VLF, and magnetic surveys
	1988	Deep overburden surveys, magnetic and IP surveys
	1989	IP and VLF surveys, prospecting
	1997	Deep overburden surveys
Strongbow Resources	2001	Soil (MMI) at Crosh
Tournigan Gold Corporation	2004	Prospecting

Table 6: Historical Exploration on DG3 Licence

Company	Year	Work Completed
AMAX Exploration of UK	1971-1972	Soil surveys
Glencar Exploration	1974	Stream surveys
	1975	Soil and stream surveys
	1977-1978	Soil surveys and panning
Ulster Base Metals	1982	Prospecting
	1982-1983	Panning
Dungannon Explorations	1983	Soil, stream, and deep overburden surveys, panning
	1984	Deep overburden surveys
Ulster Base Metals	1985	Deep overburden and VLF surveys, panning, prospecting
Dungannon Explorations	1985	Deep overburden surveys
Ennex International	1986	Prospecting and panning
Dungannon Explorations	1986	Soil and deep overburden surveys, prospecting, panning
Ennex International	1987	IP, VLF, and deep overburden surveys, prospecting
Dungannon Explorations	1987	Stream and soil surveys
Celtic Gold	1987	Soil and deep overburden surveys, prospecting, panning
Ennex International	1988	Deep overburden surveys, prospecting
Celtic Gold	1988	Deep overburden, stream, and soil surveys, trenching, prospecting, panning
Ennex International	1989	Magnetic surveys, prospecting
Celtic Gold	1989	Stream sampling
	1996	Deep overburden surveys, prospecting
Brancote Mining	1997	Stream surveys, panning, prospecting
Billiton UK Resources	1997	Magnetic survey
Ennex International	1997	Deep overburden survey
Brancote Mining	1998	Magnetic, IP, Stream, deep overburden and soil surveys, prospecting, panning
	1999	Magnetic surveys, prospecting, panning
Tournigan Gold Corporation	2004	Prospecting

Table 7: Historical Exploration on DG4 Licence

Company	Year	Work Completed
Glencar Explorations.	1977-1978	Soil surveys, panning
Rio Tinto Finance & Exploration (RioFinex)	1982-1983	Stream surveys, panning
Dungannon Exploration	1983	Deep overburden, soil and stream surveys, panning
	1984	Deep overburden surveys
	1985	Soil surveys, deep overburden surveys
Ulster Base Metals	1985	Deep overburden surveys, panning, prospecting
Ennex International	1986	Deep overburden surveys, soils, panning, prospecting
	1987	Prospecting
	1988	Deep overburden and VLF surveys, panning, prospecting
Celtic Gold	1988	Stream and soil surveys, panning, prospecting
Ennex International	1989	Magnetic surveys and prospecting
Celtic Gold	1989	Stream surveys
Ennex International	1995	Soil surveys
Brancote Mining	1997	Stream and soil surveys, panning, prospecting
Biliton UK Resources	1997	Magnetic surveys
Ennex International	1997	Deep overburden surveys
Brancote Mining	1998	Stream, soil, and magnetic surveys, panning, prospecting
Tournigan Gold Corporation	2004	Soil surveys, prospecting

5.3 Previous Mineral Resource Estimates

Historical mineral resource estimates presented in this section are superseded by the mineral resource estimate discussed herein. The information presented in this section is relevant to provide context but should not to be relied upon.

In May 1997, a polygonal resource estimate was prepared on behalf of Ennex by CSA Group (CSA, 1997). Tully prepared a mineral resource estimate in 2005 (Tully, 2005).

Micon International Ltd. (Micon) completed a series of mineral resource estimates on the Curraghinalt deposit starting with one for Tournigan in 2007 (Micon, 2007), followed by two estimates for Dalradian in 2010 and 2011 (Micon, 2010 and Micon, 2012a). The 2011 estimate by Micon led to an initial preliminary economic assessment (Micon, 2012b).

T. Maunula & Associates Consulting Inc. (Maunula) prepared a Mineral Resource Statement for the Curraghinalt gold deposit in May 2014 (Maunula, 2014) for Dalradian that led to a follow-up preliminary economic assessment prepared by Micon in October 2014 (Micon, 2014). The model was created with a minimum down-hole width of 2.0 metres and was reported at a cut-off grade of 5 grams gold per tonne (g/t gold).

In June 2016, SRK prepared a technical report in accordance with the Canadian Securities Administrators' National Instrument 43-101 in support of a Mineral Resource Statement disclosed by Dalradian on May 5, 2016. This mineral resource led to a feasibility study prepared by JDS disclosed by Dalradian on December 12, 2016 and reported in a National Instrument 43-101 technical report on January 25, 2017.

The 2005 and 2007 Mineral Resource Statements can be found on SEDAR (www.sedar.com), filed under Azarga Metals Corp. (current name of Tournigan). The 2010 to 2017 technical reports are also available on SEDAR filed under Dalradian.

6 Geological Setting and Mineralization

6.1 Regional Geology

The bedrock geology of Northern Ireland is a complex assemblage of units deposited from the Mesoproterozoic to the Paleogene (British Geological Survey, 2016). It can be divided into four quadrants (Figure 4):

- Northwest - composed predominantly of the Proterozoic Dalradian Supergroup and the early Ordovician Tyrone Igneous Complex
- Southeast - composed mainly of rocks of the Southern Uplands/Longford-Down Terrane, an allochthonous prism composed of an Ordovician and Silurian turbidite sequence
- Southwest - underlain mainly by Upper Palaeozoic sedimentary rock deposited in continental to marine environments
- Northeast - underlain by the early Palaeogene (60 – 55 Ma), subaerial Antrim Lava Group and minor underlying Paleozoic units.

The local geology of the project area comprises three main rock groups:

- Dalradian metasediments in the Grampian terrane to the north of the Omagh Thrust
- The Tyrone Igneous Complex in the Midland Valley terrane south of the Omagh Thrust
- Upper Palaeozoic, Mesozoic and Palaeogene sedimentary rocks which are widely distributed throughout these terranes, particulary within the DG6 Licence.

Mitchell (2004) described the tectonic evolution of Northern Ireland from which the following is summarized. The Caledonian orogenic belt of the British and Irish Caledonides resulted from the progressive closure of the Iapetus Ocean and Tornquist Sea during the early Palaeozoic. Assembly and docking of the terranes that form the basement in Northern Ireland commenced in mid-Ordovician time and continued for 80 Ma through the Silurian and finished in the Early Devonian. Final closure was accommodated by sinistral strike-slip movement on terrane bounding faults. Northern Ireland covers three of the seven suspect terranes that together constitute the Caledonian Orogen in Ireland. From north to south, these are referred to as the Central Highlands (Grampian) Terrane, Midland Valley Terrane, and the Southern Uplands/Longford-Down Terrane.

Dalradian's Northern Ireland property straddles two of these terranes: the Central Highlands to the north (DG1, DG3, DG4, DG5 and DG6) and the Midland Valley to the south (DG2). The Central Highland Terrane consists of Moinian (Mesoproterozoic, not expressed on property) and Dalradian (Neoproterozoic-Cambrian) rocks and Caledonian igneous intrusions. The Dalradian Supergroup that hosts the Curraghinalt gold deposits comprises Neoproterozoic metasedimentary and mafic meta-igneous rocks which were deposited on the Laurentian passive continental margin between ca. 800 – 500 Ma (Strachan et al., 2002; Cooper and Johnston, 2004). Dalradian sedimentation was terminated by an arc-continent collision during the Ordovician Grampian event of the Caledonian Orogeny (Hollis et al., 2012), followed by polyphase deformation and regional metamorphism at ca. 475 – 465 Ma (Friedrich et al., 1999).

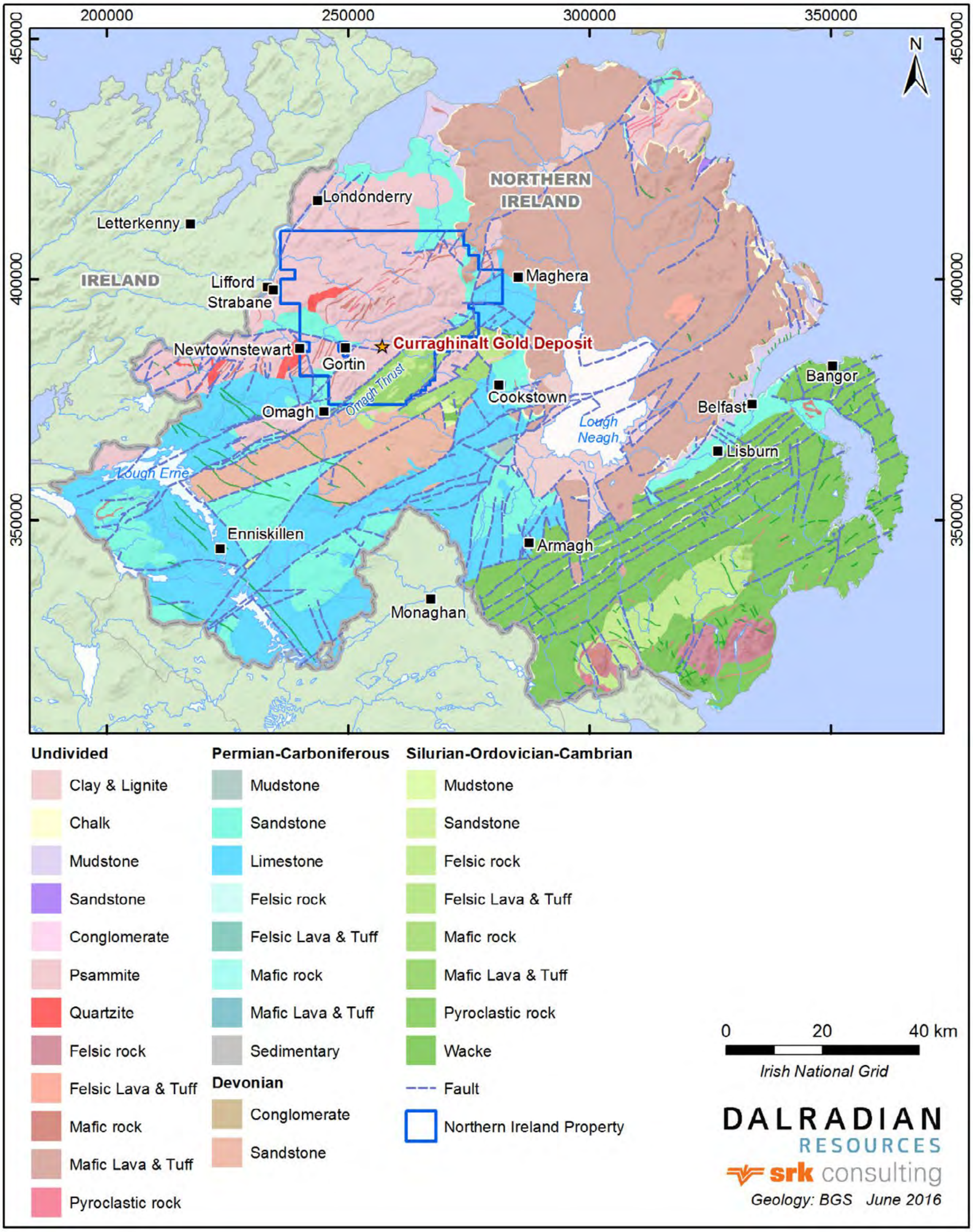


Figure 4: Regional Geology of Northern Ireland

Source: British Geological Survey DiGMapGB (1:625K).

The southern margin of the terrane is marked by the concealed Fair Head-Clew Bay Line, which is interpreted as the southwesterly extension or major splay of the Highland Boundary Fault in Scotland. This forms a major terrane-bounding structure. The associated regional magnetic lineament that extends southwestwards to Clew Bay in County Galway is located 10 kilometres north of the Grampian northwest-dipping Omagh Thrust Fault. The Omagh Thrust Fault is part of the Fair Head – Clew Bay Line, and separates Dalradian rocks to the north from the underlying Ordovician Tyrone Igneous Complex to the south (Cooper and Mitchell, 2004) (Figure 5).

The Midland Valley Terrane in Northern Ireland comprises Upper Paleozoic, Mesozoic and Lower Cenozoic rocks. However, in County Tyrone, a late Ordovician to early Silurian succession is exposed with part of an early Ordovician ophiolite and an island arc volcanic complex (Tyrone Igneous Complex) at its base. The Tyrone Igneous Complex is comprised of the Tyrone Plutonic Group and the Tyrone Volcanic Group (Cooper and Mitchell, 2004). The Tyrone Plutonic Group forms the upper part of a ca. 484 – 480 Ma supra-subduction zone ophiolite. It was accreted with the ca. 475 – 469 Ma Tyrone Volcanic Group island arc onto an outboard micro-continental block prior to the ca. 470 Ma Grampian event of the Caledonian Orogeny (Cooper et al., 2008, 2011; Hollis et al., 2012, 2014).

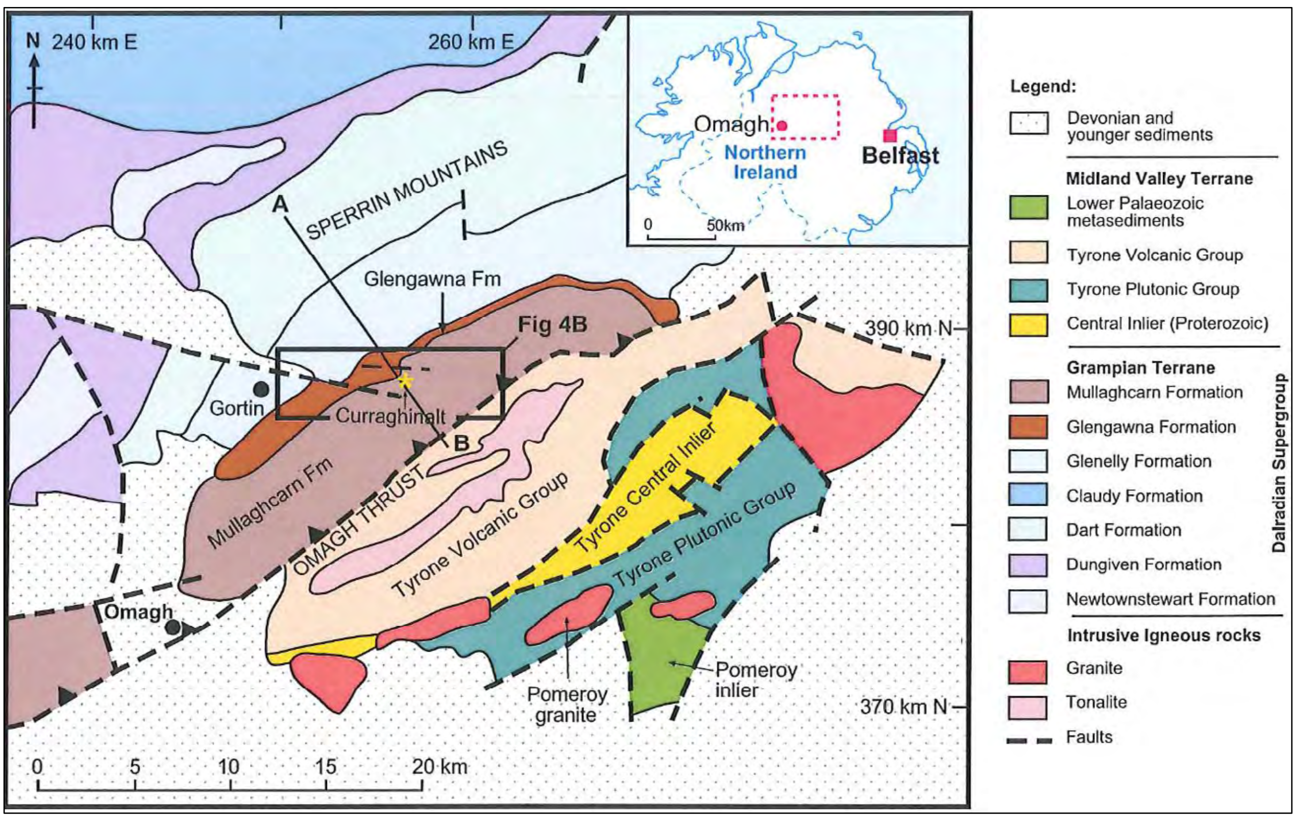


Figure 5: Regional Geology of the Southern Sperrin Mountains

Source: Rice et al. (2016).

At the core of the Tyrone Igneous Complex is the fault bounded Central Inlier. This consists of psammitic and semipelitic paragneiss known as the Corvanaghan Formation (Cooper and Johnston, 2004). While originally thought to be of Moinian affinity (Cooper and Johnston, 2004), more recent dating has correlated the Central Inlier with either the Argyll or Southern Highland Groups of the Dalradian Supergroup (Chew et al., 2008). This formation originally formed part of the Central Highlands Terrane, and was metamorphosed and deformed prior to ca. 468 Ma. It represents part of an outboard segment of Laurentia, possibly detached as a micro-continent prior to arc continental collision (Chew et al., 2008).

The Grampian Orogeny resulted in crustal thickening (folding - D1), nappe structures (recumbent southeast-facing folds - D2), and peak metamorphism (development of crenulation cleavage - D3) (Cooper and Johnston, 2004). Orogenic collapse was followed by exhumation, extension and partial melting at ca. 470 – 450 Ma (Alsop and Hutton, 1993; Flowerdew et al., 2000; Clift et al., 2004). The mid-Silurian Scandian event of the Caledonian Orogeny saw the final closure of the Iapetus Ocean. This was recorded in Northern Ireland with magmatism and further deformation (Kirkland et al., 2013).

Peak metamorphism of the Grampian Orogeny coincided with the southeast-directed emplacement of the Dalradian Supergroup over the Tyrone Igneous Complex along the Omagh Thrust Fault (Figure 5 and Figure 6). This event overlapped with the intrusion of arc-related plutons into the Tyrone Volcanic Group at ca. 470 – 464 Ma (Cooper et al., 2008 and 2011; Hollis et al., 2012 and 2014). Orogenic collapse was coeval with the development of regional-scale extensional shearing and accompanied by northeast-trending quartz veins (Alsop and Hutton, 1993), that coincide with the earliest phase of gold mineralization at Curraghinalt.

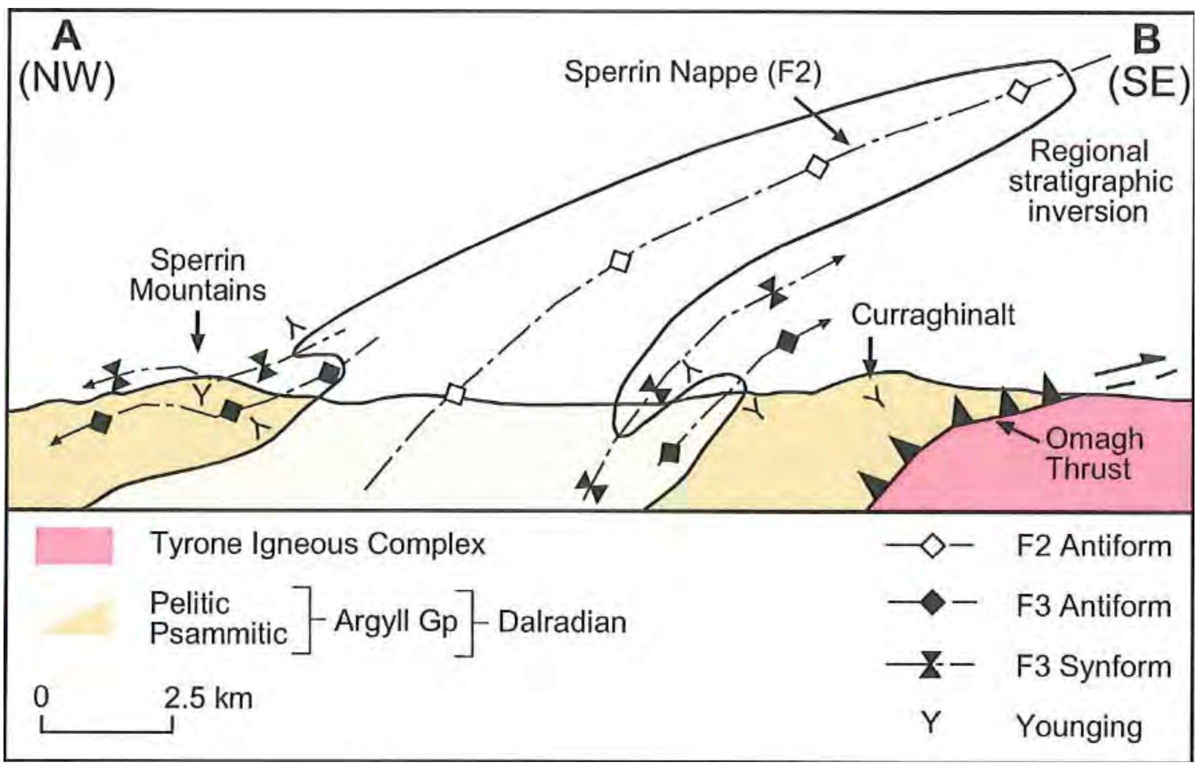


Figure 6: Section Across the Sperrin Nappe and Omagh Thrust Fault

Source: Rice et al. (2016)

6.2 Property Geology

6.2.1 Dalradian Supergroup – Licences DG1, DG2, DG3, DG4, DG5 and DG6

Licences DG1, DG3, DG4, DG5, and DG6 are underlain by Neoproterozoic-aged rocks of the Dalradian Supergroup that form the Sperrin Mountains (Figure 7). The Dalradian Supergroup is divided into the Argyll Group and Southern Highland Group on the property, both comprised of predominantly clastic marine sedimentary rocks deposited in a rift basin. The oldest rocks on the property belong to the Newtownstewart Formation/Killeter Quartzite Formation (Argyll Group), which is exposed in the core of the recumbent Sperrin Fold and is flanked by Dungiven Limestone Formation (Table 8) in DG3, DG4, DG5 and DG6. The Southern Highland Group is interpreted to flank the Argyll Group on both limbs of the Sperrin Fold, although the stratigraphy differs markedly between the north and south limbs. Mitchell (2004) notes that "an absence of distinctive marker horizons allied to lateral facies changes makes correlation difficult between formations and results in the different nomenclature north and south of the fold axis."

The Southern Highland Group comprises a thick sequence of turbiditic arenite and pelitic metasedimentary rocks with rare volcaniclastic (green bed) and calcareous schist units (Figure 7). Progressing southeastward onto DG1, the Southern Highland Group is exposed and is divided from northwest to southeast into the Dart, Glenelly, Glengawna and Mullaghcarn formations. The mineralized quartz-carbonate veins of the Curraghinalt deposit are hosted by the Mullaghcarn Formation.

Table 8: Stratigraphy of the Dalradian Supergroup

Group	Formation	Lithology
Southern Highland	Mullaghcarn	Semi-pelite, psammite, pelite
	Glengawna	Black graphitic pelites, psammite, semi-pelite
	Glenelly	Volcaniclastic semi-pelite, semi-pelite, psammite
	Dart	Schistose amphibolite, feldspathic and calcareous semi-pelite
Argyll	Dungiven	Limestone, pelite, semi-pelite, psammite, quartzite, basaltic pillow lavas, volcaniclastic sediments
	Newtonstewart	Quartzose psammite and thin pelite interbeds

Dart Formation

At the base of the Dart Formation, in contact with the underlying Dungiven Limestone Formation is the Glenga Amphibolite Member, which is interpreted as a resedimented volcaniclastic siltstone and sandstone. The remainder of the formation consists of conglomerate, psammite, schistose semi-pelite, and a volcaniclastic member.

Glenelly Formation

The Glenelly Formation comprises silvery to greenish grey schistose pelite and semi-pelite with minor psammite and limestone. Plagioclase porphyroblasts are ubiquitous in the rocks of this formation with more localized occurrences of small euhedral garnet and randomly distributed needles of tourmaline. Also present is a volcaniclastic member, and a limestone and calcareous semi-pelite member.

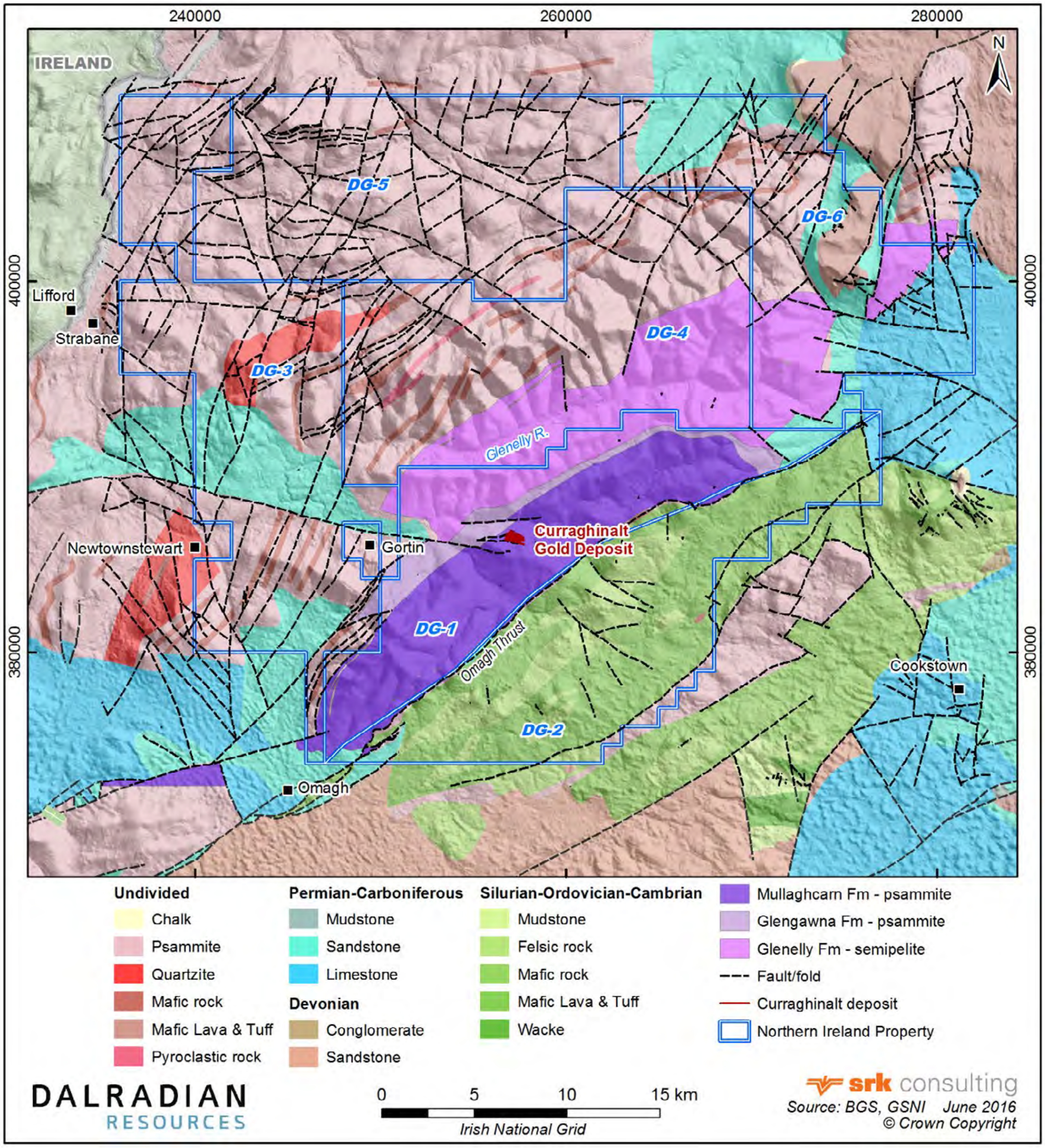


Figure 7: Property Geology

Source: Modified from British Geological Survey DiGMapGB (1:625K) and Geological Survey of Northern Ireland (1:10K)

Mullaghcarn Formation

The Mullaghcarn Formation is host to the Curraghinalt gold deposits and the Alwories prospect, and consists predominantly of semi-pelite and psammite with subordinate pelite horizons and chloritic semi-pelite. Although not subdivided on the Geological Survey of Northern Ireland maps because of lack of outcrop (Figure 7), a variation in magnetic intensity is apparent in the regional Tellus geophysical data suggesting internal variations are present.

The southern boundary of the Dalradian Supergroup is marked by the Omagh Thrust Fault (Figure 7), a moderately northwest dipping thrust fault active as late as the Carboniferous.

Deformation and Metamorphism of the Dalradian Supergroup

The following is summarized from Mitchell (2004). At least four phases of deformation are recognized in Dalradian rocks on the property:

- D_1 - Weakly preserved as barely discernible folds and cleavage
- D_2 - Dominant deformation of the Grampian Orogeny associated with the formation of major regional southeast-facing recumbent anticlines including the Sperrin Fold
- D_3 - Southeast-directed deformation in the south Sperrin mountains resulted in minor southeasterly-verging folds and low-angle, north northwest-dipping thrust faults such as the Omagh Thrust Fault which transposed Dalradian rocks to the south southeast over the early Ordovician Tyrone Igneous Complex
- Post-D_3 - Late deformation associated with localized sets of kink bands and late stage brittle fractures.

The Dalradian Supergroup in Northern Ireland preserves a thermal and pressure gradient increasing from lower greenschist facies in the north to lower amphibolite facies in the south, close to the Omagh Thrust Fault.

6.2.2 Tyrone Igneous Complex – Licence DG2

The following is taken from Hollis (2012).

“Licence DG2 is largely covered by the Tyrone Igneous Complex, which is exposed over approximately 350 square kilometres, within the Midland Valley Terrane and is one of the largest areas of ophiolitic and arc-related rocks exposed along the northern margin of Iapetus within the British and Irish Caledonides. It is broadly divisible into the ophiolitic Tyrone Plutonic Group and the younger arc-related Tyrone Volcanic Group. The northwestern edge of the Tyrone Igneous Complex is bounded by the Omagh Thrust Fault, which has emplaced Neoproterozoic Dalradian Supergroup metasedimentary rocks above the Tyrone Volcanic Group. Within the central regions of the complex (to the southeast of DG2), the structurally underlying metamorphic basement (Tyrone Central Inlier) is exposed. A suite of granitic to tonalitic plutons (ca 470 to 464 Ma) intrudes the Tyrone Igneous Complex and Tyrone Central Inlier (Cooper et al., 2011).”

“The Tyrone Plutonic Group is interpreted to represent the uppermost portion of a dismembered suprasubduction zone ophiolite and is characterized by layered, isotropic and pegmatitic gabbros, sheeted diabase dikes and the occurrence of rare pillow lavas (Cooper et al., 2011 and references therein). Layered olivine gabbro has provided a uranium-lead zircon age of 479.6 ± 1.1 Ma (Cooper et al., 2011). Accretion to the Tyrone Central Inlier must have occurred prior to the intrusion of a 470.3 Ma ± 1.9 Ma tonalite, which contains inherited Proterozoic zircons and roof pendants of ophiolitic material (Cooper et al., 2011).”

“The Tyrone Volcanic Group forms the upper part of the Tyrone Igneous Complex and comprises mafic to intermediate pillowed and sheeted lavas, tuffs, rhyolite, banded chert, ferruginous jasperoid (ironstone) and argillaceous sedimentary rocks (Mitchell, 2004). The Tyrone Volcanic Group

(473 Ma ± 0.8 Ma, Cooper et al., 2008) is interpreted to have formed within a peri-Laurentian island arc/back-arc, which was accreted to the Tyrone Central Inlier following emplacement of the Tyrone Plutonic Group (Draut et al., 2009; Cooper et al., 2011)."

Hollis et al. (2012) has revised the stratigraphy of the Tyrone Volcanic Group based on mapping and geophysics (Figure 8) and the following is summarized from that work. The lower part of the Tyrone Volcanic Group is restricted to south of the Beaghmore Fault (southwestern and eastern blocks) and is dominated by basaltic to andesitic lavas and volcaniclastic rocks, with subsidiary agglomerate, layered chert, ferruginous jasperoid (ironstone), finely laminated argillaceous sedimentary rocks, and rare rhyolite breccia, deformed into the northeast trending upright Copney anticline. All units in the lower Tyrone Volcanic Group have been subjected to varying degrees of hydrothermal alteration and are characterized by regional sub-greenschist- to greenschist-facies metamorphic assemblages. Abundant sills of undeformed quartz ± feldspar porphyritic dacite cut all stratigraphic levels of the Tyrone Volcanic Group.

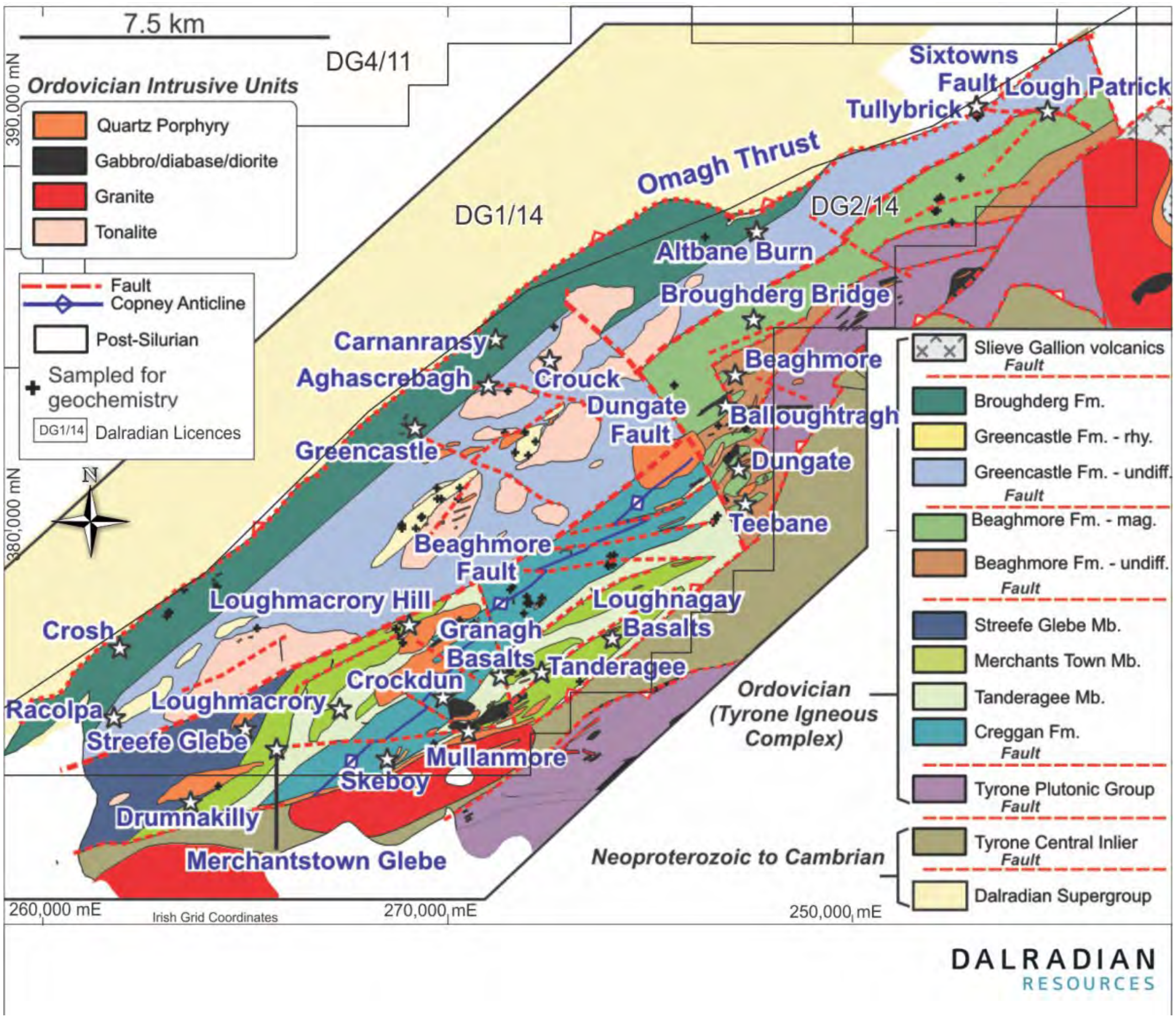


Figure 8: Tyrone Igneous Complex Geology

Source: Hollis et al., 2012

North of the Beaghmore Fault, the Greencastle and Broughderg formations of the upper Tyrone Volcanic Group are exposed as a conformable sequence dipping between 35 and 60 degrees to the northwest. Dalradian metasedimentary rocks overlie the succession along its western edge, separated by the low-angle Omagh Thrust Fault, which dips around 30 degrees to the northwest (Alsop and Hutton, 1993). The crosscutting nature of the Omagh Thrust Fault provides a relatively complete section through the upper part of the Tyrone Volcanic Group, which has been metamorphosed to chlorite-grade greenschist facies. Further south, sub-greenschist facies metamorphic assemblages are preserved around Formil. Hydrothermal alteration and associated zinc-lead-copper (gold) mineralization are widespread within the Greencastle and Broughderg formations. Mineralization is characterized by pyrite-sphalerite-galena and chalcopyrite in locally silicified, sericitic and/or chloritic tuff/rhyolite (Clifford et al., 1992). Between Racolpa and Broughderg, bodies of tonalite and sills of quartz ± feldspar porphyry intrude both formations. The Greencastle Formation is a relatively thick succession dominated by chloritic, locally sericitized and siliceous quartzo-feldspathic crystal tuff, flow-banded and brecciated rhyolite, rhyolitic lapilli tuff, lesser diorite, rare arkosic sandstone, and localized occurrences of hornblende-phyric tuff. The overlying Broughderg Formation is a diverse succession of intermediate to felsic crystal and lesser lapilli tuff/schist, rhyolite (e.g., around Crosh), vesicular basalt, argillaceous sedimentary rocks, layered chert, and black ironstone (silica-magnetite) with bedded pyrite.

A late suite of I-type, calc-alkalic, tonalitic to granitic plutons intrude the Tyrone Igneous Complex and Tyrone Central Inlier (Draut et al., 2004). Recent uranium-lead zircon geochronology indicates these were intruded between ca. 470 and 464 Ma (Cooper et al., 2011).

A gently northwest dipping cleavage intensifies northwards in the volcanics towards the Omagh Thrust Fault, and is correlated with the S3 fabric in the Dalradian Supergroup. The Laght Hill Tonalite has variable relationships with the fabric in the volcanics—early stage tonalite porphyry bodies are deformed by it, but the main body itself cuts the fabric and contains xenoliths that contain the fabric. This suggests that magmatic activity outlasted the overthrusting of the volcanics by the Dalradian (Hollis, 2012).

Hollis et al., (2014) suggests the Tyrone Igneous Complex of Northern Ireland represents a possible broad correlative of the Buchans-Robert's Arm Belt of Newfoundland, host to some of the most metal rich volcanogenic massive sulphide (VMS) deposits globally. Stratigraphic horizons prospective for volcanogenic massive sulphide mineralization in the Tyrone Igneous Complex are associated with rift-related magmatism, hydrothermal alteration, synvolcanic faults, and high-level subvolcanic intrusions (gabbro, diorite, and/or tonalite). Locally intense hydrothermal alteration is characterized by sodium-depletion, elevated silica, magnesium oxide, barium/strontium, bismuth, antimony, chlorite-carbonate-pyrite alteration index (CCPI). On the property, stratigraphic horizons favorable for VMS mineralization occur in the Greencastle Formation and in the Broughderg Formation, all of which contain occurrences of base and precious metal mineralization (Hollis et al., 2014).

6.2.3 Carboniferous – Licences DG1, DG3 and DG6

Two Carboniferous basins are present within the licence area: the Omagh Basin comprises the Omagh Sandstone Group to south and the Newtonstewart Outlier comprises the Owenkillew Sandstone Group to the north (Figure 7), while to the northeast of DG6 the Roe Valley Group and Tyrone Group unconformably overly the Dalradian basement.

Omagh Sandstone Group

The Omagh Sandstone Group rests unconformably on Dalradian rocks. The basal unit is up to 100 metres thick and is composed of non-fossiliferous red sandstone with calcrete nodules, and quartz pebble conglomerates (Mitchell, 2004). Much of the remaining sequence is dominated by channel sandstone and siltstone that contains Courceyan to early Chadian miospores. However, thin algal limestones with evaporite replacement textures occur locally. Some of the limestones contain rare brachiopods. The exact thickness of this group is difficult to estimate based on the amount of uplift, folding, and erosion that has taken place (Mitchell, 2004).

Owenkillew Sandstone Group

The Owenkillew Sandstone Group also rests unconformably on the Dalradian rocks and comprises approximately 1,500 metres of predominantly non-marine strata present within a half graben. Rock types include greenish-grey and purplish-red sandstone and siltstone, with thin beds of algal laminated limestone (Mitchell, 2004). Mudstones containing miospores have indicated an early Chadian age. The group is thought to have formed in an inter-cratonic basin with current indicators suggesting the sediment source is to the north (Mitchell, 2004).

Roe Valley Group

The Spincha Burn Formation is a basal clastic unit of the Roe Valley Group that unconformably overlies the Dalradian meta-sediments. The succession of conglomerate beds have clasts consisting of vein quartz and green pssamites, are very coarse and unfossiliferous, and range in approximately 25 to 100 metres thick.

The Barony Glen Formation of the Roe Valley Group is dominated by calcrete mudstones, siltstones and lesser palaeosols. The lower sections has been interpreted as padogenic and lacustrine deposited, while its upper sections are dominated by thin limestones and grey mudstones which mark a transition to a marginal marine environment. The formation thickness varies between 150 and 200 metres and the presence of miospores *Schopfites claviger* and *Auroraspora macra* place it within the Courceyan.

Tyrone Group

The Iniscarn Formation of the Tyrone group is approximately 400 metres thick and is composed of purplish to brown conglomerates and breccias. Clasts of the conglomerate in the lower portion are up to two metres long suspended in a coarse matrix. The upper section is poorly sorted with angular fedspathic brecciation, however exhibits a minor degree of upwards fining into the overlying horizons.

The Drumard and Mormeal members of the Altagoan Formation over the Iniscarn Formation. The lower Drumard member is approximately 300 metres thick and consists of purple to brown unfossiliferous fining-upwards series of sandstones, siltstones and mudstones. The overlying mormeal member is approximately 250 metres thick and consists of mudstone and channelized sandstones. Within this section are five narrow evaporite beds that contain calcide pseudomorphs of halite and gypsum. Grey mudstones contain fossilized marine macrofaunal bivalves and ostracods, as well as miospores *Auroaspora Schopfites claviger* and more rare *Lycospora pusilla*, which indicates an early Chadian age.

6.2.4 Triassic – Licence DG6

Sherwood Sandstone Group

The Sherwood sandstones consist of red-bed sediments, mainly pink to brown sandstones and siltstones with occasional brown mudstones. The basal unit consists of an approximately 25 metre thick pebble conglomerate, which unconformably overlies Carboniferous and older basement rocks. The Group is approximately 300 metres thick in the east, varying laterally and is interpreted to have been deposited in hot, continental conditions by fluviatile processes that encompass channel, overbank, floodlain and lacustrine environments. The occurrence of well-rounded sand grains and local large dune forests indicate an Aeolian influence on deposition. This group has been dated to the Triassic using scarce miospore assemblage, but may straddle the Permo-Triassic boundary.

6.2.5 Late Cretaceous – Licence DG6

The Ulster White Limestone Formation of the Late Cretaceous unconformably overlies the Sherwood Sandstone Group on the property, however other Mesozoic lithologies are exposed laterally. The Formation is comprised of 14 members composed of a coccolith-foraminiferal micrite with flint nodules. The full succession is not documented in a single locality, however individual members are recognizable at outcrops based on flint type, spacing of flint bands, and the characteristics of individual beds. The composite thickness of all of the members is approximately 133 metres.

6.2.6 Paleogene – Licence DG6

The Donalds Hill Ignimbrite Formation is a silicic welded ash-flow tuff and is commonly less than one metre thick with a lateral extension of over 30 kilometres. This rhyolitic ignimbrite resulted from a substantial volcanic eruption and the base of the unit is often a thin clay with flints formed from eroding the underlying Ulster White Limestone. The ash has been strongly silicified from fluids percolating downwards through the overlying basalt. The Formation was dated from a low diversity assemblage of pteridophyte spores and bisaccate plant pollens.

The upper Basalt Formation is part of the Antrim Lava Group, a series of volcanics associated with the North Atlantic Igneous Province. Extrusive material was deposited during the Paleocene when the “Icelandic Hotspot” induced widespread magmatism across Greenland and North-West Europe and overstepped the older units of the Antrim Lava Group onto Dalradian, Carboniferous and Mesozoic lithologies. The Antrim Lava Group is up to 346 metres thick, divided into a lower aphyric group and an upper olivine-phyric flow-banded group that are separated by a layer of grey bauxite.

6.3 Mineralization

6.3.1 The Curraghinalt Gold Deposit

High-grade gold mineralization occurs as a series of west-northwest trending, moderately to steeply dipping, subparallel stacked veins and arrays of narrow extension veinlets. These veins are hosted by the Neoproterozoic Dalradian rocks in the central section of the Sperrin Mountains, and represents the largest known gold deposit in the United Kingdom.

The mineral resource model discussed herein focusses on a set of 21 prominent gold-bearing quartz veins that occur mainly within psammites, semi-pelites, and pelites of the Dalradian Argyll Group, within the Mullaghcarn Formation. Auriferous quartz veins exist between the main modelled veins, but their continuity is difficult to demonstrate at the current drill spacing. The quartz vein system was investigated by core drilling and is partly exposed in underground workings. Surface exposures of the vein system are limited to the Curraghinalt and Attagh Burns (creeks), as well as a variety of surface trenching excavations completed in 2003 and in the late 1980s. The veins range from a few centimetres to five metres wide.

The vein swarm has been modelled along strike for approximately 2,300 metres, across strike for approximately 800 metres and down dip for over 1,200 metres by prospecting, trenching, and drilling. Though the modelled veins extend 2,300 metres along strike, the vein system is traceable with similar strike aligned veins occurring over approximately four kilometres from Alwories in the east to Scotchtown in the west. The vein system remains open along strike and at depth. On average, the quartz veins dip between 50 degrees and 75 degrees to the north northeast. The modelled veins are listed in Table 9 and shown in Figure 9.

Table 9: List of Modelled Quartz Veins, from North to South

Domain Number*	Vein Name
110	Road Vein
120	Sheep Dip Vein
130	Sperrin Vein
140	Mullan Vein
150	Grizzly Vein
160	T17 Vein
170	V55 Vein
180	No1 Vein
190	Causeway Vein
200	10616 Vein
210	Slapshot Vein
211	Slapshot Splay Vein
212	Slapshot Splay 1 Vein
220	V75 Vein
230	Bend Splay Vein
240	Bend Vein
250	Crow Vein
260	Raven Vein
270	Harp Vein
280	Finn Vein
290	Foyle Vein

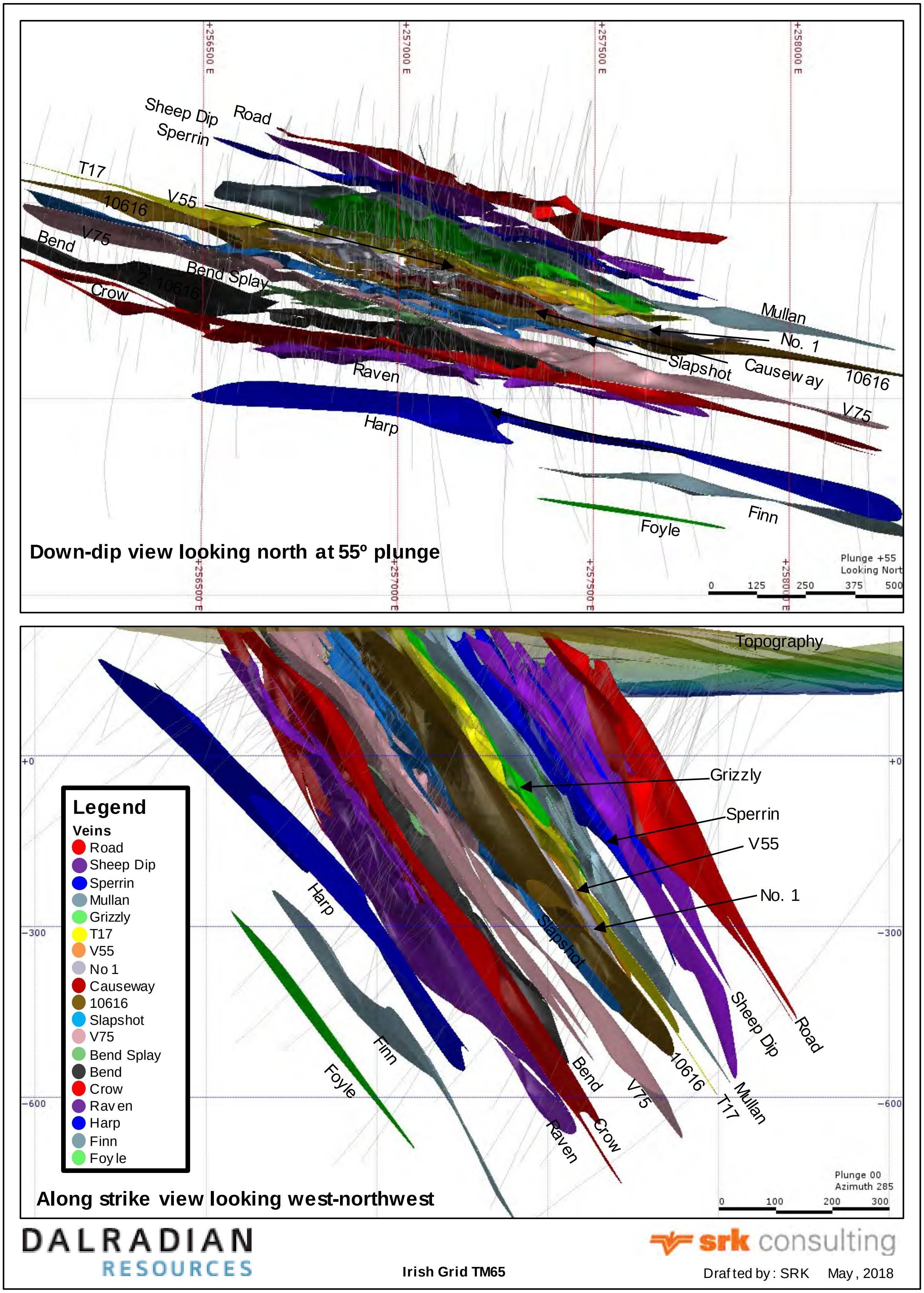


Figure 9: Plan (top) and West-northwest (bottom) Views of the Modelled Curraghinalt Gold Veins

In 2012, Miron Berezowski, recognized two main vein sets:

- Shear (D) veins - west-northwest trending, steeply dipping
- Extensional (C) veinlets - arrays of narrow extension veinlets

Single or multiple D veins form vein zones while vein complexes are anchored by a vein zone and are flanked by C vein arrays.

The D or shear veins are thought to be hosted in west northwest trending shear zones dipping moderately to steeply to the northeast and with good strike continuity. D veins are often laminated and include slivers of wall rock, evidence of incremental development. Additionally, D veins can be brecciated. Examples of D veins exposed in underground workings are shown in Figure 10.

Figure 10: D Vein Mineralization in Underground Workings

A. Exposed No. 1 vein at east end of drift.

B. Pyrite overgrowing lamination in a vein in main crosscut.

C. Extensional growth in quartz and pyrite on 10616 vein

The C veinlets are southeast trending, steeply dipping extension veins which are oriented obliquely to the D veins. They show evidence of open space filling, are never brecciated, and do not have sheared margins.

The gold-bearing vein system in the Curraghinalt deposit is crosscut by several generations of structures with different characteristics and orientations. The two most prominent structures in the deposit are the Kiln and Crow shear zones. These shear zones are east-west trending, either south-dipping or north-dipping. The Kiln shear shows evidence of brittle reactivation as indicated by the presence of gouge zones along the contact between the highly strained ductile rocks within the shear zone and the Dalradian metasedimentary wall rocks. The Kiln shear disrupts and displaces the vein zones (D veins) with observed oblique dextral-normal kinematics.

Vein zones are entrained within the Kiln Shear and previous workers (Boland, 1997) have suggested that the shears have controlled vein emplacement or at least served to produce wider mineralized segments.

In addition, other shear zones and faults with gouge development crosscut the Curraghinalt deposit. These structures trend northeast and dip moderately northwest. Fault thicknesses and characteristics vary based on the country rock lithology. Faults and shear zones within the pelite, north of the No. 1 vein, tend to be wider (typically 0.5 to1.0 metre wide), either crosscut or disrupt the pre-existing regional foliation in the pelite, and in some cases, have measurable offsets (e.g., four metre offset of the T17 vein).

Limited information is available for the kinematics of the crosscutting fault systems. However, in 3D the Kiln shear zone is currently modelled to offset the auriferous vein system with a dextral strike-separation. Underground mapping by Dalradian shows sinistral strike-separation of the vein system along northeast-trending faults, particularly where faults intersect the western section of veins (e.g., T17 west, eight metre offset by FZ_107). However, the Dalradian mapping also shows the dextral strike-separation of veins where faults intersect the eastern section of veins, for example the V75 vein east is offset by three metres. This fault contains steep-plunging slickenlines, suggesting the movement direction was dominantly vertical. This is possibly related to dominantly normal movement creating sinistral or dextral separations given the dip of the faults.

Petrographic work by Clarke (2004) has documented that the gold mineralization at Curraghinalt occurs in quartz-pyrite-carbonate veins and is associated with variable abundances of carbonate, chalcopyrite, and tennantite-tetrahedrite. Gold is commonly in the form of native gold and more rarely as electrum (>20 weight percent silver), and occurs primarily along fractures in pyrite, as inclusions in pyrite, and at pyrite grain contacts with carbonate and quartz. Most native gold grains are associated paragenetically with carbonate, chalcopyrite, tennantite-tetrahedrite, and telluride minerals infilling fractures in pyrite. The seven veins studied at the time have similar mineralogy. Native gold was observed in samples from all veins and grains range in size from 2 micrometres to 150 micrometres.

6.3.2 Tyrone Volcanic Group

The Tyrone Volcanic Group hosts a number of other gold and gold plus base metal prospects, which are described in Section 9. Hollis et al. (2014) have identified stratigraphic horizons associated with rift-related magmatism, hydrothermal alteration, synvolcanic faults, and high-level subvolcanic intrusions, which are prospective for VMS mineralization. Hollis et al., (2014) suggest that the Tyrone Volcanic Group is broadly correlative with the Buchans-Robert’s Arm Belt of Newfoundland, which is host to numerous VMS deposits.

7 Deposit Types

Dalradian's Northern Ireland property has potential to host two distinct deposit types. Licences DG1, DG3,DG4, DG5 and DG 6 which includes the Curraghinalt gold deposits, has potential to host orogenic gold deposits. Licence DG2, underlain by the Tyrone Igneous Complex, has potential to host volcanic massive sulphide mineralization (VMS), as well as porphyry copper-gold, and iron-gold exhalites (Hollis et al., 2014; Hollis et al., 2015; British Geological Survey, 2016).

7.1 Orogenic Gold Deposits

Rice et al. (2016) noted that the timing of gold mineralization at Curraghinalt (ca. 462.7 – 452.8 Ma) closely followed peak metamorphism associated with the Grampian event of the Caledonian Orogeny. It is temporally linked with an extensional setting following orogenic uplift and collapse. Rice et al. (2016) concluded that Curraghinalt is more likely an orogenic (rather than intrusion related) gold deposit. Thus an orogenic gold deposit model best describes the Curraghinalt vein system (Figure 11).

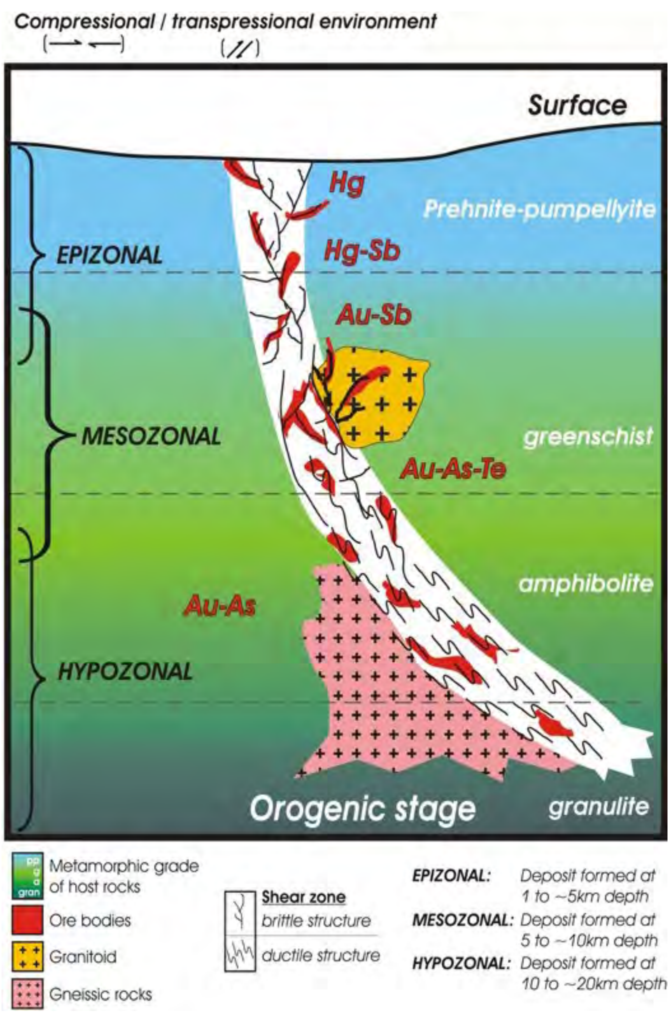


Figure 11: Orogenic Gold Deposit Model

Source: Goldfarb, 2005

Commonly referred to as mesothermal gold deposits in the past, these orogenic ores were formed during compressional to transpressional deformation processes at convergent plate margins in accretionary and collisional orogens. In both types of orogen, hydrated marine sedimentary and volcanic rocks have been added to continental margins during tens to some 100 million years of collision. Subduction-related thermal events, episodically raising geothermal gradients within the hydrated accretionary sequences, initiate and drive long-distance hydrothermal fluid migration. The resulting gold-bearing quartz veins were emplaced over a unique depth range for hydrothermal ore deposits, with gold deposition from 15 – 20 kilometres to the near surface environment. On the basis of their depth of formation, the orogenic deposits are best subdivided into epizonal (<6 kilometres), mesozonal (6 – 12 kilometres) and hypozonal (>12 kilometres) classes (Groves at al., 1998).

The following has been summarized from Tomkins (2013b).

Orogenic gold deposits dominantly form in metamorphic rocks in the mid- to shallow crust (5 – 15 kilometres depth), at or above the brittle-ductile transition, in compressional settings that facilitate transfer of hot gold-bearing fluids from deeper levels (Goldfarb et al., 2005; Groves et al., 1998; Phillips and Powell, 2009). The term orogenic is used because these deposits likely form in accretionary and collisional orogens (Groves et al., 1998). There are two plausible sources for the gold: (1) metamorphic rocks, from which fluids are generated as temperatures increase; and (2) felsic-intermediate magmas, which release fluids as they crystallize. Gold-bearing magmatic-hydrothermal deposits are enriched in many elements, including sulphur, copper, molybdenum, antimony, bismuth, tungsten, lead, zinc, tellurium, mercury, arsenic, and silver (e.g., Goldfarb et al., 2005; Richards, 2009). Such deposits have been referred to as gold-plus deposits (e.g., Phillips, 2013), but most orogenic gold deposits fall into the alternative group of gold-only deposits. These are characterized by elevated sulphur and arsenic, and have only minor enrichments in the other elements.

The vast majority of orogenic gold occurred in three periods in geologic time: the Neoarchean (ca. 2700-2400 Ma), the Paleoproterozoic (ca. 2100-1800 Ma), and a third period from ca. 650 Ma continuing throughout the Phanerozoic (Goldfarb et al., 2001).

World-class gold deposits are generally two to ten kilometres long, approximately one kilometres wide, and are mined down-dip to depths of two to three kilometres. Most orogenic gold deposits contain two percent to five percent sulphide minerals and have gold/silver ratios from five to ten. Arsenopyrite and pyrite are the dominant sulphide minerals, whereas pyrrhotite is more important in higher temperature ores and base metals are not highly anomalous.

7.2 Volcanic Massive Sulphide Deposit Model

The volcanic stratigraphy of the Tyrone underlying licence DG2 is a potential host to volcanic massive sulphide deposits. VMS deposits are syngenetic, stratabound, and in part stratiform accumulations of massive to semi-massive sulphide that form seafloor hydrothermal systems at or near the seafloor (Gibson et al., 2007; Galley et al., 2007). The deposits consist of two parts: a concordant massive sulphide lens (>60 percent sulphide minerals), and discordant vein-type sulphide mineralization, commonly called the stringer or stockwork zone, located within an envelope of altered footwall volcanic and or sedimentary rocks (Gibson et al., 2007).

Recently, VMS deposits have been classified by host lithologies that define a distinctive time-stratigraphic event (Barrie and Hannington, 1999; Franklin et al., 2005). These five different groups are:

- Bimodal-mafic dominated volcanic – Cu-rich
- Mafic back-arc (ophiolite associated) – Cu-rich
- Pelitic mafic back-arc
- Bimodal felsic-dominated volcanic – Zn-rich
- Siliciclastic – felsic

The order of the lithologic groups above reflects a change from the most primitive volcanogenic massive sulphide environments, represented by ophiolite settings, through oceanic-rifted arc, evolved rifted arcs, continental back-arc, to sedimented back-arc. Hollis et al. (2014) have identified the Lower Tyrone Volcanic Group as having formed in a bimodal-mafic arc to back-arc, and the Upper Tyrone Volcanic Group as having characteristics of the bimodal-felsic model (Figure 12).

Gold-rich VMS deposits are viewed as a subtype where the gold content exceeds the associated combined copper, lead, and zinc grades.

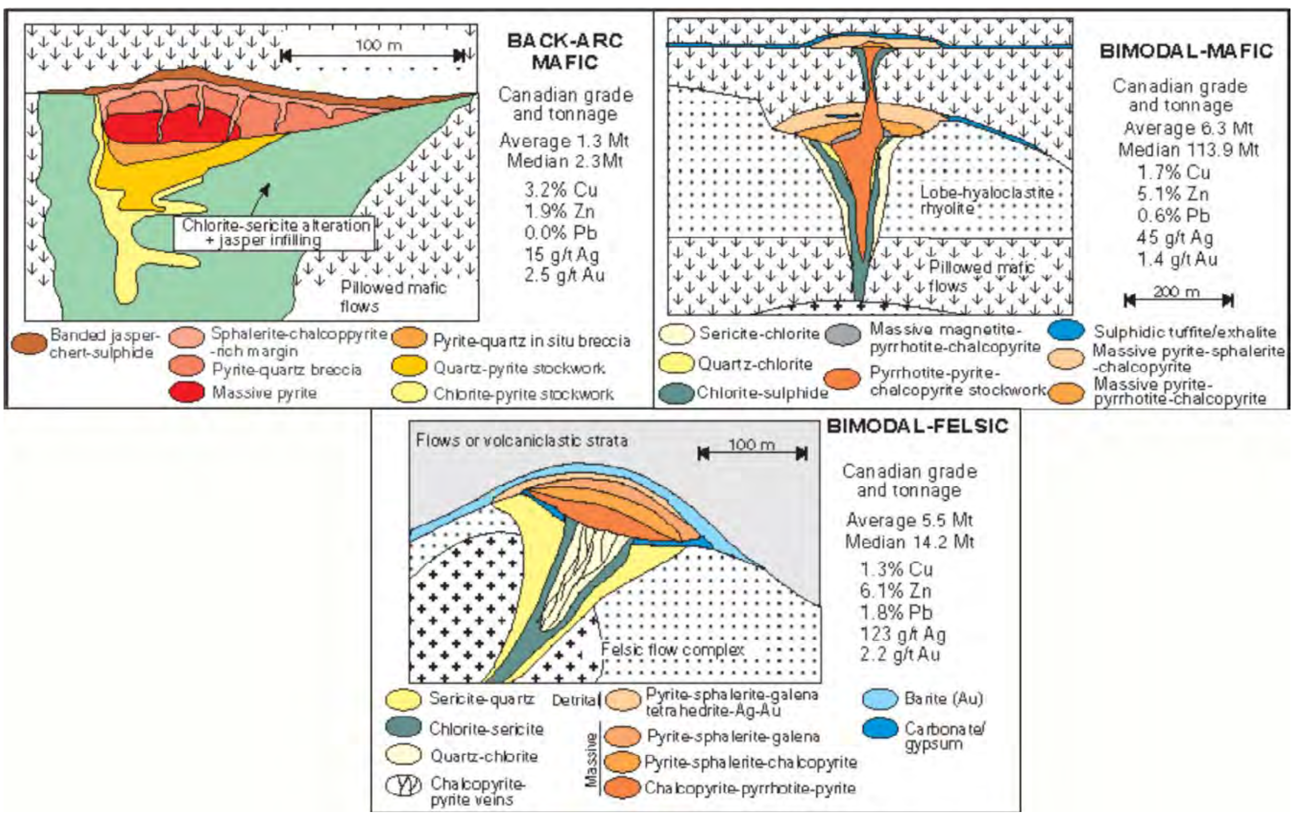


Figure 12: Volcanogenic Massive Sulphide Deposit Model
Source: Galley et al., 2007

8 Exploration

Information for the period 2010 to 2014 has been extracted largely from the 2014 technical report by Micon (2014).

Since 2010, Dalradian has drilled 459 boreholes (146,910 metres) on the Curraghinalt gold deposit, and 47 boreholes (12,987 metres) on other regional targets. In addition, airborne and ground geophysical surveys, prospecting, mapping, and geochemical surveys have been completed. Drilling is discussed in Section 9.

8.1 Exploration 2010 – 2011

In 2011, Dalradian commissioned Patterson, Grant and Watson Limited (PGW) of Toronto, Ontario to reprocess available geophysical data acquired previously during the government-funded Tellus survey (Figure 13).

All available historical ground induced polarization, magnetic, very low frequency electromagnetic, and resistivity data were also reprocessed over the four licence areas (DG1, DG2, DG3, DG4). Based on this work, 23 exploration targets within the four licences were identified. Dalradian evaluated these targets based on published geology and a more detailed data compilation. Following this initial work, Dalradian carried out prospecting work on all four licences in the first and second quarters of 2011.

A total of 929 samples were collected, 143 of which yielded assays results greater than 0.25 grams of gold per tonne (g/t gold). A summary of the samples is provided in Table 10. The locations of the prospecting samples are shown in Figure 14.

After the initial prospecting campaign, Dalradian integrated and evaluated existing exploration data and newly acquired information, and selected 19 of the initial 23 exploration targets for detailed exploration work, including core drilling. The targets can be split into two distinct groups: those within the Tyrone Volcanic Group on licence DG2, and those within the Dalradian Supergroup in licence areas DG1, DG3, DG4, DG5, and DG6.

The Tyrone Volcanic Group is an environment favourable for the formation of VMS deposits and contains an abundance of float with VMS-style mineralization. Gold and base metal mineralization is most prevalent within the upper part of the volcanic sequence. Historical prospecting results include siliceous tuffs yielding 16.1 percent lead and 1.5 g/t gold, as well as chloritic tuffs yielding 8.8 percent zinc, 1.2 percent lead, and 1.7 g/t gold.

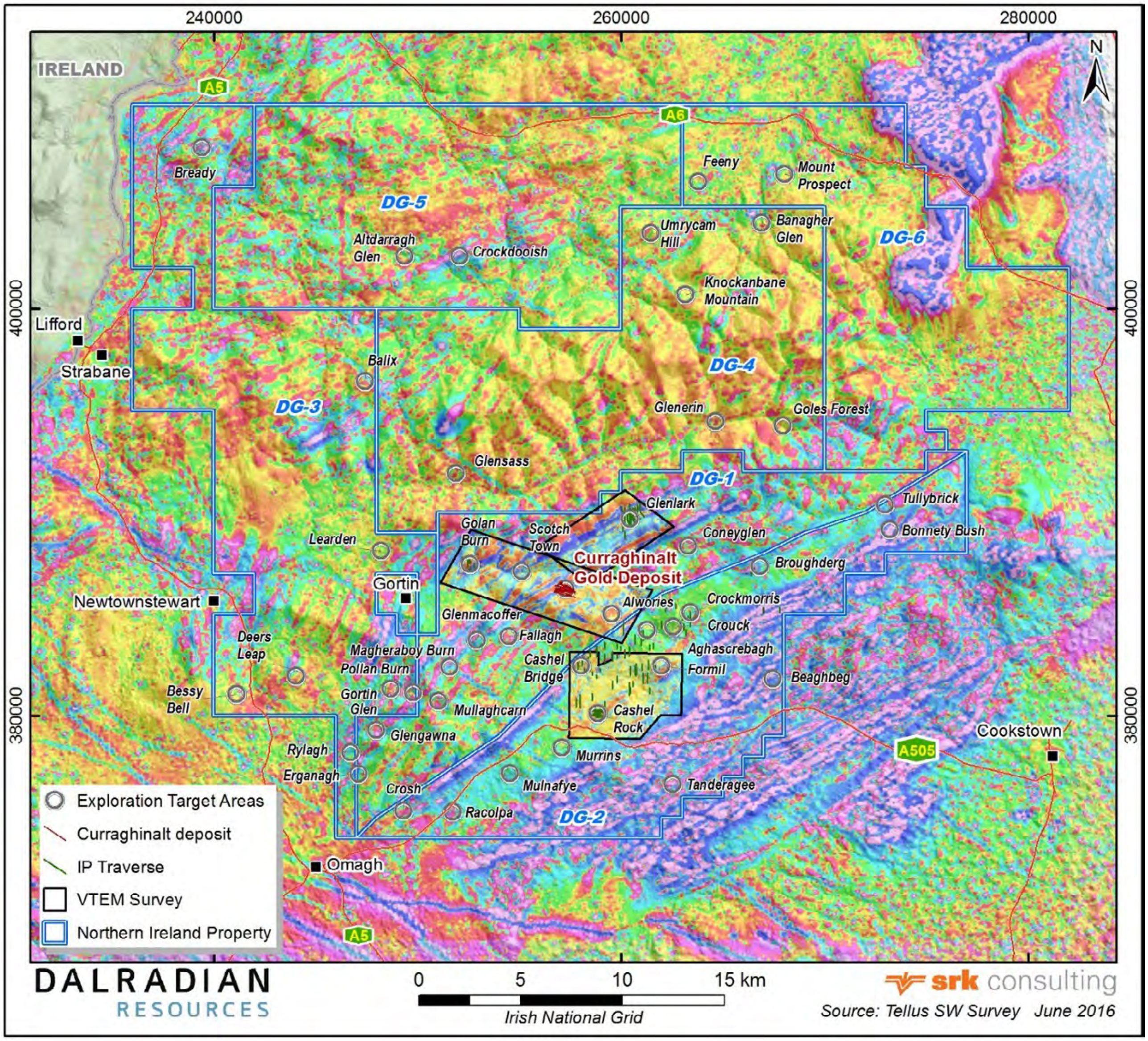


Figure 13: Geophysical Surveys and Exploration Targets on the Northern Ireland Property

Table 10: Summary of 2011 Prospecting Samples

Licence Area	Total No. of Samples	No. of Outcrop Samples	No. of Float Samples	Gold Value Range (g/t)	No of Samples > 0.25 g/t Au
DG1	316	139	177	0.01 – 44.96	88
DG2	270	144	126	0.01 – 5.48	31
DG3	184	86	98	0.01 – 14.08	22
DG4	159	97	62	0.01 – 2.07	2

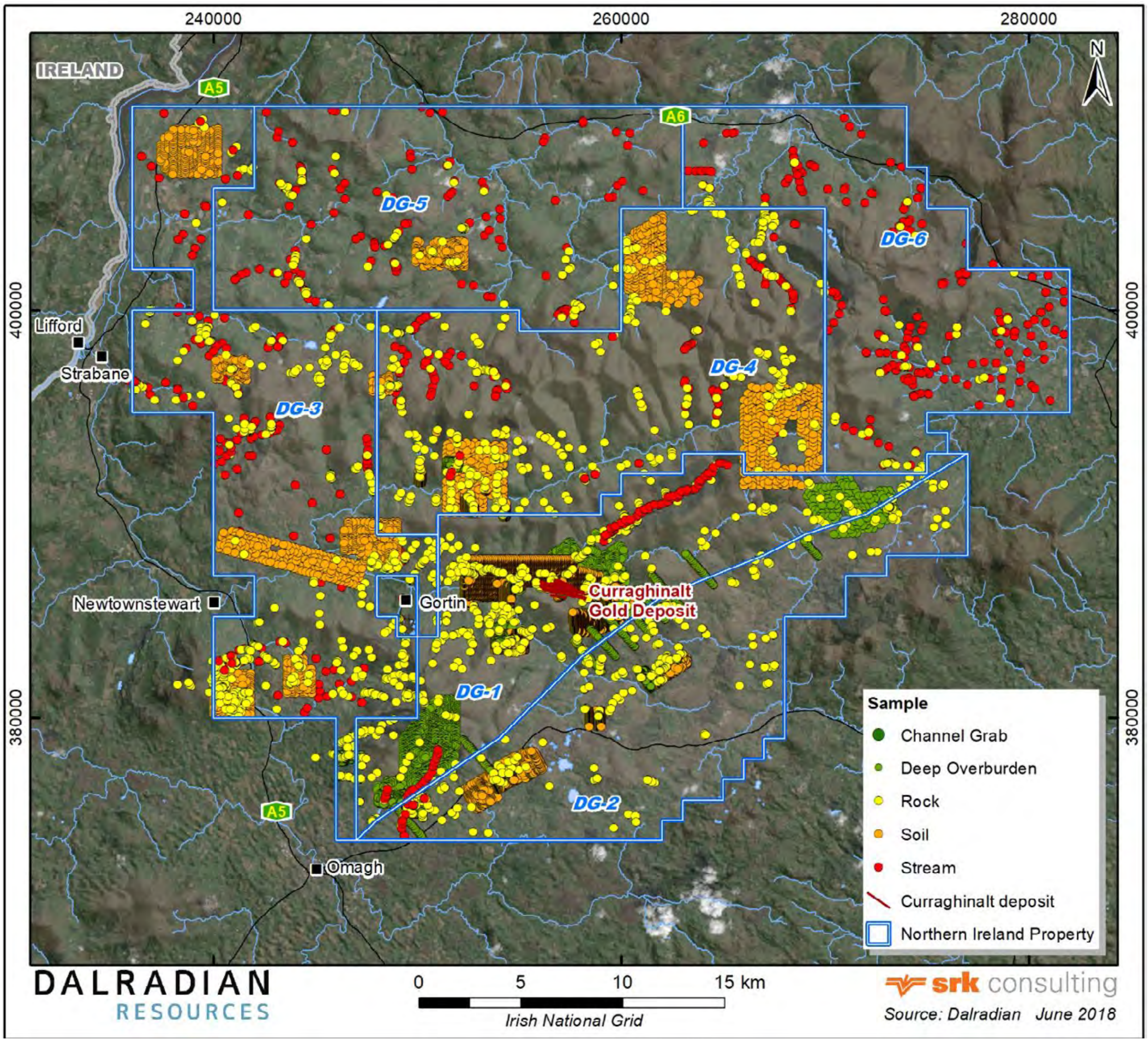


Figure 14: Exploration Sampling by Dalradian on the Northern Ireland Property

A summary of exploration targets is shown in Table 11 and Table 12 for targets in the Tyrone Volcanic Group and the Dalradian Supergroup, respectively.

Following target identification, Dalradian started a regional scout drilling program. Two boreholes were completed at target Broughderg, and one borehole was completed at target Tullybrick. However, no significant mineralization was intersected in any of these boreholes and in late 2011, Dalradian suspended the scout-drilling program in order to gather additional geological information to better define drilling targets.

Table 11: Exploration Targets within the Tyrone Volcanic Group

Target Name	Area	Target Defined By	Significant Samples	Sample Type	Geology	Historical Drilling
Broughderg	750 metres x 350 metres	Historical drilling, trenching, magnetic high, Au soil geochemistry, mineralized outcrop and float	1.5 metres at 4.36 g/t Au	Trench	Auriferous chert-magnetite horizon. Interpreted to be exhalative unit	2 shallow boreholes
Cashel Bridge	2.9 kilometres x 1.9 kilometres	EM, Au and Zn–Pb–Cu soil geochemistry, mineralized outcrop and float	1.63 g/t Au and 4.3 percent Cu+Pb+Zn from outcrop	Prospecting	Outcrop of altered tuffs in poorly exposed area	15 shallow boreholes
Mulnafye	750 metres x 500 metres	Au soil geochemistry and mineralized float	5.48 g/t Au from quartz float	Prospecting	Rhyolite–tonalite contact with abundant angular quartz float with visible gold	None
Cashel Rock	350 metres x 300 metres	Historical drilling and trenching, EM, Au soil geochemistry, and mineralized outcrop and float	Historical shallow borehole: 3.63 metres at 30.12 g/t Au	Borehole	Rhyolite breccia with gold and base metals. Airborne geophysics shows new EM anomalies	15 shallow boreholes
Bonnety Bush	4.5 kilometres x 700 metres	EM, IP, magnetic geophysics, Zn–Cu soil geochemistry, and mineralized outcrop and float	Historical Prospecting: 4.54 g/t Au in ironstone	Prospecting	Mineralized ironstone overlying altered tuffs and basalts	None
Crosh	3.5 kilometres x 2.2 kilometres	EM, Au soil geochemistry, and mineralized outcrop and float	2.19 g/t Au and 2.99 percent Cu+Pb+Zn from outcrop	Prospecting	Auriferous rhyolite breccias and tuffs with galena and sphalerite	None
Tullybrick	1.2 kilometres x 1 kilometres	EM and IP, Zn–Cu soil geochemistry, and mineralized outcrop and float	Historical Prospecting: 1.87 g/t Au in float	Prospecting	Altered volcanic tuffs with quartz veins	None

Table 12: Exploration Targets within the Dalradian Supergroup

Target Name	Area	Target Defined By	Significant Samples	Sample Type	Geology	Historical Drilling
Glenlark	7 kilometres x 600 metres	EM, IP, and mineralized outcrop and float	Trench: 9.5 metres at 5.64 percent Zn+Pb Historical prospecting: 141.2 g/t Au from float Recent prospecting: 33.94 g/t Au from float	Trench and Prospecting	Metasediment-hosted quartz vein and stratiform gold and base metal mineralization	12 shallow boreholes
Scotch Town	2 kilometres x 50 metres	Au soil geochemistry, mineralized subcrop and float	10.52 g/t Au from float.	Prospecting	Graphitic pelite-hosted breccia zone up to 50 metres wide and 2 kilometres long	None
East Curragh-inalt	1.8 kilometres x 375 metres	Mineralized float	44.96 g/t Au and 32.80 g/t Au from float	Prospecting	Quartz float, 200 metres east of drilled mineralization at Curraghinalt	None
Alwories	1.5 kilometres x 700 metres	Au soil geochemistry, mineralized outcrop and float	Channel: 0.88 metres @ 39.43 g/t Au	Channel	Quartz vein, 2 kilometres east along strike from Curraghinalt	None
Golan Burn	1 kilometres x 600 metres	Historical drilling, mineralized outcrop and float	Historical shallow borehole: 0.6 metres at 61.43 g/t Au	Borehole	Quartz vein 4.5 kilometres west along strike from Curraghinalt	44 shallow boreholes
North Curragh-inalt	7.5 kilometres x 600 metres	Au soil geochemistry and mineralized float	22.4 g/t Au from quartz float 3.36 g/t Au from silicified metasediment float	Prospecting	Wide range of float styles in river valley	None
Fallagh	2.5 kilometres x 650 metres	Au soil geochemistry and mineralized float	11.68 g/t Au from float	Prospecting	Quartz float in river valley	None
Gortin Glen	2.3 kilometres x 1.7 kilometres	Au soil geochemistry, mineralized outcrop and float	14.08 g/t Au from quartz float with pyrite. 8.18 g/t Au from silicified metasediment float	Prospecting	Float train of silicified metasediments and quartz veins	None
Bessy Bell	2 kilometres x 1.5 kilometres	Au soil geochemistry, mineralized outcrop and float	2.96 g/t Au from outcrop	Prospecting	Silicified quartzite with disseminated and fracture fill pyrite	None
Rylagh/ Glengawna	2.3 kilometres x 0.9 kilometres	Au soil geochemistry, mineralized outcrop and float	1.63 g/t Au from graphitic pelite outcrop 1.88 g/t Au from outcropping quartz vein	Prospecting	Silicified graphitic pelite and quartz veins	3 shallow boreholes
Coneyglen	4 kilometres x 1 kilometres	Au soil geochemistry, mineralized outcrop and float	2.35 g/t Au from float	Prospecting	Quartz breccias with pyrite in metasediments	None
Glenerin	2 kilometres x 1 kilometres	Au soil geochemistry, mineralized outcrop and float	2.07 g/t Au from outcrop	Prospecting	Quartz vein with pyrite.	None

8.2 Exploration 2012 – 2013

In April 2012, Dalradian commissioned Geotech Ltd. (Geotech) of Aurora, Ontario, Canada to carry out a helicopter-borne versatile time domain electromagnetic (VTEM) and magnetic survey. The survey consisted of 1,009 survey line-kilometres in three separate survey blocks approximately 20 kilometres northeast, 17 kilometres northeast, and 14 kilometres northeast of Omagh (Figure 13). Survey lines in the northernmost survey block were flown in a northwest to southeast direction with survey lines spaced 100 metres apart. Three tie lines were flown perpendicular to the principal survey direction at a line spacing of 1,000 metres. The central survey block, which covers approximately 10 kilometres along the Curraghinalt trend, was flown at a 50-metre line spacing in a north-easterly direction (30 degrees) with perpendicular tie lines flown at a 500-metre line spacing. The survey lines in the south block were flown in a north-south direction with a line spacing of 100 metres; tie lines were flown perpendicular with a spacing of 1,000 metres. Terrain clearances were 43 and 69 metres for the electromagnetic and magnetic sensors, respectively.

The airborne survey was unable to detect conductive horizons caused by the sulphide bearing veins that host the gold mineralization at Curraghinalt. However, the conductivity, apparent resistivity, and magnetic signatures were able to resolve stratigraphic subdivisions and contacts.

In addition to the airborne geophysical survey, Dalradian initiated a detailed soil geochemistry survey on licence DG1 to extend the existing geochemistry grid (Figure 15). A gold-in-soil anomaly was interpreted in the Alwories area (Anomaly A on Figure 15), and was followed up with drilling in the summer of 2012.

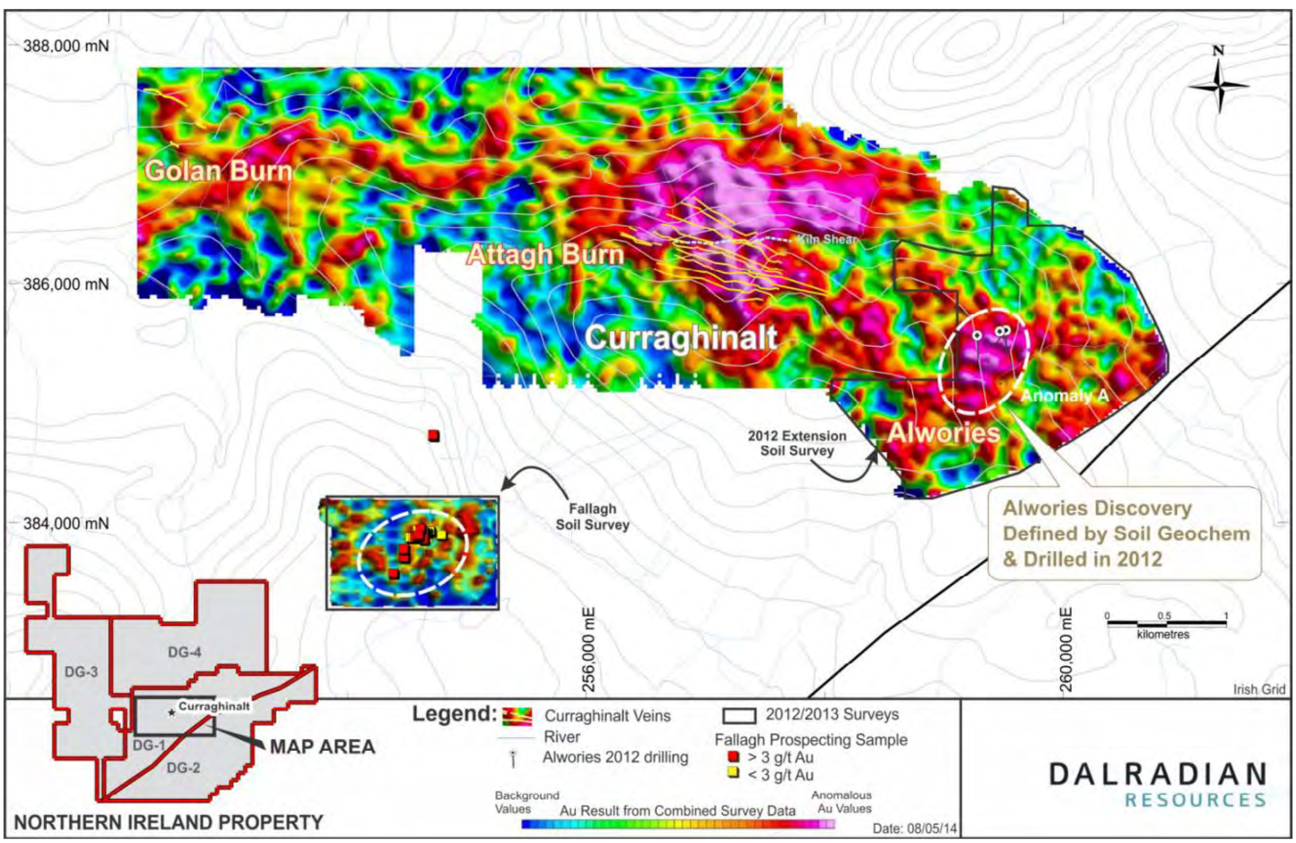


Figure 15: 2012 Curraghinalt East Soil Survey Area

A second soil survey was initiated in the Fallagh area in late 2012 (Figure 15). Based on encouraging gold-in-soil results, Dalradian completed trench 13-FA-T01. Although bedrock mineralization was not intersected, a sample of quartz-carbonate vein in the till within the trench yielded 14.65 g/t gold; a float sample discovered near the trench returned 91.5 g/t gold.

Prospecting was carried out concurrently with the soil survey on licence DG1, and as a separate campaign on the other three licences. On DG1, 185 samples were collected, with 63 of them yielding results above 1 g/t gold. On licence DG3, a total of 313 bedrock and float samples were collected, and a total of 30 samples returned results in excess of 0.5 g/t gold. The most anomalous results were returned from the known prospects of Bessy Bell, Pollan Burn/Gortin Glen, and Rylagh/Erganagh. On DG4, a total of 168 bedrock and float samples were collected, but only three samples returned results in excess of 0.5 g/t gold.

In the Glenlark area, 52 panned concentrate samples were collected, following-up on three boreholes completed in the area.

8.3 Exploration 2014 – 2018

Between 2014 and 2018, Dalradian continued to explore across the entire tenement, but focused most work on the Curraghinalt deposit area. Table 13 summarizes the exploration work completed in this time frame. The location of prospecting, soil, and stream samples are shown in Figure 14.

Table 13: Summary of Exploration Work by Dalradian between January 1, 2014 and March 31, 2018

Licence Area	Work Completed	Area
DG1	159 prospecting samples	Various
	70 stream sediment samples	Various
	107 soil samples	Omagh Thrust Fault Transect
	3,107 deep overburden samples	Fallagh, Six Towns, Omagh Thrust Fault Transect, Glenlark, Mullaghcarn, Glencordial, Glencurry
	Underground face samples	Curraghinalt
	Core drilling	Curraghinalt & Alwories
	Underground development program	Curraghinalt
DG2	56 prospecting samples	Various
	14 stream sediment samples	Various
	970 soil samples	Formil, Mulnafye, OmaghThrust Fault Transect
	434 deep overburden samples	Crosh, Formil, Tullybrick
DG3	208 prospecting samples	Various
	212 stream sediment samples	Various
	1078 soil samples	Bready, Bessy Bell, Deers Leap, Learden, Newtownstewart, Owenreagh Hill
	426 Deep Overburden Samples	Rylagh
DG4	60 prospecting samples	Various
	118 stream sediment samples	Various
	911 soil samples	Knockbane Mtn, Umrycam Hill, Balix, Goles, Glensass
	139 deep overburden samples	Glensass
DG5	135 prospecting samples	Various
	159 stream sediment samples	Various
	186 soil samples	Crockdooish
DG6	44 prospecting samples	Various
	206 stream sediment samples	Various

Several outcropping veins exposed within a three to four metres exposure on licence DG3 were sampled during prospecting at Rylagh. One sub-horizontal vein returned a result of 139.5 g/t gold and follow-up duplicate samples returned assays of 168.0 g/t gold and 42.4 g/t gold from selective grab samples. A program of deep overburden sampling was completed in early 2016, yielding a multi-element anomaly adjacent to outcropping veins in a stream section.

8.3.1 Underground Development Program

Throughout 2015 and 2016, Dalradian completed approximately 989 metres of underground development, increasing the total development on the project to 1,785 metres with the Ennex tunneling work completed in the 1980s, including drifts, crosscuts, raises, drilling chambers, and safety bays. The development work was conducted largely via single-boom vein-runner jumbo drill, and via jack-leg stoper for the raising. An existing 1.8-metre wide and 59-metre long inclined borehole was converted to an exhaust raise and fitted with an Alimak conveyance that served as a secondary egress and means of conveying materials. At the top of the borehole a 30kW fan was installed, as were several small buildings for the storage of blasting materials.

In addition to new development, Dalradian completed the mapping of all remaining historical underground workings at either 1:250-scale or 1:500-scale, with emphasis on structural geology, vein characterization and morphology, alteration, and lithology. New development was mapped at 1:250-scale or 1:100-scale on advance during production. Subsequent detailed back-mapping along vein drives was undertaken after their completion and return of assays.

Dalradian sampled 230 faces for a total of 878 face samples between August 2, 2015 to July 6, 2016. As of October 31, 2016, channel samples collected totalled 1,297. Sludge samples of percussion boreholes were also taken in several localities underground, totalling 70 samples. Blasted rock (muck samples) totalled 1,224 as of November 8, 2016.

8.3.2 Petrographic Study

A total of 24 rock samples were submitted to Vancouver Petrographics Limited (VPL) for petrographic analysis in 2017. A mixture of lithologies and veins from both hand specimen and drill core were provided. No geological information or context for the samples were provided to VPL, however they were supplied with ICP multi-element assay data to assist in mineralogical determination.

Two of the samples were taken from a one-metre wide intrusion intersected deep into the footwall of the Curraghinalt vein package, and these were determined to be an olivine-phyric basalt/microdiorite. Four samples from gold-bearing quartz-pyrite-calcite-chalcopyrite veins were examined, in addition to five samples representing the alteration associated with the gold-bearing veins. Nine examples of the host rock lithologies were analysed, representing semi-pelites, psammites and various units between these two end-members.

Two samples of a unit encountered adjacent to T17 vein underground, previously logged as a meta-conglomerate, psammite or a quartz-rich semi-pelite, were determined to be a quartz-albite-white mica gneiss. However, Dalradian believe that the metamorphic grade seen in the area is not considered high enough for gneiss formation, and thus is more appropriately classified as quartz-albite-white mica schist. Two hand specimens from a mineralized fault and vein located beyond the main Curraghinalt deposit were included to determine their mineralogy.

9 Drilling

Historical drilling on the Northern Ireland property dates back to the 1970s and was carried out in a number of campaigns until 2008. Most of the historical drilling was at the Curraghinalt deposit, including a number of underground boreholes completed while the Ennex adit was being excavated (Figure 16). Celtic Gold completed some drilling at the Golan Burn prospect. The remainder of the historical drilling targeted other prospects on areas of current licences DG1 and DG2.

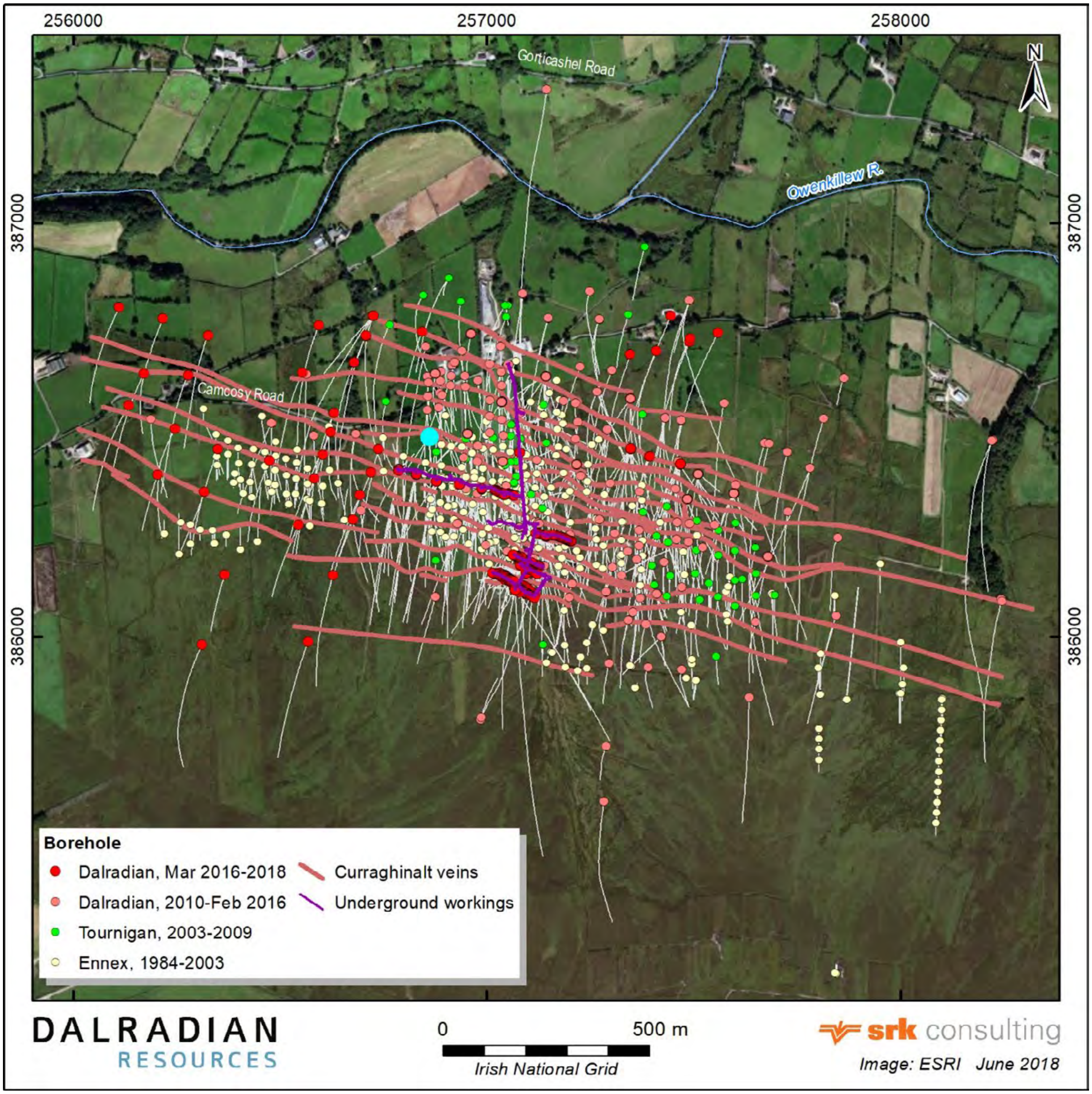


Figure 16: Distribution of Core Boreholes at the Curraghinalt Deposit

Core drilling of surface boreholes at Curraghinalt was primarily completed with HQ-size core (63.5 millimetres) with a small number of older surface boreholes drilled with BQ-size core (36.4 millimetres), representing less than 3 percent of the surface boreholes. Occasionally HQ-sized boreholes were reduced to NQ (47.6 millimetres) at depth. Most of the core from former operators is stored at Dalradian's core facility in Omagh, Northern Ireland, including the Celtic Gold core from Golan Burn. Dalradian completed significant additional core drilling from 2010 to 2018.

9.1 Drilling by Riofinex (1970s)

From 1973 to 1974, Riofinex Ltd. completed seven boreholes (920 metres) on a base metal target in the Cashel Rock area in current licence area DG2. None of the boreholes intersected significant mineralization.

No information exists regarding the drilling procedures or the sampling methods and approaches employed by Riofinex.

9.2 Drilling by Celtic Gold (1987)

Celtic Gold completed 55 core boreholes (3,717 metres) on the Golan Burn prospect that straddles the licence boundary between current licences DG1 and DG3. An additional 69 short, reverse circulation boreholes are mentioned by Micon (2014) but could not be verified by SRK. Salient results from the core drilling include: 6.84 grams gold per tonne (g/t gold) in borehole DG-14, 9.3 g/t gold over 0.4 metres in borehole DG-18, and 61.4 g/t gold over 0.6 metres in borehole DG-41. These boreholes were drilled outside the Curraghinalt gold deposit area.

No information exists regarding the drilling procedures or the sampling methods and approaches employed by Celtic Gold.

9.3 Drilling by Ennex (1984 – 1999)

Ennex in a joint venture with Ulster Base Metals completed two drilling programs at Curraghinalt. The first phase, between 1985 and 1989, included surface and underground core boreholes. The second phase, between 1995 and 1997, consisted of surface core boreholes. In total, Ennex completed 187 core boreholes (17,991 metres) from surface and 26 core boreholes (659 metres) from underground.

Ennex completed eight core boreholes (441 metres) in the Glenlark area in licence DG1 north of the Curraghinalt deposit area. Notable intersections from borehole DDH 90-200 include 2.09 g/t gold and 3.7 g/t silver over 1.93 metres, as well as 8.19 g/t gold, 14.8 g/t silver. And 1.11 percent lead plus zinc over 0.75 metres (CSA, 1987).

In addition, Ennex completed 21 core boreholes (1,348 metres) in the Cashel Rock area on the DG2 licence. A small number of thick very low anomalous gold zones were intersected (up to 145 metres grading 0.4 g/t gold), with some shorter, higher grade core length intervals, including 4.3 g/t gold over 5.45 metres, 1.3 g/t gold over 6.9 metres, and 30.6 g/t gold over 3.63 metres. In addition, Ennex completed 14 reconnaissance core boreholes in the Tyrone Volcanic Group rocks, including four at each Formil (324 metres) and Cashel Bridge (249 metres), six at Aghascrebagh-Crouk (442 metres), and six other (258 metres).

Drilling procedures used by Ennex remain undocumented. After completion of boreholes, collars were cemented. During the 1980s, collar surveys were conducted by measuring the distance from a known baseline. Collars of boreholes completed in the 1990s were surveyed using a total station and/or GPS receivers. Surveys were conducted by John Barnett and Associates Ltd. and Land Survey Services in the 1980s and 1990s, respectively.

9.3.1 Underground Sampling by Ennex (1987 – 1989)

During the original development of the Curraghinalt adit from 1987 to 1989, Ennex completed an underground sampling program, including back, face, wall, and muck samples along the length of the Sheep Dip, T17, and No.1 drifts. The current database contains 310 historical Ennex underground channels (485 metres) for a total of 910 samples. Individual sample lengths vary between 0.04 and 1.52 metres, with an average length of 0.52 metre.

Face samples were taken daily, or very regularly, and have accompanying face maps that show rough sketches of vein and mineralization position, along with indications of structure and lithology. The maps are not to scale, and they lack structure measurements and channel location on the face.

Back channel samples were taken along the back of the Sheep Dip, T17, and No.1 drifts. Back sampling was done after face and muck sampling, in between existing channels to achieve a maximum distance of one metre between channels.

Wall samples were taken in place of back samples, where the ground was less competent, or where the main vein was present only along the wall. A series of muck samples were also taken during drift development, with one muck sample taken per eight trams of rock mucked from each heading.

Information about channel sampling can be found plotted on historical maps, as well as documented in monthly reports and on individual face map sheets for the No.1, T17, and Sheep Dip drifts. Channel sample information was digitally compiled in 1999 in Techbase software, along with all other historical assay information. Techbase exports were used initially to populate the main database at the time.

Historical underground sampling was reviewed and verified in 2014 by Dalradian staff.

9.4 Drilling by Nickelodeon (1999)

Nickelodeon did not complete any drilling on the project area, but carried out additional sampling on existing core.

No information exists regarding the sampling methods and approaches employed by Nickelodeon for sampling of historical core.

9.5 Drilling by Tournigan (2003 – 2008)

Tournigan completed 59 core boreholes (12,565 metres) between 2003 and 2008. Tournigan contracted Irish Drilling Limited (Irish Drilling) based in Loughrea, County Galway to perform all drilling on the project. Drilling equipment consisted of Boyles Brothers 37, mounted on a Go-Tract 1000. The majority of the drilling was carried out using HQ-size equipment. NQ-sized equipment was used in difficult drilling situations where HQ-sized casing was required. Each drill site was located with a GPS receiver, staked, and then photographed prior to moving the drill rig onto the site. Down-hole surveys were completed on all boreholes using an Encore Reflexit smart multi-shot tool instrument at the bottom of the borehole and every 6 metres to the casing. Tully (2005) reports that a Tropari survey instrument was used for the first four boreholes in the Tournigan program. On completion of a borehole, Celtic Surveys Ltd. surveyed the collar using the Irish National Grid to the nearest centimetre. All sites were cleared on completion and re-photographed.

Core was delivered daily from the drill site to the core shed by Irish Drilling and placed sequentially on trestles. A geologist checked all the core markers, measuring between them to identify any lost core and potential tags. Core was orientated and logged on 1:100 purpose-designed logging sheets. Logging information included lithologies, structure, alteration, rock quality designation (RQD), mineralization, and any other observations deemed important. Core recovery varied from 90 percent to 97 percent except in pelitic units and fault zones. Based on recommendation made by Micon in the summer of 2007, Tournigan started to photograph vein intersections as part of the routine logging procedures.

Once core was logged, vein material was sampled. According to Tully (2005), all quartz vein material within known vein systems was sampled. Vein material with high sulphide or breccia content was usually sampled separately. Sample lengths varied from 0.25 to 0.5 metres in primary veins, and 5 to 15 centimetres in undefined smaller adjacent veins. In addition to vein material, Tournigan took additional samples from wall rock adjacent to sampled vein material.

9.6 Drilling by Dalradian (2010 – 2018)

Since acquiring the project in 2010, Dalradian has completed 459 core boreholes (146,910 metres) from surface and underground stations in the Curraghinalt deposit area (Figure 16). In addition, Dalradian completed 47 core boreholes (12,987 metres) on regional targets elsewhere on the property (Table 14).

Drilling was carried out by Irish Drilling until 2012, when Dalradian commissioned Major Drilling Group International Inc. (Major) to perform drilling tasks. In October 2015, Dalradian signed an additional contract for drilling operations with Mason & St John Ltd. (Mason). In December 2015, two more drills were mobilised to site by Priority Drilling (Priority). Underground drilling was completed in January 2016, and the surface drilling was completed in February 2016. A short underground drilling program was completed between March and April 2016 for stope definition. Underground drilling resumed in January 2017 and continued until March 2018 with two rigs from Priority and two rigs from Major. Surface drilling contributing to the resource update at Curraghinalt resumed in June 2017 and was completed in March 2018 with three Major drills and two Priority drills.

Table 14: Summary of Drilling at Regional Targets Completed by Dalradian

Target	Number of Boreholes	Metres Drilled	Year
Alwories	27	8,740.4	2012, 2015 and 2018
Broughderg	2	525.0	2011
Cashel Rock	2	402.5	2011 and 2012
Crosh	7	1,478.0	2018
Glenlark	3	651.0	2012
Glenmacoffer	3	594.1	2013
Scotchtown	2	351.6	2011 and 2012
Tullybrick	1	244.8	2011
Total	**32**	**9,041.7**	

Similar to procedures used by Tournigan, surface drilling primarily used HQ-sized equipment. NQ-sized equipment was used where ground conditions required a reduction in core size. Since April 2015, Dalradian has used an ACT 2 tool for oriented core. Starting in October 2015, all surface drilling was completed using triple tube equipment. The vast majority of boreholes are drilled towards the south or the south-southwest in order to intercept the generally north-northeasterly dipping gold mineralized veins.

Collar locations were identified using hand-held GPS receivers prior to drilling; drills were oriented using a compass. Prior to 2015, all collars were independently surveyed once drilling was completed. From 2015 all collars were surveyed by Dalradian surveyors using a total station and from April 2017 all surface collars were surveyed with a Leica GPS. Down-hole surveys were carried out by drill operators during active drilling using a single shot Reflex EZ-Trac instrument. The boreholes were subsequently resurveyed upon completion using a Reflex multi-shot tool with readings taken every 6 metres.

Underground drilling utilized NQ-size equipment until October 2015, when Dalradian switched to triple tube NQ3 equipment. Front-sights and back-sights were installed by the underground surveyors for reference by drill crews on set-up via string line. Borehole specifications were +/- 3 degrees on azimuth and +/- 2 degrees on dip. In cases where a borehole was not within the design parameters, the borehole in question would be re-collared. Completed underground boreholes were labeled by the drillers with a wooden wedge and aluminum tag. Upon completion of drilling at a station, Dalradian underground surveyors surveyed the borehole collar locations and calculated the collar azimuth and dip of the borehole by surveying two prisms mounted in a steel pipe partly inserted into the borehole.

Until 2011, core was brought from drill sites to the core logging facility located in Gortin at the end of each day, where core was logged by the Geologists and stored in Gortin. In 2011 Dalradian’s core logging and storage facilities moved to Omagh, approximately 15 kilometres from Gortin. Since then, core is securely stored overnight in Gortin before being transported to Omagh where logging and sampling as well as final storage occurs. Underground core is transported directly to the Omagh facilities.

Core logging procedures have been updated from time to time to improve certain aspects of the procedures. Logging was carried out by geologists assigned to the project by Aurum Exploration Services until July 2011, and subsequently by Dalradian staff.

Tournigan initiated photography of all vein material in August 2007. Presently, Dalradian photographs all core, and the photographic record, along with a digital copy of the striplog and backup of recorded data are stored in a separate file for each borehole. A historical re-photographing program was initiated in conjunction with the historical core evaluation project (HCEP) and was completed at the end of 2016.

Until 2012, Dalradian’s sampling approach was as follows. All sulphide-bearing quartz vein material intersected by drilling was sampled. A geologist selected core sample intervals with a length between 0.1 and 0.3 metres. The 0.3-metre sample length was selected so that an entire sample could be pulverized at the laboratory, eliminating the need to split the crushed sample. Samples in unmineralized wall rock had lengths of up to 1.0 metre. Sample intervals honored geological contacts, including mineralization styles.

Sample intervals were marked on the core as well as on core boxes. Core was sawn lengthwise for sampling. Preprinted sample tags were used; one part of the tag was stapled to the core box, while another was placed with the half-core sample in a numbered sample bag. Brief mineralogical descriptions of individual samples were added to the sample tags. The second half of the sawn core remained in the core box for reference. Sample numbers were verified at the end of a shift and individual sample bags were placed in large, pre-addressed plastic bags for shipment. The large bags were sealed with cable ties.

All core was brought from the drills at the end of shift, and was stored in a rented lockable storage facility on the main street of Gortin, across the road from the field office. Until November 2011, core was sawn at a nearby farm, and core boxes with unmineralized core were stored in a concrete-floored barn at that location. Core boxes with mineralized core were returned to the industrial building where they were kept under lock and key. In November 2011, Dalradian leased a new office and core facility in nearby Omagh, where all logging, sampling, and storage took place. The Omagh facility is located in a secure fenced area. The core storage and logging facility is kept locked when unoccupied. Unshipped samples are also stored at this location.

In September 2012, Dalradian revised their logging and sampling procedures. Prior to core logging, core was aligned such that the foliation trended from the upper left of the core boxes to the lower right. The core was washed and inspected for out-of-sequence core pieces. At this point, metre blocks added by the drill crew were verified. Every metre was marked on the core to aid in recovery assessment, RQD measurements, and logging. Sampling intervals (From and To) was marked on the core boxes. Sample tags for analytical quality control samples were added to the core boxes to preserve a continuous series of sample numbers.

In February 2015, Dalradian revisited the sampling procedures again and made the following changes to account for oriented core. Core was placed in an angle iron and each piece locked together in order to achieve an accurate orientation of the core. An orientation line was drawn along the core with blue crayon to mark the bottom of the borehole, metre marks were drawn on the core, and the core was returned to the core box. The protocols for the selection of sampling intervals also changed:

- D veins are sampled with a minimum sample length of 0.25 metre and a maximum length of 0.50 metre. The sample length was adjusted to correlate with the 0.50-metre composite length used for geology and mineral resource modelling.
- C veining and sericitic-chloritic altered shear intervals were sampled at intervals from 0.25 to 1.0 metre.
- Where a vein intersection is expected based on the geological model, but the core shows no veining, structures or alteration will be sampled at 0.5-metre intervals.
- A minimum of two samples are taken before and after the selected sample interval, these samples are up to 1.0 metre in length.

In April 2017, Dalradian revised the logging procedure to reflect input from geotechnical consultants. As part of the logging process boreholes were logged in to domains to reflect changes in lithology, alteration, mineralisation, structures and RQD. Domains were based on a minimum length of 0.25 metres, to correspond with the minimum sample length, and up to a maximum of 3 metres. The domains were marked on the core in white crayon indicating the depth, lithology and alteration. Once domained the core was logged and sampled to the previous protocol, although samples would not cross domain boundaries. This allowed geotechnical logging to be carried out over smaller, more appropriate intervals around vein zones.

9.6.1 Underground Core Sampling by Dalradian (2013 – 2018)

Underground core was sealed with a lid at the drill rig and boxes were transported out of the adit and placed directly on the core delivery truck each day. Underground muck and chip samples were also placed on the core delivery truck by the geologist. The core truck was parked overnight at the secure local site, and all samples were transported the following morning to the Omagh logging facilities. Logging of core from underground drilling follows the same procedures applied to core from surface drilling. Underground chip and muck samples were labelled, packaged, and shipped similar to core samples.

9.6.2 Sampling of Historical Core

In 2013, Dalradian re-logged and re-sampled archived core of surface boreholes drilled in the central area of the deposit, 12,061 metres were re-logged and 12,790 samples were collected. As part of the resampling program, Dalradian also photographed the core.

In 2015, Dalradian acquired the core from the boreholes drilled by Celtic Gold. These were transported to Omagh and re-logged, verified, and selectively sampled. An additional 292 samples were taken.

In 2017 and 2018, Dalradian carried out additional sampling on 51 historic boreholes with 734 samples taken in total to improve sampling coverage for the resource update.

9.7 Underground Sampling by Dalradian (2013 – 2016)

In 2013, Dalradian completed an initial underground channel sampling program. Sampling involved cutting a four-centimetre-wide channel along the wall of the main tunnel. The majority of the channels were cut on the western wall, except through the cross-cuts of the T17 and No.1 drifts where the channels were cut on the eastern wall. Cutting and sampling was not possible in certain limited zones due to support structures in place. In total, 450 individual samples were collected.

Dalradian continued underground sampling in 2015 and 2016. Sampling was carried out in the underground development along veins during advance, across the full width of the face for each round (typically 3 metres in horizontal drifting and 1.8 metres in raising). After washing the active development face, the geology of the round was described in detail and mapped (at chest height) at 1:250-scale. This mapping served as the basis for the sampling. Distinct geological and alteration zones were sampled separately via panel chip sampling. The locations of samples were measured using a laser rangefinder referencing a surveyed control point.

Samples were collected by taking small chips on a regular grid with a rock hammer. Since samples were delineated by geological domains, no strict minimum horizontal thickness applied to the zone of interest. Maximum horizontal sampling width generally did not exceed one metre.

The production geologist collected 4 to 5 kilograms of material per sample from the face, comprising chips of about 3 to 5 centimetres in diameter. Panel style sampling resulted in a composite of material confined to the sample zone, from approximately two thirds of the height of the face and, in the case of samples from the mineralized zone, in volumetric proportion based on relative abundance of mineralization versus gangue. Due to blasting, it was found that sulphide and quartz-carbonate gangue were equally fractured on the face, ensuring that neither material was over-sampled due to the ease or difficulty of collection. Sample collection along raising in the V75 stope block was made in the same way as described above, except that the east and west ribs were both sampled.

Samples were placed in labelled bags along with sample tags, and secured with cable ties. The horizontal interval of the sample was recorded in a sample book and added to the database at the end of the day. Other information also recorded included the date and shift, heading and vein name, dimensions of the face and distance from a control point, vein thickness, and dip, estimate of face grade, drift azimuth, and sample descriptions. A digital, georeferenced photo was taken of the cleaned, sampled, painted face as evidence of what was sampled.

In 2016, Dalradian completed an underground channel sampling program in existing developments which consisted of sill channels located at the same location as face samples collected during development drives. 110 channels were made (95 of which have a corresponding face sample pair). SRK reviewed the channel data by comparing the results to the face samples and the composited data informing the 2016 resource model. It was determined that the face samples show only a minor positive bias compared to channel samples, but are largely comparable. However, both the face and channel samples show a significant positive bias compared to drill composites used in the 2016 resource model. The previous resource model vein wireframes were snapped to 0.5 metre fixed length composites, composited from borehole collar to toe, prior to modelling the veins. This study showed that compositing prior to domain definition introduced grade dilution to the 2016 resource model not present in underground sampling results. Consequently, the vein modelling methodology was revised and is described further in Section 13.3.

9.8 SRK Comments

The SRK qualified person reviewed the core logging and sampling procedures used by Dalradian and, as far as known, by previous operators. In the opinion of the qualified person, the core logging and sampling procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project. Drilling, core logging and sampling procedures followed by previous operators are, in part, difficult to assess; however, after analysis of exploration data, qualified person considers that historical data are sufficiently reliable to inform geology and mineral resource models.

10 Sample Preparation, Analyses, and Security

Exploration samples collected by Ennex, Tournigan, and Dalradian since 1984 were submitted to OMAC Laboratories Ltd. (OMAC Labs) in Loughrea, Ireland. Nickelodeon submitted samples to Chemex Labs Limited (Chemex) in Vancouver for sample preparation and analyses. Both facilities are independent, commercial geochemical laboratories that operated independently from the companies. No information exists regarding laboratories used by Riofinex and Celtic Gold.

Tournigan used an unspecified laboratory operated by ALS Chemex in Canada for umpire testing of samples from core collected by Ennex.

Dalradian used Geolabs Ltd. (Geolabs) in Birmingham, England for geotechnical testing of selected samples. Geolabs is accredited to ISO 17025:2005 by the United Kingdom Accreditation Service, issue number 013 for tests used by Dalradian.

OMAC Labs was acquired in July 2011 by the ALS group of laboratories, and is currently operating as ALS Loughrea (ALS), although OMAC Labs remains the official business name that appears on all assay certificates. Umpire testing of samples was conducted through Activation Laboratories Ltd. (Actlabs) in Ancaster, Canada. ALS and Actlabs are autonomous, commercial geochemical laboratories that operate independently of Dalradian Resources Inc.

OMAC Labs and subsequently ALS Loughrea have been accredited to ISO/IEC 17025 for geochemical analyses by the Irish National Accreditation Board (INAB) since 2006 with Registration Number 173T, including those used by Dalradian. ALS Loughrea is a part of the ALS Group of laboratories that operates under a global quality management system accredited to ISO 9001. Actlabs Ancaster is accredited to ISO/IEC 17025 for chemical analysis by the Standards Council of Canada (SCC) with registration Number 266, including those used by Dalradian.

10.1 Riofinex (1970s)

No information exists about sample preparation procedures, analytical techniques, and sample security employed by Riofinex in the 1970s.

10.2 Celtic Gold (1987)

No information exists about sample preparation procedures, analytical techniques, and sample security employed by Celtic Gold in 1987.

10.3 Ennex (1984 – 1999)

Sample preparation, analyses and security procedures for core samples taken by Ennex are poorly documented and are therefore difficult to review. SRK understands that samples were assayed for gold using a mix of wet assay methods and fire assay methods. For a large number of samples the assay method is undocumented. Sample sizes comprised 30- and 50-gram charges. The preparation techniques are undocumented; assaying techniques are only partly documented. Assay records are preserved on paper logs, and have been digitized by Dalradian.

10.4 Underground Sampling by Ennex (1987 – 1989)

Sample preparation, analyses, and security procedures for underground chip samples taken by Ennex are undocumented. However, SRK considers that underground samples were treated the same way surface core samples were processed.

10.5 Nickelodeon (1999)

No information exists regarding sample preparation and analysis, or sample security for samples taken by Nickelodeon.

10.6 Tournigan (2003 – 2008)

Sample preparation and analytical procedures are described in Micon (2007). Samples were dried and crushed to less than 2 millimetres using a jaw crusher. The crushed samples was split using a riffle splitter, and a 1 kilogram subsample was pulverized to 100 micrometres.

Gold was analyzed using a 50-gram sample by fire assay with an atomic absorption spectroscopy finish (Package AU4). Approximately 10 percent of all samples were subjected to repeat analysis using packages AU5 and AU1 comprising a 30-gram subsamples digested in a concentrated aqua regia solution, extracted with methyl isobutyl ketone (MIBK) and analyzed by atomic adsorption spectroscopy. A further 10 percent of this sample suite was re-analyzed using the same methodology.

10.7 Dalradian (2010 – 2018)

All samples were collected under the supervision of Dalradian staff, maintaining the chain of custody from the time of sampling through to receival at the primary laboratory.

Sample preparation and analytical procedures used by Dalradian largely mirror those by Tournigan, with the exception of using almost exclusively 50-gram charges for fire assay analyses (ALS Lab code Au-AA26). Samples grading over 100 g/t gold were re-analyzed with a gravimetric finish (ALS Lab code Au-GRA22). Gold analyses by fire assay with gravimetric finish were conducted on 50-gram charges to increase accuracy compared to analyses conducted on 30-gram charges.

The excess material pulps of core and underground face/channel samples sent to ALS were returned to Dalradian and stored on site. A portion of these pulp samples selected randomly by Dalradian for repeat analysis (5.2 percent of the total samples) was sent to the umpire laboratory, Actlabs, for check assay testing. Check assay analysis was completed by fire assay using 50-gram subsamples and analyzed with an atomic adsorption spectroscopy finish (Actlabs code 1A2-50). Samples grading over 100 g/t gold were re-analyzed with a gravimetric finish (Actlabs code 1A3-50).

10.8 Specific Gravity Data

Specific gravity of various rock types and vein mineralization was measured by Tournigan and Dalradian using a standard weight in water/weight in air methodology on core from complete sample intervals. A total of 11,241 specific gravity measurements were provided to SRK on core intervals, including 3,013 located within the modelled shear veins. The average specific gravity within the shear veins is 2.81.

The average waste rock density of pelite, semi-pelite, and psammite combined, containing no shear veins is 2.75.

10.9 Quality Assurance and Quality Control Programs

Quality control measures are typically set in place to ensure the reliability and trustworthiness of the exploration data. These measures include written field procedures and independent verifications of aspects such as drilling, surveying, sampling and assaying, data management, and database integrity. Appropriate documentation of quality control measures and regular analysis of quality control data are important as a safeguard for project data and form the basis for the quality assurance program implemented during exploration.

Analytical control measures typically involve internal and external laboratory control measures implemented to monitor the precision and accuracy of the sampling, preparation, and assaying process. They are also important to prevent sample mix-up and to monitor the voluntary or inadvertent contamination of samples.

Assaying protocols typically involve regularly duplicating and replicating assays and inserting quality control samples to monitor the reliability of assaying results throughout the sampling and assaying process. Check assaying is normally performed as an additional test of the reliability of assaying results. It generally involves re-assaying a set number of sample rejects and pulps at a secondary umpire laboratory.

10.9.1 Ennex (1984 – 1999)

There is no evidence that Ennex used an analytical quality assurance and quality control program.

10.9.2 Nickelodeon (1999)

Nickelodeon did not institute an analytical quality assurance and quality control program for its resampling program of historical Ennex core.

10.9.3 Tournigan (2003 – 2008)

Tournigan instituted an analytical quality assurance and quality control program for core samples involving the use of blanks and certified reference material samples. Tournigan further relied on pulp duplicate testing carried out as part of the internal laboratory quality control program routinely maintained by OMAC labs to monitor analytical results on an ongoing basis. Tournigan's analytical quality control program is described by Micon (2007).

Commercial certified reference material (over a range of gold grades) were sourced from CDN Resource Laboratories Ltd. of Langley, BC (CDN-GS-XX) and Rocklabs Limited (Rocklabs) of Auckland, New Zealand. Use of reference material from Rocklabs was limited to two occurrences in the database reviewed by SRK. The specifications of the control samples used by Tournigan are summarized in Table 15. According to Micon (2007), blank material was sourced from limestone from the Irish Midlands, near Lisheen. The insertion rate of standard reference material and blank samples was approximately one in 10 samples.

Table 15: Summary of Samples Used by Tournigan (2003-2009)

Control Sample	Au ppm	SD* ppm	Control Sample	Au ppm	SD* ppm
CDN-GS-11	3.40	0.14	CDN-GS-12	9.98	0.37
CDN-GS-3B	3.47	0.13	CDN-GS-15A	14.83	0.31
CDN-GS-5C	4.74	0.24	CDN-GS-15	15.31	0.29
CDN-GS-5a	5.10	0.14	CDN-GS-20	20.60	0.34
CDN-GS-6P5	6.74	0.23	SH35	1.32	0.04
CDN-GS-14	7.47	0.31	SN38	8.57	0.16
CDN-GS-10A	9.78	0.27			

* SD = standard deviation

According to Micon (2007), results from analytical quality control samples were monitored on an ongoing basis to ensure reliability of analytical results delivered by the primary laboratories used. SRK was unable to determine performance gates implemented by Tournigan that determined when certain assay batches were sent for re-assay based on the performance of analytical quality control samples submitted with the regular assay stream.

In addition to analytical quality control procedures implemented on samples collected by Tournigan, Tournigan submitted 43 samples from historical core drilled by Ennex for umpire assaying to OMAC labs as well as to a laboratory operated by ALS Chemex at an unspecified location in Canada.

10.9.4 Dalradian (2010 – 2018)

Dalradian continued to apply the same analytical quality control procedures first introduced by Tournigan. During the first phase of underground channel sampling in 2013, Dalradian did not use analytical quality control samples. Chip sampling procedures in 2015 were adjusted to mirror the insertion rate of analytical quality control samples to that of core samples.

During the first years of operation by Dalradian, the number of reference materials was high. More recently, Dalradian has reduced the number of reference material types to streamline the data analysis. Analytical quality control data considered for the May 2016 mineral resource model is discussed in an earlier technical report (SRK, 2016).

Commercial certified reference material (over a range of gold grades) were sourced from Rocklabs. Dalradian has used a total of 14 reference material types between 2016 and 2018, summarized in Table 16. Blank material was sourced from limestone from a quarry in Fivemiletown, Northern Ireland. The insertion rate of blank and standard reference material was approximately one in ten.

Table 16: Summary of Control Samples used by Dalradian on the Curraghinalt Gold Project (2016-2018)

Low Grade Gold (0-1g/t)				Medium Grade Gold (1-5g/t)				High Grade Gold (>5 g/t)			
Standard ID	Expected Value	SD*	Inserts	Standard ID	Expected Value	SD*	Inserts	Standard ID	Expected Value	SD*	Inserts
SE86	0.595	0.015	49	SG66	1.086	0.032	115	SL61	5.931	0.177	64
SF67	0.835	0.021	112	SJ80	2.656	0.057	82	SL76	5.960	0.192	163
				SK94	3.899	0.084	34	SN60	8.595	0.223	72
								SN75	8.671	0.199	97
								SN91	8.679	0.194	29
								HiSilP1	12.050	0.368	195
								HiSilP3	12.244	0.246	95
								SP59	18.120	0.360	207
								SP73	18.170	0.420	50
Total			**161**	**Total**			**231**	**Total**			**972**

* Standard Deviation

10.10 SRK Comments

The qualified person for the mineral resource in this study reviewed the sample handling and preparation procedures used by the independent certified laboratories contracted by Dalradian. In the opinion of qualified person, the sampling preparation, security, and analytical procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project. Sample handling and preparation procedures followed by previous operators are, in part, difficult to assess. However, after analysis of exploration data, qualified person considers that historical data are sufficiently reliable to inform geology and mineral resource models, especially considering that drilling and undergound sampling data collected by Ennex, Nickelodeon, and Tournigan amount to approximately five percent of all available exploration data available for the Curraghinalt project.

11 Data Verification

The verification and analysis of data provided to SRK from Dalradian between 1984 and March, 2016 is described within the 2016 technical report and includes data produced by Ennex, Nickelodeon, Tournigan, and Dalradian. The conclusions from this analysis are summarized at the end of this section.

11.1 Verifications by Dalradian

For the verification of drilling data, Dalradian relies partly on verification processes built into DataShed and LogChief software used for logging core and storage of data. Possible data errors such as logging interval overlaps, end-of-hole values greater than the borehole length, missing information etc., are detected automatically and send error messages within the program. A manual override of information automatically added to the logging information by the software is possible.

In late 2015, Dalradian commissioned ALS to investigate the performance of fire assays with atomic absorption finish using 30-gram aliquots versus 50-gram aliquots and the influence of coarse gold on the methods' performance using a screen fire assay methodology as verification. The study was conducted on 63 samples with a range of gold values from various locations within the deposit area. The results indicate that analyses conducted on 30-gram aliquots show, on average, lower gold values than those analyses conducted on 50-gram aliquots. Results from the latter sample size correlate well with assay results obtained from screen fire assays, suggesting that the occurrence of coarse gold has a direct impact on assay accuracy. Due to the results of this study, all gold assays from 2015 onwards have been conducted on 50-gram aliquots.

As part of the analytical data verification, Dalradian submitted 1,066 sample pulps to Actlabs for umpire testing between 2016 and 2018. The samples cover a range of gold values and were assayed by fire assay with an atomic absorption finish (Actlabs method code 1A2-50 Au) on 50-gram aliquots. Samples grading over 100 g/t gold were re-analyzed with a gravimetric finish (Actlabs method code 1A3-50). The analysis of this testing is discussed below.

In late 2017, Dalradian identified a potential minor bias with ALS-reported gold grades between 5 and 15 g/t gold. Within this grade range, the umpire laboratory, Actlabs, reported values consistently below those of ALS, however, these were still within 10 percent difference. It is unclear whether the bias is related to ALS or Actlabs. In early 2018, Dalradian identified to ALS a high bias from medium to high grade certified reference material. ALS investigated the issues and has re-introduced a higher grade internal standard for calibration purposes, and has moved from manual hand shaking of dilutions to using an electric vortex mixer.

11.2 Verifications by SRK

11.2.1 Site Visits

In accordance with National Instrument 43-101 guidelines, several members of the SRK team visited the Curraghinalt gold project to inspect the property, conduct field investigations of core and underground exposures, and hold discussions with Dalradian site personnel.

Most recently, Dr. James Siddorn and Mr. Dominic Chartier visited the project from October 22 to October 27, 2017, accompanied by Mr. Greg Hope and Ms. Emma Brosnan of Dalradian. The purpose of the Dr. Siddorn's site visit was to evaluate the structural controls on gold mineralization and review the distribution, geometry, and kinematics of post-mineralization structures that may crosscut or displace the gold domains. The purpose of Mr. Chartier's site visit was to review exploration procedures, review the exploration database and validation procedures, define geological modelling procedures, examine drill core and underground workings, compare database assays with original certificates, and collect all relevant information for the preparation of a revised mineral resource model and the compilation of a technical report.

11.2.2 Database Verifications

SRK conducted a series of routine verifications to ensure the reliability of the electronic data provided by Dalradian. These verifications included checking the digital data against original assay certificates, where possible. SRK audited approximately four percent of data generated by Dalradian and did not identify any errors.

11.2.3 Verifications of Analytical Quality Control Data

SRK analyzed the analytical quality control data produced by Dalradian from 2016 to 2018 drilling and underground sampling programs conducted since the May 5, 2016 mineral resource estimate. All data were provided to SRK in Microsoft Excel spreadsheets accompanied by original pdf lab certificates. SRK aggregated the assay results of the external analytical control samples for further analysis. Control samples (blanks and certified reference materials) were summarized on time series plots to highlight their performance. Paired data (preparation, pulp, umpire, and lab internal pulp duplicate assays) were analyzed using bias charts, quantile-quantile, and relative precision plots. A selection of the charted data is presented in Appendix A. The type of analytical quality control data collected, and their associated performances are discussed below and summarized in Table 17.

Table 17: Summary of Analytical Quality Control Data Produced by Dalradian on the Curraghinalt Gold Deposit (2016-2018)

	Total	(%)	Comment	Gold (g/t)
Sample Count	20,481			
Blanks	1,457	7.1%	Limestone	
Standards	1,364	6.7%		
SE86	49	0.2%	Rocklabs	0.595
SF67	112	0.5%	Rocklabs	0.835
SG66	115	0.6%	Rocklabs	1.086
SJ80	82	0.4%	Rocklabs	2.656
SK94	34	0.2%	Rocklabs	3.899
SL61	64	0.3%	Rocklabs	5.931
SL76	163	0.8%	Rocklabs	5.960
SN60	72	0.4%	Rocklabs	8.595
SN75	97	0.5%	Rocklabs	8.671
SN91	29	0.1%	Rocklabs	8.679
HiSilP1	195	1.0%	Rocklabs	12.050
HiSilP3	95	0.5%	Rocklabs	12.244
SP59	207	1.0%	Rocklabs	18.120
SP73	50	0.2%	Rocklabs	18.170
Total QC Samples	**2,821**	**13.8%**		
Check Assays				
ALS and Actlabs	1,066	5.2%		

Analytical Quality Control Data by Dalradian (2016 – 2018)

In general, analyses of blank samples consistently yielded gold values near or below the detection limit of the primary laboratory. The performance of blank samples between 2016 and 2018 is acceptable with no sample contamination detected and less than 0.5 percent returning values above 10 times the detection limit.

Dalradian used a total of 14 certified standard reference material types with a variable range of expected gold values (Table 16). Overall, the performance of these materials is acceptable with failure rates ranging from 1 to 23 percent, typically below 6 percent. Failure rates of over 10 percent were reviewed closely and determined to be marginal. Standard material exhibiting a failure rate higher than 10 percent often had a sample count lower than 50 due to recent adoption or discontinued use, and therefore the statistical performance of these material may be unevolved or undetermined.

During December 7, 2017 to February 15, 2018, it was noted by Dalradian that assay results for standard SP59 were exhibiting an increased failure rate with a positive bias. Only one obvious outlier is attributed to the probable mislabelling of standard SN75. Dalradian discussed this issue with ALS and the performance of this standard is being monitored after corrective action was implemented.

Approximately five percent of samples analyzed by ALS were chosen randomly by laboratory staff from additional pulp material and sent to Actlabs for repeat analysis. Rank half absolute relative difference (HARD) plots suggested that 81.8 percent of the umpire check assays conducted on pulps, had HARD below 10 percent, suggesting good reproducibility between two laboratories.

Reproducibility of core assays from pulp material was satisfactory with a correlation coefficient of 0.94. Reproducibility of assays of underground face/channel samples from pulp material was very good with a correlation coefficient of 0.99. The available dataset for this type of analytical quality control sample for underground face/channel samples was small with 159 sample pairs available for analysis between 2016 to 2018. However, pulp duplicate data for core samples acquired between 2016 and 2018 had similarly good reproducibility with a larger data set of 907 sample pairs. Recent exploration data from underground face/channel samples are therefore comparable with those from recent core samples.

11.3 SRK Comment

The mineral resource qualified person carried out a detailed quality control review including the review of analytical quality control programs and their performance carried out by Ennex, Tournigan, and Dalradian between 1987 and 2018. The aim of this review was twofold: a) to verify the reliability of exploration data to be used in the resource update, and b) to identify whether historical data would impact the reliability of the exploration data as a whole.

In the review of potential risk introduced by historical data, SRK identified the following issues:

- Lack of analytical quality control data prior to 2000
- High failure rate of blank samples during discrete periods
- High failure rate of certain control samples used

The sampling data collected by Dalradian (approximately 71,878 core samples) far outweigh historical sampling data collected by Ennex (1,551 core samples) and Tournigan (2,289 core samples) (Figure 17), significantly reducing the risk introduced by the use of historical data that may be less reliable because the associated sampling data are less well documented.

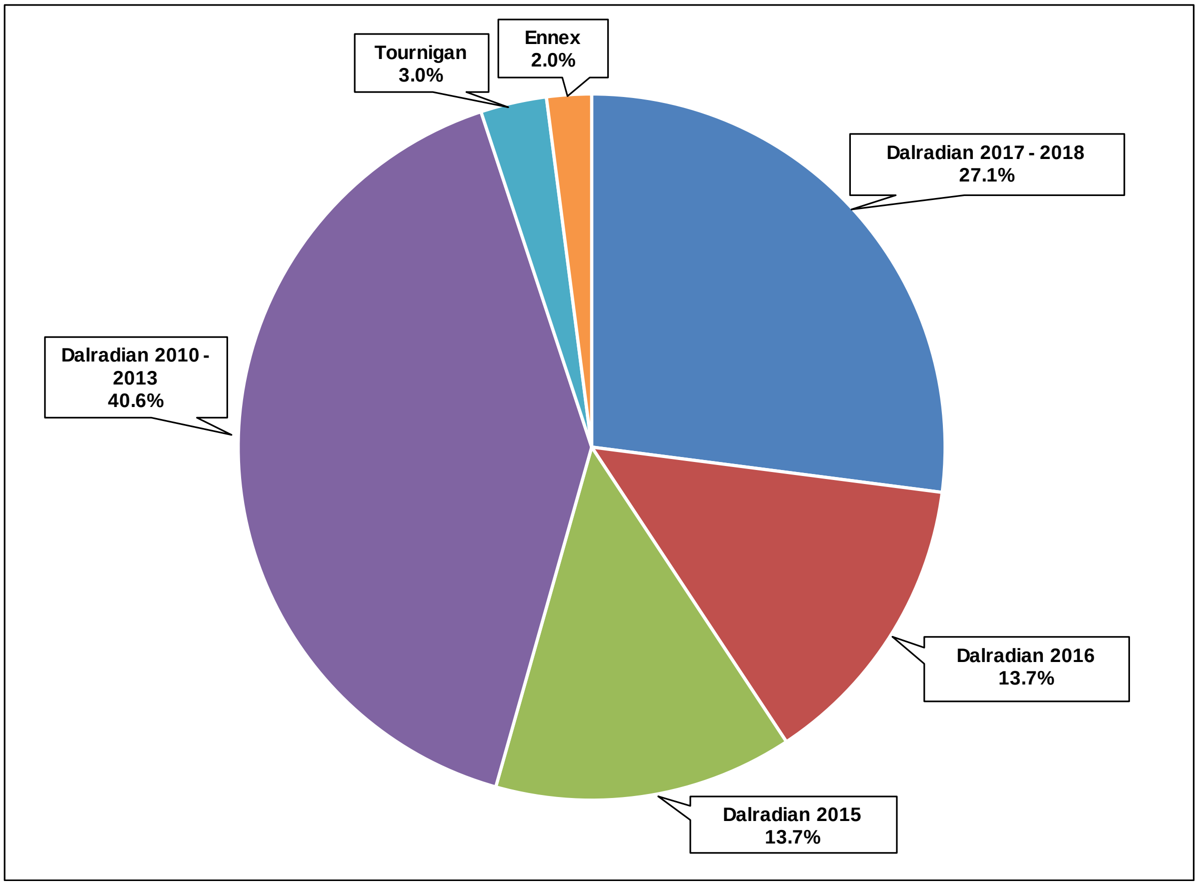


Figure 17: Distribution of Samples by Operator

SRK carried out a detailed quality control review including the review of analytical quality control programs carried out by Dalradian from 2016 to 2018. The aim of this review was to verify the reliability of exploration data generated during this period to be used in the mineral resource update. This review is in addition to that conducted and discussed in the 2016 report.

In the opinion of SRK, the paired data results are consistent with results expected for this type of gold mineralization. The umpire check assays show that the results produced by ALS can be reproduced within acceptable limits by Actlabs.

In its review of quality control data, SRK identified a high failure rate for certain control samples used during discrete periods. Standards SP59 and HiSilP3 exhibited increased bias and variability over time. Dalradian was proactive in discussing failures with ALS and the use of both have been discontinued. This is consistent with previous actions taken by Dalradian, where the use of certain standard reference materials that exhibited higher failure rates (for example, Rocklabs SQ48 used between 2003 and 2008 with a failure rate of approximately 30 percent) were also discontinued. Continued diligence in monitoring quality control data is strongly encouraged.

Based on previous project exposure and on SRK's most recent site visit completed during active drilling operations in October 2017, SRK believes that drilling, logging, core handling, core storage, and analytical quality control protocols used by Dalradian meet generally accepted industry best practices. In the opinion of SRK, the sampling preparation, security, and analytical procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project.

Overall, SRK considers analytical results from core sampling conducted at Curraghinalt are globally sufficiently reliable for the purpose of resource estimation. The data examined by SRK do not present obvious evidence of analytical bias.

12 Mineral Processing and Metallurgical Testing

12.1 Introduction

The metallurgical test work carried out to support development of the Curraghinalt project and creates the basis of this section was summarized, managed and directed by Mr. Stacy Freudigmann P.Eng.

As permitted by Item 3 of Form 43-101F1 – Technical Report, published by the Canadian Securities Administrators (Form 43-101F1), the Qualified Person (QP) responsible for the preparation of this Section has relied upon certain reports, opinions and statements of certain experts who are not qualified persons. These reports, opinions and statements, the makers of each such report, opinion or statement and the extent of reliance are described.

12.2 Testing History

In previous project development phases, testing was undertaken on composites blended from various veins and different areas of the deposits on the Curraghinalt property. More recent test work was carried out on flowsheet optimization composites, constructed to represent the resource as it was understood at the time, and also on variability composites, to determine the change in metallurgical response of individual samples selected to represent the grade, lithology and spatial aspects of the resource. Testing on the optimization composite was designed to develop the flotation-leach flowsheet. The resulting flowsheet, and more closely defined process variables, were then used to determine the metallurgical performance of a number of variability composites, evaluating both gold and silver recoveries.

A number of testwork programs have been undertaken on the Curraghinalt Project since 1985, as illustrated in Table 18.

Test work programs completed by independent reputable metallurgical laboratories using primarily drill core samples from exploration drilling, include but are not limited to characterization and mineralogical studies, comminution studies, gravity concentration tests, flotation, leach and settling tests. Historical test work results indicate that the mineralization responded well to flotation and to direct agitated cyanide leaching for precious metal extraction.

Table 18: Summary of Test Work Completed

Year	Lab	Report No.	Mineralogy	Ore Sorting	Comminution	Gravity	Flotation	Cyanidation	Solid/-Liquid Separation	Detox	Other
1985	LR	2936 Report 1	X			X					Diagnostic Leach
1986	LR	2936 Report 2			X	X	X	X			
1986	LR	2936 Report 3					X	X			
1989	LR	3588 Report 4	X			X	X	X			
1999	IME	Report No.1	X			X	X				
2012	SGS	13471-001 Final Report	X				X	X			Heavy Liquid Separation
2012	ALS	KM3258	X		X	X	X	X			
2013	ALS	KM3258 Phase II					X	X			
2013	ALS	KM3841					X	X			Minor Element
2015	ALS	KM3986	X			X	X	X			Locked Cycle Test
2015	BVM	1501204								X	
2015	P&C	DRC-32-0147	X						X		Rheology, Paste Backfill
2015	BaseMet	BL0012	X		X		X	X	X		Humidity Cell
2016	BaseMet	BL0075	X	X	X	X	X	X	X	X	Rheology, O2 Uptake, Confirmation
2016	TOMRA	Dalradian Rev 0		X							
2017	BaseMet	BL0141	X		X	X	X				Flotation Only Flowsheet Optimization
2017	BaseMet	BL0261	X				X	X	X	X	Quartz & Muscovite
2017	Kettle	CAN0045									Bulk Stope & Development material Processing Trial

* Lakefield Research (LR), International Metallurgical and Environmental (IME), SGS Canada, Lakefield, (SGS), ALS Metallurgy, Kamloops (ALS), BV Minerals – Metallurgical Division (BVM), Paterson & Cooke (P&C), Base Met Labs (BaseMet), Outotec (TOMRA), Kettle River Process Plant (Kettle)

12.3 Mineralogical Evaluations

12.3.1 Mineralogy

Historically, mineralogical analysis were conducted by Lakefield Research on head samples, gravity concentrate samples, T17 and Sheepdip Vein Composites; by IME on high and low sulphide composites determining sulphur speciation; by SGS on both waste and vein samples; by ALS on composite and concentrate samples including, photomicrographs, BMAL and QEMSCAN work and recently by BaseMet undertaking mineral composition of the vein composites and recent stope and development composite materials.

Mineralogical work indicates that gold mineralization at Curraghinalt occurs in quartz-pyrite veins and is associated with variable abundances of carbonate, chalcopyrite, and minor amounts of tennantite-tetrahedrite. In general, carbonate, chalcopyrite, and tennantite-tetrahedrite are paragenetically later than quartz and pyrite, and fill fractures in the latter. Gold occurs mainly as the native metal or more rarely as electrum (>20 wt% Ag) and is found primarily along fractures in pyrite, as inclusions in pyrite, and at pyrite grain contacts with carbonate and quartz. Most native gold grains are associated with carbonate, chalcopyrite, and minor amounts of tennantite-tetrahedrite,

and telluride minerals. Samples from numerous veins have been assessed and it has been observed that the mineralogy is generally similar in all the veins found at Curraghinalt.
A sample of Master Composite (MC) 12-1A was ground to approximately 80% passing 106 µm and was submitted for BMAL and QEMSCAN analysis at ALS. The main points of interest are summarized below.

- Pyrite was the dominant sulphide mineral observed measuring approximately 5.5 percent of the feed. Minor chalcopyrite was also observed, measuring about 1 percent.
- The dominant minerals were quartz and muscovite, being approximately 51 percent and 25 percent by weight of the feed, respectively.
- The copper sulphides and pyrite were well liberated, being approximately 83 percent on average. About 16 percent of the copper sulphides were locked in binary with pyrite. The liberation data indicates that a primary grind coarser than 106 µm could be used in the rougher circuit of a flotation flowsheet.
- Chalcopyrite accounted for the majority of the copper sulphide minerals in the feed.
- Results from BaseMet mineralogy in 2015 on the vein composites indicated that the dominant copper-bearing mineral occurring in the vein composites was also chalcopyrite.

Pyrrhotite was not identified in the samples analyzed by BaseMet, by ALS, nor was it identified in the SGS test work. Pyrrhotite was only identified in a single sample in the 1986 Lakefield Research test work. The level of organic carbon in the samples studied by ALS and Basemet was also found to be negligible. The dominant minerals observed by BaseMet were quartz and muscovite at 55 percent and 22 percent on average respectively and the pyrite averaged 5.1 percent, which aligns well with the previous ALS work.

More recently in 2017, BaseMet undertook mineralogical analysis on composite samples derived from Test Stope and Underground Mine Development material. Again quartz and muscovite were the dominant minerals at 57% and 19% on average respectively. The “Feasibility Study Composite” (FSC), which was developed to represent process plant feed and was made up of a 83:17 mix of STOPE and DEVELOPMENT material and contained 18% muscovite. The flotation and detoxed leach tails contained 14% and 12% muscovite respectively, well below the 20% hazardous material guideline. Minimizing waste rock and dilution in the plant feed would appear to reduce muscovite in the tailings.

Although quartz was present in those flotation tailings samples at approximately 62 percent on average, there was only approximately 1 percent between 2 to 5 micrometres in size and no result less than 1 micrometre in size for the FSC, which would be representative of what would be fed to the process plant.

Table 19: Summary of Mineral Content of Vein Composites

Minerals	Composite					Minerals	Composite				
	106-16	Crow	No. 1	Sheep Dip	T17		106-16	Crow	No. 1	Sheep Dip	T17
Chalcopyrite	0.2	0.2	0.3	0.3	0.2	Quartz	59	58	60	48	49
Tetrahedrite	0.1	<0.1	<0.1	0.1	0.1	Muscovite	19	19	19	27	26
Other Sulphides	<0.1	<0.1	<0.1	<0.1	<0.1	Feldspars	5	7	5	6	6
Pyrite	6.4	4.1	5.9	3.5	5.8	Ankerite	6	7	5	4	4
						Others	4	4	5	11	8

Source: BaseMet, 2015

- At ALS, a rougher concentrate sample was submitted for mineral examination, illustrated in the photomicrograph below, and was generated from a rougher flotation on the Master Composite 12-1A ground to approximately 80 percent passing 141 micrometres. It can be observed in these images that, as previously observed in the mineralogical analysis, the gold particles in the rougher concentrate occur primarily along fractures in pyrite or as inclusions in pyrite.

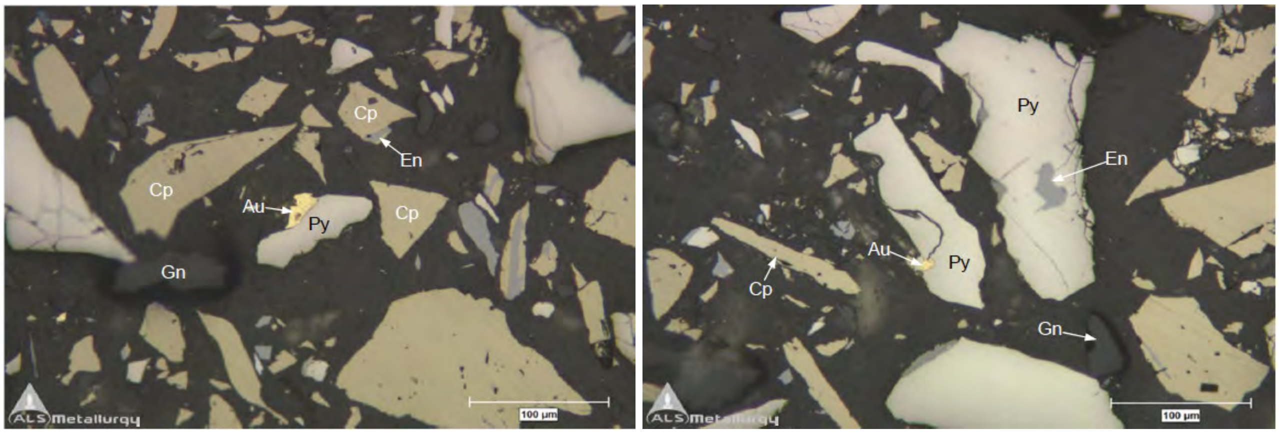


Figure 18: Photomicrograph of Rougher Concentrate (T4, KM3258)
Source: ALS, 2012

12.4 Test Work

12.4.1 Historical Metallurgical Testing

Pre-2012 Metallurgical Test work

The historical test work from 1985 to 1989 examined the amenability of the samples to gravity concentration. The gravity recovery of gold using a Wilfley table followed by cleaning on a Mozley concentrator varied from 26 percent to 52 percent. Test work undertaken in 1999 with a Knelson concentrator decreased the observed variability in the samples tested and ranged from 50 percent to 52 percent gold.

A Bond Ball Mill Work Index (BBWi) test completed by Lakefield Research in 1986 on a composite sample returned a value of 15.4 kilowatt hours per tonne (kWh/t).

Historical cyanidation test work returned metal extractions typically averaging 95 percent for gold and approximately 80 percent for silver. A grind of approximately 85 percent passing 200 mesh (75 micrometres) and a leach time of 48 hours at 1 gram per litre (g/L) sodium cyanide dose was found generally effective on whole-ore-leach (WOL). Sodium cyanide consumptions in direct cyanidation tests were variable but generally elevated between 1.0 – 2.4 kilograms per tonne (kg/t). Where solution assays were available, they showed increased copper and thiocyanate (CNS) concentrations, and it was concluded that copper sulphides were the most likely cause for the raised cyanide consumptions.

SGS undertook test work in 2011 to investigate heavy liquid separation (HLS) as a means of reducing the amount of feed material reporting to process by rejecting the waste portion that would come from the mine as dilution. The tests indicated that, using this pre-treatment of the plant feed, it was possible to reject up to 50 percent of the feed material into the waste stream; however, gold loss into the reject material was approximately 4 percent. As part of that test work program, SGS completed cyanide leach tests on samples of the rougher concentrate and rougher tailings from the sinks and float portions of the HMS test. Extractions for gold were approximately 90 percent on average, and indicated that there is likely a strong dependency on particle size, independent of grade). The sinks concentrate from the HMS test was also submitted for flotation testing. Gold and silver rougher recoveries were 99 percent and 95 percent, respectively (relative to the flotation feed), into 42 percent of the mass. This test work suggested that a relatively coarser grind is likely possible prior to flotation. The flotation results suggest that the gold occurrence is strongly associated with sulphides, which is consistent with the mineralogical observations.

2012-2015 Metallurgical Test work

A program of test work was carried out by ALS Metallurgy of Kamloops, BC on a representative composite sample. Laboratory testing was conducted using a gravity-flotation circuit, on samples ground to approximately 80 percent passing 140 micrometres prior to flotation, and produced a bulk rougher concentrate grading 82.8 g/t gold and 59 g/t silver.

ALS completed a single BBWi test on composite sample 12-1B that returned a value of 15.2 kWh/t, which agreed with the historical test completed by Lakefield Research. ALS also completed a single Abrasion Index (Ai) on that composite that returned a value of 0.1278 g.

Gravity concentration test work achieved 81 percent and 76 percent gold recovery into a concentrate of 6 percent and 5 percent mass pull for composites 12-1A and 12-1B, respectively. Additional testing achieved gold recoveries into the gravity concentrates of 61.5 percent and 67.9 percent with mass pulls of 3.1 percent and 3.4 percent, and 29.4 percent and 24.2 percent with mass pulls of 0.2 percent. These results suggest a good correlation between mass pull and gold recovery into the gravity concentrate as illustrated in Figure 19.

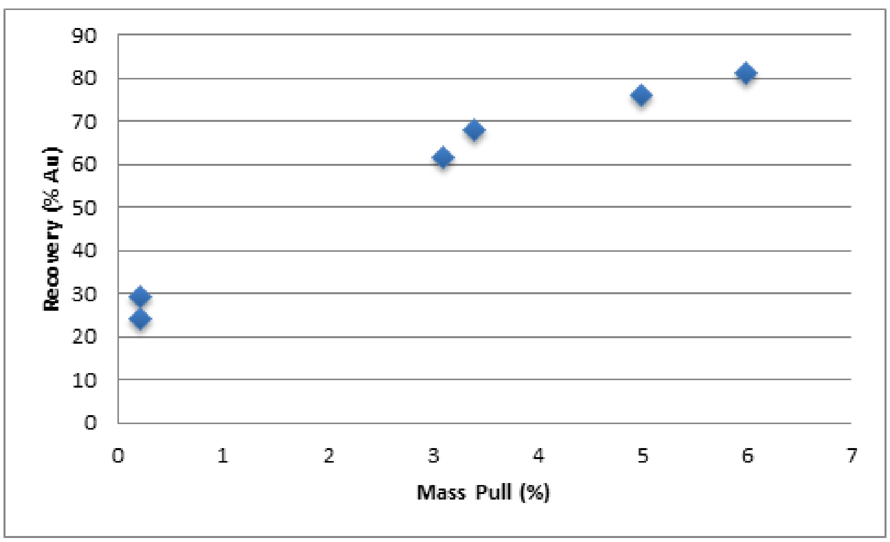


Figure 19: Gold Recovery to Gravity Concentrate with Varying Mass Percent

Source: JDS, 2017

The flotation testing by ALS focused on producing a rougher concentrate, both with and without a gravity circuit prior to flotation. Gold recoveries into the flotation concentrate without a gravity circuit were 98.8 percent to 99.4 percent (Composite 12-1A), and 94.7 percent to 95.3 percent

(Composite 12-1B), and 70.0 percent to 74.6 percent (Composite 12-1A) when a gravity circuit was used ahead of the flotation circuit.

Overall gold recoveries from this test program were 99.4 percent, with 29.4 percent of the gold reporting to the gravity circuit, and 70.0 percent reporting to a bulk rougher concentrate, demonstrated a potential alternative processing method compared to the whole-ore cyanidation process used as the base-case scenario previously. Analysis of the flotation concentrate suggested a clean, saleable concentrate could be produced, with little to no significant penalty elements present.

A number of other series of WOL and flotation tests were also undertaken with the main results summarized as follows:

- Pre-aeration on the leaching process was demonstrated to not be required.
- Lead Nitrate as an additive to the leaching process was also demonstrated to not be required, which would be expected with the almost non-existent presence of pyrrhotite as observed in the mineralogy.
- The tests to determine the amount and effect of graphitic carbon in the mineralization demonstrated that there is only a minor trace amount present and that it is not deleterious to the flotation or leaching processes.
- An initial grind size evaluation determined that for the composites tested a grind of approximately 80 percent passing 141-148 μm for WOL and approximately 80 percent passing 44 micrometre for the cyanide leaching of the flotation concentrate were optimal.
- Increasing the cyanide concentration on the leach tests indicated an improvement in recovery could be achieved.

The test work program undertaken at BaseMet in Kamloops, BC in 2015, assessed the metallurgical response of two main flow sheets: WOL, and bulk flotation followed by cyanidation of the flotation concentrate, on five vein composites (106-16, No.1, T17, Crow, and Sheep Dip) and a single master composite. Vein composite grades ranged from 5.4 – 11.2g/t gold and 4.2 – 9.6g/t silver with the master composite at 8.2 g/t gold and 4.6g/t silver, whilst copper was present in all the samples, at relatively low levels of around 0.1 percent. Carbon was measured at less than 0.5 percent and again, no preg-robbing effects were observed during cyanidation.

The BBWi testing was conducted using a closing screen sizing of 212 micrometres, resulting in a product sizing averaging approximately 80 percent passing 169 micrometres. At this closing screen sizing, the five composites recorded work indices averaging 12.5 kWh/t.

Table 20: Comminution Test Result Summary

Sample ID	Bond BWi kWh/t	Abrasion Index	A x b	DWi kWh/m^3
106-16 Comp	12.8	0.108	63.4	4.27
Crow Comp	13.4	0.161	67.9	4.01
No. 1 Comp	12.7	0.122	69.9	3.96
Sheep Dip Comp	11.5	0.087	79.0	3.47
T-17 Comp	12.0	0.071	91.8	2.97

Source: BaseMet, 2015

The mineralization was measured to be moderately abrasive, with abrasion indices between 0.07 – 0.16 g and an average of 0.11 g. SMC tests resulted in an average drop weight index (DWi) of 3.7 kWh/t. These values would indicate that the Curraghinalt mineralization is moderately soft.

Rougher flotation of the master composite measured greater than 95 percent gold recovery for all of the tests, employing a primary grind size of approximately 80 percent passing 145 micrometres, and using potassium amyl xanthate (PAX) as the collector. The majority of this recovery was to the rougher concentrate with typically less than 2 percent of the gold being recovered to the scavenger concentrate. When gravity concentration was included prior to flotation, about 24 percent of the gold was recovered to the concentrate. This concentrate graded 747 g/t gold. This in turn led to the flotation concentrates obviously grading lower, however, the overall recovery of gold did not appear to be influenced by either the inclusion or exclusion of the gravity concentration stage.

Overall gold extractions were lower from the WOL tests than for the combined gravity/flotation/leach tests. For WOL, gold extraction after 48 hours measured up to 90 percent. For tests on the gravity/flotation/leach flowsheet, gold recovery measured between 90 percent and 94 percent.

For the flotation concentrates from the master composite tests, in general, gold recovery improved as the cyanide concentration increased and as the regrind size decreased. On average, across all concentrate leach tests, gold extraction was 95 percent, with the range being between 94 percent and 96 percent for the groups of sodium cyanide concentrations of 1,500 and 10,000 parts per million (ppm). Gold extraction kinetics was greatly enhanced at the higher cyanide concentration of 10,000 ppm. The high sodium cyanide concentration did also result in increased consumption during the leach stage.

Sodium cyanide consumption measured, on average, 0.8 kg/t of master composite for the lower sodium cyanide concentration leaches (1,500 and 2,000 ppm sodium cyanide) and 1.5 kg/t for the 10,000 ppm tests. Lime consumption measured on average 0.2 kg/t.

Carbon-in-leach (CIL) testing on the master composite did not appear to improve gold extraction, however, silver recorded a higher recoveries in these tests (8 percent on average). Silver recovery also increased when a higher pulp density of 50 percent solids was employed. In the remaining tests, silver recovery measured between 63 percent and 69 percent.

On the vein composites, the Sheep Dip vein had the lowest flotation gold recovery, measuring approximately 91 percent, while the Crow and 106-16 composites exhibited the highest gold recoveries of around 98 percent. The weighted average recovery from the vein composites matched that of Master Composite 15-A at 96 percent gold. Copper and silver recoveries measured, on average, 92 percent and 86 percent.

The first set of cyanidation tests on rougher concentrates from the vein composites were conducted at 1,500 ppm sodium cyanide concentration with the second set at 2,000 ppm sodium cyanide concentration. An additional test was conducted on No.1 Composite at 10,000 ppm.

In the first set of tests, the Sheep Dip composite had a lower leach recovery than the other composites, recovering only 82 percent of the gold from the flotation concentrate. Gold recovery was still increasing at the end of the test (48 hours). This composite performed much better in the second test with higher sodium cyanide concentration, during which 95 percent of the gold was recovered.

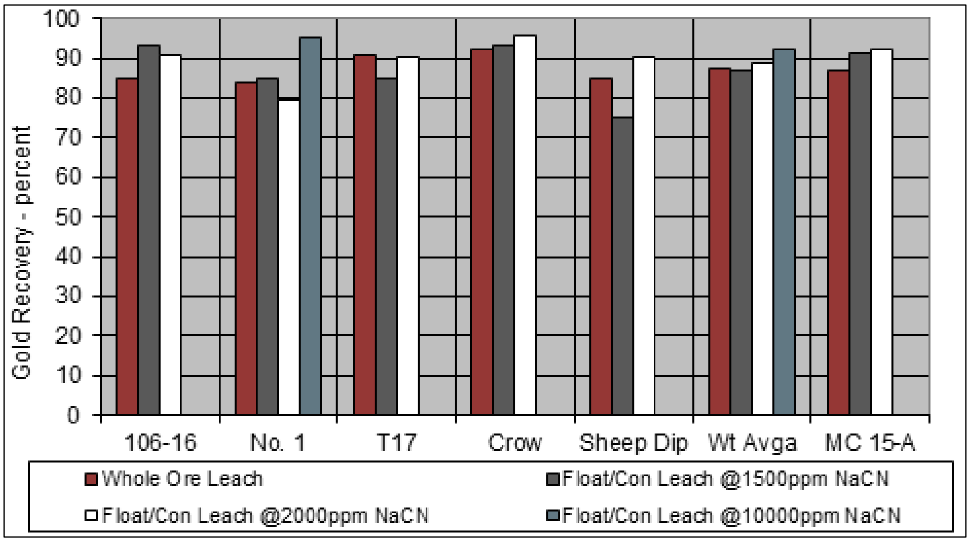


Figure 20: Gold Leach Recovery with Varying NaCN Concentrations
Source: BaseMet, 2015

Gold extractions were higher using the flowsheet involving flotation, with approximately 92 percent gold overall recovery. Sodium cyanide and lime consumptions using this flowsheet measured about 1.0 and 0.2 kg/t of flotation feed, respectively. Whole ore cyanidation resulted in, on average, about 6 percent lower gold extraction compared to the flowsheet involving flotation/cyanidation.

Higher sodium cyanide concentrations in the leaching stage were evaluated and tended to result in higher gold extractions. On the master composite, increasing the concentration from 1,500 to 2,000 ppm sodium cyanide resulted in about 1.5 percent higher gold extraction. Increasing it again from 2,000 to 10,000 ppm resulted in an additional 1.6 percent higher gold extraction and gold kinetics were greatly improved.

Copper was present in all the samples tested and given the relatively good liberation characteristics of the samples, it may be possible to produce a copper concentrate. This would lower the mass throughput feeding the cyanidation circuit, and potentially lower sodium cyanide consumption.

12.4.2 Solid-Liquid Separation Test Work

Two solid-liquid separation programs have been conducted on the Curraghinalt mineralization. The first flocculent screening and static settling tests were undertaken in July 2015 and were conducted at BaseMet on flotation tailings, concentrate, and leach residue produced from the master composite. As part of that sample testing program, both flotation tailings and detoxed leach residue samples were sent to Paterson & Cooke for solid-liquid separation testing and paste backfill assessment, whom reported on the results in September 2015.

BaseMet undertook a preliminary flocculent screening test utilizing anionic, cationic and non-anionic flocculants, resulting in the anionic (Magnafloc 156) producing the fastest settling rate and clearest supernatant in that test series. This flocculent was then tested as follows indicating that a dosage of approximately 5 – 10 g/t would produce the best overall performance.

Table 21: Static Settling Test Result Summary

Product	Dosage (g/t)	Free Settling Rate (mm/min)	Final Density (% solids)
T22 Scavenger Tailings	0	6	57.0
T22 Scavenger Tailings	2	264	54.8
T22 Scavenger Tailings	5	233	53.9
T22 Scavenger Tailings	10	353	49.9
T22 Scavenger Tailings	20	380	46.6
T22 Ro and Scav Con - Unleached	10	180	57.0
T33/34 Leach Residue	10	133	52.4

Source: BaseMet, 2015

Paterson & Cooke tested the flotation tailings and detox leach residue and were able to achieve favorable settling conditions under the following conditions:

- Float Tails: 10 – 15 percent solids feed, 30 – 35 g/t anionic flocculant (Magnafloc 919) producing 64 percent solids underflow
- Detox Leach Residue: 5 – 10 percent solids feed, 20 – 25 g/t slightly anionic flocculant (Magnafloc 10) producing 64 percent solids underflow

In their flocculant screening, Paterson & Cooke did not reassess Magnafloc 156 or flocc dosages less than 15 g/t as tested by BaseMet as the objective of the Paterson & Cooke work was to produce a high underflow density for paste backfill. Paterson & Cooke was able to produce a 58.5 percent underflow density on the detox leach residue using a 10 percent solids feed density and a flocculant dose of 15 g/t.

Filtration

Filtration test work was carried out by Paterson & Cooke on flotation tailings and the methodology was designed to replicate vacuum disk filtration in terms of filter leaf submersion, form, and both dry and total cycle times. High filtration rates were measured, with increased loading observed with increased feed density and faster cycle times. The resulting cakes measured between 20 – 22 percent moisture.

12.4.3 Cyanide Detoxification Test Work

As part of the BaseMet test programs, samples were sent to the BV Minerals division of Bureau Veritas Commodities Canada Ltd., Vancouver in 2015 for detoxification test work. The SO_2/O_2 cyanide destruction process was successful in reducing the levels of Weak Acid Dissociable Cyanide (CN WAD) to the target of less than 5.0 milligrams per litre (mg/L), achieving 0.07 mg/L of CN Total and less than 0.05mg/L CN WAD.

A detox feed slurry containing 974.2 mg/L CN WAD was effectively treated and resulted in a stable final CN WAD of less than 0.05 mg/L under reaction conditions of 5.3 grams SO2 / grams CN Total, pH 8.7 and six hours of retention time, however 1.5 mg/L CN WAD was achieved after a residence time of 60 minutes under the same conditions. Copper catalyst addition was required at 0.7 grams/grams CN Total in this test work to achieve the final result.

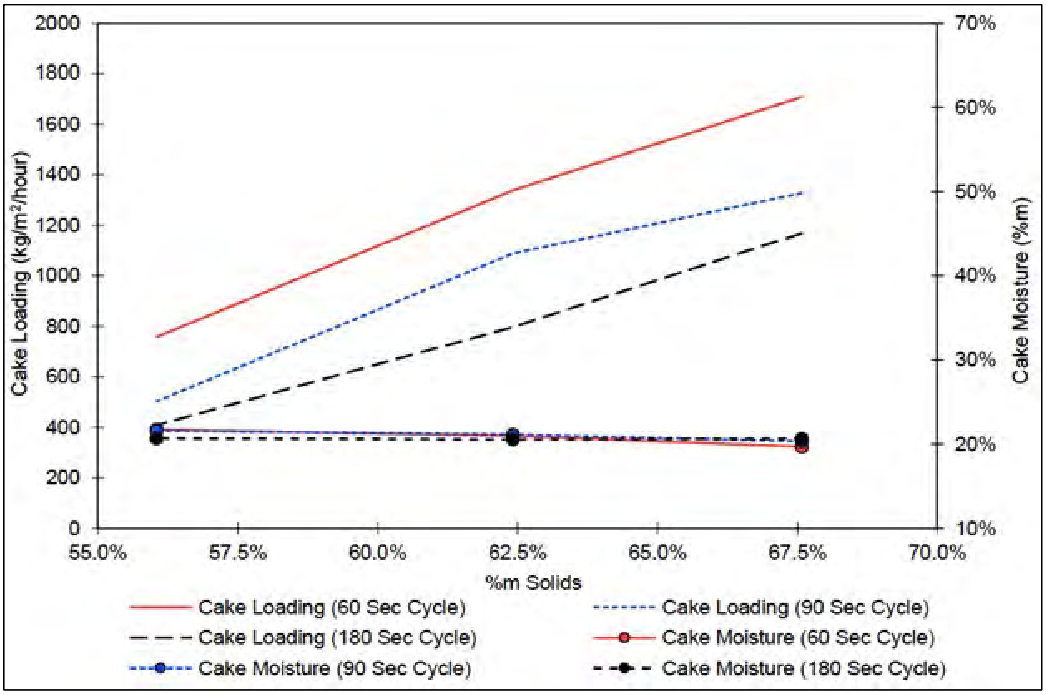


Figure 21: Vacuum Filtration Results
Source: Paterson & Cooke, 2015

12.4.4 Feasibility Study Metallurgical Testwork (2016)

Base Metallurgical (BaseMet) Laboratories in Kamloops, BC, completed a comprehensive testwork program on the Curraghinalt mineralization between January and April of 2016 which included;

- Comminution
- Gravity concentration
- Bulk flotation
- Mineralogy
- Dewatering (solid/ liquid separation)
- Oxygen uptake testing,
- Viscosity evaluation, and
- Cyanidation

Over 1.5 tonnes of Curraghinalt samples (a mix of coarse rock sample and drill core), was received for testing; 277 samples from 11 boreholes were taken as they passed through each discreet vein for flotation testing, while an additional 236 intervals were sampled for comminution testing, and the bulk vein material generated five different composites for the testwork program. The testwork program for Curraghinalt was designed to optimize the overall process for gold extraction, and to provide an understanding of the variability in the metallurgical response for the feasibility study.

Comminution Testwork

Comminution testwork was undertaken, testing the Crusher Work Index (CWi) on material from 4 of the veins and the two waste rock types, the SAG Mill Comminution (SMC) and Bond Ball Mill Work Index tests (BWi) on the comminution variability composites, and Abrasion indexes (Ai) on vein material from five vein deposits and the optimization composite. The summary of the results from the comminution testwork can be found in Table 22 and indicates that the mineralization from each of the veins tested appears to be relatively soft to moderate in hardness and amenable to SAG milling. The abrasiveness of the rock is also relatively low.

The SMC results shown in Table 23 indicates that the variability samples measured an average Drop Weight Index (DWi) of 4.9 kWh/m^3 which informs that the mineralization is quite amenable to SAG milling. The sample test results range between being moderately soft to moderately hard at 2.28 kWh/m^3 to 6.87 kWh/m^3 respectively.

A closing screen size of 212µm was used for the Bond Ball Mill Work Index (BWi) Tests with an average product sizing of approximately 162µm K80. The average BWi measured 13.3 kWh/tonne, ranging from 10.5 to 14.8 kWh/t across the 25 composites, indicating the mineralization to be of moderate hardness.

Bond Low Impact Crusher tests were conducted on rock samples specifically suppied by Dalradian Resources for this testing. The average work index for each sample set ranged from 6.9 to 9.2 kWh/t, which would be considered very soft with respect to crushing.

Table 22: Summary Comminution Results

Sample ID	Bond BWi* (kWh/t)	Ai	DWi** (kWh/M^3)
106-16 Composite	12	0.15	3.84
No. 1 Composite	12.6	0.13	4.84
T17	12.7	0.14	2.28
V75	11.2	0.13	3.41
T17A	14	-	-
Opt. Composite	12.5	-	-

* Bond Work index (BWi), Arasion index (Ai) Drop Weight index (DWi)

Source: BaseMet, 2016

Table 23: Variability Comminution Data

Sample ID	DWi* (kWh/t)	Axb	Bond BWi** (kWh/t)
T-17 Comp.	2.28	125.3	12.7
V-75 Comp.	3.41	80.2	11.2
106-16 Comp	3.84	72	12
No-1 Comp.	4.84	56.4	12.6
106-16-1	5.11	53.641	13.1
106-16-2	5.13	54.614	13.4
106-16-3	6.35	43.818	14.2
Bend	5.68	48.503	13.8
Causeway	3.41	80.303	10.5
Crow-1	3.18	85.675	13.4
Crow-2	4	69.212	14.1
Crow-3	5.61	48.618	14.4
Mullan-1	4.16	67.26	13
Mullan-2	4.86	55.524	13.8
Mullan-3	4.46	63.336	14.4
No.1-1	4.52	60.99	14.4
No.1-2	4.32	55.488	13.4
No.1-3	3.15	84.608	11.1
Road	5.64	48.02	11.6
Sheep Dip	6.32	44.25	14.8
Slapshot	5.29	53.784	14.4
Sperrin	5.62	49.364	12.9
T17-1	4.91	55.237	14
T17-2	2.96	89.04	11
T17-3	4.84	58.183	14
V55	5.3	52.008	12
V75-1	5.05	55.335	14.3
V75-2	6.87	39.42	13.6
V75-3	4.85	56.212	13.3

* Drop Weight index (DWi), ** Bond Work index (BWi)

Source: BaseMet, 2016

Optimization Testwork

A series of flotation and leaching tests were completed to optimize the process flowsheet and associated variables. The primary grind – recovery relationship was assessed for both gravity and rougher flotation.

There does appear to be an impact of primary grind sizing on gravity gold recovery as illustrated in Figure 22. Gravity gold recovery at primary grind sizes between 106 and 145µm K80 measured between 28 and 49 percent whereas at 340 to 460µm K80 recovery measured 17 to 20 percent respectively.

Intensive leach optimization testwork was also undertaken on the gravity concentrate, the results of which indicate that a NaCN dose of 2000ppm or above at a grind of approximately 80 percent passing 44 micrometres using NaOH at a pH of 12 for a residence time of 48 hours achieved a gold extraction of 99.6 percent. Overall cyanide consumption of NaCN for that test (T69) was 0.18 kg/t. Increasing cyanide dose showed limited benefit to the overall extraction at 24 or 48 hours, and only gave an increase in gold extraction of approximately 3 percent at the 6-hour mark.

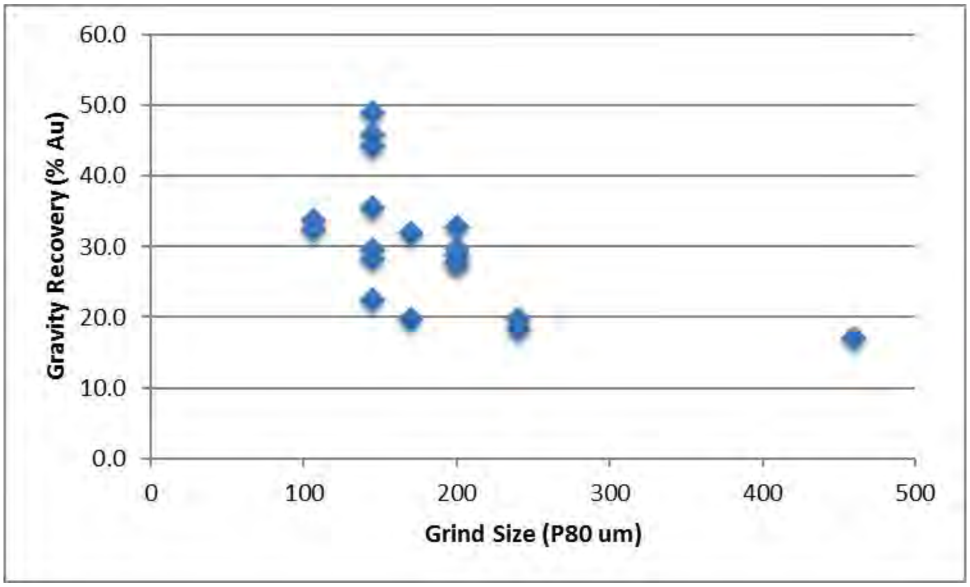


Figure 22: Primary Grind Size vs. Gravity Recovery
Source: JDS, 2017

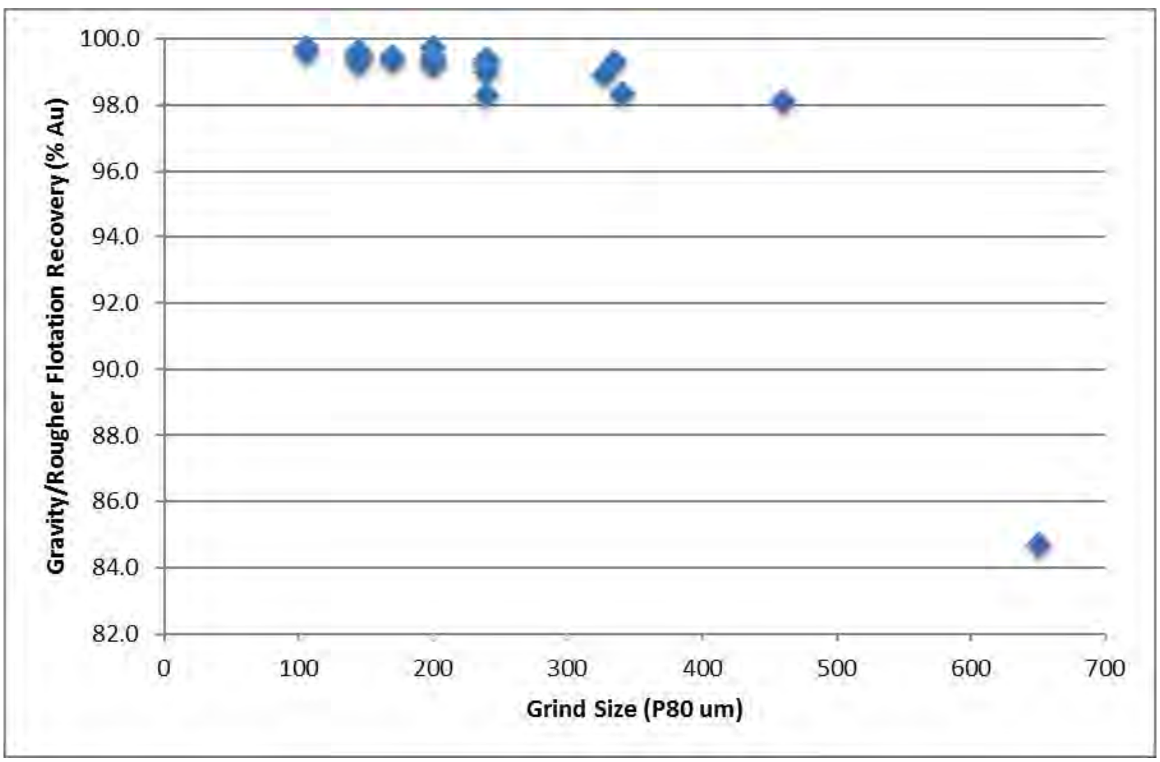


Figure 23: Primary Grind Size Vs. Gravity/Rougher Flotation Recovery
Source: JDS, 2017

Overall gold recovery, to the combined pan, rougher and scavenger flotation concentrates, was also impacted by primary grind, more so once the grind size increase above approximately 80 percent passing 300 micrometres such that a primary grind size of approximately 80 percent passing 240 micrometres was selected. Six of the optimization tests on the Optimization Composite excluded gravity concentration, and these tests were at relatively coarse primary grind sizes. One of these, Test 74, was undertaken to produce products for downstream testing and consumed 150 kilograms of feed mass. Tests 56, 65, 71 and 72 measured overall rougher flotation gold recoveries of between 98.9 and 99.4 percent despite excluding gravity concentration. Comparatively, tests 10 and 11, which had the same primary grind time and included gravity concentration, measured gold recoveries of 99.3 and 99.4 percent respectively. This would potentially indicate that gravity concentration might not be required to achieve similar gold recoveries to the rougher flotation concentrate.

Test 58 was conducted to evaluate flash flotation. The nominal primary grind sizing for this test was approximately 80 percent passing 650 micrometres (K80). At this sizing, about 85 percent of the gold was recovered to the rougher concentrate. Gold was still being readily recovered in the 4th rougher stage and longer residence times might allow for higher rougher flotation recovery or an assessment of coarse particle flotation. However, the practicality of running longer flotation times at plant scale at such coarse primary grind sizes would need to be further evaluated. These optimization tests were initially undertaken on a high grade composite due to limited sample mass available, however the flowsheet variables were confirmed on both a low grade and LOM grade composite with similar results.

Cleaning flotation of the rougher concentrate was also assessed, and upon completion of the variability program it was shown that cleaning of the rougher concentrate with no regrind resulted in a gold recovery decrease of approximately 2 percent and mass pull decrease on average of approximately 6 percent.

Leach parameters were evaluated through 23 cyanidation bottle roll tests that were conducted on the bulk Test 17 combined rougher and scavenger concentrate sample. Tests 32 to 37 were undertaken at 2000 ppm NaCN concentration, and Tests 54 to 55, at 5000ppm NaCN concentration tested the effect of particle sizing. These tests are summarized in Table 24.

Table 24: Cyanidation Results – Effects of Regrind Size

Test	Grind Size (P_{80} µm)	NaCN (ppm)	pH	48hr Gold Extraction	Cal'c Au Feed	Au Residue Assay	Overall Reagent Cons. - kg/t Plant Feed	
							NaCN	NaOH
T32	138	2000	11	82.2	112	20.1	0.71	0.08
T33	65	2000	11	91.3	107	9.32	1.16	0.04
T34	45	2000	11	92.7	116	8.47	1.52	0.02
T35*	35	2000	11	80.5	117	22.8	1.6	0.01
T36*	23	2000	11	64.5	110	39.3	1.69	0.05
T37*	14	2000	11	62	110	42	1.74	0.24
T54	45	5000	11	95.4	110	5.1	2.58	0.06
T55	35	5000	11	94.2	113	6.53	3.09	0.06

Note: Dissolved oxygen levels of +15mg/L could not be maintained

Source: BaseMet, 2016

At finer particle sizings, difficulties were encountered maintaining dissolved oxygen (DO) levels above 15 mg/L, despite oxygen sparging at each reading. It appears that this lower DO resulted in reduced gold extractions at sizings of approximately 80% passing 35µm and finer. For test 55, the DO was maintained above 15 mg/L, but gold extraction was no better than test 54, which had the same cyanide concentration but a slightly coarser particle sizing of approximately 80 percent passing 45µm.

Sizings coarser than approximately 80 percent passing 45 micrometres (65 µm and 138 µm K80) also had poorer gold recoveries than the equivalent test at approximately 80 percent passing 45 micrometres K80. Thus, 45 micrometres K80 appeared to be the optimal particle sizing for this sample. Further optimization test work and mineralogy would be required to refine the leaching extractions of of gold in the samples with finer grinds.

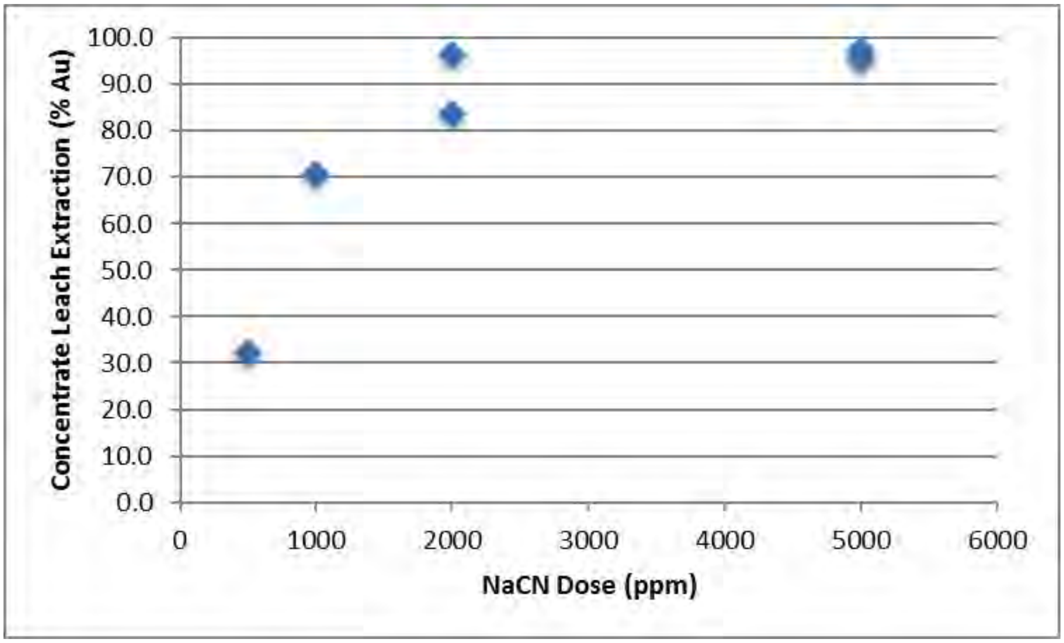


Figure 24: Gold Recovery from Concentrate Leach at Varying Cyanide Doses
Source: JDS, 2017

A number of other optimization tests were undertaken including an assessment of the cyanide dose on the leach recovery and tail residue grade. From the results performed on this concentrate sample reground to approximately 80 percent passing 45 micrometres, with and without CIL, tail residues increased once the NaCN dose used decreased below 2000 ppm. A slight improvement in recovery and tail grade was observed when a NaCN dose of 5000 ppm was used. Further testwork would be required to evaluate the 5000ppm result, however the average cyanide consumption increased to 2.7 kg/t from 1.6 kg/t for the 2000 ppm NaCN tests. At the time, trade-off calculations indicated that increasing the sodium cyanide dose from an optimized 2000 ppm result to 5000 ppm was not an economical and consequently 3000 ppm NaCN was selected for the variability testwork. Additional testwork would be required to further refine the 2000 – 5000 ppm result.

A summary of results using other cyanide bottle roll test conditions on the Test 17 flotation concentrate are as follows:

- Pre-oxidation, involving 12 hours of oxygen sparging prior to the test, did not improve extraction
- The addition of lead nitrate did not improve gold extraction in the range 20 to 250 g/t.
- The use of cement instead of lime to modulate pH had a minor adverse effect on gold extraction. Cement consumption was much higher than lime consumption.

- Higher pulp densities, as compared to 33 percent by weight, resulted in relatively decreased gold extractions.
- Lowering the cyanidation concentration from 2000 ppm resulted in much lower gold recoveries and increased tail grades.
- Lowering the pH to 10 improved gold extraction by about 0.7 percent. Raising the pH lowered gold extraction by about 7 percent.
- Raising the cyanide concentration to 5000 ppm increased gold extraction by about 2.7 percent, despite the test being at about pH 12. Cyanide consumption was substantially higher at this concentration, however.

Variability Testwork

A flotation test was conducted on each of the process variability composites at a nominal grind size of approximately 80 percent passing 240 micrometres. Based on the flotation optimization testwork, the tests did not include gravity concentration. Potassium Amyl Xanthate (PAX) was used as the collector and Methyl IsoButyl Carbonyl (MIBC) as the frother. Rougher flotation gold extraction, weighted for the LOM mine plan, averaged 97.7 percent across the 61 samples with a mass pull of approximately 11.2 percent. The extraction of gold from the flotation concentrate cyanidation stage alone had a weighted averaged of 96.3 percent.

Figure 25 illustrates the rougher mass pull (%) and gold recovery for the 61 variability samples.

Average rougher recovery, when weighted for gold grade, was 98.1 percent across the 61 samples. Average rougher recoveries, weighted for head grades, for silver and copper measured 84.3 and 98.5 percent, respectively. About 2 percent recovery difference was also observed between the rougher and cleaner concentrate for these elements.

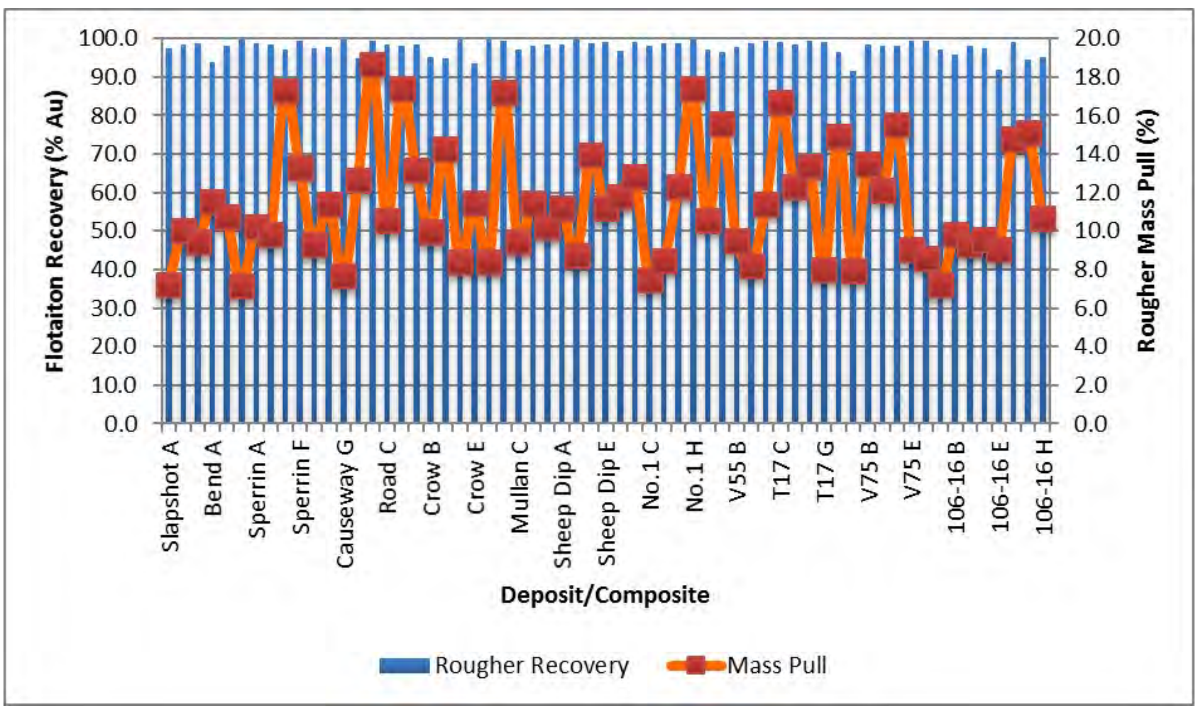


Figure 25: Mass Pull Vs. Au/Ag Recovery Curve

Source: BaseMet, 2016

Recombined rougher concentrate from each of the flotation variability composites was tested for amenability to cyanidation. A single Carbon-In-Leach (CIL) Cyanidation bottle roll test was conducted on each of the composites. Each rougher concentrate sample was reground to a nominal grind size of approximately 80 percent passing 45 micrometres prior to the bottle roll test. Leach recoveries for Au and Ag for the different veins are shown in Figure 26.

Relative silver and copper extractions in the cyanidation circuit averaged 71 and 14 percent. Sodium cyanide consumption was moderate, averaging 1.3 kg/t of fresh feed.

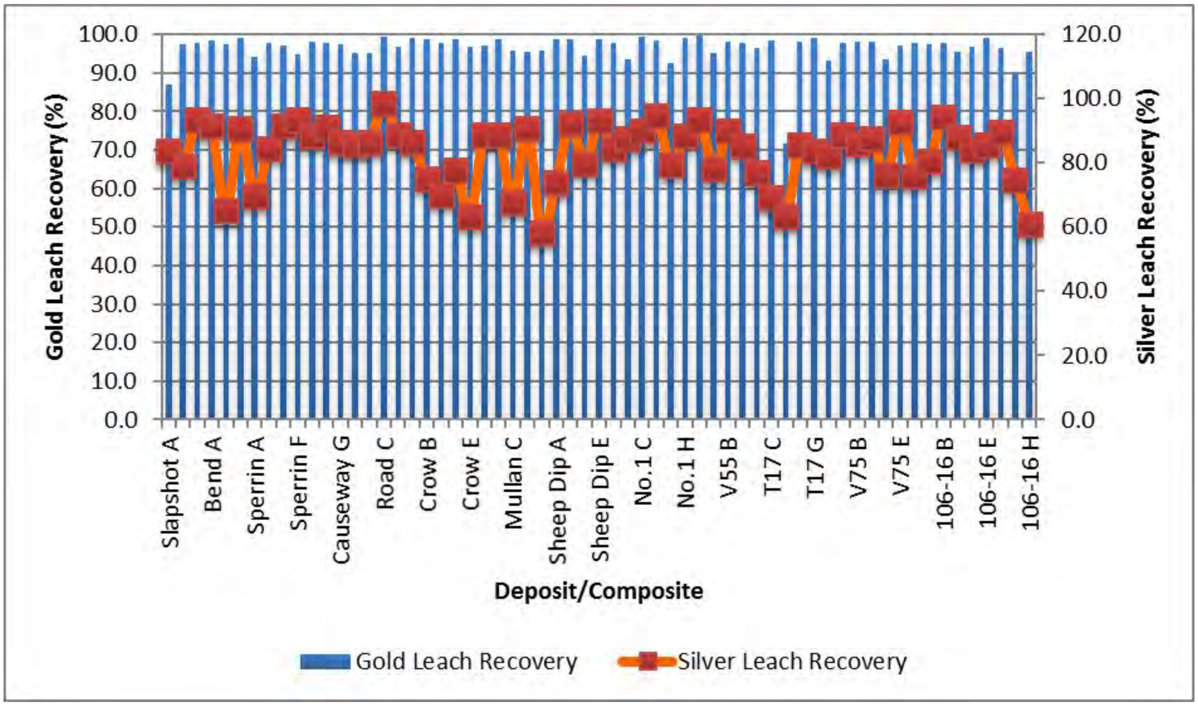


Figure 26: Au/Ag Leach Recoveries
Source: BaseMet, 2016

Feasibility Recovery Projections

The overall recoveries for gold above a 5 g/t mine cut-off range from 93.9 to 94.8 percent without solution losses. Typical operational inefficiencies can vary from 0.3 to 1 percent and the LOM mine plan weighted average gold recovery is estimated at approximately 94.3 percent. From the variability data illustrated in Figure 27, it can be seen that there is indeed a grade/recovery relationship for silver, but based on a weighted average from the mine plan, the estimated silver recovery is 57.9 percent.

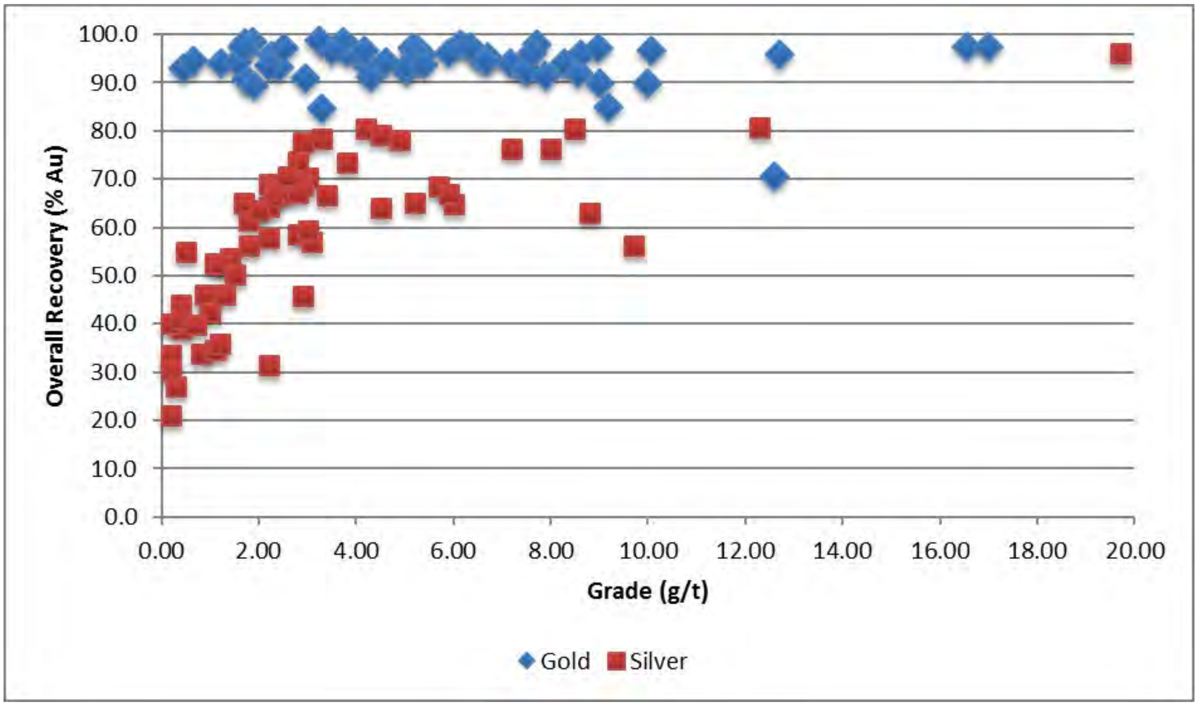


Figure 27: Grade Vs. Au/Ag Recovery Curve

Source: Data taken from BaseMet, 2016

Solid/Liquid Separation Testwork

Settling tests were conducted on rougher tailings and CIL residues from the variability program, covering 14 veins and the optimization composite #2, which was created from the comminution composites to represent the LOM grade. Results are summarized in Table 25.

Rougher tailing settling rates were relatively consistent with free settling rates measuring between 177 and 195 millimetres per minute. Compaction densities were also quite consistent measuring on average 58 percent solids.

CIL residue at finer grinds had settling rates that were slower and less consistent compared to rougher tailing settling rates. Free settling rates for the CIL residues measured between 14 and 68 mm/minute to an average ultimate compaction density of 47 percent solids.

Table 25: Summary of Settling Data

Composite ID	Product	Free Settling Rate (mm/min)	Final Density (% solids)
Opt Comp #2	Test 73 Rougher Tailings	179	55.7
	Test 76 Cyanide Residue	68	52.6
Slapshot B	Test 79 Rougher Tailings	177	56.4
	Test 78-80 Cyanide Residue	36	47.8
Bend C	Test 82 Rougher Tailings	194	57.9
	Test 81-83 Cyanide Residue	40	46.5
Sperrin B	Test 85 Rougher Tailings	189	60.3
	Test 84-87 Cyanide Residue	19	44
Causeway B	Test 89 Rougher Tailings	188	58.4
	Test 88-90 Cyanide Residue	43	48.6
Road C	Test 93 Rougher Tailings	178	57.7
	Test 91-94 Cyanide Residue	61	48.6
Crow C	Test 97 Rougher Tailings	182	57.5
	Test 95-99 Cyanide Residue	20	44
Mullan C	Test 102 Rougher Tailings	181	55.6
	Test 100-104 Cyanide Residue	14	48.5
Sheep Dip C	Test 107 Rougher Tailings	191	56.9
	Test 105-108 Cyanide Residue	14	43.7
No.1 D	Test 102 Rougher Tailings	194	57.7
	Test 109-115 Cyanide Residue	56	47.9
V55 B	Test 117 Rougher Tailings	195	57.6
	Test 116-118 Cyanide Residue	53	48.4
T17 D	Test 121 Rougher Tailings	193	58.8
	Test 119-124 Cyanide Residue	29	47.7
V75 D	Test 128 Rougher Tailings	184	58.9
	Test 125-130 Cyanide Residue	30	47.7
106-16 F	Test 136 Rougher Tailings	184	58.8
	Test Cyanide Residue	18	46.6

Source: BaseMet, 2016

Oxygen Update Rate Determination Testwork

Reground combined rougher/scavenger concentrate was utilized to determine the oxygen uptake characteristics of the mineralization. Oxygen Consumption results are displayed in Table 26.

Although the oxygen consumption within the first two hours appears to be low, it is more than likely significantly higher as the initial dissolved oxygen measurements at time zero for these intervals was less than 1 mg/L. A satisfactory dissolved oxygen level at time zero for the intervals was not achieved until after 3 hours. The sample exhibits a relatively high oxygen consumption with demand not decreasing until after 4 hours.

Table 26: Oxygen Consumption in Leach

	Hours							
	0	1	2	3	4	5	6	24
Oxygen Consumption (mg/L/hr)	0.007	0.002	0.11	0.177	0.181	0.156	0.147	0.116

Source: BaseMet, 2016

Detoxification Testwork

As part of the 2016 BaseMet test programs, samples were sent to Kemetco Research Inc., Vancouver (Kemetco), to optimize the cyanide detoxification process and deliver representative treated detox effluent samples for environmental testing on two grades, high grade (HG) and LOM grade (LG), of flotation concentrate.

The two samples were each ground and subjected to a carbon in leach process (CIL) using representative test conditions. The relatively higher NaCN addition to the leach and higher sulphide levels in the concentrates resulted in relatively higher levels of sulphate, cyanate and thiocyanate in solution. Consequently, direct detoxification of the CIL tailings resulted in elevated levels of sulphate above 5000 ppm, causing consolidation issues with the paste fill.

The barren leach slurry tailings resulting from each leach was then diluted to 20 percent solids and decanted, to mimic the introduction of a cyanide recovery thickener in an effort to reduce the level of sulphate in the CIL tailings and eliminate the paste fill consolidation issue. This step produced both a separate supernatant solution and thickened slurry sample for detox testing. The test products from the HG concentrate were split into smaller test lots and used for detox optimization testing, (due to sufficient mass being available) and test products from the LG concentrate were used for confirmation of the process parameters through continuous bulk testing under optimized conditions. In total, 14 bench scale detoxification tests were performed. The SO2/O2 cyanide destruction process was successful in reducing the levels of CN WAD to the target of less than 5.0 mg/L for all streams and the principal results obtained from the detox testing were as follows:

- HG tailings slurry sample: CN WAD was reduced to 0.277 ppm, Cu to 0.16 ppm, and Fe to 0.51 ppm using a 5:1 SO2:CNWAD ratio, 15 ppm Zn and pH 9, with a 150 minute retention time. Copper did not work as effectively as zinc as a catalyst for this feed.
- HG solution sample: CN WAD was reduced to 0.313 ppm and Cu to 4.37 ppm using a 5:1 SO2:CNWAD ratio, 15 ppm Cu and pH 8.5, with a 150 minute retention time. Replacement of copper with zinc as the catalyst may further improve results.
- LG slurry: CN WAD was reduced to 0.651 ppm, Cu to 0.5 ppm and Fe to 11.9 ppm using a 5:1 SO2:CNWAD ratio, 30 ppm Zn and pH 9, with a 120 minute retention time.
- LG solution: CNWAD was reduced to 0.739 ppm, Cu to 3.22 ppm and Zn to 0.12 ppm using a 5:1 SO2:CNWAD ratio, 15 ppm Cu and pH 8.5, with a 150 minute retention time.

Overall the detox optimization tests identified suitable conditions for consistently meeting target levels for CN WAD removal from this challenging effluent. Replacement of the copper catalyst with zinc improved the slurry detox efficiency; however, the effect of the zinc catalyst on the solution detox was not investigated due to sample restrictions, and is recommended for future work.
If significant changes to the process chemistry are needed in the future, particularly if any treated effluent is recycled back into the circuit, additional detox testing would be advisable, potentially extending to Locked-Cycle testing of detox in combination with CIL testing.

12.4.5 Ore Sorting (2016-2017)

Altogether, 3 ore sorting test programs have been undertaken so far with the direction of Dalradian, using both dual energy x-ray transmission (XRT) and laser sensors, and the following is a summary of the results.

“With an XRT sensor, the material to be sorted is exposed to the x-radiation while it is moving along a conveyor type belt. The x-ray sensor system below the material produces a digital image of the material, using two different energy bands. The x-ray attenuation through the material is different within the two bands and depends on both, the material thickness and atomic density. Special transformation of the attenuation images of the two bands classifies each pixel according to the measured atomic density. Because the x-rays pass through the particles and are a measure of the attenuation through the entire rock, XRT separation is almost independent of surface quality of the material or its moisture. Surface properties such as color and texture and/or contaminations such as dirt, dust, paint, etc. are mainly irrelevant to the detection. In laser sorting technology, the laser beam scans the surface of the particles. The degree of the diffusion or the "scattering effect" of the laser beam on the surface of the rocks may vary for different mineral types. This "spot size" is measured and indicates differences of the material structure." (Outotec Report, December 2, 2016)

An ore sorting amenability program was initially undertaken at the Steinert sorting facility, Kentucky, USA in 2016, where 26 samples were tested. Rocks varying in size from -120+20 millimetres were selected from the bulk vein samples shipped to BaseMet Labs for the feasibility study testwork, to create two samples each from V75, T-17, No.1 and the 106-16 veins. Another 8 samples of psammite and 10 of semi-pelite were sent to represent the dominant waste rock types. After each vein rock was scanned and each waste composite was scanned, the sorting algorithms were developed. "Bucket tests" were run through the sorters and the results combined to show that with little optimization, the sulphide bearing mineralization contained usable differences in x-ray absorption while the laser sensor could easily detect the quartzite inclusions; such that the feed grade of approximately 4.7 g/t Au was increased to 10.55 g/t Au in approximately 42 percent of the sorter feed, representing a gold recovery to the sorter concentrate of approximately 93 percent. The waste rejects from the combined XRT/Laser sorteing bucket test were assayed at 0.58 g/t Au. Clearly this initial sorting test indicated that the deposit mineralization was potentially amenable to ore sorting.

Two larger bulk tests were then undertaken, one at Steinert and one at Outotec/Tomra in Wedel, Germany.

Steinert was provided with a bulk sample of mine development material in seven large polypropylene woven bags with nominal one tonne capacity. This material was screened to -50+10mm and washed prior to sorting. In this test, 829 kilograms of screen discharge was tested through a series of sorters starting with the combination sorter (XRT/Laser/3D), then the waste stream from that sorter was sent through an XRT sorter and then the waste stream from that was sent through a laser sorter. The combined results showed that a feed grade into the combination sorter of approximately 3 g/t Au could be upgraded to 4.3 g/t Au with the waste grading 0.64 g/t Au. This would represent a gold recovery through the combination of sorters at approximately 92.4 percent in 64 percent of the sorter feed mass. However, with this testing, there was insufficient information about the fines material that was screened and the proportions thereof that were tested, and consequently this result can only be used as indicative.

The second bulk test was undertaken at Outotec/Tomra. 8.5t of mine development sample grading 10.6g/t Au was crushed and screened to -104 millimetres to +12 millimetres at the Curraghinalt site. The fines material (-12 mm) representing 49.5 percent of the mass, was assayed at 24.6 g/t Au. The screen oversize (-104+80 mm) represented approximately 34 percent of the screen feed and assayed at 2.3g/t Au, while the midsize (-80+12 mm) representing approximately 16.8 percent of the screen feed, assayed at 12.8 g/t Au. It is suggested that with this mineralization there may be a case for coarse beneficiation, even without ore sorting. The coarse and mid sized fractions were sent to the Tomra testing centre and weighed approximately 4.5 tonnes. At the test centre the sample was further screened and washed into the following size fractions: Washing fines, <15 millimetres, +15-35 millimetres and +35 millimetres. Washing fines and the below 15 millimetres fractions were dried, weighed and assayed, however they were not sorted. Sorting was undertaken on the fractions -35+15 millimetres and +35 millimetres. Each screened fraction was split to create six sub samples in total and these were sorted using different sorter settings to evaluate the impact of different thresholds on the sorting performance for the different size fractions. These ore sorting test results are displayed in Table 27.

The XRT stages alone achieved gold recoveries between 95.6 percent and 98.7 percent. These results were achieved with a waste removal average of approximately 59 percent of sorting feed mass. This would indicate that there is a strong correlation between sulphide detection and gold association for this mine development sample. The laser scavenger step was able to increase the gold recovery close to 100 percent. However the waste removal decreases to an average below 50 percent. It is recommended moving forward that the necessity of a scavenger step be assessed in a trade-off.

Table 27: Ore Sorting Response on Different Size Fractions with Different Thresholds and Sensors

Test	Sensor	Size (mm)	Product (Concentrate)			Waste (Tails)		
			kg	Mass	Au g/t	kg	Mass	Au g/t
1.1	XRT	15-35	168	32%	27.31	354	68%	0.67
1.2	Laser	15-35	116.3	34%	1.64	225	66%	0.17
2.1	XRT	15-35	206	42%	23.04	286.5	58%	0.39
2.2	Laser	15-35	81.1	29%	0.83	200	71%	0.21
3.1	XRT	15-35	396	48%	23.59	435	52%	0.27
3.2	Laser	15-35	105.1	24%	0.47	327	76%	0.21
4.1	XRT	35	219	33%	21.7	445.5	67%	0.49
4.2	Laser	35	137.3	31%	1.3	308.5	69%	0.12
5.1	XRT	35	291.5	42%	17.94	404.5	58%	0.30
5.2	Laser	35	133.2	33%	0.75	265.5	67%	0.07
6.1	XRT	35	382.5	47%	16.14	430	53%	0.36
6.2	Laser	35	112.4	27%	0.67	311.5	73%	0.25

Sample to wash fines: 118 kg, 22.10 g/t Au
Sample to -15mm: 530 kg, 11.36 g/t Au
Source: Outotec, 2016

12.4.6 Bulk Stope Sample Processsing (2017)

During 2016, Dalradian undertook test mining with development and stope material made available for processing in May, 2017. This material was shipped from Northern Ireland to the Kettle River processing facility in the USA. The material was processed through the plant in three batch campaigns, defined as Lot 1, 2 and 3. Lots 1 and 2 contained development material, and Lot 3 contained material from the Test Stopes 1, 2 and 3.

The Kettle River processing plant flowsheet included:

- Primary jaw crushing,
- Secondary crushing in closed circuit with a vibrating screen,
- Primary grinding by rod mills, operated in parallel,
- Secondary grinding by ball mills,
- Flash flotation,
- Flotation concentrate leaching,
- Flotation tailings leaching, through CIL – concentrate leach tails are added to the feed of this circuit, and,
- Loaded carbon from concentrate and tailings leach is combined, stripped and refined into gold doré bars.

During the trial, the Kettle River plant operation was adjusted to ensure smooth processing and was supervised by process metallurgists at all times. The plant also ran a single rod mill due to the decreased throughput of approximately 45 to 64 tph and to control the product size to the downstream processes.

Sampling of the processed material was conducted by a belt sampler and hourly, these cumulative belt samples were split, and two samples were collected.

There were minor processing challenges with the Lot 2 material, and most of the limitations of were due to high fine ore bin levels rather than any negative metallurgical effects in the plant. Some qualitative observations of the material being processed was that it appeared to have a higher clay content, however, this did not seem to increase hang ups in the chutes, and although there were a few days with high precipitation where this was a potential issue, multiple inspections of the chutes indicated that there was not a challenge with material hang up. The fines, clays and precipitation mix did cause issues with conveyer tracking, spillage and issues with material wrapping around, clogging the rollers and take-up tower; which did cause a number of crushing plant shutdowns while these items were addressed. This is a consideration for the conveyor and crushing plant design moving forward. Additionally, the material appeared to be “slabby” and rectangular, which is a consideration when selecting screens for particle size separation, but preferred for ore sorting applications.

There were very few processing challenges with the Lot 3 material other than those already noted. The consumption of reagent was observed to be similar to that predicted in the 2016 Feasibility Study (FS) and observed in the laboratory testwork, while the average overall recovery was slightly higher than expected at 95.9 percent Au when compared to the predicted 94.3 percent gold in the feasibility study. This may have been due to the leaching of the flotation tails in the Kettle River flowsheet which is presently not in the proposed Curraghinalt flowsheet.

Table 28: Summary of Campaign Weights and Assays

	Total Weight (wet tonne)	Average Moisture (%)	Total Weight (dry tonne)	Final Grade (g/t Au)
Lot 1 Dev	2,489	4.20%	2,385	7.37
Lot 2 Dev	9,321	5.80%	8,779	7.03
Lot 3 Stope	3,388	5.20%	3,212	15.70

Source: Canenco, 2017

12.4.7 Flotation Only Flowsheet Testwork (2017)

The objective of this Curraghinalt metallurgical testwork program was to further optimize the developed process, and produce a flotation concentrate for downstream testing, including smelter testing; and focused on a process including flotation only, without cyanidation leaching.
Testing and flowsheet optimization focused around one bulk composite, targeting life of mine gold feed grade. Testing included rougher flotation evaluating grind size, cleaner flotation evaluating regrind size, and the investigation into a selective cleaning circuit to produce a high-grade gold-copper concentrate. A test, processing 1.2 tonnes of material, was subsequently conducted to produce concentrate and products for additional testing.

Optimization testing showed finer primary grinding potentially resulted in marginally higher gold rougher flotation recovery but additional testwork would be recommended to confirm this. The primary grind size K80 of 106 micrometres was chosen, which achieved a gold recovery of 98 percent to the combined rougher and gravity concentrate.

The effect of regrinding was established to be quite limited in bulk sulphide cleaning flotation. With this flowsheet, the upgrading of gold is dependent on the sulphide content in the sample, as gold will respond to flotation similar to sulphide mineral, particularly pyrite, under non-selective conditions. The coarsest regrind of 45µm achieved the greatest performance, recovering 96 percent of the gold to the combined gravity + cleaner concentrate at a gold grade of 199 g/t.

An alternative selective flowsheet was investigated to produce a high-grade gold and copper concentrate. The regrind size was decreased significantly to approximately 80 percent passing 15 to 23 micrometres in order to liberate gold from pyrite, as well as using selective collector and elevated pH with lime in the cleaning stages. Initial testing with this schematic indicated the production of a high-grade gold concentrate is possible, although at lower gold recovery. Grades of about 1610 g/t gold and 29 percent copper were produced recovering between 68 to 74 percent gold and 54 to 59 percent copper. This flowsheet also included a scavenging or recleaning circuit to recover a low-grade gold concentrate. An additional 12 to 23 percent of the gold was recovered into this concentrate grading 224 to 243 g/t gold. Additional testing including closed circuit tests would be required to refine the selective flowsheet design for optimized results.

Bulk testing on 1185 kilograms of material produced 7.3 kilograms of gravity concentrate, and 8.7 kilograms of final 3rd cleaner flotation concentrate. The combined gold grade and recovery for these products were 472 g/t at 81 percent recovery. The first cleaner concentrate + gravity concentrate graded about 217 g/tonne gold and recovered 95 percent of the gold. Copper in the flotation concentrate measured 15.4 percent copper, at a recovery of about 68 percent. than reference testing, which is thought to be a partial result of a slightly coarser regrind (23µm K80). A calculated recombined gravity + cleaner 1 concentrate and cleaner scavenger concentrate (Products 1 to 5) graded approximately 217 g/t gold and recovered about 95 percent of the gold in the feed.

12.5 Other Design Considerations

12.5.1 Mercury

Only traces of mercury have been observed in the composites sampled. Typically, if the mercury level is below 50 ppm in the process plant feed, in gold districts where mercury is present, it is not expected to be an issue downstream, either as a competitor for gold in the extraction process or for health reasons. 50 ppm is an experience-based guideline as it is dependent on the extraction potential of the mercury and its geological form. Above 50 ppm, mercury mitigation actions may be required, however, it is understood that the Curraghinalt process facility has included these abatement processes in the design.

12.6 Relevant Results

The results from the previously reported metallurgical test programs concluded with the following flowsheet:

- Primary grind to approximately 80 percent passing 240 micrometres, followed by flotation and CIL of the rougher concentrate ground to approximately 80 percent passing 50 micrometres.

Based on an analysis of the metallurgical results, the gravity concentrator was removed from the grinding circuit during the design phase as it did not benefit gold recovery. Cleaner flotation was also removed from the process flowsheet as it did not benefit gold recovery.

12.6.1 Process Design Criteria and Metallurgical Projections

The process plant design criteria and metallurgical projections developed for the selected option were based on an analysis of the test work completed between in 2015 and 2016. This is detailed in the following sections.

12.6.2 Comminution Design Criteria

The design was based on the 75th percentile of the available results. A summary of the key comminution design criteria is presented in Table 29. The comminution design criteria selected shows very moderate values for comminution.

Table 29: Key Comminution Design Criteria

Description	Units	Value	Source
Bond Ball Mill Work Index	kWh/t	13.7	BL0075 (BaseMet, 2016)
Bond Abrasion Index	g	0.137	BL0075 (BaseMet, 2016)
SMC	Axb	54.9	BL0075 (BaseMet, 2016)

Source: JDS, 2017

12.6.3 Flotation Design Criteria

Flotation results from the 2016 feasibility study testwork were used to estimate flotation recovery. Gold grade vs. rougher recovery curves were created from test data and empirical equations were then generated to predict gold and silver recoveries.

A summary of the key process design criteria for the flotation area is presented in Table 30. A flotation feed F_{80} of approximately 240 um was selected.

Tests 59 to 61 incorporated only 10 percent of the PAX dosage of other tests; 4.2 g/t instead of 42 g/t. Despite this reduction in dosage, gold recoveries were similar to other tests.

Table 30: Key Flotation Circuit Design Criteria

Description	Units	Value	Source
Flotation Feed F80	µm	240	BL0075 (BaseMet, 2016)
Flotation Circuit Recovery			
Au	%	97.7	BL0075 (BaseMet, 2016)
Ag	%	69.6	BL0075 (BaseMet, 2016)
Flotation Mass Pull	%	11.2	BL0075 (BaseMet, 2016)
Flotation Reagent Dosage			
PAX	g/t	42	BL0075 (BaseMet, 2016)
MIBC	g/t	28	BL0075 (BaseMet, 2016)

Source: JDS, 2017

12.6.4 Regrind Design Criteria

A summary of the key process design criteria for the concentrate regrind is presented in Table 31. A final regrind size of approximately 80% passing 50um was selected. The Bond Ball Mill Work Index was used to size the regrind mill for the Curraghinalt process facility.

Table 31: Key Regrind Circuit Design Criteria

Description	Units	Value	Source
Regrind Feed F_{80}	µm	240	BL0075 (BaseMet, 2016)
Regrind Size P_{80}	µm	50	BL0075 (BaseMet, 2016)
Bond Ball Mill Work Index	kWh/t	13.7	BL0075 (BaseMet, 2016)

Source: JDS, 2017

12.6.5 CIL Design Criteria

Cyanidation results from the 2016 BaseMet test program were used to develop the leach circuit design criteria. Recovery projections for Curraghinalt are based on all tests conducted at a grind size of approximately 80 percent passing 50 micrometres. Further test work is recommended to confirm recovery projections and assumptions for Curraghinalt. A summary of the key process design criteria for the leach area is presented in Table 32.

Table 32: Key Leach Circuit Design Criteria

Description	Units	Value	Source
CIL Feed F_{80}	µm	50	BL0075 (BaseMet 2016)
CIL Retention Time	hrs	48	BL0075 (BaseMet 2016)
Leach Circuit Recovery			
Au	%	96.3	BL0075 (BaseMet 2016)
Ag	%	82.8	BL0075 (BaseMet 2016)
Oxygen Consumption	t/d	4.2	BL0075 (BaseMet 2016) and Design Criteria
Lime Consumption	kg/t	0.1	BL0075 (BaseMet 2016)
Cyanide Consumption	kg/t	1.23	BL0075 (BaseMet 2016)

Source: JDS, 2017

12.6.6 Cyanide Destruction Design Criteria

The cyanide destruction data is limited. Therefore, industrial standards were used to develop preliminary reagent requirements and operating conditions for the circuit. Further test work is recommended to confirm reagent requirements for the other deposits and to more fully define the process variables. A summary of the key process design criteria for cyanide destruction is presented in Table 33.

Table 33: Key Cyanide Destruction Circuit Design Criteria

Description	Units	Value	Source
Detox Retention Time - Slurry	min	120	Kemetco (2016)
Detox Retention Time - Solution	min	150	Kemetco (2016)
Slurry Operating pH - Slurry	-	9	Kemetco (2016)
Slurry Operating pH - Solution	-	8.5	Kemetco (2016)
SO_2 Consumption - Slurry	g SO_2 / g CNWAD	5:01	Kemetco (2016)
SO_2 Consumption - Solution	g SO_2 / g CNWAD	5:01	Kemetco (2016)
Zinc Concentration - Slurry	mg/L	30	Kemetco (2016)
Copper Concentration - Solution	mg/L	15	Kemetco (2016)

Source: JDS, 2017

12.7 Preliminary Recovery Estimate

The recoveries used were estimated based on the methodology discussed in the previous section. Table 34 presents the recovery estimates used for economic projections.

Table 34: Preliminary Recovery Projections

Recovery	Au (%)	Ag (%)
Flotation Recovery	97.7	69.6
Leach Recovery	96.3	82.8
Overall Recovery	94.3	57.6

Source: JDS, 2017

12.8 Future Metallurgical Work

Substantial testing has been undertaken on the Curraghinalt mineralization. Additional testing that may be beneficial to the Project includes:

Comminution. It is recommended that additional Bond Work Index tests are undertaken at a finer closed screen size to confirm energy requirements around the regrind size. It is recommended that coarse beneficiation and ore sorting should be further assessed as based on the current testwork there is significant potential for these processes to provide additional value to the project.

Flotation. Additional testwork at lower dosages of reagent should be undertaken to further refine the operating cost through the next level of engineering. It is suggested that coarse particle flotation should also be assessed as it may reduce footprint and add value to the project.

Solid Liquid Separation. Although there are a number of solid-liquid separation tests, it is highly recommended that in the next phase of engineering, additional solid-liquid testing be undertaken to confirm the thickening, rheology and filtration design parameters. Thickeners have been sized on static settling tests and it would be beneficial to undertake dynamic testing prior to placing orders to confirm sizing parameters.

Detoxification. Additional oxidation test work should be undertaken to optimize the cyanide detoxification process conditions including the use of zinc sulphate as a catalyst on the solution detox process. If significant changes to the process chemistry are required in the future, particularly if any treated effluent is recycled back into the circuit, additional detox testing would be advisable, potentially extending to locked-cycle testing of detox in combination with CIL testing.

Bulk Material Handling. In the next phase of engineering, the calculated volumes in stockpiles and material flow characteristics assumed through chutes, could be further refined based on results from bulk material testwork.

13 Mineral Resource Estimate

13.1 Introduction

This section describes the methodology and summarizes the key assumptions considered to prepare the geology and mineral resource model. In the opinion of qualified person for the mineral resource, the resource evaluation reported herein is a reasonable representation of the global gold mineral resources of the Curraghinalt gold deposit at the current level of sampling. The mineral resources have been estimated in conformity with the widely accepted CIM *Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines* and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. Mineral resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

The construction of the mineral resource model was a collaborative effort between between Dalradian and SRK staff. Dalradian provided the technical support and assistance related to the drilling database and geological modelling. Dr. James Siddorn, PGeo (APGO#1314) provided insight to offsetting faults and the structural geology controls on gold mineralization. The data review and geological modelling updates and modifications were performed by Mr. Dominic Chartier, PGeo (OGQ#874, APGO#2775). Grade estimation and associated sensitivity analyses, and mineral resource classification were performed by Dr. David Machuca, PEng (PEO#100508889) under the supervision of Dr. Oy Leuangthong, PEng (PEO#90563867). The overall process was reviewed by Mr. Glen Cole, PGeo (APGO#1416).

An additional 145 core boreholes for 46,487 metres and 181 underground channels/faces for 535 metres were drilled and / or sampled since the 2016 mineral resource model was disclosed publicly by Dalradian in a news release on May 5, 2016.

Leapfrog Geo™ software (version 4.2.3) was used to construct the geological solids. SRK used a combination of Datamine Studio RM software (version 1.2.45.0), Leapfrog Geo™, and GSLib™ software to prepare assay data for geostatistical analysis, construct the block model, estimate gold grades, and tabulate mineral resources. The mineral resource model considers 731 core boreholes (178,130 metres) and 678 underground channels/faces (2,397 metres). The final database for this mineral resource model has an effective date of March 20, 2018.

The Mineral Resource Statement was prepared by Drs. Leuangthong and Machuca, and Mr. Chartier, who are independent qualified persons pursuant to National Instrument 43-101. The effective date of the Audited Mineral Resource Statement for the Curraghinalt deposit is May 10, 2018. It represents the ninth mineral resource evaluation prepared for the Curraghinalt gold project.

13.2 Mineral Resource Estimation Methodology

The evaluation of mineral resources for the Curraghinalt gold project involved the following procedures:

- Database compilation and verification.
- Construction of overburden, fault system, and vein wireframe models, using stratigraphy, underground mapping, and structural trends.

- Definition and construction geostatistical mineral resource domains.
- Data conditioning (compositing and capping) for geostatistical analysis and variography.
- Selection of estimation strategy and estimation parameters.
- Block modelling and grade interpolation.
- Validation, classification, and tabulation.
- Assessment of "reasonable prospects for eventual economic extraction" and selection of reporting assumptions.
- Preparation of the updated Mineral Resource Statement.

The following sections summarize the methodology and assumptions made by SRK to construct the mineral resource model.

13.3 Resource Database

Dalradian provided the mineral resource database as exports from a LogChief project database. The database used to evaluate the mineral resources of the Curraghinalt gold deposit includes 731 core boreholes (178,130 metres) and 678 underground channels/faces (2,397 metres). An additional 145 core boreholes for 46,487 metres and 181 underground channels/faces for 535 metres were drilled or sampled since the 2016 mineral resource model (Figure 28). The final header, down-hole survey, lithology intervals, and assay results were received on March 20, 2018.

The drilling and underground channel/face samples were acquired primarily by Dalradian between 2010 and 2018. Drilling and underground sampling was also completed by Ennex (1987 – 1999) and drilling by Tournigan (2003 – 2008), representing a combined total of approximately 20 percent of the available meterage. Tournigan and Dalradian used HQ and NQ-sized equipment for all boreholes. Ennex used BQ-sized equipment for underground drilling and HQ as well as NQ-sized equipment for surface boreholes. All three companies used the smaller diameter equipment for drilling in difficult ground conditions.

Collars of boreholes completed by Dalradian were surveyed by a surveyor. Elevations were adjusted to coincide with a lidar-generated surface. Down-hole surveys were completed with EZ-Trac and Reflex multi-shot tools every 6 to 3 metres. The survey of borehole collars and down-hole surveys for underground boreholes completed by Ennex is undocumented. Collars of surface boreholes completed by Ennex were surveyed initially by chaining from a baseline and later using a total station and GPS receivers of unknown type. Information about down-hole survey methods are unavailable. Collar locations of boreholes completed by Tournigan were surveyed using GPS equipment. The elevations were later adjusted to coincide with a surface generated from a lidar survey. Down-hole surveys on the first four boreholes completed by Tournigan were carried out with a Tropari instrument; all later boreholes were surveyed with a Reflex multi shot tool every 6 metres.

Based on previous project exposure and on SRK's most recent site visit completed during active drilling operations in October 2017, SRK believes that drilling, logging, core handling, core storage, and analytical quality control protocols used by Dalradian meet generally accepted industry best practices. In the opinion of SRK, the sampling preparation, security, and analytical procedures used by Dalradian are consistent with generally accepted industry best practices and are, therefore, adequate for an advanced exploration project.

SRK also carried out a detailed quality control review including the review of analytical quality control programs carried out by Dalradian from 2016 to 2018, as detailed in a memo dated May 16, 2018. Overall, SRK considers the analytical results from core and underground face/channel sampling conducted at Curraghinalt to be sufficiently reliable for the purpose of mineral resource estimation. The data examined by SRK do not present obvious evidence of analytical bias.

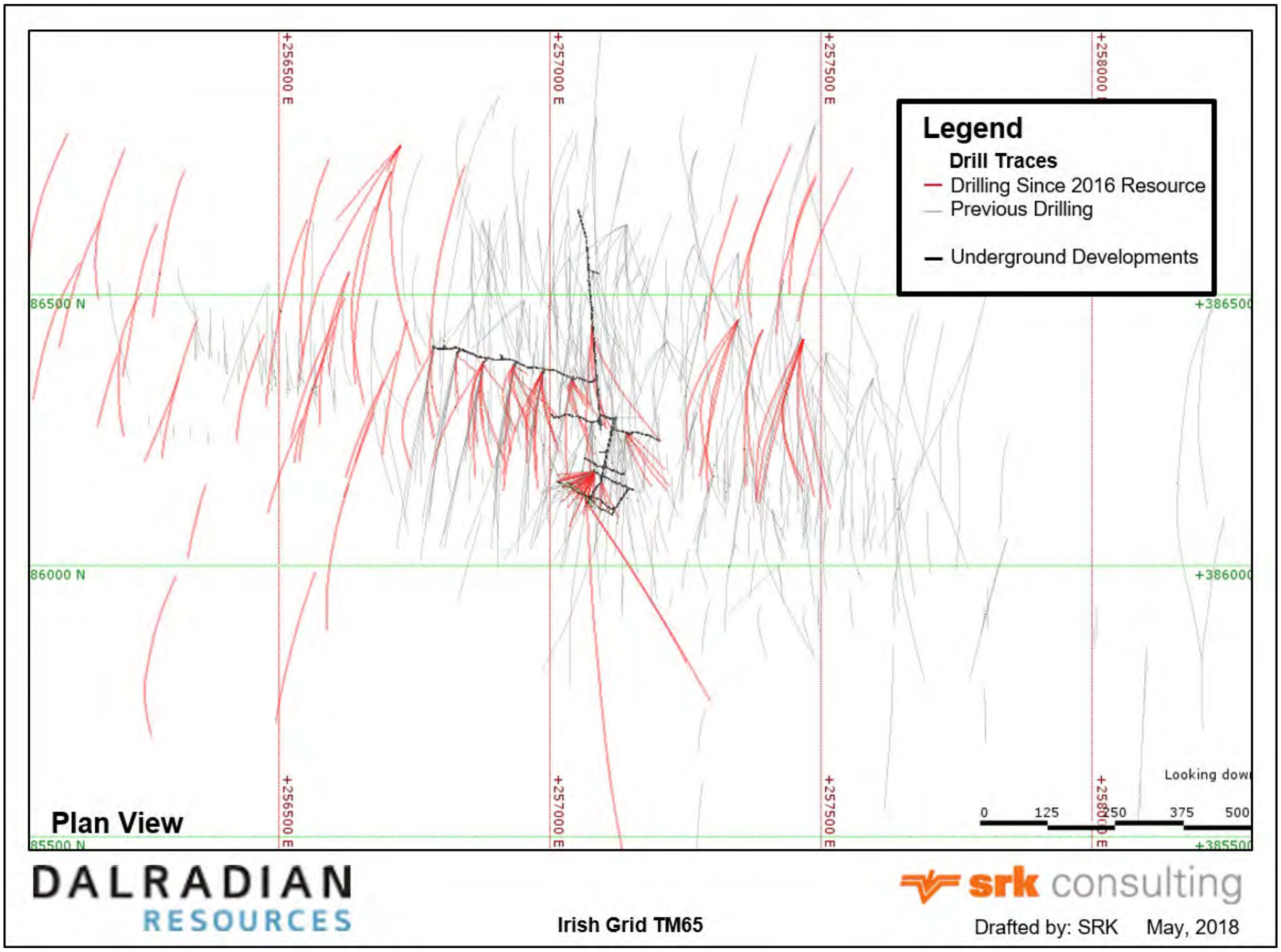


Figure 28: Plan View of Drilling and Underground Developments

13.4 Geological Interpretation and Modelling

The gold mineralization at the Curraghinalt gold project is hosted in narrow, sub-parallel auriferous quartz-carbonate-sulphide veins. Twenty-one vein wireframe domains were constructed by SRK with the assistance of Dalradian (Figure 9). The veins are cut by a network of late brittle faults. The vein wireframes were offset by the four main observed shear zones and faults (Kiln, 105, 106, and 302). The vein offset across each fault varies between one to ten metres on average. Other faults were also modelled but do not offset the vein wireframes in the model, due to either not showing any apparent offset or their lower confidence in location and offset. Further information on the mineralization and faults is presented in Section 6.3.1.

The vein wireframes were modelled on the extents of logged gold mineralized shear veins (D veins), and snapped to assays irrespective of gold grades. Other vein types such as extensional veins (C veins) can also be auriferous but were only included when immediately adjacent to, or within a modelled D vein interval. The previous resource model vein wireframes were snapped to 0.5-metre fixed length composites, composited from borehole collar to toe, prior to modelling the veins. The new vein wireframes therefore provide a better representation of true vein width, without dilution due to compositing (Figure 29).

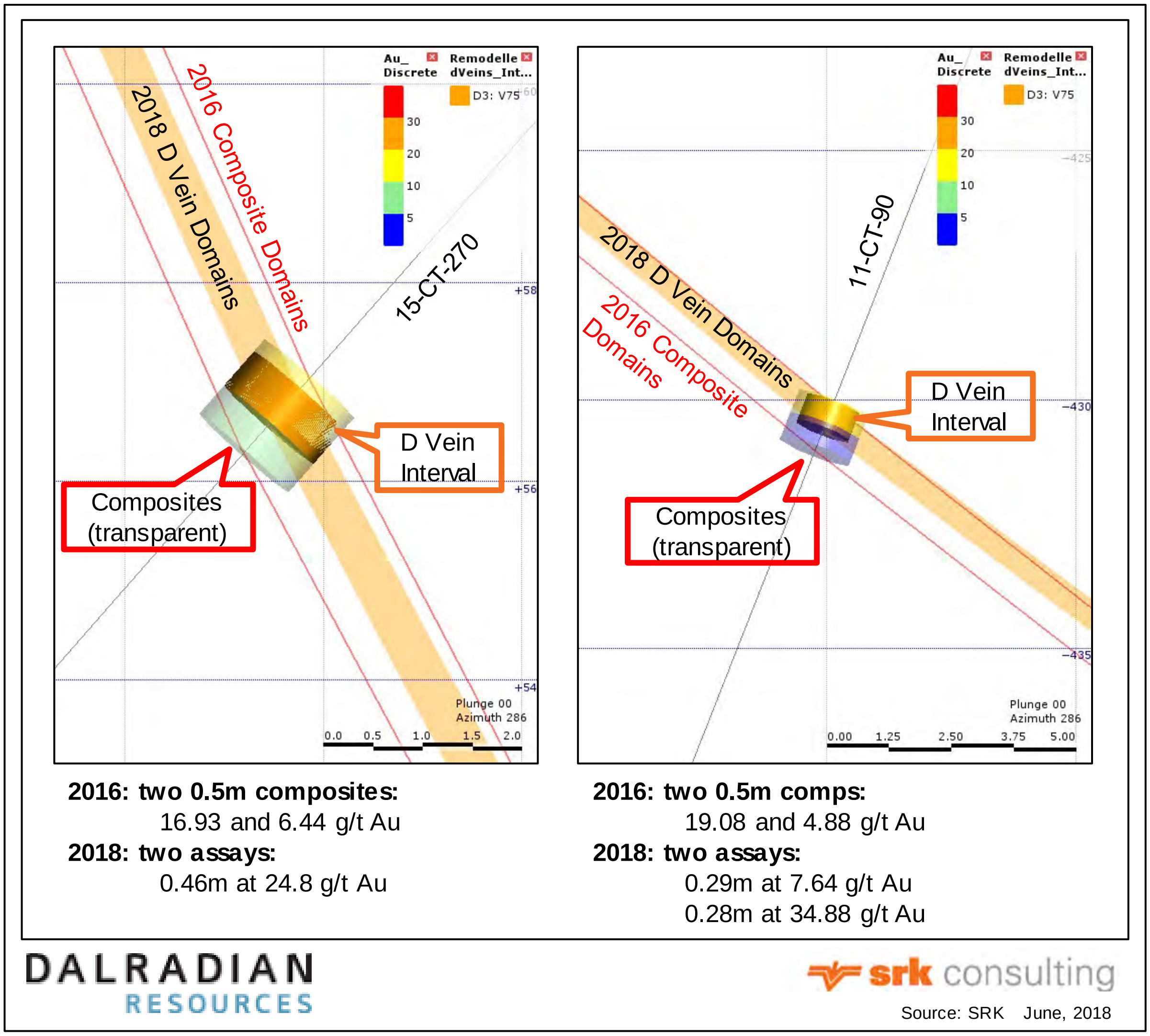


Figure 29: Vein Domaining Methodology Change Between 2016 Fixed-Length Composites and 2018 D Vein Assays.

The veins generally strike west northwest and dip moderately to steeply to the north northeast at 50 to 75 degrees. The true thickness of the modelled vein wireframes averages 0.47 metres but can locally be as much as five metres thick. The domains are listed in Table 35 with statistics on domain thickness and volume for each domain. Comparisons are made to comparative domain modelling conducted in 2016 that had been used to support the previous mineral resource model but which are now redundant. A visual comparison between the 2016 and 2018 modeled vein domains is provided in (Figure 30).

In addition to the auriferous quartz-carbonate-sulphide veins, SRK and Dalradian constructed a 3D lithology model for the purpose of geotechnical evaluation. The geotechnical lithology model focussed on delineating the spatial distribution of pelite, semi-pelite, and psammite. The pelite was further sub-divided into weak and strong pelite. Due to the large amount of geological drilling information and the need for high resolution wireframes, rapid Leapfrog Radial Basis Function (RBF) interpolation algorithms were used for 3D modelling of the various geotechnical units. The same four faults offsetting the vein model were used to offset the geotechnical lithology model. The domains were bound near surface to the bottom of an alluvium overburden surface.

Table 35: Vein Domain Thickness and Volume

2016 Domain Number	2018 Domain Code	Domain Name	Vein Domain True Thickness (m)			Vein Domain Volume (m^3)	
			Average	Difference to 2016 wf	Max	Volume	Difference to 2016 wf
9	110	Road Vein	0.28	-61%	1.39	144,520	-35%
8	120	Sheep Dip Vein	0.36	-44%	2.20	208,010	-43%
13	130	Sperrin Vein	0.31	-46%	2.53	160,050	4%
7	140	Mullan Vein	0.48	-36%	5.06	457,710	-18%
15	150	Grizzly Vein	0.34	-46%	1.45	137,800	27%
6	160	T17 Vein	0.49	-37%	3.31	429,915	-15%
12	170	V55 Vein	0.40	-38%	5.12	105,639	20%
1	180	No1 Vein	0.56	-32%	3.58	465,340	16%
14	190	Causeway	0.44	-35%	2.40	87,354	-26%
2	200	10616 Vein	0.53	-32%	4.98	717,970	14%
11	210	Slapshot	0.44	-33%	4.57	362,350	69%
11.2 (16)	211	Slapshot Splay Vein	0.18	-68%	1.19	13,483	-41%
11.1	212	Slapshot Splay 1 Vein	0.19	New	1.00	3,567	New
3	220	V75 Vein	0.42	-42%	2.75	709,170	16%
17	230	Bend Splay Vein	0.36	-42%	2.05	150,190	204%
4	240	Bend Vein	0.43	-41%	2.13	460,290	5%
5	250	Crow Vein	0.60	-31%	3.68	1,112,037	23%
18	260	Raven Vein	0.42	New	2.55	276,900	New
19	270	Harp Vein	0.36	New	1.16	336,110	New
21	280	Finn Vein	0.36	New	1.27	112,100	New
22	290	Foyle Vein	0.40	New	0.78	64,392	New
Combined			**0.47**	**-37%**	**5.12**	**6,514,897**	**21%**

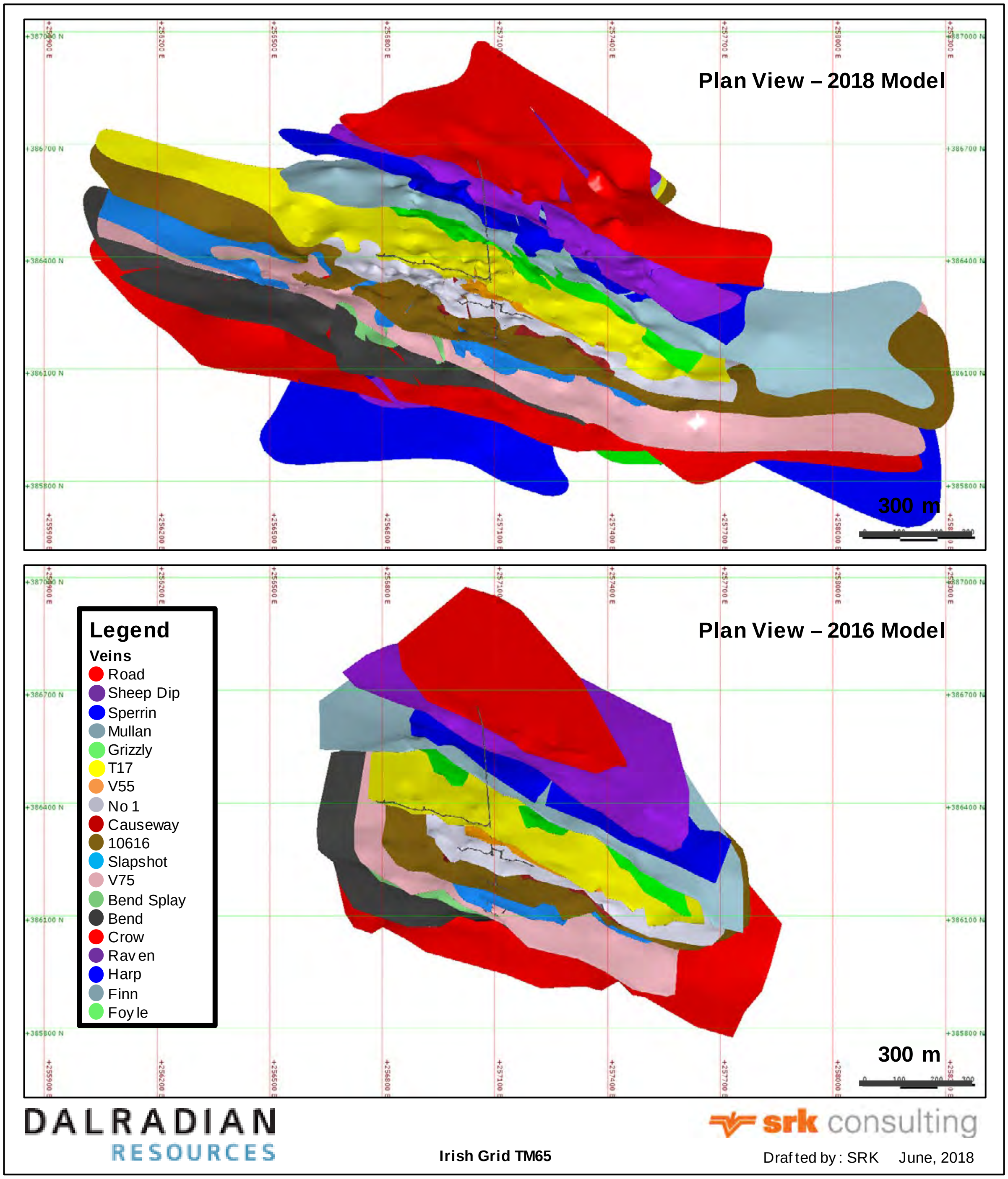


Figure 30: Comparative Plan View of 2018 and 2016 Vein Domains

13.5 Compositing, Statistics, and Capping

Table 36 and Table 37 summarize the assay statistics for the core and face samples, respectively, within the Curraghinalt gold project, tagged by mineralized domains. Table 38 summarizes the length statistics of the core sample intervals in the mineralized domains. Given that the average assay interval within the modelled veins is 0.32 metres and the relatively thin vein domain widths (see Table 38), SRK chose to composite the assays to 0.30 metres. Approximately 51 percent of assay samples within mineralized domains measure 0.30 metres or less, including 55 percent of the core samples and 28 percent of the face samples.

Table 36: Gold Assay Statistics* for Core Samples in Curraghinalt Gold Project

Code	Domain Name	Count	Mean (g/t)	Std. (g/t)	Min (g/t)	Max (g/t)	CoV
110	Road	99	12.34	21.21	0.005	98.00	1.72
120	Sheep Dip	214	13.86	25.49	0.005	192.00	1.84
130	Sperrin	190	11.01	23.86	0.005	204.80	2.17
140	Mullan	405	15.44	31.21	0.005	400.00	2.02
150	Grizzly	223	12.09	23.98	0.005	156.80	1.98
160	T17	560	23.55	45.83	0.005	501.76	1.95
170	V55	204	12.01	23.10	0.005	175.50	1.92
180	No1	717	17.48	26.18	0.005	195.00	1.50
190	Causeway	258	13.66	32.99	0.005	475.00	2.41
200	10616	870	15.32	24.66	0.005	246.62	1.61
210	Slapshot	432	10.60	19.11	0.005	188.00	1.80
211	Slapshot Splay	86	13.78	20.34	0.005	93.10	1.48
212	Slapshot Splay 1	68	19.13	22.04	0.005	88.80	1.15
220	V75	643	18.12	28.41	0.005	245.00	1.57
230	Bend Splay	244	9.34	18.33	0.005	147.50	1.96
240	Bend	270	11.64	26.47	0.005	318.00	2.27
250	Crow	491	12.16	22.51	0.005	219.00	1.85
260	Raven	147	6.79	12.71	0.005	77.60	1.87
270	Harp	27	18.45	29.04	0.51	155.14	1.57
280	Finn	12	12.14	13.01	1.36	39.80	1.07
290	Foyle	7	14.93	9.20	2.22	29.76	0.62
Total		**6,167**	**14.94**	**27.94**	**0.005**	**501.76**	**1.87**

* Statistics are length-weighted and prior declustering. Std = standard deviation; Min = minimum; Max = maximum; CoV = coefficient of variation

Table 37: Gold Assay Statistics* for Face Samples in Curraghinalt Gold Project

Code	Domain Name	Count	Mean (g/t)	Std. (g/t)	Min (g/t)	Max (g/t)	CoV
120	Sheep Dip	25	15.51	15.06	0.487	50.50	0.97
160	T17	507	30.56	58.46	0.005	492.30	1.91
180	No1	202	20.92	21.25	0.04	111.30	1.02
200	10616	155	12.32	19.86	0.03	98.80	1.61
210	Slapshot	29	13.86	12.32	0.01	66.60	0.89
211	Slapshot Splay	1	21.90	-	21.9	21.90	-
212	Slapshot Splay 1	1	24.40	-	24.4	24.40	-
220	V75	260	29.91	38.13	0.005	260.00	1.27
Total		**1,180**	**25.89**	**44.63**	**0.005**	**492.3**	**1.72**

* Statistics are length-weighted and prior declustering. Std = standard deviation; Min = minimum; Max = maximum; CoV = coefficient of variation

Table 38: Length Statistics for Core Sample Intervals in Vein Domains

Code	Domain Name	Count	Mean (m)	Min (m)	PCTL25 (m)	PCTL50 (m)	PCTL75 (m)	Max (m)
110	Road Vein	99	0.26	0.04	0.22	0.25	0.30	1.07
120	Sheep Dip Vein	214	0.34	0.04	0.25	0.28	0.40	1.12
130	Sperrin Vein	190	0.32	0.05	0.25	0.28	0.38	0.92
140	Mullan Vein	405	0.29	0.01	0.20	0.27	0.33	1.10
150	Grizzly Vein	223	0.31	0.06	0.20	0.27	0.37	1.00
160	T17 Vein	560	0.33	0.04	0.23	0.28	0.38	1.53
170	V55 Vein	204	0.33	0.03	0.25	0.29	0.40	1.01
180	No1 Vein	717	0.32	0.05	0.25	0.29	0.38	1.21
190	Causeway	258	0.32	0.03	0.25	0.27	0.35	2.00
200	10616 Vein	870	0.32	0.03	0.25	0.29	0.39	1.00
210	Slapshot	432	0.33	0.05	0.25	0.28	0.37	1.02
211	Slapshot Splay Vein	86	0.30	0.05	0.25	0.27	0.31	1.00
212	Slapshot Splay 1 Vein	68	0.31	0.11	0.26	0.30	0.35	0.60
220	V75 Vein	643	0.33	0.03	0.25	0.30	0.40	1.01
230	Bend Splay Vein	244	0.31	0.02	0.25	0.27	0.34	1.03
240	Bend Vein	270	0.31	0.07	0.25	0.27	0.32	1.12
250	Crow Vein	491	0.33	0.07	0.25	0.30	0.39	1.50
260	Raven Vein	147	0.30	0.08	0.25	0.27	0.32	1.00
270	Harp Vein	27	0.26	0.05	0.19	0.25	0.29	0.56
280	Finn Vein	12	0.26	0.08	0.17	0.24	0.30	0.59
290	Foyle Vein	7	0.24	0.15	0.17	0.26	0.27	0.30
	All Veins	**6,167**	**0.32**	**0.01**	**0.25**	**0.28**	**0.37**	**2.00**

* Min = minimum; Max = maximum; PCTL = percentile

Table 39 summarizes the uncapped and capped statistics of these composites. SRK analyzed the statistics on the basis of domains and data source, and found that the core and face composites data vary significantly in summary statistics. As such, capping was performed on a by-domain basis and considered core and face composites separately.

Probability plots and sensitivity curves were assessed in order to determine an appropriate capping value. Figure 31 shows an example of these plots illustrated for Domain 160 (T17) considering only the core composites. Appendix B contains the complete set of probability plots and sensitivity curves for all domains by data type.

In addition to gold modelling, SRK was also tasked with estimating sulphur, silver, copper, molybdenum, zinc, iron and arsenic. These secondary metals do not contribute to the economic value of the gold mineralization, but may impact on process recovery or environmental waste management. Silver, copper, molybdenum and zinc were capped by domain and by data type.

Table 39: Uncapped and Capped Gold Composite Statistics

Domain	Domain Name	Uncapped Composites* Count	Mean (g/t)	Std (g/t)	Min (g/t)	Max (g/t)	CoV	Capped Composites* Mean (g/t)	Std (g/t)	Max (g/t)	CoV
All Core Composites											
110	Road	97	12.34	20.45	0.005	90.95	1.66	10.83	16.05	50.00	1.48
120	Sheep Dip	253	13.70	23.16	0.005	192.00	1.69	12.05	16.19	60.00	1.34
130	Sperrin	215	10.96	23.33	0.005	204.80	2.13	8.87	12.76	50.00	1.44
140	Mullan	408	15.37	25.89	0.005	256.34	1.69	13.02	15.50	55.00	1.19
150	Grizzly	247	12.06	22.67	0.005	139.50	1.88	9.67	13.12	45.00	1.36
160	T17	644	23.08	41.72	0.005	391.06	1.81	20.63	29.88	120.00	1.45
170	V55	237	12.03	21.76	0.005	175.50	1.81	10.49	14.68	55.00	1.40
180	No1	783	17.47	24.09	0.005	146.00	1.38	16.13	19.34	70.00	1.20
190	Causeway	289	13.66	32.42	0.005	475.00	2.37	11.85	14.78	65.00	1.25
200	10616	948	15.32	23.16	0.005	246.62	1.51	14.90	20.52	110.00	1.38
210	Slapshot**	671	11.99	19.27	0.005	188.00	1.61	11.03	14.82	60.00	1.34
220	V75	739	18.12	26.62	0.005	229.67	1.47	16.30	19.47	70.00	1.19
230	Bend Splay	262	9.34	17.78	0.005	133.50	1.90	8.63	14.07	70.00	1.63
240	Bend	290	11.64	26.29	0.005	318.00	2.26	8.79	9.67	30.00	1.10
250	Crow	545	12.16	20.39	0.005	157.89	1.68	11.52	17.22	80.00	1.49
260	Raven	162	6.79	11.82	0.005	77.60	1.74	5.53	6.62	25.00	1.20
270	Harp	27	18.45	28.34	0.56	155.14	1.54	13.86	13.15	40.00	0.95
280	Finn	12	12.14	10.77	1.49	33.94	0.89	11.92	10.36	30.00	0.87
290	Foyle	7	14.93	8.55	2.40	29.76	0.57	13.53	6.58	20.00	0.49
	Total	**6,836**	**14.94**	**26.04**	**0.005**	**475.00**	**1.74**	**13.41**	**21.79**	**120.00**	**1.52**
All UG Face Composites											
120	Sheep Dip	52	15.51	14.29	0.487	50.50	0.92	15.22	13.69	40.00	0.90
160	T17	815	30.56	53.00	0.005	413.60	1.73	26.43	36.62	125.00	1.39
180	No1	303	20.92	20.50	0.04	111.30	0.98	19.88	17.58	60.00	0.88
200	10616	217	12.34	18.05	0.04	85.02	1.46	10.52	12.83	40.00	1.22
210	Slapshot**	58	14.20	12.21	0.01	66.60	0.86	12.88	7.92	30.00	0.62
220	V75	405	32.07	36.41	0.005	260.00	1.14	30.83	31.41	125.00	1.02
	Total	**1,850**	**26.29**	**41.22**	**0.005**	**413.60**	**1.57**	**24.19**	**31.02**	**125.00**	**1.28**

* Std = standard deviation; Min = minimum; Max = maximum; CoV = coefficient of variation

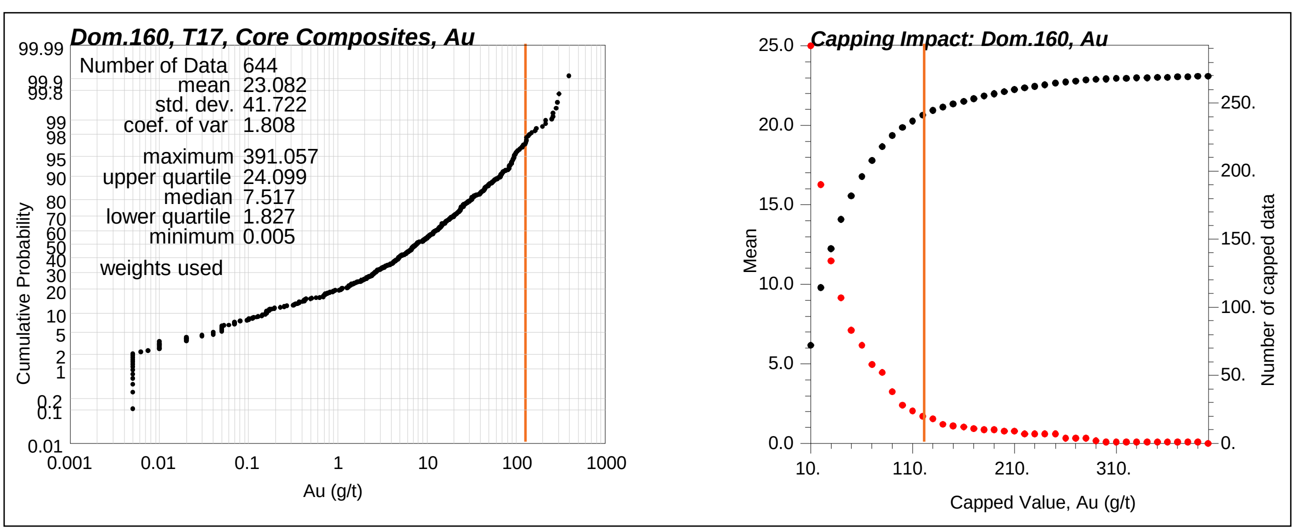


Figure 31: Probability Plot and Capping Sensitivity Curve for Domain 160 (T17), Core Samples

13.6 Specific Gravity

Specific gravity was measured by Dalradian at their core logging facility using a standard weight in water/weight in air methodology on core from complete sample intervals. The specific gravity database contains 3,013 measurements across all veins, representing an almost four-fold increase in the database from 2016. Given the larger database, SRK chose to estimate specific gravity within each vein into the block model. Compositing of specific gravity was done at a consistent support with gold composites. Specific gravity data were capped on a global basis, similar to the approach taken in 2016, to avoid any extreme low and/or high values for estimation. Chosen cap values for specific gravity are provided in Table 40; the impact of capping on the average specific gravity was less than 1 percent for all veins.

Table 40: Uncapped and Capped Core Composite Statistics* for Specific Gravity

Domain Code	Vein Name	Uncapped Composites						Capped Composites				
		Count	Mean	Std. Dev.	Min.	Max.	CoV	Mean	Std. Dev.	Min.	Max.	CoV
110	Road	42	2.76	0.18	2.49	3.64	0.07	2.76	0.18	2.49	3.64	0.07
120	Sheep Dip	107	2.84	0.24	2.53	3.78	0.08	2.84	0.24	2.53	3.78	0.08
130	Sperrin	91	2.77	0.17	2.29	3.42	0.06	2.78	0.16	2.40	3.42	0.06
140	Mullan	176	2.77	0.18	2.47	3.62	0.06	2.77	0.18	2.47	3.62	0.06
150	Grizzly	97	2.84	0.24	2.47	3.81	0.08	2.84	0.24	2.47	3.80	0.08
160	T17	230	2.83	0.19	2.44	3.82	0.07	2.83	0.19	2.44	3.80	0.07
170	V55	83	2.83	0.18	2.54	3.74	0.06	2.83	0.18	2.54	3.74	0.07
180	No1	355	2.82	0.21	2.37	4.77	0.07	2.82	0.18	2.40	3.80	0.06
190	Causeway	127	2.80	0.14	2.22	3.27	0.05	2.80	0.13	2.40	3.27	0.05
200	10616	469	2.81	0.16	2.33	4.13	0.06	2.81	0.15	2.40	3.80	0.05
210	Slapshot**	311	2.81	0.17	2.54	3.72	0.06	2.81	0.17	2.54	3.72	0.06
220	V75	405	2.82	0.18	2.53	3.70	0.06	2.82	0.18	2.53	3.70	0.06
230	Bend Splay	121	2.77	0.08	2.60	3.10	0.03	2.77	0.08	2.60	3.10	0.03
240	Bend	118	2.77	0.11	2.49	3.18	0.04	2.77	0.11	2.49	3.18	0.04
250	Crow	216	2.80	0.17	2.37	3.63	0.06	2.80	0.17	2.40	3.63	0.06
260	Raven	44	2.76	0.16	2.32	3.27	0.06	2.76	0.15	2.40	3.27	0.05
270	Harp	14	2.83	0.19	2.69	3.61	0.07	2.83	0.19	2.69	3.61	0.07
280	Finn	6	2.83	0.10	2.68	2.96	0.04	2.83	0.10	2.68	2.96	0.04
290	Foyle	1	2.91	0.00	2.91	2.91	0.00	2.91	0.00	2.91	2.91	0.00
Total		**3,013**	**2.81**	**0.18**	**2.22**	**4.77**	**0.06**	**2.81**	**0.17**	**2.4**	**3.80**	**0.06**

* Statistics are length-weighted and prior declustering

** Includes Slapshot Splay and Slapshot Splay 1

*** Min. = Minimum, Max. = Maximum, Std. Dev. = Standard Deviation; CoV = Coefficient of Variation

13.7 Variography

SRK used the Geostatistical Software Library (GSLib, Deutsch and Journel, 1998) and GSLib-compatible programs to calculate and model gold variograms for the mineralized domains. Various orientations were considered, including those aligned with the intersection of C-veining and the domain. Where anisotropy in grade continuity was identifiable, this was found aligned with these geological structures. In sparsely sampled domains, SRK grouped adjacent domains to determine a regional variogram applicable to the grouped domains. The modelled variograms for gold are summarized in Table 41, and in many cases are based on correlograms. As an example, Figure 32 shows the gold variogram fitted for domain T17 (Code 160).

Variograms for gold, specific gravity, and the other secondary elements are tabulated in Appendix C.

Table 41: Summary of Gold Variogram Parameters in Datamine Convention

Code	Domain Name	Variogram Model[1]							Rotation Angles[5]		
		Nugget[4]	Str. No.	Type	CC[4]	X Range[3]	Y Range[3]	Z Range[3]	Z	X	Z
100	All	0.15	1	Exponential	0.65	9	4.9	1.2	20°	60°	-45°
			2	Spherical	0.2	95	95	2.5			
110	Road	0.25	1	Spherical	0.2	50	50	2.1	21°	59°	-45°
120	Sheep Dip	0.15	1	Spherical	0.3	30	30	2	23°	64°	-45°
			2	Spherical	0.55	50	50	2			
130	Sperrin	0.15	1	Spherical	0.3	50	50	1	24°	61°	-30°
			2	Spherical	0.55	70	70	1			
140	Mullan	0.25	1	Exponential	0.65	66	30	1.4	19°	61°	-45°
			2	Spherical	0.1	80	80	1.5			
150	Grizzly	0.15	1	Spherical	0.35	25	25	1	21°	63°	-30°
			2	Spherical	0.5	60	60	1			
160	T17	0.2	1	Spherical	0.55	21	21	1.2	17°	57°	-30°
			2	Spherical	0.25	70	50	1.2			
170	V55	0.2	1	Spherical	0.3	30	30	0.7	20°	58°	-30°
			2	Spherical	0.5	75	75	0.7			
180	No1	0.2	1	Exponential	0.6	12	12	1.2	18°	57°	-45°
			2	Spherical	0.2	70	60	1.2			
190	Causeway	0.15	1	Exponential	0.45	45	45	1.2	19°	58°	-30°
			2	Spherical	0.4	75	75	1.5			
200	10616	0.2	1	Spherical	0.7	37	10	2	17°	24°	-45°
			2	Spherical	0.1	80	65	2			
210	Slapshot[2]	0.2	1	Spherical	0.65	35	10	1.5	22°	29°	-45°
			2	Spherical	0.15	95	60	1.5			
220	V75	0.15	1	Exponential	0.75	33	33	1.3	18°	26°	-60°
			2	Spherical	0.1	80	80	1.5			
230	Bend Splay	0.15	1	Spherical	0.15	75	75	0.8	18°	58°	-30°
240	Bend	0.15	1	Spherical	0.2	30	30	0.5	18°	60°	-30°
			2	Spherical	0.65	45	45	1.5			
250	Crow	0.25	1	Spherical	0.5	15	42	1.2	16°	57°	-45°
			2	Spherical	0.25	80	80	1.2			
260	Raven	0.25	1	Spherical	0.2	5	5	1	14°	56°	-45°
			2	Spherical	0.55	30	30	1			
270	Harp	0.25	1	Spherical	0.2	5	5	1	15°	52°	-45°
			2	Spherical	0.55	30	30	1			
280	Finn	0.25	1	Spherical	0.2	5	5	1	14°	56°	-45°
			2	Spherical	0.55	30	30	1			
290	Foyle	0.25	1	Spherical	0.2	5	5	1	12°	54°	-45°
			2	Spherical	0.55	30	30	1			

1 Au variogram models in straightened coordinates along the veins middle planes as W-E vertical sections

2 Includes Slapshot Splay and Slapshot Splay 1

3 Variogram ranges in metres

4 Nugget effect and sill contribution values standardized by the data variance

5 Variogram mode rotation expressed as in Datamine's Z-X-Z convention

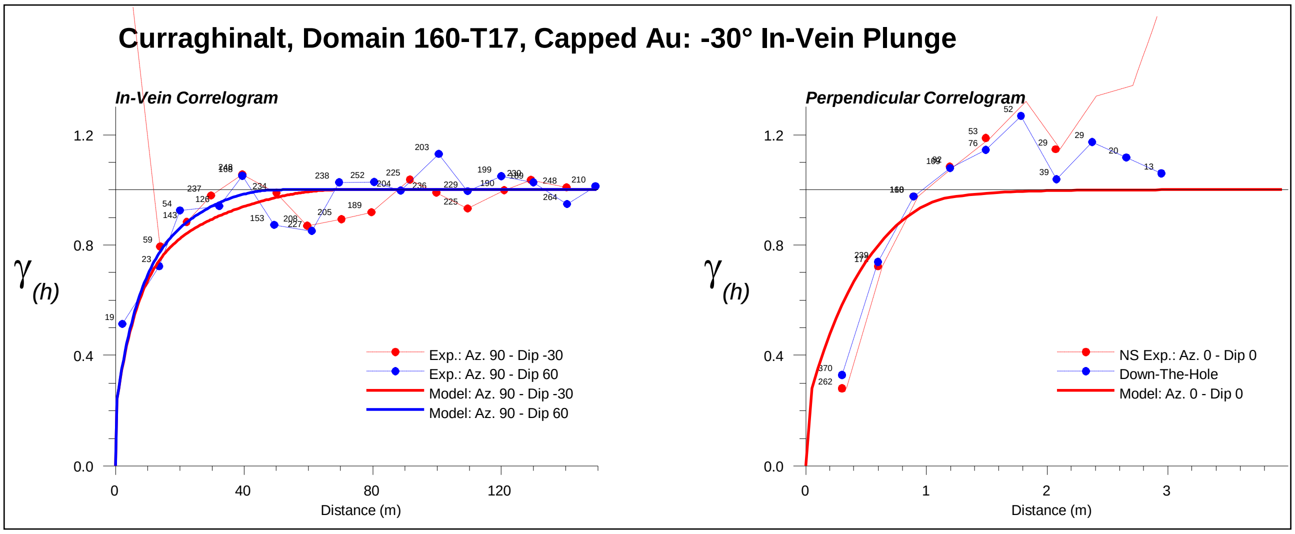


Figure 32: Gold Variogram Model for Domain T17 (Code 160)

13.8 Block Model Parameters

A block model was constructed to cover the entire extent of the gold deposits. Block size was set at 5 by 5 by 5 metres for parent cells, and subcells at 0.50- by 0.25- by 0.50-metre resolution in the X, Y and Z axes, respectively, to honour the geometry of the modelled mineralization. Subcells were assigned the same grade as the parent cell. No rotation was applied. The block model coordinates are based on Irish Grid TM65. The block model definition is summarized in Table 42.

Table 42: Curraghinalt Block Model Specification

Axis	Block Size (metres)		Origin*	Number of Cells
	Parent	Sub cell		
X	5.0	0.50	256,000	466
Y	5.0	0.25	385,670	262
Z	5.0	0.50	-850	224

* Irish Grid TM65

13.9 Estimation

The block model was populated with gold values using ordinary kriging, informed by composite data and three estimation runs with progressively relaxed search ellipsoids and data requirements. Table 43 summarizes the search parameters used for each estimation pass for all attributes; these are consistent with the parameters used in the 2016 mineral resource model as a result of extensive estimation sensitivity analyses. Each domain was estimated using a hard boundary approach using only the composites from that domain. A pass "zero" was included to allow the use of the underground face samples, within a limited 10-metre radii. Indicator variograms of the face samples were calculated to establish their continuity is limited to 10 metres. All subsequent passes used only the capped core borehole composites.

Table 43: Summary of Estimation Search Parameters

Parameter	Pass 0	Pass 1	Pass 2	Pass 3
Interpolation method	Ordinary kriging	Ordinary kriging	Ordinary kriging	Ordinary kriging
Data set	Core + Face	Core	Core	Core
Search range X	10m	1 x Var range	2 x Var range	6 x Var range
Search range Y	10m	1 x Var range	2 x Var range	6 x Var range
Search range Z	15m	30m	60m	180m
Minimum number of composites	5	5	4	2
Maximum number of composites	12	12	15	15
Octant search	No	No	No	No
Maximum number of composites per borehole	3	3	3	3

Internal sensitivity studies in 2017 identified the risk of high grade smearing in sparsely sampled areas of the modelled veins. This was confirmed in preliminary estimation results. For this reason, a secondary, more conservative, capping threshold was applied to core composites for the third estimation pass, which is generally the run during which these sparsely sampled areas tend to be estimated. The secondary capping thresholds were chosen based on probability plots, in a similar way as the primary capping thresholds but looking for changes in the statistical populations at lower grades. These secondary capping thresholds are listed in Table 44.

Table 44: Secondary Gold Grades Capping for Core Composites in the Third Estimation Pass

Domain Code	Vein Name	Au Capping Threshold (g/t)
110	Road	15.00
120	Sheep Dip	20.00
130	Sperrin	15.00
140	Mullan	20.00
150	Grizzly	15.00
160	T17	40.00
170	V55	20.00
180	No1	30.00
190	Causeway	20.00
200	10616	25.00
210	Slapshot*	20.00
220	V75	30.00
230	Bend Splay	15.00
240	Bend	15.00
250	Crow	25.00
260	Raven	12.00
270	Harp	20.00
280	Finn	20.00
290	Foyle	15.00

* Includes Slapshot Splay and Slapshot Splay 1

13.10 Block Model Validation

SRK validated the block model using a visual comparison of block estimates and informing composites, and statistical comparisons between composites and block model distributions. Figure 33 shows an example of a long section for Domain 160 which compares the composite data to the estimated block grades, and also the estimation pass to the Indicated/Inferred boundary. Long sections for all other domains are provided in Appendix D.

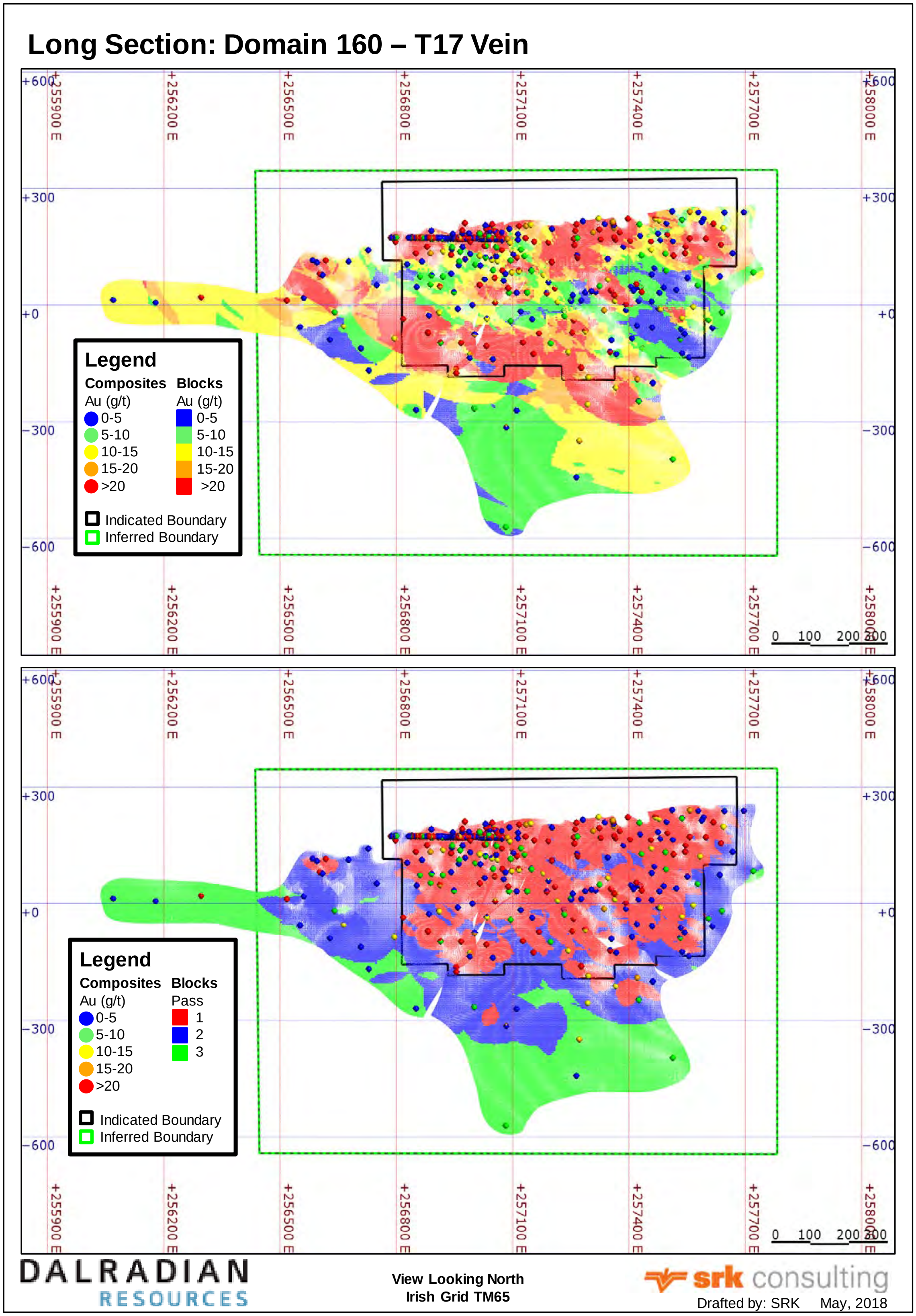


Figure 33: Longitudinal Section for T17 Vein

Comparison of Block Estimates and Informing Composites (top), and Estimation Pass Number to Boundary for Indicated/Inferred Categories (bottom)

Swath plots considering all domains were generated, along easting, northing and elevation using 20-metre intervals (see Figure 34). For each swath, SRK compared two composite distributions against the block model: (a) all composites (Figure 34, left column), and (b) only the composites from boreholes Figure 34, right column). The swath comparisons show that while the face samples were used for estimation in a locally constrained manner, the block model grades are mostly influenced by the composites from boreholes. As expected, the profiles of the block model grade are smoother than that from the composites, but follow along the same general trends.

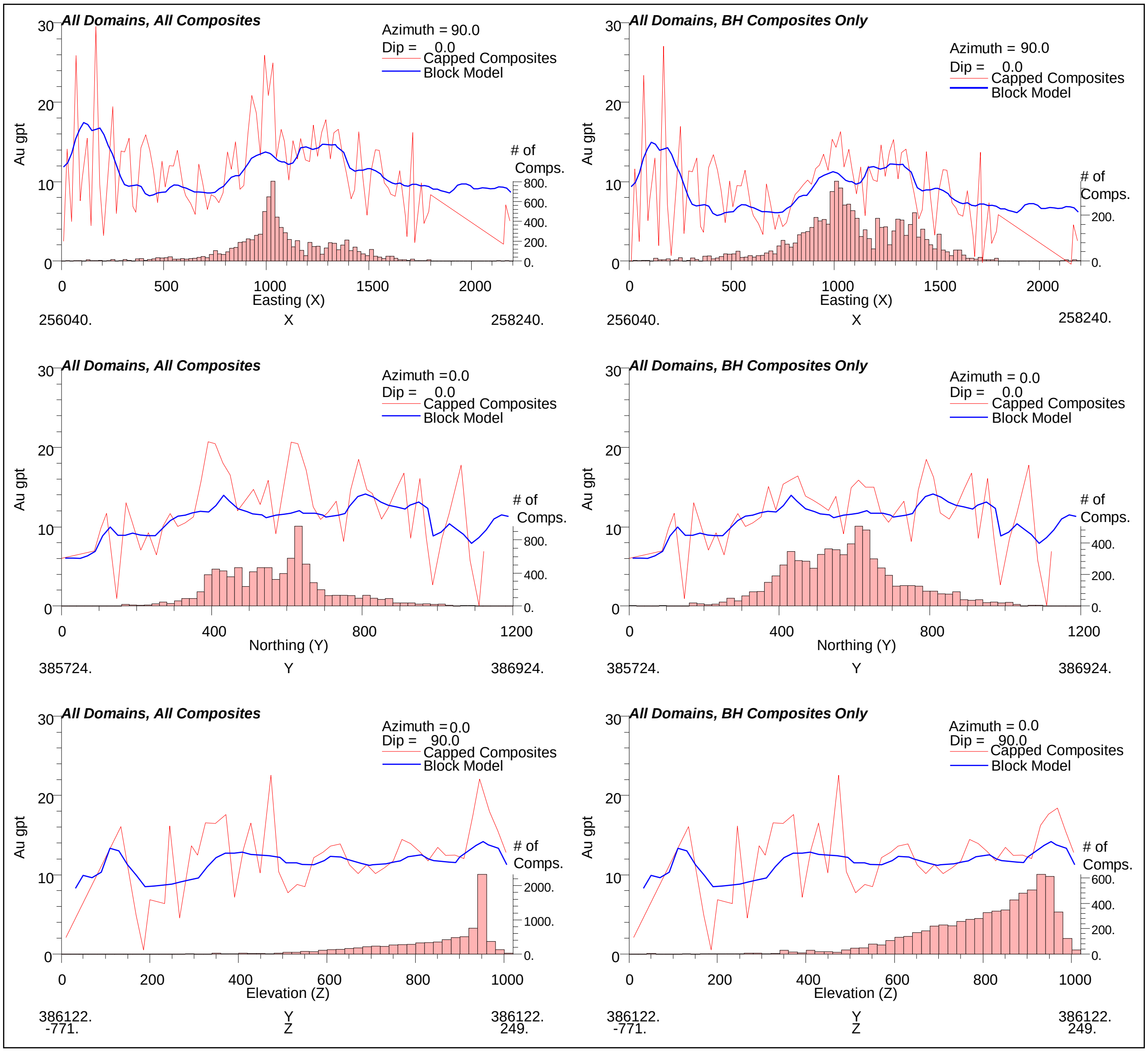


Figure 34: Swath Plot Comparison of Block Estimates

All Composites (left column) and Only Borehole Composites (right column) along Easting (top row), Northing (middle row) and Elevation (bottom row)

Additionally, SRK considered statistical comparisons between ordinary kriging estimates and alternate estimators at a zero-cut-off grade. Table 45 shows there is less than 4 percent global difference in the contained metal between ordinary kriging, and inverse distance weighting to a power of two and three estimates at a zero-cut-off grade.

Table 45: Global Comparison of Estimators

Cut-off Grade (g/t)	Estimation Method	Quantity (x1000 t)	Grade (g/t)	Metal (oz)	Difference in Metal* (%)
0	OK	17,822	11.84	6,782	
	ID2	17,793	11.39	6,514	-3.94%
	ID3	17,796	11.43	6,543	-3.52%

* At 0 g/t gold cut-off, and relative to the ordinary kriging estimates

OK = Ordinary Kriging

ID2 = Inverse distance to a power of two

ID3 = Inverse distance to a power of three

13.11 Classification

Criteria used for block classification are:

- **Measured**: Blocks estimated in Pass 0, requiring a minimum of two boreholes and a minimum of five composites from core and underground face samples. The mean average distance of informing composites for this category is less than 20 metres with an average of six boreholes informing the blocks in this category.
- **Indicated**: Blocks generally estimated in the first pass, with search radii equivalent to the variogram range and requiring a minimum of two boreholes. The mean average distance of informing composites for this category is less than 50 metres with an average of six boreholes informing the blocks in this category.
- **Inferred**: Includes all other blocks estimated in the second pass and some blocks estimated in the third pass using composites located up to 150 metres away from a borehole. The mean average distance of composites for this category is less than 100 metres.

SRK examined the classification visually by inspecting sections and plans through the block model. SRK concludes that the parameters used to define Measured blocks reasonably reflect estimates that can be considered to be at a high confidence level, material classified as Indicated reflect estimates made with a moderate level of confidence within the meaning of CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014), and all other material is estimated at a lower confidence level. Additionally, SRK applied a post-smoothing filter on the classified material to ensure continuity within the classification categories. In particular, the boundary between Indicated and Inferred is intentionally drawn as parallel or perpendicular to potential underground levels, to facilitate underground mine planning.

13.12 Mineral Resource Statement

CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May 2014) define a Mineral Resource as:

> *"[A] concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for*

> *eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling."*

The "reasonable prospects for eventual economic extraction" requirement generally implies that quantity and grade estimates meet certain economic thresholds and that mineral resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recovery. SRK considers that the Curraghinalt deposit is amenable to underground extraction. Through discussions with Dalradian, SRK considers that it is reasonable to report as underground mineral resources those classified blocks above a cut-off grade of 5.0 g/t gold. This is based on a gold price of US$1,200 per troy ounce and a gold recovery of 95 percent.

SRK delivered to Dalradian a sub-block model with a single classification per block and undiluted gold grade. The Mineral Resource Statement reported herein is based on an undiluted block model. The mineral resource model does not consider a minimum mining width or likely planned dilution which will likely be considered during the conversion of mineral resources to mineral reserves.

SRK is satisfied that the mineral resources were estimated in conformity with the widely accepted CIM *Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines*. The mineral resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent mineral resource estimates. The mineral resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. The Mineral Resource Statement for the Curraghinalt gold project presented in Table 46 was prepared by Mr. Dominic Chartier, PGeo (OGQ#874, APGO#2775), Drs. Oy Leuangthong, PEng (PEO#90563867) and David Machuca, PEng (PEO#100508889). Mr. Chartier and Drs. Leuangthong and Machuca are independent Qualified Persons as this term is defined in National Instrument 43-101.

The effective date of the Mineral Resource Statement for the Curraghinalt gold project is May 10, 2018.

Table 46: Mineral Resource Statement*, Curraghinalt Gold Project, Northern Ireland, SRK Consulting (Canada) Inc., May 10, 2018

Resource Category	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Measured^	34	26.00	28
Indicated	6,309	14.95	3,033
Measured^ + Indicated	**6,343**	**15.01**	**3,061**
Inferred	7,722	12.24	3,038

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Underground mineral resources are reported at a cut-off grade of 5.0 g/t gold. The cut-off grades are based on a gold price of US$1,200 per troy ounce and a gold recovery of 95 percent.

^ Due a reporting discrepancy, the Measured resources reported in the Press Release by Dalradian on May 10, 2018 differ nominally to that reported here.

For reconciliation purposes, a detailed breakdown of the Mineral Resource Statement by Domain and by resource category is provided in Table 47.

Table 47: Detailed Breakdown of Mineral Resource Statement* by Domain and Resource Category

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	33	15.85	17	256	11.30	93
Sheep Dip	120	1	11.98	0.4	175	16.36	92	349	10.98	123
Sperrin	130	-	-	-	157	12.74	64	205	11.54	76
Mullan	140	-	-	-	552	13.79	245	570	15.16	278
Grizzly	150	-	-	-	246	12.64	100	73	10.04	24
T17	160	13	34.14	13.9	577	19.08	354	471	12.84	194
V55	170	-	-	-	173	12.15	68	75	11.11	27
No.1	180	7	16.63	3.6	755	17.23	418	481	15.74	244
Causeway	190	-	-	-	218	14.41	101	12	18.48	7
106-16	200	3	18.68	1.9	931	15.35	459	730	14.08	330
Slap Shot	210	1	15.26	0.6	445	12.79	183	355	9.98	114
Slap Shot Splay	211	-	-	-	26	10.24	9	5	9.87	2
Slap Shot Splay1	212	-	-	-	10	16.42	5	-	-	-
V75	220	9	27.28	8.0	758	16.75	408	945	12.84	390
Bend Splay	230	-	-	-	202	10.78	70	31	6.69	7
Bend	240	-	-	-	252	10.06	81	934	9.53	286
Crow	250	-	-	-	799	13.96	359	1,609	12.42	643
Raven Vein	260	-	-	-	-	-	-	335	7.10	77
Harp Vein	270	-	-	-	-	-	-	286	13.57	125
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**34**	**26.00**	**28**	**6,309**	**14.95**	**3,033**	**7,722**	**12.24**	**3,038**

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Underground mineral resources are reported at a cut-off grade of 5.0 g/t gold. The cut-off grades are based on a gold price of US$1,200 per troy ounce and a gold recovery of 95 percent.

13.13 Grade Sensitivity Analysis

The mineral resources of the Curraghinalt gold project are fairly sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, block model quantities and grade estimates at various cut-off grades are presented in Table 48 and grade tonnage curves are presented in Figure 35.

Table 48: Global Block Model Quantities and Grade Estimates* at Various Cut-Off Grades

Cut-off Au (g/t)	Measured Quantity ('000 t)	Measured Grade Au(g/t)	Measured Au Metal ('000 oz)	Indicated Quantity ('000 t)	Indicated Grade Au(g/t)	Indicated Au Metal ('000 oz)	Inferred Quantity ('000 t)	Inferred Grade Au(g/t)	Inferred Au Metal ('000 oz)
0.01	35	24.79	28	7,195	13.50	3,124	9,198	10.79	3,190
1.00	35	24.92	28	7,135	13.61	3,122	9,137	10.86	3,190
2.00	35	25.12	28	7,031	13.79	3,117	8,874	11.13	3,175
3.00	34	25.44	28	6,832	14.12	3,101	8,581	11.42	3,152
4.00	34	25.56	28	6,578	14.53	3,072	8,212	11.78	3,110
5.00	**34**	**26.00**	**28**	**6,309**	**14.95**	**3,033**	**7,722**	**12.24**	**3,038**
6.00	33	25.95	28	5,979	15.47	2,975	7,073	12.85	2,922
7.00	33	26.25	28	5,623	16.04	2,900	6,363	13.56	2,774
8.00	32	26.68	28	5,236	16.68	2,807	5,631	14.35	2,597
9.00	32	26.93	28	4,855	17.32	2,703	4,867	15.27	2,388
10.00	31	27.50	27	4,456	18.01	2,581	4,165	16.23	2,173

* The reader is cautioned that the figures in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of a cut-off grade.

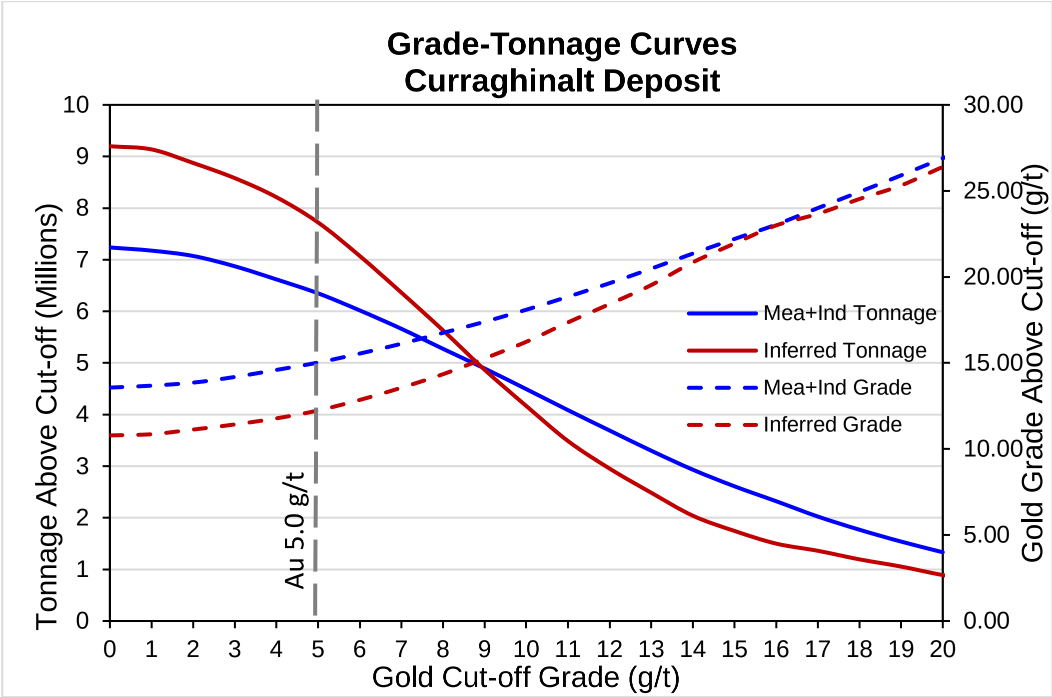


Figure 35: Grade Tonnage Sensitivity to Cut-Off Grade by Classified Resource Categories

13.14 Sensitivity Analysis on Dilution

At the request of Dalradian, SRK considered the impact of potential dilution on the gold grade within each modelled domain. Specifically, this involved the conceptual evaluation of mineral resources at a minimum of 1.0, 1.2, 1.4, 1.6, and 1.8 metres true widths (minimum mining widths). For each case, SRK also considered the impact of assigning a grade of zero or a constant grade of 0.25 g/t gold to the host rock as a check on the sensitivity of dilution grade to reported tonnage and gold grades.

The impact of dilution on conceptual combined mineral resource reporting to each minimum width scenario is tabulated in Table 49 to Table 53, whereas a detailed tabulation summary of the impact the dilution scenarios to each domain is provided in Appendix E.

As expected, increasing the minimum mining width results in lower contained metal for all mineral resource category blocks. Assuming a dilution grade of zero, the loss of metal content in the Measured plus Indicated mineral resources categories ranges from 18 percent, for the 1.0 metre minimum mining width scenario, up to approximately 40 percent for the 1.8 metres minimum mining width scenario.

Assuming a dilution grade of 0.25 g/t gold, the loss of metal content in the Measured plus Indicated mineral resources categories ranges from 17 percent, for the 1.0 metre minimum mining width scenario, up to approximately 38 percent for the 1.8 metres minimum mining width scenario.

Table 49: Impact of Dilution for 1.0 Metre Minimum Mining Width

	Au 0.0 g/t Waste Grade			Au 0.25 g/t Waste Grade		
Resource Category	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**
Measured	34	18.51	20	34	18.50	20
Indicated	6,991	11.07	2,488	7,158	11.01	2,534
M + I	**7,025**	**11.10**	**2,508**	**7,192**	**11.05**	**2,555**
Inferred	6,923	9.86	2,194	7,125	9.79	2,244
Compared to May 10, 2018 MRS						
Measured	1%	-29%	-28%	1%	-29%	-28%
Indicated	11%	-26%	-18%	13%	-26%	-16%
M + I	**11%**	**-26%**	**-18%**	**13%**	**-26%**	**-17%**
Inferred	-10%	-19%	-28%	-8%	-20%	-26%

Table 50: Impact of Dilution for 1.2 Metre Minimum Mining Width

	Au 0.0 g/t Waste Grade			Au 0.25 g/t Waste Grade		
Resource Category	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**
Measured	36	17.07	20	37	17.06	20
Indicated	6,847	10.46	2,302	7,059	10.39	2,358
M + I	**6,884**	**10.49**	**2,322**	**7,095**	**10.43**	**2,378**
Inferred	6,457	9.47	1,966	6,691	9.40	2,023
Compared to May 10, 2018 MRS						
Measured	7%	-34%	-30%	9%	-34%	-29%
Indicated	9%	-30%	-24%	12%	-31%	-22%
M + I	**9%**	**-30%**	**-24%**	**12%**	**-31%**	**-22%**
Inferred	-16%	-23%	-35%	-13%	-23%	-33%

Table 51: Impact of Dilution for 1.4 Metre Minimum Mining Width

	Au 0.0 g/t Waste Grade			Au 0.25 g/t Waste Grade		
Resource Category	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**
Measured	38	15.93	20	39	15.91	20
Indicated	6,536	9.98	2,097	6,892	9.88	2,189
M + I	**6,574**	**10.02**	**2,117**	**6,931**	**9.91**	**2,209**
Inferred	5,947	9.19	1,757	6,224	9.10	1,822
Compared to May 10, 2018 MRS						
Measured	12%	-39%	-31%	14%	-39%	-30%
Indicated	4%	-33%	-31%	9%	-34%	-28%
M + I	**4%**	**-33%**	**-31%**	**9%**	**-34%**	**-28%**
Inferred	-23%	-25%	-42%	-19%	-26%	-40%

Table 52: Impact of Dilution for 1.6 Metre Minimum Mining Width

	Au 0.0 g/t Waste Grade			Au 0.25 g/t Waste Grade		
Resource Category	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**
Measured	39	15.00	19	41	14.88	19
Indicated	6,444	9.49	1,967	6,710	9.44	2,036
M + I	**6,483**	**9.53**	**1,986**	**6,751**	**9.47**	**2,055**
Inferred	5,479	8.96	1,579	5,715	8.91	1,637
Compared to May 10, 2018 MRS						
Measured	17%	-42%	-33%	20%	-43%	-31%
Indicated	2%	-37%	-35%	6%	-37%	-33%
M + I	**2%**	**-37%**	**-35%**	**6%**	**-37%**	**-33%**
Inferred	-29%	-27%	-48%	-26%	-27%	-46%

Table 53: Impact of Dilution for 1.8 Metre Minimum Mining Width

	Au 0.0 g/t Waste Grade			Au 0.25 g/t Waste Grade		
Resource Category	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**	**Tonnage ('000 t)**	**Grade Au (g/t)**	**Au Metal ('000 oz)**
Measured	40	14.44	18	41	14.28	19
Indicated	6,172	9.14	1,814	6,465	9.08	1,888
M + I	**6,211**	**9.18**	**1,833**	**6,507**	**9.12**	**1,907**
Inferred	5,131	8.71	1,436	5,380	8.65	1,496
Compared to May 10, 2018 MRS						
Measured	18%	-44%	-35%	22%	-45%	-33%
Indicated	-2%	-39%	-40%	2%	-39%	-38%
M + I	**-2%**	**-39%**	**-40%**	**3%**	**-39%**	**-38%**
Inferred	-34%	-29%	-53%	-30%	-29%	-51%

13.15 Reconciliation with 2016 Mineral Resource Statement

For comparison, the May 5, 2016 Mineral Resource Statement, generated by SRK, is presented in Table 54. Table 55 shows the reconciliation between the May 5, 2016 and the May 10, 2018 mineral resource statements.

Dalradian drilled an additional 145 boreholes for 46,487 metres of drilling since the May 2016 resource model, an increase of 35 percent more drilling. The step out boreholes in Dalradian’s drill program largely contributed to the extension of existing veins to the west and the introduction of four new veins in the south. The re-interpretation of the vein wireframes from vein intervals as defined in sampled assays, and not 0.5-metre composites, has the impact of reducing vein domain thickness to an average of 0.47 metres. This is accompanied by an increase in the average grade of each vein domain. Modelled vein domain wireframes delineate in-situ gold grade and do not consider a minimum mining width or likely planned mining dilution, which will likely be considered during the conversion of mineral resources to mineral reserves.

The general estimation methodology did not change in 2018; however, some veins in the south such as Crow vein benefited from the infill drilling at depth. The overall impact of the additional step-out and infill drilling and updated vein models is a moderate increase in Indicated and Inferred tonnages, accompanied by a significant increase in average grade, resulting in a significant increase in Indicated and Inferred metal. There is also some slight gain in Measured quantities, and this is largely due to 36 percent more underground face and channel samples relative to 2016. The additional drilling also delineated areas of considerable exploration potential to be targeted in future drilling campaigns.

13.16 SRK Comment

Considering the variable, but generally narrow width of the vein hosted gold mineralization at Curraghinalt, SRK consider it important for Dalradian to evaluate the performance of the mineral resource model at stope designs and widths envisaged for the estimation of mineral reserves. This evaluation could include the reconciliation of the results of the 2016 test stoping on the V75 vein with the updated mineral resources and mineral reserves to be disclosed in the forthcoming feasibility study, but also the consideration of additional future test stoping on other veins characterized by different width and geometry attributes. The objective would be to assess the performance of the modeled veins to a wide spectrum of practical mining outcomes.

Table 54: Mineral Resource Statement*, Curraghinalt Gold Project, Northern Ireland, SRK Consulting (Canada) Inc., May 5, 2016

Domain	Rock Code	Measured Tonnage† ('000 t)	Measured Grade Au (g/t)	Measured Au Metal (000 oz)	Indicated Tonnage† ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal (000 oz)	Inferred Tonnage† ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	9				125	8.63	35	449	9.42	136
Sheep Dip	8	1	15.12	0	248	11.23	90	715	11.76	270
Sperrin	13				182	8.48	50	126	8.87	36
Mullan	7				512	10.61	175	902	10.41	302
Grizzly	15				158	11.48	58	92	9.34	28
T17	6	12	37.94	15	697	13.89	311	481	8.78	136
V55	12				127	7.92	32	41	11.31	15
No.1	1	7	17.11	4	762	12.69	311	292	16.09	151
Causeway	14				255	9.99	82	20	11.46	7
106-16	2	2	22.00	1	960	11.97	369	601	12.07	233
Slap Shot	11	1	12.17	0	347	9.21	103	179	9.82	57
Slap Shot Splay	16				28	6.93	6	20	6.24	4
V75	3	5	22.18	4	492	13.06	207	1,085	9.57	334
Bend Splay	17				96	10.63	33	20	9.34	6
Bend	4				203	7.74	50	779	7.39	185
Crow	5				393	12.53	158	1,329	9.52	407
	Total	**28**	**26.99**	**25**	**5,583**	**11.53**	**2,069**	**7,130**	**10.06**	**2,306**

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Underground mineral resources are reported at a cut-off grade of 5.0 g/t gold based on a gold price of US$1,200 per ounce and a gold recovery of 95 percent.

† Tonnage was calculated using a density formula defined by SRK based on sulphur estimates.

Table 55: Relative Changes between 2018 and 2016 Mineral Resource Statements

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110				-74%	84%	-53%	-43%	20%	-32%
Sheep Dip	120	14%	-21%	-10%	-29%	46%	2%	-51%	-7%	-54%
Sperrin	130				-14%	50%	28%	63%	30%	111%
Mullan	140				8%	30%	40%	-37%	46%	-8%
Grizzly	150				56%	10%	73%	-21%	8%	-16%
T17	160	5%	-10%	-5%	-17%	37%	14%	-2%	46%	43%
V55	170				36%	53%	111%	83%	-2%	79%
No.1	180	-4%	-3%	-7%	-1%	36%	35%	65%	-2%	61%
Causeway	190				-15%	44%	23%	-39%	61%	4%
106-16	200	58%	-15%	35%	-3%	28%	24%	21%	17%	42%
Slap Shot	210	14%	25%	42%	28%	39%	78%	99%	2%	100%
Slap Shot Splay	211				-6%	48%	45%	-76%	58%	-62%
Slap Shot Splay1	212									
V75	220	81%	23%	123%	54%	28%	97%	-13%	34%	17%
Bend Splay	230				110%	1%	112%	53%	-28%	10%
Bend	240				24%	30%	63%	20%	29%	55%
Crow	250				103%	11%	127%	21%	31%	58%
Raven	260									
Harp	270									
Finn	280									
Foyle	290									
	Total	**21%**	**-4%**	**13%**	**13%**	**30%**	**47%**	**8%**	**22%**	**32%**

14 Mineral Reserve Estimates

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

15 Mining Methods

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

16 Recovery Methods

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement. However, it is envisaged that the process flowsheet would remain similar.

17 Project Infrastructure

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

18 Market Studies and Contracts

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

19 Environmental Studies, Permitting, and Social or Community Impact

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement. However, the Environmental Social Impact Assessment (ESIA) report released in November 2017 is still considered current.

20 Capital and Operating Costs

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

21 Economic Analysis

In January 2017, Dalradian disclosed the results of a feasibility study detailing additional exploration, hydrogeology, rock and soil geotechnical work, metallurgical and geochemical characterization of the gold mineralization and the waste rock, and mine engineering studies to design a new underground mine and mill complex targeting the mineral resources disclosed on May 5, 2016, and its economic viability was evaluated at a feasibility level (JDS, 2017). The 2016 mineral resource evaluation is now obsolete and is replaced by the mineral resource evaluation reported herein.

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. In this context, the results of the feasibility study reported in January 2017 are no longer valid or current. of the feasibility study reported in December 2016 are no longer valid and current.

Since the feasibility study disclosed in January 2017 is no longer current, this section is not required to support the updated mineral resource statement.

22 Adjacent Properties

There are no adjacent properties that are relevant to this technical report.

23 Other Relevant Data and Information

There are no other relevant data or information that are considered relevant to this technical report.

24 Interpretation and Conclusions

Exploration core drilling on the Northern Ireland gold project has focussed on the Curraghinalt gold deposit with the majority of boreholes drilled from the surface. The database used to evaluate the mineral resources of the Curraghinalt gold deposit includes 731 core boreholes (178,130 metres) and 678 underground channels/faces (2,397 metres). An additional 145 core boreholes for 46,487 metres and 181 underground channels/faces for 535 metres were drilled or sampled since the 2016 mineral resource model, representing a 35 percent increase to the borehole database by meterage. This new information considerably improves the confidence in the overall quality of the exploration database and in the continuity of the gold mineralization.

SRK witnessed the extent of the exploration work and can confirm that Dalradian's exploration work is conducted using field procedures that meet generally accepted industry best practices. SRK is of the opinion that the exploration data are sufficiently reliable to interpret with confidence the boundaries of the gold mineralization and support the evaluation and classification of mineral resources in accordance with generally accepted CIM *Estimation of Mineral Resource and Mineral Reserve Best Practices* and CIM *Definition Standards for Mineral Resources and Mineral Reserves*.

The bulk of the gold mineralization is hosted in a stacked network of narrow quartz-carbonate-sulphide veins. Twenty-one vein resource domains were modelled on the extents of logged gold mineralized shear veins (D veins), and snapped to assays irrespective of gold grades. The vein wireframes were offset by the four main observed faults. Extensive geostatistical studies were carried out on the composited data to select capping levels, and derive estimation parameters. Gold, sulphur, silver were estimated into a block model using ordinary kriging informed from capped composited data. A density was estimated into each block.

The block model was classified using a combination of tools, including confidence in the geological interpretation, search radii, minimum number of boreholes and composites, variography, and estimation pass. A Measured category was assigned to blocks within a 10 by 10 by 10 metres search radii around the underground workings informed by core and/or underground channel/face samples. An Indicated classification was assigned to blocks estimated in the first pass, using a minimum of two boreholes. The mean average distance of informing composites for Indicated blocks is 50 metres; while on average, these blocks are informed by six boreholes. All other blocks not classified as Measured or Indicated, whose grade was estimated in a vein domain with composites located up to 150 metres away from a borehole, were classified as Inferred. Overall, the mean average distance of composites in this category is less than 100 metres. All other blocks estimated were unclassified.

The re-interpretation of the vein wireframes from vein intervals as defined in sampled assays, and not 0.5-metre composites such as the 2016 study, has the impact of reducing vein domain thickness to an average of 0.47 metres. This is accompanied by an increase in the average grade of each vein domain. Modelled vein domain wireframes delineate in-situ gold grade and do not consider a minimum mining width or potential planned mining dilution, which will likely be considered during the conversion of mineral resources to mineral reserves.

The general estimation methodology did not change in 2018; however, some veins in the south such as Crow vein benefited from the infill drilling at depth. The overall impact of the additional step-out and infill drilling and updated vein models is a moderate increase in Indicated and Inferred tonnages, accompanied by a significant increase in average grade, resulting in a significant increase in

Indicated and Inferred metal. The additional drilling also delineated areas of considerable exploration potential to be targeted in future drilling campaigns.

25 Recommendations

The updated mineral resource statement reported herein, along with an improved geotechnical study and ore sorting testwork, will support an ongoing updated feasibility study initiated by Dalradian. With material exploration activities concluded, the authors of this report are not in a position to make meaningful recommendations for further work on the project until the results of the updated feasibility study have been disclosed.

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APPENDIX A

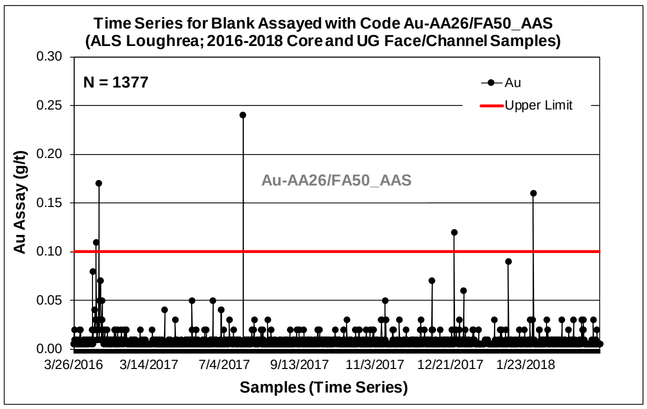
Analytical Quality Control Data and Relative Precision Charts from 2016 to 2018 Drilling and Underground Sampling

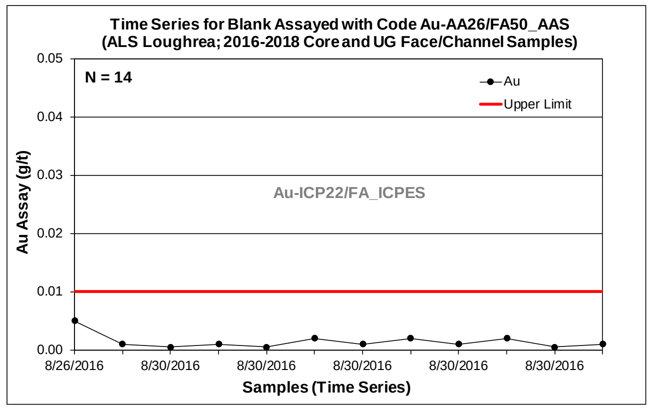
Time Series Plots for Blank Material Samples Assayed by ALS Loughrea Between 2016 and 2018.

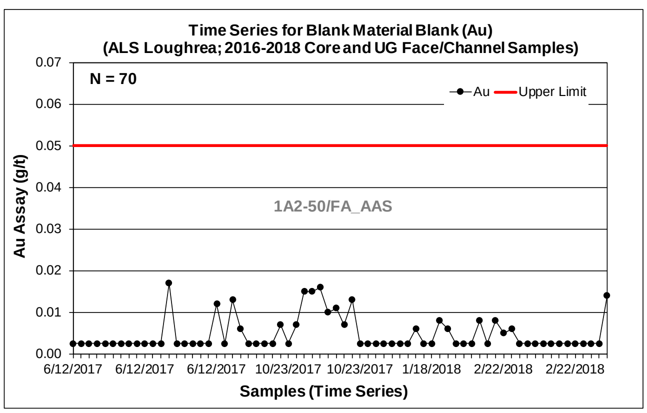
srk consulting

Project	Dalradian - Curraghinalt
Data Series	2012 - 2015 Blanks
Data Type	Core and UG Face/Channel Samples
Commodity	Au (g/t)
Laboratory	ALS Loughrea
Analytical Method	Fire assay - AA finish
Detection Limit	0.01; 0.005; 0.001

Statistics	**Blank AA26**	**Blank ICP22**	**Blank 1A2-50**
Sample Count	1,377	14	70
Expected Value	0.010	0.001	0.005
Standard Deviation	-	-	-
Data Mean	0.009	0.001	0.005
Upper Limit (10xDL)	0.4%	0%	0%





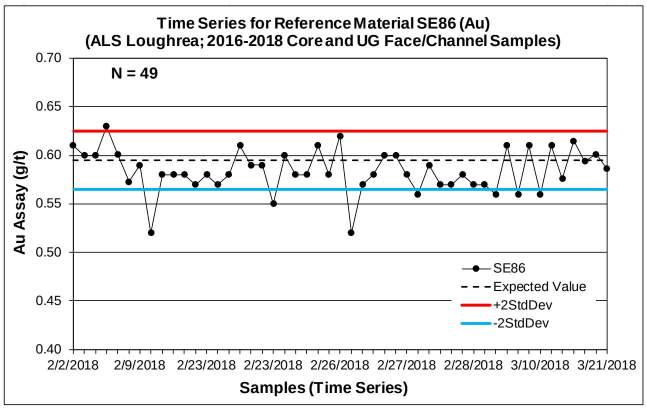


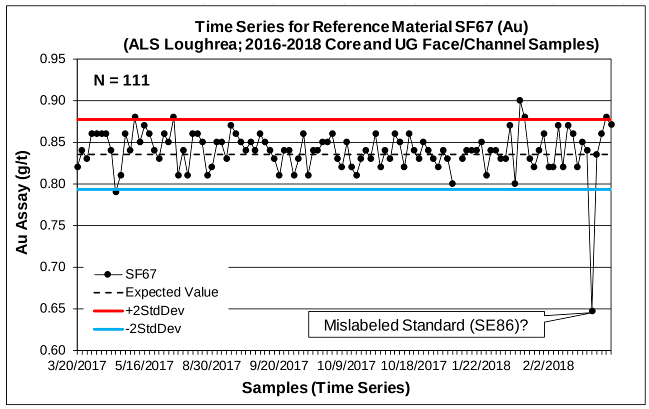
Time Series Plots for Certified Reference Material Samples Assayed by ALS Loughrea Between 2016 and 2018.

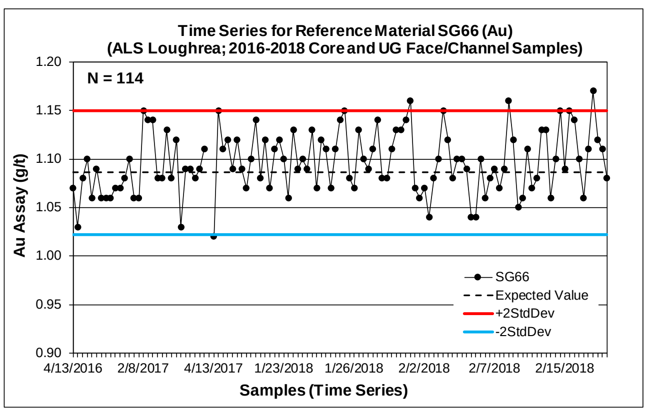
srk consulting

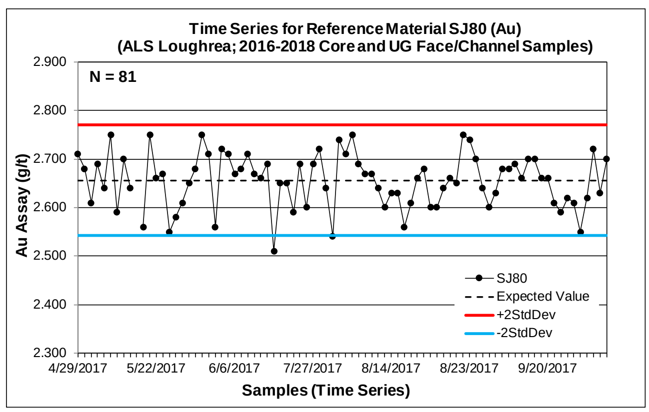
Project	Curraghinalt
Data Series	2016-2018 Standards
Data Type	Core and UG Face/Channel Samples
Commodity	Au in g/t
Laboratory	ALS Loughrea
Analytical Method	Fire assay - AA finish
Detection Limit	0.01 ppm

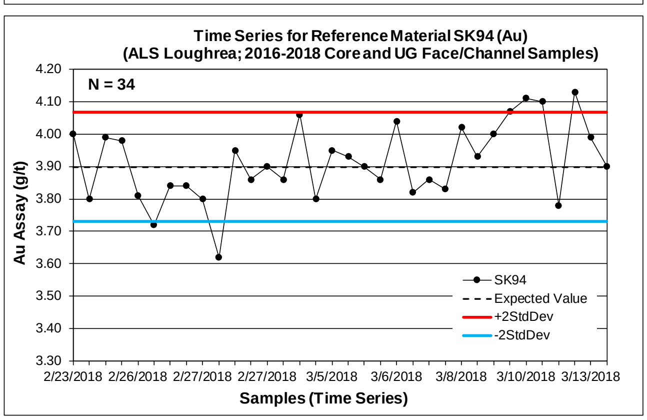
Statistics	**SE86**	**SF67**	**SG66**	**SJ80**	**SK94**	**SL61**
Sample Count	49	111	114	81	34	64
Expected Value	0.595	0.835	1.086	2.656	3.899	5.931
Standard Deviation	0.015	0.021	0.032	0.057	0.084	0.177
Data Mean	0.584	0.839	1.096	2.655	3.913	5.878
Outside 2StdDev	16%	6%	4%	2%	18%	2%
Below 2StdDev	7	2	1	2	2	1
Above 2StdDev	1	5	3	0	4	0

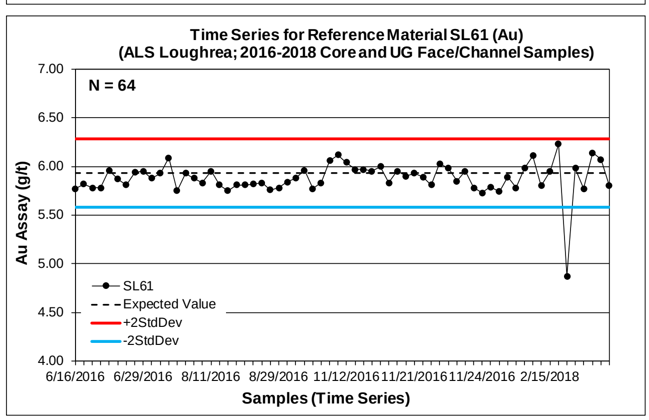












Time Series Plots for Certified Reference Material Samples Assayed by ALS Loughrea Between 2016 and 2018.

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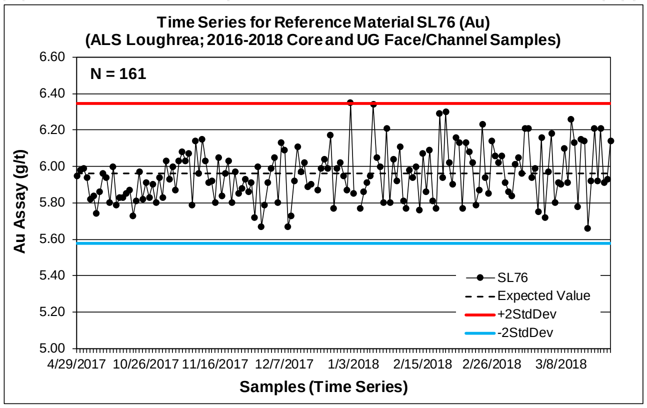
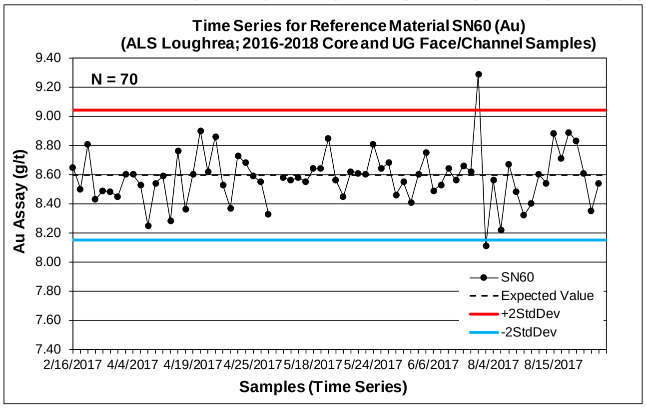
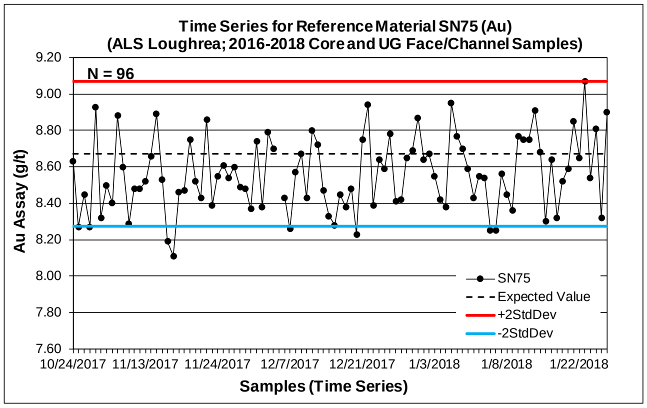
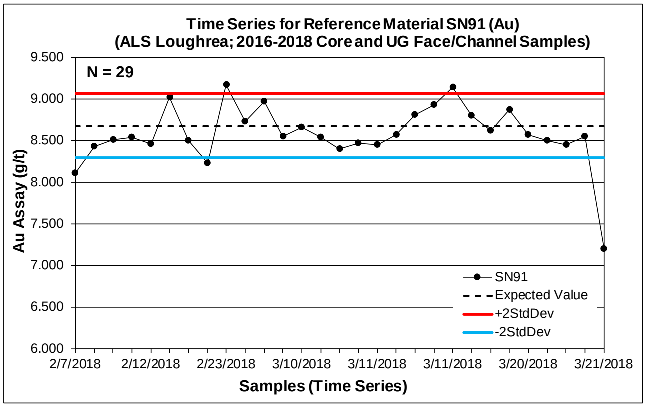
Project	Dalradian - Curraghinalt
Data Series	2016-2018 Standards
Data Type	Core and UG Face/Channel Samples
Commodity	Au in g/t
Laboratory	ALS Loughrea
Analytical Method	Fire assay - AA finish
Detection Limit	0.01 ppm

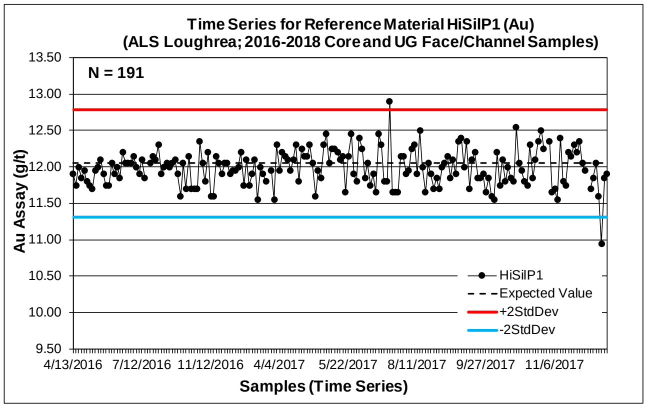
Statistics	**SL76**	**SN60**	**SN75**	**SN91**	**HiSilP1**	**HiSilP3**
Sample Count	161	70	96	29	191	94
Expected Value	5.960	8.595	8.671	8.679	12.050	12.240
Standard Deviation	0.192	0.223	0.199	0.194	0.368	0.246
Data Mean	5.954	8.582	8.558	8.578	11.985	12.115
Outside 2StdDev	1%	3%	9%	17%	1%	23%
Below 2StdDev	0	1	8	3	1	14
Above 2StdDev	1	1	1	2	1	8

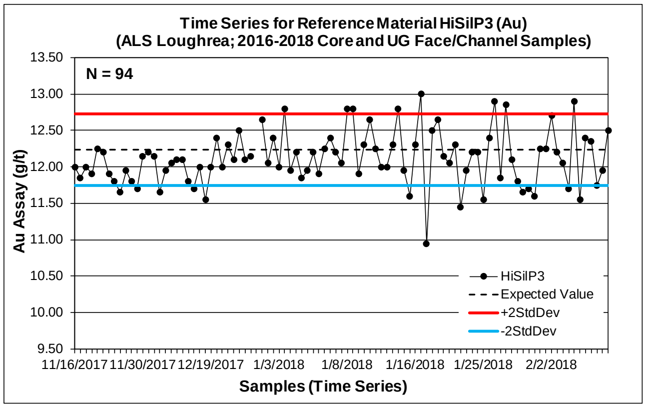










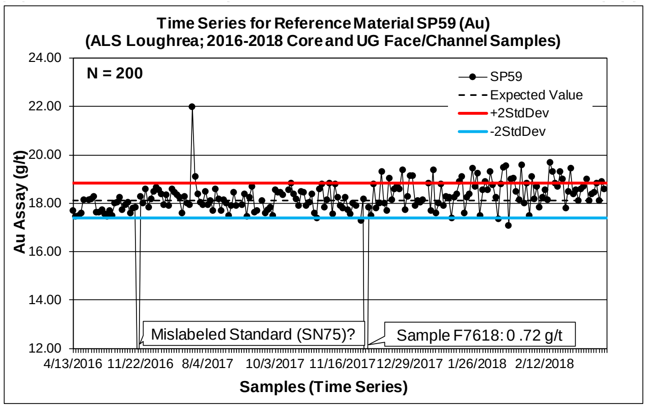


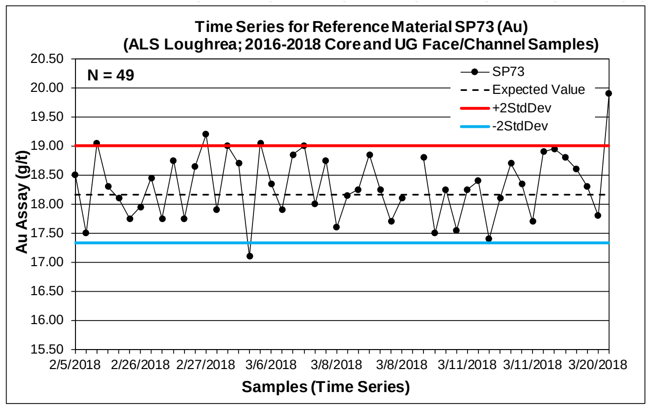
Time Series Plots for Certified Reference Material Samples Assayed by ALS Loughrea Between 2016 and 2018.

srk consulting

Project	Dalradian - Curraghinalt
Data Series	2016-2018 Standards
Data Type	Core and UG Face/Channel Samples
Commodity	Au in g/t
Laboratory	ALS Loughrea
Analytical Method	Fire assay - AA finish
Detection Limit	0.01 ppm

Statistics	**SP59**	**SP73**
Sample Count	200	49
Expected Value	18.120	18.170
Standard Deviation	0.360	0.420
Data Mean	18.147	18.315
Outside 2StdDev	19%	10%
Below 2StdDev	5	1
Above 2StdDev	33	4





Bias Charts and Precision Plots for Lab-internal Pulp Duplicates (Lab Checks), Core Samples, Assayed by Activation Laboratories in Ancaster, Canada Between 2017 and 2018.

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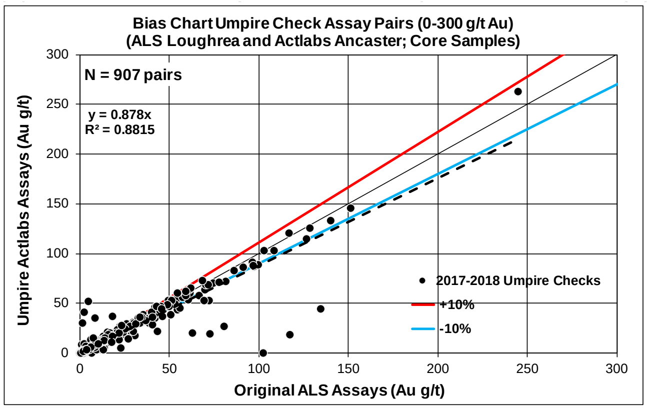
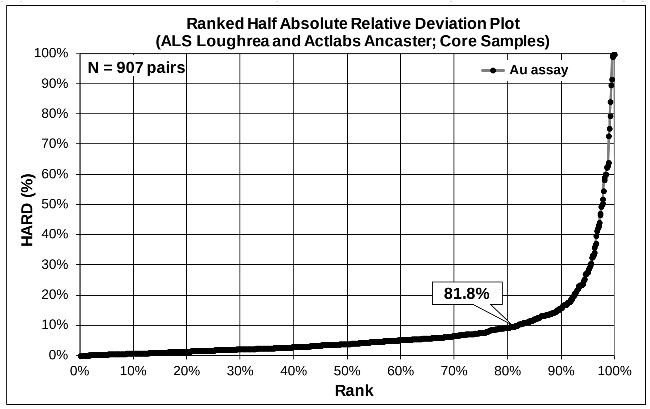
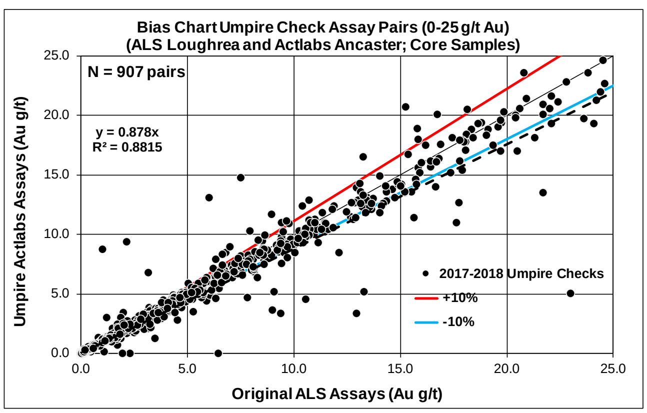
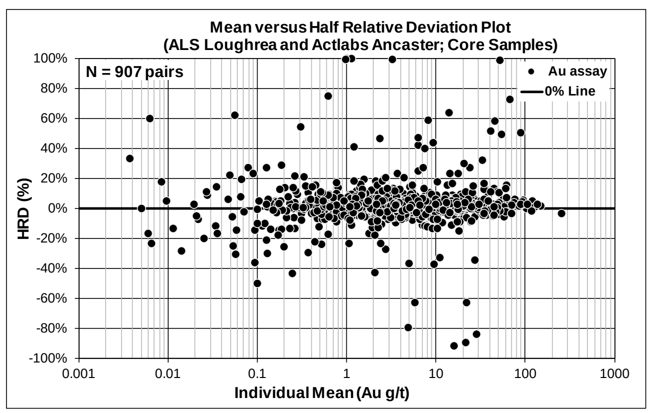
Project	Dalradian - Curraghinalt
Data Series	2017-2018 Umpire Checks
Data Type	Core Samples
Commodity	Au in g/t
Analytical Method	Fire Assay AA/Grav
Detection Limit	ALS: 0.01, Actlabs: 0.005
Original Dataset	Original ALS Assays
Paired Dataset	Umpire Actlabs Assays

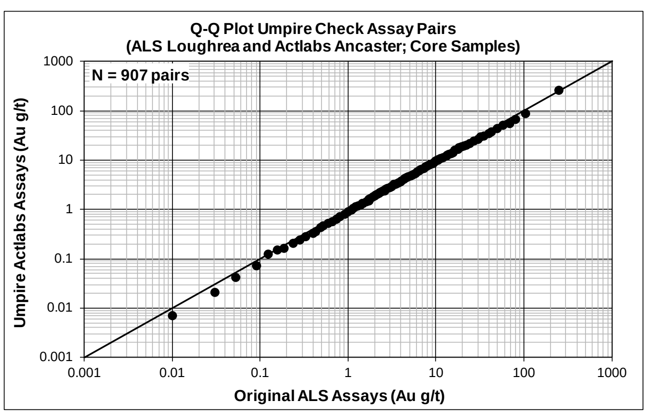
Statistics	**ALS**	**ACTlabs**
Sample Count	907	907
Minimum Value	0.005	0.003
Maximum Value	245.00	263.00
Mean	11.285	10.457
Median	3.880	3.720
Standard Error	0.693	0.637
Standard Deviation	20.858	19.178
Correlation Coefficient	0.9394	
Pairs ≤ 10% HARD	81.8%	

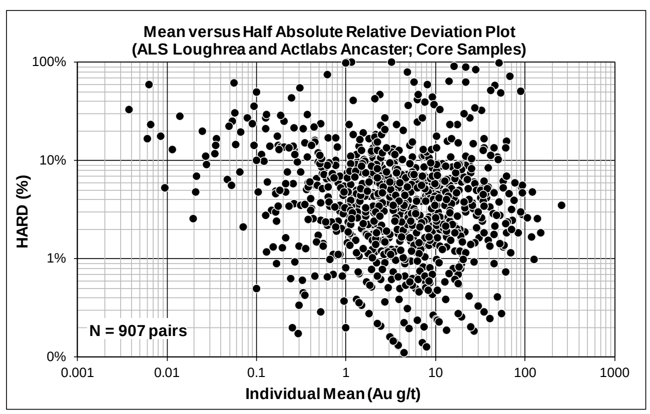










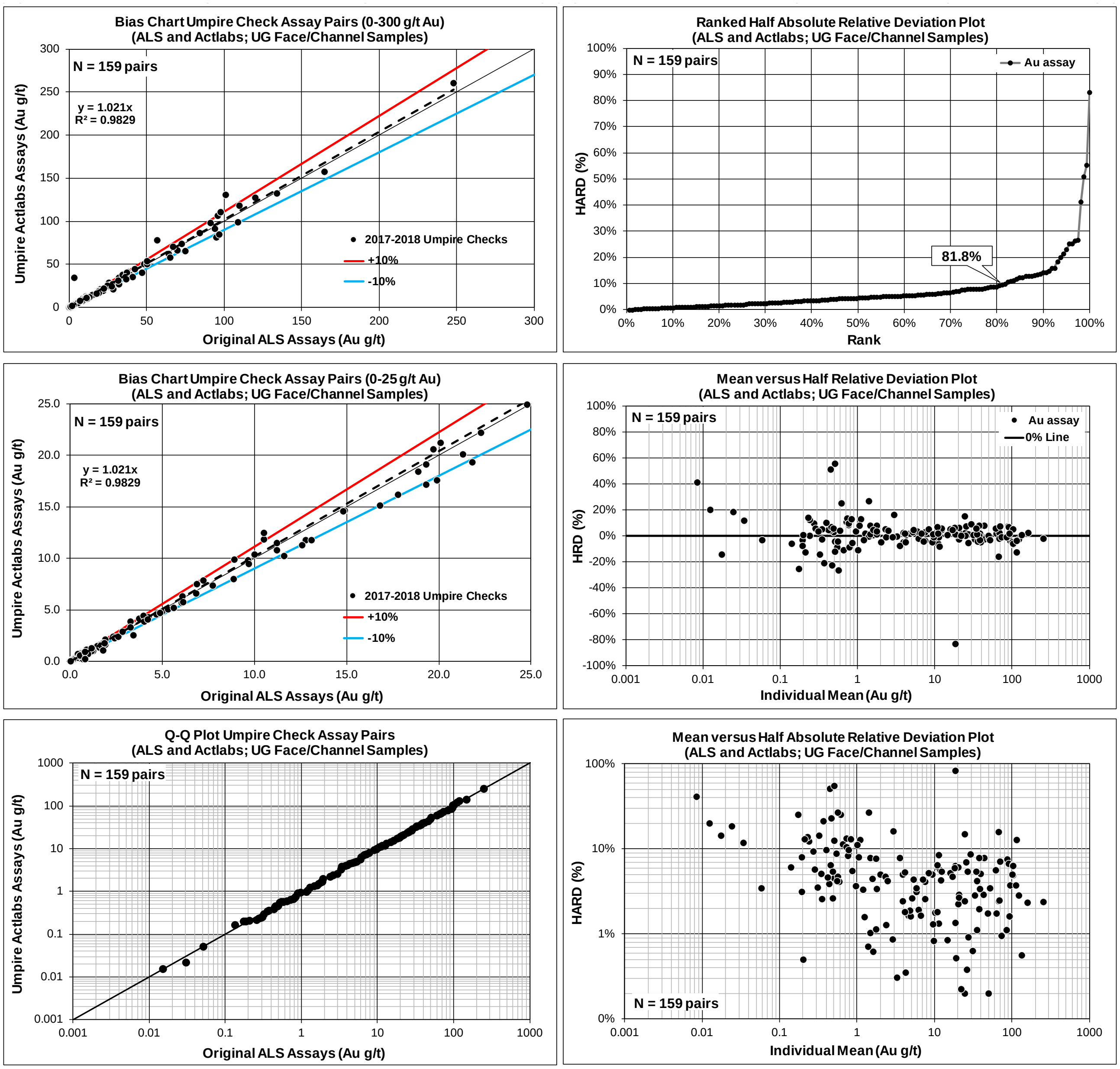


Bias Charts and Precision Plots for Lab-internal Pulp Duplicates (Lab Checks), Underground Face/Channel Samples, Assayed by Activation Laboratories in Ancaster, Canada Between 2017 and 2018.

srk consulting

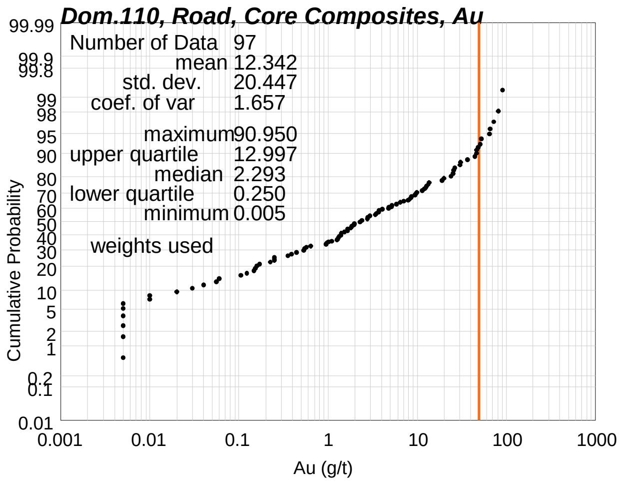
Project	Dalradian - Curraghinalt
Data Series	2017-2018 Umpire Checks
Data Type	UG Face/Channel Samples
Commodity	Au in g/t
Analytical Method	Fire Assay AA/Grav
Detection Limit	ALS: 0.01, Actlabs: 0.005
Original Dataset	Original ALS Assays
Paired Dataset	Umpire Actlabs Assays

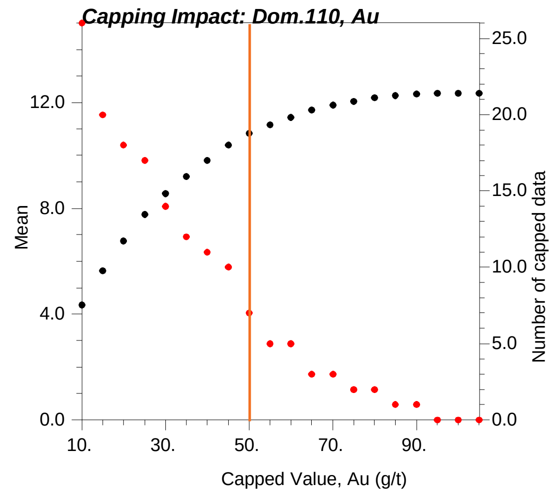
Statistics	**ALS**	**ACTlabs**
Sample Count	159	159
Minimum Value	0.012	0.005
Maximum Value	248.00	260.00
Mean	22.498	22.869
Median	5.320	5.150
Standard Error	2.927	3.019
Standard Deviation	36.905	38.070
Correlation Coefficient	0.9914	
Pairs ≤ 10% HARD	81.8%	

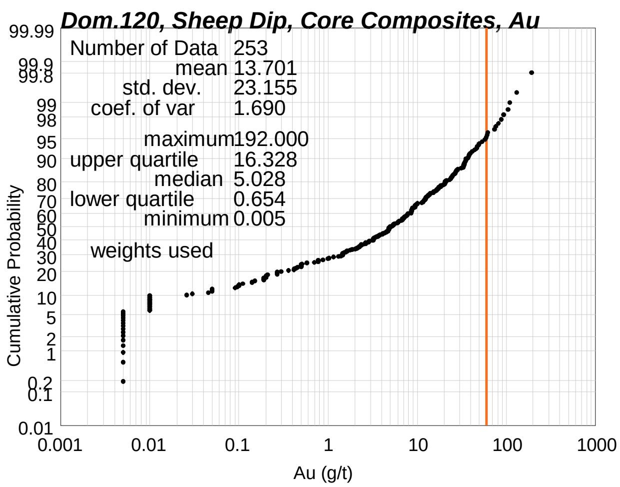


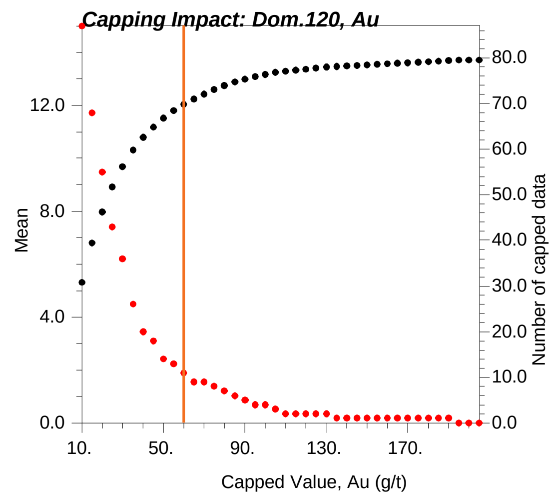
APPENDIX B

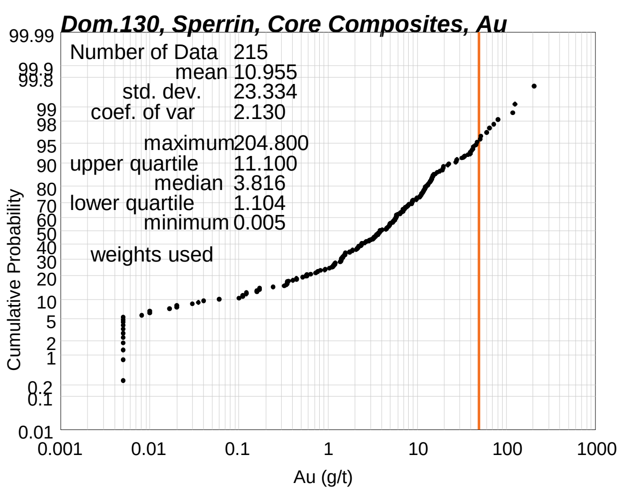
Grade Capping Plots

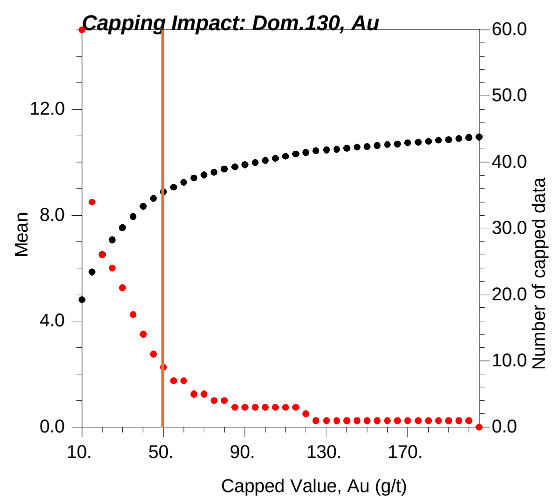

Dom.110, Road, Core Composites, Au
Number of Data 97
mean 12.342
std. dev. 20.447
coef. of var 1.657
maximum 90.950
upper quartile 12.997
median 2.293
lower quartile 0.250
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

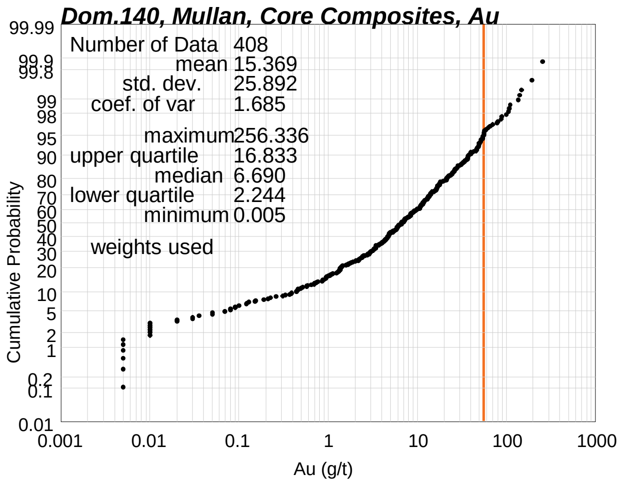

Capping Impact: Dom.110, Au
Mean
Number of capped data
Capped Value, Au (g/t)

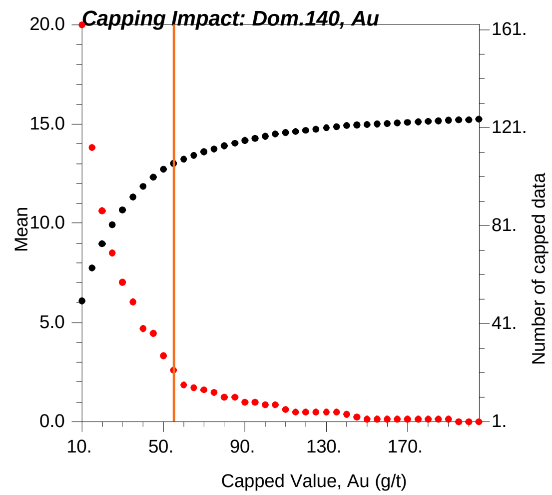

Dom.120, Sheep Dip, Core Composites, Au
Number of Data 253
mean 13.701
std. dev. 23.155
coef. of var 1.690
maximum 192.000
upper quartile 16.328
median 5.028
lower quartile 0.654
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

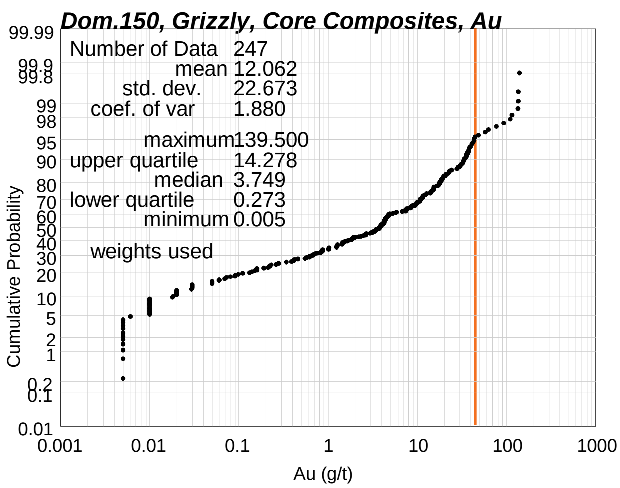

Capping Impact: Dom.120, Au
Mean
Number of capped data
Capped Value, Au (g/t)

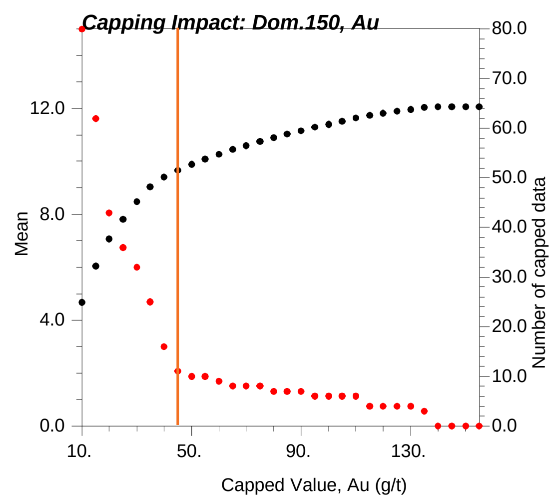

Dom.130, Sperrin, Core Composites, Au
Number of Data 215
mean 10.955
std. dev. 23.334
coef. of var 2.130
maximum 204.800
upper quartile 11.100
median 3.816
lower quartile 1.104
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

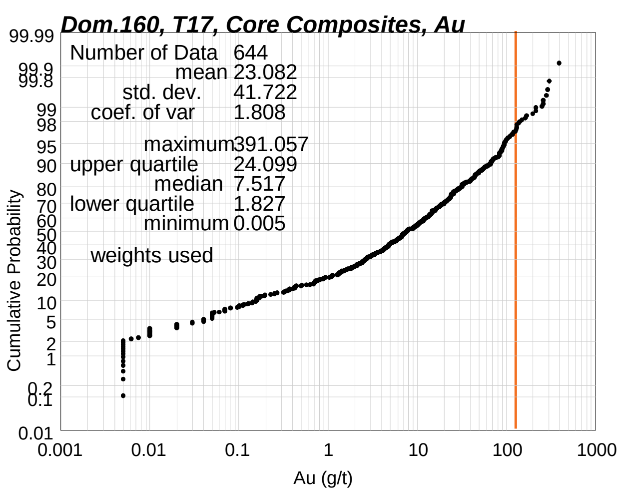

Capping Impact: Dom.130, Au
Mean
Number of capped data
Capped Value, Au (g/t)

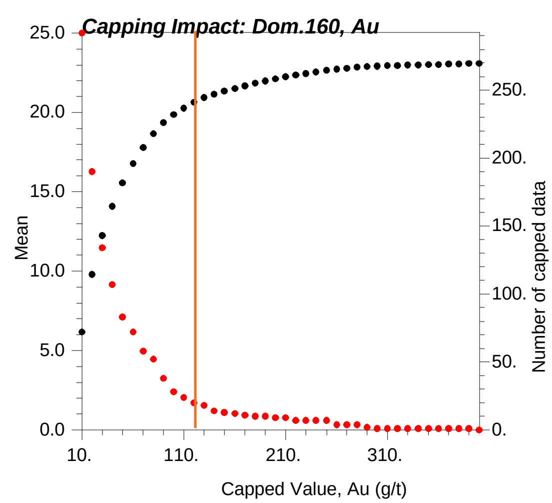

Dom.140, Mullan, Core Composites, Au
Number of Data 408
mean 15.369
std. dev. 25.892
coef. of var 1.685
maximum 256.336
upper quartile 16.833
median 6.690
lower quartile 2.244
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

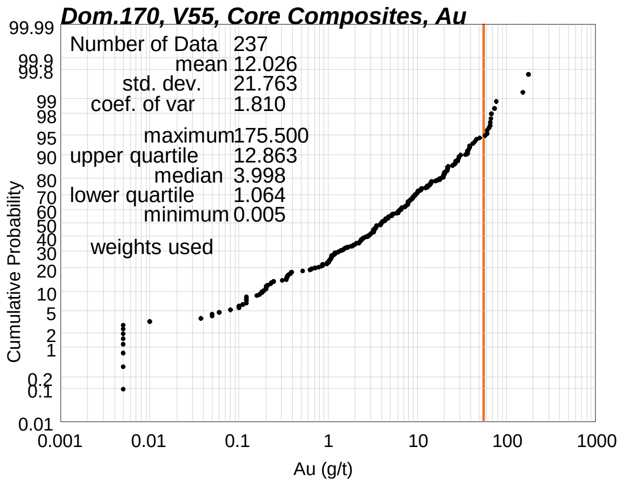

Capping Impact: Dom.140, Au
Mean
Number of capped data
Capped Value, Au (g/t)

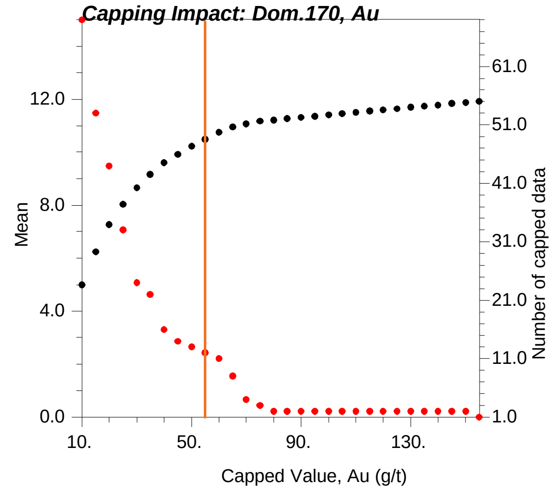

Dom.150, Grizzly, Core Composites, Au
Number of Data 247
mean 12.062
std. dev. 22.673
coef. of var 1.880
maximum 139.500
upper quartile 14.278
median 3.749
lower quartile 0.273
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

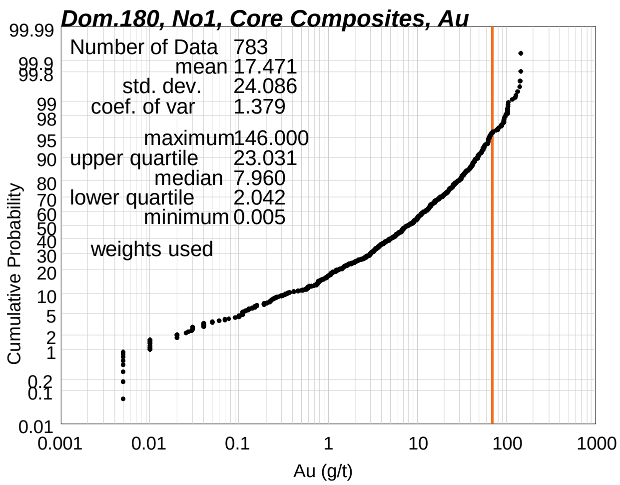

Capping Impact: Dom.150, Au
Mean
Number of capped data
Capped Value, Au (g/t)

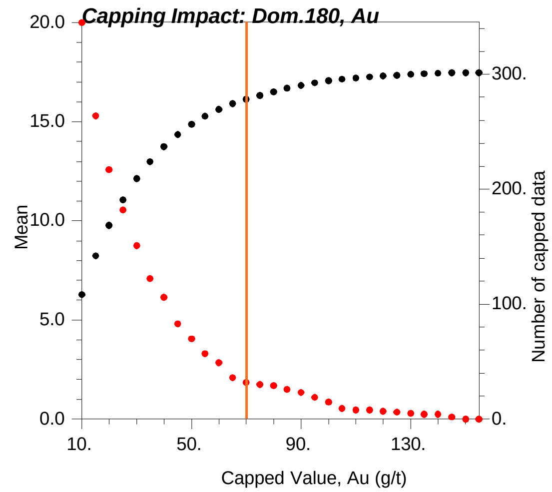

Dom.160, T17, Core Composites, Au
Number of Data 644
mean 23.082
std. dev. 41.722
coef. of var 1.808
maximum 391.057
upper quartile 24.099
median 7.517
lower quartile 1.827
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

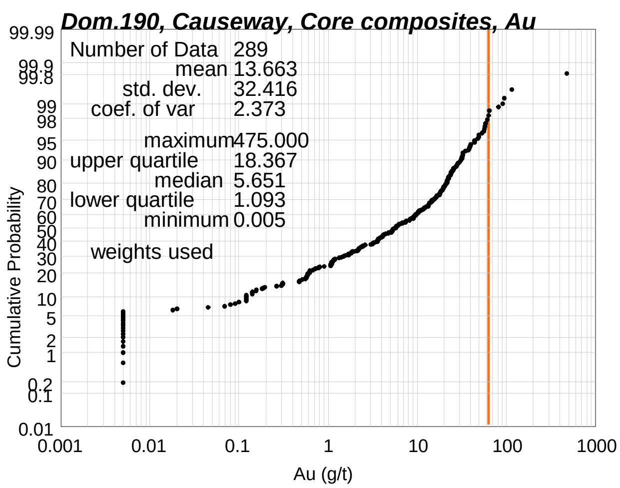

Capping Impact: Dom.160, Au
Mean
Number of capped data
Capped Value, Au (g/t)

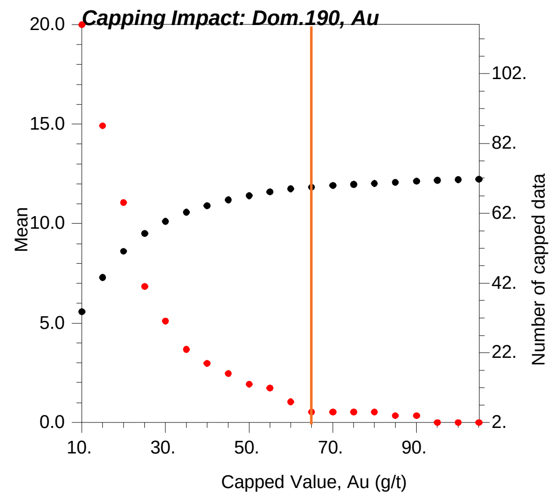

Dom.170, V55, Core Composites, Au
Number of Data 237
mean 12.026
std. dev. 21.763
coef. of var 1.810
maximum 175.500
upper quartile 12.863
median 3.998
lower quartile 1.064
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

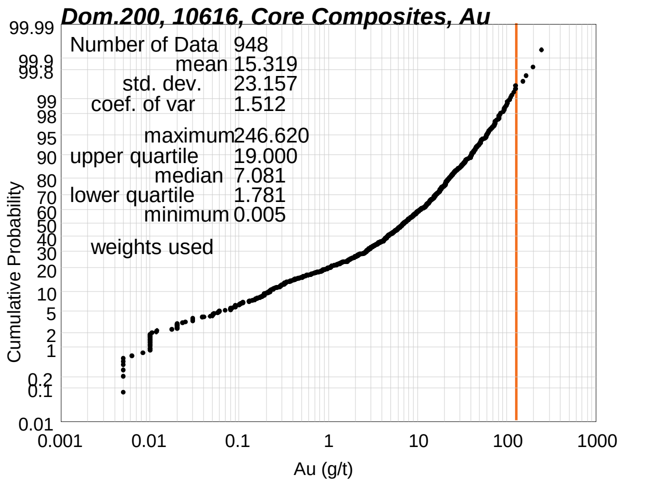

Capping Impact: Dom.170, Au
Mean
Number of capped data
Capped Value, Au (g/t)

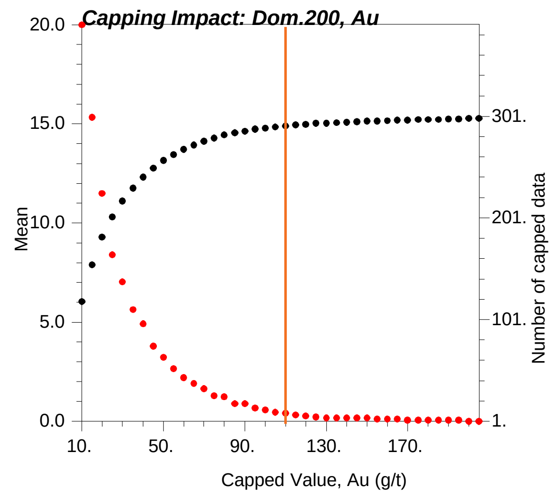

Dom.180, No1, Core Composites, Au
Number of Data 783
mean 17.471
std. dev. 24.086
coef. of var 1.379
maximum 146.000
upper quartile 23.031
median 7.960
lower quartile 2.042
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

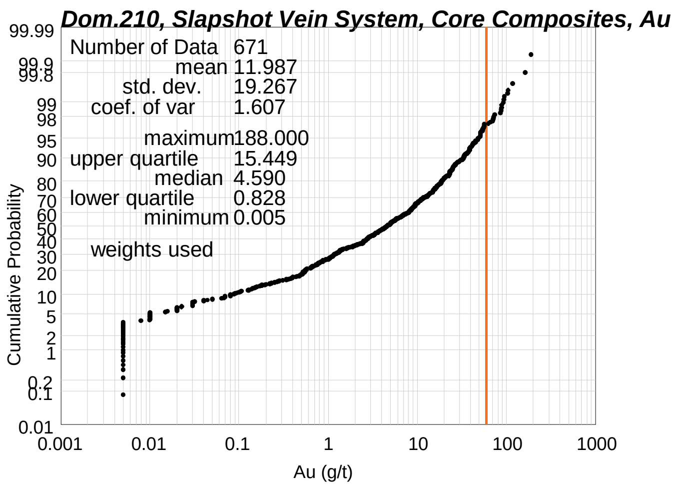

Capping Impact: Dom.180, Au
Mean
Number of capped data
Capped Value, Au (g/t)

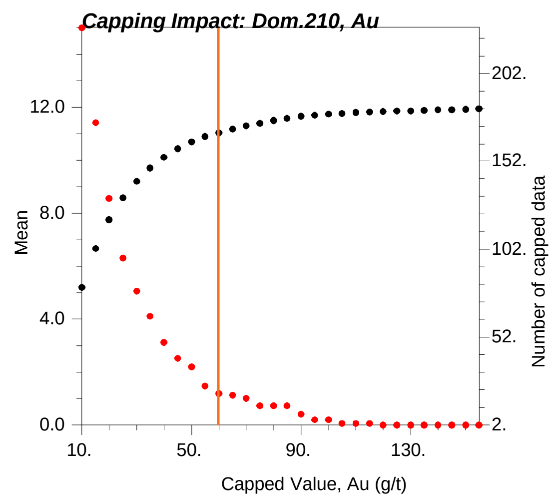

Dom.190, Causeway, Core composites, Au
Number of Data 289
mean 13.663
std. dev. 32.416
coef. of var 2.373
maximum 475.000
upper quartile 18.367
median 5.651
lower quartile 1.093
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

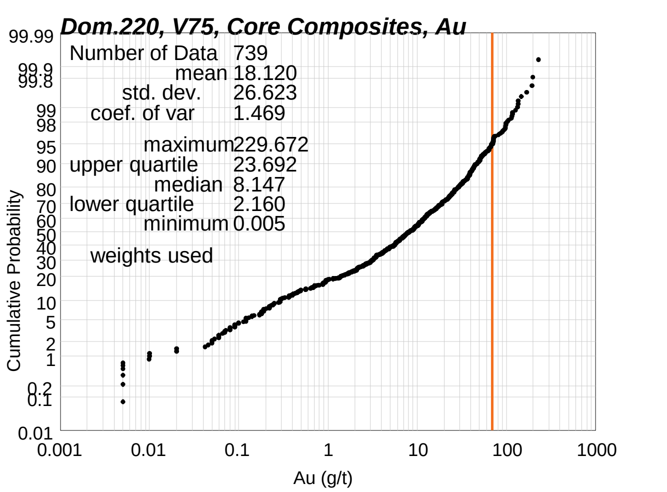

Capping Impact: Dom.190, Au
Mean
Number of capped data
Capped Value, Au (g/t)

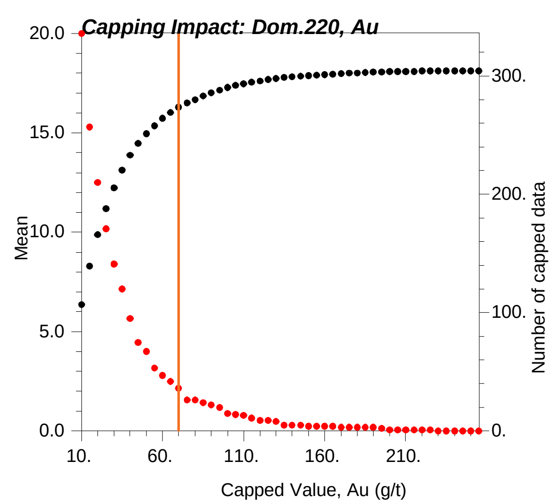

Dom.200, 10616, Core Composites, Au
Number of Data 948
mean 15.319
std. dev. 23.157
coef. of var 1.512
maximum 246.620
upper quartile 19.000
median 7.081
lower quartile 1.781
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

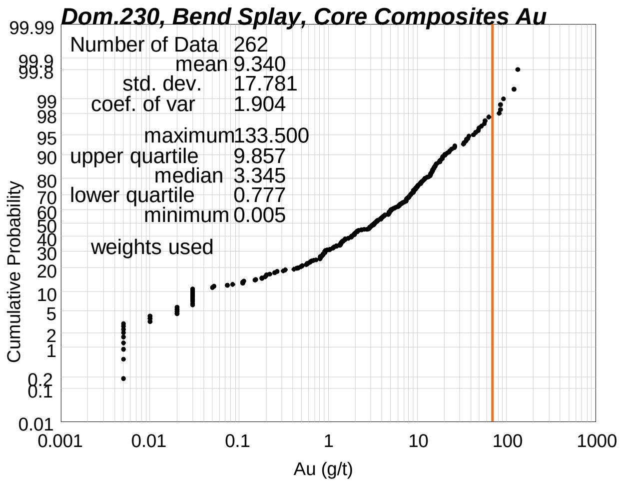

Capping Impact: Dom.200, Au
Mean
Number of capped data
Capped Value, Au (g/t)

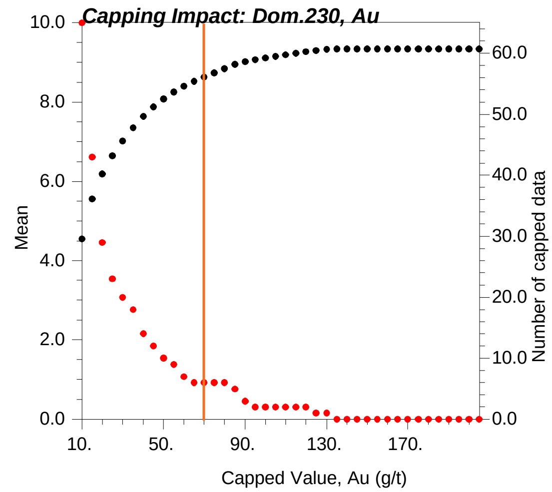

Dom.210, Slapshot Vein System, Core Composites, Au
Number of Data 671
mean 11.987
std. dev. 19.267
coef. of var 1.607
maximum 188.000
upper quartile 15.449
median 4.590
lower quartile 0.828
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

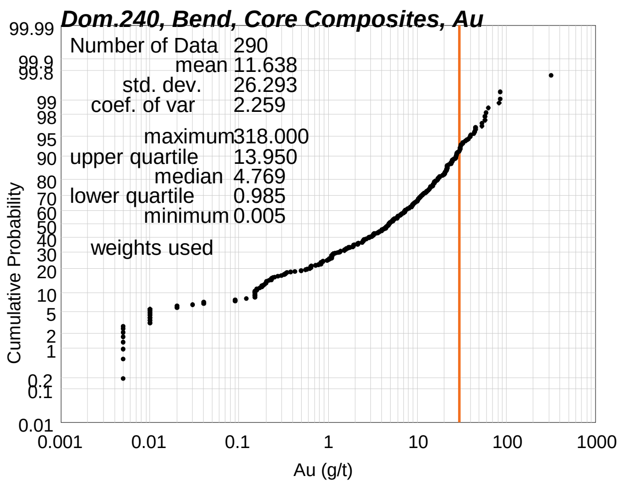

Capping Impact: Dom.210, Au
Mean
Number of capped data
Capped Value, Au (g/t)

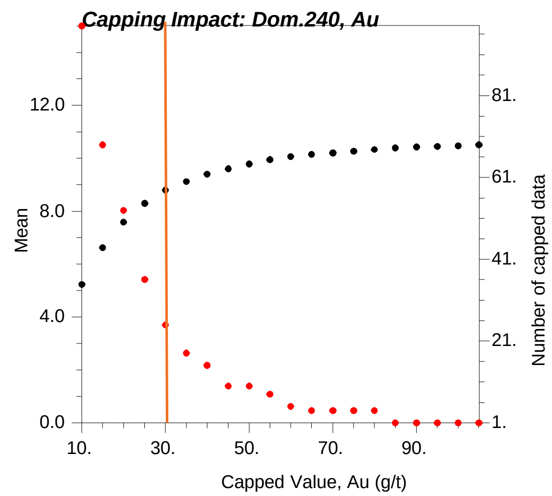

Dom.220, V75, Core Composites, Au
Number of Data 739
mean 18.120
std. dev. 26.623
coef. of var 1.469
maximum 229.672
upper quartile 23.692
median 8.147
lower quartile 2.160
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

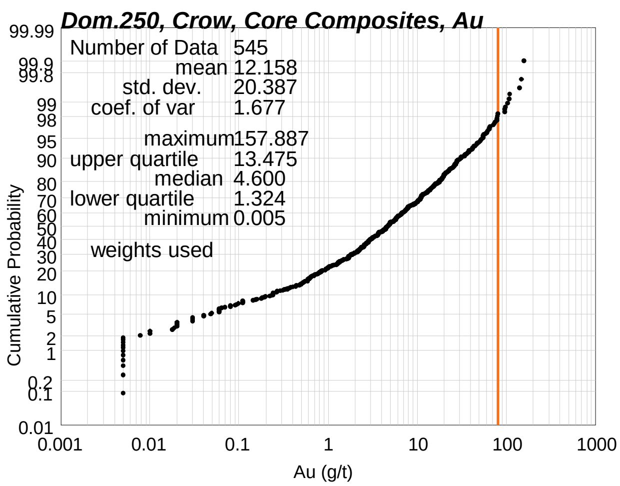

Capping Impact: Dom.220, Au
Mean
Number of capped data
Capped Value, Au (g/t)

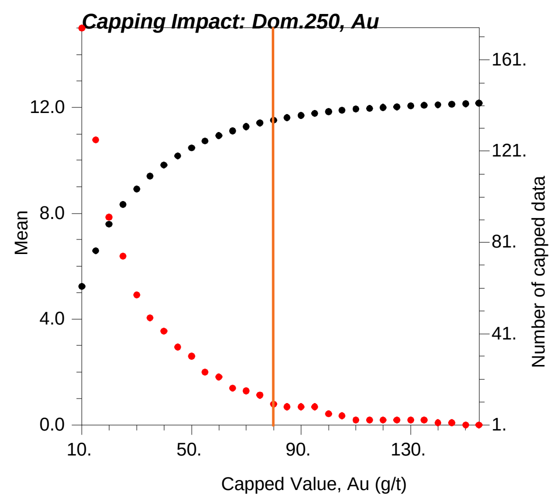

Dom.230, Bend Splay, Core Composites Au
Number of Data 262
mean 9.340
std. dev. 17.781
coef. of var 1.904
maximum 133.500
upper quartile 9.857
median 3.345
lower quartile 0.777
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

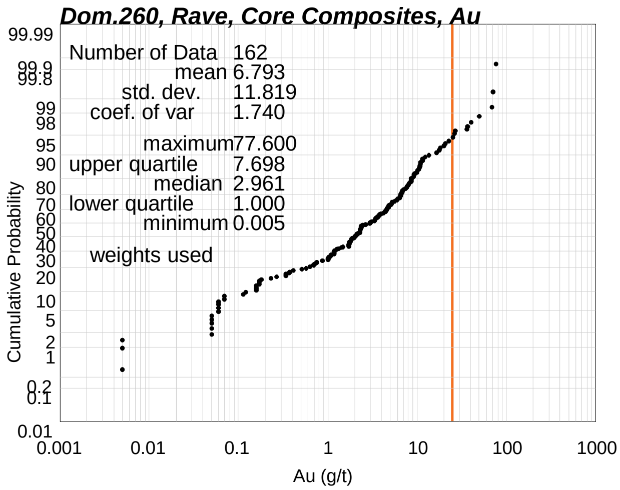

Capping Impact: Dom.230, Au
Mean
Number of capped data
Capped Value, Au (g/t)

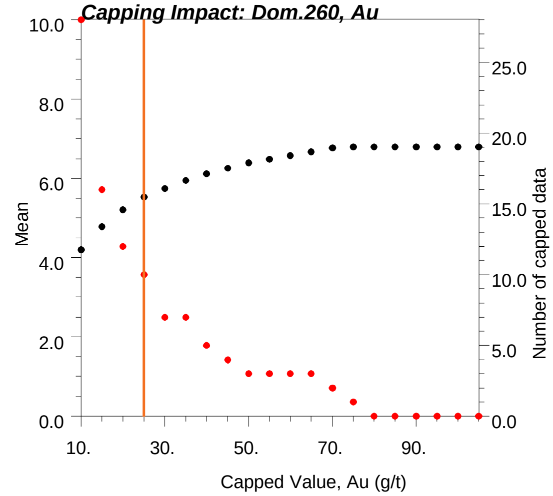

Dom.240, Bend, Core Composites, Au
Number of Data 290
mean 11.638
std. dev. 26.293
coef. of var 2.259
maximum 318.000
upper quartile 13.950
median 4.769
lower quartile 0.985
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

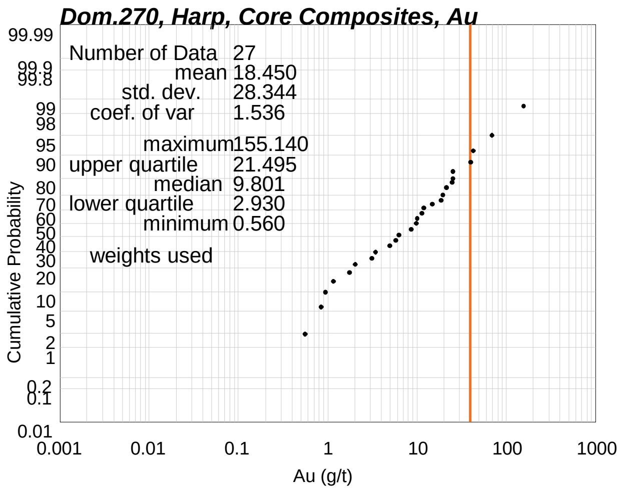

Capping Impact: Dom.240, Au
Mean
Number of capped data
Capped Value, Au (g/t)

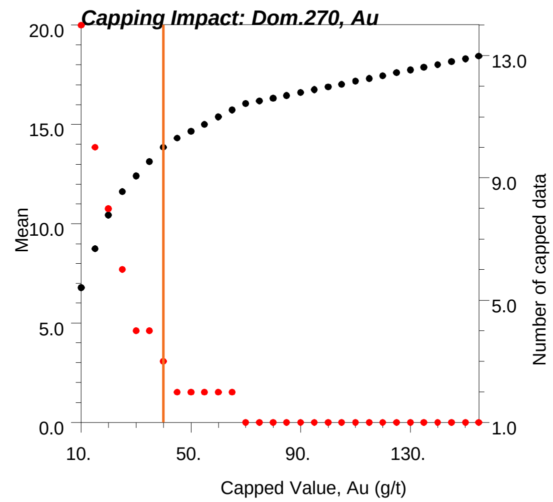

Dom.250, Crow, Core Composites, Au
Number of Data 545
mean 12.158
std. dev. 20.387
coef. of var 1.677
maximum 157.887
upper quartile 13.475
median 4.600
lower quartile 1.324
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

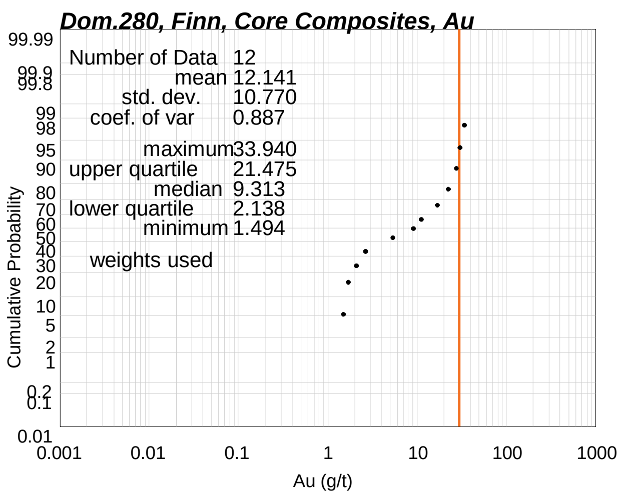

Capping Impact: Dom.250, Au
Mean
Number of capped data
Capped Value, Au (g/t)

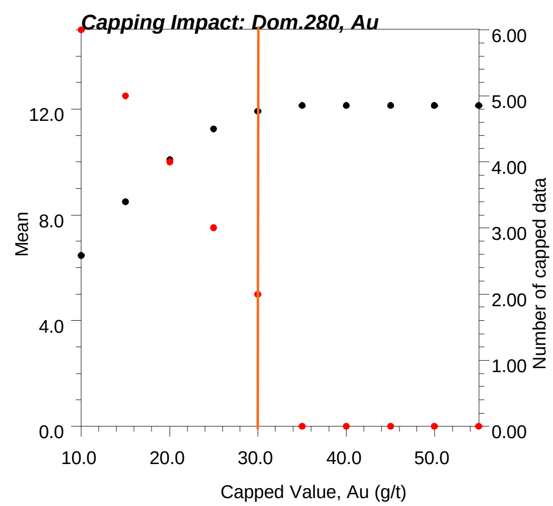

Dom.260, Rave, Core Composites, Au
Number of Data 162
mean 6.793
std. dev. 11.819
coef. of var 1.740
maximum 77.600
upper quartile 7.698
median 2.961
lower quartile 1.000
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

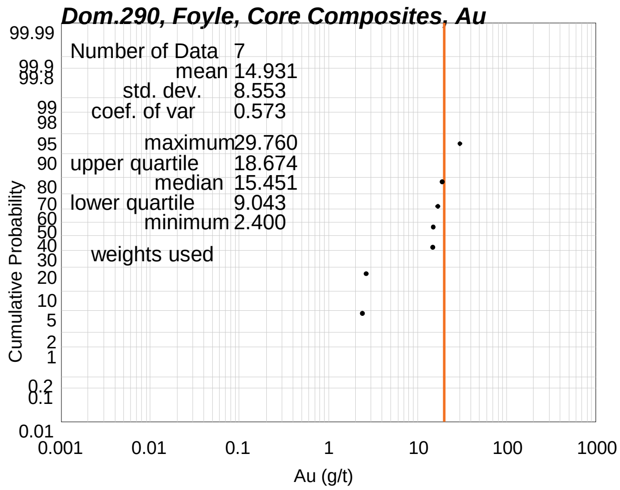

Capping Impact: Dom.260, Au
Mean
Number of capped data
Capped Value, Au (g/t)

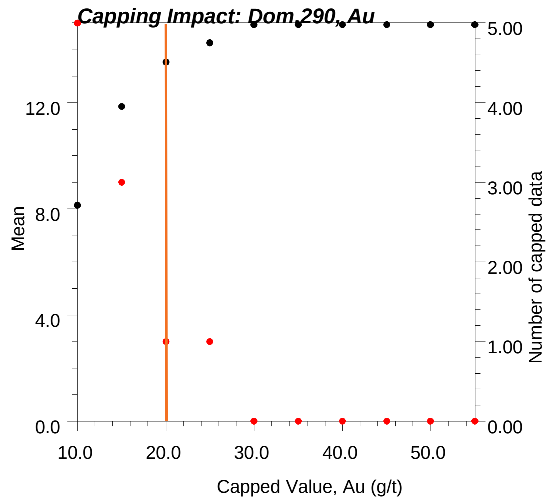

Dom.270, Harp, Core Composites, Au
Number of Data 27
mean 18.450
std. dev. 28.344
coef. of var 1.536
maximum 155.140
upper quartile 21.495
median 9.801
lower quartile 2.930
minimum 0.560
weights used
Cumulative Probability
Au (g/t)

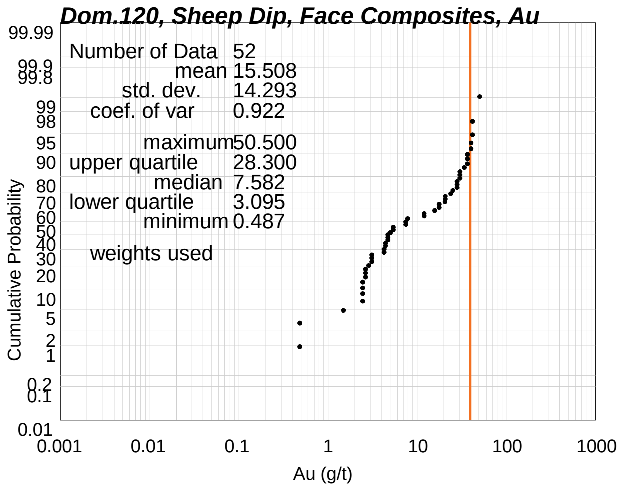

Capping Impact: Dom.270, Au
Mean
Number of capped data
Capped Value, Au (g/t)

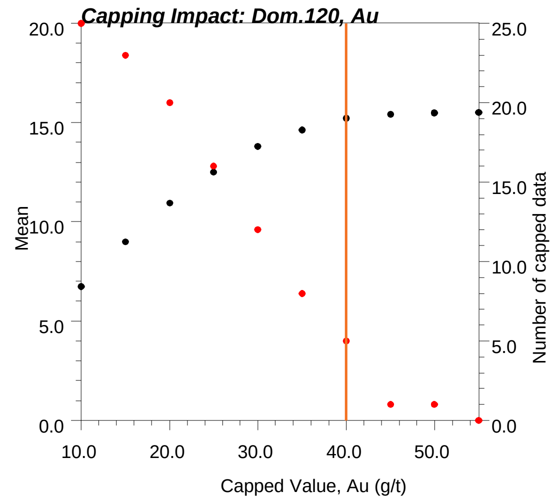

Dom.280, Finn, Core Composites, Au
Number of Data 12
mean 12.141
std. dev. 10.770
coef. of var 0.887
maximum 33.940
upper quartile 21.475
median 9.313
lower quartile 2.138
minimum 1.494
weights used
Cumulative Probability
Au (g/t)

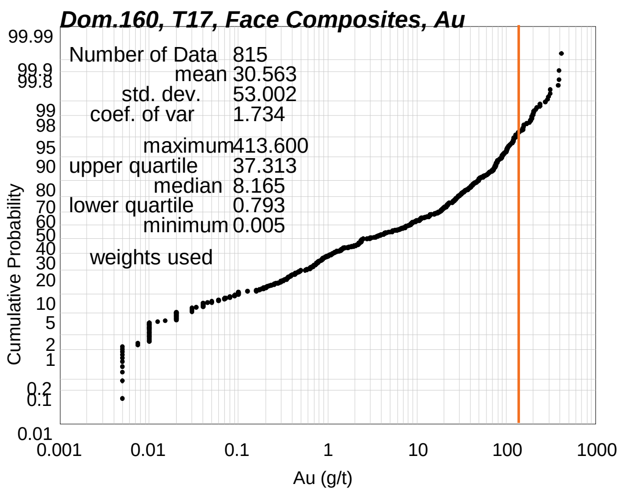

Capping Impact: Dom.280, Au
Mean
Number of capped data
Capped Value, Au (g/t)

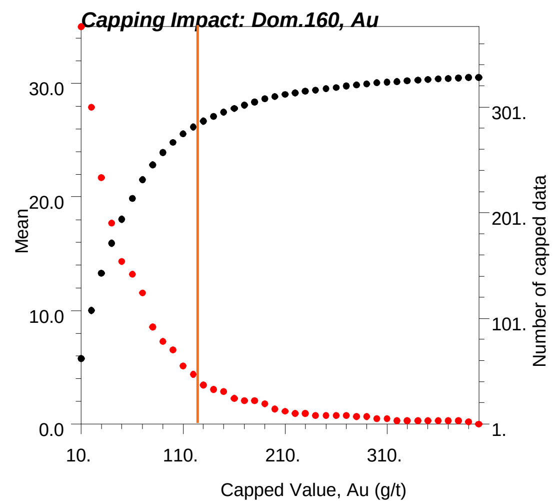

Dom.290, Foyle, Core Composites, Au
Number of Data 7
mean 14.931
std. dev. 8.553
coef. of var 0.573
maximum 29.760
upper quartile 18.674
median 15.451
lower quartile 9.043
minimum 2.400
weights used
Cumulative Probability
Au (g/t)

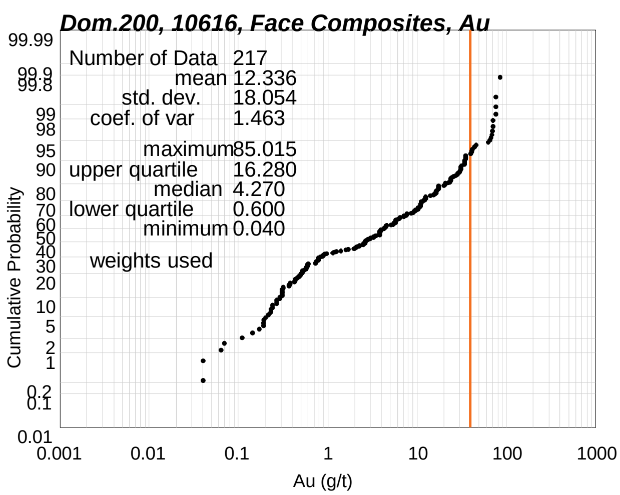

Capping Impact: Dom.290, Au
Mean
Number of capped data
Capped Value, Au (g/t)

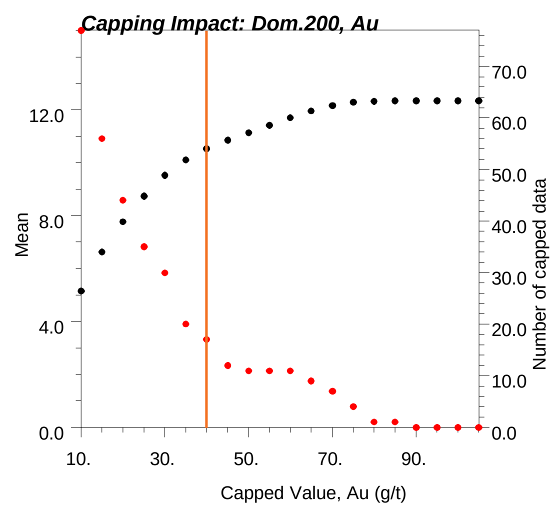

Dom.120, Sheep Dip, Face Composites, Au
Number of Data 52
mean 15.508
std. dev. 14.293
coef. of var 0.922
maximum 50.500
upper quartile 28.300
median 7.582
lower quartile 3.095
minimum 0.487
weights used
Cumulative Probability
Au (g/t)

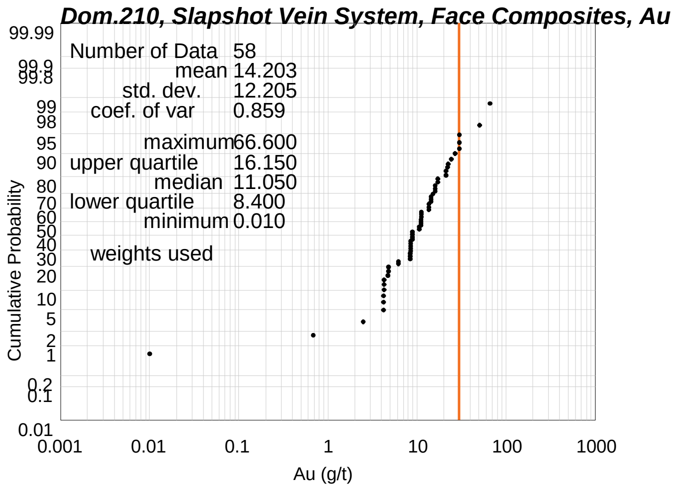

Capping Impact: Dom.120, Au
Mean
Number of capped data
Capped Value, Au (g/t)

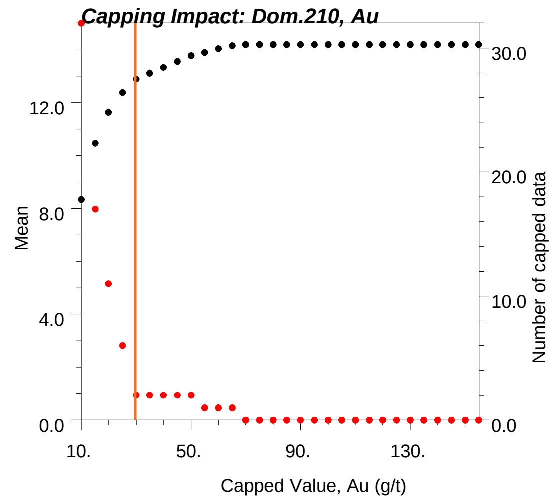

Dom.160, T17, Face Composites, Au
Number of Data 815
mean 30.563
std. dev. 53.002
coef. of var 1.734
maximum 413.600
upper quartile 37.313
median 8.165
lower quartile 0.793
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

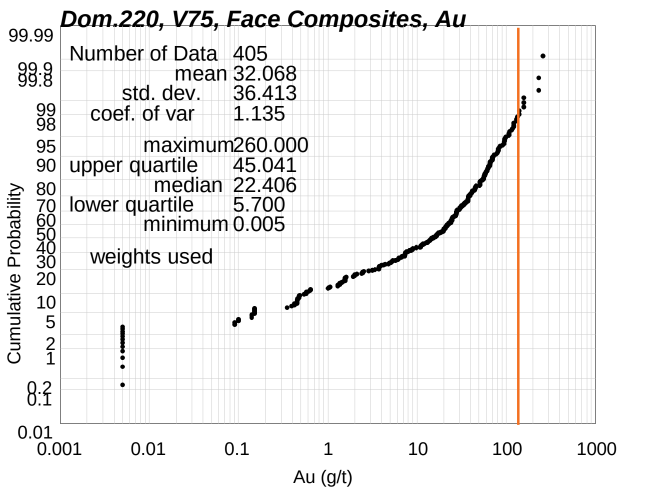

Capping Impact: Dom.160, Au
Mean
Number of capped data
Capped Value, Au (g/t)

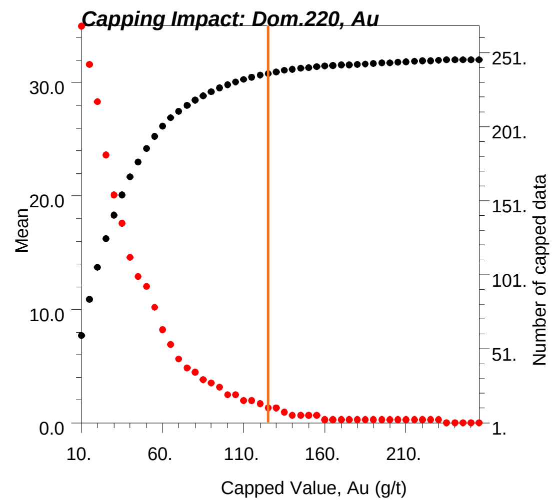

Dom.200, 10616, Face Composites, Au
Number of Data 217
mean 12.336
std. dev. 18.054
coef. of var 1.463
maximum 85.015
upper quartile 16.280
median 4.270
lower quartile 0.600
minimum 0.040
weights used
Cumulative Probability
Au (g/t)


Capping Impact: Dom.200, Au
Mean
Number of capped data
Capped Value, Au (g/t)


Dom.210, Slapshot Vein System, Face Composites, Au
Number of Data 58
mean 14.203
std. dev. 12.205
coef. of var 0.859
maximum 66.600
upper quartile 16.150
median 11.050
lower quartile 8.400
minimum 0.010
weights used
Cumulative Probability
Au (g/t)


Capping Impact: Dom.210, Au
Mean
Number of capped data
Capped Value, Au (g/t)


Dom.220, V75, Face Composites, Au
Number of Data 405
mean 32.068
std. dev. 36.413
coef. of var 1.135
maximum 260.000
upper quartile 45.041
median 22.406
lower quartile 5.700
minimum 0.005
weights used
Cumulative Probability
Au (g/t)

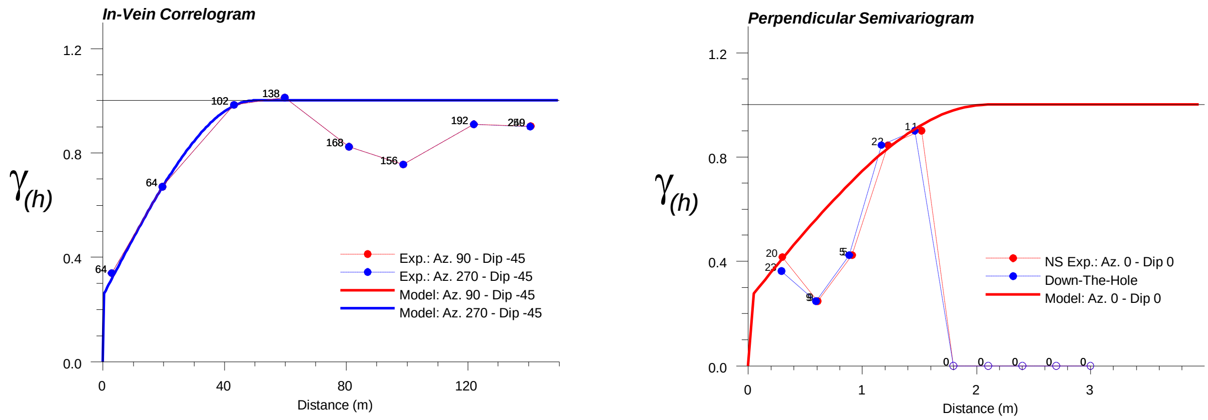

Capping Impact: Dom.220, Au
Mean
Number of capped data
Capped Value, Au (g/t)

APPENDIX C

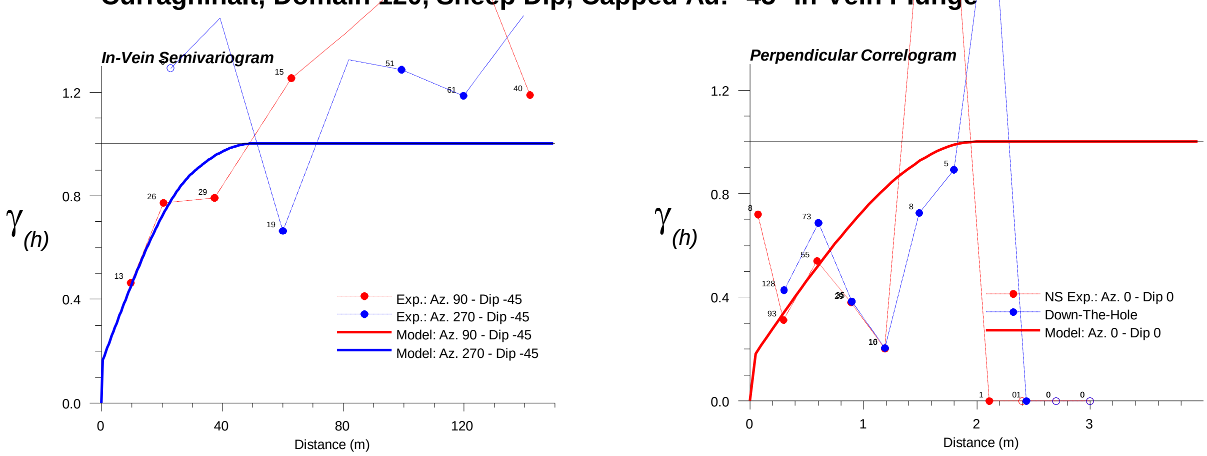
Variogram Models

Gold Variograms

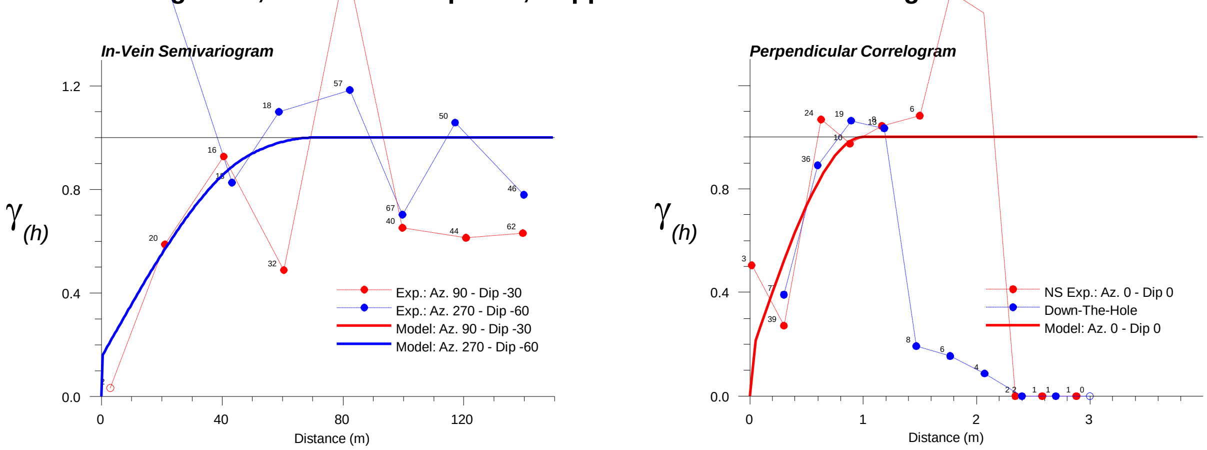
Curraghinalt, Domain 110, Road, Capped Au: -45° In-Vein Plunge



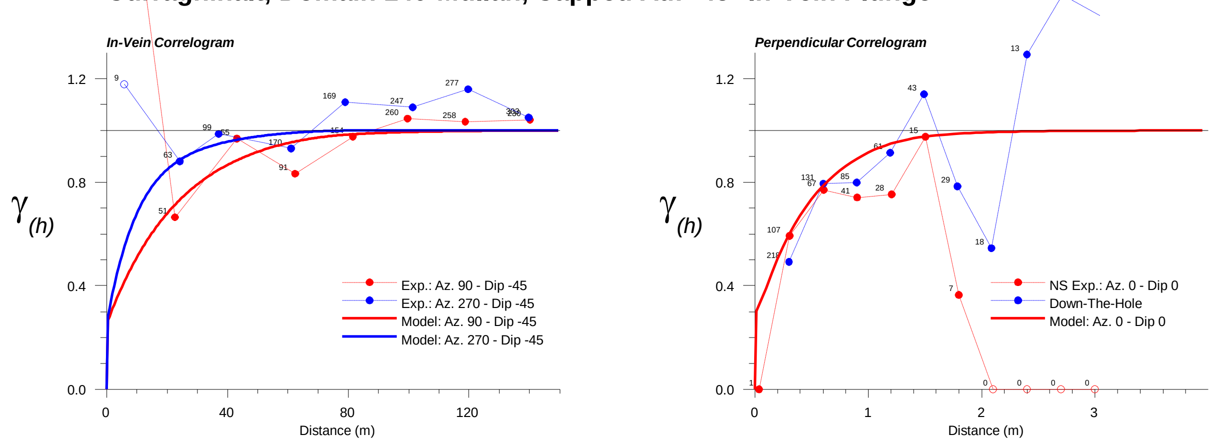
Curraghinalt, Domain 120, Sheep Dip, Capped Au: -45° In-Vein Plunge



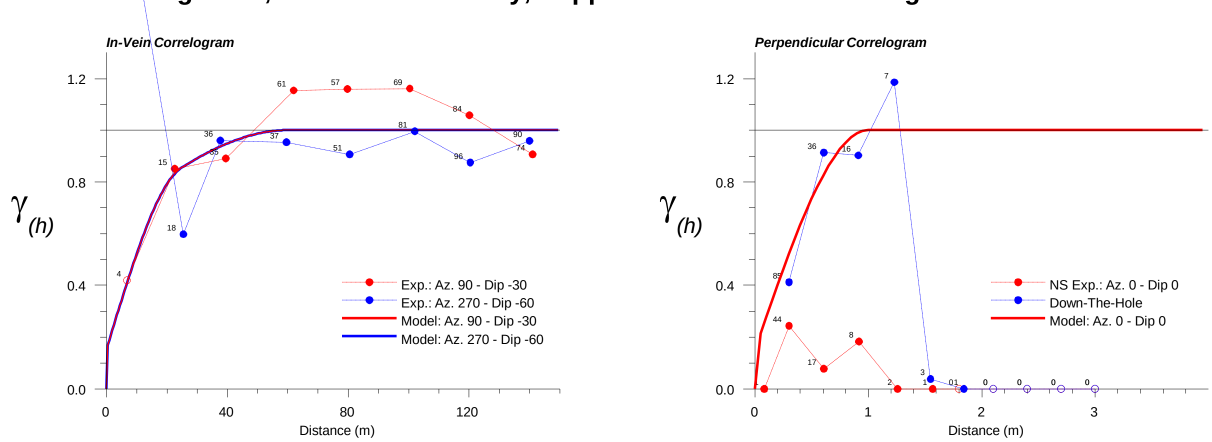
Curraghinalt, Domain 130-Sperrin, Capped Au: -30° In-Vein Plunge



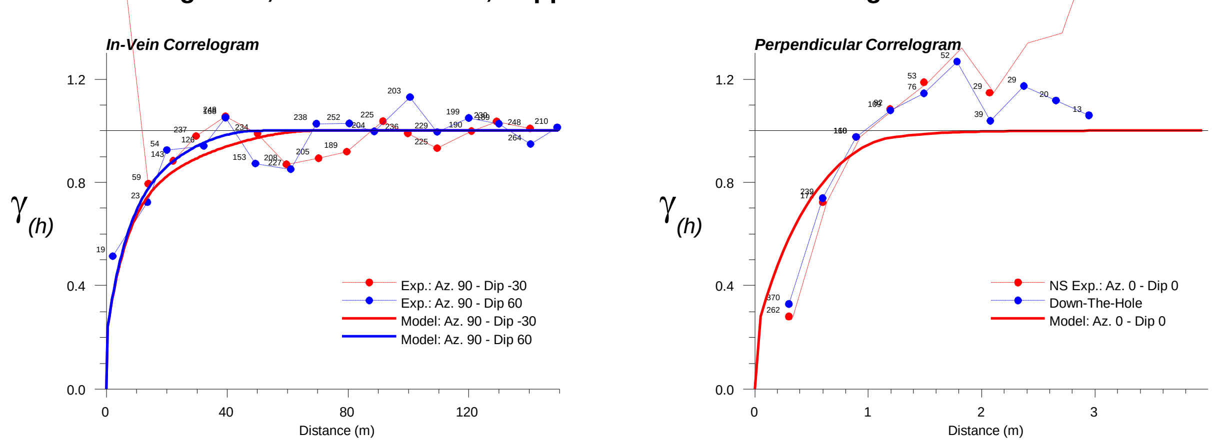
Curraghinalt, Domain 140-Mullan, Capped Au: -45° In-Vein Plunge

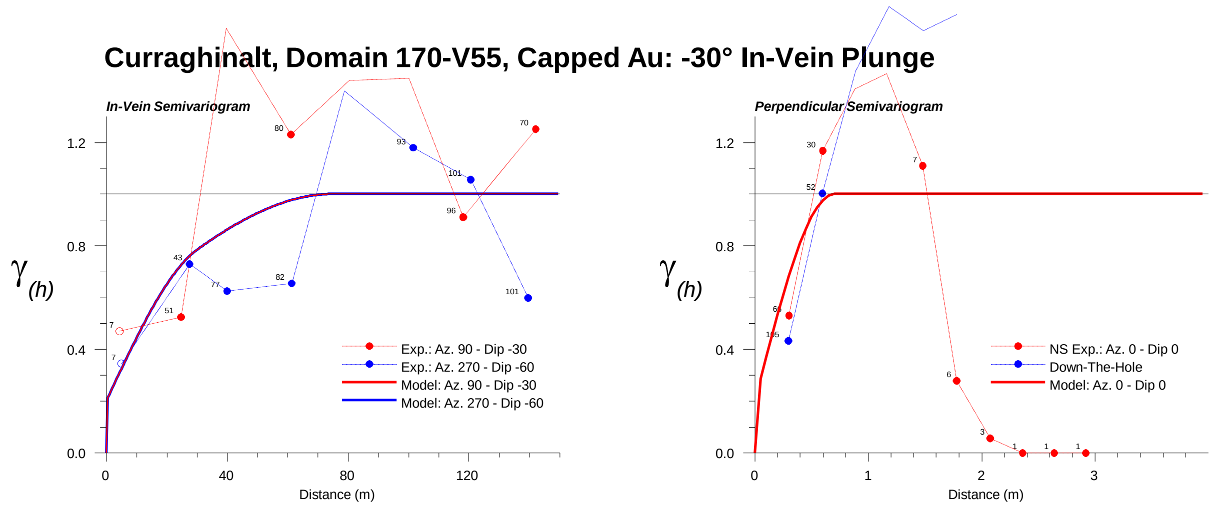


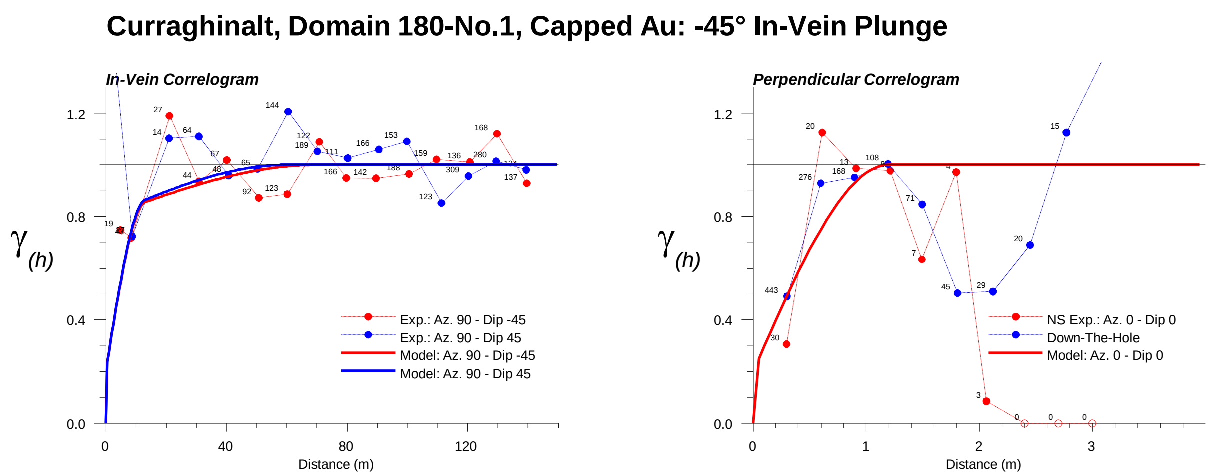
Curraghinalt, Domain 150-Grizzly, Capped Au: -30° In-Vein Plunge

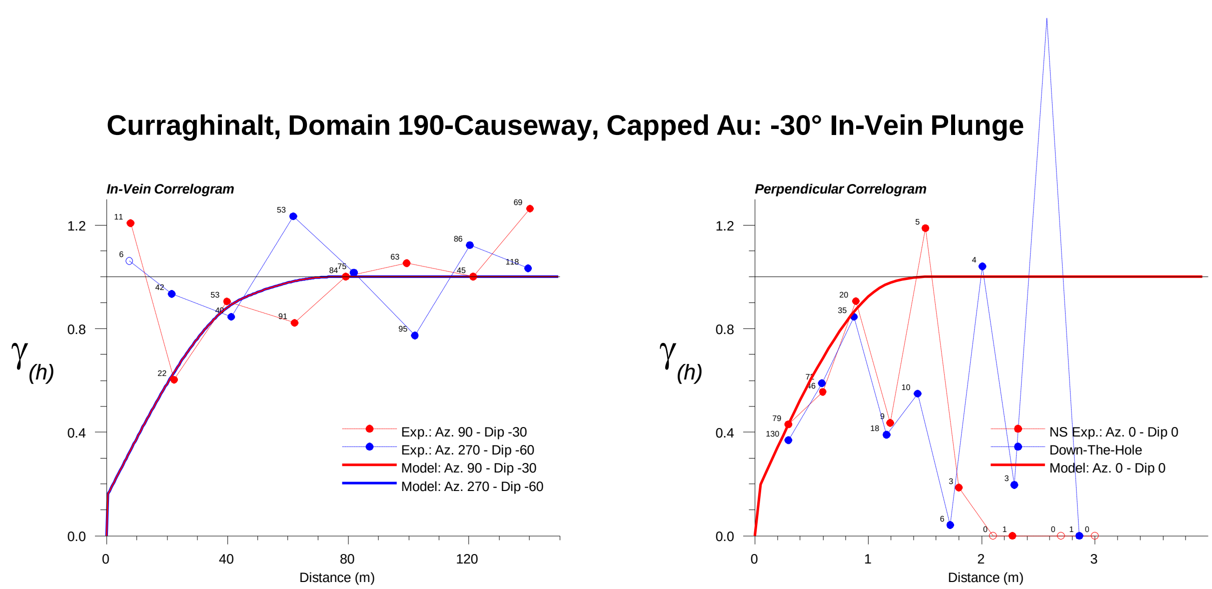


Curraghinalt, Domain 160-T17, Capped Au: -30° In-Vein Plunge

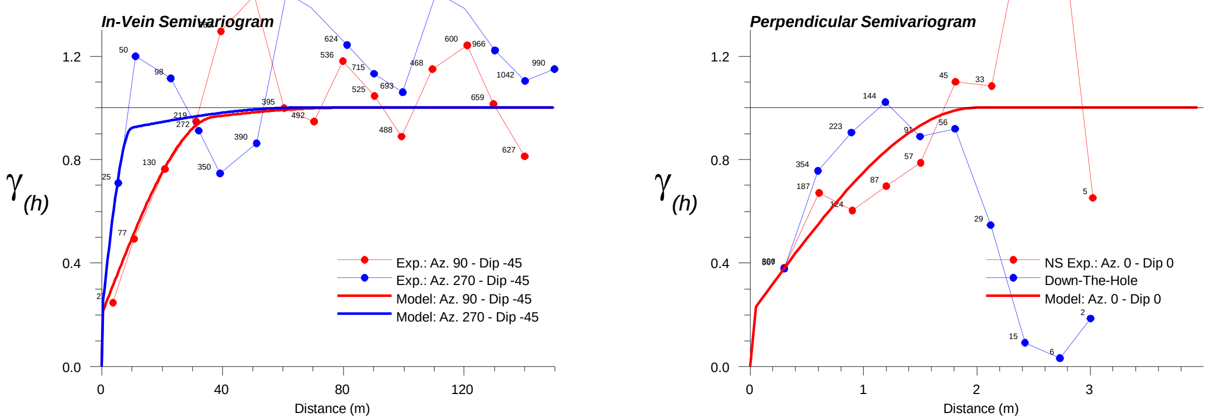



Curraghinalt, Domain 170-V55, Capped Au: -30° In-Vein Plunge
In-Vein Semivariogram
Perpendicular Semivariogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -30
Exp.: Az. 270 - Dip -60
Model: Az. 90 - Dip -30
Model: Az. 270 - Dip -60
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0

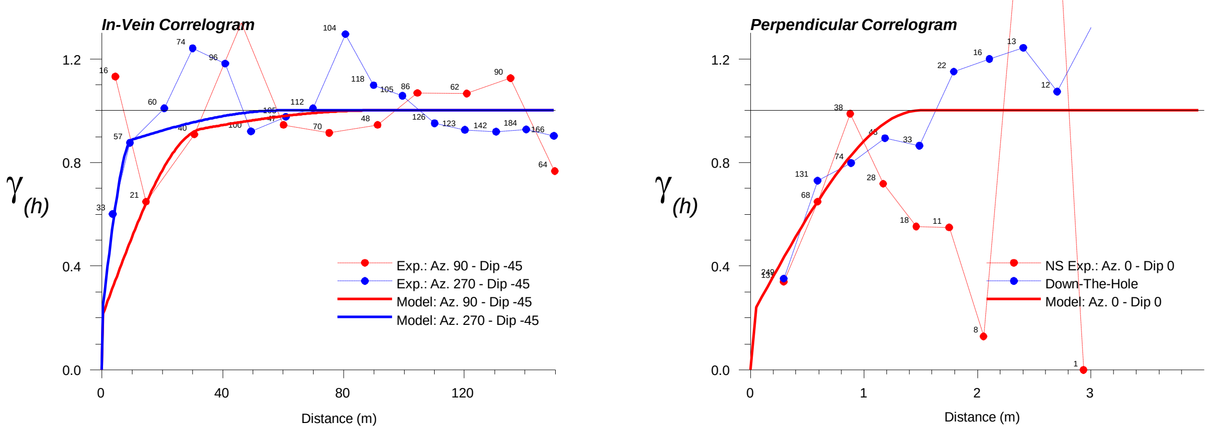

Curraghinalt, Domain 180-No.1, Capped Au: -45° In-Vein Plunge
In-Vein Correlogram
Perpendicular Correlogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -45
Exp.: Az. 90 - Dip 45
Model: Az. 90 - Dip -45
Model: Az. 90 - Dip 45
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0


Curraghinalt, Domain 190-Causeway, Capped Au: -30° In-Vein Plunge
In-Vein Correlogram
Perpendicular Correlogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -30
Exp.: Az. 270 - Dip -60
Model: Az. 90 - Dip -30
Model: Az. 270 - Dip -60
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0

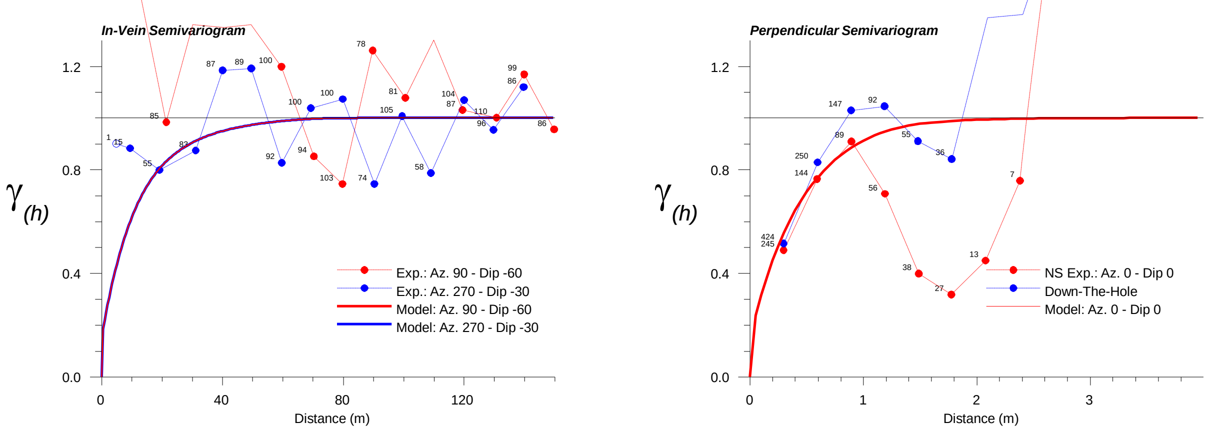
Curraghinalt, Domain 200-10616, Capped Au: -45° In-Vein Plunge

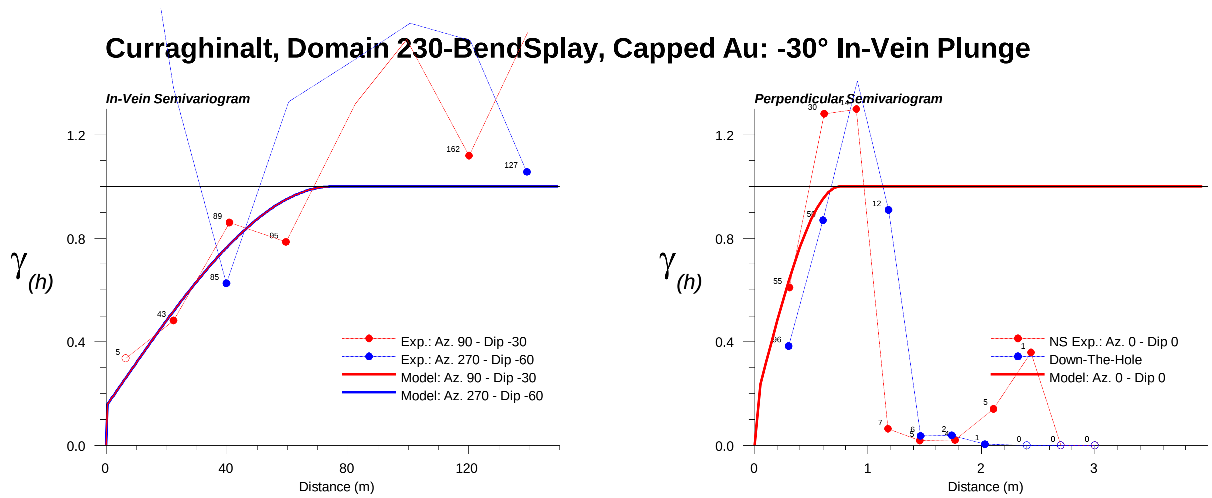


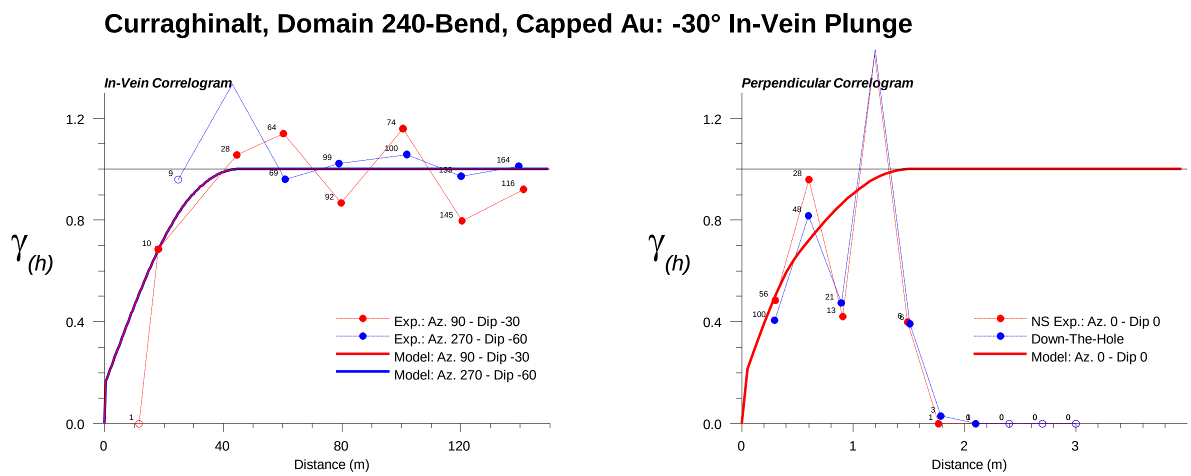
Curraghinalt, Domain 210-Slapshot, Capped Au: -45° In-Vein Plunge

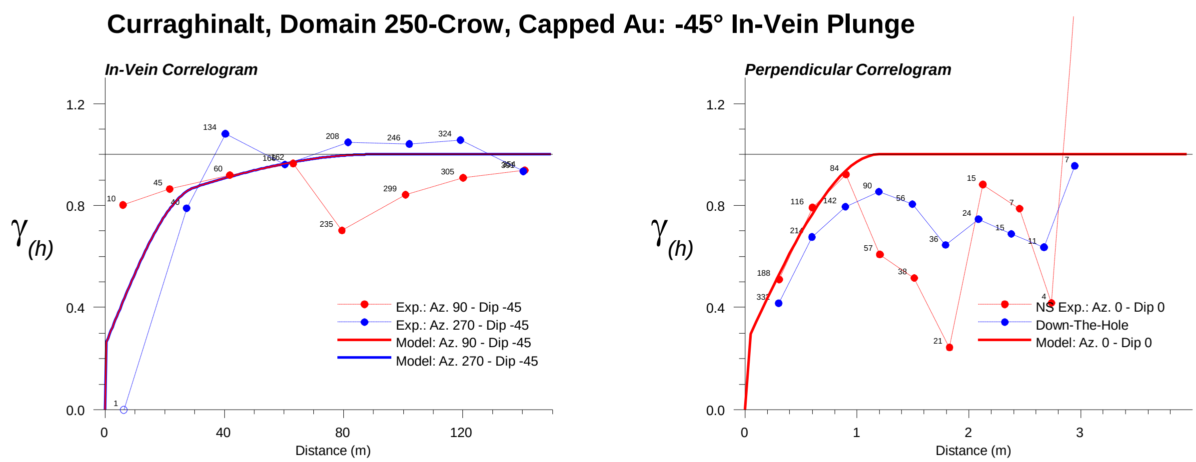


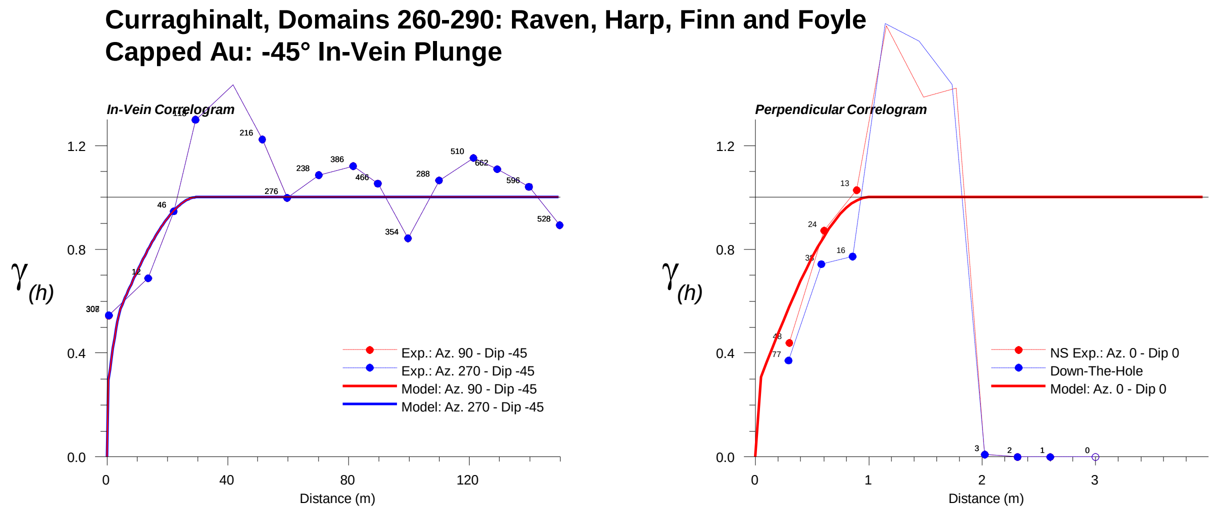
Curraghinalt, Domain 220-V75, Capped Au: -60° In-Vein Plunge




Curraghinalt, Domain 230-BendSplay, Capped Au: -30° In-Vein Plunge
In-Vein Semivariogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -30
Exp.: Az. 270 - Dip -60
Model: Az. 90 - Dip -30
Model: Az. 270 - Dip -60
Perpendicular Semivariogram
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0


Curraghinalt, Domain 240-Bend, Capped Au: -30° In-Vein Plunge
In-Vein Correlogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -30
Exp.: Az. 270 - Dip -60
Model: Az. 90 - Dip -30
Model: Az. 270 - Dip -60
Perpendicular Correlogram
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0

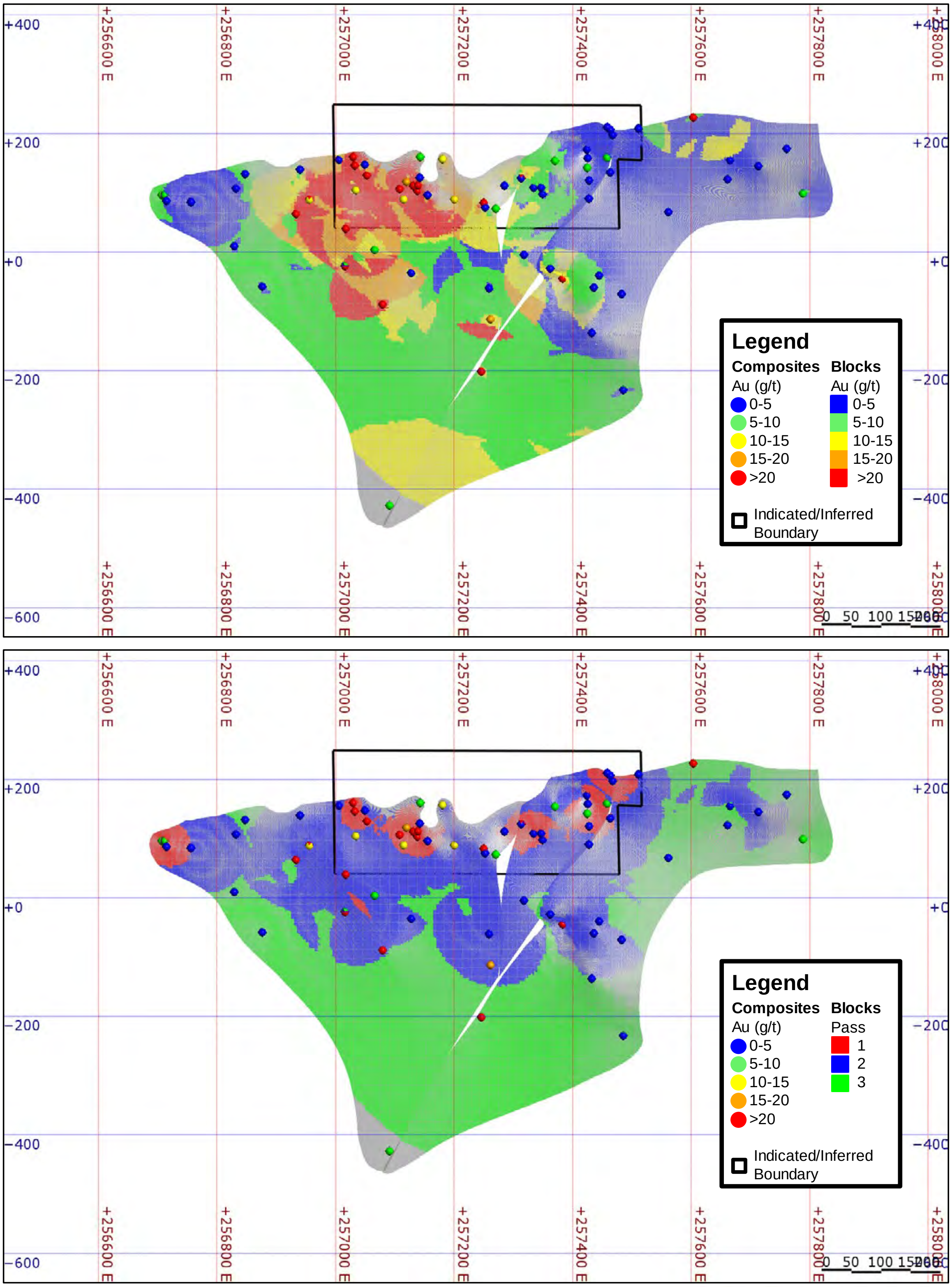

Curraghinalt, Domain 250-Crow, Capped Au: -45° In-Vein Plunge
In-Vein Correlogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -45
Exp.: Az. 270 - Dip -45
Model: Az. 90 - Dip -45
Model: Az. 270 - Dip -45
Perpendicular Correlogram
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0


Curraghinalt, Domains 260-290: Raven, Harp, Finn and Foyle
Capped Au: -45° In-Vein Plunge
In-Vein Correlogram
γ(h)
Distance (m)
Exp.: Az. 90 - Dip -45
Exp.: Az. 270 - Dip -45
Model: Az. 90 - Dip -45
Model: Az. 270 - Dip -45
Perpendicular Correlogram
NS Exp.: Az. 0 - Dip 0
Down-The-Hole
Model: Az. 0 - Dip 0

APPENDIX D

Longitudinal Sections

Long Section: Domain 110 - Road Vein



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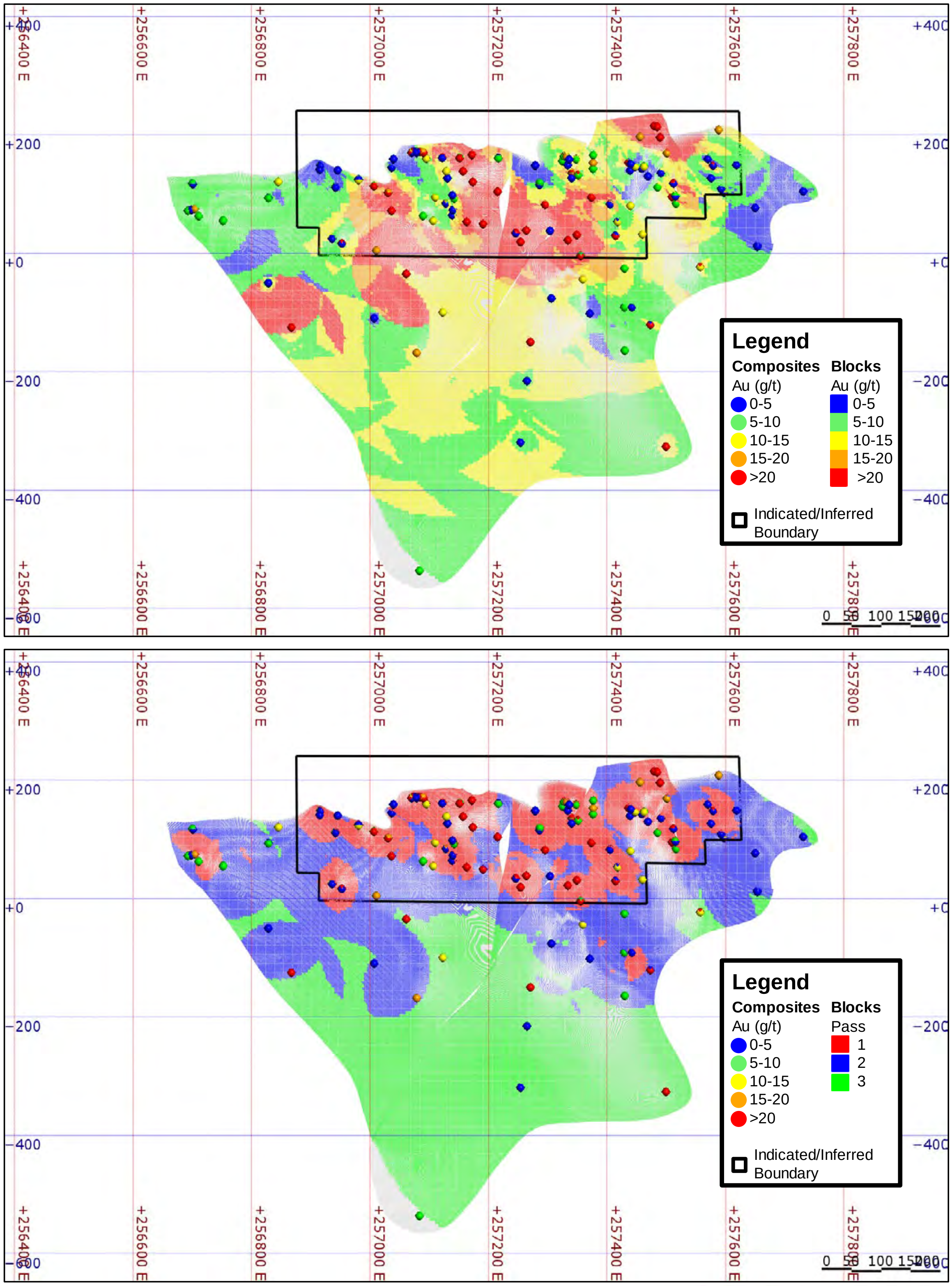
Long Section: Domain 120 – Sheep Dip Vein



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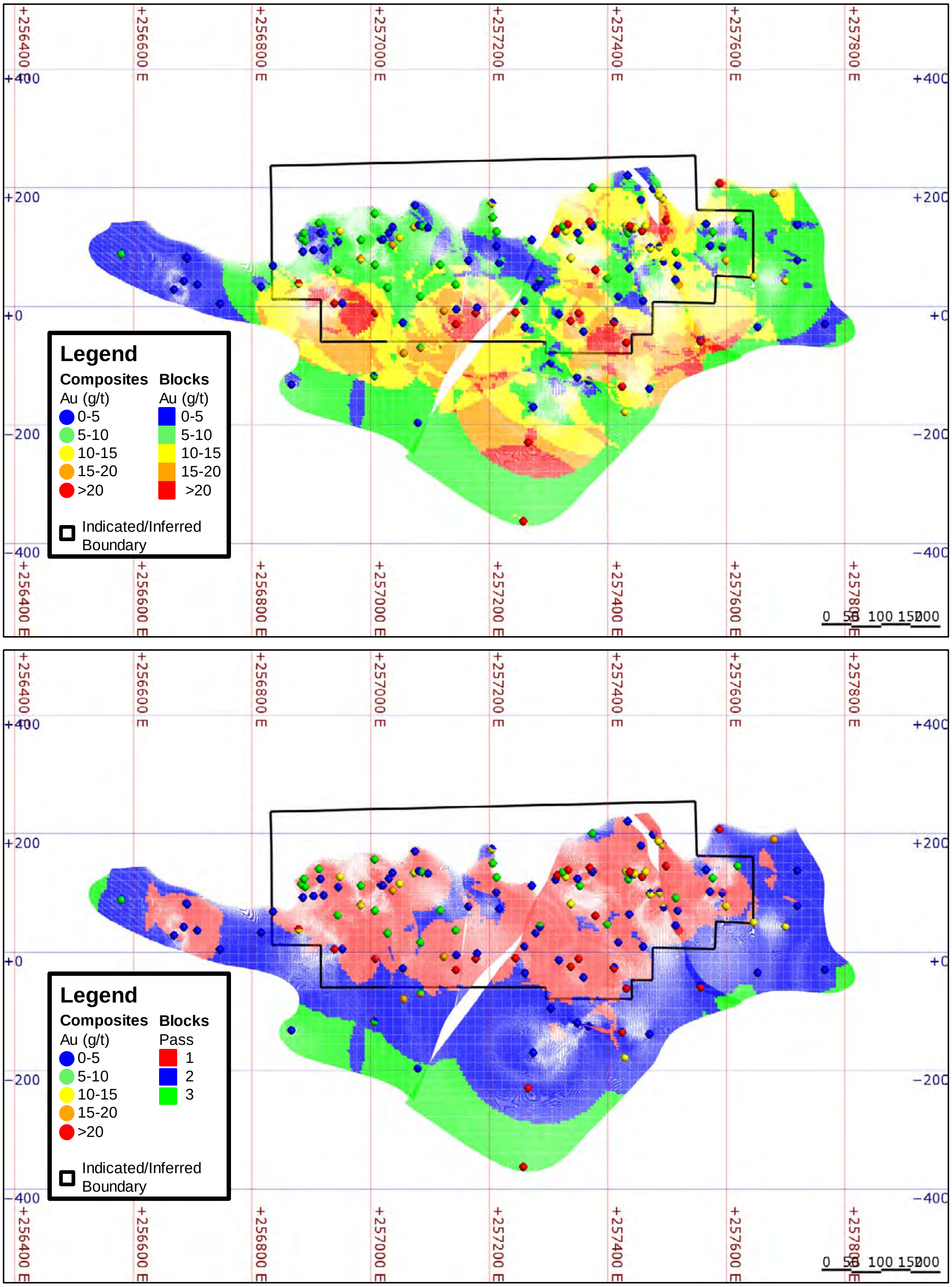
Long Section: Domain 130 – Sperrin Vein



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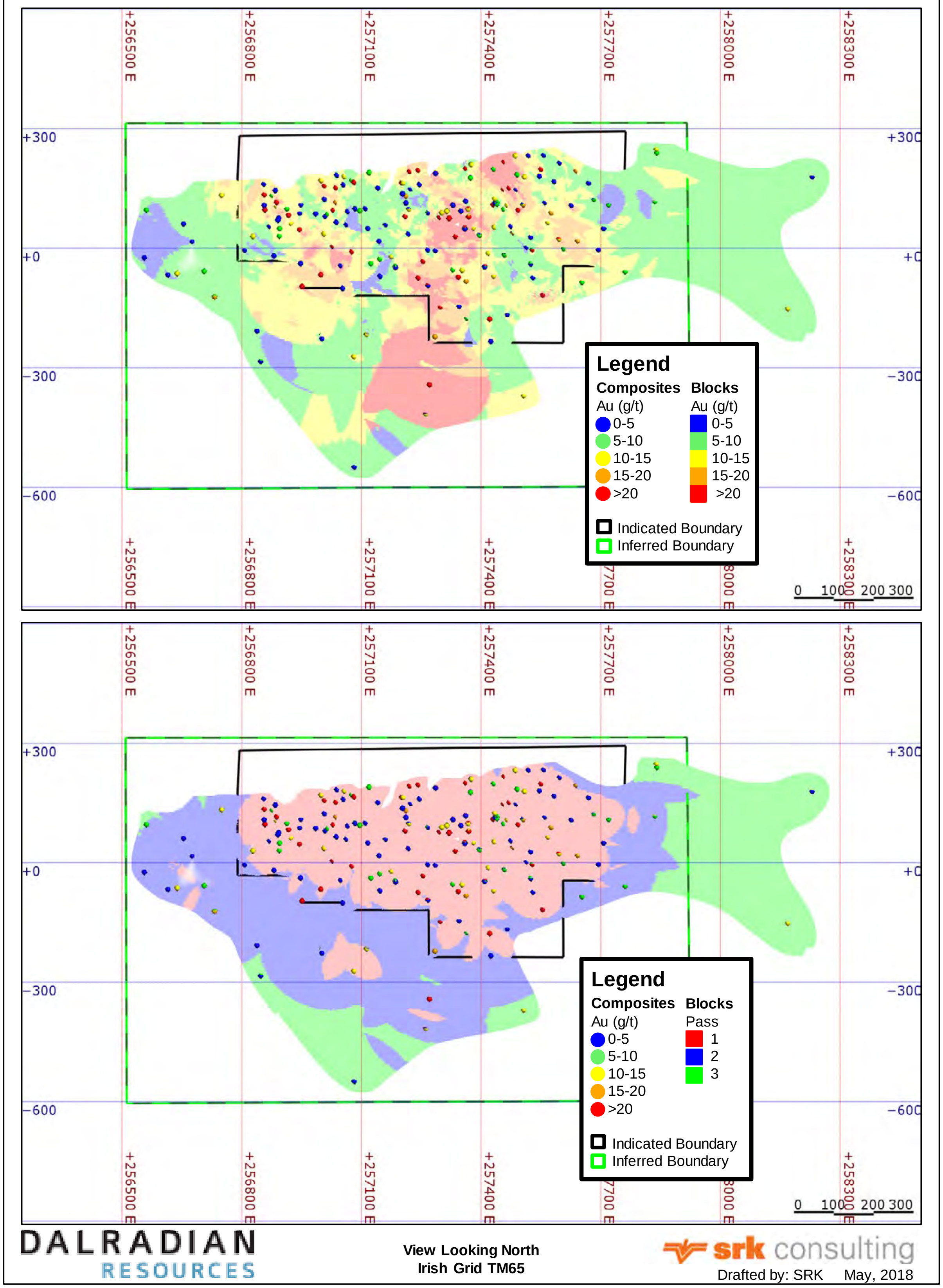
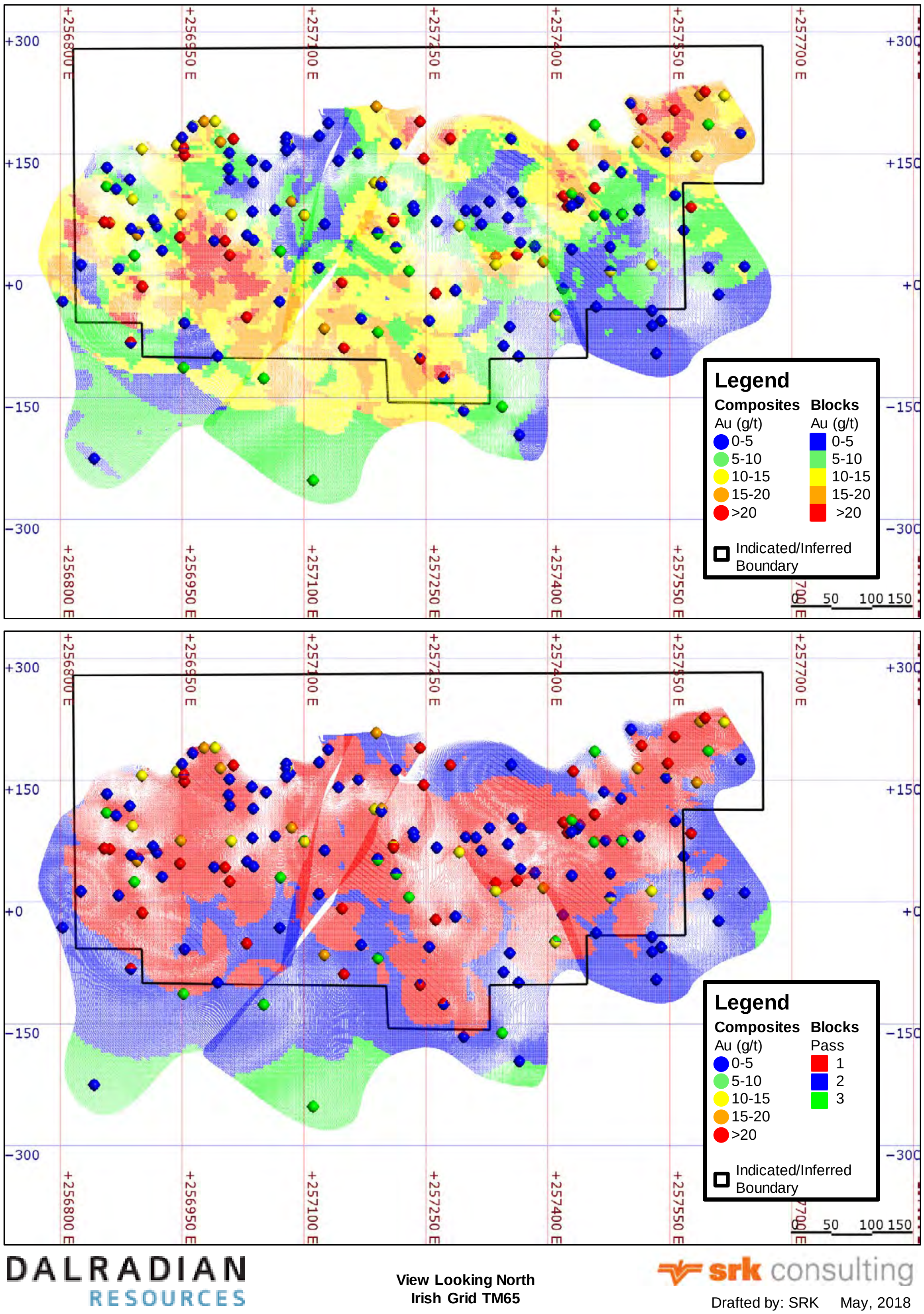
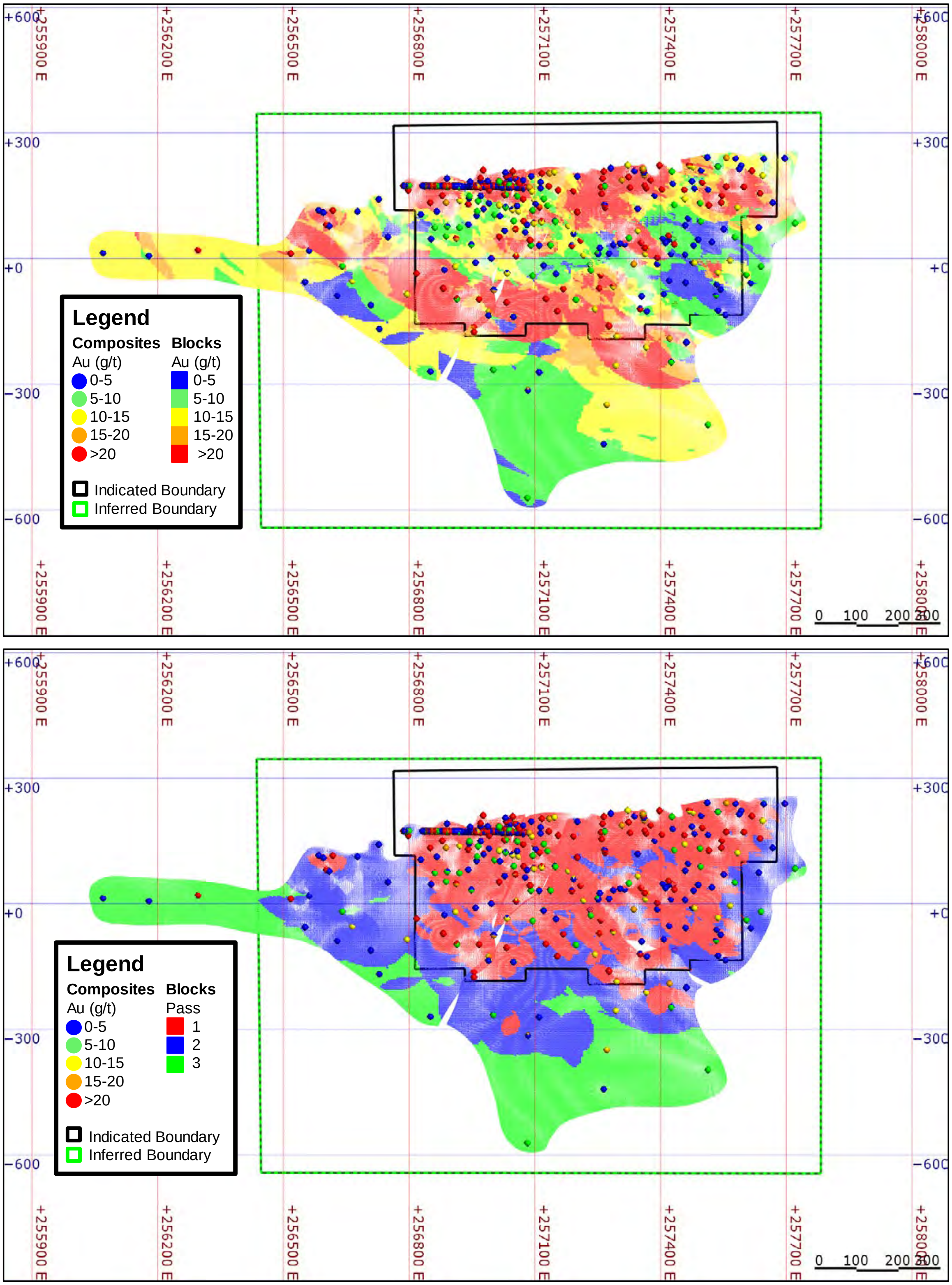
Long Section: Domain 140 – Mullan Vein



Long Section: Domain 150 – Grizzly Vein



Long Section: Domain 160 – T17 Vein



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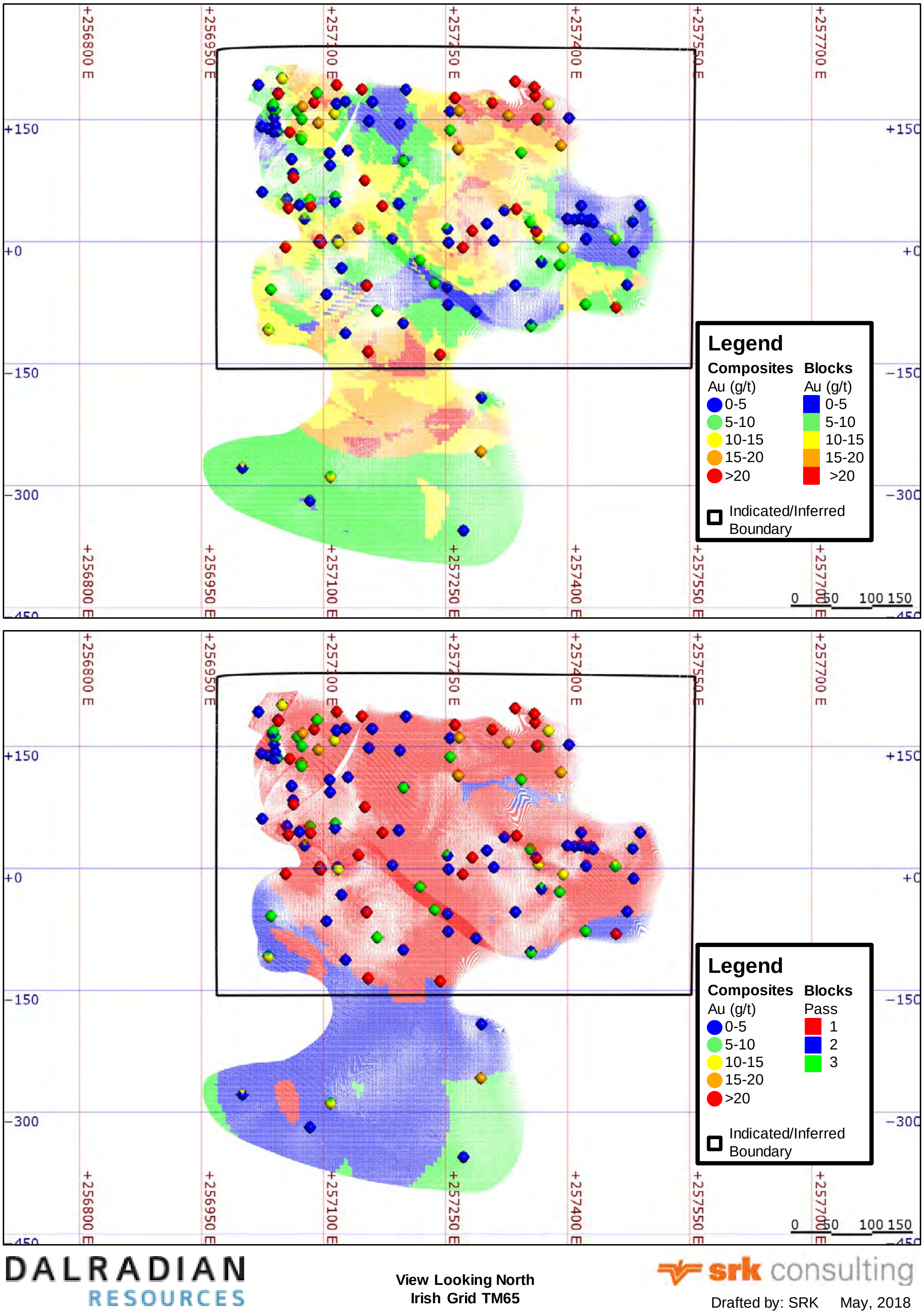
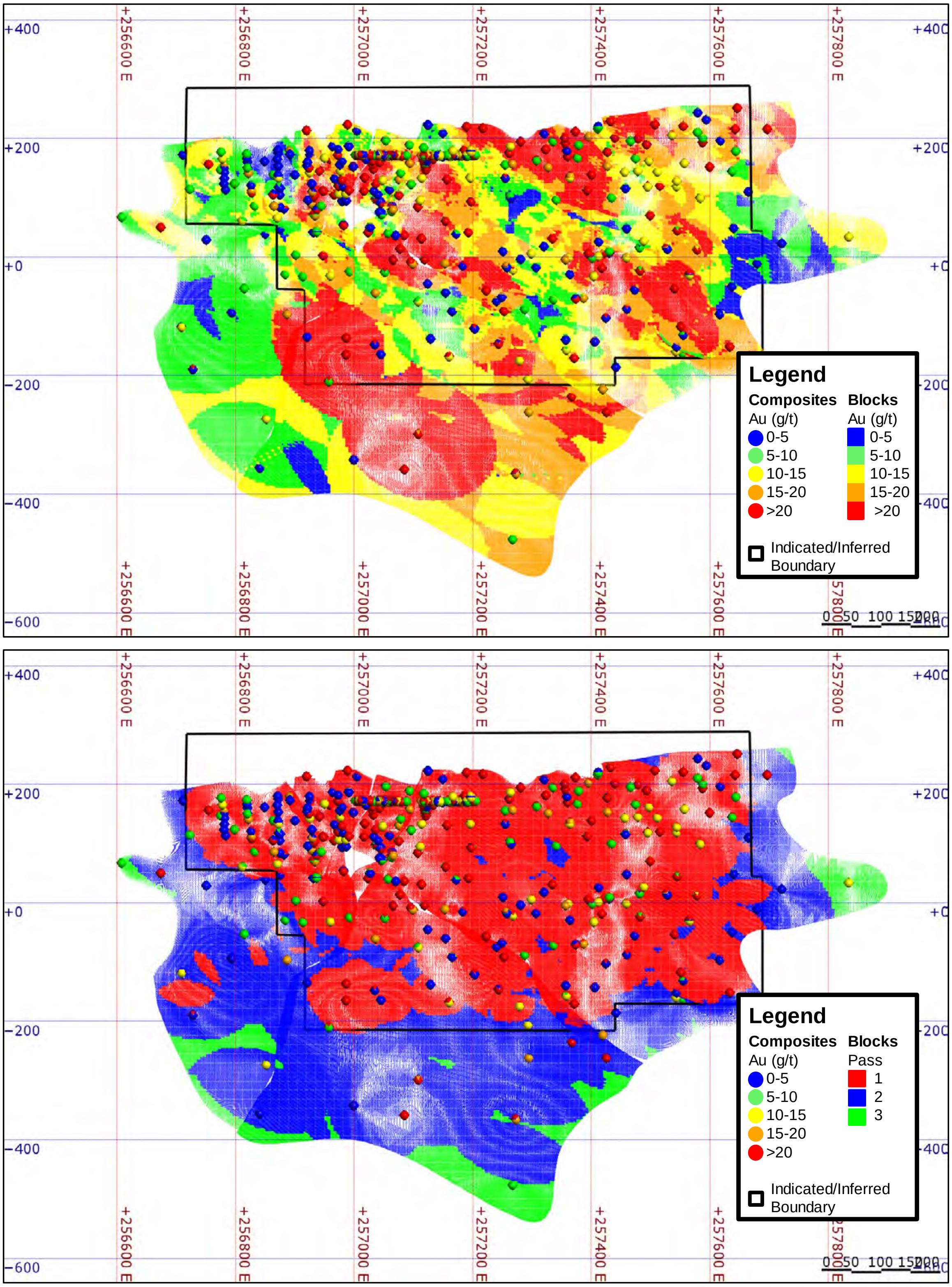
Long Section: Domain 170 – V55 Vein



Long Section: Domain 180 - No 1 Vein



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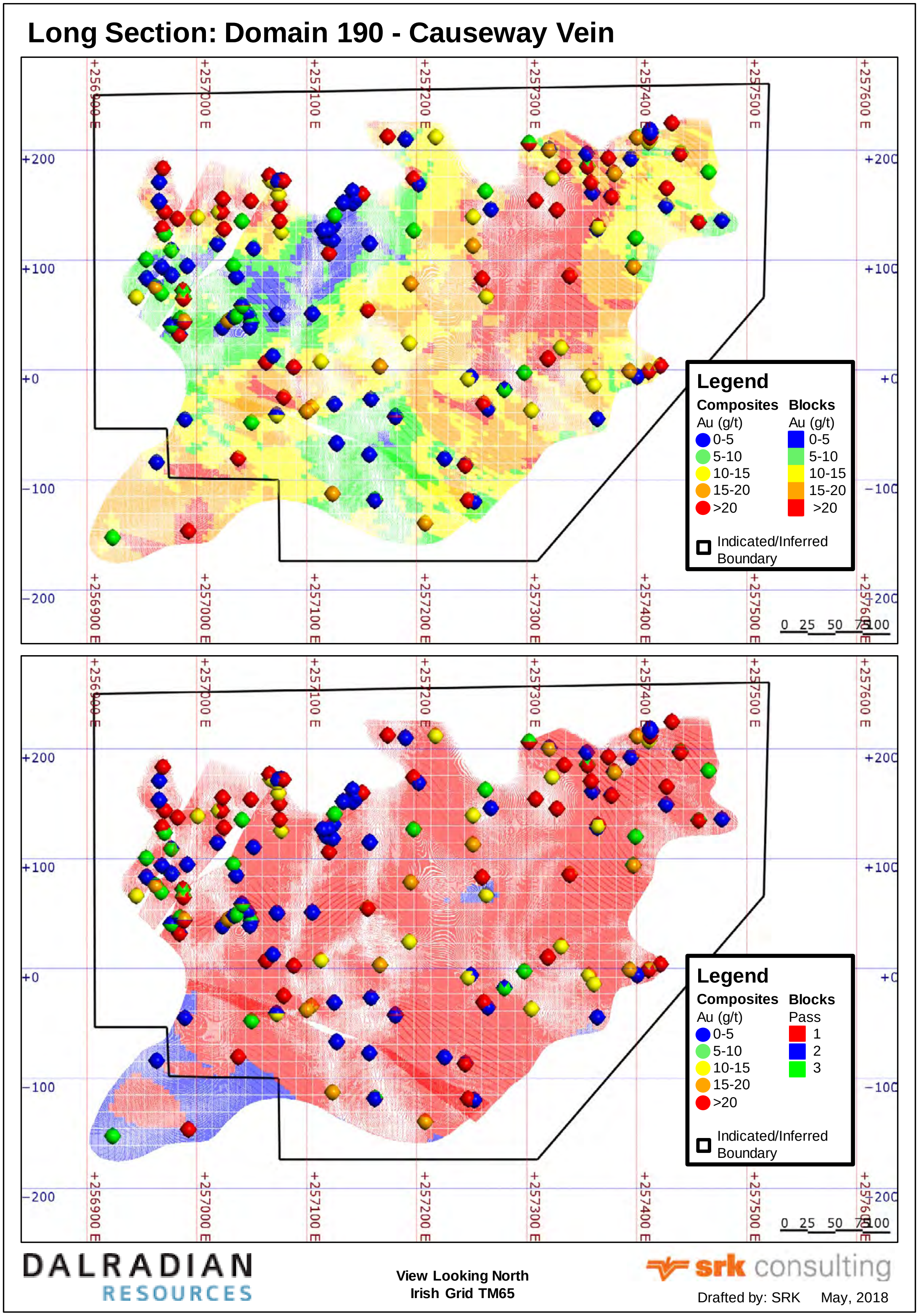
Long Section: Domain 190 - Causeway Vein
+256900 E
+257000 E
+257100 E
+257200 E
+257300 E
+257400 E
+257500 E
+257600 E
+200
+100
+0
−100
−200
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated/Inferred Boundary
0 25 50 75 100
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Pass
1
2
3
Indicated/Inferred Boundary
DALRADIAN RESOURCES
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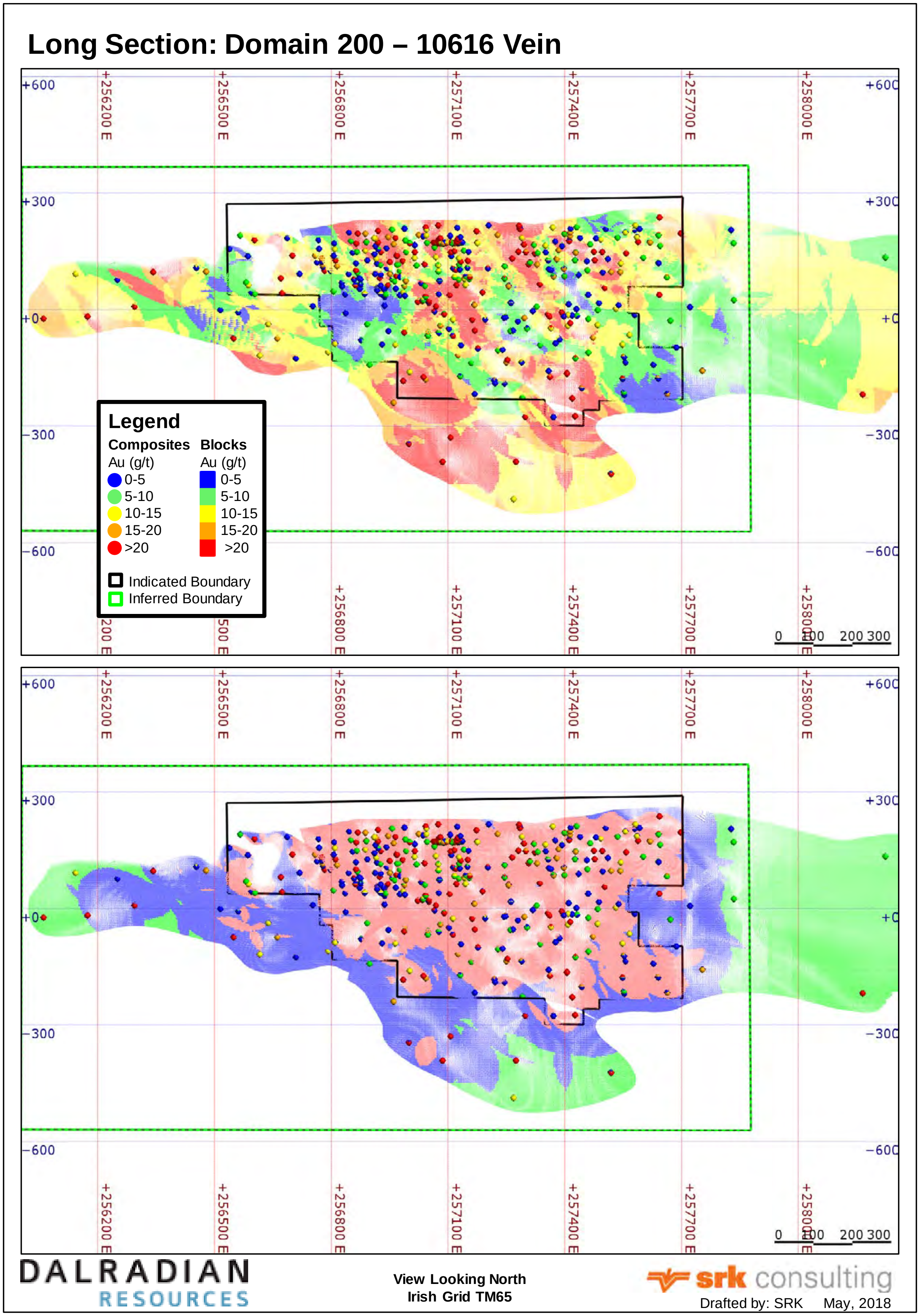
Long Section: Domain 200 – 10616 Vein
+600
+300
+0
-300
-600
+256200 E
+256500 E
+256800 E
+257100 E
+257400 E
+257700 E
+258000 E
Legend
Composites Au (g/t)
Blocks Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated Boundary
Inferred Boundary
0 100 200 300
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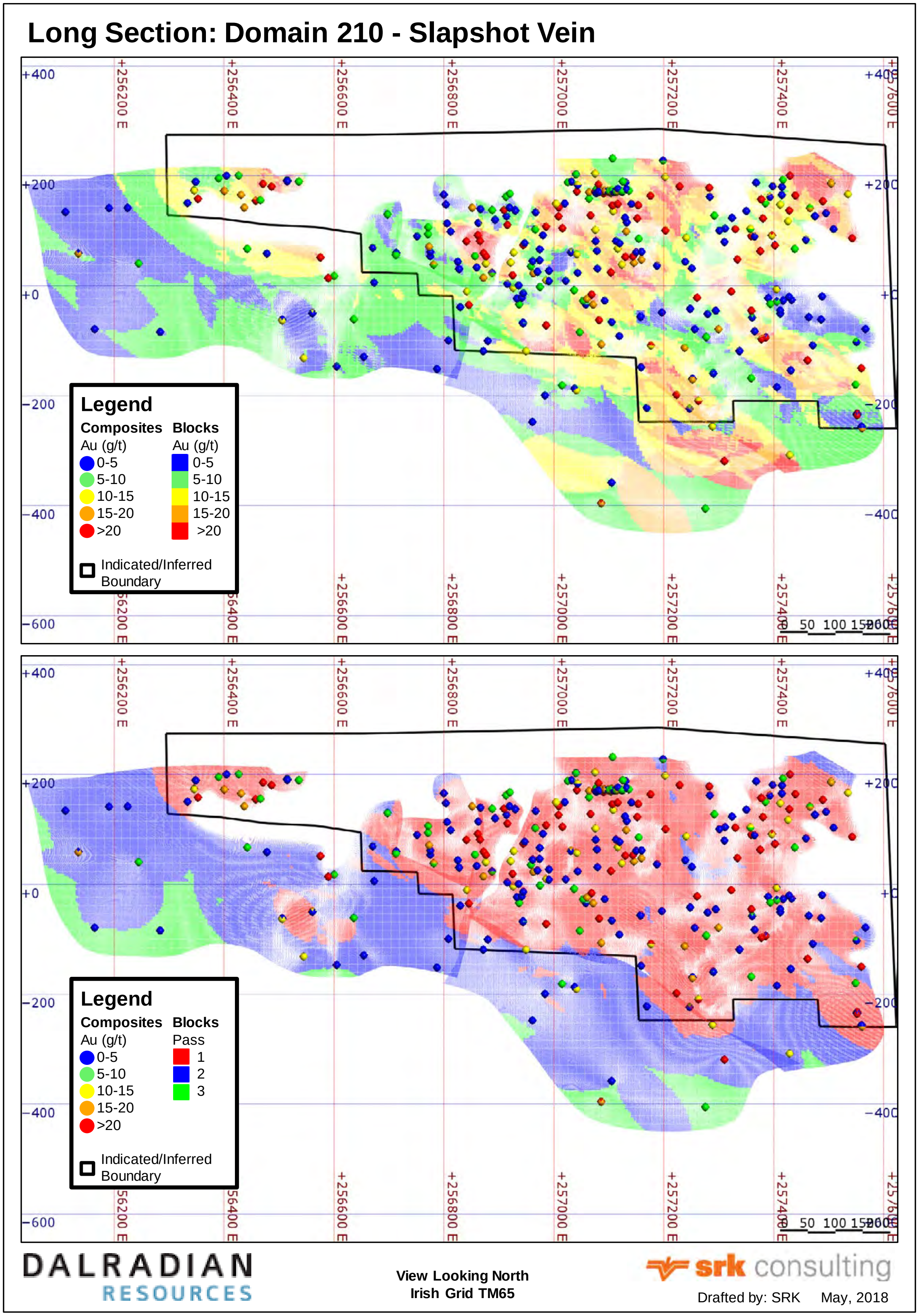
Long Section: Domain 210 - Slapshot Vein
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated/Inferred Boundary
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Pass
1
2
3
Indicated/Inferred Boundary
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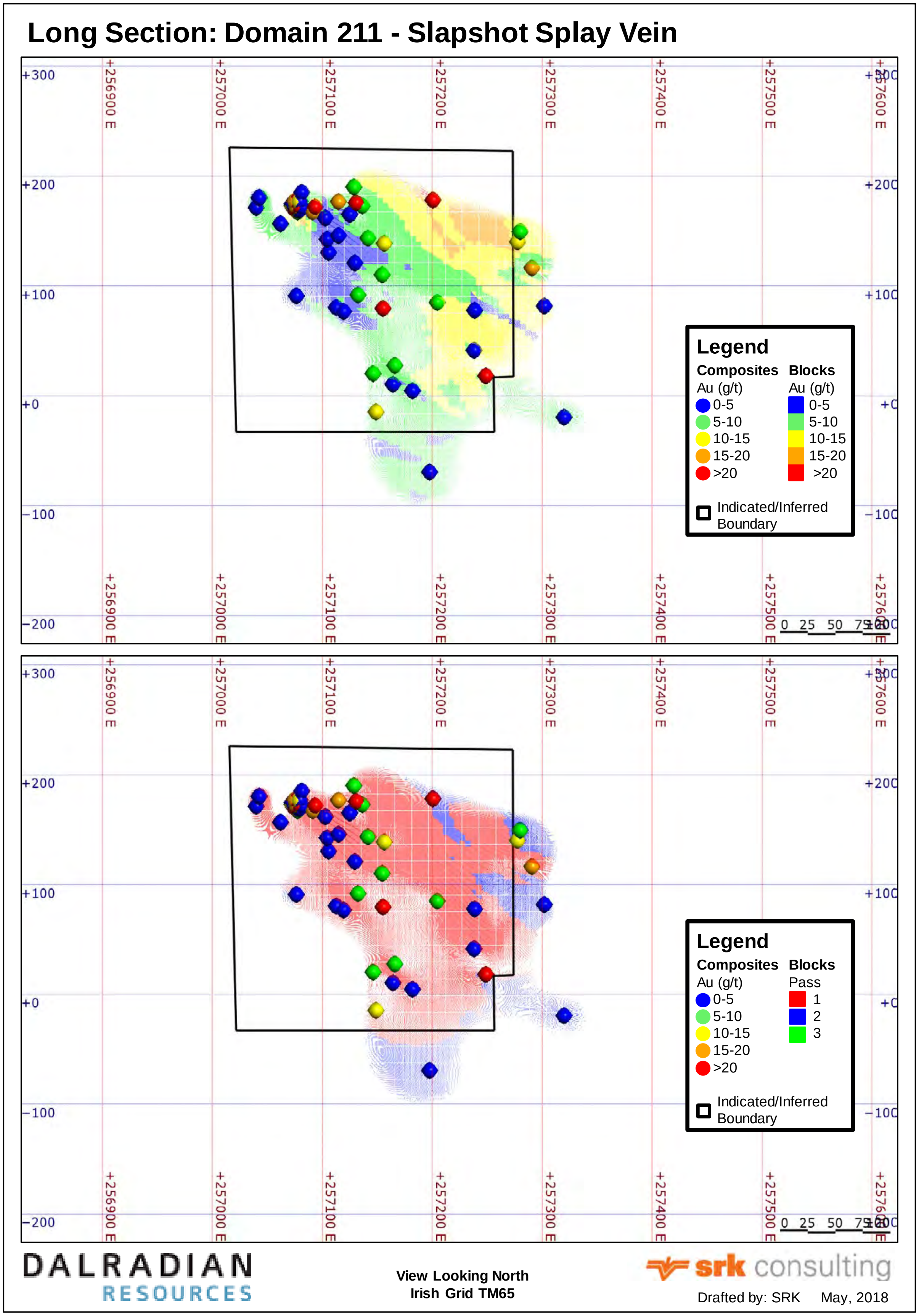
Long Section: Domain 211 - Slapshot Splay Vein
+300
+200
+100
+0
-100
-200
+256900 E
+257000 E
+257100 E
+257200 E
+257300 E
+257400 E
+257500 E
+257600 E
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated/Inferred Boundary
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Pass
1
2
3
Indicated/Inferred Boundary
0 25 50
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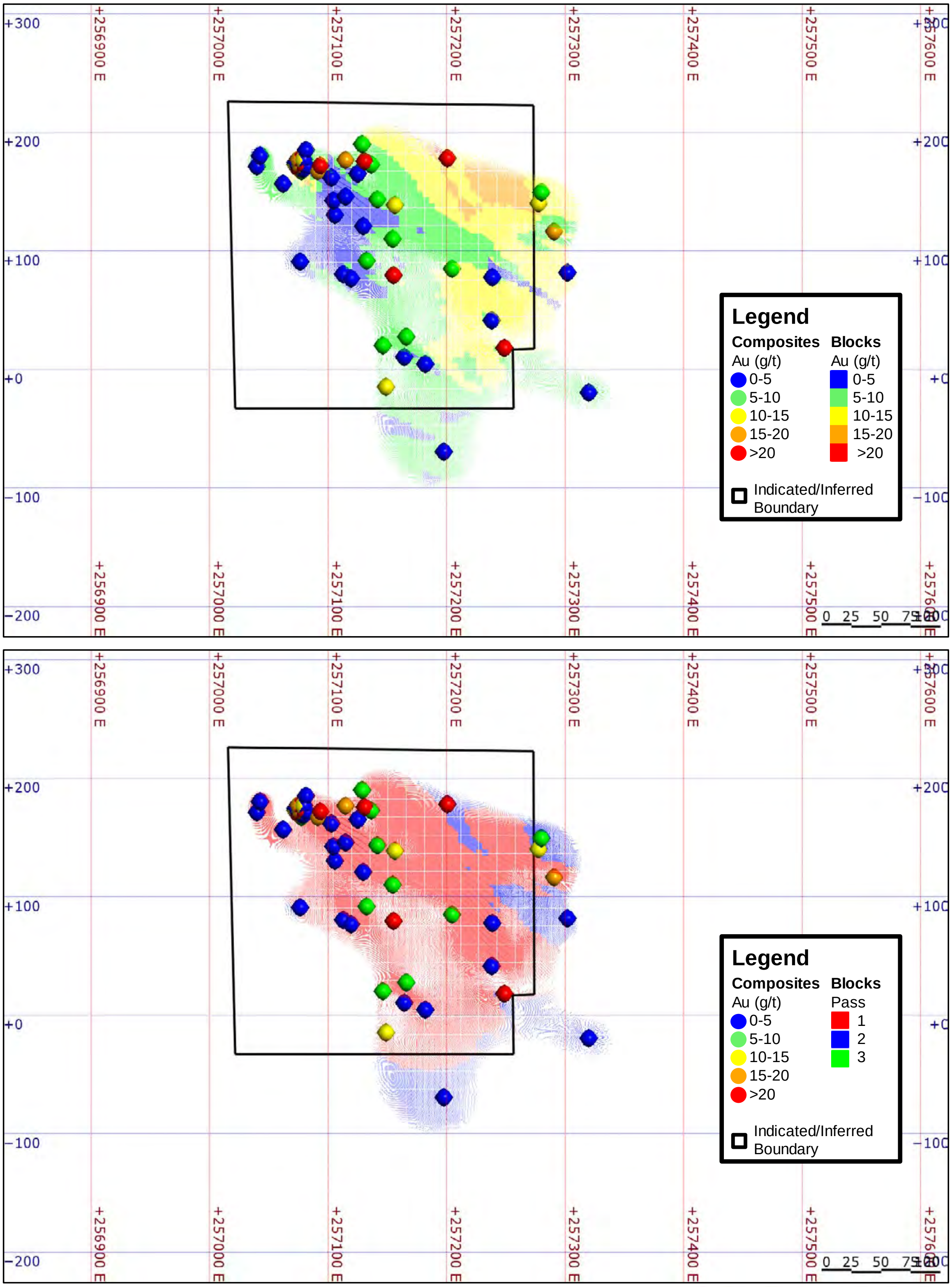
Long Section: Domain 211 - Slapshot Splay Vein



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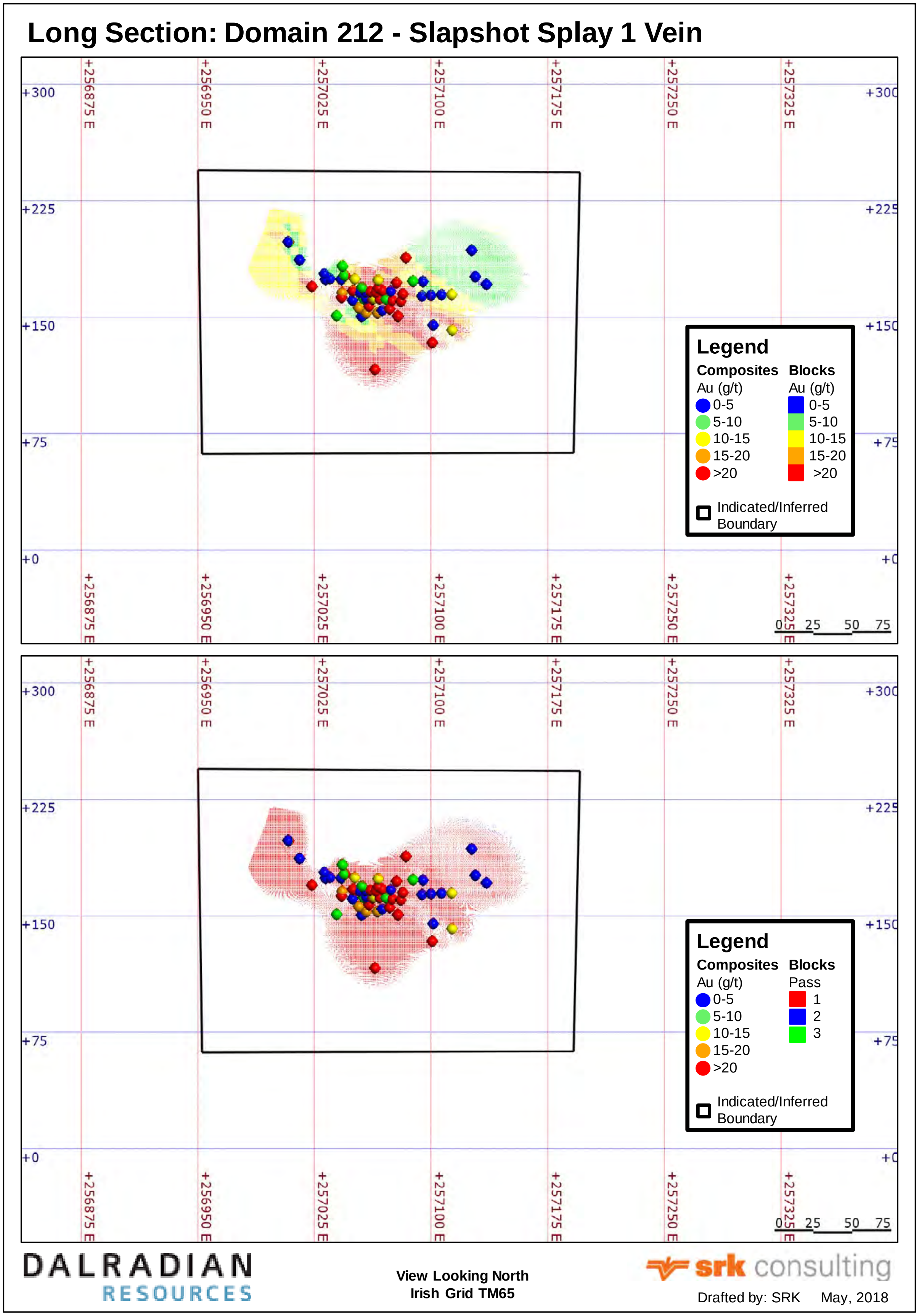
Long Section: Domain 212 - Slapshot Splay 1 Vein
+256875 E
+256950 E
+257025 E
+257100 E
+257175 E
+257250 E
+257325 E
+300
+225
+150
+75
+0
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated/Inferred Boundary
0 25 50 75
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Pass
1
2
3
Indicated/Inferred Boundary
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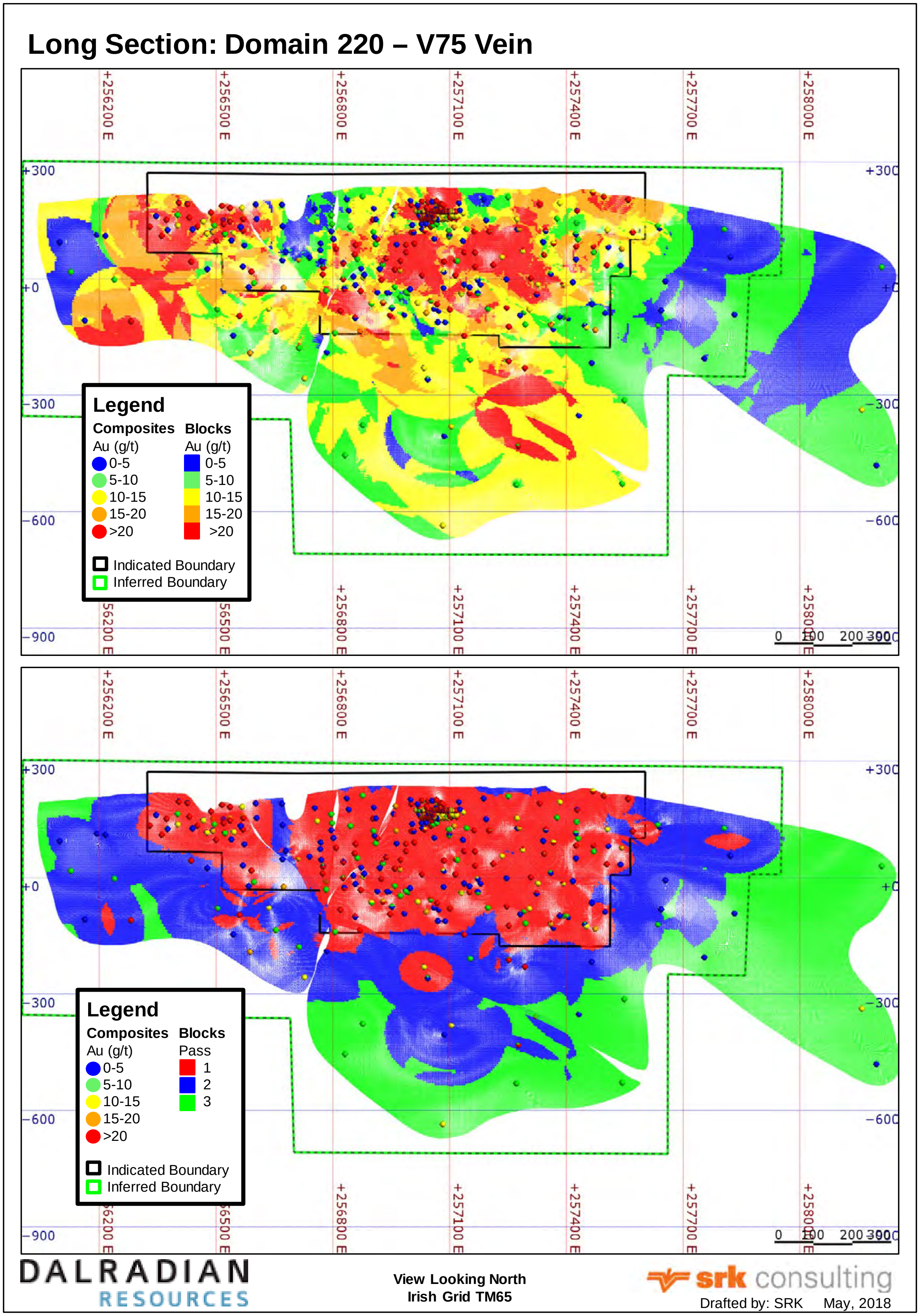
Long Section: Domain 220 – V75 Vein
+256200 E
+256500 E
+256800 E
+257100 E
+257400 E
+257700 E
+258000 E
+300
+0
-300
-600
-900
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated Boundary
Inferred Boundary
0 100 200 300
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Pass
1
2
3
Indicated Boundary
Inferred Boundary
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RESOURCES
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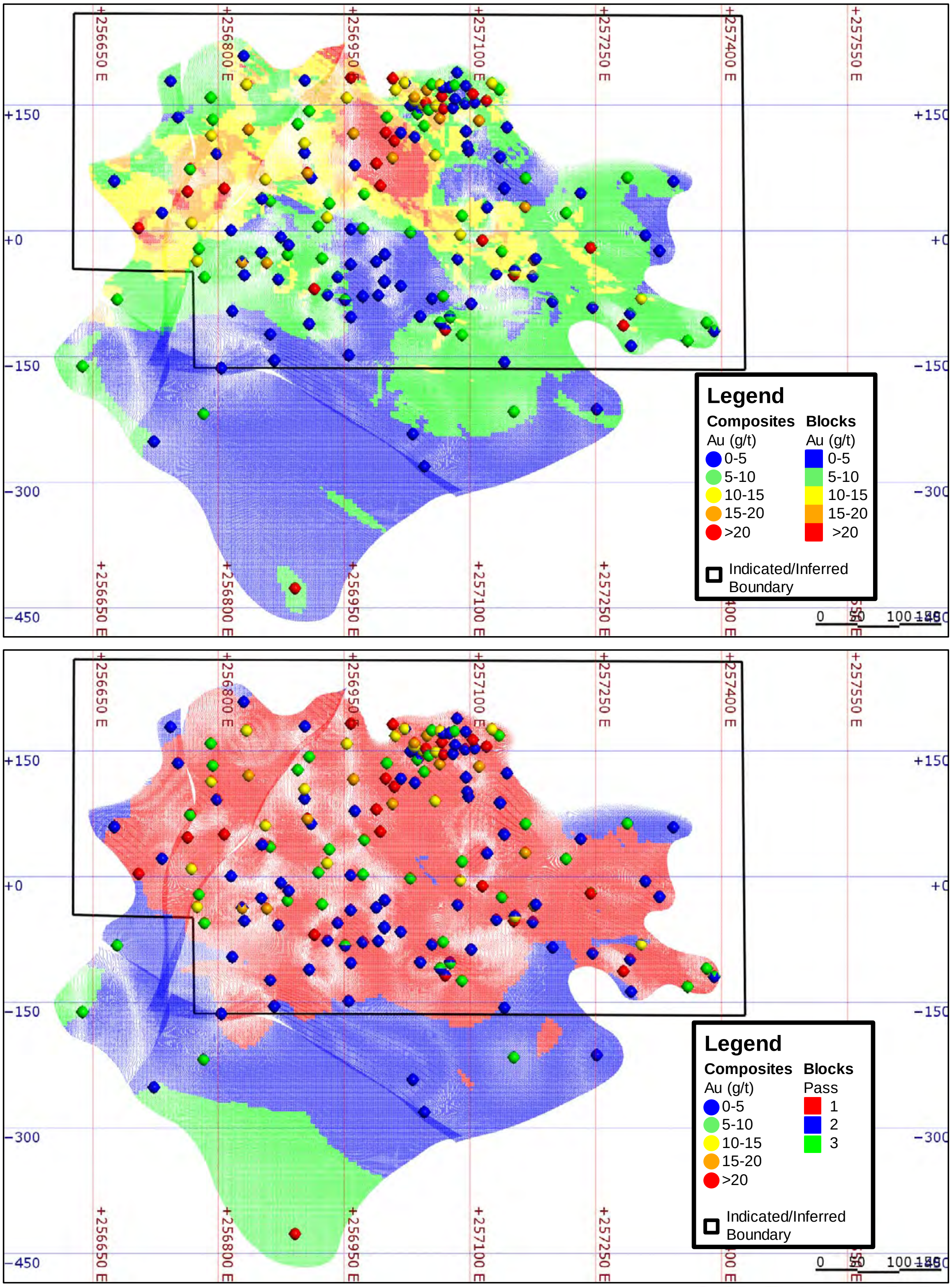
Long Section: Domain 230 - Bend Splay Vein



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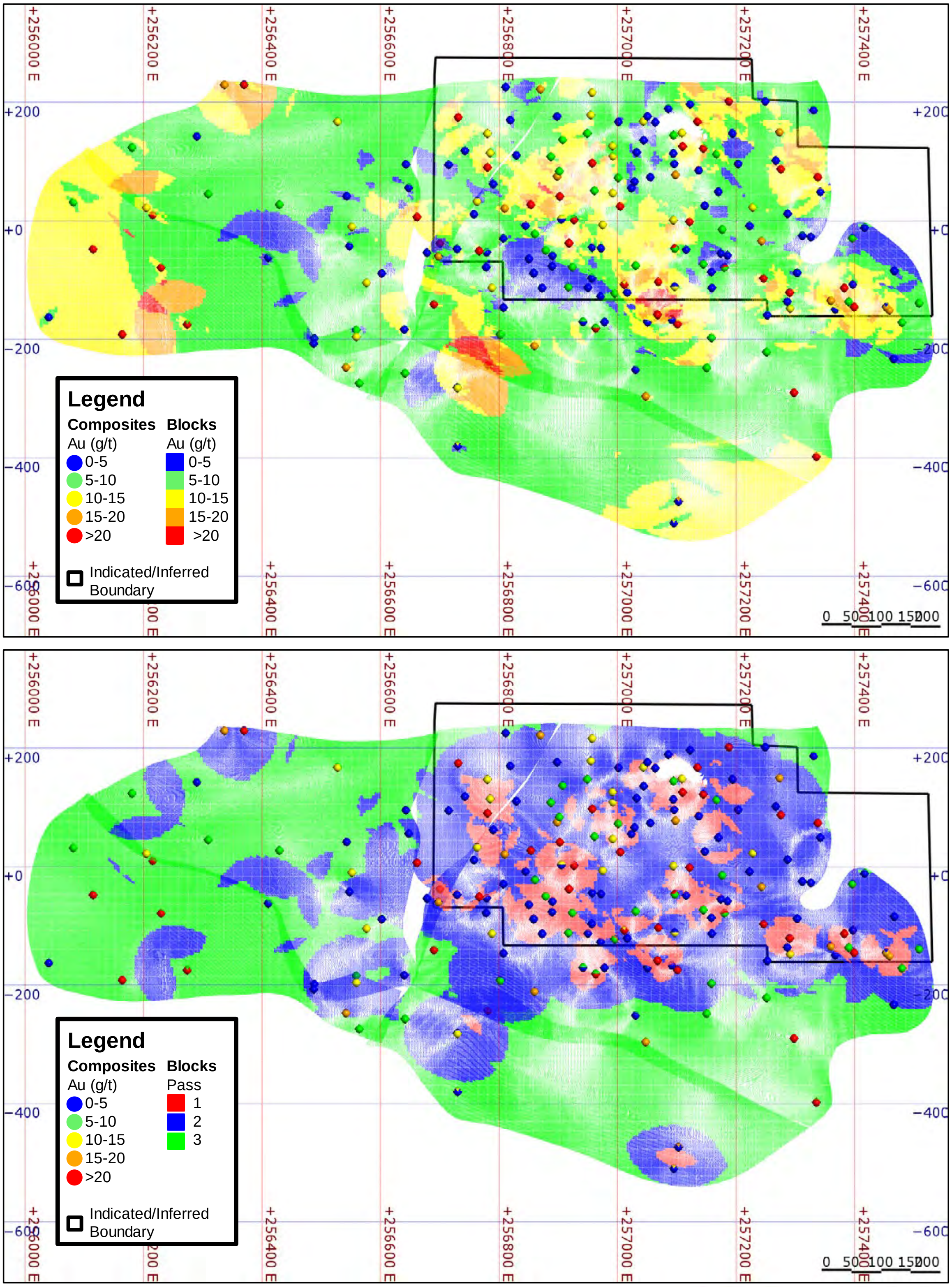
Long Section: Domain 240 - Bend Vein



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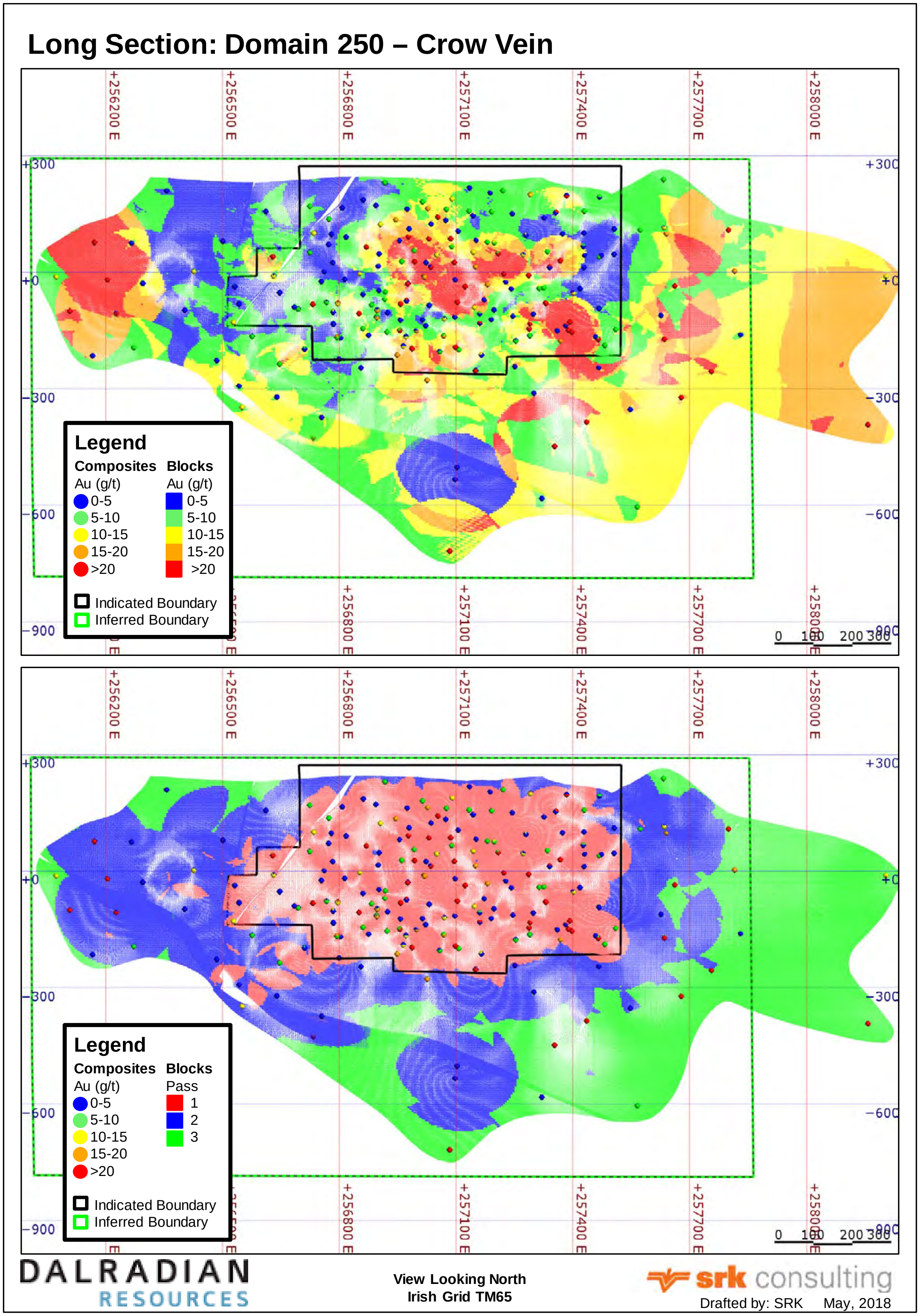
Long Section: Domain 250 – Crow Vein
+256200 E
+256500 E
+256800 E
+257100 E
+257400 E
+257700 E
+258000 E
+300
+0
-300
-600
-900
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Au (g/t)
0-5
5-10
10-15
15-20
>20
Indicated Boundary
Inferred Boundary
0 100 200 300
Legend
Composites Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks Pass
1
2
3
Indicated Boundary
Inferred Boundary
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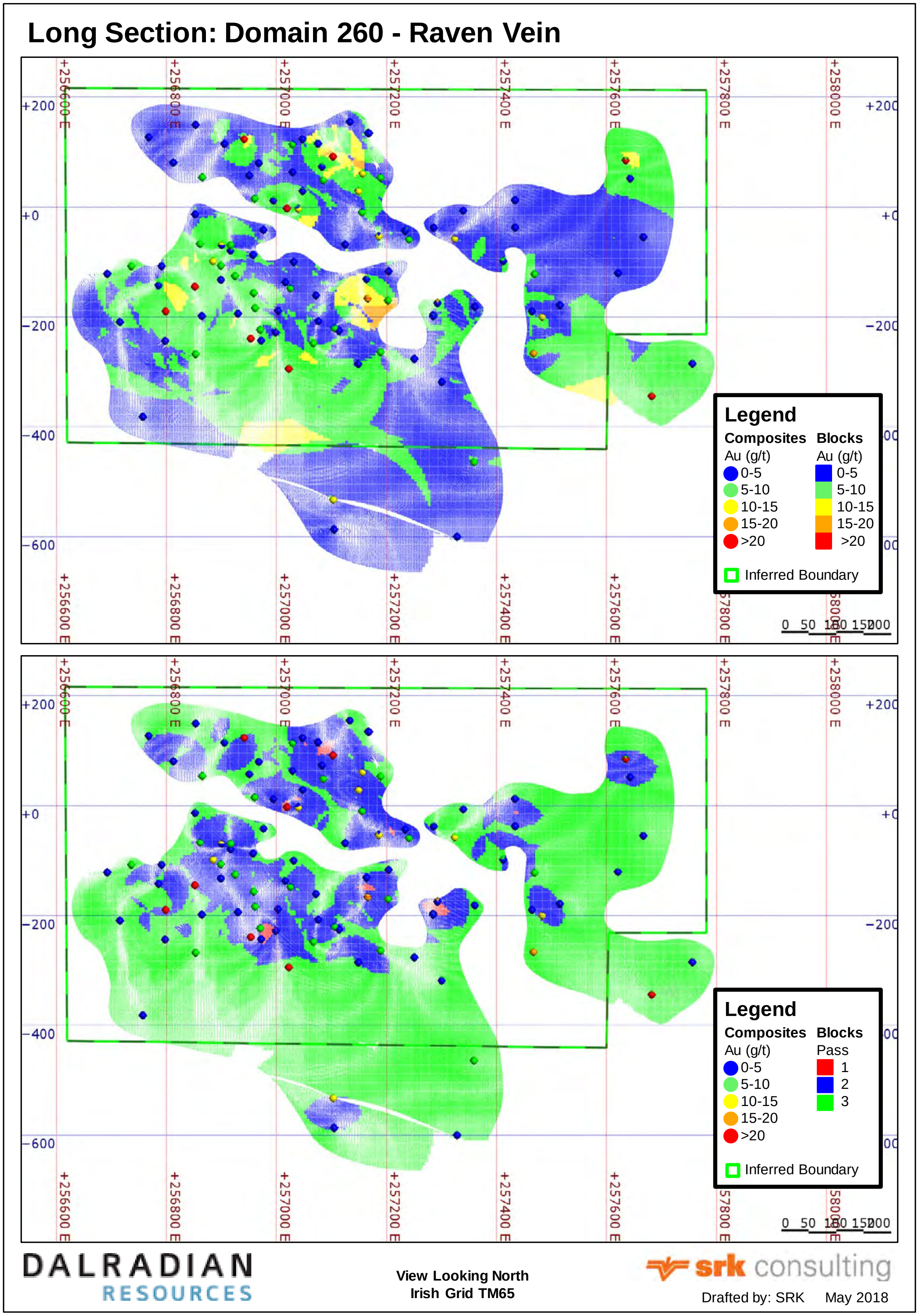
Long Section: Domain 260 - Raven Vein
+256600 E
+256800 E
+257000 E
+257200 E
+257400 E
+257600 E
+257800 E
+258000 E
+200
+0
−200
−400
−600
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Au (g/t)
0-5
5-10
10-15
15-20
>20
Inferred Boundary
0 50 100 150 200
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Pass
1
2
3
Inferred Boundary
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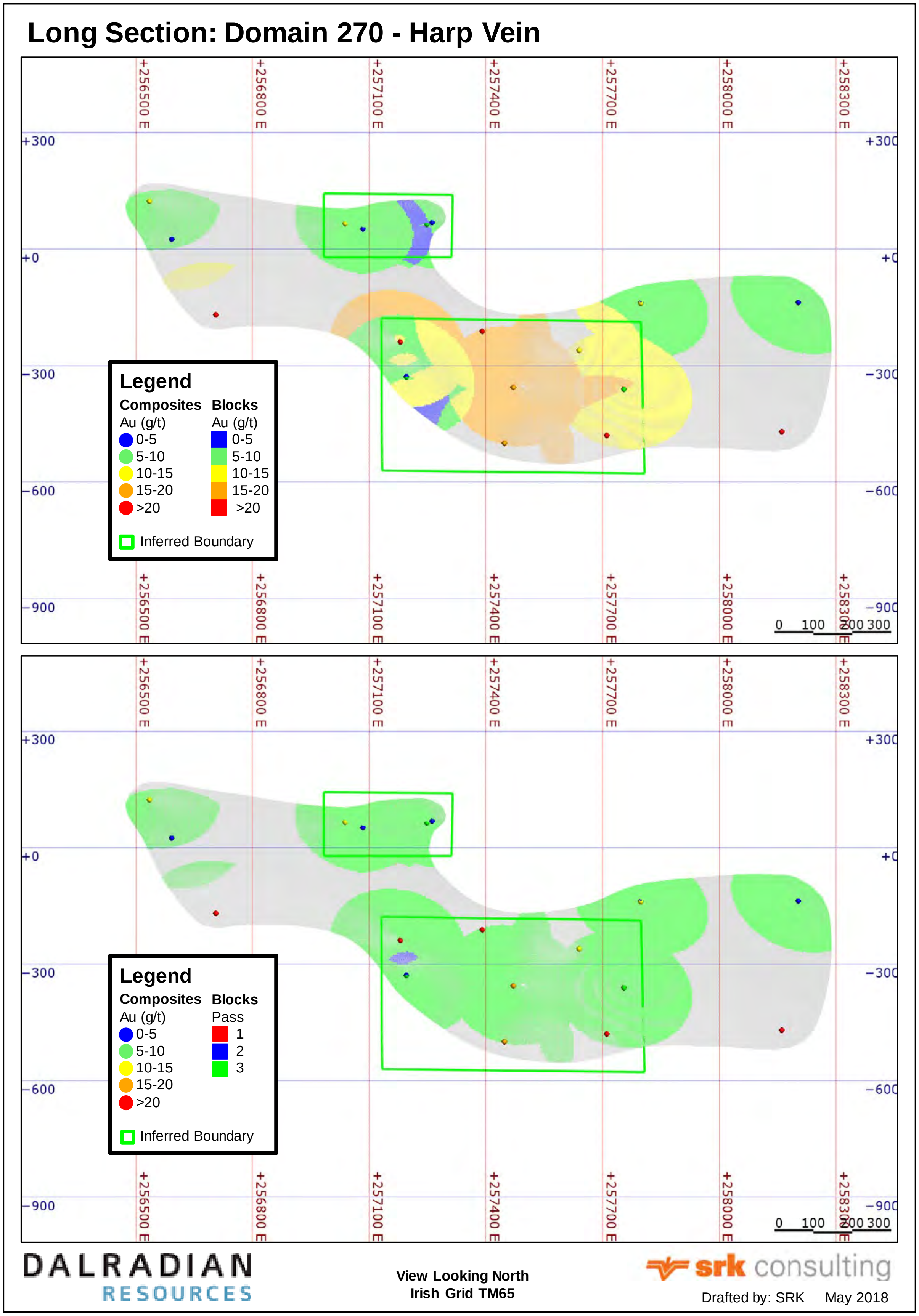
Long Section: Domain 270 - Harp Vein
+256500 E
+256800 E
+257100 E
+257400 E
+257700 E
+258000 E
+258300 E
+300
+0
−300
−600
−900
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Au (g/t)
0-5
5-10
10-15
15-20
>20
Inferred Boundary
0 100 200 300
Legend
Composites
Au (g/t)
0-5
5-10
10-15
15-20
>20
Blocks
Pass
1
2
3
Inferred Boundary
DALRADIAN RESOURCES
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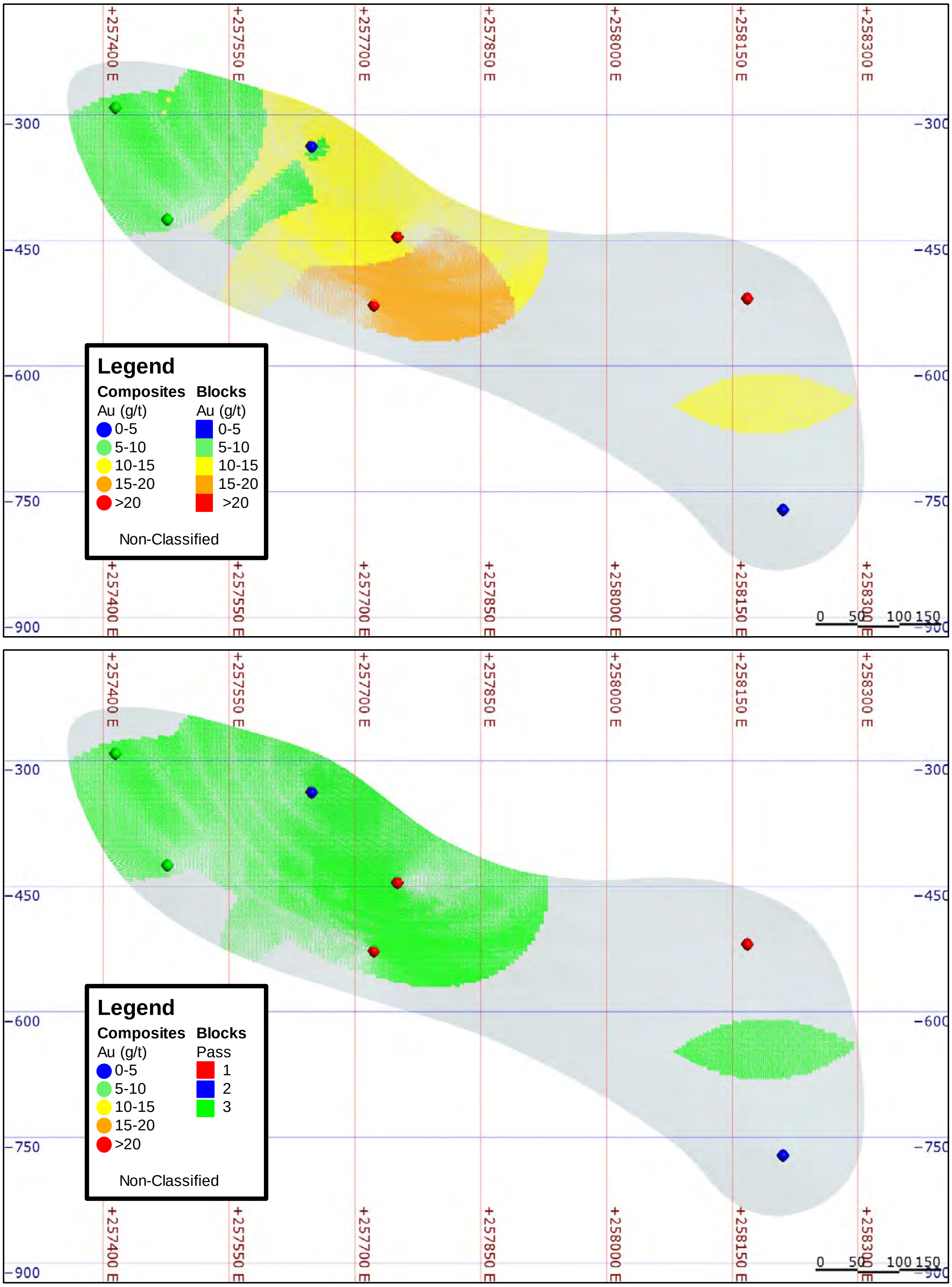
Long Section: Domain 280 - Finn Vein



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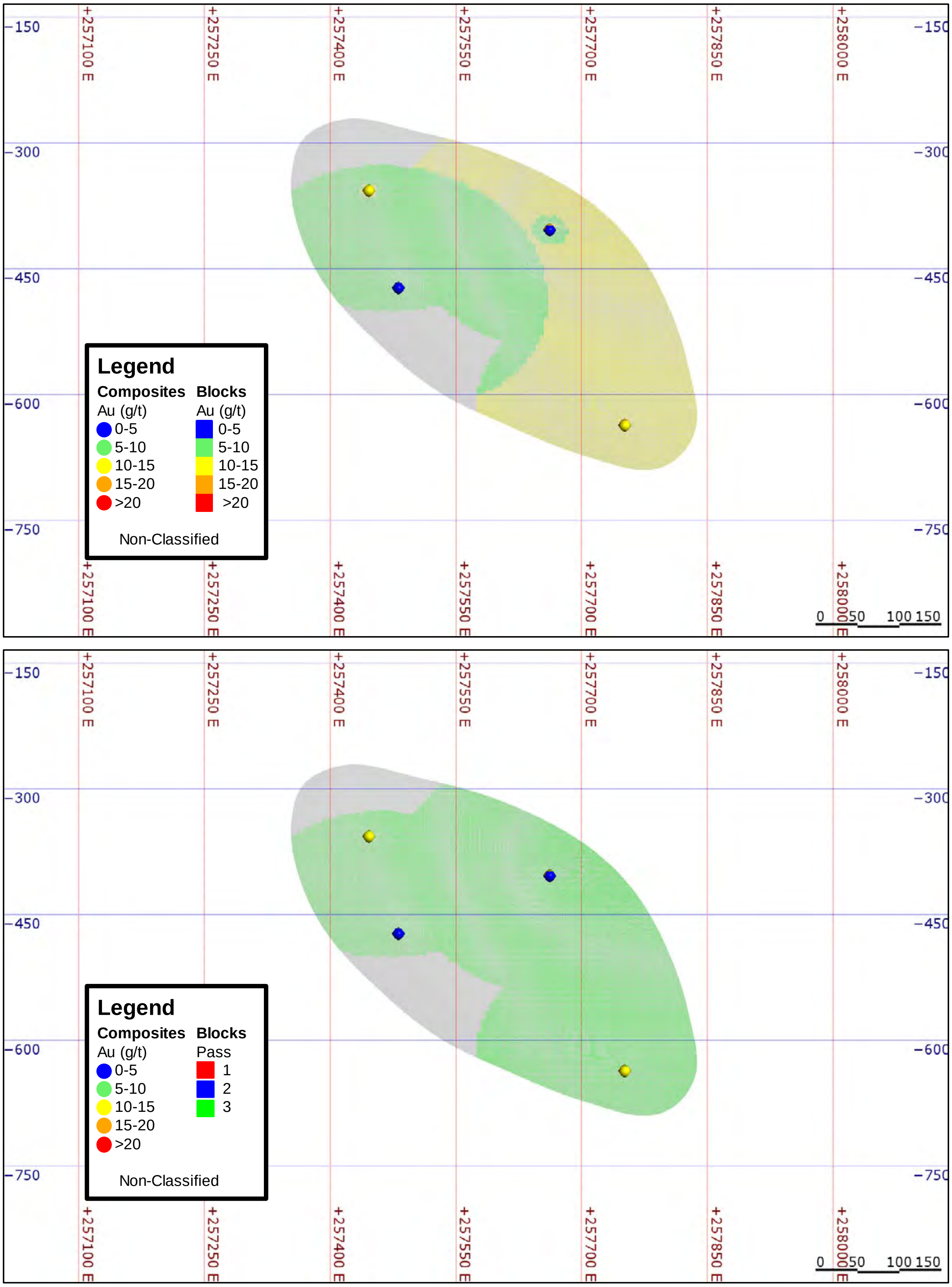
Long Section: Domain 290 - Foyle Vein



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Irish Grid TM65

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APPENDIX E

Impact of Dilution per Domain

Impact of Dilution for Minimum 1.0 Metre Thickness, Assuming Zero Grade in Host Rock

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	40	5.99	8	119	10.06	39
Sheep Dip	120	1	8.16	0.3	216	10.34	72	224	8.40	60
Sperrin	130	-	-	-	125	8.47	34	161	6.53	34
Mullan	140	-	-	-	590	10.31	196	486	14.15	221
Grizzly	150	-	-	-	248	7.75	62	34	8.00	9
T17	160	11	25.05	9.2	736	13.77	326	473	8.93	136
V55	170	-	-	-	168	7.85	42	54	8.21	14
No.1	180	6	11.62	2.2	1,003	11.90	384	548	12.56	221
Causeway	190	-	-	-	269	9.16	79	28	7.51	7
106-16	200	3	13.29	1.4	1,025	12.36	407	855	10.27	282
Slap Shot	210	1	8.58	0.3	454	8.63	126	289	8.03	74
Slap Shot Splay	211	-	-	-	9	5.36	2	0.4	5.25	0.1
Slap Shot Splay 1	212	-	-	-	13	7.88	3	-	-	-
V75	220	11	19.00	6.8	992	11.50	367	903	9.58	278
Bend Splay	230	-	-	-	142	7.62	35	0	5.33	0
Bend	240	-	-	-	141	6.87	31	717	8.30	191
Crow	250	-	-	-	820	11.94	315	1,464	10.65	501
Raven Vein	260	-	-	-	-	-	-	190	6.37	39
Harp Vein	270	-	-	-	-	-	-	379	7.13	87
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**34**	**18.51**	**20**	**6,991**	**11.07**	**2,488**	**6,923**	**9.86**	**2,194**
% Dif. To Undiluted		**1%**	**-29%**	**-28%**	**11%**	**-26%**	**-18%**	**-10%**	**-19%**	**-28%**

Impact of Dilution for Minimum 1.0 Metre Thickness, Assuming Host Rock Grade = 0.25 Au g/t

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	44	6.07	9	129	9.81	41
Sheep Dip	120	1	8.24	0.3	222	10.32	74	231	8.39	62
Sperrin	130	-	-	-	132	8.43	36	176	6.54	37
Mullan	140	-	-	-	607	10.25	200	495	14.04	224
Grizzly	150	-	-	-	263	7.71	65	36	7.97	9
T17	160	12	24.97	9.3	746	13.75	330	501	8.81	142
V55	170	-	-	-	176	7.81	44	54	8.30	14
No.1	180	6	11.66	2.3	1,018	11.88	389	554	12.53	223
Causeway	190	-	-	-	278	9.14	82	28	7.61	7
106-16	200	3	13.36	1.4	1,039	12.32	411	872	10.24	287
Slap Shot	210	1	8.53	0.3	471	8.60	130	299	8.00	77
Slap Shot Splay	211	-	-	-	11	5.44	2	0.5	5.36	0.1
Slap Shot Splay 1	212	-	-	-	14	7.87	3	-	-	-
V75	220	11	19.04	6.8	1,011	11.47	373	930	9.54	285
Bend Splay	230	-	-	-	149	7.61	36	1	5.34	0
Bend	240	-	-	-	149	6.87	33	727	8.30	194
Crow	250	-	-	-	831	11.90	318	1,488	10.61	507
Raven Vein	260	-	-	-	-	-	-	197	6.37	40
Harp Vein	270	-	-	-	-	-	-	407	7.11	93
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**34**	**18.50**	**20**	**7,182**	**11.01**	**2,534**	**7,125**	**9.79**	**2,224**
% Dif. To Undiluted		**1%**	**-29%**	**-28%**	**13%**	**-26%**	**-16%**	**-8%**	**-20%**	**-26%**

Impact of Dilution for Minimum 1.2 Metre Thickness, Assuming Zero Grade in Host Rock

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	19	5.61	3	105	9.83	33
Sheep Dip	120	1	7.39	0.2	212	9.62	65	203	7.94	52
Sperrin	130	-	-	-	109	8.08	28	111	6.13	22
Mullan	140	-	-	-	558	9.95	179	477	13.60	209
Grizzly	150	-	-	-	204	7.42	49	32	7.34	8
T17	160	12	23.30	9.2	771	12.65	314	388	8.90	111
V55	170	-	-	-	137	7.59	34	60	7.02	14
No.1	180	6	10.69	2.2	1,045	10.90	366	562	11.65	211
Causeway	190	-	-	-	252	8.57	69	26	6.73	6
106-16	200	3	12.28	1.4	1,064	11.42	391	849	9.59	262
Slap Shot	210	1	7.69	0.3	410	8.20	108	247	7.85	62
Slap Shot Splay	211	-	-	-	0.4	6.37	0.1	-	-	-
Slap Shot Splay 1	212	-	-	-	12	7.19	3	-	-	-
V75	220	12	17.14	6.7	1,024	10.54	347	876	9	250
Bend Splay	230	-	-	-	119	7.22	28	0	6	0
Bend	240	-	-	-	103	6.51	22	711	8	172
Crow	250	-	-	-	808	11.41	296	1,424	10	473
Raven Vein	260	-	-	-	-	-	-	117	6	23
Harp Vein	270	-	-	-	-	-	-	269	7	60
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**36**	**17.07**	**20**	**6,847**	**10.46**	**2,302**	**6,457**	**9.47**	**1,966**
% Dif. To Undiluted		**7%**	**-34%**	**-30%**	**9%**	**-30%**	**-24%**	**-16%**	**-23%**	**-35%**

Impact of Dilution for Minimum 1.2 Metre Thickness, Assuming Host Rock Grade = 0.25 Au g/t

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	26	5.62	5	110	9.77	34
Sheep Dip	120	1	7.49	0.2	219	9.60	67	210	7.95	54
Sperrin	130	-	-	-	116	8.00	30	126	6.15	25
Mullan	140	-	-	-	579	9.85	184	489	13.47	212
Grizzly	150	-	-	-	218	7.39	52	33	7.36	8
T17	160	12	23.39	9.3	786	12.62	319	411	8.79	116
V55	170	-	-	-	146	7.55	35	61	7.13	14
No.1	180	6	10.72	2.2	1,068	10.87	373	574	11.60	214
Causeway	190	-	-	-	264	8.51	72	28	6.79	6
106-16	200	3	12.34	1.4	1,079	11.42	396	869	9.58	268
Slap Shot	210	1	7.59	0.3	430	8.17	113	260	7.79	65
Slap Shot Splay	211	-	-	-	1	5.77	0	-	-	-
Slap Shot Splay 1	212	-	-	-	13	7.24	3	-	-	-
V75	220	12	17.11	6.8	1,048	10.52	354	907	8.85	258
Bend Splay	230	-	-	-	127	7.20	30	0	5.19	0
Bend	240	-	-	-	113	6.49	24	732	7.52	177
Crow	250	-	-	-	825	11.35	301	1,455	10.26	480
Raven Vein	260	-	-	-	-	-	-	124	6.22	25
Harp Vein	270	-	-	-	-	-	-	302	6.87	67
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**37**	**17.06**	**20**	**7,059**	**10.39**	**2,358**	**6,691**	**9.40**	**2,023**
% Dif. To Undiluted		**9%**	**-34%**	**-29%**	**12%**	**-31%**	**-22%**	**-13%**	**-23%**	**-33%**

Impact of Dilution for Minimum 1.4 Metre Thickness, Assuming Zero Grade in Host Rock

		Measured			Indicated			Inferred		
Domain	Rock Code	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Road	110	-	-	-	7	5.43	1	104	9.14	30
Sheep Dip	120	1	7.01	0.2	207	8.98	60	183	7.54	44
Sperrin	130	-	-	-	95	7.73	24	68	5.87	13
Mullan	140	-	-	-	526	9.65	163	480	12.88	199
Grizzly	150	-	-	-	173	7.07	39	30	6.71	7
T17	160	13	21.40	9.1	792	11.80	300	328	8.81	93
V55	170	-	-	-	111	7.45	26	61	6.23	12
No.1	180	6	10.59	2.0	1,061	10.14	346	565	10.96	199
Causeway	190	-	-	-	108	8.72	30	6	6.58	1
106-16	200	4	11.48	1.3	1,100	10.59	374	834	9.01	242
Slap Shot	210	1	6.84	0.3	366	7.87	93	204	7.81	51
Slap Shot Splay	211	-	-	-	0.2	6.51	0.0	-	-	-
Slap Shot Splay 1	212	-	-	-	10	6.81	2	-	-	-
V75	220	13	15.40	6.6	1,028	9.83	325	837	8	224
Bend Splay	230	-	-	-	95	6.98	21	0	9	0
Bend	240	-	-	-	70	6.30	14	586	7	137
Crow	250	-	-	-	788	10.96	277	1,387	10	447
Raven Vein	260	-	-	-	-	-	-	89	6	17
Harp Vein	270	-	-	-	-	-	-	184	7	41
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**38**	**15.93**	**20**	**6,536**	**9.98**	**2,097**	**5,947**	**9.19**	**1,757**
% Dif. To Undiluted		**12%**	**-39%**	**-31%**	**4%**	**-33%**	**-31%**	**-23%**	**-25%**	**-42%**

Impact of Dilution for Minimum 1.4 Metre Thickness, Assuming Host Rock Grade = 0.25 Au g/t

		Measured			Indicated			Inferred		
Domain	Rock Code	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Road	110	-	-	-	9	5.46	2	109	9.08	32
Sheep Dip	120	1	7.12	0.2	215	8.96	62	192	7.55	47
Sperrin	130	-	-	-	103	7.66	25	81	5.89	15
Mullan	140	-	-	-	547	9.57	168	491	12.80	202
Grizzly	150	-	-	-	186	7.06	42	32	6.74	7
T17	160	13	21.45	9.2	812	11.75	307	345	8.75	97
V55	170	-	-	-	121	7.36	29	64	6.33	13
No.1	180	6	10.39	2.0	1,092	10.11	355	581	10.90	204
Causeway	190	-	-	-	240	8.15	63	21	6.50	4
106-16	200	4	11.37	1.4	1,119	10.59	381	865	8.98	249
Slap Shot	210	1	6.99	0.3	387	7.83	97	218	7.72	54
Slap Shot Splay	211	-	-	-	0.2	6.62	0.0	-	-	-
Slap Shot Splay 1	212	-	-	-	11	6.84	2	-	-	-
V75	220	13	15.53	6.7	1,060	9.80	334	876	8	233
Bend Splay	230	-	-	-	102	6.97	23	0	9	0
Bend	240	-	-	-	79	6.28	16	626	7	145
Crow	250	-	-	-	808	10.90	283	1,416	10	454
Raven Vein	260	-	-	-	-	-	-	95	6	18
Harp Vein	270	-	-	-	-	-	-	213	7	47
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**39**	**15.91**	**20**	**6,892**	**9.88**	**2,189**	**6,224**	**9.10**	**1,822**
% Dif. To Undiluted		**14%**	**-39%**	**-30%**	**9%**	**-34%**	**-28%**	**-19%**	**-26%**	**-40%**

Impact of Dilution for Minimum 1.6 Metre Thickness, Assuming Zero Grade in Host Rock

		Measured			Indicated			Inferred		
Domain	Rock Code	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Road	110	-	-	-	1	5.35	0	101	8.59	28
Sheep Dip	120	1	6.42	0.2	198	8.49	54	160	7.27	37
Sperrin	130	-	-	-	87	7.34	20	41	5.61	7
Mullan	140	-	-	-	499	9.36	150	489	12.13	190
Grizzly	150	-	-	-	144	6.79	32	26	6.33	5
T17	160	14	19.89	9.0	810	11.06	288	297	8.54	81
V55	170	-	-	-	91	7.32	21	48	5.81	9
No.1	180	5	10.44	1.8	1,055	9.57	325	566	10.36	189
Causeway	190	-	-	-	207	7.83	52	14	6.29	3
106-16	200	4	11.12	1.3	1,113	9.93	355	802	8.55	220
Slap Shot	210	1	6.42	0.2	322	7.62	79	169	7.83	42
Slap Shot Splay	211	-	-	-	0.2	5.72	0.0	-	-	-
Slap Shot Splay 1	212	-	-	-	8	6.47	2	-	-	-
V75	220	15	13.99	6.6	1,020	9.25	303	774	8	197
Bend Splay	230	-	-	-	73	6.83	16	0	9	0
Bend	240	-	-	-	48	6.12	9	428	7	102
Crow	250	-	-	-	767	10.53	260	1,381	10	428
Raven Vein	260	-	-	-	-	-	-	56	6	10
Harp Vein	270	-	-	-	-	-	-	127	7	29
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**39**	**15.00**	**19**	**6,444**	**9.49**	**1,967**	**5,479**	**8.96**	**1,579**
% Dif. To Undiluted		**17%**	**-42%**	**-33%**	**2%**	**-37%**	**-35%**	**-29%**	**-27%**	**-48%**

Impact of Dilution for Minimum 1.6 Metre Thickness, Assuming Host Rock Grade = 0.25 Au g/t

		Measured			Indicated			Inferred		
Domain	Rock Code	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)	Tonnage ('000 t)	Grade Au (g/t)	Au Metal ('000 oz)
Road	110	-	-	-	3	5.33	0	106	8.57	29
Sheep Dip	120	1	6.55	0.2	208	8.47	57	170	7.27	40
Sperrin	130	-	-	-	93	7.33	22	48	5.69	9
Mullan	140	-	-	-	521	9.28	155	501	12.06	194
Grizzly	150	-	-	-	157	6.78	34	28	6.36	6
T17	160	14	19.88	9.1	834	11.01	295	313	8.49	86
V55	170	-	-	-	99	7.26	23	56	5.86	11
No.1	180	6	10.30	1.9	1,093	9.54	335	577	10.37	192
Causeway	190	-	-	-	220	7.79	55	16	6.31	3
106-16	200	4	10.78	1.3	1,146	9.90	365	836	8.52	229
Slap Shot	210	1	6.52	0.2	344	7.58	84	179	7.75	45
Slap Shot Splay	211	-	-	-	0	5.88	0	-	-	-
Slap Shot Splay 1	212	-	-	-	9	6.45	2	-	-	-
V75	220	15	13.94	6.7	1,060	9.22	314	813	7.90	206
Bend Splay	230	-	-	-	81	6.79	18	0	8.92	0
Bend	240	-	-	-	54	6.12	11	465	7.30	109
Crow	250	-	-	-	789	10.48	266	1,404	9.63	435
Raven Vein	260	-	-	-	-	-	-	64	5.66	12
Harp Vein	270	-	-	-	-	-	-	139	7.04	31
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**41**	**14.88**	**19**	**6,710**	**9.44**	**2,036**	**5,715**	**8.91**	**1,637**
% Dif. To Undiluted		**20%**	**-43%**	**-31%**	**6%**	**-37%**	**-33%**	**-26%**	**-27%**	**-46%**

Impact of Dilution for Minimum 1.8 Metre Thickness, Assuming Zero Grade in Host Rock

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	0	5.28	0	93	8.29	25
Sheep Dip	120	1	6.24	0.1	189	8.08	49	143	6.99	32
Sperrin	130	-	-	-	78	7.01	18	19	5.42	3
Mullan	140	-	-	-	469	9.14	138	482	11.66	181
Grizzly	150	-	-	-	116	6.60	25	19	6.15	4
T17	160	14	19.20	8.9	811	10.51	274	278	8.20	73
V55	170	-	-	-	76	7.18	18	29	5.60	5
No.1	180	5	10.50	1.6	1,021	9.17	301	580	9.69	181
Causeway	190	-	-	-	183	7.61	45	9	6.35	2
106-16	200	3	10.91	1.2	1,104	9.44	335	759	8.18	200
Slap Shot	210	1	6.14	0.2	285	7.39	68	148	7.70	37
Slap Shot Splay	211	-	-	-	0.1	5.43	0.0	-	-	-
Slap Shot Splay 1	212	-	-	-	6	6.42	1	-	-	-
V75	220	16	12.85	6.5	997	8.79	282	743	7	178
Bend Splay	230	-	-	-	57	6.71	12	0	9	0
Bend	240	-	-	-	34	5.89	7	312	8	76
Crow	250	-	-	-	744	10.17	243	1,377	9	410
Raven Vein	260	-	-	-	-	-	-	28	6	5
Harp Vein	270	-	-	-	-	-	-	113	7	25
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**40**	**14.44**	**18**	**6,172**	**9.14**	**1,814**	**5,131**	**8.71**	**1,436**
% Dif. To Undiluted		**18%**	**-44%**	**-35%**	**-2%**	**-39%**	**-40%**	**-34%**	**-29%**	**-53%**

Impact of Dilution for Minimum 1.8 Metre Thickness, Assuming Host Rock Grade = 0.25 Au g/t

Domain	Rock Code	Measured Tonnage ('000 t)	Measured Grade Au (g/t)	Measured Au Metal ('000 oz)	Indicated Tonnage ('000 t)	Indicated Grade Au (g/t)	Indicated Au Metal ('000 oz)	Inferred Tonnage ('000 t)	Inferred Grade Au (g/t)	Inferred Au Metal ('000 oz)
Road	110	-	-	-	1	5.31	0	99	8.23	26
Sheep Dip	120	1	6.35	0.1	198	8.10	52	153	7.00	34
Sperrin	130	-	-	-	84	7.03	19	29	5.42	5
Mullan	140	-	-	-	491	9.05	143	498	11.57	185
Grizzly	150	-	-	-	130	6.57	28	23	6.10	4
T17	160	15	19.00	9.0	841	10.45	283	295	8.16	77
V55	170	-	-	-	83	7.14	19	37	5.62	7
No.1	180	5	10.21	1.7	1,070	9.11	313	595	9.70	186
Causeway	190	-	-	-	195	7.58	48	11	6.27	2
106-16	200	4	10.53	1.3	1,141	9.41	345	800	8.14	209
Slap Shot	210	1	6.31	0.2	307	7.35	73	157	7.64	38
Slap Shot Splay	211	-	-	-	0.2	5.32	0.0	-	-	-
Slap Shot Splay 1	212	-	-	-	7	6.44	1	-	-	-
V75	220	16	12.89	6.6	1,041	8.77	293	774	7.50	187
Bend Splay	230	-	-	-	64	6.66	14	0	8.92	0
Bend	240	-	-	-	40	5.92	8	346	7.48	83
Crow	250	-	-	-	771	10.10	250	1,407	9.25	419
Raven Vein	260	-	-	-	-	-	-	34	5.58	6
Harp Vein	270	-	-	-	-	-	-	122	6.77	27
Finn Vein	280	-	-	-	-	-	-	-	-	-
Foyle Vein	290	-	-	-	-	-	-	-	-	-
	Total	**41**	**14.28**	**19**	**6,465**	**9.08**	**1,888**	**5,380**	**8.65**	**1,496**
% Dif. To Undiluted		**22%**	**-45%**	**-33%**	**2%**	**-39%**	**-38%**	**-30%**	**-29%**	**-51%**