NI 43-101 Technical Report
Carlin Vanadium Project
Carlin, Nevada

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Report Prepared for

First Vanadium Corp.

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1 Summary

This report was prepared as a Resource-level Canadian National Instrument 43-101 (NI 43-101) Technical Report (Technical Report) for First Vanadium Corp. (First Vanadium, formerly Cornerstone Metals Inc.) by SRK Consulting (U.S.), Inc. (SRK) on the Carlin Vanadium Project (Carlin or the Project).

1.1 Property Description and Ownership

1.1.1 Property Description and Location

The Project consists of 182 unpatented mining claims totaling 3096 acres (excluding overlaps and portions of claims outside section limits) and approximately 80 acres of fee simple land through a Mineral Lease Agreement covering a total of 3,177 acres. The Project was explored and drilled by Union Carbide Corporation (UCC) in the late 1960's resulting in a defined vanadium historic resource. The claim group is located in north-central Nevada in Elko County, seven air miles south of Carlin. The vanadium deposit is centered about geographical coordinates 40°36'29"N, 116°07'17"W. Elko, with a population of about 20,000, is the largest town in the area.

1.1.2 Ownership

The core 72 claims (BK and Pot claims) are owned by Golden Predator U.S. Holding Corp., a corporation with an address in Idaho. Americas Gold Exploration Inc. (AGEI), a private Nevada corporation acquired a 5-year option June 15, 2017 to acquire 100% of the Carlin Vanadium Project from Golden Predator U.S. Holding Corp. which was assigned to First Vanadium through an Assignment Agreement dated September 22, 2017 and approved by the TSX Venture exchange November 9, 2017. Both Option and Assignment Agreements are in good standing at the time of the report with First Vanadium fulfilling its obligations (payments, work commitments and share issuances) in a timely fashion. First Vanadium can exercise the option and earn 100% interest in these claims by making remaining payments to Golden Predator of US$50,000 by June 2019 and US$1.91 million by June 15, 2022, subject to a 2% NSR in favor of Golden Predator, which could be bought out at the time of option exercise for US$4 million. First Vanadium has fulfilled all of its obligations to AGEI under the Assignment Agreement except requiring to produce a Preliminary Economic Assessment (PEA) on the project by November 9, 2021.

First Vanadium recently added 80 acres of mineral rights through a Mineral Lease Agreement from third parties subject to a 5% NRS royalty.

First Vanadium has recently added 110 unpatented lode claims adjacent and proximal to the original property in the name of its wholly owned subsidiary Copper One USA, Inc.

1.2 Geology and Mineralization

The Carlin Vanadium Property is located on the western flank of the Piñon Range, a block faulted horst of the Basin and Range tectonic province. The local lithologies are predominantly Paleozoic age (Permian to Mississippian), western assemblage, siliceous sedimentary rocks, shale, siltstone, chert, limestone and conglomerate, transported above the Roberts Mountain Thrust. These are overlain by Tertiary age rhyolite flows and Pliocene lake sediments. The vanadium mineralization is stratigraphically controlled and appears to follow the strike and dip of the host lithology, near the contact between an overlying grey-brown siltstone and an underlying brown to black shale unit of the Devonian-age Woodruff Formation. The mineralized zones form stratigraphic subunits or beds of the Woodruff Formation shale hosting elevated concentrations of vanadium in the form of vanadium pentoxide (V_2O_5). There are no visual sulfides indicating vanadium mineralization. The only visual distinctions in the lithology which indicate areas of elevated vanadium grades or mineralization from the unmineralized host shale is a color change from medium brown to black, reflecting an increase of carbon in the form of kerogen in the shale. All the mineralized zones are defined by chemical analysis.

Drilling to date has defined multiple zones of vanadium enriched mineralization (>0.2% V_2O_5) both in the overlying grey-brown siltstone and brown-black shale unit. The most persistence, thick and highest grade vanadium unit lies in the brown-black shale unit and averages approximately 115 ft (35 meters (m)) thick, striking north-south over 6,000 ft (1,800 m) in length and 2,000 ft (600 m) wide in the east-west direction. Although most of the deposit is flat to very shallow dipping, it appears to be gently folded anticlinally, with dips locally east and west up to 30°. The mineralization is locally exposed at surface but mostly at a shallow depth to 200 ft (60 m) from surface. Parts of the sequence and deposit are oxidized and exhibit red-purple color in higher vanadium grades.

1.3 Exploration

UCC began exploration in September 1966 and continued for the next two years. The work included surface mapping, trenching and sampling and was accompanied by auger and rotary drilling. A total of 17.8 line miles of road building and 3.3 line miles of caterpillar trenching and sampling were completed on the property. One hundred twenty seven (127) rotary drillholes totaling 31,095 ft (9,478 m) were completed by the end of 1967 on the property.

First Vanadium completed aerial surveys that generated orthophotos, mapping and core and reverse circulation drilling in 2017-2018. The drilling of 89 holes totaling 20,521 ft (6,255 m) confirmed historical drilling, infilled and expanded the deposit and collected material for metallurgical testing. Results of these drilling programs were applied to the current Mineral Resource Estimate.

1.4 Mineral Processing and Metallurgical Testing

Historic metallurgical testing on samples obtained from drill cuttings and surface trenches were done between 1967 and 1972 by Union Carbide Corp., and U.S. Dept. of Interior, Bureau of Mines. This work focused primarily on a salt roast process to extract vanadium. Maximum vanadium recoveries achieved with the historic testwork were in the upper sixty percent range.

Beginning in 2018, First Vanadium Corp., commissioned Sherritt Technologies to perform a metallurgical testing program, which was tasked in improving vanadium extraction and recoveries over the historical procedures. This recent work has focused on pressure oxidation (POX), and solvent extraction (SX) / precipitation to produce ammonium metavandate. After the initial optimization study the vanadium extractions using this procedure were conducted on nine variability samples of both oxidized and un-oxidized shale at varying vanadium grades. The recovery results following POX leaching ranged from 92% to 98% vanadium into solution. Soluble vanadium extraction from SX isotherm tests ranged from 96.2% to 96.9%. Based on these preliminary test results an overall 85% vanadium recovery is forwarded as a reasonable assumption for purposes of the mineral resource estimation.

1.5 Mineral Resource Estimate

This report provides Mineral Resource estimates, and a classification of resources prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, May 10, 2014 (CIM, 2014). Dr. Bart Stryhas, with assistance from First Vanadium constructed the geologic and Mineral Resource model discussed below. Dr. Stryhas is the Qualified Person responsible for the resource estimation methodology, Mineral Resource classification and resource statement.

The resource estimation is based on the current drillhole database, interpreted lithologies, geologic controls and current topographic data. The resource estimation is supported by drilling and sampling current to January 31, 2019. The estimation of Mineral Resources was completed utilizing a computerized resource block model constructed using Leapfrog™ and Vulcan™ modeling software.

The Carlin Vanadium Mineral Resource statement is presented in Table 1-1. Note that this statement only includes the mineral resource located on the First Vanadium claims. The 0.3% V_2O_5 CoG was chosen for resource reporting based on the reasonable potential for economic extraction under a conceptual open pit mining and milling scenario.

Table 1-1: Carlin Vanadium Mineral Resource Statement (Effective January 31, 2019)

Classification	Cut-off (% V_2O_5)	Grade (% V_2O_5)	Tons (M)	V_2O_5 lb (M)
Indicated	0.3	0.615	24.64	303
Inferred	0.3	0.520	7.19	75

Source: SRK, 2019

- Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the Inferred Resources tabulated above as an Indicated or Measured Mineral Resource. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future.
- The Mineral Resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.
- The mineral resources listed in Table 14-4 are confined within a Whittle Pit Shell with a 45º pit slope and a strip ratio of 2.6:1 waste to ore including all categories. The following parameters were used to construct the Whittle pit shell and to derive the mineral resource cut-off grade of 0.3% V_2O_5: Metal prices: US$12.50/lb V_2O_5 flake, Mining: US$2.50/t, Processing: US$52.50/t, G&A: US$1.50/t, Product Transport: $2.00/t, Process Recovery: 85%.
- Contained pounds may not add due to rounding.

1.6 Conclusions and Recommendations

1.6.1 Property Description and Ownership

The mineral resource estimate contained on the current land package is of sufficient size and quality to continue development to prefeasibility level. Acquisition of adjacent property may have upside potential for exploration of V_2O_5 mineralization.

1.6.2 Geology and Mineralization

Topographic surveys and geologic outcrop mapping have been completed for the current land package. The regional and local geology is well understood, as are controls on vanadium enrichment. No additional geologic surveys are necessary on the current land package.

1.6.3 Status of Exploration, Development and Operations

The recent drilling programs provided sample material to confirm historical drilling results and run metallurgical testwork. The classification of the current Mineral Resource could be upgraded with additional drilling, as described below.

As the current resource is substantial and of good quality, it is justifiable and SRK recommends advancing the project through an economic study. The more prudent approach would be through a Preliminary Economic Assessment (PEA). The metallurgical flowsheet should be finalized prior to the PEA. The cost of the r PEA is estimated at US$300,000 (~CAN$400,000). Since the current resource is substantial with a high percentage of Indicated, the Company has the option to advance the project directly to a pre-feasibility study at an estimated cost of US$1,000,000 (~CAN$1,035,000)

As there is obvious opportunity to expand the size of the deposit and resource cost effectively, a drill program is recommended in four areas with the aim to upgrade Inferred resources to Indicated and further expand the deposit. The program, estimated to cost US$650,000 (~CAN$880,000), should include 14,000 ft (4,270 m) of reverse circulation and diamond core drilling in 45 holes. This program could be considered prior to a Prefeasibility with the results further benefiting the project's economic case. Approximately 30% of this drill program could be done on the private fee simple ground without further permitting requirements. The remainder of the drill program would require the granting of the Plan of Operation permit which has been applied for.

A geotechnical study for pit slope angle has not been completed. Due to the weak and friable nature of the material and relatively shallow proposed pit depths, this work may not be required, as the pit slope angle may be limited to the angle of repose.

1.6.4 Mineral Processing and Metallurgical Testing

Based on the preliminary metallurgical testwork response further process testing of the Carlin Vanadium Project is justified. The recommended method for technical advancement of vanadium processing for this project is to pursue pressure oxidation and solvent extraction. Additional laboratory study is required to define process conditions and the operating flowsheet prior to conducting any related economic study. The planned future testwork to develop a flowsheet and better define the metallurgy is estimated to be US$150,000 (~CAN $200,000).

1.6.5 Mineral Resource Estimate

The resources of the Carlin Vanadium Property are classified as Indicated and Inferred based primarily on the average drillhole spacing. All resources supported by drilling with an average spacing of 200 ft or less were classified as Indicated Mineral Resources. Infill drilling in areas with Inferred mineral resources would increase the classification to Indicated and add to the potential Mineral Reserves. When any future resource drilling programs are completed, an updated Mineral Resource Estimate would be required.

The current resource is limited to V_2O_5. If silver and/ or zinc are present in recoverable concentrations, they could add value to the Project.

1.6.6 Mineral Reserve Estimate

The economic inputs to define a Mineral Reserve Estimate would be included in a prefeasibility study. Detailed mineral processing studies were in progress at the time this report was published. Mining methods, infrastructure needs, and other components would be evaluated as part of a prefeasibility study.

1.6.7 Mining Methods

Mining scenarios have not been evaluated in detail for this report. A conventional open-pit truck and shovel mining method would be appropriate for the Project.

1.6.8 Recovery Methods

Recovery methods would be a component of a PEA or prefeasibility study.

1.6.9 Project Infrastructure

Infrastructure needs to develop the Project include:

- Road improvements;
- Water supply;
- Power supply;
- Processing plant; and
- Tailings impoundment and waste rock storage facilities.

Detailed studies for these infrastructure components and others would be included in a prefeasibility study.

1.6.10 Environmental Studies and Permitting

A Plan of Operations Permit application was in process at the time of publication. This permit would allow First Vanadium to further develop the property. Required information for the permit application would include baseline environmental studies required by federal, state, and local authorities, which have been done.

2 Introduction

2.1 Terms of Reference and Purpose of the Report

This report was prepared as a Resource-level Canadian National Instrument 43-101 (NI 43-101) Technical Report (Technical Report) for First Vanadium Corp. (First Vanadium, formerly Cornerstone Metals Inc.) by SRK Consulting (U.S.), Inc. (SRK) on the Carlin Vanadium Project (Carlin or the Project).

The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in SRK's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by First Vanadium subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits First Vanadium to file this report as a Technical Report with Canadian securities regulatory authorities pursuant to NI 43-101, Standards of Disclosure for Mineral Projects. Except for the purposes legislated under provincial securities law, any other uses of this report by any third party is at that party's sole risk. The responsibility for this disclosure remains with First Vanadium. The user of this document should ensure that this is the most recent Technical Report for the property as it is not valid if a new Technical Report has been issued.

This report provides Mineral Resource and Mineral Reserve estimates, and a classification of resources and reserves prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, May 10, 2014 (CIM, 2014).

2.2 Qualifications of Consultants (SRK and F. Wright Consulting)

The Consultants preparing this technical report are specialists in the fields of geology, exploration, Mineral Resource and Mineral Reserve estimation and classification, underground mining, geotechnical, environmental, permitting, metallurgical testing, mineral processing, processing design, capital and operating cost estimation, and mineral economics.

None of the Consultants or any associates employed in the preparation of this report has any beneficial interest in First Vanadium. The Consultants are not insiders, associates, or affiliates of First Vanadium. The results of this Technical Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between First Vanadium and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practice.

The following individuals, by virtue of their education, experience and professional association, are considered Qualified Persons (QP) as defined in the NI 43-101 standard, for this report, and are members in good standing of appropriate professional institutions. QP certificates of authors are provided in Appendix A. The QP's are responsible for specific sections as follows:

- Brooke Clarkson, Senior Consultant is the QP responsible for permitting, history, and geology Sections 4-12, 20, 23, and 24, and portions of Sections 1, 25 and 26 summarized therefrom, of this Technical Report.

- Frank Wright, P.Eng., Principal Metallurgist of F. Wright Consulting Inc. is the QP responsible for metallurgy Section 13 and portions of Sections 1, 25 and 26 summarized therefrom, of this Technical Report.
- Bart Stryhas, Principal Associate Consultant is the QP responsible for Mineral Resource Estimation Section 14, and portions of Sections 1, 25 and 26 summarized therefrom, of this Technical Report.

Brooke Miller Clarkson, MSc, CPG

Ms. Brooke Clarkson conducted a site visit to the property on September 11, 2018. She reviewed the geological data from First Vanadium, verified drillhole data, and analyzed quality control results from recent assays. Ms. Clarkson is a QP as defined by NI 43-101.

Bart Stryhas, PhD, CPG

Dr. Bart Stryhas conducted an onsite review of the property in 2010. He constructed the geologic and resource model, resource estimation methodology and produced the resource statement in this report. Dr. Stryhas is a QP as defined by NI 43-101.

Frank Wright, P.Eng.

Mr. Frank Wright reviewed the metallurgical data and test work from First Vanadium. Frank Wright is a QP as defined by NI 43-101.

2.3 Details of Inspection

Table 2-1: Site Visit Participants

Personnel	Company	Expertise	Date(s) of Visit	Details of Inspection
Bart Stryhas	SRK Consulting	Geology and Resources	10 February 2010	Site conditions, locations of historical drill sites
Brooke Clarkson	SRK Consulting	Geology	11 September 2018	New drillhole locations, sample materials

2.4 Sources of Information

This report is based in part on internal Company technical reports, previous feasibility studies, maps, published government reports, Company letters and memoranda, and public information as cited throughout this report and listed in the References Section 27.

Standard professional review procedures were used in the preparation of this report. SRK reviewed data provided by First Vanadium, conducted a site visit to confirm the data and mineralization, and reviewed the project site. The content of this report is based on historical data files produced by Union Carbide Corporation (UCC) during the late 1960’s as well as work conducted by First Vanadium. There are no remaining drill cuttings or pulp samples from the UCC drilling campaigns. Specific sources of information are presented throughout the body of the text and in Section 27 References.

2.5 Site Visit

Ms. Clarkson visited the Project on September 11, 2018, for one day. She was accompanied by Paul Cowley of First Vanadium, which was Cornerstone Metals at the time. The purpose of the visit was to observe the site conditions, surficial geology, reverse circulation (RC) drilling and sampling QA/QC procedures in progress at the time. Core samples and prepared laboratory assay samples were stored off site in Elko and were also inspected. Several shale outcrops were inspected, but no samples were collected in the field. Recent drillhole locations were inspected to verify the monument labels and proximity to historical drillholes, if applicable. Six drillhole sites were visited, and more were visible during the tour, on foot or in a four-wheel drive pickup truck. During the site visit, the drill rig was not operating due to required repairs. A total of about three hours were spent on site.

Dr. Stryhas visited the Carlin Vanadium Project on February 10, 2010 for one day. He was accompanied by Mark Beaman formerly of EMC. The site was accessed with a four-wheel drive pickup to the southern end of the exploration area. Numerous drill roads, pads and trenches were clearly visible. Two mineralized outcrops located along the north side of Cole Creek were cleared off and sampled. The outcrops were both composed of dark gray-black shale. One was cut by a high angle fault structure and displayed evidence of minor oxidation. Approximately five drill pads were visited. The drill pads were observed to contain old drill cuttings and sumps, no drill casing was found. An old piece of wooden lath was found at one drill site. A total of five hours was spent on site.

2.6 Effective Date

The effective date of this report is January 31, 2019.

2.7 Units of Measure

The US System for weights and units has been used throughout this report. Tons are reported in short tons of 2,000 lb. All currency is in U.S. dollars (US$) unless otherwise stated.

3 Reliance on Other Experts

The Consultant's opinion contained herein is based on information provided to the Consultants by First Vanadium throughout the course of the investigations. SRK has relied upon the work of other consultants in the project areas in support of this Technical Report.

A qualified person who prepares or supervises the preparation of all or part of a technical report may include a limited disclaimer of responsibility if:

> (a) The qualified person is relying on a report, opinion or statement of another expert who is not a qualified person, or on information provided by the issuer, concerning legal, political, environmental or tax matters relevant to the technical report, and the qualified person identifies
>
> > (i) the source of the information relied upon, including the date, title, and author of any report, opinion, or statement;
> >
> > (ii) the extent of reliance; and
> >
> > (iii) the portions of the technical report to which the disclaimer applies.

The Qualified Persons (QPs) of the report have examined the current data for the Project provided by First Vanadium and have relied upon that basic data to support the statements and opinions presented in this Technical Report. In the opinion of the QPs, the data is present in sufficient detail, is credible and verifiable in the field, and is an accurate representation of the Carlin Vanadium Project.

SRK has relied on First Vanadium to provide valid mineral claim information as described in Section 4.2 of this report. First Vanadium has provided the QP with multiple receipts from the United States Department of the Interior Bureau of Land Management for full payment of maintenance on the 182 claims making up the property. This validates the claims are in good standing until September 2019. The receipts identify Golden Predator U.S. Holdings Corp. as the owner of 72 claims and Copper One USA, Inc. (a subsidiary of First Vanadium) as the owner of 110 claims. First Vanadium has also provided the QP with multiple receipts for county (Elko and Eureka) fees paid on all claims for good standing until September 2019.

These items have not been independently reviewed by SRK and SRK did not seek an independent legal opinion of these items. The Consultants used their experience to determine if the information from previous reports was suitable for inclusion in this technical report and adjusted information that required amending. This report includes technical information, which required 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, the Consultants do not consider them to be material.

4 Property Description and Location

4.1 Property Location

The Project is located in north-central Nevada in Elko County, seven air miles south of Carlin and 22 air miles southwest of the town of Elko (Figure 4.1). The project area covers approximately 3096 acres (excluding overlaps and portions of claims outside section limits) of unpatented mining claims and approximately 80 acres of fee simple land through a Mineral Lease Agreement with the vanadium deposit centered about UTM Zone 11N geographical coordinates 574,328E, 4,495,637N (Lat 40°36’29”N, Long 116°07’17”W). Elko, with a population of about 20,000, is the largest town in the area. Carlin has a population of about 2,500.

The Project is in Nevada Administrative Groundwater Basin 53, Pine Valley, of Nevada Hydrographic Region 4, Humboldt River Basin. The Project area is in the headwaters of Cole Creek.

Figure 4-1: Carlin Vanadium Project, General Location Map

Source: EMC, 2010

4.2 Mineral Titles

4.2.1 General

Federal (30 USC and 43 CFR) and Nevada (NRS 517) laws concerning mining claims on Federal land are based on an 1872 Federal law titled "An Act to Promote the Development of Mineral Resources of the United States." Mining claim procedures still are based on this law, but the original scope of the law has been reduced by several legislative changes.

The Mineral Leasing Act of 1920 (30 USC Chapter 3A) provided for leasing of some non-metallic materials; and the Multiple Mineral Development Act of 1954 (30 USC Chapter 12) allowed simultaneous use of public land for mining under the mining laws and for lease operation under the mineral leasing laws. Additionally, the Multiple Surface Use Act of 1955 (30 USC 611-615) made "common variety" materials non-locatable; the Geothermal Steam Act of 1970 (30 USC Chapter 23) provided for leasing of geothermal resources; and the Federal Land Policy and Management Act of 1976 (the "BLM Organic Act," 43 USC Chapter 35) granted the Secretary of the Interior broad authority to manage public lands. Most details regarding procedures for locating claims on Federal lands have been left to individual states, providing that state laws do not conflict with Federal laws (30 USC 28; 43 CFR 3831.1).

Mineral deposits are located either by lode or placer claims (43 CFR 3840). The locator must decide whether a lode or placer claim should be used for a given material; the decision is not always easy but is critical. A lode claim is void if used to acquire a placer deposit, and a placer claim is void if used for a lode deposit. The 1872 Federal law requires a lode claim for "veins or lodes of quartz or other rock in place" (30 USC 26; 43 CFR 3841.1), and a placer claim for all "forms of deposit, excepting veins of quartz or other rock in place" (30 USC 35). The maximum size of a lode claim is 1,500 feet in length and 600 feet in width, which is 20.66 acres, whereas an individual or company can locate a placer claim as much as 20 acres in area.

Claims may be patented or unpatented. A patented claim is a lode or placer claim or mill site for which a patent has been issued by the Federal Government, whereas an unpatented claim means a lode or placer claim, tunnel right or mill site located under the Federal (30 USC) act, for which a patent has not been issued.

Annually, owners of unpatented lode claims (federal BLM claims) are required to make maintenance fee payment to the Bureau of Land Management in the amount of one hundred and fifty-five dollars (US$155) prior to September 1 of each year for each of the claims to hold a claim through each ensuing assessment year ending at noon on September 1 of that ensuing year, as required by law and file an Affidavit of Payment of Maintenance Fees and Notice of Intent to Hold Mining Claims. By filing the affidavit, the owner of a claim gives notice of their intent to hold and maintain all right, title and interest in and to each claim for the following assessment year.

About 85% of the land in Nevada is controlled by the Federal Government; most of this land is administered by the US Bureau of Land Management (BLM), the US Forest Service, the US Department of Energy, or the US Department of Defense. Public land in the Project claim group is administered by the BLM.

4.2.2 Carlin Vanadium Property

SRK reviewed a limited amount of correspondence, pertinent maps and agreements to assess the validity and ownership of the unpatented mining claims.

First Vanadium has provided the QP with a receipt for US$11,160 from the United States Department of the Interior Bureau of Land Management dated July 5, 2018 for full payment of maintenance on the original 72 claims (BK and Pot claims). The receipt confirms that all unpatented mining claims have had the 2018 to 2019 federal mining claim maintenance fees paid on July 5, 2018 and the Notice of

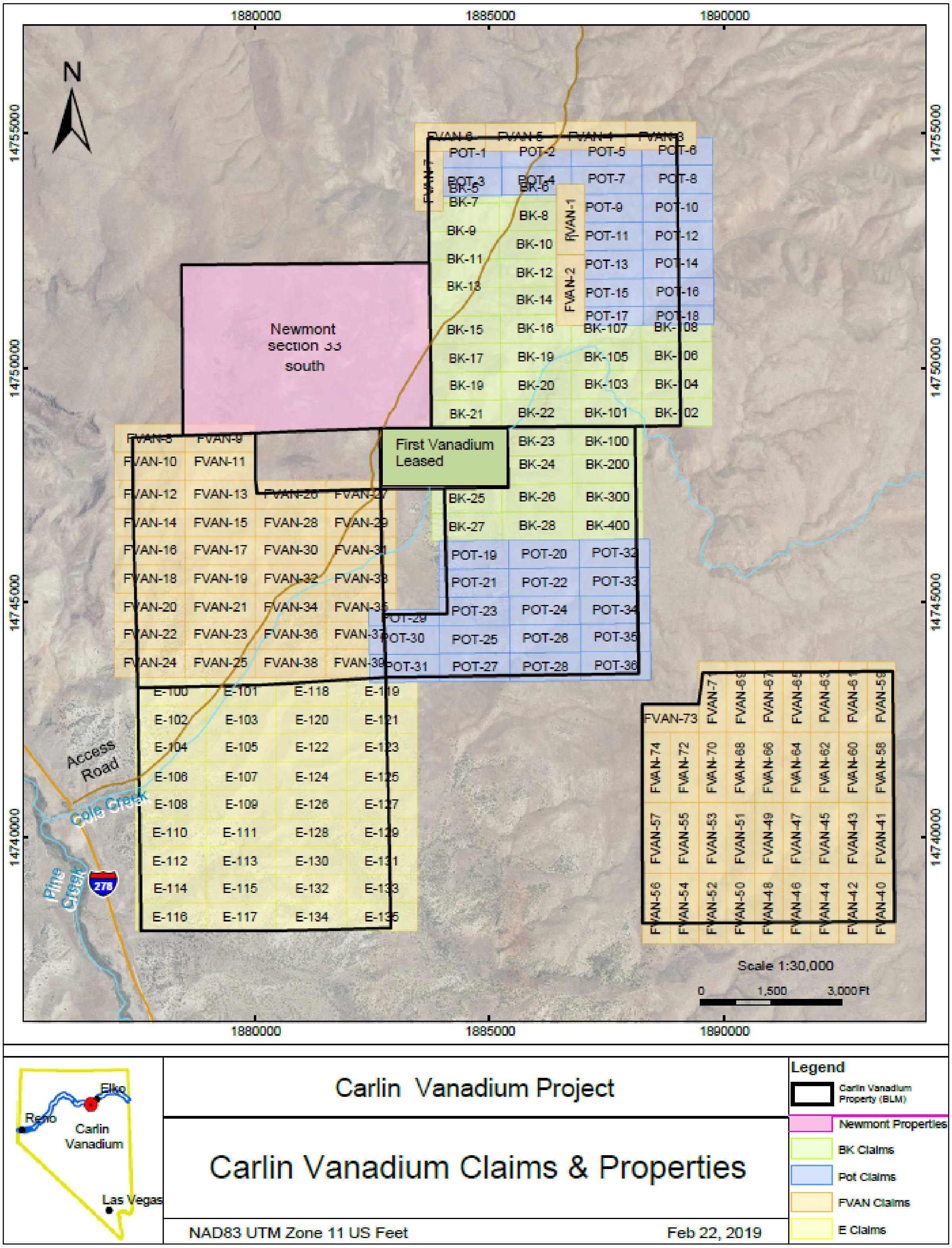
Intent to Hold recorded in Elko County, NV on July 16, 2018 as document 0743337. By making the maintenance fee and the federal fee requirements for each claim, the claims are in good standing for the assessment year ending noon September 1, 2019. The receipt identifies Golden Predator U.S. Holdings Corp. as the owner of the original 72 (BK and Pot) claims. First Vanadium has also provided the QP with a receipt for US$874.00 for county fees paid July 16, 2018 for these claims.

First Vanadium has provided the QP with receipts of US$14,416 and US$7,420.00 from the United States Department of the Interior Bureau of Land Management dated January 30, 2019 and February 25, 2019, respectively, for full payment of maintenance on the FVAN 1-74 and E100-135 claims staked in the name of Copper One USA, Inc. (wholly owned subsidiary of First Vanadium). By making the maintenance fee and the federal fee requirements for each claim, the claims are in good standing for the assessment year ending noon September 1, 2019. The receipt identifies Copper One USA, Inc. as the owner of the FVAN 1-74 and E 100-135 claims. First Vanadium has also provided the QP with receipts for US$1,720.00 and US$1,585 for Elko county fees paid January 16, 2019 and February 20, 2019, respectively, for these claims and a receipt for Eureka county fees paid January 22, 2019 for these claims.

In addition, on January 31, 2019, the Company announced entering into an Access and Mineral Lease Agreement to approximately 80 acres of private (fee simple) land immediately adjacent to the Carlin Vanadium property (referred to as the “Cole Creek Property”, specifically a portion of APN 005-04A-001 Lot 3 and Lot 4, in Section 4, Township 31N., Range 52 E. Pursuant to the terms of the Access and Mineral Lease Agreement, the Company has paid the lessor US$50,000 on signing, and is required to pay an additional US$20,000 annually for the lease of all minerals beneath the surface of, within or that may be produced from the Cole Creek Property. In the event the Company commences mining operations on the Cole Creek Property, the annual payments will be replaced with a 5% NSR royalty in favor of the lessor. Pursuant to the terms of the lease, the Company is also required to incur at least US$100,000 expenditures on the property within 36 months, or to remedy any shortfall by making a cash payment to the lessor in the amount of such shortfall. The term of the lease is for an initial five-year period which may be extended, at the Company’s option, for additional five-year periods provided the Company remains in good standing under the agreement. The Company has the right to terminate the lease portion of the agreement without terminating the road access portion of the agreement (described below).

The lessor also owns or has rights to certain lands containing roads which the Company wishes to use for access to the Cole Creek Property and to the Carlin Vanadium property. The Access and Mineral Lease Agreement grants to the Company the right to access such lands and roads by making annual payments during the exploration period, The Company is also required to build and maintain a gate and cattle guard in order to keep its access rights in good standing. In addition, amongst other matters including compensation for lost cattle and lost grazing, the agreement also contemplates that upon commencement of development and mining operations, the Company will construct additional roads to be agreed upon between the Company and the lessor and at such time the Company will pay the lessor additional fees for the new road access until mining ceases and reclamation is completed. The access rights have been granted for an initial five-year term which may be extended, at the Company’s option, for additional five-year periods provided the Company remains in good standing under the agreement.

First Vanadium has provided the claim information detailed in Appendix B and shown in Figure 4.2.



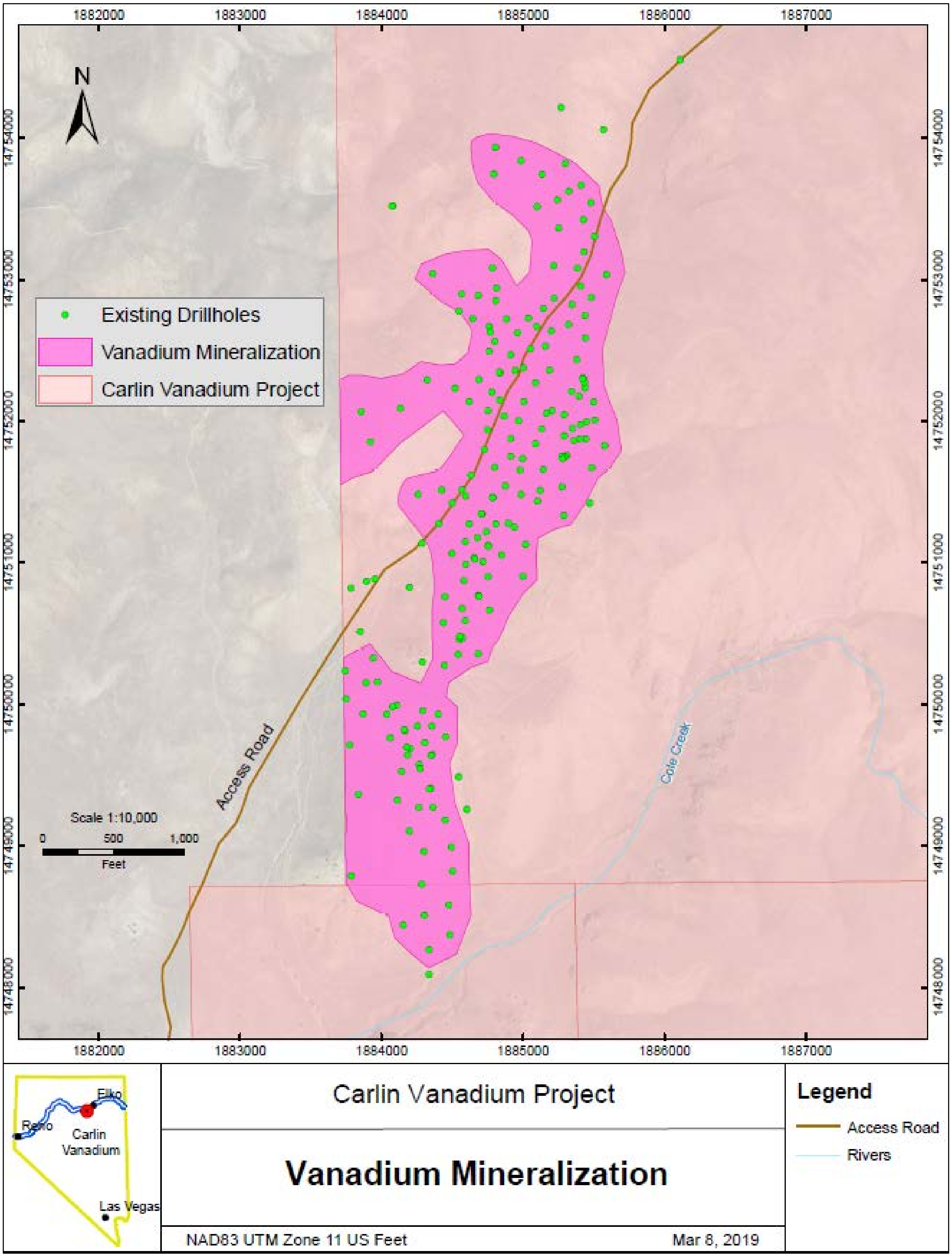
Source: First Vanadium, 2019

Figure 4-2: Land Tenure Map

4.3 Location of Mineralization

The vanadium-bearing zones of the Project are located within carbonaceous shales of the Woodruff Formation. The mineralization is located both within unpatented mining claims owned by Golden Predator U.S. Holdings Corp, which have been optioned to First Vanadium, and the Cole Creek fee simple claims which the Company has through an Access and Mineral Lease Agreement.

Figure 4.3 locates the vanadium-bearing deposit in purple relative to the Carlin Vanadium Property claims outer boundary, outlined by the red line. The deposit lies on claims BK 001 through 017, 019 and 021 and Lots 3 and 4 of APN 005-04A-001. Note: just for illustration purposes Figure 4.3 excludes claims POT-006, 008, 010, 012, 014, 016 and 018, and BK-102, 104, 106 and 108.



Source: First Vanadium, 2019

Figure 4-3: Property Boundary and Mineralization Extent

4.3.1 Nature and Extent of Issuer’s Interest

4.4 Royalties, Agreements and Encumbrances

The original BK and Pot claims are owned by Golden Predator US Holding Corp., a corporation with address in Idaho. Americas Gold Exploration Inc. (AGEI), a private Nevada corporation holds an option to acquire 100% of the Carlin Vanadium Project from the third-party owner of the property which was then assigned to First Vanadium through a signed definitive Assignment Agreement with AGEI dated September 22, 2017, which outlined the terms under which AGEI would assign its interest to First Vanadium. The Assignment Agreement provided First Vanadium complete access to the property. The closing of the deal was subject to TSX Venture exchange approval which was granted November 9, 2017. First Vanadium assumes all of the optionee’s obligations set out in the 5-year underlying option agreement, which include cash payments totaling US$75,000 (US$25,000 made as of date of this report) and US$400,000 in work commitments over 2.5 years (completed as of date of this report). In addition to these commitments, a US$1.91 million payment would complete the option exercise requirements, at which time First Vanadium would acquire a 100% interest in the project, subject to a 2% NSR in favor of the property owner, which could be bought out at the time of option exercise for US$4 million.

As set out in the definitive Assignment Agreement, First Vanadium paid AGEI total cash payments of US$50,000 and issued to AGEI 2 million shares of First Vanadium, in two tranches. It will be a further requirement of the assignment that First Vanadium produce a Preliminary Economic Assessment (PEA) on the project within 4 years. Once the underlying option agreement was fully exercised by the Company, AGEI would be granted a 1.5% NSR which could be entirely bought out at any time by Cornerstone for a total of US$3 million. On November 30, 2018, First Vanadium extinguished this 1.5% NSR early by making an issuance of 1.3 million shares of the Company to AGEI.

On January 31, 2019, the Company announced entering into an Access and Mineral Lease Agreement to approximately 80 acres of private (fee simple) land immediately adjacent to the Carlin Vanadium property (referred to as the “Cole Creek Property”, specifically a portion of APN 005-04A-001 Lot 3 and Lot 4, in Section 4, Township 31N., Range 52 E. Pursuant to the terms of the Access and Mineral Lease Agreement, the Company has paid the lessor US$50,000 on signing, and is required to pay an additional US$20,000 annually for the lease of all minerals beneath the surface of, within or that may be produced from the Cole Creek Property. In the event the Company commences mining operations on the Cole Creek Property, the annual payments will be replaced with a 5% NSR royalty in favor of the lessor.

The lessor also owns or has rights to certain lands containing roads which the Company wishes to use for access to the Cole Creek Property and to the Carlin Vanadium property. The Access and Mineral Lease Agreement also grants to the Company the right to access such lands and roads by making annual payments during the exploration period, The Company is also required to build and maintain a gate and cattle guard in order to keep its access rights in good standing. In addition, amongst other matters including compensation for lost cattle and lost grazing, the agreement also contemplates that upon commencement of development and mining operations, the Company will construct additional roads to be agreed upon between the Company and the lessor and at such time the Company will pay the lessor additional fees for the new road access until mining ceases and reclamation is completed. The access rights have been granted for an initial five-year term which may be extended, at the

Company's option, for additional five-year periods provided the Company remains in good standing under the agreement.

4.5 Environmental Liabilities and Permitting

4.5.1 Environmental Liabilities

There are no potential environmental liabilities related to historical surface disturbance or any related reclamation obligations. Historical drill access roads and drill sites were left as constructed, as was the standard industry practice at the time.

Current environmental liabilities at the Project are limited to road and drill pad construction from the 2017-2018 drilling programs. Reclamation of disturbance related to these activities is bonded with the U.S. Department of the Interior (DOI) Bureau of Land Management (BLM).

4.5.2 Required Permits and Status

Bureau of Land Management regulations regarding surface disturbance and reclamation require that a notice be submitted to the appropriate Field Office of the Bureau of Land Management for exploration activities in which five acres or fewer are proposed for disturbance (43 CFR 3809.1-1 through 3809.1-4). A Plan of Operations is needed for all mining and processing activities, plus all activities exceeding five acres of proposed disturbance. A Plan of Operations is also needed for any bulk sampling in which 1,000 or more tons of presumed ore are proposed for removal (43 CFR 3802.1 through 3802.6, 3809.1-4, 3809.1-5). The BLM also requires the posting of bonds for reclamation for any surface disturbance caused by more than casual use (43 CFR 3809.500 through 3809.560). The Forest Service has regulations regarding land disturbance in forest lands (36 CFR Subpart A). Both agencies also have regulations pertaining to land disturbance in proposed wilderness areas.

In November 2017, First Vanadium submitted a Notice of Intent (NOI) application to the U.S. Department of the Interior (DOI) Bureau of Land Management (BLM) for proposed surface disturbance related to exploration drilling. Proposed activities included new road construction, and new drill pad construction from new and existing roads. Total estimated new disturbance to date under the NOI is estimated at 4.9 acres. The reclamation bond paid by First Vanadium was equal to the estimated cost of reclaiming proposed disturbance.

Exploration drilling conducted in December 2017 through present was permitted with the 2017 Notice of Intent (NOI) filed with the BLM in early November 2017, and with the approved reclamation bond accepted in early December 2018.

First Vanadium has submitted a Plan of Operations (POO) application with the BLM to ramp up surface disturbance to a maximum of 100 acres. A cultural study along with botany, soil, terrain and wildlife studies were undertaken in 2018 and were submitted with the POO application.

4.5.3 Compliance Evaluation

In the 2017 NOI, the Company stated that monitoring of reclaimed new disturbance will take place for three years after the completion of proposed drilling activities. Drilling completed to date concluded in September 2018, however, additional drilling may occur under the NOI in 2019.

4.6 Other Significant Factors and Risks

To the extent known, there are no significant factors or risks that may affect access, title, or right or ability to perform work on the property.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Topography, Elevation and Vegetation

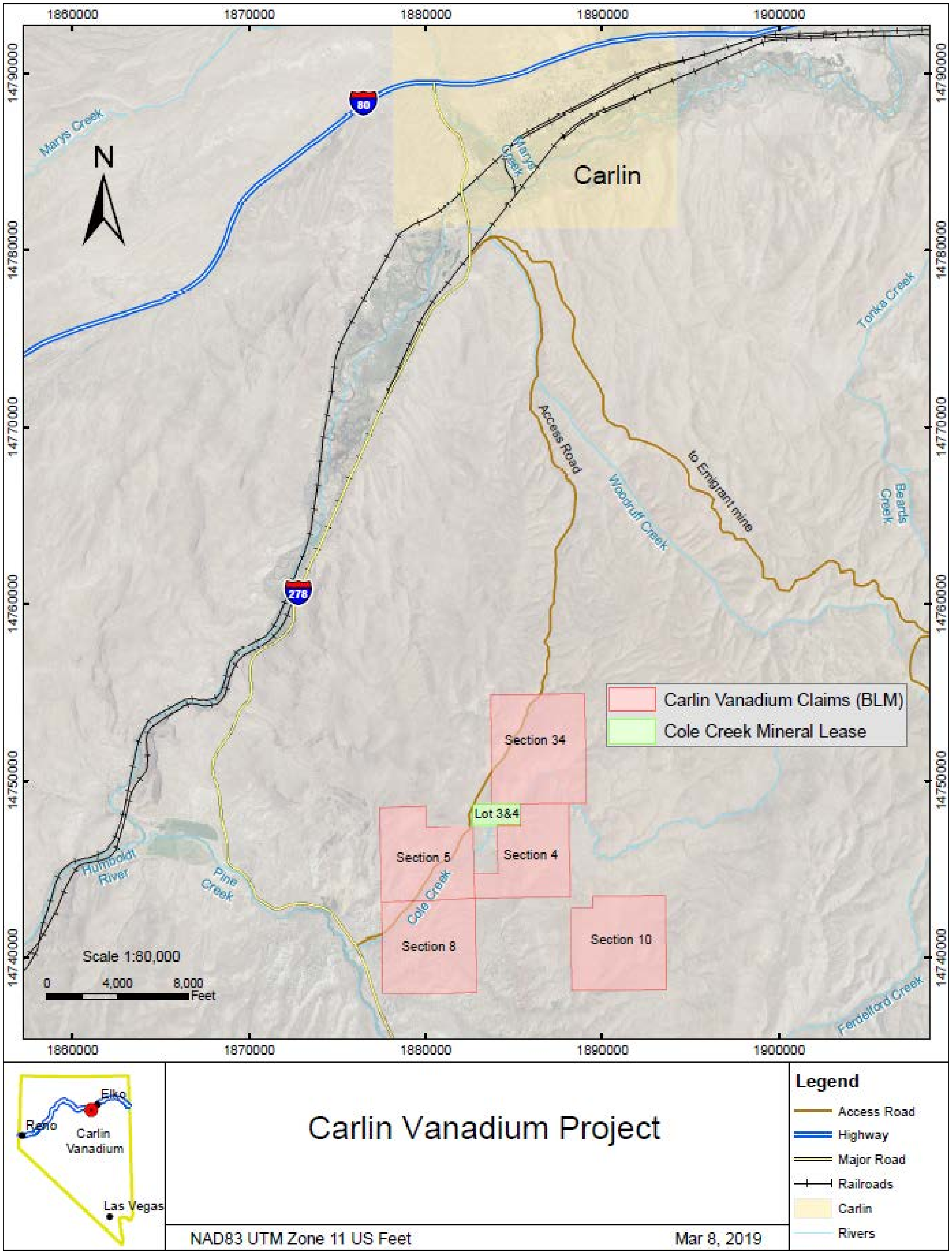
The Project lies within the Basin and Range physiographic province of east-central Nevada. This province consists of northerly trending mountain ranges with 2,000 to 5,000 ft of topographic relief above relatively broad and flat intervening valleys. The mineralized area is situated along the western flank of the Piñon Range within the headwaters of Cole Creek. Topography is characterized by moderate to steeply sloped hillsides at elevations ranging from 6,000 to 6,500 ft above sea level. The hills and ridges are covered by thin soil and colluvial sediments. Outcrop is generally moderate, perhaps 15% to 30% or less over the entire property.

Vegetation is typical of the Basin and Range Province, varying locally between none and sparse desert vegetation. The north facing slopes are slightly more vegetated than the south facing slopes. Typical vegetation found at the site includes pinion pine, juniper, creosote bush, sagebrush and a variety of desert grasses and flowers.

5.2 Access to Property

The Carlin Vanadium Project is chiefly situated on public lands that are administered by the Bureau of Land Management (BLM). No easements or rights of way are required for access over public lands. A small part of the property, Lot 3 and 4, are fee simple land. The Company has an access agreement with the owner of the fee simple land.

The drive from Carlin is approximately 30 minutes over 14.25 miles of paved and gravel roads. Immediately west of Carlin, turn south at Bush Street onto State Highway #278 then proceed south for 11.5 miles and then turn east onto Cole Creek Road. Travel northeast for 2.75 miles along the Cole Creek dirt road and you arrive at the Project. The roads leading up to the Cole Creek road are all Nevada State and county maintained providing year around access. The Cole Creek road is a privately maintained access to the property. The Company has an access agreement along the Cole Creek road. Alternatively, the property can be reached from the north starting from Highway #278 at the Newmont Emigrant Mine exit and follow a dirt road south 6 miles to link up with the Cole Creek dirt road. The Property location with nearby transportation infrastructure is shown in Figure 5.1.



Source: First Vanadium, 2019

Figure 5-1: Property Location and Access Routes

5.3 Climate and Length of Operating Season

Climate is typical for the high-desert regions of central Nevada, with hot, dry summers and cold, snowy winters. Summer temperatures are typically about 80° F, but highs can peak at 95° F. Winter temperatures range between lows of 0° F to 20° F to highs of 30° F to 40° F. Most of the precipitation for the region falls as snow in the winter months. Snow many feet deep in the mountains above 7,000 ft occurs from December through February. Rainfall occurs as mild showers in the spring and as severe thunderstorms during the late summer.

The typical exploration season would be from mid-March through the end of November. If snow removal equipment is used, the typical exploration season can be extended through the winter months. However, First Vanadium was able to conduct its diamond drilling program in December 2017 and January/February 2018 with marginal weather delays or snow removal equipment.

5.4 Surface Rights

The Project consists chiefly of unpatented mining claims, the surface estate of which is owned by the United States, and administered by the Department of Interior, Bureau of Land Management (BLM). The mining claimant has the right to utilize the surface estate of the lands to develop the mineral interest of the claim. These lands have guaranteed public access which is governed by United States law. A small part of the property (80 acres), Lot 3 and 4, are fee simple land. The Company has an access agreement with the owner of the fee simple land.

5.5 Local Resources and Infrastructure

5.5.1 Access Road and Transportation

The Project is located 2.75 miles from Nevada State Highway 278, a major north-south transportation route. From the highway, an all season, two-lane dirt road leads to the property. The Union Pacific Railroad and US Interstate Highway 80 both run through the town of Carlin. Regularly scheduled air passenger service is available in Elko, Nevada, 21 miles east of Carlin.

5.5.2 Power Supply

The Project site does not have electrical service. The closest electrical transmission line is located along Highway 278, approximately 2.75 miles to the west. There is also a transmission line that is approximately 5 miles northeast of the property which services Newmont’s Emigrant Mine.

5.5.3 Water Supply

There is currently no developed water supply of water right attached to the project.

5.5.4 Buildings and Ancillary Facilities

There are no buildings or ancillary facilities at the Project.

5.5.5 Manpower

Carlin and Elko, Nevada are the closest towns with a significant population to provide manpower for a mining operation. Elko currently support numerous large-scale mining operations.

5.5.6 Tailings Storage Areas

There are currently no tailings disposal areas on the property, however, there are areas on the property that could serve as tailings disposal areas. These areas would likely be located above the main drainages on a mildly dissected plateau located to the northeast or southeast of the mineralization. This area is covered by the current claim group. Another alternative would be to comingle tailings with waste rock as described below.

5.5.7 Waste Disposal Areas

There are currently no waste rock disposal areas located on site, however, there are several areas on and close to the Project that could be used for future waste rock disposal. The nature of the mineralization defines several potential open pits. A likely starter waste dump could be designed immediately east of the southern pit and once this pit was mined out it could be back filled with waste from other pits located to the north. There are also several isolated valleys that could serve as future waste rock disposal areas. These areas are covered by the current claim group.

5.5.8 Potential Heap Leach Pad Areas

A heap leach facility will not be necessary for processing vanadium mineralization.

5.5.9 Potential Processing Plant Sites

There are several areas on or close to the Project that could be used to locate a mineral processing plant. The current claims package includes outlying areas distal from known mineralization that were identified for future infrastructure needs.

6 History

6.1 Ownership

The original claims covering the vanadium mineralization during UCC's tenure are believed to have all lapsed. The current claim history begins with quitclaim deeds from November 18, 2002. At this time, claims Pot-1 through Pot-36 were transferred from Teck/Cominco to GAM. On March 31, 2003, BK-5 through BK-28, BK-100 through BK-108, BK-22, BK-300 and BK-400 were deeded to GAM by Donald McDowell. On May 5, 2003, BK-22 through BK-24 were deeded to GAM from Donald McDowell. On August 11, 2003, Pot-1 through Pot-36 were deeded to GAM again via a corrected quitclaim deed by Teck/Cominco. All of these claims were acquired by EMC through the acquisition of GAM in 2008. Subsequently, all of the Project claims were transferred to Golden Predator U.S. Holding Corp. Golden Predator U.S. Holding Corp. optioned the claims in June 2017 to AGEI who assigned the option to First Vanadium through a signed definitive Assignment Agreement with First Vanadium September 22, 2017. The deal was approved by the TSX Venture exchange on November 9, 2017.

First Vanadium, through an Access and Mineral Lease Agreement in January 2018, added to the size of the property by 80 acres of fee simple land. First Vanadium also increased the size of the property through staking of an additional 110 unpatented lode claims in late 2017 and early 2018.

6.2 Past Exploration

UCC began exploration in September of 1966 with the staking of the IZA claims. Over the next two years surface mapping, trenching and sampling was conducted accompanied by auger and rotary drilling.

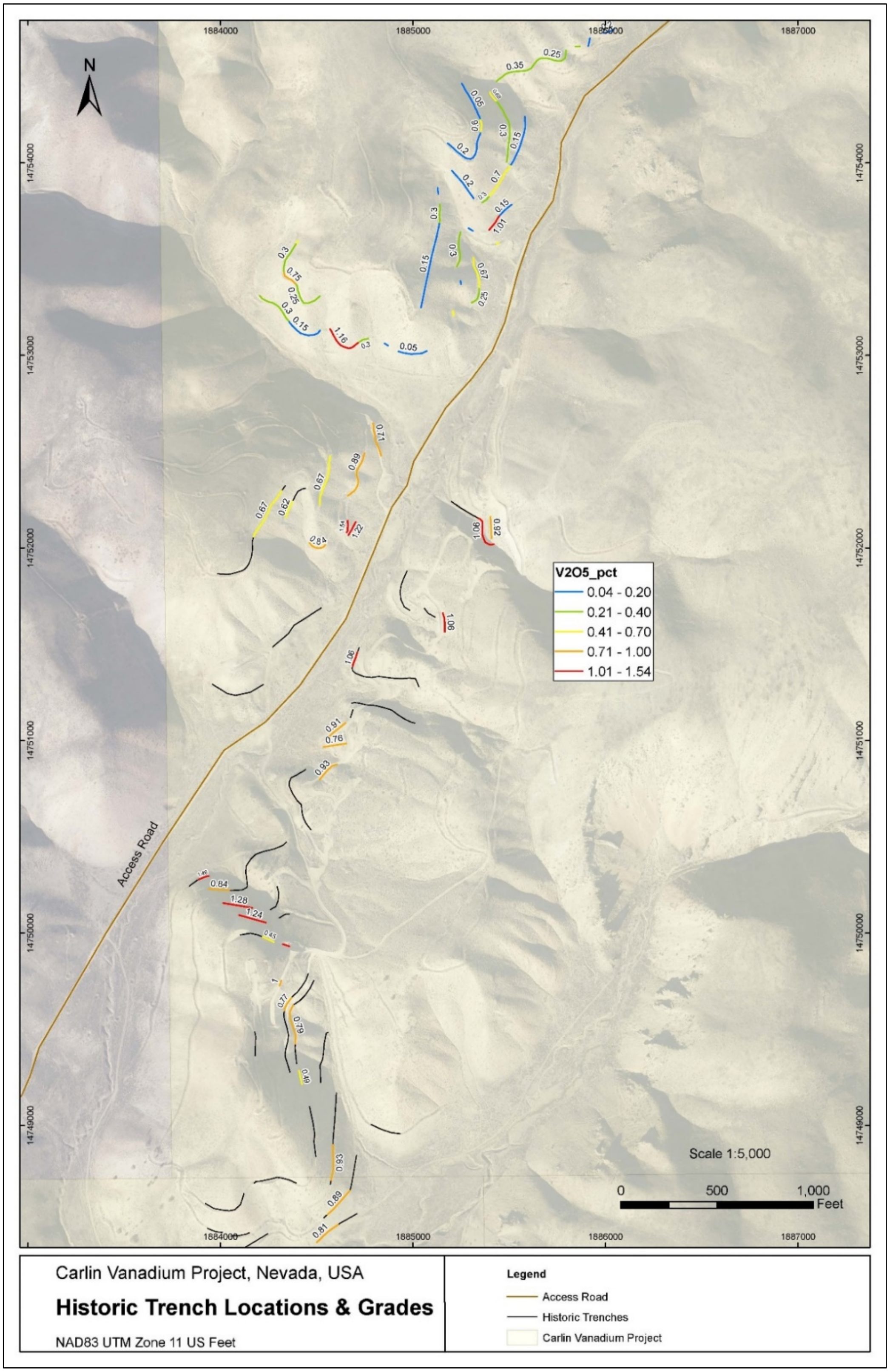
Historic Road Building and Trenching for Vanadium

UCC completed extensive road building on the property in 1966 and 1967. An estimate of 18.7 aggregate line miles of road on both sides of the valley were done and not reclaimed. The road building not only provided drill access but was evidently used to expose rock outcrop for mapping purposes and for sampling vanadium mineralization.

UCC completed 70 caterpillar-dig trenches in 1966 and 1967 generally along their roads to expose rock outcrop for mapping purposes and for sampling vanadium mineralization. These trenches have an aggregate total length of approximately 3.3 miles (17,400 ft). Roughly 1,000 assays were taken from these trenches, with individual samples as horizontal chips across 3 to 10 foot intervals. Trench locations and a large portion of the individual assay results are found on 1968 paper maps and were digitized into First Vanadium's mapping database. The trench locations are shown in Figure 6.1. Summary composited vanadium grades along parts of these trenches are shown in Figure 6.2.

Source: First Vanadium, 2019

Figure 6-1: Historic Trench Location Map



Source: First Vanadium, 2019

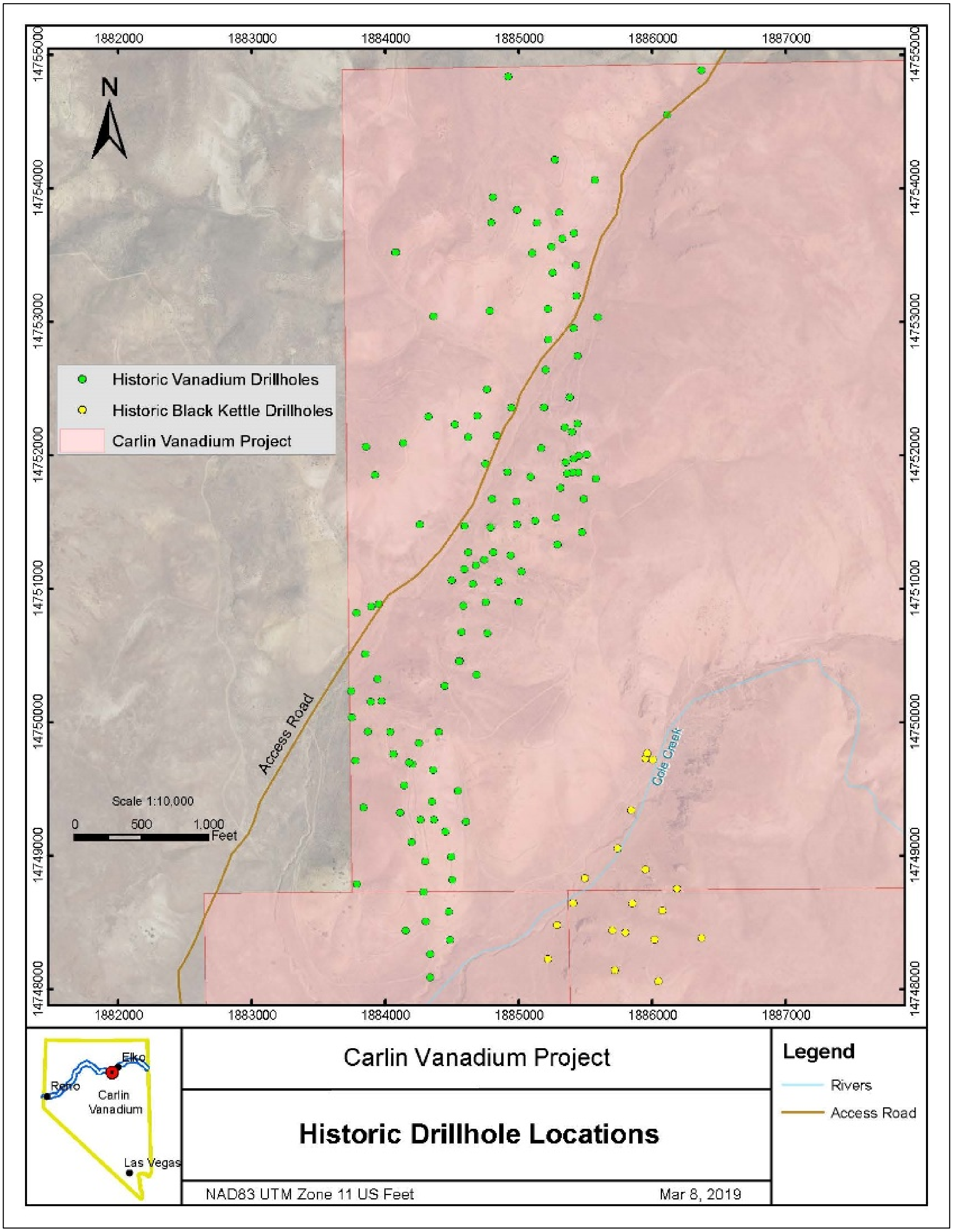
Figure 6-2: Vanadium Grades in Trench Samples

Type and Extent of Historic Drilling by UCC

The UCC drilling was completed by truck mounted rotary drilling with an air circulated mud system used for sample recovery. All of the drilling was completed May 1967 through October 1967 and were vertical holes generating rock chip that were logged and sampled. A total of 127 rotary drillholes were completed by UCC in 31,095 feet (9,478m) located on the historic IZA claims, all located within Section 34 T32E, R52E. These holes lie within the Carlin Vanadium Property controlled by First Vanadium.

The drilling is found within a single broad valley and up both eastern and western slopes of the valley, illustrated in Figure 6.3. The average drillhole spacing was approximately 200 ft within the more densely drilled areas. Figure 6.3 shows the outline of the property boundary in red, but just for illustration purposed excludes the southernmost claims (POT-023 through -031, and -034 though -036).

No chips or pulps are available from these programs, but assay and survey data were preserved. Original drill logs are available. Rock chip that were logged for lithology and sampled for vanadium and occasional zinc and silver. Rare drill collars are evident in the field with open holes or chip piles. No downhole surveys were done on these holes due to their short length and vertical orientation of the drillholes.



Source: First Vanadium, 2019

Figure 6-3: Historical Drillhole Locations

6.2.1 Procedures on Historic Drilling by UCC

There is no detail describing the specific drilling procedures used at the Project by UCC. Various progress reports and internal notes describe the drill as a rotary type with samples recovered by an air, air-water or air-mud system. There are numerous notations in the drill logs describing relatively high water flows which impeded sample recovery and resulted in hole termination. Also, several holes encountered cavities which interrupted sample recovery. For this reason, most of the mineralized holes have been infilled with newer drilling and five of the historic holes have been specifically twinned during the recent drilling. The holes range between 20 ft and 500 ft in length with an average of 240 ft.

All of the holes were drilled vertically, and the mineralization is interpreted have a general strike northward and a gentle dip to the west. Therefore, the drillhole length of interception is near true thickness of the mineralization, about 80% to 100% of the drillhole interception length.

The drilling samples were all collected using a rotary air, air-water or air-mud system. In this case air is forced down the center of the drill steel and it blows cuttings up the drillhole. Once water is encountered or drilling gets tight, the samples are circulated up the hole suspended in water. If the hole begins to cave, then mud is introduced to hold the hole open and the samples are circulated up suspended in mud. The drill cuttings were collected at the collar in five-foot increments. Each 5 ft sample was referred to as the regular sample. An additional grab sample was also collected from every alternate 5 ft interval. The 5 ft samples are adequate to delineate variations in lithology and mineralization. In the opinion of the QP, the sample length is appropriate for the nature of the mineralization as it would have isolated relatively higher-grade samples from lower grade. The entire drillhole was sampled and therefore any potential mineralization encountered in the holes should have been identified.

In soft or broken rocks, rotary drilling samples are known to be subject of contamination from material located higher up in the drillhole. There is no direct evidence that this was a problem at the Project and subsequent drilling by First Vanadium confirmed similar results. In the opinion of the QP, the samples collected by UCC at the project are adequate to be included in the current resource estimate.

6.2.2 Results of Historic Drilling by UCC

The UCC drilling results were all recorded on standard handwritten drill logs which were later transcribed to typed final manuscripts. The drill logs contain specifics information pertaining to; hole no., local x, y coordinates, elevation, claim location, orientation, date started, date completed, total depth, logged by and summary of results. Each 5 ft interval is described by; from-to, interval length, % V_2O_5, anomalous % Zn values and comments. Typical comments relate to rock types, color and drilling conditions. The drilling methods used by UCC were typical of the time the exploration was completed. The rotary air-water-mud system was a commonly used procedure in soft rock exploration in the 1960's. As drilling methods evolved and improved, rotary-mud systems were abandoned from use where analytical samples are collected. This was due to potential sample contamination problems. The rotary system circulates the samples from the face of the bit up along the outside of the drill steel in contact with the country rock. The abrasive nature of the air-water-mud had a tendency to cavitate and incorporate zones of soft country rock located above, therefore producing samples at the collar which were not truly representative of the material encountered at the bottom of the hole.

6.2.3 Sample Preparation and Assaying Methods of Historic Sampling by UCC

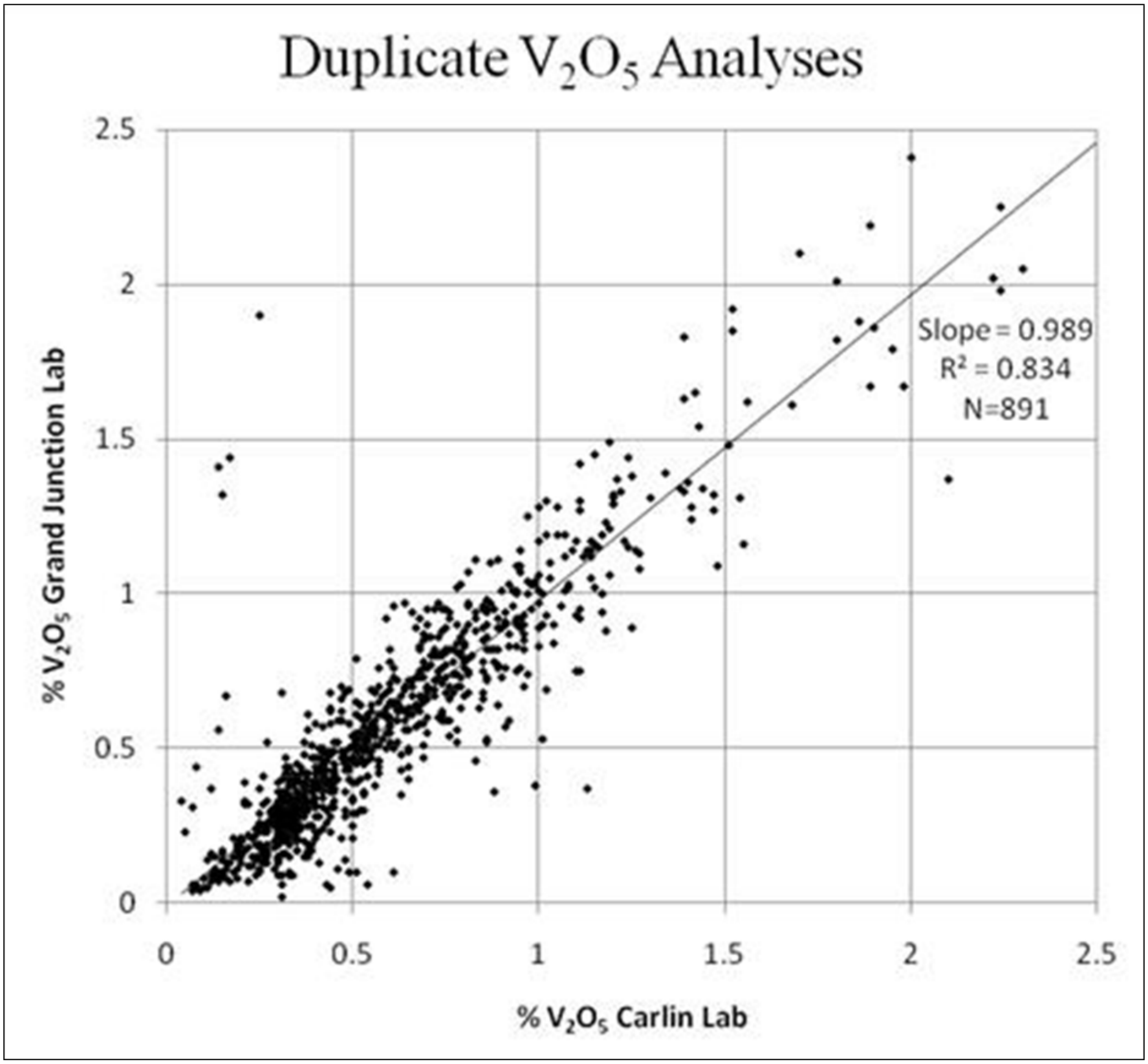
There is no information currently available which describes the sample preparation methods by UCC. The samples were analyzed using a two-stage approach. First, the alternate grab samples described above, were analyzed by X-ray fluorescence for V_2O_5 at Carlin NV. If a particular grab sample or run of grab samples produced anomalous results, then the original sample for that interval and the two adjacent intervals were sent to Grand Junction, CO. for V_2O_5 and zinc analysis. It is unknown what analytical procedures were used at the Grand Junction laboratory. Infill drilling within these holes did not show any significant differences in the analytical results.

6.2.4 Testing Laboratories by UCC

The Carlin NV laboratory and the Grand Junction Co. laboratories were both in-house, UCC facilities. During the era of this work, it was common for large companies like UCC to operate their own analytical laboratories. In many cases, these laboratories were the best in the business at the time.

6.2.5 Quality Assurance and Quality Controls by UCC

At the time that the exploration drilling by UCC was completed, it was not a common procedure for the exploration department to conduct rigorous QA/QC programs on its in-house laboratories. Each of the in-house laboratories was held accountable for their own QA/QC programs. The existing assay certificates do not contain any data for internal duplicates or standards. The nature of the sampling at the Project does however provide for an incidental check on results. Since many of the samples originally analyzed at the Carlin laboratory were then rerun at the Grand Junction laboratory a direct comparison can be made. Figure 6-2 is an x-y scatter plot of the V_2O_5 results for duplicate analyses on 891 samples. The plot shows very good correlation between the two labs with no bias from either.



Source: EMC, 2010

Figure 6-4: Duplicate Check Samples

6.2.6 Interpretation

The analytical results produced by UCC demonstrate adequate quality to support a resource estimate. Because the analytical data, samples, and techniques could not be verified by the QP, the resource classification in 2010 that was generated, was exclusively from the UCC data is was limited to Inferred category. This has been subsequently been verified by the 2017-2018 First Vanadium drilling.

6.2.7 2010 Surface Sampling for Vanadium

In 2010, EMC, the owners of the property at that time took 2 surface samples while Dr. Stryhas was on site. The two surface samples were collected by removing unconsolidated surface material and then collecting a composite of rock fragments from broken bedrock. Approximately 25 lb of sample were collected from each outcrop. The two outcrops were located about 30 ft apart. The samples both returned relatively high grades on mineralization as shown in Table 6-1.

Table 6-1: **2010 Outcrop Sample Results**

Sample Number	V_2O_5 %
CV001	0.845
Cv002	0.445

Source: EMC, 2010

6.2.8 Historic Gold Exploration

There is anomalous gold mineralization on the Carlin Vanadium property. The occurrence is referred to as the Black Kettle Prospect. The source of this information is from Company files.

The Black Kettle Prospect (BKP) is located immediate southeast of the Carlin Vanadium deposit across Cole Creek. The BKP prospect has been explored by two previous operators. In 1985, Santa Fe Pacific Mining drilled six holes totaling 1,865 ft. There are currently no detailed records of the results of this work in the data files. A single cross section shows one of the holes encountered silicification associated with iron oxides. In 1991, Cambior USA Inc. optioned the BKP as a joint venture (JV) with Santa Fe Pacific Mining. Cambior recognized the iron stained surface alteration with leached sulfides as typical for the districts gold mineralization and believed the property could be highly prospective due to its 5 mile proximity to Newmont's Rain Mine.

In 1991, soil geochemistry was completed followed by rock chip sampling. This work identified an anomalous gold zone within the Woodruff Formation. The gold zone extended 550 ft along strike and intensified at the contact with overlying Permian-Pennsylvanian rocks. The soil geochemistry returned anomalous gold values between 30 to 300 ppb. These were substantiated by rock chip samples ranging from anomalous to economic (0.033 oz/st) gold values. The mineralization is believed to follow a north striking, steeply dipping fault structure and is best developed at the upper Woodruff contact. This geologic model is very similar to the mineralization controls at the Rain deposit which has historic production of 1.3 Moz Au (Gaborit 1993, Williams and others 2000).

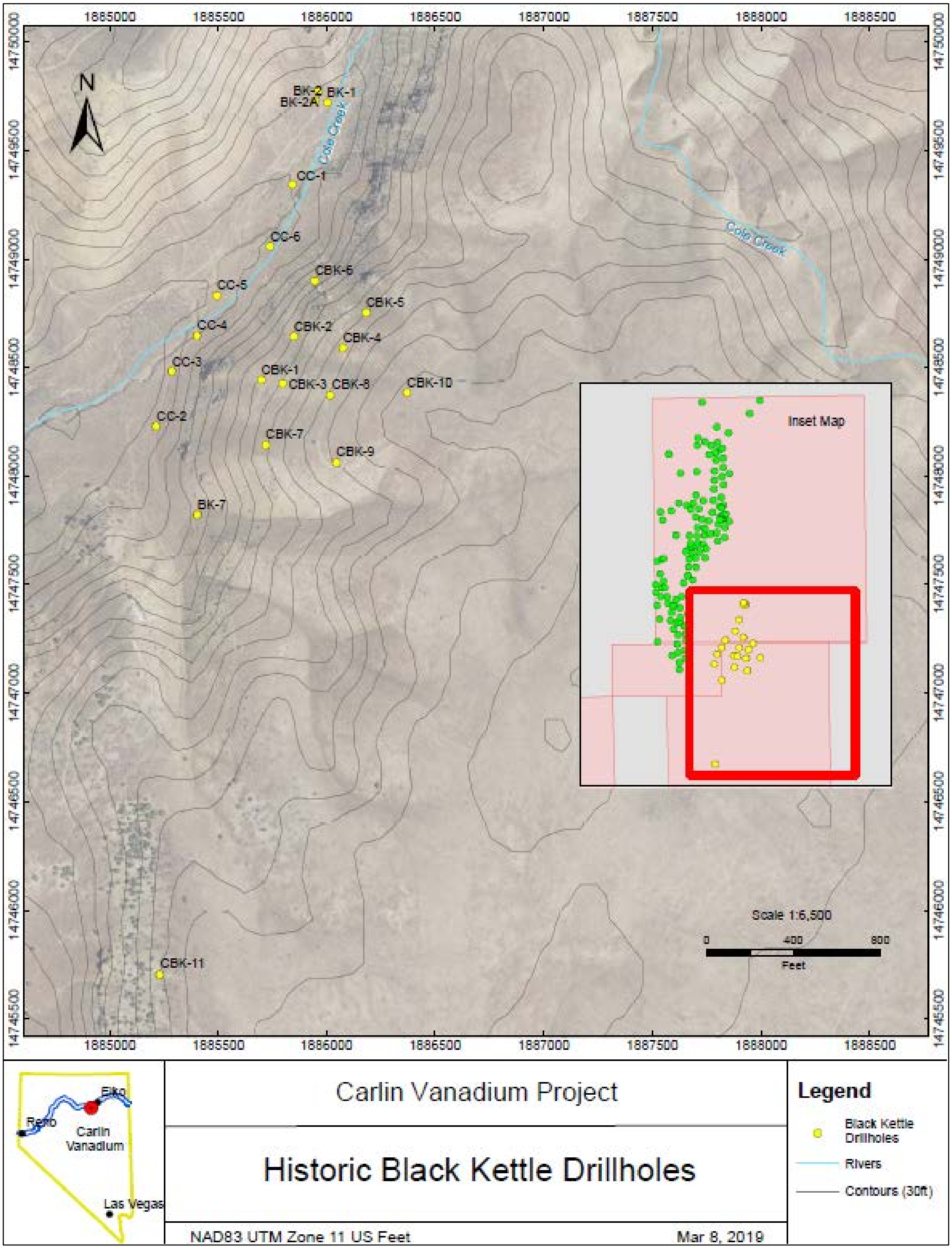
In 1992, a five-hole, reverse circulation (RC) drilling program was completed. During construction of the drilling roads, the anomalous gold zone was extended another 100 ft to the south-southwest. Forty-nine additional rock chip samples were collected of which 26 returned gold values greater than 100 ppb. The highest rock chip value was a 30 ft composite with 0.015 opt Au adjacent to the upper Woodruff contact. All five of the RC drillholes returned considerable interceptions of either anomalous gold or anomalous gold pathfinder elements. The largest gold intercept was drillhole CBK-2 which encountered 0.010 oz/st Au from 5 ft to 70 ft. Hole CBK-1 encountered 105 ft averaging 202 ppb Au and CBK-3 intersected 75 ft averaging 147 ppb Au. Holes CBK-4 and CBK-5 both intercepted zones with high mercury values averaging 2,000 ppb. (Gaborit 1993) The true strike and dip of the mineralized structures are unknown and the stated intercept lengths do not reflect the true thickness of mineralization. The true thickness of mineralization is unknown at this time.

In 1993, the JV completed six additional RC drillholes and conducted Scalar CSMT Controlled-Source Audio- Magnetotelluric Resistivity Surveys (MT) at the BKP. The MT surveys were conducted along seven section lines at an unknown spacing. The current data files do not contain an interpretation of the MT results. The results of the six additional drillholes are represented only in the drill logs. There is no compilation report in the current data files. All of the holes appear to be targeted at the upper

Woodruff contact zone. Only five of the six reached this target and one hole was lost. Of the five successful drillholes, two encountered anomalous gold values in the target zone, two other encountered high mercury values and one was barren. Drillhole CBK-6 encountered 55ft averaging 105 ppb Au from 20 ft to 75 ft. Drillhole CBK-9 encountered 70 ft averaging 113 ppb Au from 130 ft to 200 ft. Drillhole CBK-8 encountered a broad zone of mercury ranging between 500 to 1,000 ppb in a fault zone within the Woodruff. Drillhole CBK-11 encountered a broad zone of mercury ranging between 1000 to 2000 ppb in the upper Woodruff. The location of the BKP drillholes are shown in Figure 6-5. The true strike and dip of the mineralized structures are unknown and the stated intercept lengths do not reflect the true thickness of mineralization. The true thickness of mineralization is unknown at this time.

The results of the 1991-1993 exploration programs identified a structural/stratigraphic target with anomalous gold and mercury mineralization. Of the eleven holes completed, eight encountered significant intervals with Au mineralization in excess of 100 ppb or mercury mineralization in excess of 1,000 ppb Au. There is no record of any additional exploration work conducted after the 1993 exploration season.

During the exploration of the Black Kettle prospect, 1144 samples were analyzed for vanadium. Four samples returned values >0.2% V_2O_5 and thirty samples contain V_2O_5 between 0.1% and 0.2%. The best intercept of vanadium is found in CBK-3 that had a grade of 0.33% V_2O_5 over 15 feet (235-250 ft depth). CBK-3 encountered dark grey to black carbonaceous cherty siltstone at the interval of 285-387 feet. CBK-4 intersected 5 feet of 0.29% V_2O_5 (180-185 ft depth).



Source: First Vanadium, 2019

Figure 6-5: Historic Black Kettle Drillholes

6.3 Exploration and Development Results of Previous Owners

UCC applied assay and metallurgical testing results to a polygonal reserve estimate during 1968. SRK applied the same data for the 2010 mineral resource estimate. Both are summarized below.

6.4 Historic Mineral Resource and Reserve Estimates

A qualified person has not done sufficient work to classify the historical estimate as a current resource estimate or Mineral Reserve and the issuer is not treating the historical estimate as a current resource estimate.

6.4.1 UCC 1968 Historic Mineral Estimate

Upon completion of the exploration work described above, UCC generated a polygonal reserve estimation base on both drilling and trenching results during 1968. The results are described within a UCC Internal Correspondence letter as 19,690,000 st containing 0.83% V_2O_5 with a waste ore strip ratio of 2:1 (Galli 1968). Note that these figures are historical in nature and do not meet the requirements of NI 43-101 reporting. They should not be considered relevant or reliable and are cited here only for historical record. The term reserve described above does not comply with current industry standard resource and reserve categories. Current industry standard reserve classification requires significant additional economic and engineering analysis. A QP has not done sufficient work to classify the historical estimate as a current mineral reserve. The issuer is not treating the historical estimate as a current mineral resource or reserve.

6.4.2 2010 SRK Historic Mineral Estimate

In 2010 a resource estimation was made by Dr. Bart Stryhas for EMC, the owner of the property at that time. Dr. Stryhas was independent of EMC. Dr. Bart Stryhas constructed the geologic and resource model supported by information from the 127 rotary drillholes totaling 31,095 ft completed by UCC. The drillholes are generally oriented along sections at azimuth 70° or 90° and are all oriented vertical. The drillhole depths range from 20 ft to 500 ft with an average of 240 ft. The drillhole database was compiled by EMC and verified by SRK. The 2010 resource estimation was based on a generalized geologic model and confined within a V_2O_5 grade shell. The geological model assumed that the mineralization was stratigraphically controlled, following the strike and dip of the host lithology, defining a zone of mineralization striking north-south over 6,100 ft of length and dipping 5°to 30° west averaging 2,500 ft of downdip extent. Each model block was assigned an average density of 2.34 (g/cm^3) based on the lithologies present.

Drillhole samples were composited into 25 ft bench lengths without breaks at geologic contacts. The raw V_2O_5 assays were capped at 2.2% prior to compositing. The model blocks were 50 ft x 50 ft x 25 ft in the x,y,z directions, respectively. V_2O_5 grades were estimated using Inverse Distance Weighting to the second power. A minimum of three and maximum of 12 composites were required for the block grade estimations.

The results of the resource estimation provided a CIM classified Inferred Mineral Resource as shown in Table 6-2. The quality of the historical data was good, and the Mineral Resource was classified as Inferred mainly because the rotary drilling had not been verified by a modern program.

Table 6-2: 2010 Historic Mineral Resource Estimate

Resource Category	% CoG	Total (Mst)	V_2O_5 Grade (%)	Contained V_2O_5 (Mlb)
Inferred	0.3	28	0.515	289

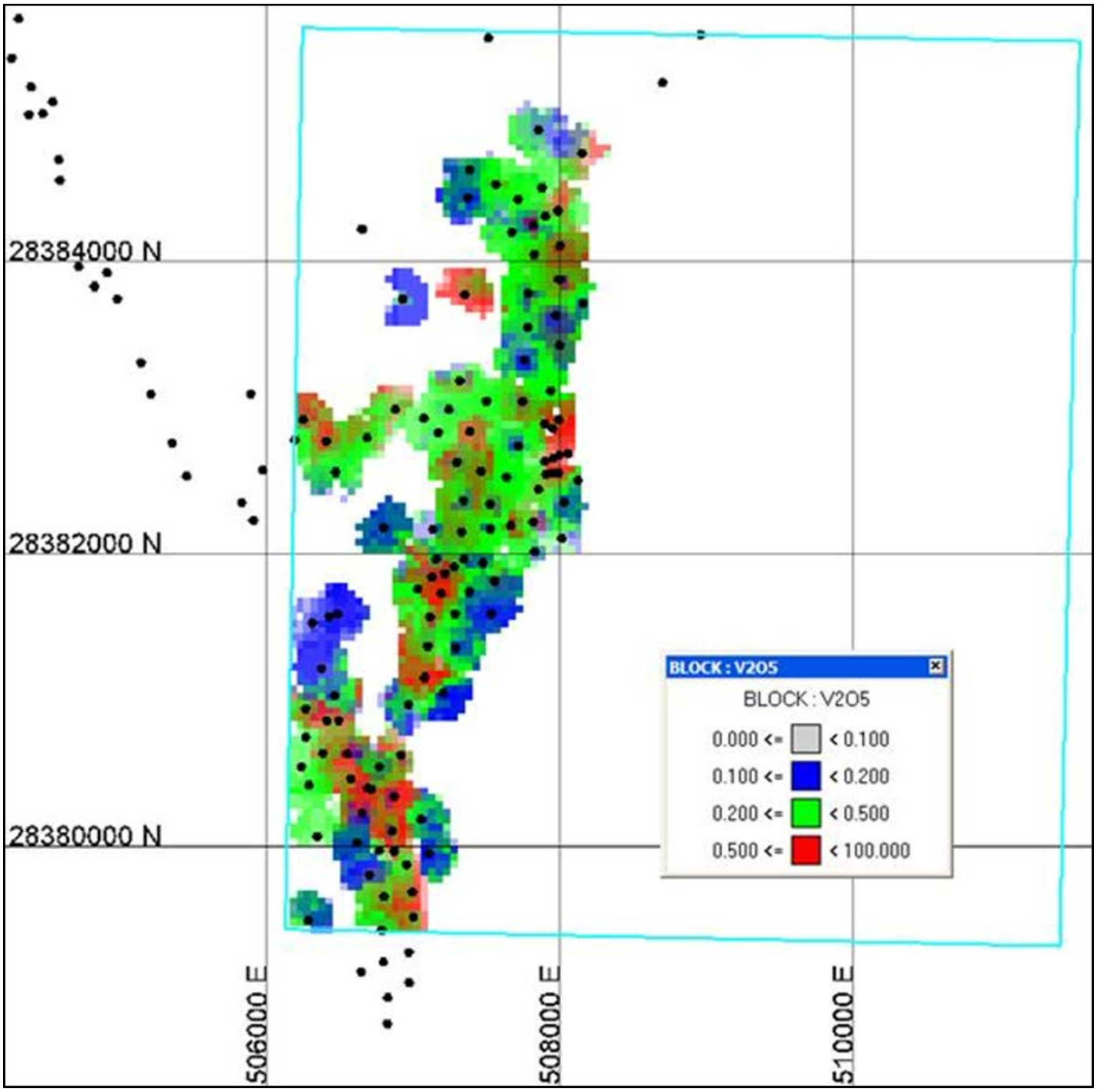
Source: SRK, 2010

The 0.3% V_2O_5 CoG was chosen in 2010 for resource reporting based on the reasonable potential for economic extraction under a conceptual open pit mining and milling scenario. The CoG was calculated using US$2.30/st mining cost, US$35/st milling cost, US$0.50/st admin cost, 65% recovery, 95% selling pay-for, 1% freight charge, 0% royalty and a US$10.46/lb V_2O_5 value. The sensitivity results reported in the historic resource statement, summarized in Table 6-3, are rounded to reflect the approximation of grade and quantity, which can be achieved at this level of resource estimation.

Table 6-3: 2010 Historic Resource Estimate Sensitivity Table

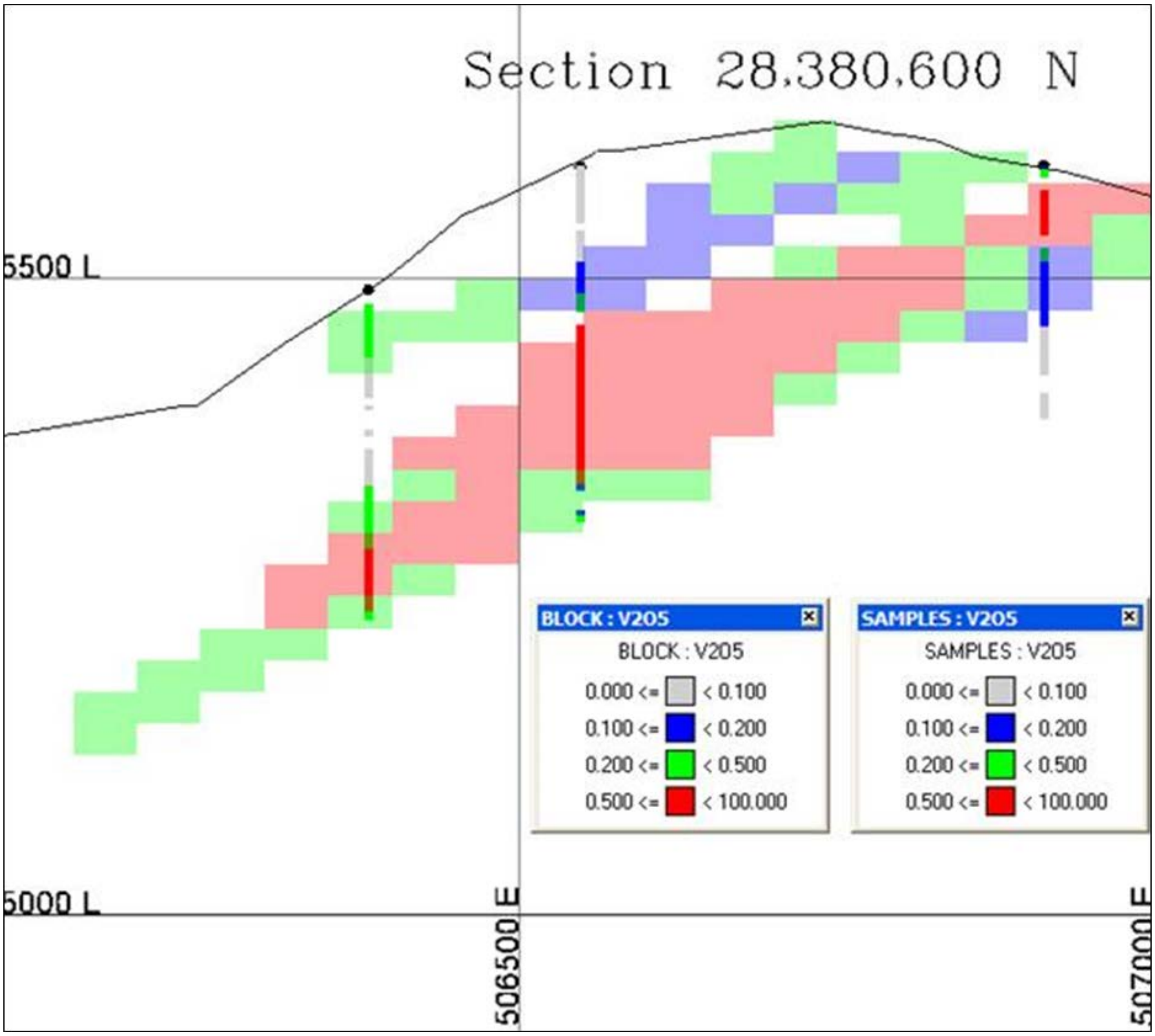
% CoG	Total (Mst)	V_2O_5 Grade (%)	Contained V_2O_5 (Mlb)
0.1	64	0.341	439
0.2	47.	0.404	384
0.3	28	0.515	289
0.4	18	0.616	217
0.5	11	0.708	161
0.6	7	0.806	115
0.7	5	0.893	82

Source: SRK, 2010



Source: SRK, 2010
Drill collars shown in black and claim boundary shown in teal.

Figure 6-6: Plan View of the 2010 Historic Resource Estimate Block Model



Source: SRK, 2010.
Topographic profile shown in black

Figure 6-7: Example Cross-section View of 2010 Historic Mineral Resource Block Model

The historic resource estimate is not been treated by the Company or the QP as current because they lack the application of a floating pit and current vanadium metal prices, so should not be relied upon.

6.5 Historic Production

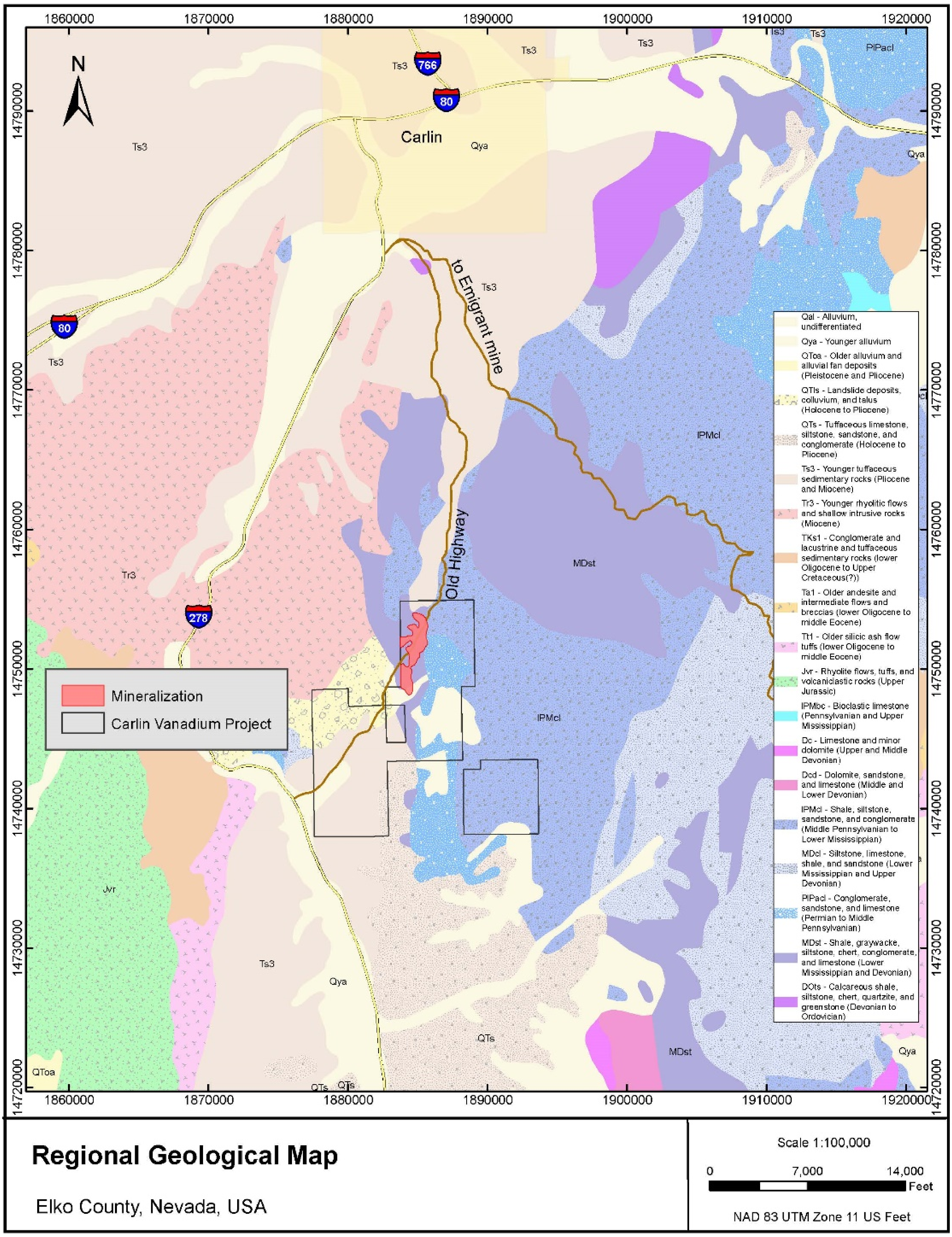
There is no record or evidence of historic production from this project.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Carlin Vanadium Property is located on the western flank of the Piñon Range, a block faulted horst of the basin and range tectonic province. The area is underlain by Paleozoic meta-sedimentary rocks overlain by a variety of Tertiary volcanic rocks (Morgan 1969). The generalized regional geology is shown in Figure 7.1.

During the Cambrian through Devonian Periods, the study area was part of a large passive continental shelf forming the western margin of the North American Craton (NAC). At this time, two general sequences were formed. Predominantly shallow water mud, limey mud and sandy-mud were deposited in the eastern assemblage. To the west, a coeval continental rise sequence consisting of siliceous eugeosynclinal sediments formed the western assemblage. During the Carboniferous Period, the Antler Arc collided with the NAC creating the Antler Mountain Range mainly west of the study area. In the Triassic Period, the area was subject to over thrusting related to the collision of the Quesnel Fragment. Shallow thrust faulting displaced the entire western assemblage over the eastern assemblage along the Roberts Mountain Thrust Fault. As the Wrangellia oceanic plateau was subducted beneath the NAC, large batholiths and plutons began to form farther inland probably at the end of the Jurassic. The Tertiary Period brought about a change from compressional to extensional tectonics marked by the development of widespread volcanism and caldera development followed by the eventual development of the basin and range faulting which predominates the landscape today. Basin and range faulting has been active from Miocene to present day. The combination of compressional folding and thrust faulting overprinted by normal faulting has produced the complex structural setting which exists in the study area today (Blakely 1997, Fergusson and Muller 1949, Nordin 1984, Ross 1961).



Source: First Vanadium, 2019

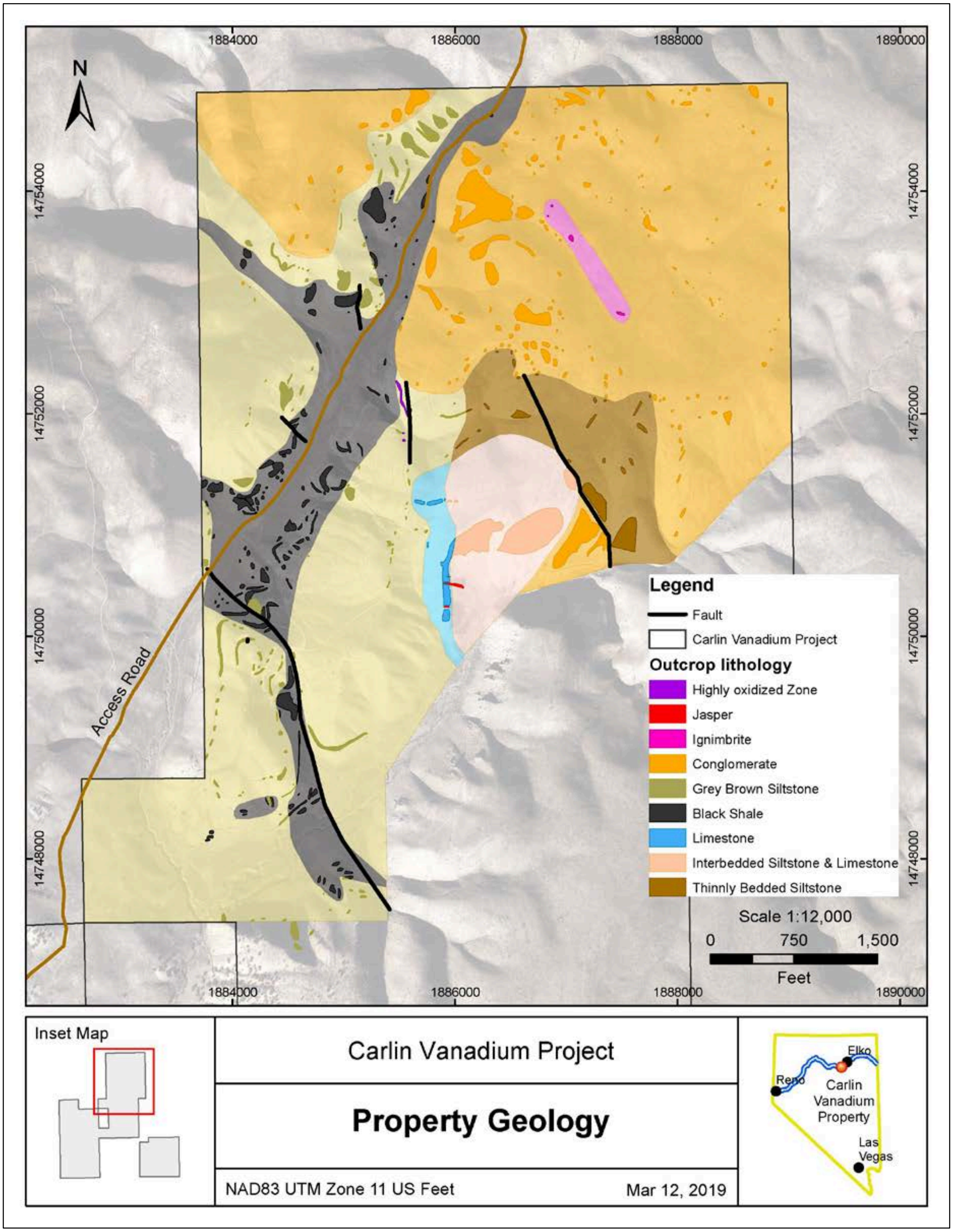
Figure 7-1: Regional Geologic Map

7.2 Local Geology

The Woodruff Shale within central Nevada hosts several other vanadium deposits with similar characteristics. The vanadium is believed to have originally formed in a deep, restricted basin associated with the depositional environment of the western assemblage lithologies. Subsequently these lithologies were transported tectonically to their current location. Regionally, the Vinini and Woodruff Formations were subjected to at least two periods of thrust faulting prior to basin and range faulting. Uplift and erosion has exposed the mineralization, and oxidation by meteoric waters has resulted in an over printing redox boundary.

7.3 Property Geology

The property is underlain primarily by a generally north trending sequence of Permian to Mississippian-aged sedimentary rocks composed of siltstone, shales, sandstones, conglomerates and limestones, subdivided into several units or formations. Detailed surface geology of the Property is shown in Figure 7.2. This map is based on outcrop mapping completed in 2018 by First Vanadium. The oldest unit on the property appears to be an undifferentiated Permian unit composed of limestone, limey siltstone and siltstone that lies in the eastern half of Sections 4 and 34 of the property as a north striking folded sequence. To the west of this unit lies the Devonian-age Woodruff Formation composed of siltstones and shales, also generally in a north trending band and lying on the west side of Sections 4 and 34 of the property. The contact between the underlying Permian unit and the Woodruff appears unconformable or possibly fault bounded. The Woodruff Formation on the property is flat to gently dipping in what appears to be a broad north oriented anticline with local east and west gently dipping flanks. On the property, the Woodruff Formation appears to be differentiated into an upper grey-brown siltstone and a lower brown to black shale sequence. The Woodruff Formation hosts the vanadium-bearing zones or beds. Unconformably overlying the Woodruff Formation is the Diamond Peak Formation composed of hematite oxidized conglomerate +/- sandstone. This unit lies at the northern end of property and underlies most of Section 10. A small amount of Holcene-Pliocene-aged tuff unit is located in the southwesternmost part of Section 4 on the property. Miocene-aged rhyolite flows occur in the northernmost part of Section 5 and as an isolated remnant overlying Diamond Peak in the northern part of Section 34. The rhyolite flows form prominent ridges to the west of the property.



Source: First Vanadium, 2019

Figure 7-2: Detailed Geology Map of the Northern Part of Carlin Vanadium Property (Section 34)

7.3.1 Local Lithology

Undifferentiated Permian-aged Unit

This unit was subdivided by Company geologists during the 2018 mapping. The lowest subunit appears to be a sequence of light brown thin- to medium-bedded siltstone. This unit grades up into a sequence of thinly bedded light brown siltstone, limey siltstone and occasional thin beds of light grey crinoid-bearing limestone. This unit is capped by a unit of bedded light grey-brown limestone, which is approximately 100 feet thick.

Woodruff Formation

The Woodruff Formation consists principally of siliceous mudstone and chert with lesser amounts of shale, siltstone, dolomitic siltstone and dolomite with some limestone and calcareous sandstone. On property, the Woodruff Formation can be subdivided stratigraphically into upper and lower rock units. The lower unit is a monotonous sequence of shale (silty to muddy) that is medium to dark brown or grey to black in color, shown in Figure 7.3. The color change to dark grey to black signifies the presence of more carbon as kerogen which is strongly associated with vanadium mineralization. Black sooty shale signifies high vanadium grades. Within the shale sequence, the shales can be somewhat cherty, particularly below the vanadium-rich sections, which tend to occur closer to the upper contact of the shale sequence. The lower shale unit tends to be very crumbly on surface due to surface affects and in most of the property remains relatively fresh at surface with just a film of oxidation to give a medium-dark brown color. In the northern part of the property this unit weathers deeper, up to 60 feet deep where it becomes a brown clay unit. Where this unit is weathered and vanadium-rich the colors become shades of deep brown-red to purple. The contact between the upper grey-brown siltstone and lower black shale can be sharp or gradational with interlayering over as much as 60 feet.

The upper unit is characterized by light grey-brown siltstone, moderate to weakly calcareous, shown in Figure 7.4. Occasionally this unit has 2- to 5-inch thick medium grey cherty beds interbedded with the siltstone. Vanadium-rich units occur in this upper unit but are generally lower grade and less continuous. Upon weathering, the upper grey brown mudstone is oxidized to various hues of yellow-brown and pink, the vanadium-rich zones in this unit also weather to shades of purple and red.

Field of view four feet by seven feet; antler is approximately 16 inches wide and 22 inches long
Source: First Vanadium, 2018

Figure 7-3: Black Shale Outcrop

Field of view five feet by eight feet; antler is approximately 16 inches wide and 22 inches long
Source: First Vanadium, 2018

Figure 7-4: Gray Brown Siltstone Outcrop

Local broad to rolling bedding attitudes and the absence of marker beds precludes reliable thickness measurements in the Woodruff Formation. It may be as much as several thousand feet thick.

Diamond Peak Formation

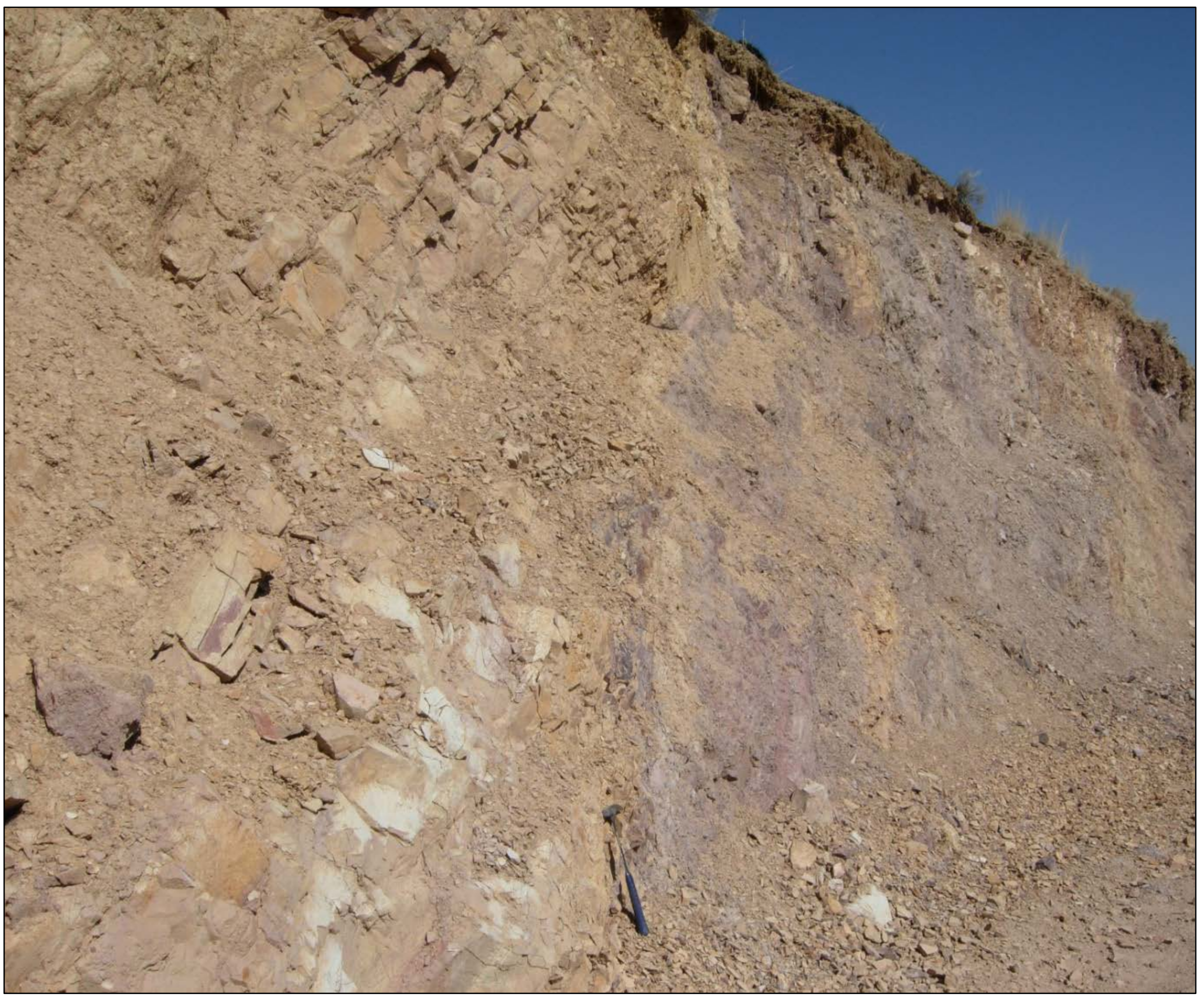
The Diamond Peak Formation on the property is predominately a red hematite oxidized conglomerate. The grain size is predominately clast dominated pebble to cobble but locally can be granular or grades to a medium-grained sandstone. The unit is typically bedded to massive and make prominent ridges.

Tertiary Formation

The oldest Tertiary Formation in the report area is the Palisade Canyon Rhyolite of Miocene age. This formation is not differentiated in the study area and is present only in the extreme western area.

Quaternary

On the property, the Cole Creek valley and its secondary valleys are filled with valley alluvium, eroded from the surrounding rock units and locally covers parts of the Woodruff Formation. Alluvium thickness is variable, up to about 65 feet in some areas, and absent in others.



Rock pick in lower center is 16 inches long. Purple weathering of vanadium-rich unit.
Source: SRK, 2018

Figure 7.4: Upper Grey Brown Siltstone unit.

7.3.2 Alteration

In the southern part of Section 34 and the northern part of Section 4 is an area of exposed auriferous silicification that is typical jasperoid of this region of the Carlin Gold Trend. This area, known as the Black Kettle occurrence, was drilled by Cambiar. A description of the exploration is in Section 6.2.8. Elevated grades of gold and pathfinder elements were encountered. The occurrence has an area of 1,000 feet by 500 feet and trends northeast. There are also two small east-west zones up to 10 feet wide of silicification (multi-episodic chalcedonic banding) cutting the limestone unit on the southern part of Section 34.

7.3.3 Structure

Due to the recessive nature of the sedimentary sequence particularly in the main valley hosting the deposit, outcrop exposures are limited, yet extensive in higher relief areas. The extensive road building and trenching by UCC has been very beneficial to gain exposures. In the Diamond Peak exposures and the undifferentiated Permian units and to a lesser degree the upper brown grey mudstone unit, bedding attitudes are generally easy to measure. Due to the lack of bedding and markers in exposures of lower black shale unit in road cuts bedding measurements are less obvious. What aids the structural picture of the black shale unit is its contact with the upper grey-brown siltstone unit which is much easier to pick up in outcrop, trenches and extensive density of drillholes. From these aids, the Woodruff Formation exhibits in a broad sense and for most of the property and deposit as flat to gently dipping in what appears to be a broad north oriented anticline with local east and west dipping flanks. On the local scale in some exposures there are broad rolls and local small scale open folds that represent local aberrations.

In the southern part of the deposit there is a clear mappable curvilinear vertical fault separating the northern generally flat-lying terrain (Central Zone) which hosts most of the deposit from a northwest trending southwest dipping (30º) terrain that hosts a small part of the deposit called the South Zone. Within the northern generally flat-lying terrain (Central Zone) which hosts most of the deposit, faulting is less evident. Two vertical, generally north to north-west trending block faults are interpreted here, one of which shows vertical displacement (eastside up) of the mineralization of approximately 100 ft.

7.4 Mineralization

The Carlin Vanadium deposit is interpreted to be a syngenetic type. The Woodruff Shale within central Nevada hosts several other vanadium deposits to the south, all with similar characteristics. The vanadium is believed to have originally formed in a deep, restricted marine basin associated with the depositional environment of the western assemblage lithologies. As the marine basin filled, sub basins formed. Organisms likely in the form of algae bloomed on the shallow flanks of sub basins. As these organisms died they contributed to carbon input into the basin. It is interpreted that the vanadium was concentrated into laterally relatively continuous shale units by precipitation, absorption aided by carbon accumulation and evaporation processes as the restricted basin filled, evaporated and concentrated the seawater into salts.

The sedimentary environment within which the Woodruff Formation was deposited was the primary control on mineralization.

The vanadium mineralization is stratigraphically controlled and appears to follow the strike and dip of the host lithology, near the contact between an overlying grey-brown siltstone and the underlying brown to black shale unit of the Devonian-age Woodruff Formation. The mineralized zones form as stratigraphic subunits or beds within the Woodruff Formation shale hosting elevated concentrations of vanadium in the form of vanadium pentoxide (V_2O_5). There are no visual sulfides indicating vanadium mineralization. Mineralogical studies by First Vanadium and UCC show the vanadium in the form of metahewetite, as finely and evenly disseminated. The only visual distinctions in the lithology which indicate areas of elevated vanadium grades or mineralization from the unmineralized host shale is a colour change from medium brown to black, reflecting an increase of carbon in the form of kerogen in the shale. All the mineralized zones are defined by chemical analysis.

Drilling to date has defined multiple zones of vanadium enriched mineralization (>0.2% V_2O_5) both in the overlying grey-brown siltstone and brown-black shale unit. The most persistence, thick and highest grade vanadium unit lies in the brown-black shale unit and averages approximately 115 ft (35m) thick, striking north-south over 6,000 ft (1,800m) of length and 2,000 ft (600m) wide in the east-west direction. The vanadium mineralization underlies a north-northeast treading, moderately sloped broad valley and crops out at low elevations on both sides of the valley. Although most of the deposit is flat to very shallow dipping, it appears to be gently folded anticlinally with dips locally east and west up to 30^o . In the southern part of the deposit there is a clear mappable curvilinear vertical fault separating the northern generally flat-lying terrain which hosts most of the deposit as the Central Zone from a northwest trending southwest dipping (30^o) terrain that hosts a small part of the deposit called the South Zone.

The mineralization is locally exposed at surface at both the Central and South Zones but mostly at a shallow depth less than 200 feet (60m) from surface. The average strip ratio for the deposit was calculated to be 2.6:1. Also above and below the high-grade persistent zone are other vanadium zones within the black shale unit that are generally less persistent laterally, of moderate grade (0.2-0.5% V_2O_5) and are thinner (30-75 ft thick) but still may be important depending on cut-off grades in any future operation.

There is a relatively persistent flat lying high grade vanadium-enriched bed averaging 115 ft thick within the upper grey-brown mudstone unit to the west of the Central Zone. Other vanadium zones within the grey-brown siltstone are generally less persistent laterally, of moderate grade (0.2-0.4% V_2O_5) and are thinner (30-60 ft thick) but still may be important as stockpile material.

Phosphor content may to be spatially associated with high concentration of vanadium. Where phosphor is high (>3000 ppm), the overlying rocks would likely contain much elevated vanadium values, especially in black shale. This indicates the phosphate materials may serve as nutrients in the basin environment and made the algae flourish. The flourished algae adsorbed more vanadium than normal, which leads to high grade vanadium deposition.

The vanadium-rich units are defined as vanadium pentoxide with average grades above 0.3% V_2O_5, and commonly found between 0.3% and 0.8% V_2O_5 in 5-foot sample intervals. These were confirmed with core and RC drilling in 2017-2018.

The historical assay database had:

- 1,536 samples greater than 0.2% V_2O_5 including:
  - 991 samples > 0.3% V_2O_5; and
  - 265 samples >0.8% V_2O_5, maximum 3.1% V_2O_5.

Historical assay values were confirmed with core and RC samples summarized below:

- 1,701 samples greater than 0.2% V_2O_5 including:
    - 1,140 samples > 0.3% V_2O_5 and
    - 512 samples >0.8% V_2O_5, maximum 3.65% V_2O_5.

Very limited sampling of the main vanadium-rich unit has also shown elevations of silver, zinc and cobalt.

8 Deposit Type

8.1 Mineral Deposit

Vanadium deposits in the Western United States fall under two general types; reduction-precipitation and syngenetic. The reduction-precipitation type is commonly associated with uranium. These are formed by meteoric water leaching uranium and/or vanadium from a source material and then re-precipitation at the redox boundary or in association with organic material. These typically are sandstone hosted due high permeability requirements for development. An example is the vanadium–uranium deposit in the Henry Basin, Utah (Whitney and Northrop 1986). These deposits are usually low tonnage, low overall metal content but high vanadium grades (1.5%).

The syngenetic type are typically much larger but lower grade (0.2-1.0% V_2O_5) associated with black shales and are believed to have formed by direct precipitation of vanadium from seawater. This method of mineralization is similar to the processes which form syngenetic copper or iron deposits. Typically, a restricted basin develops containing seawater, which was already enriched with vanadium. Over time, evaporation or deepwater stagnation enriches the vanadium content within a primarily reducing environment and the vanadium precipitates out as the siliceous sediments are deposited in a low energy environment. Vanadium is commonly bound with Fe or Mn oxides or with kerogen. Subsequent oxidation and remobilization of the vanadium can occur (Premovic et al 1988, Hanson et al 2008).

8.2 Geological Model

The Carlin Vanadium deposit is interpreted to be a syngenetic type. The Woodruff Shale within central Nevada hosts several other vanadium deposits to the south, all with similar characteristics. The vanadium is believed to have originally formed in a deep, restricted marine basin associated with the depositional environment of the western assemblage lithologies. As the marine basin filled, sub basins formed. Organisms likely in the form of algae, bloomed on the shallow flanks of sub basins. As these organisms died they contributed to carbon input into the basin. It is interpreted that the vanadium was concentrated into laterally relatively continuous shale units by precipitation, absorption aided by carbon accumulation and evaporation processes as the restricted basin filled, evaporated and concentrated the seawater into salts.

9 Exploration

First Vanadium has not conducted any exploration activity on this property other than ortho-photography generation, mapping and drilling. Mapping was done on orthophotos at a scale of 1:500 scale in Section 34 of the property which generated an outcrop pattern map (see Figure 7-2). The ortho-photographs were prepared from an airborne and target survey conducted in October 2017. Farr West Engineering of Elko, Nevada surveyed the field targets.

10 Drilling

First Vanadium completed a wireline core drilling program and a reverse circulation drilling program between late 2017 and fall 2018. The drilling of 89 holes totaling 20,521 feet (6,255m) confirmed historical drilling, infilled and expanded the deposit and collected material for metallurgical testing. SRK did not observe the core drilling but the remaining sample material was examined during the 2018 site visit. Drillholes in the 2018 Reverse Circulation (RC) program were designed with 250 ft average depth, some vertical and the rest angled. All vertical RC holes were planned to drill dry, for maximum sample recovery and quality. The minimum amount of water was added to the angled RC holes for ground control.

The material is weak and friable shale. The risks of poor recovery in core and RC drilling were mitigated successfully with drilling and sampling techniques described below.

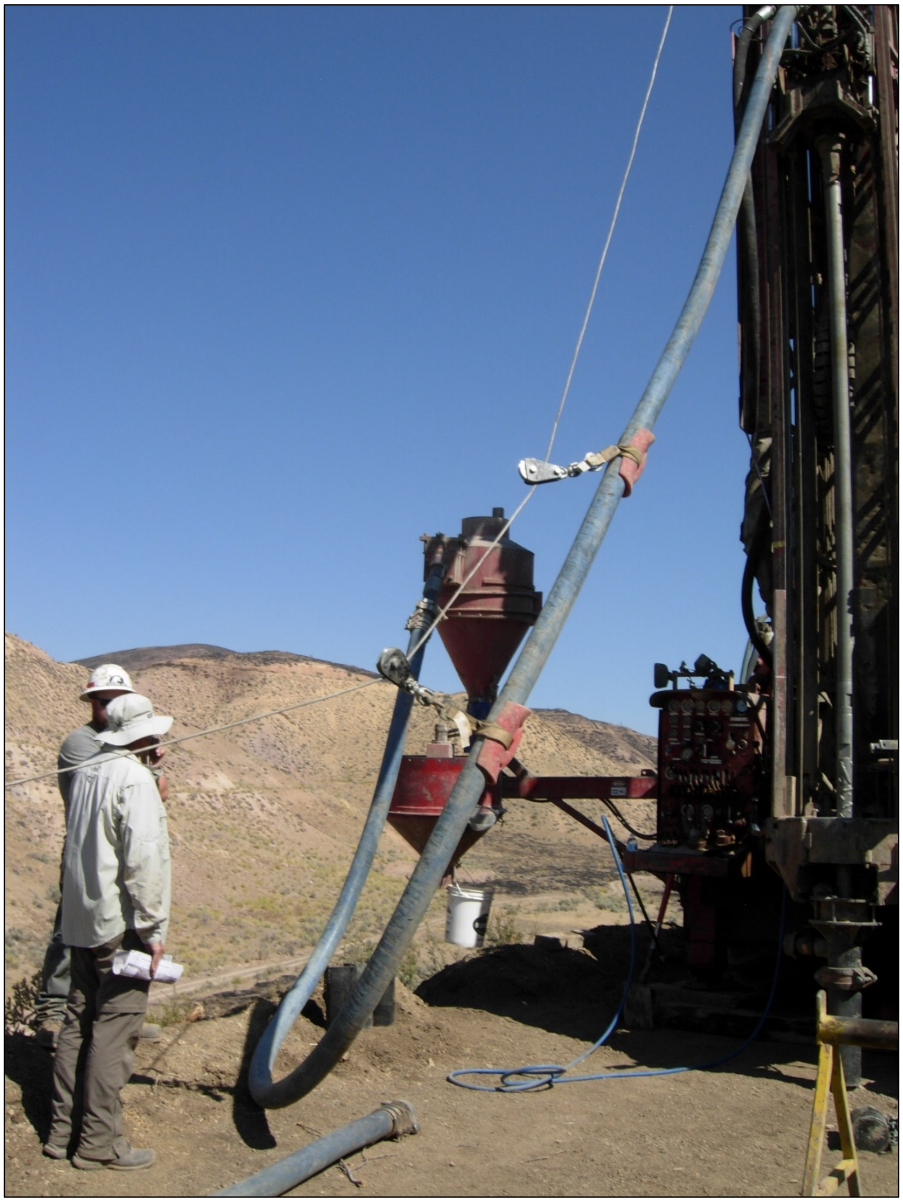
10.1 Type and Extent

A core drilling program was completed between December 2017 and February 2018 by Redcore Drilling, based in Carlin, Nevada. Figure 10.1 is photograph of the core drill operating at site. This program consisted of 5,346 feet (1,629 meters) of conventional HQ diameter core (2.5 inch) in twenty drillholes. Core drillhole locations are shown in Figure 10.4. Core drilling took three times longer than expected but achieved 90% average recovery in weak and friable rock.

An RC drilling program was completed between mid-August and late September 2018 by two drilling contractors. This program consisted of 15,175 feet (4,625 meters) of 4.5 diameter holes in 69 drillholes. The first RC rig on site was a Foremost Explorer 1500, owned and operated by AK Drilling of Butte, Montana. This rig, set up on RCC18-15, is shown in Figure 10.2. The drill pipe outside diameter was 4 ½ inch, driven dry with a hammer bit, shown in Figure 10.3. Most of the drillholes completed by the AK rig were vertical, and drilled dry to maximize sample recovery. The second RC contractor on site was New Frontier Drilling of Fallon, Nevada. The primary purpose of the second RC rig was to complete angled drillholes. Angle holes by New Frontier were to have a small amount of water added for ground control. The second rig was being set up during the site visit but was not operating at that time. RC drillhole locations are shown in Figure 10.5. RC sample recovery risks were mitigated with minimal added water and monitoring of sample mass during drilling.

Source: Cornerstone Metals, 2018

Figure 10-1: Core Rig Work Site

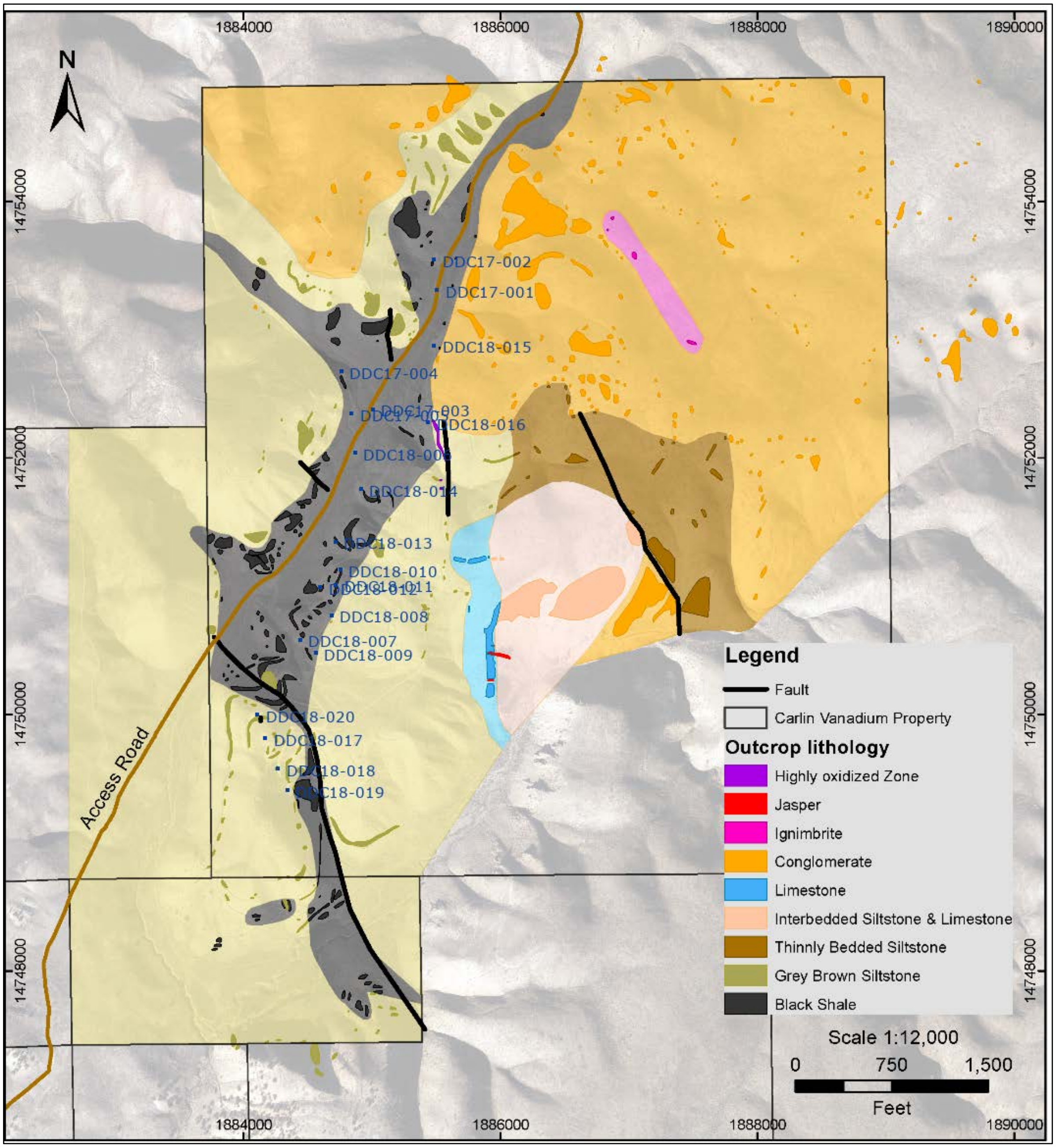


Source: SRK, 2018

Figure 10-2: RC Rig on RCC18-15

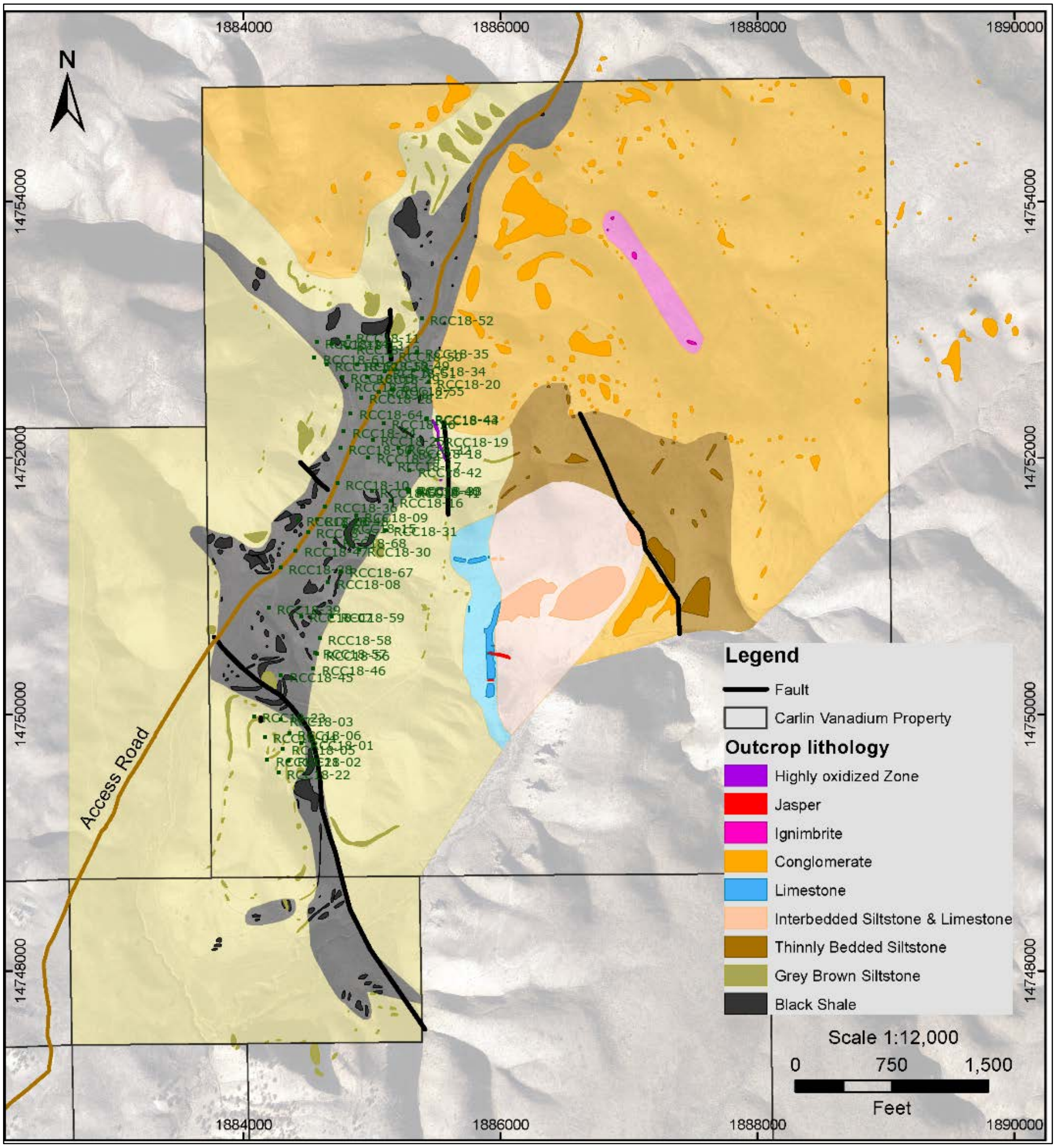
Source: SRK, 2018

Figure 10-3: RC Drill Pipe and Hammer Bit



Source: SRK, 2019 and First Vanadium, 2019

Figure 10-4: Location Map of First Vanadium Core Drillhole Collars with Property Geology



Source: SRK, 2019 and First Vanadium, 2019

Figure 10-5: Location Map of First Vanadium Reverse Circulation Drillhole Collars with Property Geology

10.2 Procedures

10.2.1 Collar Location Survey

Surface collar locations of the 2017-2018 core and RC drillholes were surveyed by Farr West Engineering of Elko, Nevada in November 2018. Farr West utilized Trimble GPS equipment and software for this project. Existing on-site control points were utilized in the survey. Farr West set up a

Trimble R10 GNSS Receiver and Trimble TDL450 Radio as a base station on several points over the course of the two-day survey and commenced real-time kinematic (RTK) GPS surveys both days. Two additional Trimble R10 Receivers were utilized by field personnel, John Carson (Party Chief) and Ryan Burns (Chainman), and both surveyors dispersed to take a separate section of the project. Once the collars were identified by the accompanying markers, shots were taken on the drillholes utilizing RTK GPS methods, specifically the ‘Topo Shot’ measurement function. Once the field portion was completed, the data were post-processed utilizing Trimble Geomatics Office software, and reports were generated and sent to client.

10.2.2 Downhole Trajectory Survey

The diamond drilling program was entirely with vertical holes and because the core diameter was HQ, the field QP of First Vanadium considered there would be nominal deviation so no downhole surveys were completed on the core holes.

A gyroscopic downhole survey tool was supplied to First Vanadium by International Directional Services (IDS) and operated by the drilling contractors. Deviation on the vertical 2018 RC drillholes was less than 0.5 degrees, over about 200 feet drilled.

10.2.3 Core Sampling and Logging

Drill runs were removed from the core tube and placed in wax-coated cardboard core boxes by the drill crew. The boxes were labeled by the drill crew with the hole ID, depth interval in feet, and box number. Depths in meters were added to the boxes by First Vanadium. Core samples were transported by Rangefront Geological Services contract geologists via pickup truck to Rangefront’s facility in Elko for logging, saw-splitting and sampling. Rangefront is and was independent of First Vanadium. An example of split and sampled core is shown in Figure 10.6. All remaining core resides at a storage unit in Elko, Nevada, with controlled access, shown in Figure 10.7.

The friable rock quality caused breakage in the core. Samples selected for comminution testing were a minimum of 4 inches (10cm) long; this requirement may have biased the samples with higher-strength material than the overall rock mass. Due to the weak rock, pit wall slope angles may be limited to the angle of repose. A rock mechanics study has not been completed to date.

The following points describe the sampling procedure taken during the 2017-2018 diamond drill program:

- Core was first cleaned and organized;
- Core was photographed both wet and dry with a camera placed perpendicular to the core box;
- Geotechnical logging was undertaken digitally on an Excel spreadsheet by a trained technician;
- Core boxes were labelled using permanent marker;
- Core logging and sample selection was performed by the site geologists;
- Samples were generally 1.5 metres long. A minor number of samples taken were less than 1.5 metres in length due to a poor recovery;
- Sampling was carried out immediately below the overburden and all the way down to the bottom;
- Every 18th, 19th and 20th sample tags were designated as a duplicate, standard and blank, respectively. The duplicate sample was a split of the sample preceding it (i.e., duplicate sample

#18 would be a 50% split of sample #17). Splitters retained the standards and blanks and placed the entire pouch of material into the labelled plastic sample bag in the corresponding tag order;

- Core was logged and sampled at Rangefront's facility by Rangefront contract geologists;
- Core was cut in half, bisecting the mineralization by Rangefront contract technicians;
- Technicians were instructed to place the same side of core back into the box and the other into a labelled clean plastic sample bag that was then sealed using a plastic zip tie;
- Sample bags were placed in address-labelled rice bags, sealed with plastic zap-straps.
- Sample shipment records were maintained. Records were also kept of sample preparation, analysis requested, and the person intended to receive the results;
- Core sampling was carried out by use of a diamond blade core saw. The core sampler was highly experienced and sampling work was closely monitored by on-site core logging geologists, and;
- The remaining cores were transported to a secured warehouse for storage.

All samples were assigned a blind sample identification number, and quality control samples were included in the sequence. Sample serial numbers with depth intervals or QA/QC sample type were recorded in booklets provided by the lab. Samples were shipped via commercial freight carrier to MS Analytical of Langley, British Columbia, for sample preparation and analysis.

10.2.4 RC Sampling and Logging

A contract geologist provided by Rangefront was present for all RC drilling. The geologist set up a table for sample splitting at a safe distance from the rig. The drill crew collected the fine, powdery sample material in 5-gallon plastic buckets lined with polyethylene sample bags. The crew brought the buckets to the table for the geologist to split and re-package. Average total sample weight was about 12 pounds per five-foot interval. Dry samples were split at the rig, to separate about 25% for multi-element assay, and retain the rest for metallurgical testing. A single-tier riffle splitter with sixteen riffles was used at the rig, shown in Figure 10.8. The dry sample material flowed freely through the riffle splitter. A small, representative amount of material was collected in chip trays as shown in Figure 10.9, for geologic logging and archival. An additional small sample (200 grams) was separated out for XRF analyses.

Samples with added water were collected from the rig in one bag and split after drying at the analytical lab. This eliminated the potential risk of sample bias from splitting cohesive material that does not flow freely.

Five-foot sample intervals were assigned a blind sample identification number, and quality control samples were included in the sequence. Sample serial numbers with depth intervals or QA/QC sample type were recorded in booklets provided by the lab. The RC samples were collected in polyethylene bags at the rig. These were transported via pickup truck to the storage facility in Elko for inventory prior to shipment to the analytical laboratory. The polyethylene bags were placed in larger rice sacks for protection during shipping, as shown in Figure 10.10. Samples were shipped via commercial freight carrier to MS Analytical of Langley, British Columbia, for sample preparation and analysis.

Field geologist described the rock chips and then placed a representative sample into pre-labelled plastic RC chip trays. Logging was performed on hard copy sheets and data recorded included drillhole ID, sample number and depth, oxidation state, color, lithologies, carbonaceous enrichment, carbonate reaction with acid and siliceous enrichment. Logging data were subsequently input into Microsoft Excel files. All geological descriptions were encoded, and standard codes were utilized during the program. A Niton hand held analyzer was used on every five-foot run as samples were produced from the drill. The analyzer determined V_2O_5 grades from the 200 gram subsample and the geologist recorded these numbers on drill logs. As the Niton analyzer had been tested by First Vanadium on core pulps with lab assays, there was reasonable confidence in the XRF results. This procedure assisted in determining when the hole had passed through the high-grade zone for hole termination.

Chip trays were laid horizontally on a desk and a digital camera was fixed at the same height perpendicular to the chip tray for images. Incandescent light was used for photographing all chips in chip trays. The images were then white balanced in Lightroom to reflect the true color of rock.

Source: SRK, 2018

Figure 10-6: Sampled Core from DDC18-017

Source: SRK, 2018

Figure 10-7: Interior of Core Sample Storage Unit

Source: SRK, 2018

Figure 10-8: Riffle Splitter Used at Drill Site

Source: SRK, 2018

Figure 10-9: Chip Trays from RCC18-005

SRK, 2018

Figure 10-10: Samples from RCC18-05 For Assay

10.3 Interpretation and Relevant Results

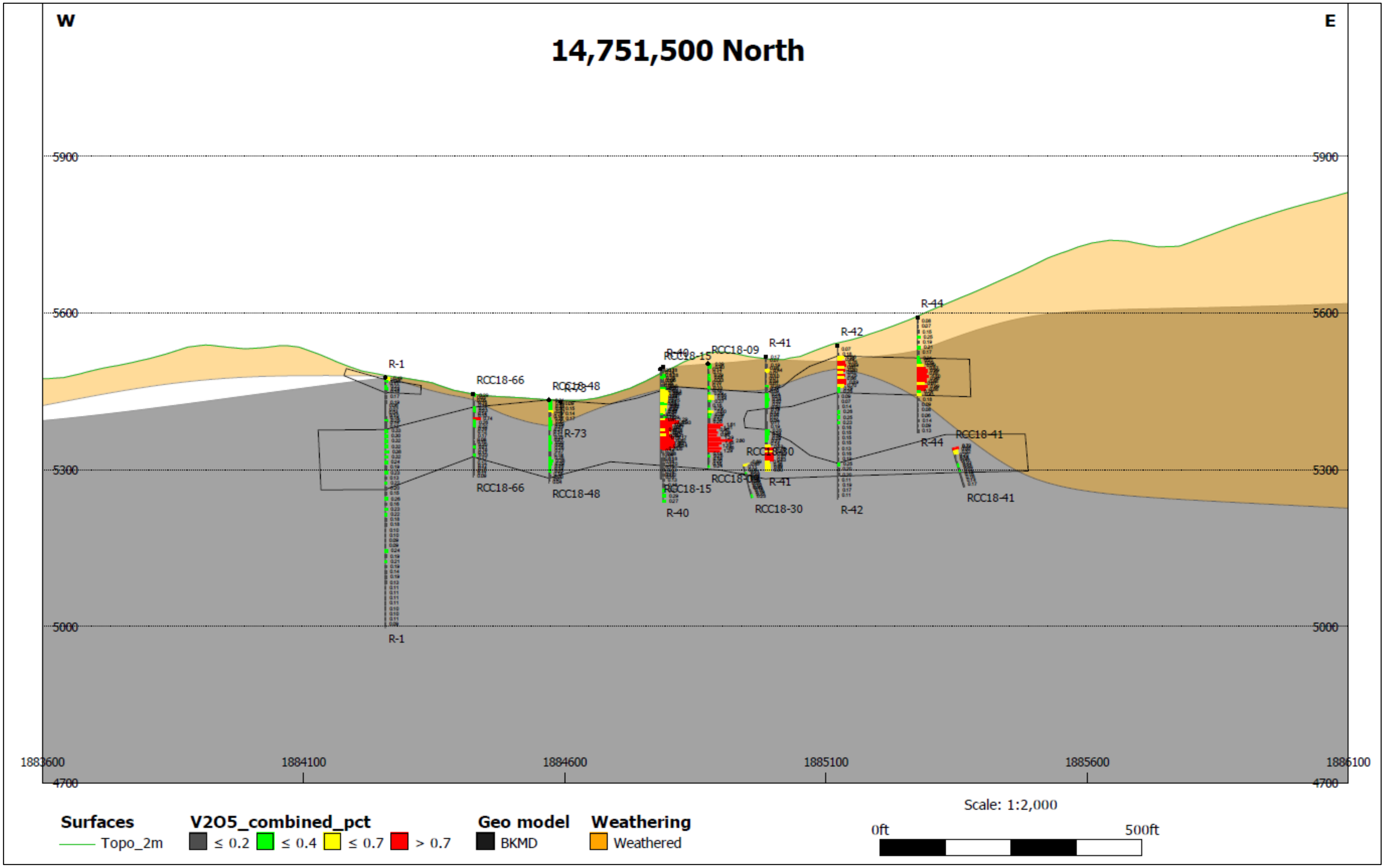
The 2017-2018 drilling programs were designed to offset the drillholes completed by UCC in areas of known vanadium mineralization and to provide twin checks to the historic UCC drilling. The UCC drillholes were twinned using both diamond core and RC drilling. The results of this work are presented in Table 10-1 The core and RC programs provided material for assay, density, and metallurgical testing, and confirmed the location and tenor of vanadium grades defined by historical drilling and testwork.

Example cross sections in the core of Central Zone deposit in Figure 10.11 and Figure 10.12 show vanadium grade intercepts in drillholes, the interpreted weathering horizon, and the modeled grade envelope. Grade intercepts of economic interest are shown in green, yellow, and red.

Table 10-1: Twin Drilling Results

First Vanadium				Union Carbide				Difference (FV to UCC %)
Hole ID	From (ft)	To (ft)	V_2O_5 (%)	Hole ID	From (ft)	To (ft)	V_2O_5 (%)	
DDC18-09	32.8	185.4	1.47	R-111A	25	185	0.89	39
DDC18-16	37.7	200.1	0.84	R-67	40	200	0.92	-10
DDC18-19	59	249.3	0.91	R-94	60	250	0.96	-5
RCC18-02	70	190	1.02	R-95	70	190	0.81	21
RCC18-08	0	160	1.03	R-75	0	160	1.32	-28
RCC18-15	35	155	0.67	R-40	35	155	0.68	-1
All								3

Source: First Vanadium/SRK, 2019



Source: First Vanadium, 2019

Figure 10-11: East-West Cross Section at 14,751,500ft North

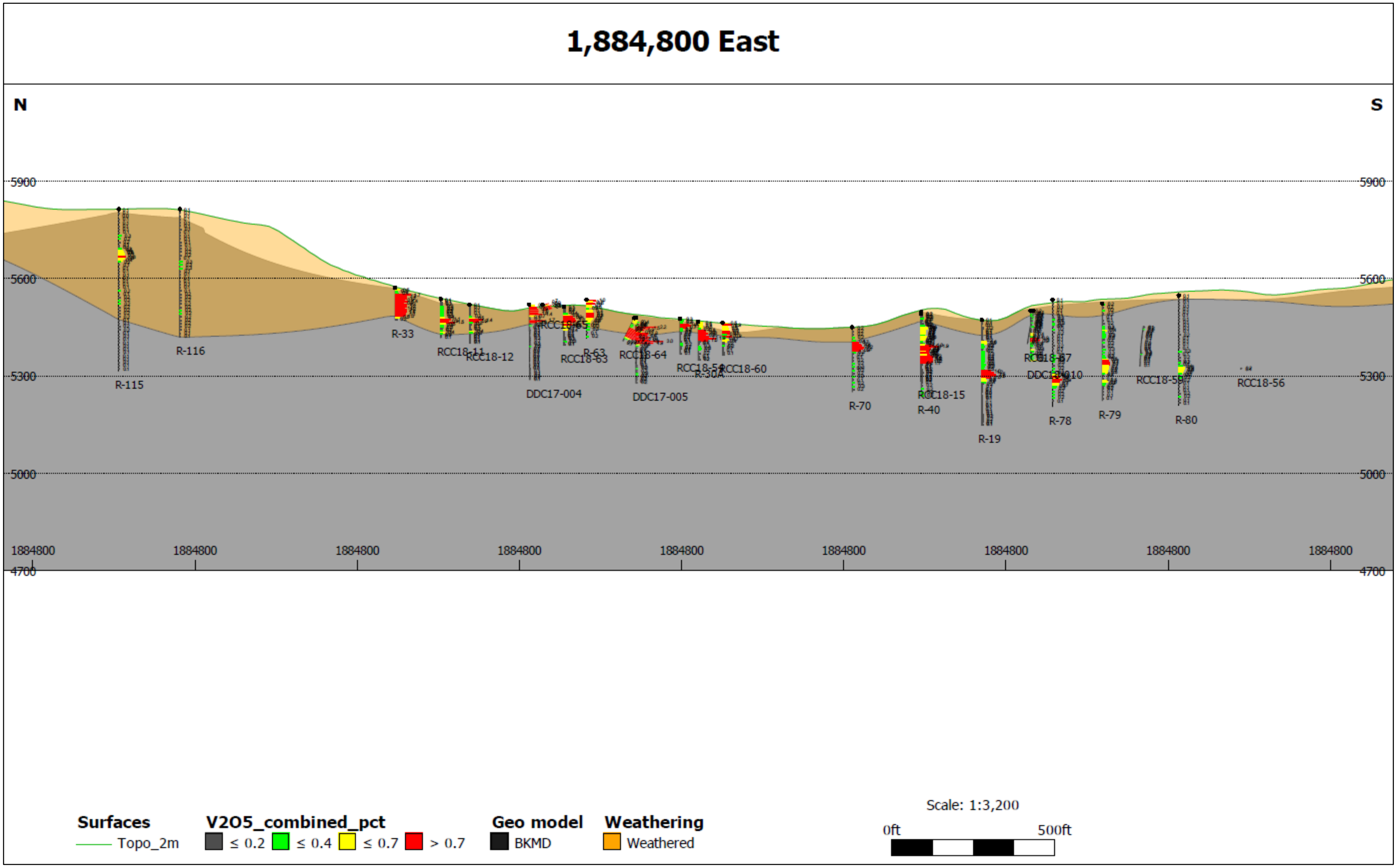


Figure 10-12: North-South Long Section at 1,884,800 East

Source: First Vanadium, 2019

11 Sample Preparation, Analysis and Security

The information in this section pertains to the core and RC drill samples from First Vanadium drilling programs in 2017-2018. All figures, charts, and tables in this report section were generated by SRK in 2019 for this document.

Drill samples were shipped by a commercial freight company (R&L Carriers), to MS Analytical, in Langley, British Columbia, Canada. MS Analytical (MSA) is an accredited laboratory independent of First Vanadium and has both ISO 17025 and ISO 9001 accreditation for laboratory testing and calibration, and Quality Management Systems, respectively. These accreditations apply to both analytical procedures and sample preparation procedures.

11.1 Security Measures

Samples were collected in the field for RC or in the core shed for core. All material was handled by contracted staff independent of First Vanadium. Sample bags were placed in woven rice sacks, which were palletized and wrapped for secure shipment. The required shipment waybill for each batch served as evidence for secure sample chain of custody between First Vanadium's possession and receipt of samples at the lab. Each batch of samples included a sample submittal form that detailed the material shipped and served to document the lab's receipt of the samples.

11.2 Sample Preparation for Analysis

All sample preparation was completed at the MS Analytical laboratory in Langley, BC. The RC sample material is a fine powder and has low risk for sample bias during laboratory sample reduction. Core samples were larger particles, but the soft material would also crush and homogenize easily.

The sample preparation procedure PRP-910 was used for all samples:

- Dry and weigh;
- Crush to 70% passing 2 mm;
- Split 250g with a riffle splitter; and
- Pulverize split to 85% passing 75 µm.

The remaining coarse reject material was retained and returned to First Vanadium.

11.3 Sample Analysis

Analytical methods:

- Code IMS-230:
  - Ultra-trace level multi-element determination for all samples;
  - 4-acid digestion and ICP-AES or MS analysis;
  - Sample mass 0.2 g;
  - Suite of 48 major and trace elements; and
  - Method detection limit range is 1-10,000 ppm V_2O_5 (up to 1%).
- Code ICF-6V:
  - Ore-grade vanadium determination for samples with at least 0.3% V_2O_5 (3,000 ppm);
  - 4-acid digestion and ICP-AES analysis;

- o Sample mass 0.2 g; and
- o Lower method detection limit is 0.001% V_2O_5 (10 ppm).

On the assay certificates, V_2O_5 results are reported and were determined by converting elemental V results. The conversion formula is:

V_2O_5 = V * 1.7852

11.4 Quality Assurance/Quality Control Procedures

Control samples, as reference and blank samples, were included in the core and RC drilling programs conducted by First Vanadium. Several types of duplicate samples were analyzed, to test for bias in sample reduction. Results for V_2O_5 from the QA/QC samples are reported below. Laboratory results and certified values were reported in parts per million and are presented below in the same units.

11.4.1 Standards

Three types of certified reference material (CRM) samples were included in the core sample assay program. OREAS 45e is a weathered soil and is similar material to the drill samples. This CRM was also used in the RC sample assay program. The other two CRM are from carbonatite-hosted rare earth deposits, and while they have certified mean values for vanadium, the material is considerably different than the drill samples. CRM samples were inserted after every 20th drill sample in the serial number sample list for both drilling programs. The mean values for four-acid digestion and ICP analysis are summarized in Table 11-1.

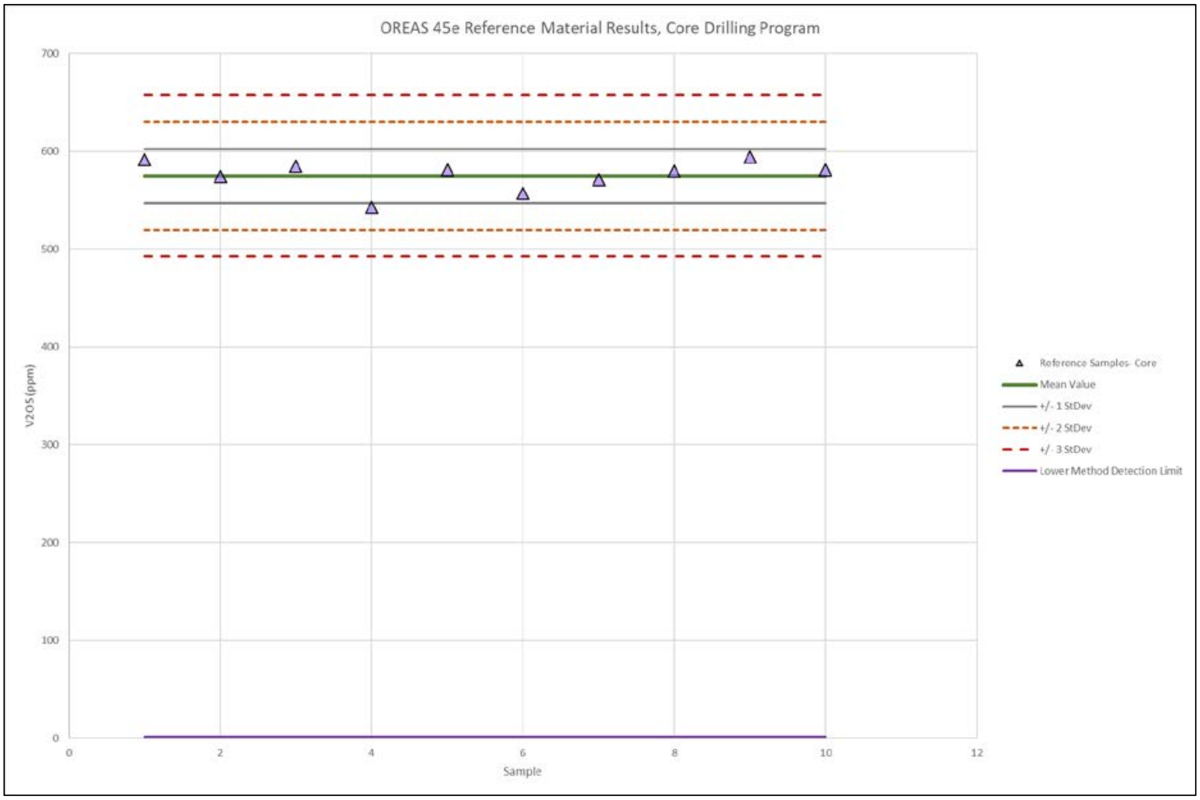
Table 11-1: Certified Reference Material Summary

CRM	Material Type	Certified Mean (V_2O_5 ppm)	Standard Deviation (V_2O_5 ppm)	Samples (Core Program)	Samples (RC Program)
OREAS 45e	Lateritic soil	575	27.5	11	160
OREAS 461	Carbonatite supergene REE	628	51.3	22	--
OREAS 465	Carbonatite supergene REE	762	123.1	28	--
Total				**61**	**160**
Lower Method Detection Limit 1 ppm Resource Cutoff Grade 3000 ppm					

Source: SRK, 2019

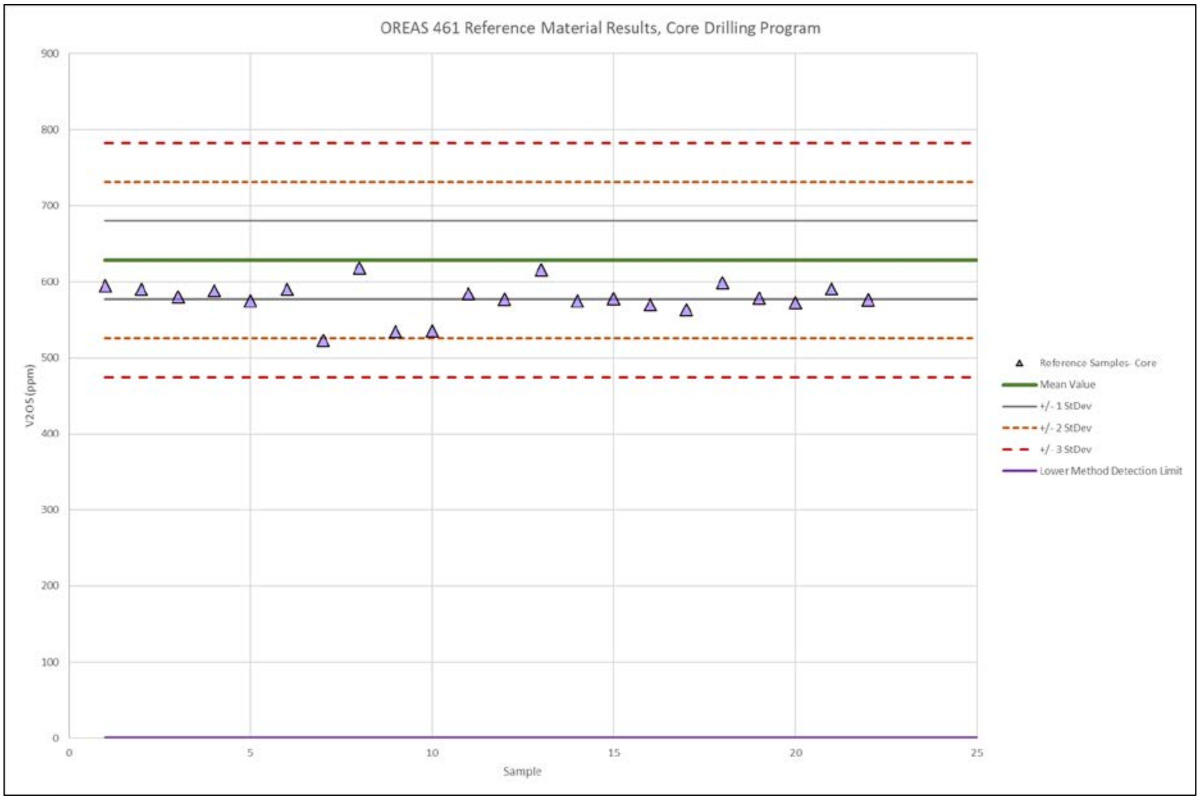
CRM results are presented in the following charts. Results for OREAS 45e, in Figure 11.1 and Figure 11.4 for core and RC, respectively, were within two standard deviations of the mean value for all but one sample. Values are symmetrically distributed about the mean and there is no apparent sample bias. Results for OREAS 461 are shown in Figure 11.2, and are systematically lower than the mean value, and all results but one are within two standard deviations of the mean. Results for OREAS 465, in Figure 11.3, have more values less than the mean than greater, but all samples are within one standard deviation of the certified mean value.

The cause of apparently low values for two of the reference materials is not clear. All have similar V_2O_5 values, about 5 times less than economic grades. Difference in the matrix composition, interference from other elements, and possible refractory material in 461 and 465 are possible causes for low reported values. OREAS 45e results from both drilling programs indicate reliable and consistent values.



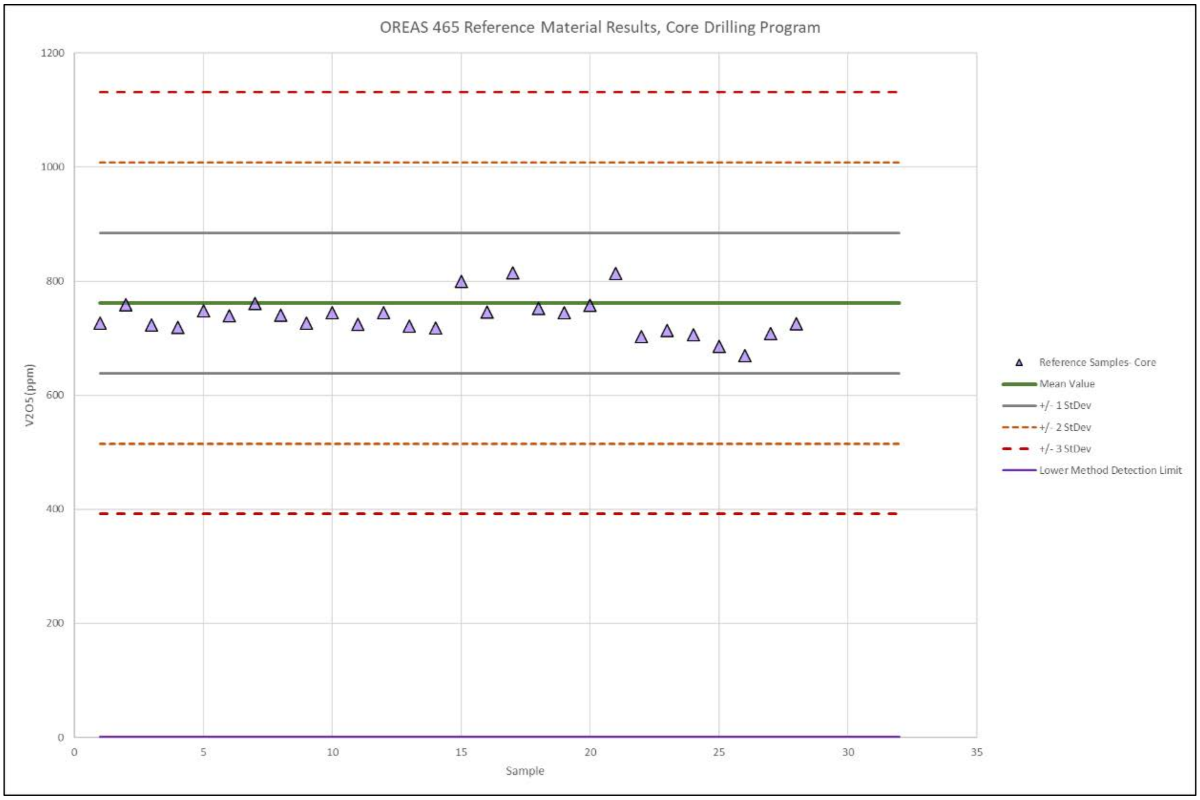
Source: SRK, 2019

Figure 11-1: OREAS 45e Results, Core Program



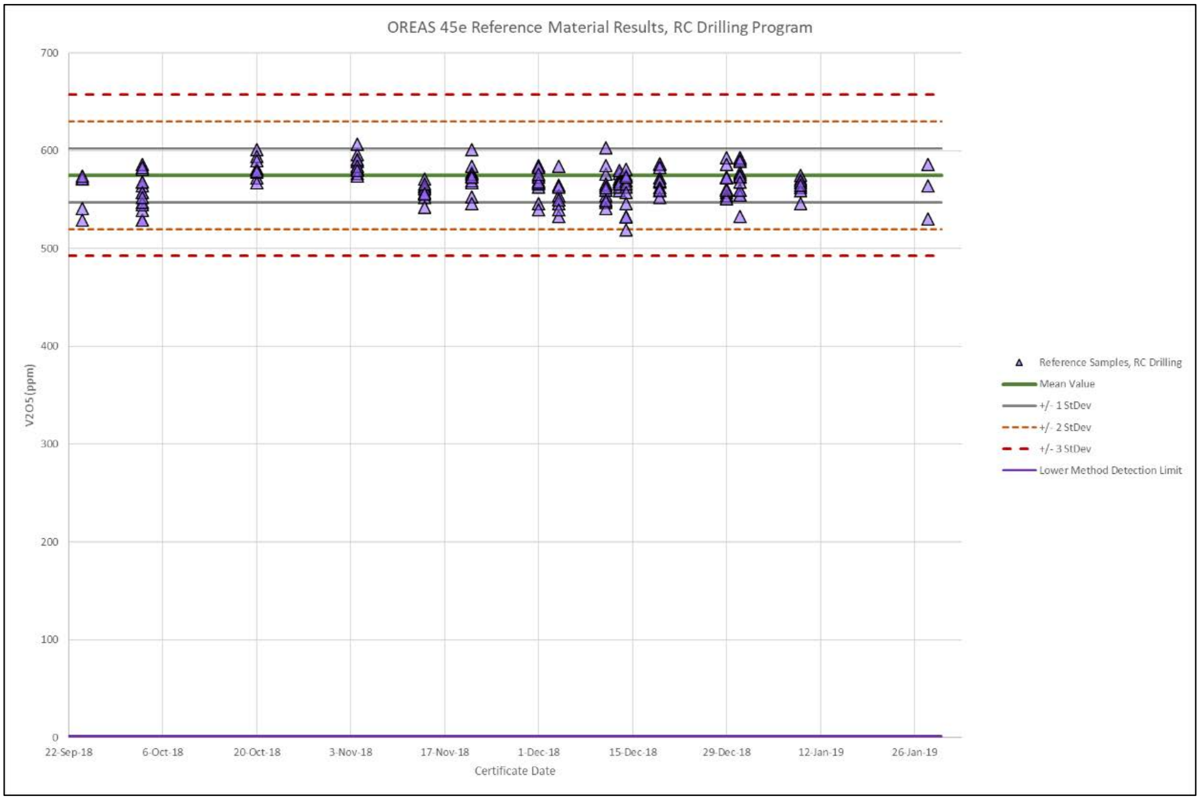
Source: SRK, 2019

Figure 11-2: OREAS 461 Results, Core Program



Source: SRK, 2019

Figure 11-3: OREAS 465 Results, Core Program



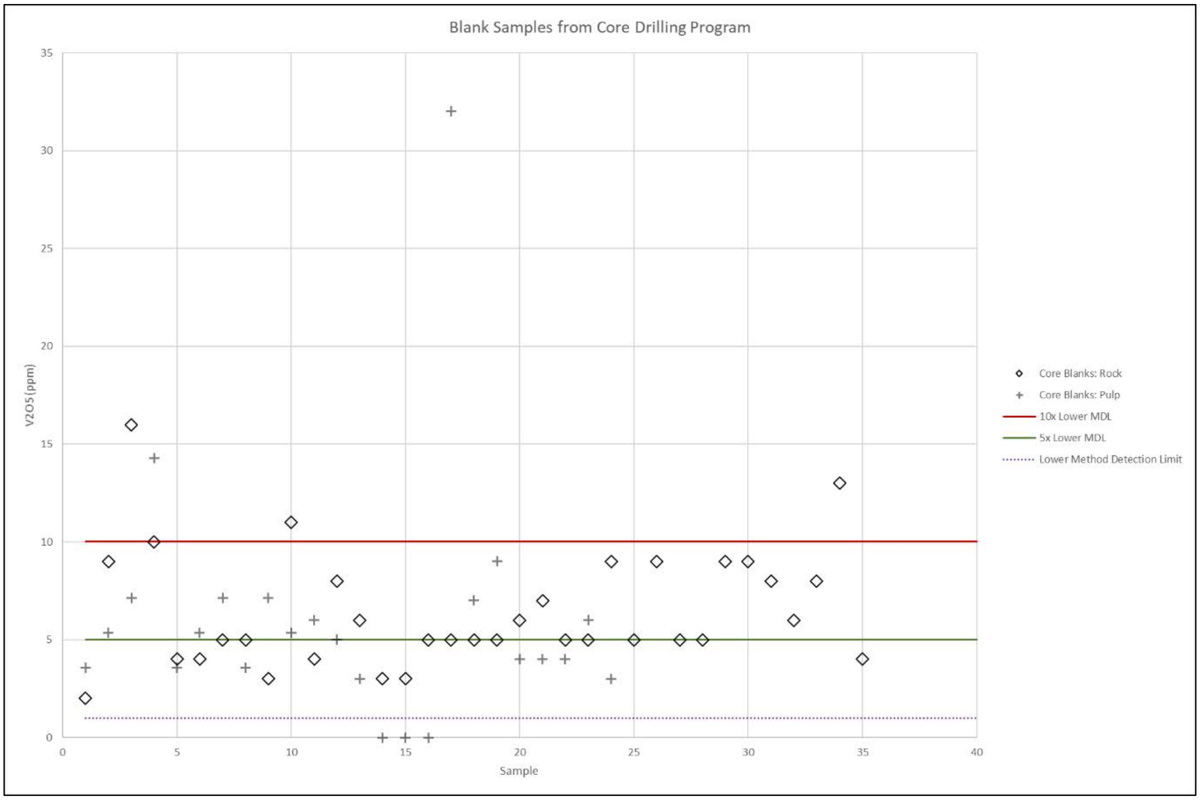
Source: SRK, 2019

Figure 11-4: OREAS 45e Results, RC Program

11.4.2 Blanks

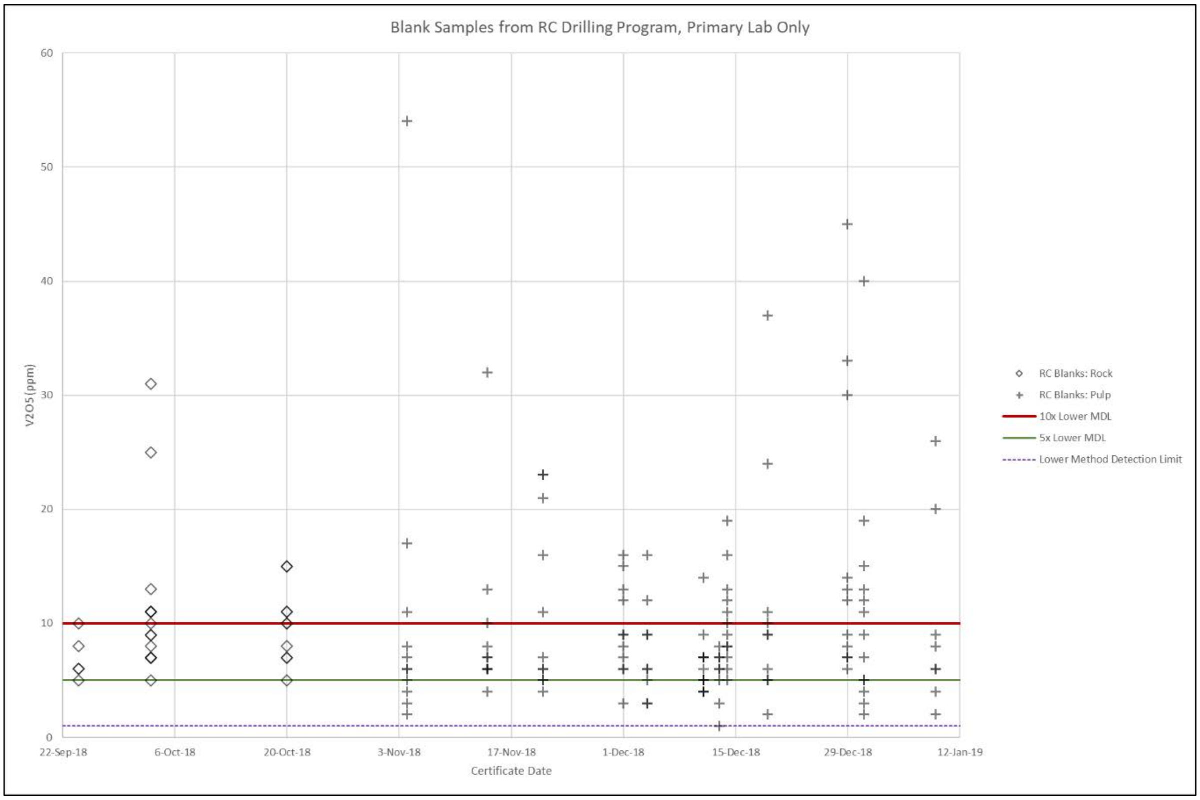
Blank samples of fine silica sand or coarse rock were inserted in the sample sequence after every 20th drill sample, at the same insertion rate as the CRM samples. Blank sample results from the core program are plotted in Figure 11.5. While most values were less than ten times the method detection limit (10ppm), this benchmark may be overly stringent for vanadium results. The average crustal abundance of V_2O_5 is on the order of 300ppm. All values were an order of magnitude less than the average crustal abundance, and two orders less than economic grades. Blank results from the core program indicate sample preparation free of cross contamination and reliable analytical results.

Fine and coarse blank sample materials were also used for the RC assay program. Results are plotted in Figure 11.6. Coarse material was used early in the program, and fine material was used later, to better match the fine-grained RC drill samples. Distribution of blank sample values from the RC program is similar to the core program. The results do not indicate any material cross contamination or analytical issues.



Source: SRK, 2019

Figure 11-5: Blanks from Core Program



Source: SRK, 2019

Figure 11-6: Blanks from RC Program

11.4.3 Duplicates

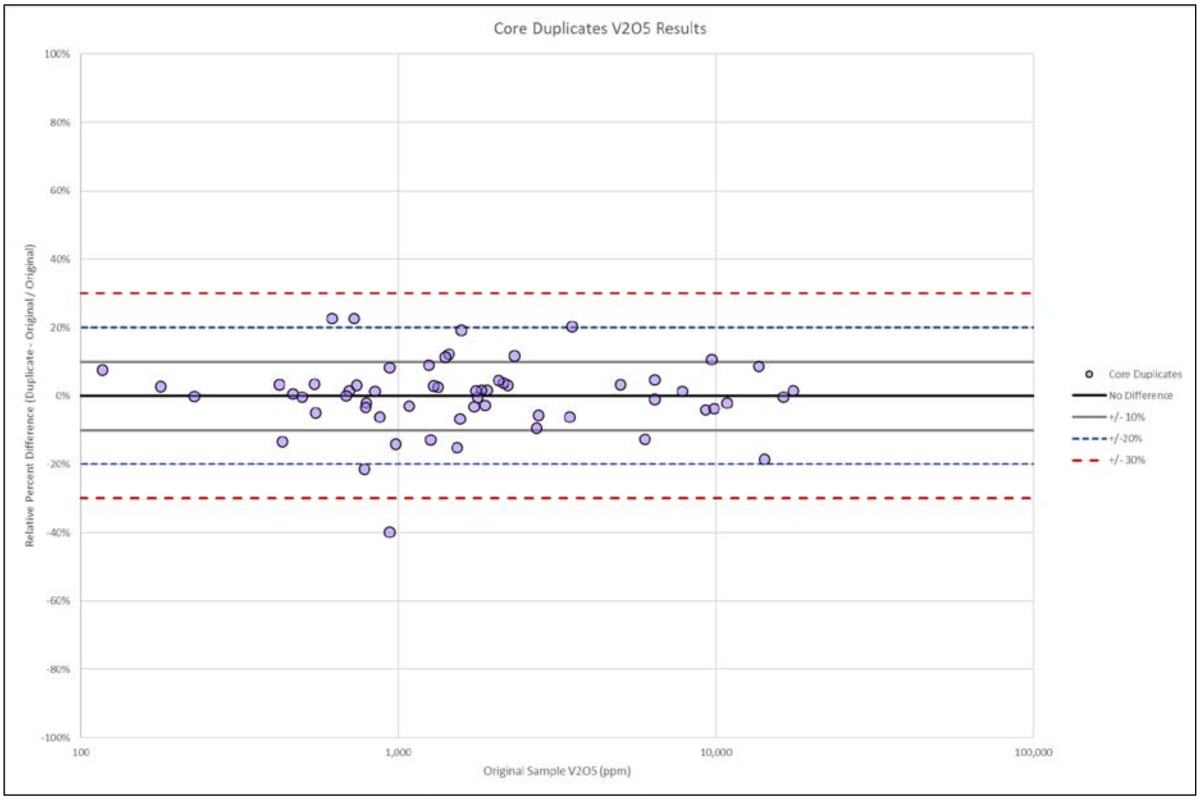
Duplicate samples may be collected at each stage of sample reduction, to test for sampling bias and degree of homogeneity of the material. Smaller particle size allows greater homogeneity, so finer samples should have less average variation than coarser samples. The magnitude of difference between the duplicate and original sample values compared to the original sample value provides the relative percent difference with the following equation:

Relative (to original) Percent Difference = (Duplicate – Original) / Original * 100%

Relative percent difference (RPD) values increase for low sample values as they approach the method detection limit. Charts of RPD versus original sample value are presented below for each set of duplicate samples, to illustrate the variation by sample value.

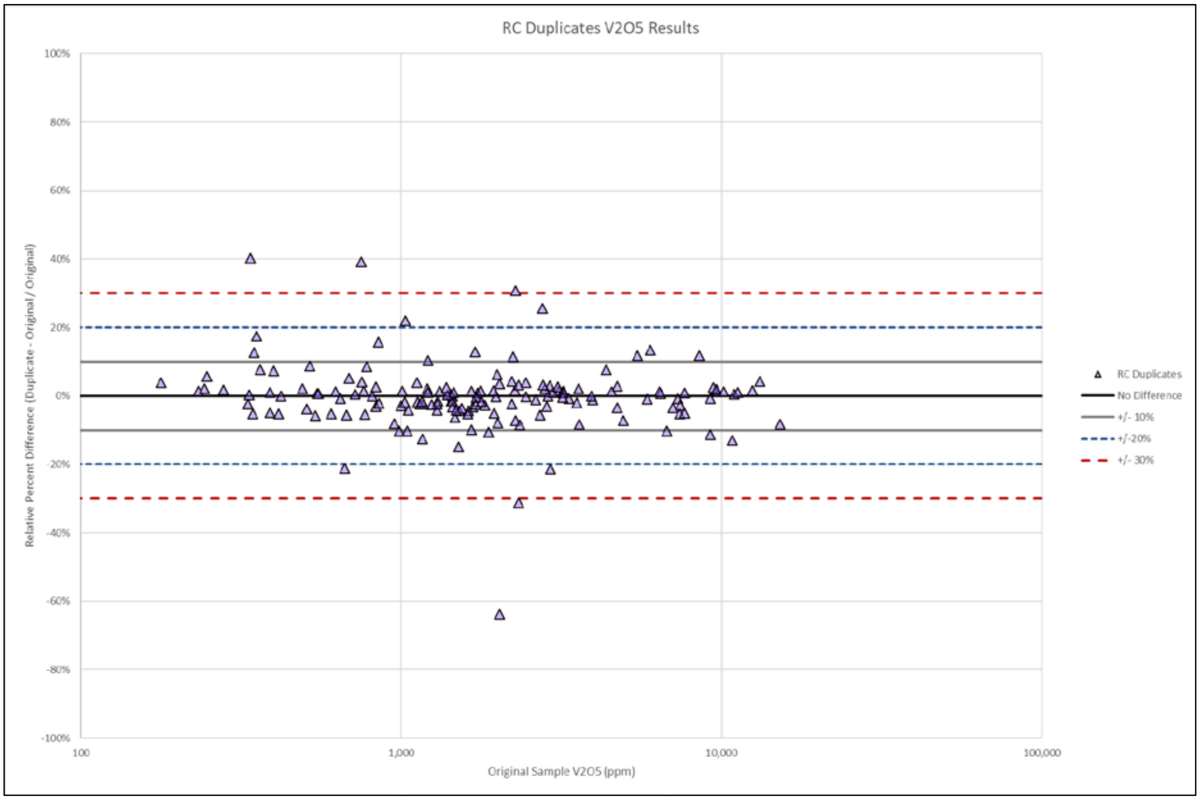
Duplicate core samples were collected for approximately one out of 18 samples. Variation in the in-situ material with coarse particle size is expected to be up to 30%, depending on the nature of mineralization. Percent difference of original and duplicate core sample pairs is plotted in Figure 11.7. All duplicate pairs have values well above the method detection limit. For higher values, the difference between original and duplicate samples is relatively smaller. There is slightly more variation for samples less than 1000 ppm than there is for original samples with higher values. Duplicate pairs have differences within the expected range, and all duplicate sample values except one are within 30% of the corresponding original value. This reflects a sound approach for core splitting and sampling and shows that the half-core assay sampling method is free of bias.

Duplicate RC samples were collected in the field from dry material to assess the quality of sample splitting done in the field. Duplicates were collected on every 20th drill sample, at 100ft depth intervals. Like the core duplicate samples, the RC duplicates tested the first stage of sample mass reduction. Unlike the coarse core samples, the RC samples were milled to consistently fine particle size by the hammer bit. Percent difference of RC duplicate samples compared to original sample values are plotted in Figure 11.8. Differences between original and duplicate RC samples have a similar distribution to the core duplicate pairs. Differences are symmetrical about 0% (no difference) and the majority of pairs have less than 20% difference. A small proportion have greater variability.



Source: SRK, 2019

Figure 11-7: Core Duplicate Pair Relative Percent Difference



Source: SRK, 2019

Figure 11-8: RC Duplicate Pair Relative Percent Difference

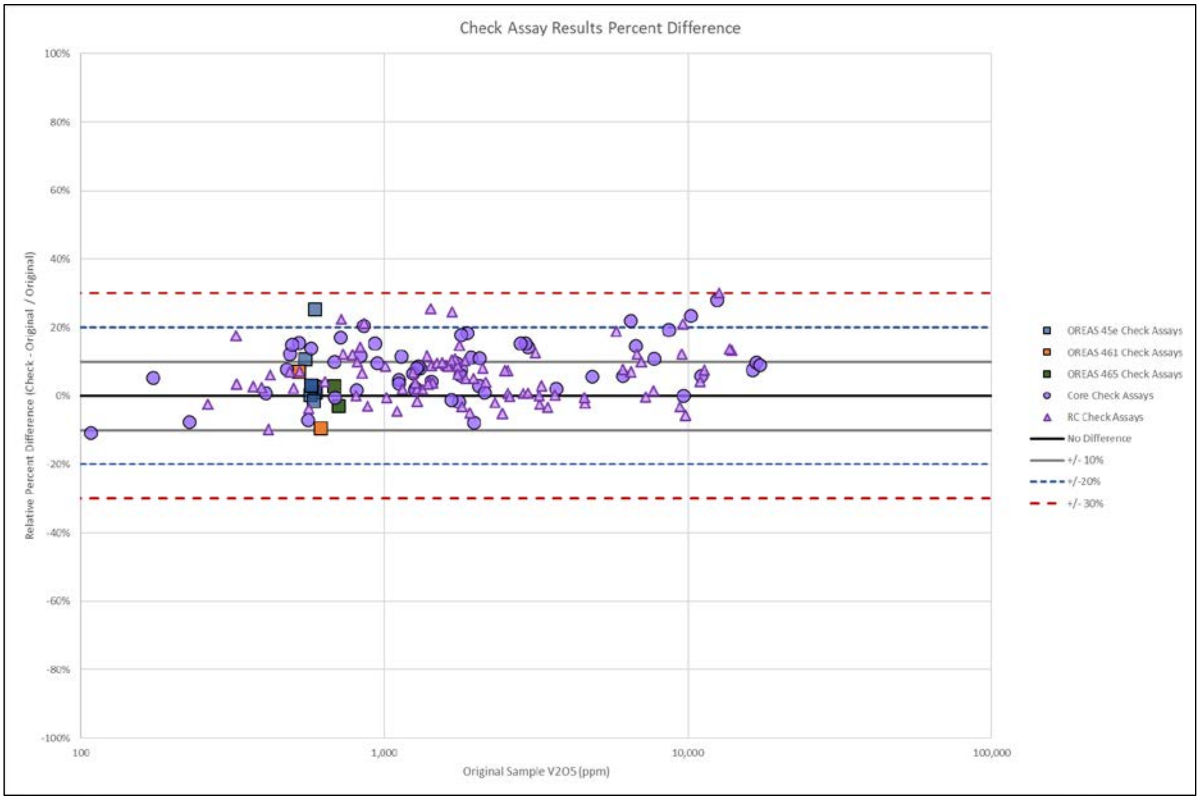
Analysis of a sub-set of samples at a second independent lab provides an objective assessment of the main set of assay results. Check assays were completed at ALS Global - Geochemistry Analytical Lab of North Vancouver, B.C., on all duplicate pulps from the core and RC programs.

The analytical procedures were comparable:

- ALS code ME-ICP61, 4-acid digestion with ICP-AES finish for 33-element suite, detection range for V is 1-10,000 ppm; and
- ALS code ME-MS61a, 4-acid digestion, ICP analysis for V only, on samples >3000 ppm V_2O_5, detection range 10-100,000 ppm.

Relative percent difference of check assays versus original assays are plotted in Figure 11.9. Check assay results are between 30% higher and 12% lower than the original assay values. The 142 pairs of check assay drill samples average 6.9% higher than the original values. The eight pairs of OREAS 45e check assays average 5.6% higher than the original values. Two pairs of each OREAS 461 and OREAS 465 have less than 10% difference, and average to less than 1% difference.

The check assay results appear to be systematically greater than the original assay results by about 6%. The cause of this is unknown. CRM check assay results are within 10% of the original and the limited number of sample pairs do not show a high bias.



Source: SRK, 2019

Figure 11-9: Check Assay Sample Pair Relative Percent Difference

11.4.4 Actions

All CRM and blank sample results from initial analysis were within acceptable ranges. No samples were re-analyzed, nor does the QP recommend re-analysis.

11.4.5 Results

Assay results of control samples and sets of duplicate samples indicate reliable and accurate analytical results from the primary laboratory. The slight high bias apparent in check assay samples is not well understood but is not a cause for concern about the quality and repeatability of the analysis by MS Analytical Labs.

11.5 Opinion on Adequacy

The Quality Assurance/ Quality Control program established and implemented by First Vanadium for the 2017-2018 drilling programs allowed assessment of sample reduction and analytical procedures at several stages of the process. The QA/QC sample results indicate adequate sub-sample size for the degree of homogeneity in the material, and repeatable and reliable analytical results. Sample handling and chain of custody procedures ensured the samples were safe from tampering or accidental contamination. The QP's opinion is that the analytical data from the 2017-2018 drilling programs meets and exceeds current requirements for quality of sampling and analysis procedures, and it is suitable to include in a Mineral Resource Estimate that meets the requirements set forth in CIM NI 43-101.

12 Data Verification

12.1 Quality Control Measures and Procedures

The electronic drillhole data for the Project is stored in a secure database program managed by a consulting geologist independent of First Vanadium. The drillhole data tables with the information used for the 2019 Resource Estimate were exported on January 31, 2019 and provided to SRK as Microsoft Excel files.

Assay data from the 2017-2018 drilling programs were received from MS Analytical as Comma-Separated Value (CSV) files, which were imported directly to the Project database. Certificates were received as Portable Document Format (PDF) files, for archival.

Core and RC drillhole logs were completed on paper forms and tabulated in an Excel file with built-in validation of logging codes and depths. The completed tabular logs were then imported to the database program for secure storage.

In 2009, the historical UCC drill logs were tabulated to create the electronic drillhole database used for the 2010 resource estimation described in Section 6.4.2. First Vanadium identified and corrected some collar locations and elevations from the EMC database from orthophotos prepared from airborne and field target surveying conducted in October 2017.

First Vanadium possesses copies of the historical UCC drill logs, most assay certificates, cross-sections and plan maps used to compile the historical UCC estimation. The electronic database was generated by hand entry of information taken from the UCC drill logs. Drillhole collar locations were compiled into an Excel® spreadsheet by x.y,z in the local coordinates as listed on the drill logs. EMC later transformed these locations by conducting a licensed field survey of the local control points and then transforming the historical coordinates to Nevada State Plane using ESRI software. There are no downhole surveys recorded on the drill logs. The descriptive data for each drillhole logged interval was entered into Excel® spreadsheets. This included hole ID, from, to, % V_2O_5 Carlin lab assay, % Zn Carlin lab for some intervals, % V_2O_5 Grand Junction lab assay, % Zn Grand Junction lab for some intervals, primary rock type, secondary rock type, primary color, secondary color and original remarks.

UCC drill logs contained V_2O_5 from two different laboratories. First, every other sample interval was grab sampled and analyzed at the Carlin laboratory. If it returned anomalous results, then the original sample for that interval and the two adjacent intervals were sent to Grand Junction, Co. for V_2O_5 and zinc analysis. The database from the UCC drill program was constructed primarily from the Grand Junction analyses if available. The intervals not sent to Grand Junction were supported by the Carlin analyses. In the latter case, analyses were only available for every other sample interval.

Seven of the 89 RC holes completed in 2018 were selected for assay data verification. They were selected to represent the north-south extent of the deposit and comprise 9.2% of the drillhole interval assays. The silver and zinc values in the database matched the reported values on the assay certificates. V_2O_5 values were reported in parts per million and converted to weight percent in the database; this resulted in a loss of precision that is not material to the grades of economic interest. One sample interval of 281 was noted to have an incorrect V_2O_5 value.

12.2 Limitations

Similar procedures were used for core and RC samples to incorporate logging and assay data to the Project database. The most recent drilling program, limited to RC samples, was selected for verification of assay data. The issue noted is minor and is easily corrected by re-importing the laboratory data.

Geological logs were not compared to the data table used for modeling; rather, the interpreted geologic solids provided by First Vanadium were compared with drillhole data, and no discrepancies were noted during resource estimation.

12.3 Opinion on Data Adequacy

The process of data collection, database validation, and data storage used for the Project database ensures that the drillhole data are securely stored and readily available for resource estimation. The QP believes that the dataset is of adequate quality to support a Mineral Resource Estimation.

13 Mineral Processing and Metallurgical Testing

13.1 Historic Mineral Processing/Metallurgical Testing

Metallurgical test work on samples from the Carlin Vanadium Property was first carried out by Union Carbide Corporation (UCC) through their Mining and Metals Division – Research and Development Department located in Niagara Falls, New York, between February 1967 and December 1968 (Fox, 1968).

This work was continued by further metallurgical test work done by the U.S. Bureau of Mines in the early 1970's (Brooks and Potter 1974).

The U.S. Bureau of Mines took a bulk sample composed of Woodruff Formation described as gray weathered shale which contains less than 1% carbonaceous material. This sample is differentiated from the dark brown carbonaceous shale which contains about 10% carbonaceous material. The two are reported to have different responses to metallurgical treatment. The sample was collected from surface exposures of mineralization exposed in trenches at the Carlin Vanadium Property.

The process that was developed by UCC and reinforced by the US Bureau of Mines at Reno was a salt roasting, leaching with dilute sulfuric acid, solvent extraction and precipitation of vanadium as ammonium metavanadate. This work showed that 69% of the vanadium could be recovered from weathered dolomitic shale containing about 1% V_2O_5.

13.1.1 Historic Union Carbide Testwork Procedures and Results

Several classic extraction methods were tested to determine the mineralized materials response. The Union Carbide research investigated Acid Leaching, Alkali Leaching, NaCl Roasting-Water Leaching, and Roasting with Na_2SO_4 or Na_2CO_3.

Carbonaceous ore calcined at temperatures from 675°C to 950°C, followed by NaOH leach extracted 64% vanadium. Carbonaceous ore calcined with FeS2, followed by a pressure leach with Na2HCO3-NaHCO3 solution extracted a maximum of 62% V_2O_5. Ore precalcined from 625°C to 1050°C, followed by an H_2SO_4 leach at boiling point dissolved 81% of the vanadium with an acid consumption of 47 lb. of H_2SO_4 per pound of V_2O_5 extracted. Acid baking of upgraded ore at 280°C, followed by hot water leach extracted 93% of the vanadium with an acid consumption of 64 lb. of H_2SO_4 per pound of V_2O_5 extracted.

Samples of ore both carbonaceous and noncarbonaceous, were NaCl roasted and water leached and achieved vanadium extractions from 1% to 66%. Roasting of carbonate ores using various salt additives failed to extract more than 58% vanadium.

13.1.2 Historic Union Carbide Sample Representativeness

Sample locations are not known. The descriptions of the sample materials are typical for the deposit.

13.1.3 Historic U.S. Bureau of Mines Testwork Procedures and Results

The U.S. Bureau of Mines work followed up on the UCC work. The vanadium extraction of the non-carbonaceous weathered shale was influenced by several factors. Larger hard particles were found to be more refractory than soft, friable particles or clay. Maximum extraction was achieved by grinding to 100% minus 35 mesh which coincidentally produced a grind with 65% minus 100 mesh. Optimum salt usage was determined to be about 200 lb/st. Acid consumption was determined to be about 10 lb for each pound of V_2O_5 extracted. These combined produced an average vanadium extraction of 69%.

The vanadium extraction of the carbonaceous shale was tested using similar procedures as those described above. The same grinding and standard roasting or salt roasting was followed by a standard acid leaching only recovered 45% of the vanadium. Increasing the acid concentration such that 40 lbs of acid are required for each recovered V^2O^5 lb only increased the total V_2O_5 recovery to 60%. Recovery was improved by pre-roasting the material to 700°C in order to drive of the carbonaceous material. In this case, 70% of the V_2O_5 was recovered with 11.0 lb of acid consumed for each V_2O_5 lb recovered.

Physical beneficiation did not show significant benefits due to the very fine grained nature of the host rock. Simple salt roasting was not beneficial because the material contains in excess of 15% calcium and magnesium oxides, which form water insoluble calcium vanadate. High vanadium extraction was achieved by prolonged digestion in hot sulfuric acid, but time and acid requirements were excessive.

Simple roasting did not produce as desirable recovery results as did roasting with salt. The salt roasting test were done by hand rabbling thoroughly mixed charges of minus 35 mesh shale and minus 35 mesh salt typically in crucibles filled no more than an inch deep and a total 900°C furnace residence time of two hours. Extraction testing was done by stirring 20 g charges for one hour in 6 0 mL of water plus various doses of 10% sulfuric acid.

13.2 First Vanadium Mineral Processing/Metallurgical Testing

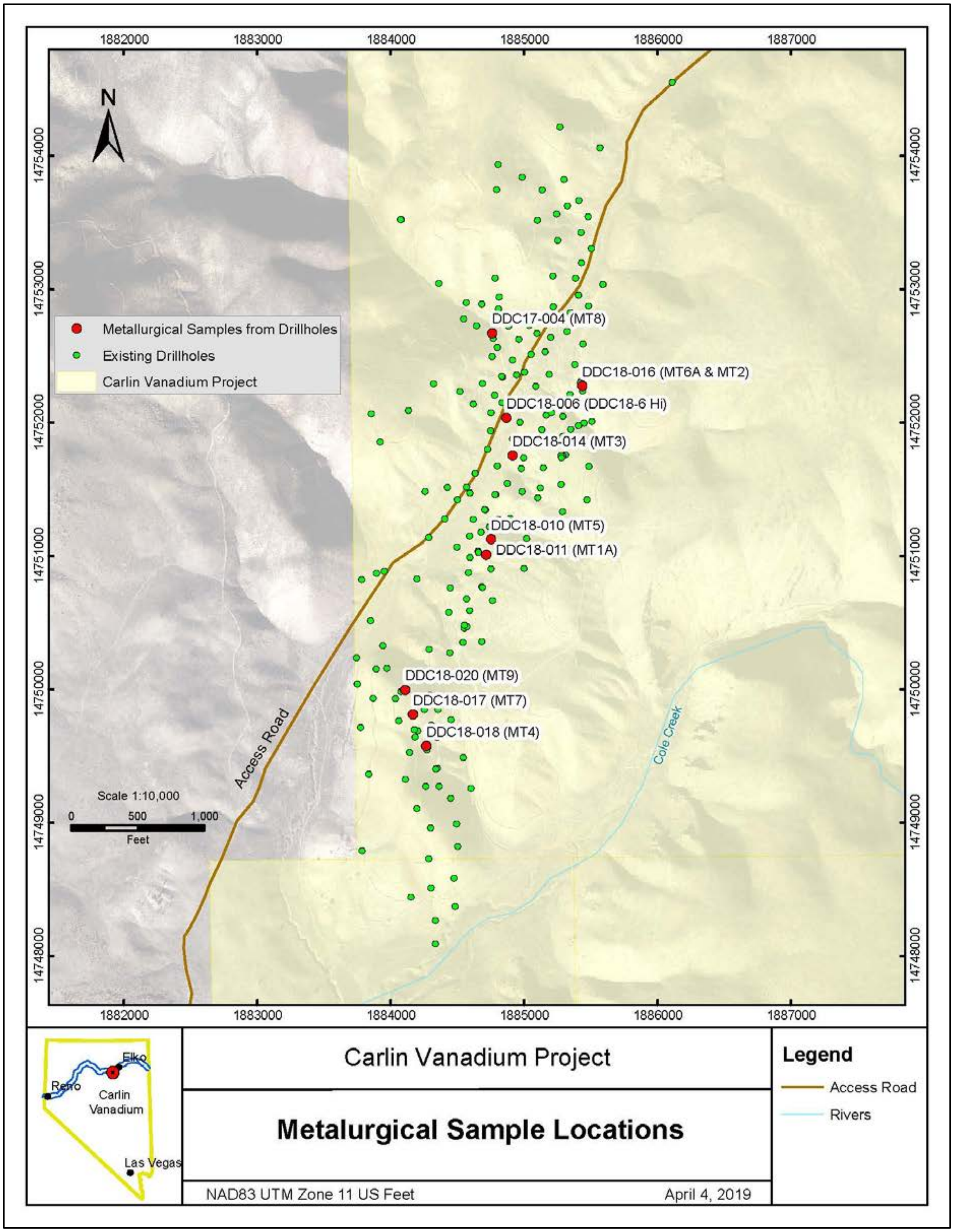
In April 2018 Sherritt Technologies, based in Fort Saskatchewan, Alberta, commenced a series of tests for the Company, in conjunction with the Company's technical group, to evaluate the extraction of vanadium from the Carlin Vanadium deposit.

The test work was conducted on a composite sample that was derived from diamond drillhole DDH18-06, composited from a continuous sample series of unoxidized black shale from 15.60 m to 34.50 m depth. The head assay of this composite sample was 0.95% V_2O_5 (calculated).

Due to the carbonate content of the sample, ten acidulation tests were conducted on the sample to evaluate carbonate destruction prior to pressure leach testing and to provide feed material for the pressure leach test work. Carbonate decomposition was efficient, resulting in extractions of vanadium ranging from 22% to 30% in the acidulation step. This step was done prior to pressure leach testing to provide feed material for the pressure leach test work.

Fifteen batch pressure oxidation ("POX") tests were then conducted to evaluate the extraction of vanadium from roasted and non-roasted material. The initial conditions for the POX tests were under low temperature, low oxygen pressure, and low acid addition, resulting in vanadium extraction of 66%. For the next series of POX tests, changes in acid dosage, oxygen overpressure and ferric sulphate addition were investigated and resulted in vanadium extraction from 66% to 80%. In order to reduce the carbon content in the autoclave feed further, tests were then conducted by either a pre-roast of the material or by increasing the temperature in the pressure oxidation step. Resulting overall extractions of vanadium increased to 94.5% and 95.5% when processing pre-roasted material, and 95.6% and 96.0% under total pressure oxidation conditions (220°C temperature and 700 kPa oxygen pressure) (Sherritt, 2018)..

The location of the metallurgical samples are shown in Figure 13-1.



Source: First Vanadium, 2019

Figure 13-1: Location of Metallurgical Samples from Drillholes

Subsequently, nine composite samples were derived from drillholes across the Carlin Vanadium Mineral Resource to test the variability of two different ore types (oxidized and unoxidized shale) of varying vanadium grades (low, average, and high) as tabled below in Table 13-1. The location of the metallurgical samples are shown in Figure 13-1.

Table 13-1: Vanadium Extractions from Variability Sampling

Metallurgical Sample ID	HoleID	Depth (m)		Calculated Grade % V_2O_5	Sample Description	Vanadium Extraction (%)
		From	To			
MT1A	DDC18-011	36	58.5	0.68	Unoxidized shale	94.1
MT2	DDC18-016	37	79.86	0.69	Unoxidized shale	93.1
MT3	DDC18-014	44.5	56.5	0.64	Unoxidized shale	97.8
MT4	DDC18-018	51	90	1.02	Unoxidized shale	95.3
MT5	DDC18-010	16.5	46.5	0.39	Unoxidized shale	92.1
MT6A	DDC18-016	8.5	31	0.62	Oxidized shale	92.4
MT7	DDC18-017	43.5	62.64	0.54	Oxidized shale	93.9
MT8	DDC18-004	0	11.5	0.93	Oxidized shale	95.3
MT9	DDC18-020	19.5	30	0.42	Oxidized shale	96.0

Source: First Vanadium, 2019

The preliminary extractions of vanadium from the nine variability samples, which were completed in March 2019, ranged from 92.1% to 97.8%. This variability work provided a good indication of the expected average and range of vanadium extractions across the deposit. Further POX test work is ongoing. Development of the process flow sheet will continue to be advanced with this ongoing POX test work.

Vanadium extraction from Solvent Extraction (SX) isotherm tests ranged from 96.2% to 96.9%. Larger samples of solution from pressure oxidation are currently being prepared for further downstream solvent extraction test work to produce ammonium metavanadate, leading to a final vanadium pentoxide product. The downstream SX work moving forward will be conducted by SGS Canada Inc. at their Lakefield, Ontario laboratory.

Based on the metallurgical test results conducted by First Vanadium to date, an 85% vanadium recovery is a reasonable assumption for purposes of the mineral resource estimation.

14 Mineral Resource Estimate

This report provides Mineral Resource estimates, and a classification of resources prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, May 10, 2014 (CIM, 2014). Dr. Bart Stryhas, with assistance from First Vanadium, constructed the geologic and Mineral Resource model discussed below. Dr. Stryhas is the Qualified Person responsible for the resource estimation methodology, Mineral Resource classification and resource statement.

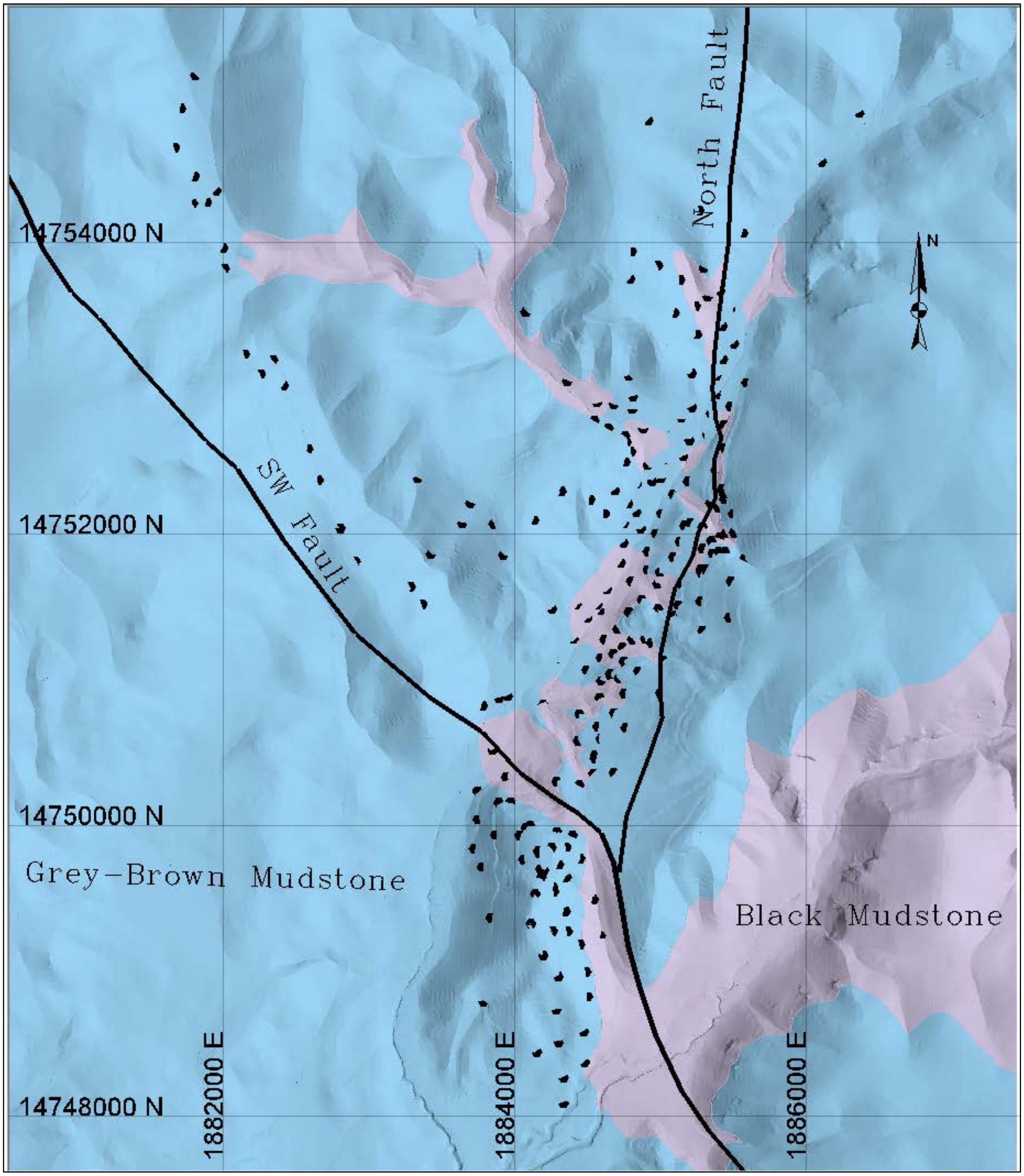
The resource estimation is based on the current drillhole database, interpreted lithologies, geologic controls and current topographic data. The resource estimation is supported by drilling and sampling current to January 31, 2019. The estimation of Mineral Resources was completed utilizing a computerised resource block model constructed using Leapfrog™ and Vulcan™ modeling software.

14.1 Drillhole Database

The 2019 drillhole database consisted of 216 drillholes on the Property, of which, 20 holes were HQ-diameter core from 2017-2018 and 69 were RC holes from 2018. There were 208 drillholes within the resource area, including all 89 holes drilled by First Vanadium.

14.2 General Geology and Geologic Model

The mineralization is interpreted to be hosted within favorable sedimentary horizons which have been weakly deformed by low intensity folding and subsequent block faulting. In general, there are two main lithologies, a lower, black mudstone and an overlying grey-brown siltstone. The mineralization is mainly hosted within the black mudstone near its upper contact and intermittently within the lower sections of the grey-brown siltstone. The lithologic units form a broad anticlinal structure which is cut by several faults. The axial trace of the antiform trends roughly due north with the western flank dipping 15-30º west and the eastern flank dipping 10-20º east. The antiform is cut by at least two mapped faults which merge to the south. The SW Fault strikes NW-SE with a near vertical dip. This structure is interpreted to be the larger of the two faults. The North Fault strikes N-S also dipping near vertical. This structure merges into the SW fault where it shows a flexure in strike. No direct displacement is observed across the SW Fault however, its location marks a significant change in lithologic dip. The North Fault is interpreted to show an east side up displacement ranging from a few feet at its north end up to 200 feet toward the south where it merges into the SW Fault. Figure 14.1 shows the generalized geologic model supporting the Mineral Resource estimation.



Source: SRK, 2019

Figure 14-1: Plan View of Geologic Model at Surface, Drillhole Collars and Roads in Black

14.2.1 Controls on Mineralization

The vanadium mineralization is controlled mainly by lithology likely related to redox conditions at the time of deposition. The mineralization within the mudstones is generally localised in planar zones interpreted to be parallel to the bedding horizons. The orientation of these preferred planes of mineralization is important to understand its continuity. SRK constructed trend planes for the highest-grade zones of mineralization by digitizing lines of continuity in sections spaced 100 ft apart and then combining these into a 3-dimensional (3-D) surface. These surfaces were then used to guide the construction of grade shells for each domain of mineralization. The domains are essentially the fault blocks. Grade shells were constructed using Leapfrog software, based on a grade threshold of 0.1% V_2O_5. These grade shells were used to constrain the resource grade estimation as will be explained further below.

The grade shells were evaluated for validity and functionality using three methods. First, they were visually inspected to evaluate how well they followed the SRK trend planes and how well they demonstrated continuity of mineralization and capture of appropriate data. Second, they were queried to determine what percentage of the available samples above the respective threshold are captured internal to the grade shell. This evaluates the capture ratio of the shells. Third, they were queried to determine what percentage of the samples in the grade shell are above and below the respective threshold. This evaluates the internal dilution of the shells. The results of the query validations are presented in Table 14-1. The grade shells have a very good capture ratio and have relatively low internal dilution.

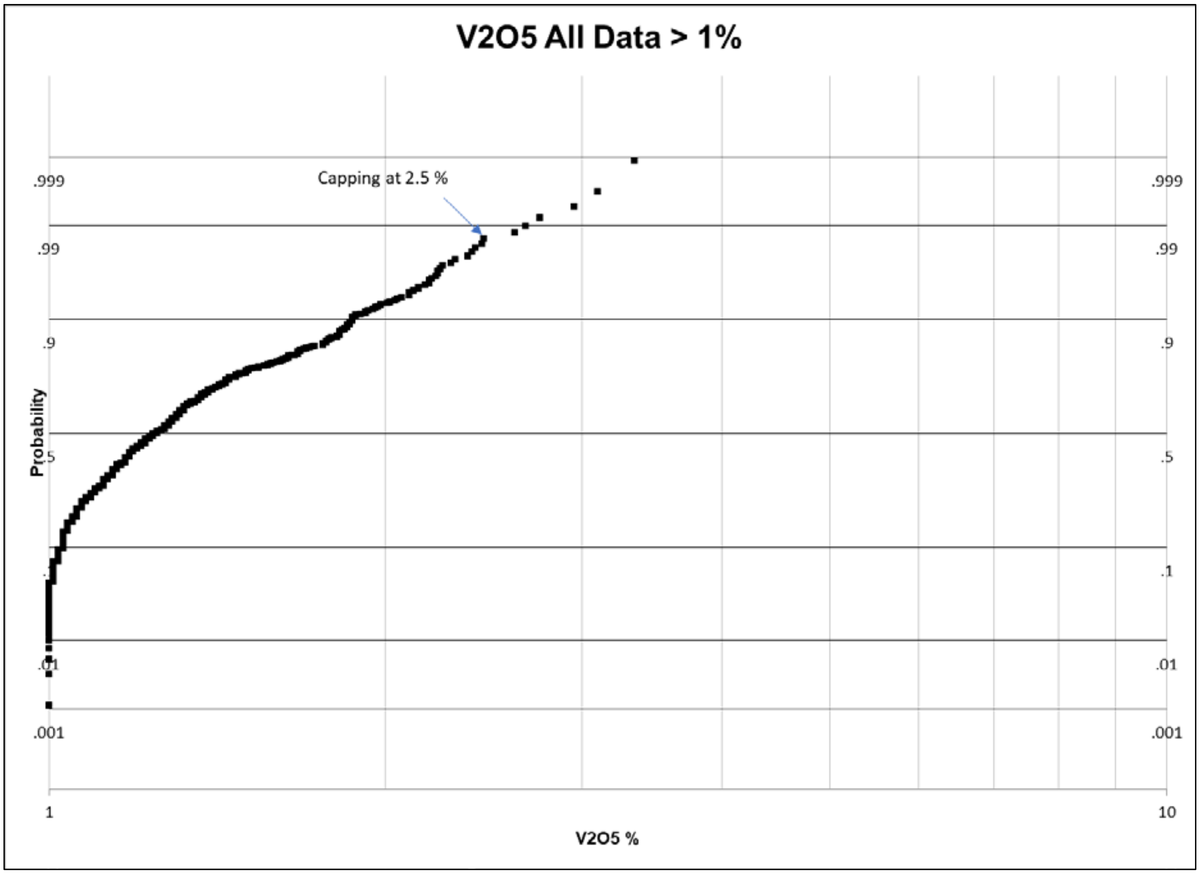
Table 14-1: Grade Shell Validation Results

Samples Above Grade Threshold Captured by Shell	Samples in Shell Above Grade Threshold	Samples in Shell Below Grade Threshold (Dilution)
93%	94%	6%

Source: SRK, 2019

14.3 Capping and Compositing

The raw assay V_2O_5 data was first plotted on histogram and cumulative distribution graphs to understand its basic statistical distribution. The histogram shows a strongly negative skewed distribution. The cumulative distribution curve in Figure 14.2 illustrates a continuous population set up to 2.5% V_2O_5. The raw assay data was capped at 2.5% resulting in six assays ranging from 2.61% to 3.34% being reduced to 2.5% prior to compositing. The original assay sample lengths are predominately five feet in length. For the modeling, these were composited into 10 ft run length composites with no breaks at geologic contacts. This length was chosen to provide initial smoothing and for approximately two composites to intersect the 20 ft vertical length blocks. Where analyses were only available for every other sample interval as described above, the missing intervals were ignored, and the composites were composed from the data available.



Source: SRK, 2019

Figure 14-2: Cumulative Distribution Plot of V_2O_5%

14.4 Densities

Density test work has been completed by First Vanadium during the 2018 drilling campaigns. Average densities were used for each of the two predominant lithologies based mainly on oxidation state. Table 14-2 lists the densities used for the block model, note that all reporting is listed as short tons (2,000lbs).

Table 14-2: Block Model Density

Lithology	Average Density tons/ft^3	Number of Measurements
Oxidized	0.0716	72
Reduced	0.0655	134

Source: SRK 2019

14.5 Variogram Analysis and Modeling

Variography studies of the capped and composited data did not return very good results. In general, weak variogram structures were obtained, which reflected the average drillhole spacings. The results are interpreted to be related to the varied orientations of the mineralized horizons as well as the variability of the original mineralized horizons.

14.6 Block Model

The block model was constructed within the NAD83 UTM Zone 11US Survey feet coordinates. Survey coordinates limits are listed in Table 14-3. A 20 ft cubic block size was chosen as an appropriate dimension based on the current drillhole spacing and the smallest mining unit of a conceptual open pit mining scenario. A topographic surface generated from 2-meter LiDAR data provided by First Vanadium and was used to flag the top of bedrock in the block model. Soil thickness varies slightly over the deposit and the soil thickness is generally very thin or non-existent.

Table 14-3: Block Model Limits

Orientation	Minimum (ft)	Maximum (ft)	Block Dimension (ft)
Easting	1,880,500.0	1,887,000.0	20
Northing	14,747,000.0	1,4756,000.0	20
Elevation	4,800	6,400	20

Source: SRK 2019

14.7 Grade Estimation Methodology

The Carlin Vanadium property was modeled for V_2O_5 and Zn. Only the V_2O_5 is reported as Mineral Resource. All block grade estimates were made using the 10 ft run length composites. The resource is constrained within a grade shell based on a 0.2% V_2O_5 threshold constructed with Leapfrog software.

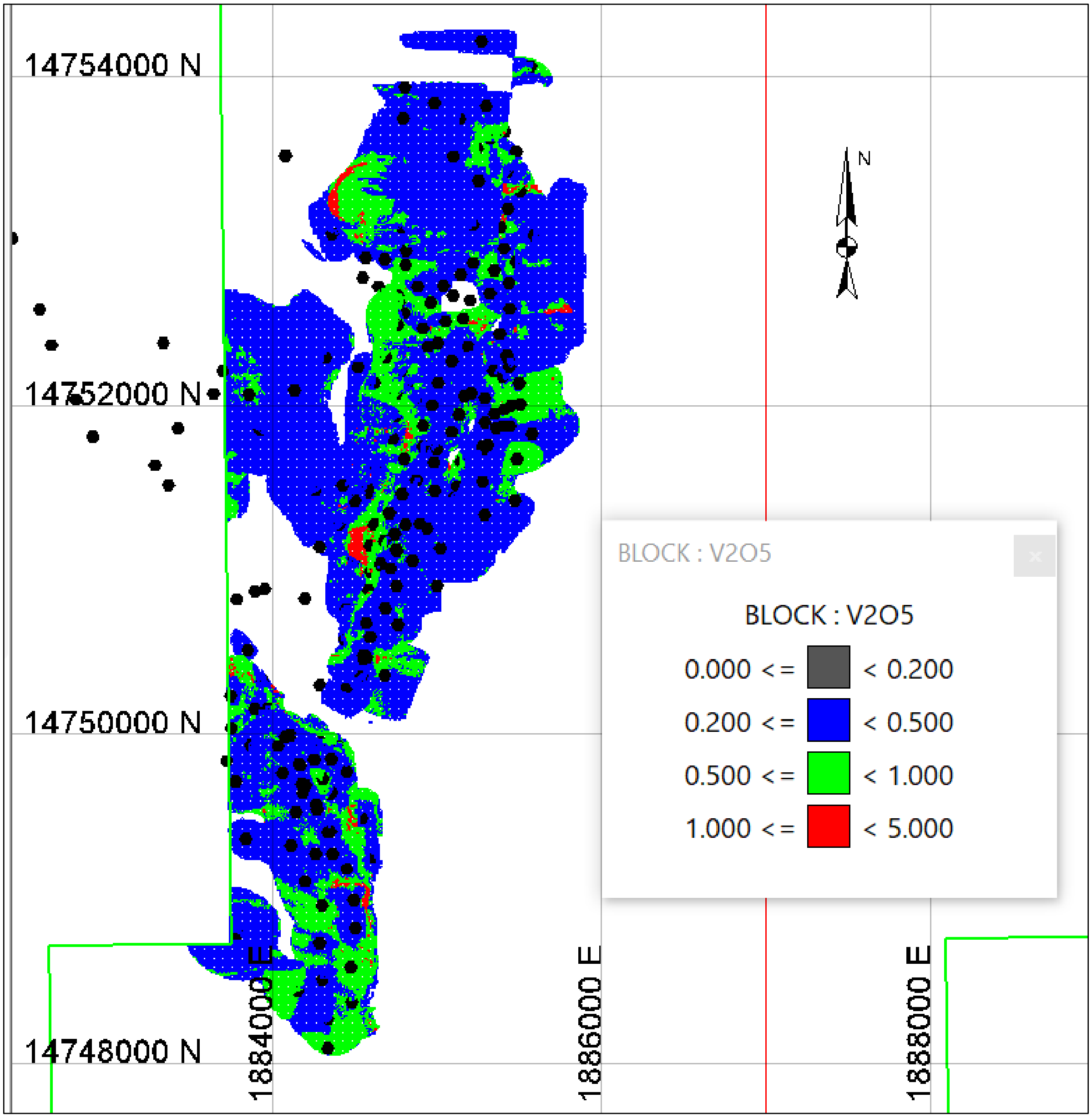
The grade estimation was run using an Inverse Distance Squared (ID^2) algorithm considering only the composites and blocks within the grade shell. The grade estimation considered all blocks with centroids within the grade shell. A dynamic search orientation was used based on the same trend plane used to construct the grade shells. A three-pass search estimation was used. The estimation parameters are listed in Table 14-4.

A plan view of the estimated blocks is shown in Figure 14.3 and a representative cross section of the interpolated block model grades is shown in Figure 14.4.

Table 14-4: Estimation Parameters

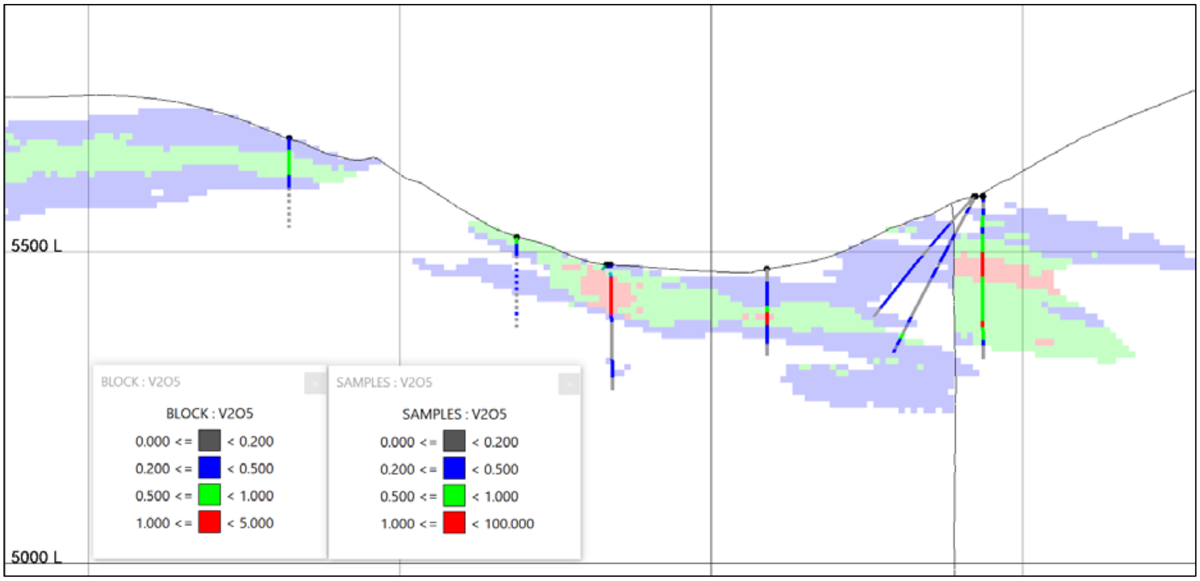
Search Pass	Search Ellipsoid (x,y,z)	Min/Max Samples	Min # Drillholes	Samples/Octant
1	225,225,15	3/16	2	2
2	400,400,25	3/16	2	2
3	500,500,35	3/16	2	2

Source: SRK 2019



Drill collars shown in black and claim boundary shown in green
Source: SRK 2019

Figure 14-3: Plan View of the Estimated Model Blocks



Source: SRK 2019

Figure 14-4: Cross-Section 14,752,300N Showing North Fault, Estimated V_2O_5 Block Grades and Drillhole Composites (Viewing North)

14.8 Model Validation

Four techniques were used to evaluate the validity of the block model. First, the interpolated block grades were visually checked on sections and bench plans for comparison to the composite assay grades. Second, the estimation parameter results were reviewed to evaluate the performance of the grade estimation. These are presented in Table 14-5. Third, statistical analyses were made comparing the estimated block grades from the ID^2 estimation to the composite drillhole data in each of the three fault domains, shown in Figure 14.5 and results are summarized in Table 14-6. The final model results show block grades which are slightly less than the composite grades as desired. Fourth, east-west oriented swath plots were constructed, comparing the estimated average block grades to the composites. The swath plot locations are shown in Figure 14.5 and the results are presented in Figure 14.6.

The results of all of the model validation tests described above provided good confidence in the resource estimation.

Table 14-5: Model Validation by Estimation Parameter Results

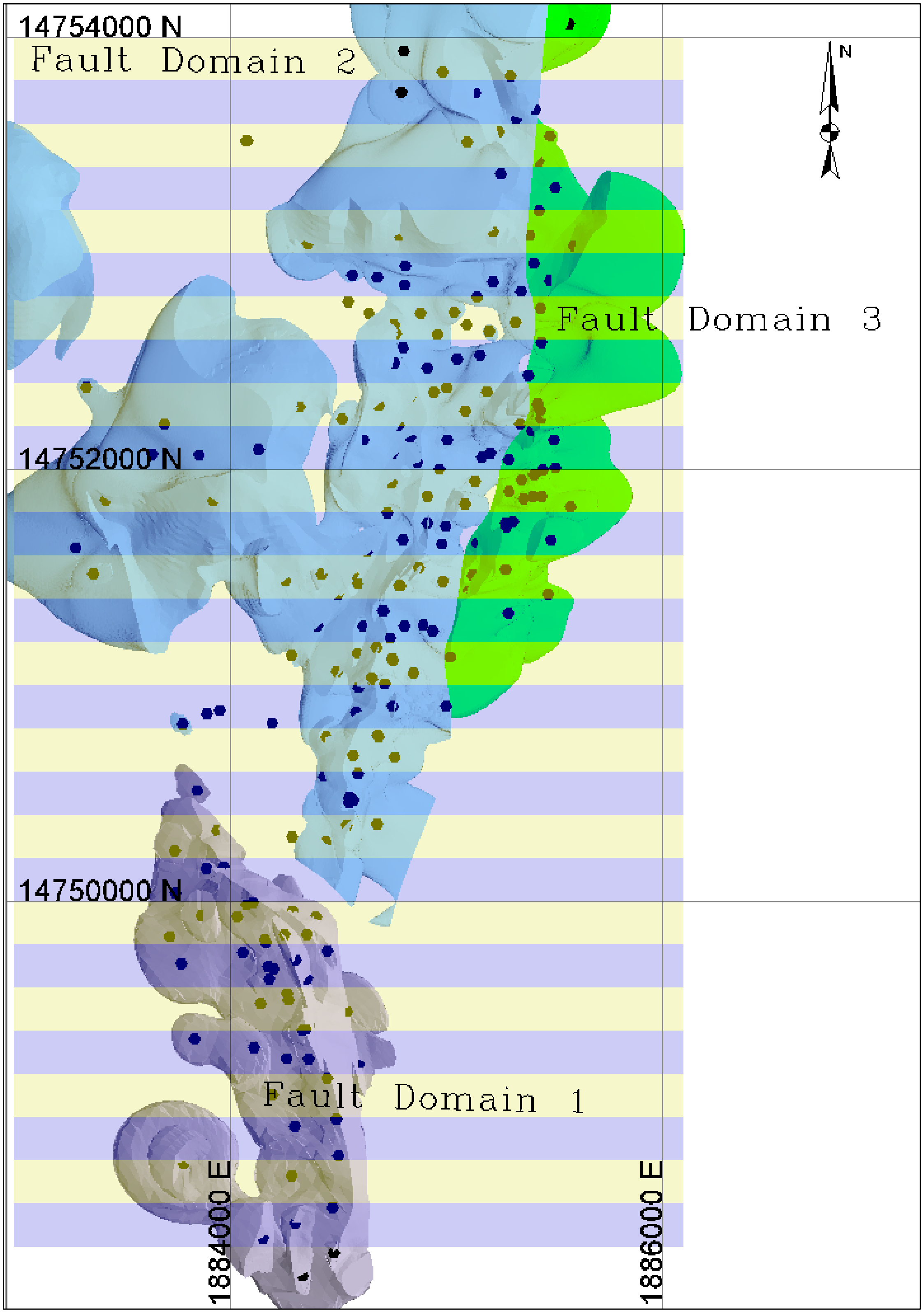
Estimation Pass	Average Number of Composites per Block	Average Number of Drillholes per Block	Average Distance to all Samples (ft)	Percentage of Blocks Estimated
1	5.2	3.3	120	27
2	4.4	2.7	220	22
3	3.3	1.9	200	51

Source: SRK 2019

Table 14-6: Model Validation by Statistical Analysis

Fault Block Domain	Average Composite V_2O_5	Average Block V_2O_5	% Difference Composite to Blocks
1	0.617	0.555	10
2	0.509	0.455	11
3	0.518	0.457	12

Source: SRK 2019



Source: SRK, 2019

Figure 14-5: Swath Plot Locations, Drill Collars, Grade Shells and Fault Domains

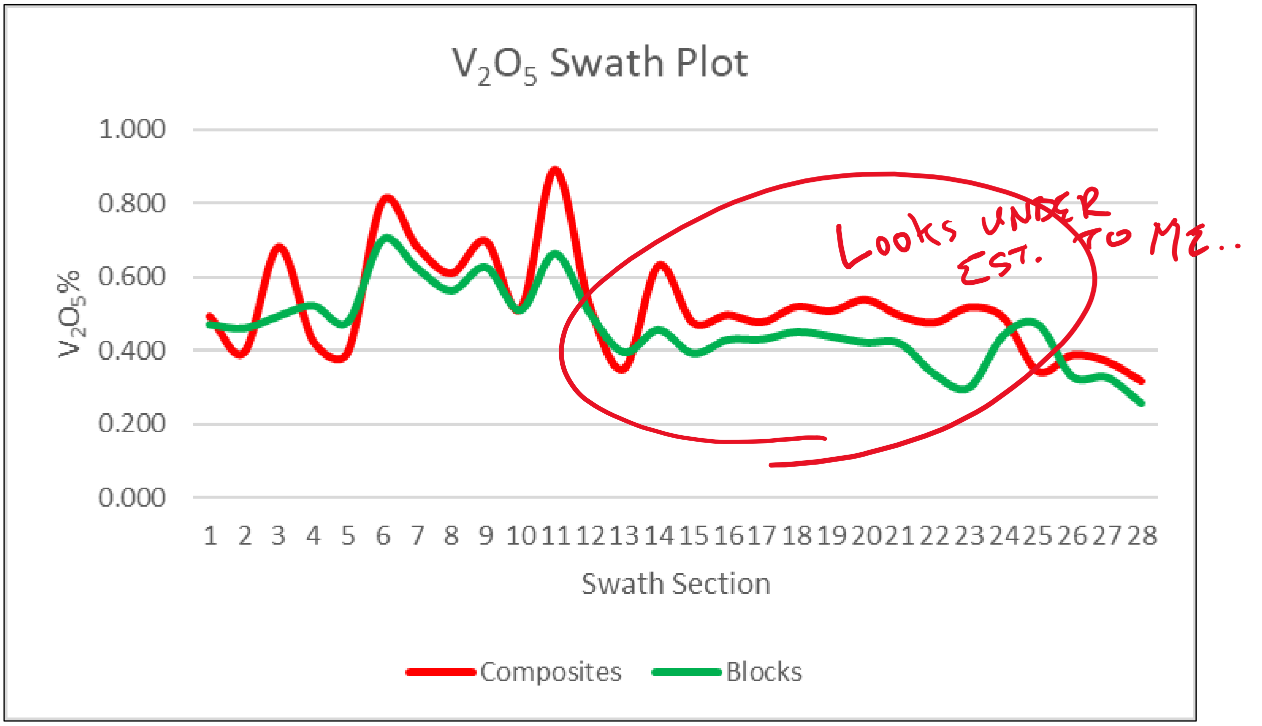


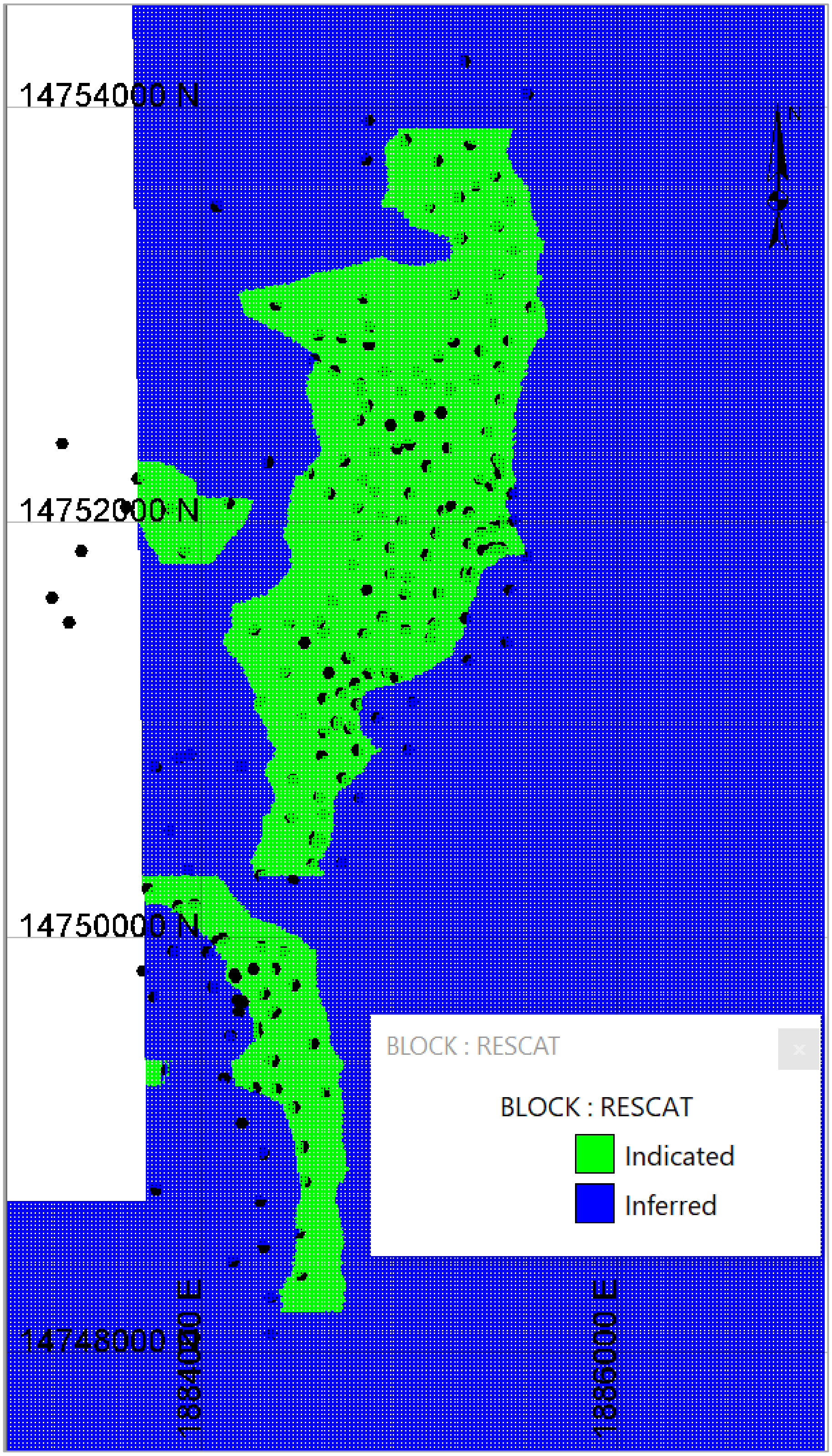
Figure 14-6: Swath Plot of the Estimated V_2O_5 Block Grades and Drillhole Composites

Source: SRK 2019

14.9 Mineral Resource Classification

The Mineral Resources are classified under the categories of Indicated and Inferred according to CIM Guidelines. Classification of the resources reflects the relative confidence of the grade estimates and the continuity of the mineralization. This classification is based on several factors including; sample spacing relative to geological and geo-statistical observations regarding the continuity of mineralization, data verification to original sources, specific gravity determinations, accuracy of drill collar locations, accuracy of topographic surface, quality of the assay data and many other factors, which influence the confidence of the mineral estimation. No single factor controls the resource classification rather each factor influences the result. Generally, most of the factors influencing the resource classification at Carlin Vanadium are positive.

The resources of the Carlin Vanadium Property are classified as Indicated and Inferred based primarily on the average drillhole spacing. All resources supported by the areas of infill drilling with an average spacing of 200ft or less were classified as Indicated Mineral Resources. No areas of the deposit are drilled to a sufficient density to support a Measured Mineral Resource. This was completed by digitizing cross-section polygons of the higher confidence areas of the mineralization. A plan view of the classification is shown in Figure 14.7.



Source: SRK 2019

Figure 14-7: Plan view of Mineral Resource Classification (Drill Collars in Black)

14.10 Mineral Resource Statement

The Carlin Vanadium Mineral Resource statement is presented in Table 14-7. Note that this statement only includes the mineral resource located on the First Vanadium claims. The 0.3% V_2O_5 CoG was chosen for resource reporting based on the reasonable potential for economic extraction under a conceptual open pit mining and milling scenario.

Table 14-7: Carlin Vanadium Mineral Resource Statement as of January 31, 2019 – SRK Consulting (U.S.), Inc.

Classification	Cut-off (% V_2O_5)	Grade (% V_2O_5)	Tons (M)	V_2O_5 lb (M)
Indicated	0.3	0.615	24.64	303
Inferred	0.3	0.520	7.19	75

Source: SRK, 2019

- Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the Inferred Resources tabulated above as an Indicated or Measured Mineral Resource. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future.
- The Mineral Resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.
- The mineral resources listed in Table 14-4 are confined within a Whittle Pit Shell with a 45º pit slope and a strip ratio of 2.6:1 waste to ore including all categories. The following parameters were used to construct the Whittle pit shell and to derive the mineral resource cut-off grade of 0.3% V_2O_5: Metal prices: US$12.50/lb V_2O_5 flake, Mining: US$2.50/t, Processing: US$52.50/t, G&A: US$1.50/t, Product Transport: $2.00/t, Process Recovery: 85%.
- Contained pounds may not add due to rounding.

14.11 Mineral Resource Sensitivity

Sensitivity analysis of the Carlin Vanadium Project's NI 43-101 mineral resource estimate for V_2O_5 at various cutoff grades are presented in Table 14-8.

Table 14-8: Carlin Vanadium Mineral Resource Sensitivity (Effective January 31, 2019)

Classification	Cut-off (% V_2O_5)	Grade (% V_2O_5)	Tons (in millions)	V_2O_5 lb (in millions)
Indicated	0.2	0.539	31.26	337
	0.3[1]	0.615	24.64	303
	0.4	0.702	18.64	262
	0.5	0.776	14.44	224
	0.6	0.849	10.92	185
	0.7	0.929	7.80	145
	0.8	1.012	5.32	108
Inferred	0.2	0.450	9.72	87
	0.3[1]	0.520	7.19	75
	0.4	0.596	4.94	59
	0.5	0.677	3.18	43
	0.6	0.745	2.08	31
	0.7	0.847	1.05	18
	0.8	0.959	0.53	10

[1] Base Case
Source: SRK 2019

15 Mineral Reserve Estimate

A prefeasibility study is required to demonstrate the economic merit of mineral resources in order for their conversion to reserve. At this time, no such study has been completed and therefore the Carlin Vanadium project currently has no reserves.

16 Mining Methods

This work has not been conducted and is not required for this report.

17 Recovery Methods

This work has not been conducted and is not required for this report.

18 Project Infrastructure

This work has not been conducted and is not required for this report.

19 Market Studies and Contracts

This work has not been conducted and is not required for this report.

20 Environmental Studies, Permitting and Social or Community Impact

Baseline environmental studies were completed as part of the Plan of Operations permit application submitted to the BLM, for future disturbance up to 100 acres. The exploration drilling was completed under a simpler Notice of Intent, with allowed disturbance up to 5 acres. Environmental, permitting, and community impact studies were not required for the mineral resource estimate reported herein.

21 Capital and Operating Costs

This work has not been conducted and is not required for this report.

22 Economic Analysis

This work has not been conducted and is not required for this report.

23 Adjacent Properties

There are no adjacent vanadium properties to the Carlin Vanadium Property. The Carlin Vanadium Property lies in the southern extent of the prolific Carlin Gold Trend.

Newmont's past producing Rain Mine (gold) lies 5 miles to the northeast of the Carlin Vanadium Property. Newmont's Emigrant mine (gold) lies 5 miles east-northeast of the Carlin Vanadium Property. The QP was unable to verify this information and the information is not indicative of the mineralization on the property that is the subject of this report. The information from these adjacent gold properties are different and distinct from the property information that is the subject of this report.

Gold Standard Ventures Corp.'s (GSV) Railroad Gold Project is their flagship project and is 3 miles southeast of the Carlin Vanadium Property. The 52,700 acre property encompasses the entire "Fourth Window" on the Carlin Gold Trend, a unique gold target-rich district which still remains predominantly untested. GSV has prioritized three advanced targets for further work – the newly discovered Dark Star deposit, the near surface oxide-gold Pinion deposit and the classic Carlin style North Bullion deposit. The Railroad project also covers 14 km of the Bullion Fault Corridor, a major gold-mineralized north south trending structural corridor, which hosts both Pinion and North Bullion deposits. North Bullion occurs near the north end of the structure and the Pinion occurs at southern end, with multiple untested target areas in between. While the Dark Star deposit is hosted at the north of the 7 km Dark Star Structural Corridor (GSV, 2019). The QP was unable to verify the information and the information is not necessarily indicative of the mineralization on the property that is the subject of this report. The information from this adjacent property is different and distinct from the property information that is the subject of this report.

24 Other Relevant Data and Information

There is no other known relevant data or information other than that which has been presented in this Technical Report.

25 Interpretation and Conclusions

25.1 Property Description and Ownership

The Project consists of 182 unpatented mining claims totaling 3096 acres (excluding overlaps and portions of claims outside section limits) and approximately 80 acres of fee simple land through a Mineral Lease Agreement covering a total of 3,177 acres. The Project was explored and drilled by Union Carbide Corporation (UCC) in the late 1960's resulting in a defined vanadium historic resource. The claim group is located in north-central Nevada in Elko County, seven air miles south of Carlin. The vanadium deposit is centered about geographical coordinates 40°36'29"N, 116°07'17"W. Elko, with a population of about 20,000, is the largest town in the area.

The core 72 claims (BK and Pot claims) are owned by Golden Predator U.S. Holding Corp., a corporation with an address in Idaho. Americas Gold Exploration Inc. (AGEI), a private Nevada corporation acquired a 5-year option June 15, 2017 to acquire 100% of the Carlin Vanadium Project from Golden Predator U.S. Holding Corp. which was assigned to First Vanadium through an Assignment Agreement dated September 22, 2017 and approved by the TSX Venture exchange November 9, 2017. Both Option and Assignment Agreements are in good standing at the time of the report with First Vanadium fulfilling its obligations (payments, work commitments and share issuances) in a timely fashion. First Vanadium can exercise the option and earn 100% interest in these claims by making remaining payments to Golden Predator of US$50,000 by June 2019 and US$1.91 million by June 15, 2022, subject to a 2% NSR in favor of Golden Predator, which could be bought out at the time of option exercise for US$4 million. First Vanadium has fulfilled all of its obligations to AGEI under the Assignment Agreement except requiring to produce a Preliminary Economic Assessment (PEA) on the project by November 9, 2021.

First Vanadium recently added 80 acres of mineral rights through a Mineral Lease Agreement from third parties subject to a 5% NRS royalty.

First Vanadium has recently added 110 unpatented lode claims adjacent and proximal to the original property in the name of its wholly owned subsidiary Copper One USA, Inc.

25.2 Geology and Mineralization

The Carlin Vanadium Property is located on the western flank of the Piñon Range, a block faulted horst of the Basin and Range tectonic province. The local lithologies are predominantly Paleozoic age (Permian to Mississippian), western assemblage, siliceous sedimentary rocks, shale, siltstone, chert, limestone and conglomerate, transported above the Roberts Mountain Thrust. These are overlain by Tertiary age rhyolite flows and Pliocene lake sediments. The vanadium mineralization is stratigraphically controlled and appears to follow the strike and dip of the host lithology, near the contact between an overlying grey-brown siltstone and an underlying brown to black shale unit of the Devonian-age Woodruff Formation. The mineralized zones form stratigraphic subunits or beds of the Woodruff Formation shale hosting elevated concentrations of vanadium in the form of vanadium pentoxide (V_2O_5). There are no visual sulfides indicating vanadium mineralization. The only visual distinctions in the lithology which indicate areas of elevated vanadium grades or mineralization from the unmineralized host shale is a color change from medium brown to black, reflecting an increase of carbon in the form of kerogen in the shale. All the mineralized zones are defined by chemical analysis.

Drilling to date has defined multiple zones of vanadium enriched mineralization (>0.2% V_2O_5) both in the overlying grey-brown siltstone and brown-black shale unit. The most persistence, thick and highest grade vanadium unit lies in the brown-black shale unit and averages approximately 115 ft (35m) thick, striking north-south over 6,000 ft (1,800m) in length and 2,000 ft (600m) wide in the east-west direction. Although most of the deposit is flat to very shallow dipping, it appears to be gently folded anticlinally, with dips locally east and west up to 30º. The mineralization is locally exposed at surface but mostly at a shallow depth to 200 feet (60m) from surface. Parts of the sequence and deposit are oxidized and exhibit red-purple color in higher vanadium grades.

25.3 Status of Exploration, Development and Operations

UCC began exploration in September 1966 and continued for the next two years. The work included surface mapping, trenching and sampling and was accompanied by auger and rotary drilling. A total of 17.8 line miles of road building and 3.3 line miles of caterpillar trenching and sampling were completed on the property. 127 rotary drillholes totaling 31,095 feet (9,478m) were completed by the end of 1967 on the property.

First Vanadium completed aerial surveys that generated orthophotos, mapping and core and reverse circulation drilling in 2017-2018. The drilling of 89 holes totaling 20,521 feet (6,255m) confirmed historical drilling, infilled and expanded the deposit and collected material for metallurgical testing. Results of these drilling programs were applied to the current Mineral Resource Estimate.

25.4 Mineral Processing and Metallurgical Testing

First Vanadium Corp. has commissioned a laboratory testing program to develop a metallurgical process for the Carlin Vanadium Project. The test work has mostly recently focused on atmospheric pre-acification producing a slurry feed to an autoclave using high temperature pressure oxidation. This is followed by a solvent extraction / precipitation step to recover a saleable vanadium product. Testing is ongoing and to date has resulted in recent variability studies that have been performed on both oxidized and un-oxidized resource samples of varying grade. The results showed 92% to 98% of vanadium is recovered into the leach solution. This is followed by solvent extraction and precipitation recovers 96.2% to 96.9% of the soluble vanadium into ammonium metavandate. Based on current laboratory data this suggests an overall vanadium recovery of 85% would be appropriate for use in resource estimation purposes.

25.5 Mineral Resource Estimate

SRK has constructed a Mineral Resource estimation for the Carlin Vanadium deposit based on the current exploration database of 216 drillholes. The grade estimation includes the primary metal of vanadium and a minor component of zinc. Grade shells were constructed to constrain elevated areas of mineralization for the vanadium. A detailed lithological model was constructed by SRK however, the lithologic types were not used to constrain the grade estimation. A three-pass search strategy was employed with each sequential pass using longer search distances. A dynamic search orientation was used which follows the continuity of mineralization for vanadium. The grade estimation was validated using four methods and showed good results. The Mineral Resource is classified as Indicated and Inferred based largely on the average drillhole spacing. The results of the Mineral Resource estimation are reported within a Whittle Pit shell constructed using potential open pit mine design and production parameters. The pit confined Mineral Resources are reported at an 0.3% V_2O_5 cut-off grade. They include: Indicated Mineral Resources of 25 Mt with 0.62% V_2O_5, and Inferred Mineral Resources of 7 Mt with 0.52% V_2O_5.

25.6 Mineral Reserve Estimate

A prefeasibility study is required to demonstrate the economic merit of mineral resources in order for their conversion to reserve. At this time, no such study has been completed and therefore the Carlin Vanadium project currently has no reserves.

25.7 Mining Methods

This work has not been conducted and is not required for this report.

25.8 Recovery Methods

This work has not been conducted and is not required for this report.

25.9 Project Infrastructure

This work has not been conducted and is not required for this report.

25.10 Environmental Studies and Permitting

There are no potential environmental liabilities related to historical surface disturbance or any related reclamation obligations. Historical drill access roads and drill sites were left as constructed, as was the standard industry practice at the time.

Current environmental liabilities at the Project are limited to road and drill pad construction from the 2017-2018 drilling programs. Reclamation of disturbance related to these activities is bonded with the U.S. Department of the Interior (DOI) Bureau of Land Management (BLM).

Baseline environmental studies were completed as part of the Plan of Operations permit application submitted to the BLM, for future disturbance up to 100 acres. The exploration drilling was completed under a simpler Notice of Intent, with allowed disturbance up to 5 acres. Environmental, permitting, and community impact studies were not required for the mineral resource estimate reported herein.

25.11 Capital and Operating Costs

This work has not been conducted and is not required for this report.

25.12 Economic Analysis

This work has not been conducted and is not required for this report.

25.13 Foreseeable Impacts of Risks

The Carlin Vanadium Project has a secure and adequate land position, and the Mineral Resource Estimate has been defined with a combination of recent core and RC drilling and historical drilling. Permitting for additional development was in progress at the time this report was published, as well as metallurgical testing. The main indicators for further development of this Project are positive, and known risks are minimal.

26 Recommendations

26.1.1 Property Description and Ownership

The mineral resource estimate contained on the current land package is of sufficient size and quality to continue development to prefeasibility level. Acquisition of adjacent property may have upside potential for exploration of V_2O_5 mineralization.

26.1.2 Geology and Mineralization

Topographic surveys and geologic outcrop mapping have been completed for the current land package. The regional and local geology is well understood, as are controls on vanadium enrichment. No additional geologic surveys are necessary on the current land package.

26.1.3 Status of Exploration, Development and Operations

The recent drilling programs provided sample material to confirm historical drilling results and run metallurgical testwork. The classification of the current Mineral Resource could be upgraded with additional drilling, as described below.

As the current resource is substantial and of good quality, it is justifiable and SRK recommends advancing the project through an economic study. The more prudent approach would be through a Preliminary Economic Assessment (PEA). The metallurgical flowsheet should be finalized prior to the PEA. The cost of the PEA is estimated at US$300,000 (~CAN$400,000). Since the current resource is substantial with a high percentage of Indicated, the Company has the option to advance the project directly to a pre-feasibility study at an estimated cost of US$1,000,000 (~CAN$1,035,000)

As there is obvious opportunity to expand the size of the deposit and resource cost effectively, a drill program is recommended in four areas with the aim to upgrade Inferred resources to Indicated and further expand the deposit. The program, estimated to cost US$650,000 (~CAN$880,000), should include 14,000 ft (4,270 m) of reverse circulation and diamond core drilling in 45 holes. This program could be considered prior to a Prefeasibility with the results further benefiting the project’s economic case. Approximately 30% of this drill program could be done on the private fee simple ground without further permitting requirements. The remainder of the drill program would require the granting of the Plan of Operation permit which has been applied for.

A geotechnical study for pit slope angle has not been completed. Due to the weak and friable nature of the material and relatively shallow proposed pit depths, this work may not be required, as the pit slope angle may be limited to the angle of repose.

26.1.4 Mineral Processing and Metallurgical Testing

Based on the preliminary metallurgical testwork response further process testing of the Carlin Vanadium Project is justified. The recommended method for technical advancement of vanadium processing for this project is to pursue pressure oxidation and solvent extraction. Additional laboratory study is required to define process conditions and the operating flowsheet prior to conducting any related economic study. The planned future testwork to develop a flowsheet and better define the metallurgy is estimated to be US$150,000 (~CAN $200,000).

26.1.5 Mineral Resource Estimate

The resources of the Carlin Vanadium Property are classified as Indicated and Inferred based primarily on the average drillhole spacing. All resources supported by drilling with an average spacing of 200 ft or less were classified as Indicated Mineral Resources. Infill drilling in areas with Inferred mineral resources would increase the classification to Indicated and add to the potential Mineral Reserves. When any future resource drilling programs are completed, an updated Mineral Resource Estimate would be required.

The current resource is limited to V_2O_5. If silver and/ or zinc are present in recoverable concentrations, they could add value to the Project.

26.1.6 Mineral Reserve Estimate

The economic inputs to define a Mineral Reserve Estimate would be included in a prefeasibility study. Detailed mineral processing studies were in progress at the time this report was published. Mining methods, infrastructure needs, and other components would be evaluated as part of a prefeasibility study.

26.1.7 Mining Methods

Mining scenarios have not been evaluated in detail for this report. A conventional open-pit truck and shovel mining method would be appropriate for the Project.

26.1.8 Recovery Methods

Recovery methods would be a component of a PEA or prefeasibility study.

26.1.9 Project Infrastructure

Infrastructure needs to develop the Project include:

- Road improvements;
- Water supply;
- Power supply;
- Processing plant; and
- Tailings impoundment and waste rock storage facilities.

Detailed studies for these infrastructure components and others would be included in a prefeasibility study.

26.1.10 Environmental Studies and Permitting

A Plan of Operations Permit application was in process at the time of publication. This permit would allow First Vanadium to further develop the property. Required information for the permit application would include baseline environmental studies required by federal, state, and local authorities, which have been done.

26.2 Recommended Work Program Costs

Table 26-1: Summary of Costs for Recommended Work for a PEA

Discipline	Program Description	Cost (US$)	No Further Work is Recommended Reason:
Property Description and Ownership	**Consider Acquisition of Land West of Current Property boundary**	**(dependent on negotiations)**	
Geology and Mineralization		--	Current land package has detailed geologic mapping and topographic survey
Mineral Processing and Metallurgical Testing	Solvent Extraction and Beneficiation testing	150,000	
Mineral Reserve Estimate	Apply costs from mining methods, site layout, process flow sheet, and infrastructure requirements	40,000	
Mining Methods	Trade-off study for contractor vs. owner-operator costs for conventional open pit	20,000	
Recovery Methods	Plant Design and flowsheet	100,000	
Project Infrastructure	Water and power studies, site layout, geotechnical studies, infrastructure design	50,000	
Environmental Studies and Permitting		--	Plan of Operations Permit Application completed
Capital and Operating Costs	Costs estimates for infrastructure, equipment, and operating costs	50,000	
Economic Analysis	Economics including market studies and contracts	40,000	
Total US$	**Required work for PEA**	**450,000$**	

Source: SRK, 2019

Table 26-2: Detailed Costs for Additional Drilling

Item	Quantity	Cost (US$)
Road Upgrades and Sumps	3.6 km	80,000
RC Drilling - footage with Mob	11,000 ft	200,000
RC Drilling - consumables, hours		75,000
DDH Drilling - footage with Mob	3,000 ft	80,000
DDH Drilling - consumables, hours		90,000
Downhole Surveys	45	10,000
Assays (with Std, Blk, Dup)	2,500	80,000
Geologist	1.5 month	20,000
Travel, Truck, Room & Board		15,000
Total		**$650,000**

Source: First Vanadium, 2019

Table 26-3 summarizes the costs for recommended work programs.

Table 26-3: Summary of Costs for Recommended Work for a PFS

Discipline	**Program Description**	**Cost (US$)**	**No Further Work is Recommended Reason:**
Property Description and Ownership	**Consider Acquisition of Land West of Current Property boundary**	**(dependent on negotiations)**	
Geology and Mineralization		--	Current land package has detailed geologic mapping and topographic survey
Mineral Processing and Metallurgical Testing	Solvent Extraction and Beneficiation testing	150,000	
Mineral Resource Estimate	Update MRE with additional drilling	50,000	
Mineral Reserve Estimate	Apply detailed costs from mining methods, site layout, process flow sheet, and infrastructure requirements	50,000	
Mining Methods	Trade-off study for contractor vs. owner-operator costs for conventional open pit	30,000	
Recovery Methods	Plant Design and Circuit	320,000	
Project Infrastructure	Water and power studies, site layout, geotechnical studies, detailed infrastructure design	150,000	
Environmental Studies and Permitting		--	Plan of Operations Permit Application completed
Capital and Operating Costs	Detailed cost estimates for infrastructure, equipment, and operating costs	200,000	
Economic Analysis	Economics including market studies and contracts	50,000	
Total US$	**Required work for PFS**	**1,000,000$**	

Source: SRK, 2019

27 References

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28 Glossary

The Mineral Resources and Mineral Reserves have been classified according to CIM (CIM, 2014). Accordingly, the Resources have been classified as Measured, Indicated or Inferred, the Reserves have been classified as Proven, and Probable based on the Measured and Indicated Resources as defined below.

28.1 Mineral Resources

A **Mineral Resource** is 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.

An **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

28.2 Mineral Reserves

A **Mineral Reserve** is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study.

A **Probable Mineral Reserve** is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

28.3 Definition of Terms

The following general mining terms may be used in this report.

Table 28-1: Definition of Terms

Term	Definition
Assay	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG)	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Footwall	The underlying side of an orebody or stope.
Gangue	Non-valuable components of the ore.
GNSS	Global Navigation Satellite System- includes GPS.
GPS	Global Positioning System, a satellite network for locating points on Earth's surface.
Grade	The measure of concentration of gold within mineralized rock.
Hangingwall	The overlying side of an orebody or slope.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous	Primary crystalline rock formed by the solidification of magma.
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.
Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological	Geological description pertaining to different rock types.
LoM Plans	Life-of-Mine plans.
LRP	Long Range Plan.
Material Properties	Mine properties.
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease	A lease area for which mineral rights are held.
Mining Assets	The Material Properties and Significant Exploration Properties.

Term	Definition
Ongoing Capital	Capital estimates of a routine nature, which is necessary for sustaining operations.
Ore Reserve	See Mineral Reserve.
Pillar	Rock left behind to help support the excavations in an underground mine.
RoM	Run-of-Mine.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Shaft	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore and waste.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Stope	Underground void created by mining.
Stratigraphy	The study of stratified rocks in terms of time and space.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulfide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening	The process of concentrating solid particles in suspension.
Total Expenditure	All expenditures including those of an operating and capital nature.
Variogram	A statistical representation of the characteristics (usually grade).

28.4 Abbreviations

The following abbreviations may be used in this report.

Table 28-2: Abbreviations

Abbreviation	Unit or Term
A	ampere
AA	atomic absorption
A/m^2	amperes per square meter
ANFO	ammonium nitrate fuel oil
Ag	silver
Au	gold
AuEq	gold equivalent grade
°C	degrees Centigrade
CCD	counter-current decantation
CIL	carbon-in-leach
CoG	cut-off grade
cm	centimeter
cm^2	square centimeter
cm^3	cubic centimeter
cfm	cubic feet per minute
ConfC	confidence code
CRec	core recovery
CSS	closed-side setting
CTW	calculated true width
°	degree (degrees)
dia.	diameter
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
ft	foot (feet)
ft^2	square foot (feet)

Abbreviation	Unit or Term
ft^3	cubic foot (feet)
g	gram
gal	gallon
g/L	gram per liter
g-mol	gram-mole
gpm	gallons per minute
g/t	grams per tonne
ha	hectares
HDPE	Height Density Polyethylene
hp	horsepower
HTW	horizontal true width
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
IFC	International Finance Corporation
ILS	Intermediate Leach Solution
kA	kiloamperes
kg	kilograms
km	kilometer
km^2	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kt/d	thousand tonnes per day
kt/y	thousand tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
kWh/t	kilowatt-hour per metric tonne
L	liter
L/sec	liters per second
L/sec/m	liters per second per meter
lb	pound
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LOI	Loss On Ignition
LoM	Life-of-Mine
m	meter
m^2	square meter
m^3	cubic meter
masl	meters above sea level
MARN	Ministry of the Environment and Natural Resources
MDA	Mine Development Associates
mg/L	milligrams/liter
mm	millimeter
mm^2	square millimeter
mm^3	cubic millimeter
MME	Mine & Mill Engineering
Moz	million troy ounces
Mt	million tonnes
MTW	measured true width
MW	million watts
m.y.	million years
NGO	non-governmental organization
NI 43-101	Canadian National Instrument 43-101
OSC	Ontario Securities Commission
oz	troy ounce
%	percent
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution

Abbreviation	Unit or Term
PMF	probable maximum flood
ppb	parts per billion
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SEC	U.S. Securities & Exchange Commission
sec	second
SG	specific gravity
SPT	standard penetration testing
st	short ton (2,000 pounds)
t	tonne (metric ton) (2,204.6 pounds)
t/h	tonnes per hour
t/d	tonnes per day
t/y	tonnes per year
TSF	tailings storage facility
TSP	total suspended particulates
µm	micron or microns
V	volts
VFD	variable frequency drive
W	watt
XRD	x-ray diffraction
y	year

Appendices

Appendix A: Certificates of Qualified Persons

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CERTIFICATE OF QUALIFIED PERSON

I, Brooke Miller Clarkson, CPG do hereby certify that:

1. I am a Senior Consultant of SRK Consulting (U.S.), Inc., 5250 Neil Road, Reno, Nevada 89502.
2. This certificate applies to the technical report titled “NI 43-101 Technical Report, Carlin Vanadium Project, Carlin, Nevada” with an Effective Date of January 31, 2019 (the “Technical Report”).
3. I graduated with a degree in Bachelor of Arts degree in Geology from Lawrence University in 2002. In addition, I have obtained a Master of Science degree in Geological Sciences from The University of Oregon in 2004. I am a Certified Professional Geologist of the American Association of Professional Geologists. I have worked as a Geologist for a total of 12 years since my graduation from university. My relevant experience includes mining and exploration geology, data analysis and geologic modeling.
4. I have read the definition of “qualified person” set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
5. I visited the Carlin property on September 11, 2018 for 1 days
6. I am responsible for permitting, history, and geology Sections 4-12, 20, 23, and 24, and portions of Sections 1, 25 and 26.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101. I have not had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is.
8. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
9. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 9th Day of April, 2019.

“Signed”

Brooke Miller Clarkson, CPG

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CERTIFICATE OF F. WRIGHT, P.ENG.

I, Frank R. Wright, P.Eng., of Delta, BC, do hereby certify that:

1. I am currently employed as a Metallurgical Engineer with F. Wright Consulting Inc. with an office at #45-10605 Delsom Cr. Delta BC, Canada V4C 0A4;
2. This certificate applies to the technical report titled "NI43 101 Technical Report Carlin Vanadium Project", with an effective date of January 31, 2019, (the "Technical Report") prepared for First Vanadium Corp. ("the Issuer");
3. I am a graduate of University of Alberta, in Edmonton, AB Canada with a Bachelor of Science in Metallurgical Engineering in 1979, and from Simon Fraser University in Burnaby, BC Canada with a Bachelor of Business Administration in 1983. I am a member in good standing with the Engineers and Geoscientists British Columbia (License #15747), and a member of the Canadian Institute of Mining and Metallurgy. I have continuously practiced my profession in the areas of hydrometallurgy, environmental, and mineral process engineering since 1979, as an employee of various resource companies and consulting firms. Since 1998, I have been the principal and self-employed consultant with F. Wright Consulting Inc., primarily providing services, including the co-authoring of technical reports for junior and mid-tier mineral exploration and mining firms.
4. I have read the definition of "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101;
5. I have not visited the Carlin Vanadium Property;
6. I am responsible for Section 13 and related portions in Sections 1, 25, and 26 of the Technical Report;
7. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
8. I have not had prior involvement with the property that is the subject of the Technical Report;
9. I have read the NI 43-101 guidelines, and the sections of the Technical Report for which I am responsible has been prepared in compliance with NI 43-101 and Form 43-101F1;
10. As of the effective date of the Technical Report and the date of this certificate, to the best of my knowledge, information and belief, this Technical Report in context to the sections for which I am responsible contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: January 31, 2019
Signing Date: April 9, 2019

F. Wright, P.Eng.

"signed"

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F. Wright, P.Eng.

Principal

F. Wright Consulting Inc.

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CERTIFICATE OF QUALIFIED PERSON

I, Bart A. Stryhas PhD, CPG # 11034, do hereby certify that:

1. I am a Principal Associate Resource Geologist of SRK Consulting (U.S.), Inc., 1125 Seventeenth Street, Suite 600, Denver, CO, USA, 80202.
2. This certificate applies to the technical report titled "NI 43-101 Technical Report, Carlin Vanadium Project, Carlin, Nevada" with an Effective Date of January 31, 2019 (the "Technical Report").
3. I graduated with a Doctorate degree in Structural Geology from Washington State University in 1988. In addition, I have obtained a Master of Science degree in Structural Geology from the University of Idaho in 1985 and a Bachelor of Arts degree in Geology from the University of Vermont in 1983. I am a current member of the American Institute of Professional Geologists. I have worked as a Geologist for a total of 31 years since my graduation from university. My relevant experience includes minerals exploration, mine geology, project development and resource estimation. I have conducted resource estimations since 1988 and have been involved in technical reports since 2004.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Carlin property on February 10, 2010 for 1 day.
6. I am responsible for mineral resource estimation Sections 14, and portions of Sections 1, 25 and 26 of the Technical Report.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101
8. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is a historic Mineral Resource estimation in 2010.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 9th Day of April, 2019.

"Signed"

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Bart A. Stryhas PhD, CPG

Appendix B: Carlin Vanadium Individual Claims

Claim Name	BLM Serial Number	Lead Serial Number	Claimant Name	Location Date	Type	Expiration Date
FVAN 1	NMC1185385	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 2	NMC1185386	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 3	NMC1185387	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 4	NMC1185388	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 5	NMC1185389	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 6	NMC1185390	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
FVAN 7	NMC1185391	NMC1185385	Copper One USA, Inc.	Nov 19, 2018	Lode	Aug 31, 2019
E100	NMC1185570	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E101	NMC1185571	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E102	NMC1185572	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E103	NMC1185573	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E104	NMC1185574	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E105	NMC1185575	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E106	NMC1185576	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E107	NMC1185577	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E108	NMC1185578	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E109	NMC1185579	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E110	NMC1185580	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E111	NMC1185581	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E112	NMC1185582	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E113	NMC1185583	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E114	NMC1185584	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E115	NMC1185585	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E116	NMC1185586	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E117	NMC1185587	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E118	NMC1185588	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E119	NMC1185589	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E120	NMC1185590	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E121	NMC1185591	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E122	NMC1185592	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E123	NMC1185593	NMC1185570	Copper One USA, Inc.	Nov 06, 2018	Lode	Aug 31, 2019
E124	NMC1185594	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E125	NMC1185595	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E126	NMC1185596	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E127	NMC1185597	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E128	NMC1185598	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E129	NMC1185599	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E130	NMC1185600	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E131	NMC1185601	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E132	NMC1185602	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E133	NMC1185603	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E134	NMC1185604	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
E135	NMC1185605	NMC1185570	Copper One USA, Inc.	Nov 05, 2018	Lode	Aug 31, 2019
FVAN 10	NMC1185608	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 11	NMC1185609	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 12	NMC1185610	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 13	NMC1185611	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 14	NMC1185612	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 15	NMC1185613	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 16	NMC1185614	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 17	NMC1185615	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 18	NMC1185616	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 19	NMC1185617	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019

Claim Name	BLM Serial Number	Lead Serial Number	Claimant Name	Location Date	Type	Expiration Date
FVAN 20	NMC1185618	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 21	NMC1185619	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 22	NMC1185620	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 23	NMC1185621	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 24	NMC1185622	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 25	NMC1185623	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 26	NMC1185624	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 27	NMC1185625	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 28	NMC1185626	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 29	NMC1185627	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 30	NMC1185628	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 31	NMC1185629	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 32	NMC1185630	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 33	NMC1185631	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 34	NMC1185632	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 35	NMC1185633	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 36	NMC1185634	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 37	NMC1185635	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 38	NMC1185636	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 39	NMC1185637	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 8	NMC1185606	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 9	NMC1185607	NMC1185570	Copper One USA, Inc.	Nov 20, 2018	Lode	Aug 31, 2019
FVAN 40	NMC1187381	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 41	NMC1187382	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 42	NMC1187383	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 43	NMC1187384	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 44	NMC1187385	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 45	NMC1187386	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 46	NMC1187387	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 47	NMC1187388	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 48	NMC1187389	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 49	NMC1187390	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 50	NMC1187391	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 51	NMC1187392	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 52	NMC1187393	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 53	NMC1187394	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 54	NMC1187395	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 55	NMC1187396	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 56	NMC1187397	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 57	NMC1187398	NMC1187381	Copper One USA, Inc.	Dec 10, 2018	Lode	Aug 31, 2019
FVAN 58	NMC1187399	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 59	NMC1187400	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 60	NMC1187401	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 61	NMC1187402	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 62	NMC1187403	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 63	NMC1187404	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 64	NMC1187405	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 65	NMC1187406	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 66	NMC1187407	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 67	NMC1187408	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 68	NMC1187409	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 69	NMC1187410	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 70	NMC1187411	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019

Claim Name	BLM Serial Number	Lead Serial Number	Claimant Name	Location Date	Type	Expiration Date
FVAN 71	NMC1187412	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 72	NMC1187413	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 73	NMC1187414	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
FVAN 74	NMC1187415	NMC1187381	Copper One USA, Inc.	Dec 09, 2018	Lode	Aug 31, 2019
BK-22	NMC821342	NMC821342	Golden Predator US Holding Corp	Sep 08, 2000	Lode	Aug 31, 2019
BK-23	NMC821343	NMC821342	Golden Predator US Holding Corp	Sep 08, 2000	Lode	Aug 31, 2019
BK-24	NMC821344	NMC821342	Golden Predator US Holding Corp	Sep 08, 2000	Lode	Aug 31, 2019
POT 1	NMC841816	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 10	NMC841825	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 11	NMC841826	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 12	NMC841827	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 13	NMC841828	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 14	NMC841829	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 15	NMC841830	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 16	NMC841831	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 17	NMC841832	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 18	NMC841833	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 19	NMC841834	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 2	NMC841817	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 20	NMC841835	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 21	NMC841836	NMC841816	Golden Predator US Holding Corp	Oct 21, 2002	Lode	Aug 31, 2019
POT 22	NMC841837	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 23	NMC841838	NMC841816	Golden Predator US Holding Corp	Oct 21, 2002	Lode	Aug 31, 2019
POT 24	NMC841839	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 25	NMC841840	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 26	NMC841841	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 27	NMC841842	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 28	NMC841843	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 29	NMC841844	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 3	NMC841818	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 30	NMC841845	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 31	NMC841846	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 32	NMC841847	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 33	NMC841848	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 34	NMC841849	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 35	NMC841850	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 36	NMC841851	NMC841816	Golden Predator US Holding Corp	Oct 20, 2002	Lode	Aug 31, 2019
POT 4	NMC841819	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 5	NMC841820	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 6	NMC841821	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 7	NMC841822	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 8	NMC841823	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
POT 9	NMC841824	NMC841816	Golden Predator US Holding Corp	Oct 18, 2002	Lode	Aug 31, 2019
BK-10	NMC844510	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-100	NMC844526	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-101	NMC844527	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-102	NMC844528	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-103	NMC844529	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-104	NMC844530	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-105	NMC844531	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-106	NMC844532	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-107	NMC844533	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-108	NMC844534	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019

Claim Name	BLM Serial Number	Lead Serial Number	Claimant Name	Location Date	Type	Expiration Date
BK-11	NMC844511	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-12	NMC844512	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-13	NMC844513	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-14	NMC844514	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-15	NMC844515	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-16	NMC844516	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-17	NMC844517	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-18	NMC844518	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-19	NMC844519	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-20	NMC844520	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-200	NMC844535	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-21	NMC844521	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-25	NMC844522	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-26	NMC844523	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-27	NMC844524	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-28	NMC844525	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-300	NMC844536	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-400	NMC844537	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-5	NMC844505	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-6	NMC844506	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-7	NMC844507	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-8	NMC844508	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019
BK-9	NMC844509	NMC844505	Golden Predator US Holding Corp	Dec 12, 2002	Lode	Aug 31, 2019