Gibellini Vanadium Project
Eureka County and Nye County, Nevada
NI 43-101 Technical Report on Mineral Resources

Prepared for:
Flying Nickel Mining Corp.

Effective Date:
27 September 2023

Prepared by:
Mr. Todd Wakefield, RM SME, MTS
Mr. Alan Drake, P.L.Eng., Wood

Project No.:
257772

CERTIFICATE OF QUALIFIED PERSON

Todd Wakefield, RM SME
Mine Technical Services Ltd
4110 Twin Falls Drive, Reno, NV, 89511

I, Todd Wakefield, RM SME, am employed as the Managing Partner and Principal Geologist with Mine Technical Services Ltd, with an office address at 4110 Twin Falls Drive, Reno, NV, 89511, USA.

This certificate applies to the technical report titled "Gibellini Vanadium Project, Eureka County, Nevada, NI 43-101 Technical Report on Mineral Resources" addressed to Flying Nickel Mining Corp. that has an effective date of 27 September, 2023 (the "Technical Report").

I am a Registered Member (RM) of the Society of Mining, Metallurgy, and Exploration (SME), registration number 4028798. I graduated from the University of Redlands with a Bachelor of Science degree in Geology in 1986, the Colorado School of Mines with a Master of Science degree in Geology in 1989, and the University of Alberta with a Citation in Applied Geostatistics in 2019.

I have practiced in my profession continuously since 1987. I have been directly involved in gold and base metal exploration and mining projects in the United States, Venezuela, Indonesia, Perú, and Mexico, and I have been involved in the evaluation of data quality, geologic modeling, resource modeling, and estimation for gold, base metal, and industrial mineral projects in North and South America, and the Asia Pacific.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101) for those sections of the Technical Report that I am responsible for preparing.

I visited the Gibellini property most recently on 9 June, 2021.

I am responsible for Sections 1.1 - 1.9, 1.11 - 1.15, 2 - 12, and 14 - 27 of the Technical Report.

I am independent of Flying Nickel Mining Corp. as independence is described by Section 1.5 of NI 43–101.

I have previously co-authored the following technical reports on the Gibellini Project:

- Gibellini Vanadium Project, Eureka County, Nevada, NI 43-101 Technical Report on Preliminary Economic Assessment Update, with an effective date of 30 August 2021, prepared for Silver Elephant Mining Corp.
- NI 43-101 Technical Report Gibellini Vanadium Project Nevada, USA with an effective date of 8 October 2008, prepared for RMP Resources Corporation
- NI 43-101 Technical Report Gibellini Property, Eureka County, Nevada, with an effective date of 18 April 2007, prepared for RMP Resources Corporation.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: 13 February 2024

"signed"

Todd Wakefield, RM SME

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CERTIFICATE OF QUALIFIED PERSON

Alan Drake, P.L.Eng.
Wood Canada Limited
400-111 Dunsmuir Street,
Vancouver, British Columbia V6B 5W3

I, Alan Drake, P.L.Eng., am employed as the Manager, Process Engineering with Wood Canada Limited ("Wood"), with a business address at 400-111 Dunsmuir Street, Vancouver, British Columbia V6B 5W3.

This certificate applies to the technical report entitled "Gibellini Vanadium Project, Eureka County, Nevada, NI 43-101 Technical Report on Mineral Resources" addressed to Flying Nickel Mining Corp. that has an effective date of 27 September, 2023 (the "Technical Report").

I am a Professional Licensee Engineering with Engineers and Geoscientists British Columbia since May 2019. I was professionally registered with the Engineering Council of South Africa from 2009 to 2020. I graduated from the Technikon Witwatersrand with a National Higher Diploma in Extraction Metallurgy in 1993. I have practiced my profession for 29 years. I have been directly involved in metallurgical plant operations, process design, construction and commissioning of minerals processing and hydrometallurgical facilities for base and precious metals.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("NI 43–101") for those sections of the Technical Report that I am responsible for preparing.

I have not visited the Gibellini Project.

I am responsible for Sections 1.1, 1.2, 1.9, 1.10, 1.14, 1.15; Sections 2; Section 3; Sections 12.4.2, 12.5, Section 13; Sections 25.1, 25.5, Sections 26.1, 26.2.4; and Section 27 of the Technical Report.

I am independent of Flying Nickel Mining Corp. as independence is described by Section 1.5 of NI 43–101.

My prior involvement in the Gibellini property involved the preparation and co-authorship of the following NI 43-101 technical reports:

I was a co-author and took responsibility for the metallurgical and mineral process sections of the technical report titled "Gibellini Vanadium Project, Eureka County, Nevada, NI 43-101 Technical Report on Preliminary Economic Assessment Update" with an effective date of 30 August 2021 that was prepared for Silver Elephant Mining Corp.

I have read NI 43–101, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: 13 February 2024

"signed"

Alan Drake, P.L.Eng.

IMPORTANT NOTICE

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1.0 SUMMARY

1.1 Introduction

Wood Canada Limited (Wood) and Mine Technical Services Ltd (MTS) were requested to prepare an independent technical report (the Report) to support updated mineral resource estimates (the Project) on the Gibellini Vanadium Property (the Property) for Flying Nickel Mining Corp. (Flying Nickel). The Property is located within Eureka County, Nevada.

The Project consists of the Gibellini, Louie Hill and Bisoni–McKay vanadium deposits. The Property consists of the Campbell Claims and the Nevada Vanadium LLC Claims.

1.2 Terms of Reference

The Report was prepared to support the disclosure of mineral resource estimates by Flying Nickel.

AMEC E&C Services Inc. and Amec Foster Wheeler E&C Services Inc. (collectively AMEC), are predecessor companies to Wood. Where work was specifically undertaken by AMEC, that name is used in the Report. For all other purposes in this Report, the name Wood is used to refer to the current and predecessor AMEC/Amec Foster Wheeler companies.

A preliminary assessment was completed by AMEC in 2008 (2008 PA), followed by a feasibility study in 2011 (2011 Feasibility Study). This work was undertaken for RMP Resources Corporation (RMP), which became American Vanadium Corporation (American Vanadium). A PEA was completed for Prophecy Development Corp. (Prophecy) in 2018. While none of these studies are considered by the Report authors as current, some elements of the studies, such as metallurgical testwork and assumptions regarding mining and mineral processing methods, were used as inputs to establish constraining mining surfaces and inputs to the cut-off grade in support of reasonable prospects for eventual economic extraction (RPEEE). Mining, processing, and general and administrative operating costs were updated to 25 September 2023.

Monetary units are in US dollars (US$). Unless otherwise specified, measurement units are reported in US Customary units. Mineral Resources were prepared in accordance with 2019 edition of Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM, 2019). The Mineral Resources are reported using the 10 May 2014 edition of the CIM's Definition Standards for Mineral Resources and Mineral Reserves (the 2014 CIM Definition Standards).

1.3 Project Setting

The Property is situated on the southeast flank of the Fish Creek Range in the Fish Creek Mining District, about 25 miles south of Eureka, Nevada and is accessed by dirt road extending westward from State Route 379.

The 24.5 miles leading to the Property is either Federal, State or County-owned. The road can be paved, improved gravel or two-track dirt. The three miles of road access from County Road M-104 to the Property is a two-track dirt road; however, it can be upgraded. This upgraded road would be the principal method of transport for goods and materials in and out of the Property.

The climate is typical of the dry Basin-and-Range conditions of northern Nevada. Exploration is possible year-round, though snow levels in winter and wet conditions in late autumn and in spring can make travel on dirt and gravel roads difficult. It is expected that any future mining operations will be able to be conducted year-round.

Nevada has a long mining history and a large resource of equipment and skilled personnel. Local resources necessary for the exploration and possible future development and operation of the Project are located in Eureka. Some resources would likely have to be brought in from the Elko and Ely areas.

A 69 kV power line is located approximately seven miles north of the Property and services Calibre Mining Corp's Pan Mine. Exploration activities have been serviced by diesel generator as required, and this approach is likely to be used on any recommencement of exploration activities.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

1.4.1 Ownership

Nevada Vanadium Mining Corp (NVMC) holds a 100% interest in the mineral claims by way of lease agreements and staked claims. Claims are in the name of NVMC's wholly-owned Nevada subsidiary, Nevada Vanadium LLC (Nevada Vanadium) (formerly Vanadium Gibellini Company LLC (Vanadium Gibellini)).

In August 2020, Nevada Vanadium and Silver Elephant concluded an agreement with Stina Resources Nevada Ltd. (Stina Resources) and Cellcube Energy Storage Systems Inc (Cellcube Energy), to purchase a set of claims, the Bisoni–McKay claims, which are situated adjacent the Gibellini claims.

1.4.2 Mineral Tenure

The Property mineral tenure include:

- 40 unpatented lode mining claims situated in Eureka County, Nevada. The owner of record is Jacqualeene Campbell, successor to Janelle Dietrich (deceased) and the unpatented lode mining claims (Campbell Claims) are leased to Nevada Vanadium.
- 547 unpatented lode mining claims situated in Eureka County, Nevada. The owner of record is Nevada Vanadium LLC. The Nevada Vanadium claims comprise a number of different claim blocks, including the PCY claims, NV claims, Stina (Bisoni–McKay) claims, and the 2018 MSM replacement claims (now VDT claims).

Unpatented mining claims are kept active through payment of a maintenance fee due by 1 September of each year. There has been no legal survey of the Property claims. Under Nevada law, each unpatented claim is marked on the ground, and does not require survey.

1.4.2.1 Campbell Claims

The Campbell Lease (formerly Dietrich) over the Campbell Claims has a 10-year period, commencing on 22 June, 2017, unless terminated earlier under provisions in the lease agreement. The lease can be extended for a second 10-year term. If mining operations are underway at either the end of the first- or second- year term, the lease will continue for additional one-year terms for as long as the mining operations continue. If no active mining is underway on the Campbell Claims, but the claim area is being used to support mining operations on other claims, then the lease will continue for as long as operations are underway.

1.4.2.2 2018 MSM Replacement Claims

The 2018 MSM replacement claims are located on ground that was previously covered by a series of unpatented claims that were held by Richard A. McKay, Nancy M. Minoletti, and Pamela S. Scutt (the McKay claims). The MSM claims were originally subject to a 2017 lease agreement with Prophecy; however, in 2018, each of these claims was declared abandoned and cancelled by the Bureau of Land Management (BLM) because certain statutory obligations had not been met by the claim holders. Prophecy staked new claims to cover the open ground previously covered by the MSM claims. A royalty agreement was established to replace the previous lease agreement for the McKay Claims (see Section 1.4.4.2 below).

1.4.3 Surface Rights

The Property is situated entirely on public lands that are administered by the BLM. No easements or rights of way are required for access over public lands. Rights-of-way may need to be acquired for future infrastructure requirements, such as pipelines and powerlines.

1.4.4 Royalties

1.4.4.1 Campbell Lease

The Campbell Lease contains both an advance royalty and a production royalty. Under the advance royalty provision, Nevada Vanadium is required to pay on the anniversary date of the execution of the lease, a sliding scale advance royalty as follows:

- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is below $7.00/pound during the preceding 12 months, $35,000 during the initial term and $50,000 during the additional term; or
- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is equal to or above $7.00/pound during the preceding 12 months, $10,000 x the average vanadium pentoxide price per pound, up to a maximum of $120,000 annually.

The advance royalty payments will continue until such time Nevada Vanadium begins payment of the production royalty. If the production royalty payable in any one year is less than the advance royalty that would otherwise be paid for that year, then Nevada Vanadium will pay the difference between the two amounts. All advance royalty payments, as well as the difference between the advance royalty payment made and the production royalty that would otherwise be due in such year, may be deducted as credits against Nevada Vanadium's future production royalty payments, provided that the credit will not be applied to payment of the difference between the production royalty paid during any year and the advance royalty that would otherwise be payable.

The Campbell Lease does not specifically set forth what events trigger the payment of the production royalty; the legal opinion provided notes that a reasonable interpretation is that payment of such a royalty would be due upon commencement of commercial mining operations. The production royalty requires Prophecy to pay a 2.5% net smelter return (NSR) until $3 million in payments is made. After that milestone is reached, the NSR falls to 2%.

Nevada Vanadium has the option to require Ms. Campbell to transfer title over all but four of the unpatented mining claims within the Campbell Claims at any time in exchange for US$1 million to be paid as an advance royalty or transfer payment.

The Gibellini mineral resource is almost entirely within the Campbell claims, and the Campbell Royalty will be payable on production. The advance royalty obligation and production royalty payable are not "affected, reduced or relieved" by the title transfer.

1.4.4.2 Battery Metals Royalty

On August 21st, 2021, NVMC entered into a royalty agreement with Silver Elephant Mining Corp. whereby it agreed to pay, in each quarter where the average V_2O_5 Vanadium Pentoxide Flake 98% Price per pound exceeds $12.00 per pound a royalty equal to: a) 2% of the returns (based on an agreed to formula) in respect of all mineral products produced from the Gibellini Property after commencement of commercial production; and b) in respect of coal, $2.00 per tonne of coal extracted from the royalty area. On January 14, 2022 Silver Elephant Mining Corp. assigned its right to this royalty to Oracle Commodity Holding Corp. (formerly Battery Metals Royalties Corp.).

This royalty was executed at the corporate parent level and was therefore not granted by either of the U.S. subsidiaries that own the mining claims and lease, VC Explorations LLC or Nevada Vanadium LLC. The royalty was not recorded in the real property records and does not encumber the 2018 MSM Replacement Claims/VDT Claims.

Under the advance royalty provision, upon commencement of "Commercial Production" from the "Gibellini Project," NVMC must pay $75,000 to the McKay claimants. Upon the sale of "all or any portion" of the 2018 MSM Replacement Claims to any third party, NVMC must pay the McKay claimants $50,000. In addition, no later than July 10 of each year during the term of the Royalty Agreement, NVMC must pay a sliding scale advance royalty as follows:

- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is below $7.00/pound during the preceding 12 months, $12,500; or
- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is equal to or above $7.00/pound during the preceding 12 months, $2,000 times the average vanadium pentoxide price per pound, up to a maximum of $28,000 annually.

The advance royalty payments will continue until such time as NVMC begins payment of the production royalty, provided, however, that if the production royalty payable in any year is less than the advance royalty otherwise payable for such year, then NVMC must pay the difference between such amounts. All advance royalty payments, as well as the difference between the advance royalty payment made and the production royalty that would otherwise be due in such year, may be deducted as credits against NVMC's future production royalty payments, provided that the credit will not be applied to payment of the difference between the production royalty paid during any year and the advance royalty that would otherwise be payable.

A small portion of the Gibellini mineral resource and the majority of the Louie Hill mineral resource are within the 2018 MSM replacement claims area, formerly the McKay Claims. The McKay claims royalty will be payable on production.

1.5 Water Rights

In 2022, Nevada Vanadium purchased Fish Creek Ranch and all of the water rights from the Fish Creek springs ("Fish Creek Water") owned by the ranch. The Fish Creek Water is currently permitted for irrigation purposes on Fish Creek Ranch, and diverted from a canal located in the SE¼ NW¼ of Sec. 8, Township 16N, Range 53E, MDB&M. In order to use the Fish Creek Water at the Project, Nevada Vanadium will be required to submit applications with the Nevada Division of Water Resources to change the place and manner of use of 650 gallons per minute (GPM) of the Fish Creek Water which is approximately 15% of the annual average flow of 4500 GPM.

1.6 Geology and Mineralization

The vanadium mineral deposits on the Property are examples of the "USGS Shale-Hosted Vanadium" deposit type. Vanadium-rich metalliferous black shales occur primarily in late Proterozoic and Phanerozoic marine successions. They typically contain high concentrations of organic matter, reduced sulfur, and a suite of metals including copper, molybdenum, nickel, platinum group elements (PGEs), silver, uranium, vanadium, and zinc.

The Property is located on the east flank of the southern part of the Fish Creek Range. The historical limestone-hosted Gibellini manganese–nickel mine and the Gibellini, Louie Hill and Bisoni–McKay shale hosted vanadium deposits are the most significant deposits in the district, and all occur within the Property boundary.

The vanadium-host shale unit ranges from 175 to >300 ft thick and overlies gray mudstone. The shale has been oxidized to a depth of about 100 ft. The oxidation state is classified as one of three oxide codes: oxidized, transitional, and reduced. Vanadium grade changes across these boundaries. The transitional zone reports the highest average vanadium grades, and this zone is interpreted to have been upgraded by supergene processes.

Mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes. In the oxidized zone, complex vanadium oxides occur in fractures in the sedimentary rocks including metahewettite ($CaV_6O_{16}{\cdot}H_2O$), bokite ($KAl_3Fe_6V_{26}O_{76}{\cdot}30H_2O$), schoderite ($Al_2PO_4VO_4{\cdot}8H_2O$), and metaschoderite ($Al_2PO_4VO_4{\cdot}6\text{-}8H_2O$). In the reduced sedimentary rocks, vanadium occurs in organic material (kerogen) made up of fine grained, flaky, and stringy organism fragments <15 µm in size.

1.7 History

There is no modern commercial vanadium production recorded from the Property.

1.7.1 Gibellini Manganese–Nickel Mine

The Gibellini manganese–nickel mine (also known as the Niganz manganese–nickel mine), located immediately northeast of the Gibellini deposit, was intermittently mined until the mid-1950s.

1.7.2 Gibellini–Louie Hill

Work completed on the Gibellini–Louie Hill area prior to Silver Elephant's involvement was undertaken by a number of companies, including the Nevada Bureau of Mines and Geology (NBMG, 1946), Terteling & Sons (Terteling; 1964–1965), Atlas Minerals Company (Atlas; 1969) TransWorld Resources Ltd (TransWorld; 1969), Noranda Inc. (Noranda; 1972–1975), and Inter-Globe Resources Ltd (Inter-Globe; 1989). Rocky Mountain Resources (RMP), later renamed to American Vanadium, conducted work from 2006–2011. No on-groundwork or exploration drilling has been conducted in the Gibellini area since 2011. Work conducted by these companies included geological mapping, surface and underground geochemical sampling, trenching, rotary, reverse circulation (RC) and core drilling, resource estimates, and metallurgical testing.

RMP completed a PA in 2008, and a feasibility study in 2011. Additional metallurgical testwork and closure column leach and attenuation studies were conducted in 2013 and 2014. All baseline studies for permitting were conducted in 2012–2015.

Prophecy acquired the Gibellini–Louie Hill area from American Vanadium in 2017. Prophecy completed no exploration or drilling activities after the Property acquisition. In 2018 a PEA was completed on the Gibellini and Louie Hill vanadium deposits (the 2018 PEA). Prophecy was renamed Silver Elephant in March, 2020.

Silver Elephant commissioned a PEA in 2021, based on proposed mining of the Gibellini and Louie Hill deposits. While none of the previous studies are considered current, some elements of the studies were used to establish RPEEE.

1.7.3 Bisoni–McKay

Work completed on the Bisoni–McKay area prior to Silver Elephant's involvement was undertaken by Union Carbide Corporation (Union Carbide; 1958–1959), Hecla Mining Company (Hecla; 1970s), TRV Minerals Corp. (TRV; 1981), Inter-Globe (1981), Vanadium International

(1993–2004) and Stina Resources (2005–2007). Work conducted by these companies included trenching, RC and core drilling, bulk sampling for heap leach testing, and mineral resource estimation.

1.8 Drilling and Sampling

1.8.1 Drilling

A total of 335 drill holes (about 73,424 ft) have been completed on the Property since 1946, comprising 21 core holes (5,800 ft), 180 rotary drill holes (30,642 ft; note not all drill holes have footages recorded) and 130 RC holes (36,982 ft).

Drill holes were geologically logged, and logging information collected could include, depending on the drill program, formation, lithology, rock color, alteration mineralogy, stain color, and oxide zone (oxidized, transition, un-oxidized).

Collar locations are sourced from a combination of digitization of locations on maps, original drill logs, and hand-held global positioning system (GPS) instrument readings.

No down-hole surveys are recorded. Most of the drill holes making up the mineral resource database are relatively short (98% of holes are less than 350 ft in length) and vertical, and so the qualified person (the QP) for the mineral resources does not consider the lack of down-hole surveys to be a significant concern. About half of the inclined drill holes at Bisoni–McKay are >300 ft in length and there is a risk that mineralized intercepts may have errors in their projected location because of the lack of down-hole surveys in the inclined drill holes.

There is no information available on the legacy drilling recoveries for Gibellini and Louie Hill. No information is available on the legacy RC drilling recoveries for Bisoni-McKay. Core recovery for the 2005 Stina Resources campaign at Bisoni-McKay ranged between 91 and 98%. Core recovery for the Gibellini and Louie Hill more recent drilling campaigns are considered by the QP as generally adequate, averaging 91.6%. The fine-grained and diffuse nature of mineralization would favor there being negligible grade bias caused by poor recovery.

Vertical intersections of mineralization are roughly approximate to the true mineralized thickness at Gibellini and Louie Hill. Inclined intersections of mineralization are roughly approximate to the true mineralized thickness at Bisoni–McKay.

RC samples were typically collected on 5 ft intervals. Core sampling was on nominal 5 ft intervals, but could range from 1–9 ft.

1.8.2 Sampling and Assay

Limited to no information is available regarding the laboratories used or the sample preparation and analytical methods for the early drill campaigns, and available assay data are from drill logs. Where known, independent analytical and assay laboratories included Union Assay Office Inc. (Union), Colorado School of Mines Research Institute (CSMRI), Skyline Laboratories (Skyline), Bondar Clegg, and ALS Chemex. The only known accreditations are for ALS Chemex, which, depending on the laboratory location, held ISO 9002 or ISO17025 accreditation for selected sample preparation or analytical techniques.

Where known, sample preparation procedures consisted of crushing to 70% passing 2 mm and pulverizing to 85% passing 75 µm. Analytical methods consisted of four-acid digestion on a 2.0 g subsample and ICP-AES finish for vanadium, and an additional 26- or 32-element suite, depending on the drill campaign. Gold, platinum, and palladium were determined by standard fire assay on a 30 g subsample. Select samples were assayed for uranium and selenium concentrations by x-ray fusion (XRF).

1.8.3 Specific Gravity

Specific gravity (SG) on 63 whole-core intervals from the Gibellini 2007 drilling campaign was determined by ALS Chemex using the wax-coated water immersion method.

1.8.4 Legacy Data Reviews

AMEC digitized existing legacy drill hole locations, surveys, logs and assays from paper maps, logs, and assay certificates to generate the initial Gibellini and Louie Hill databases. AMEC assembled all the data into a series of database tables (collar, survey, lithology, assay, and redox) in Access. The MTS QP compiled all legacy drill data for the Bisoni–McKay property into a series of database tables in Excel format. The MTS QP conducted data integrity checks of the Gibellini Project digital database (checking for overlapping intervals, data beyond total depth of hole, unit conversion, etc.) and concluded that the resource database is reasonably error-free and acceptable for use in resource estimation.

1.8.5 Quality Assurance and Quality Control

SRMs, blanks, and duplicates were inserted by RMP with routine drill samples during the 2007-2008 and 2010 drill programs to control assay accuracy and precision.

1.8.6 Databases

Available geological logging, collar survey, analytical data for the Gibellini and Louie Hill deposits were stored in an Access database that was migrated to a GeoSequel sample data management system in January 2021 by Silver Elephant personnel. Legacy data from Bisoni–McKay were compiled in Excel format by the MTS QP in January 2021 and merged into the Gibellini Project GeoSequel database by Silver Elephant personnel.

1.9 Data Verification

AMEC performed two data verification exercises, one in 2008, and a second during 2011, in support of technical reports on the Project. Both audits concluded that the data were generally acceptable for Mineral Resource estimation; however, restrictions on confidence classifications were made for some drill programs supporting Mineral Resource estimation at Gibellini and Louie Hill.

The MTS QP compiled all legacy drill data from the Bisoni–McKay property from original documents in January 2021. The MTS QP and Silver Elephant staff completed several data verification programs to confirm the data quality of the resource database. In the QP's opinion, the Bisoni–McKay resource database contains the best location, assay, and geology information available to Silver Elephant and is acceptable for resource estimation purposes. Because of data quality issues identified in the legacy drill data, the MTS QP assigned a maximum classification of Inferred to the Bisoni–McKay Mineral Resource estimate.

No on-ground work or exploration drilling has been conducted in the Gibellini area since 2011.

1.10 Metallurgical Testwork

Metallurgical testwork and associated analytical procedures were performed by recognized testing facilities, and the tests performed were appropriate to the mineralization type.

Samples selected for testing were representative of the various types and styles of mineralization at the Gibellini deposit. Samples were selected from a range of depths within the deposit. Sufficient samples were taken to ensure that tests were performed on sufficient sample mass.

Limited metallurgical testwork has been performed on mineralized material from Louie Hill.

Metallurgical recovery assumptions for the projected life of mine include:

- Gibellini: 60% for oxide, 70% for transition, and 52% for reduced material
- Louie Hill: 60% for oxide. 70% for transition, and 52% for reduced material

Scoping-level metallurgical testwork was carried out by Hazen Research on Bisoni–McKay samples in 2006. The purpose of the testwork was to examine potentially suitable front-end processing options that included magnetic separation, direct leaching, acid pugging and curing, and roasting experiments. The testwork results indicated a similar leach response and acid consumption to the equivalent Gibellini mineralization. Overall recovery indications for Bisoni–McKay at a scoping level of study were 65% for oxide, 56% for transition and 50% for reduced mineralization.

The Wood QP notes that commercial heap leaching of vanadium mineralization has not been done before. Nonetheless, heap leaching with solvent extraction (SX) recovery are common technologies in the mining industry. Column and pilot plant testing has demonstrated that heap leach technology can be successfully applied at Gibellini, with known and tested SX and precipitation processes applied to recover the vanadium to a final product. The Gibellini process is similar to uranium heap leach, SX and precipitation processes that have historical and current commercial application. In addition, there are notable examples of copper heap leach projects that use an acid-leach solution to mobilize the metal followed by metal recovery using SX and electrowinning.

1.11 Mineral Resource Estimation

Updated mineral resource estimates for the Gibellini, Louie Hill, and Bisoni–McKay deposits are the responsibility of the MTS QP. The MTS QP personally prepared the Bisoni–McKay mineral resource models and updated the current estimate using an updated cut-off based on current costs and vanadium price, and an updated constraining pit shell. The MTS QP reviewed the mineral resource models for Gibellini and Louie Hill that were prepared by Mr. E.J.C. Orbock III, RM SME and Mr. Mark Hertel, RM SME (Principal Geologists at AMEC at the time the Gibellini and Louie Hill estimates were performed) respectively, and the MTS QP prepared updated mineral resource estimates for those deposits using cut-offs and constraining pit shells based on updated operating costs and vanadium price.

1.11.1 Gibellini

Geological models were developed by American Vanadium geologists, and included oxidation domains and a grade envelope. Assays were composited along the trace of the drill hole to 10 ft fixed lengths; oxidation boundaries were treated as hard during composite construction.

Tonnage factors were calculated from specific gravity measurements and assigned to the blocks based on oxidation domain.

Individual Gibellini assays were not capped, but three high-grade composites greater than 1.5% V_2O_5 were capped at 1.5% V_2O_5. All composites were allowed to interpolate grade out to 110 ft and capped composites greater than 1% V_2O_5 to 1% V_2O_5 beyond 110 ft.

Variography, using correlograms, was performed to establish anisotropy ellipsoids and the nugget value.

Only composites from RMP, Noranda, Inter-Globe, and Atlas drill campaigns were used for grade interpolation at Gibellini. Hard contacts were maintained between oxidation domains: oxide blocks were estimated using oxide composites; transition blocks were estimated using transition composites; and reduced blocks were estimated using reduced composites. A range restriction of 110 ft was placed on composites with grades greater than 1% V_2O_5 for each of the domains.

Ordinary kriging (OK) was used to estimate vanadium grade into blocks previously tagged as being within the 0.05% V_2O_5 grade domain solid. Two kriging passes were employed to interpolate blocks with vanadium grades.

Blocks for grade that were outside of the grade shell were interpolated using only composites external to the 0.05% V_2O_5 grade shell. These composites generally contain values of <0.05% V_2O_5. Mine block tabulation indicates that there were no oxide or transition blocks above the resource cut-off grades and only minor reduced material that was classified as Inferred.

No potential biases were noted in the model from the validations performed.

In the opinion of the QP, the continuity of geology and grade is adequately known for Measured and Indicated Mineral Resources for grade interpolation and mine planning. Classification of Measured Mineral Resources broadly corresponds to a 110 x 110 ft drill grid spacing, Indicated Mineral Resources a 220 x 220 ft drill grid spacing, and Inferred Mineral Resources required a composite within 300 ft from the block.

1.11.2 Louie Hill

Geological models were developed by American Vanadium geologists as a grade envelope that differentiated mineralized from non-mineralized material.

Assays from Louie Hill were composited down-the-hole to 20 ft fixed lengths; no oxidation boundaries were interpreted, and the composite boundaries were treated as "hard" between mineralized and non-mineralized domains.

As no density measurements have been completed to date on mineralization from Louie Hill, the Gibellini density data were used in the Louie Hill estimate as these deposits are very similar in lithology and mineralization. No grade capping was employed for Louie Hill.

Variography, using correlograms, was performed to establish anisotropy ellipsoids and the nugget value.

Ordinary kriging was used to estimate V_20_5% grades into blocks domain tagged as mineralized and non-mineralized. A range restriction of 200 ft was placed on grades greater than 0.15% V_2O_5, for blocks within the non-mineralized domain. Two kriging passes were employed to interpolate grades into the mineralized domain blocks. Blocks that contained both percentages of mineralized and non-mineralized material were weight averaged for a whole block V_2O_5% grade.

No potential biases were noted in the model from the validations performed.

Because of the uncertainty in the drilling methods, sample preparation, assay methodology, and the slight grade bias of the Union Carbide's assays as compared to the American Vanadium assays, the classification of Louie Hill resource blocks were limited to the Inferred Mineral Resource category.

1.11.3 Bisoni–McKay

Geological interpretations were developed by Stina Resources geologists. The MTS QP used those interpretations, together with grade and oxidation-type polygons to construct a geological model. The grade and oxidation polygons were linked to create 3D surfaces or domain solids to code the block model.

The MTS QP composited assays to 20 ft fixed lengths. Capping was not considered to be warranted for the Bisoni–McKay assays. No density data are available for the Bisoni–McKay area. The MTS QP assigned density to the block model based on the density factors by oxidation type used for the Gibellini resource model as these deposits were very similar in lithology and mineralization.

Variography was performed to establish anisotropy ellipsoids and the nugget value. Acceptable variograms were obtained for the North A area; however, the variograms for the South B area were not useable. As a result, the MTS QP used the same search distances for South B as used for North A area.

Estimation of V_2O_5 in the North A area was completed by OK and inverse distance (ID) methods using soft boundaries between oxidation types and hard boundaries between the mineralized and unmineralized domains. Estimation within the mineralized domain was completed in two passes using OK. The first pass estimated blocks using search ellipse distances determined from variography and the second pass estimated blocks using an extended minor axis distance and a minimum of one composite. A third pass estimated blocks in the unmineralized domain using ID. The MTS QP estimated resources for the South B area using the ID method.

No potential biases were noted in the model from the validations performed.

All Mineral Resources at Bisoni–McKay are classified in the Inferred category. Based only on data spacing, some proportion of mineral resources could be classified as Indicated, but the data quality issues with the legacy drill data discussed in this Report preclude the QP from classifying the mineral resources above the Inferred category.

1.11.4 Reasonable Prospects for Eventual Economic Extraction

Mineralization was confined within Lerchs–Grossmann (LG) pit outlines, that used the following key assumptions, where applicable:

- *Mineral Resource V_2O_5 price*: $9.85/lb
- *Mining cost*: $3.54/st mined
- *Process cost*: $12.81/st processed
- *General and administrative (G&A) cost*: $1.21/st processed
- *Metallurgical recovery assumptions*: 60% for oxide material, 70% for transition material and 52% for reduced material (Gibellini); 60% for mineralized material (Louie Hill); 65% for oxide material, 56% for transition material and 50% for reduced material (Bisoni–McKay)
- *Tonnage factors*: 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material
- *Royalty*: 2.5% NSR
- *Shipping and conversion costs*: $0.547/lb V_2O_5

Multiple sources were used to arrive at the forecast long term resource price of $9.85 per pound V_2O_5 sold including consensus pricing from recently published technical reports, three-year average pricing published by the European market, and the trading range of the spot price from the Europe market over the past year. The average price of the three sources is supportive of a long-term market price of $8.20/lb V_2O_5. An elevated, $9.85/lb V_2O_5 price (20% higher) was used for inputs to the mineral resources, which is an accepted mining industry practice.

For the purposes of the resource estimates in this Report, an overall 40° pit slope angle was used for the constraining pit shell.

1.12 Mineral Resource Statement

Mineral resources are stated in Table 1-1 (Gibellini), Table 1-2 (Louie Hill) and Table 1-3 (Bisoni–McKay) using cut-off grades appropriate to the oxidation state of the mineralization. Mineral resources take into account geological, mining, processing and economic constraints, and have been confined within appropriate Lerchs Grossman (LG) pit shells, and in accordance with 2014 CIM Definition Standards.

Mr. Todd Wakefield of Mine Technical Services, a SME Registered Member, is the QP for the mineral resource estimates. The estimates have an effective date of 27 September 2023.

Factors which may affect the conceptual pit shells used to constrain the mineralization, and therefore the mineral resource estimates include changes to assumptions regarding commodity price, metallurgical recovery, pit slope angles, lithology and faulting models for Louie Hill and Bisoni-McKay deposits, assignment of oxidation state values and density values.

Table 1-1: Mineral Resource Statement, Gibellini

Confidence Category	Domain	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
Measured	Oxide	0.129	3,880	0.253	19,660
	Transition	0.111	3,940	0.379	29,860
Indicated	Oxide	0.129	6,560	0.242	31,780
	Transition	0.111	6,920	0.331	45,820
Total Measured and Indicated			**21,300**	**0.298**	**127,120**
Inferred	Oxide	0.129	120	0.181	440
	Transition	0.111	<10	0.206	20
	Reduced	0.149	3,890	0.207	16,120
Total Inferred			**4,010**	**0.206**	**16,580**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023.

(2) For the purposes of assessing RPEEE assumed open pit mining method and heap leach processing methods were used.

(3) Mineral resources are reported at various cut-off grades for oxide, transition, and reduced material.

(4) Mineral resources are reported within a conceptual pit shell that uses the following assumptions: V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 60% for oxide material, 70% for transition material and 52% for reduced material; tonnage factors of 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(5) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

Table 1-2: Mineral Resource Statement, Louie Hill

Confidence Category	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
Inferred	0.129	6,790	0.290	39,420
Total Inferred	**0.129**	**6,790**	**0.290**	**39,420**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023.

(2) For the purposes of assessing RPEEE assumed open pit mining method and heap leach processing methods were used.

(3) Oxidation state was not modeled.

(4) Mineral resources are reported within a conceptual pit shell that uses the following assumptions: V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 60% for mineralized material; tonnage factors of 16.86 ft^3/st for mineralized material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(5) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

Table 1-3: Mineral Resource Statement, Bisoni–McKay

Area	Confidence Category	Domain	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
North Area A	Inferred	Oxide	0.119	6,810	0.291	39,660
		Transition	0.138	1,580	0.325	10,220
		Reduced	0.155	10,270	0.371	76,200
Total North Area A	Inferred	All	Variable	18,660	0.338	126,080
South Area B	Inferred	Oxide	0.119	1,320	0.292	7,740
		Transition	0.138	300	0.414	2,520
		Reduced	0.155	440	0.318	2,820
Total South Area B	Inferred	All	Variable	2,060	0.316	13,080
Total	**Inferred**	**All**	**Variable**	**20,720**	**0.336**	**139,160**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023.

(2) Mineral Resources are reported at various cut-off grades for oxide, transition, and reduced material. For the purposes of assessing RPEEE assumed open pit mining method and heap leach processing methods were used.

(3) Mineral Resources are reported within a conceptual pit shell that uses the following assumptions: V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 65% for oxide material, 56% for transition material and 50% for reduced material; tonnage factors of 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(4) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

The Gibellini resource model has a known error that has effectively reduced the overall grade for Measured and Indicated by approximately 1%. Adjustments to Atlas's transition assays between zero percent and 0.41% V_2O_5 were implemented twice. In 2011, the model was re-run with the correction and the results indicate an approximate error of 1%. The error is considered by the QP as not material to the mineral resource estimate.

1.12.1 Permitting Status

For projects proposing disturbance of over five acres, a Plan of Operations (PoO) and National Environmental Policy Act (NEPA) compliance is required by the applicable land management agency on public lands (either the BLM or the United States Forestry Service (USFS)), together with a reclamation permit issued by the Nevada Division of Environmental Protection (NDEP), Bureau of Mining Regulation and Reclamation (BMRR), collectively the NDEP–BMRR. The Project is located on public lands administered by the BLM through the Mount Lewis Field Office located in Battle Mountain, Nevada. On June 28, 2019, Nevada Vanadium submitted a PoO, to the BLM's Mount Lewis Field Office. In addition, a Reclamation Permit Application was submitted to the NDEP–BMMR. The following steps have been completed in support of Project permitting:

- Baseline studies have been completed and accepted by the BLM.
- The PoO and NDEP Reclamation Permit Application was submitted to the BLM and NDEP and accepted as complete. The permit will be issued following approval of the PoO through the NEPA process.
- Supplemental Environmental Reports have been completed and accepted by the BLM.
- A Notice of Intent (NOI) was published in the Federal Register on July 14, 2020, that formally began the Environmental Impact Statement analysis.
- A Notice of Availability for the Final Environmental Impact Statement was published in the Federal Register on September 15, 2023. This starts a 30-day notice period prior to publication of the Record of Decision approving the Final Environmental Impact Statement.
- The Water Control Pollution Permit (WCPP) application with the Engineering Design Report was submitted to the NDEP-BMRR and is under review.
- The Air Quality Permit application was submitted to NDEP-BAPC, and the final permit issued.
- The final Radioactive Material License No. 07-11-13424-01 was issued by the Nevada Department of Health and Human Services on October 11, 2021.

1.12.2 Environmental and Supporting Studies

Baseline studies were completed by Nevada Vanadium and accepted by BLM using the validated data developed during the American Vanadium permitting effort. These baseline studies were used by Nevada Vanadium as the basis for the current permitting. Studies were conducted to document the existing conditions of biological resources, cultural resources, surface water resources, ground water resources, and waste rock geochemical characterization.

A key issue in any future mine development is the management of the uranium secondary product as well as long term closure management of the process facilities. The BLM works with the cooperating regulatory agencies to document the measures developed to avoid, minimize or mitigate potential impacts resulting from these issues.

Major land uses occurring in the Project area include mineral exploration and development, livestock grazing, wildlife habitat and dispersed recreation.

1.13 Markets and V_2O_5 Price Assumptions

There is an increasing demand for lighter-weight and higher-strength steel, which accounts for 90% of vanadium consumption. Vanadium consumption for batteries is forecast to grow at an average of 20% per year to at least 2029 (Critical Minerals Group, March 2023). Publicly available market analysts are projecting an increasing demand for vanadium that will be supportive of a market for vanadium product and potentially higher long-term V_2O_5 prices.

Multiple sources were used to arrive at the forecast long term resource price of $9.85 per pound V_2O_5 sold including consensus pricing from recently published technical reports, three-year average pricing published by the European market, and the trading range of the spot price from the Europe market over the past year. The average price of the three sources is supportive of a long-term market price of $8.20/lb V_2O_5. An elevated, $9.85/lb V_2O_5 price (20% higher) was used for inputs to the mineral resources, which is an accepted mining industry practice.

Mining costs assume contract mining services.

1.14 Interpretation and Conclusions

Under the assumptions in this Report, the Project has RPEEE and represents an opportunity for future development when market conditions are favorable.

1.15 Recommendations

Recommendations are envisaged as a two-phase work program described in Section 26 of this Report. The first phase should include field survey of claims, the collection of additional geological data from existing exposures on the Property, the preparation of plans for future infill drilling to improve geological models and increase confidence in the mineral resource estimates, and the planning of metallurgical test programs for the Louie Hill and Bisoni–McKay deposits to support future prefeasibility level studies. The first phase work program budget is estimated at approximately $225,000.

The proposed second work phase is dependent on the results of the first phase. If conducted, the suggested program would include executing the infill drill programs prepared in the first phase, execution of the metallurgical testwork programs prepared in the first phase, and conducting a prefeasibility study when the drilling programs and metallurgical testwork are completed and all data are available and applicable data verification has been completed. The estimated budget for the second phase work program is approximately $4,525,000 to $6,130,000.

2.0 INTRODUCTION

2.1 Introduction

Wood Canada Limited (Wood) and Mine Technical Services Ltd (MTS) were requested to prepare an independent technical report (the Report) to support updated mineral resource estimates (the Project) on the Gibellini Vanadium Property (the Property) for Flying Nickel Mining Corp. (Flying Nickel). The Property is located within Eureka County and Nye County, Nevada (Figure 2-1).

2.2 Terms of Reference

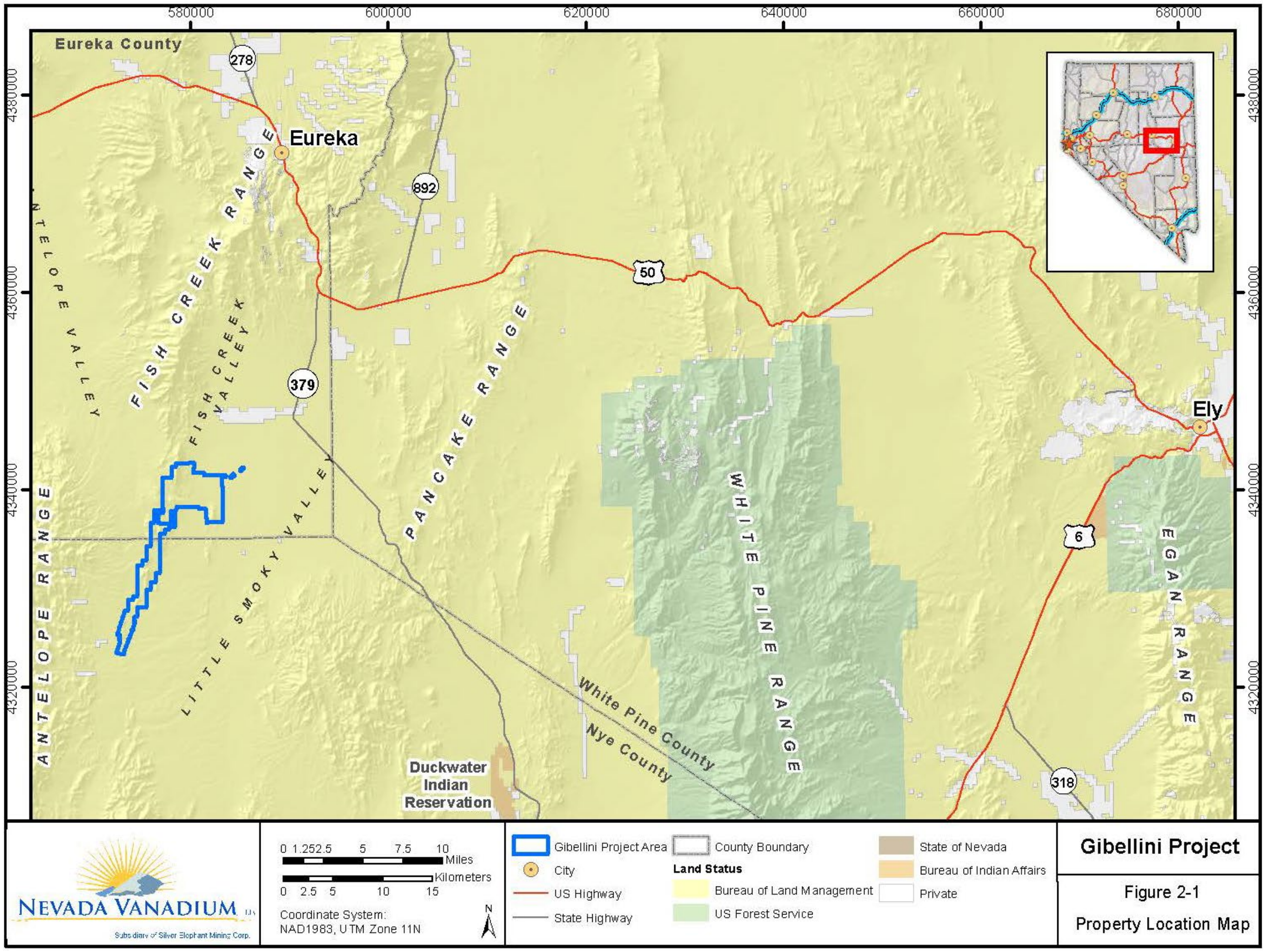
The Report was prepared to support disclosure of mineral resource estimates by Flying Nickel.

The updated mineral resource estimates were prepared in accordance with the 2019 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM, 2019), and reported in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

AMEC E&C Services Inc. (AMEC) and Amec Foster Wheeler E&C Services Inc. (Amec Foster Wheeler) are predecessor companies to Wood. Where work was specifically undertaken by AMEC, that name is used in the Report; where work was specifically undertaken by Amec Foster Wheeler.,that name is used in the Report. For all other purposes in this Report, the name Wood is used to refer to the current and predecessor AMEC/Amec Foster Wheeler companies.

A preliminary assessment was completed by AMEC in 2008 (2008 PA), followed by a feasibility study in 2011 (2011 Feasibility Study). This work was undertaken for RMP Resources Corporation (RMP), which became American Vanadium Corporation (American Vanadium). A preliminary economic assessment (PEA) was completed for Prophecy Development Corp. (Prophecy) in 2018. While none of these studies are considered by the Report authors as current, some elements of the studies, such as metallurgical testwork, and assumptions regarding mining and mineral processing methods were used as inputs to establish constraining mining surfaces and inputs to the cut-off grade in support of RPEEE. Mining, processing and general and administrative operating costs were updated to September 2023.

Figure 2-1: Project Location Plan



Source: Nevada Vanadium, 2023

2.3 Qualified Persons

The following Wood and MTS staff served as Qualified Persons (QPs) for their respective sections of the Report:

- Mr. Todd Wakefield, RM SME, Managing Partner and Principal Geologist, MTS
- Mr. Alan Drake, P.L.Eng., Manager, Process Engineering, Wood.

2.4 Site Visits and Scope of Personal Inspection

Mr. Todd Wakefield visited the Project site on 28 June, 2006, on 10–11 February, 2021, and again on 9 June, 2021. During those visits he visited outcrops and trench exposures at the Gibellini, Louie Hill, and Bisoni-McKay deposits, reviewed core and RC cuttings from drill holes, collected verification samples at the Gibellini deposit, and verified legacy drill hole locations at the Gibellini, Louie Hill, and Bisoni-McKay deposits. No on-ground work or exploration drilling has been conducted in the Gibellini area since 2011.

Mr. Alan Drake did not perform a personal inspection of the property because it is a greenfield property with no developed mineral processing facilities to inspect.

2.5 Effective Date

The following effective dates are noted:

Mineral Resource estimate, Gibellini, Louie Hill, and Bisoni–McKay: 27 September 2023

The overall Report effective date is the cut-off date for the information used in the Report, which is 27 September 2023.

2.6 Information Sources and References

Reports and documents listed in Section 2.7, Section 3 and Section 27 of this Report were used to support preparation of the Report.

2.7 Previous Technical Reports

Silver Elephant filed the following technical report on the Property:

- Hanson, K., Wakefield, T., and Drake, A., 2021: Gibellini Vanadium Project, Eureka County, Nevada, NI 43-101 Technical Report on Preliminary Economic Assessment Update: report prepared by Wood Canada Limited, for Silver Elephant, effective date 30 August, 2021

Silver Elephant, under its former name of Prophecy, filed the following technical reports on the Property:

- Orbock, E.J.C., 2017: Gibellini Vanadium Project, Nevada, USA, NI 43-101 Technical Report: prepared by Amec Foster Wheeler E&C Services Inc. for Prophecy Development Corp., effective date 10 November, 2017
- Hanson, K., Orbock, E.J.C., Peralta, E., and Gormely, L., 2018: Gibellini Vanadium Project Eureka County, Nevada, NI 43-101 Technical Report on Preliminary Economic Assessment: report prepared by Amec Foster Wheeler E&C Services Inc. for Prophecy Development Corp., effective date 29 May, 2018

Prior to Prophecy's Project interest, the following technical reports had been filed on the Gibellini claims area:

- Wakefield, T., and Orbock, E., 2007: NI 43-101 Technical Report Gibellini Property Eureka County, Nevada: report prepared by AMEC E&C Services Inc. for RMP Resources Corporation, effective date 18 April, 2007
- Hanson, K., Wakefield T., Orbock, E., and Rust, J.C., 2010: Rocky Mountain Resources NI 43-101 Technical Report Gibellini Vanadium Project Nevada, USA: report prepared by AMEC E&C Services Inc. for RMP Resources Corporation, effective date 8 October, 2008
- Hanson, K., Orbock, E., Hertel, M., and Drozd, M., 2011: American Vanadium, Gibellini Vanadium Project, Eureka County, Nevada, USA, NI 43-101 Technical Report on Feasibility Study: report prepared by AMEC E&C Services Inc. for American Vanadium, effective date 13 August, 2011

Prior to Nevada Vanadium's interest in the Bisoni–McKay claims area, the following technical reports had been filed:

- Turner A.R. and James, J.A.A., 2005: Bisoni McKay Vanadium Property Technical Report: report prepared by JAMine Inc for Stina Resources Ltd. and Vanadium International Corporation, effective date 20 January, 2005
- Ullmer, E., and James J.A.A., 2006: Bisoni McKay Vanadium Property, Nye County, Nevada, Phase I Technical Report: report prepared by JAMine Inc for Stina Resources Ltd., effective date 10 April, 2006
- Ullmer, E., 2008: Bisoni McKay Vanadium Property, Nye County, Nevada, Phase II Technical Report (Amended): report prepared for Stina Resources Ltd., effective date 20 January, 2008
- Ullmer, E., and Bentzen, E.H. III, 2016: Bisoni McKay Vanadium Property, Nye County, Nevada, Phase II Technical Report (Amended): report prepared for Stina Resources Ltd., effective date 23 October, 2015, amended 29 August, 2016.

3.0 RELIANCE ON OTHER EXPERTS

3.1 Introduction

The QPs have relied upon the following other expert reports, which provided information regarding mineral rights, surface rights, property agreements, and royalties for use in sections 4 and 14 of this Report.

3.2 Mineral Tenure, Surface Rights, Property Agreements and Royalties

The MTS QP has not independently reviewed ownership of the Property and any underlying property agreements, mineral tenure, surface rights, water rights, or royalties. The MTS QP has fully relied upon, and disclaims responsibility for, information derived from legal experts retained by Nevada Vanadium for this information through the following documents:

- Parsons, Behle, Latimer, 2017: Gibellini Property: legal opinion provided to Prophecy Development Corp. and Amec Foster Wheeler, dated 2 October, 2017, 100 p.
- Parsons, Behle, Latimer, 2018: Title Opinion—Gibellini Vanadium Project: legal opinion provided to Prophecy Development Corp. and Amec Foster Wheeler, dated 5 May, 2018, 37 p. and two annexes.
- Parsons, Behle, Latimer, 2020a: Silver Elephant Mining Corp. – Gibellini Vanadium Project Title Opinion: legal opinion provided to Silver Elephant Mining Corp., dated 29 October, 2020, in two parts, 87 p. and 92 p.
- Parsons, Behle, Latimer, 2020b: Silver Elephant Mining Corp. – Gibellini Vanadium Project Title Opinion: legal opinion provided to Silver Elephant Mining Corp., dated 16 December, 2020, 100 p.
- Parsons, Behle, Latimer, 2023: Nevada Vanadium LLC – Transfer of Ownership of Unpatented Mining Claims in Elko County, Nevada: letter to Nevada State Office, U.S. Department of the Interior, Bureau of Land Management, dated 25 April, 2023, 14 p.
- Ron Espell, 2023: Email regarding permit and environmental content in Section 4 of technical report, dated 27 September, 2023.

3.3 Environmental Information

The QPs have not independently reviewed environmental information of the Property. The QPs have fully relied upon, and disclaim responsibility for information derived from environmental experts retained by Flying Nickel Mining Corp. for this information through the following document:

- Espell, Ron, Gibellini Property Environmental Studies, Permitting, and Social or Community Impact 2022: environmental opinion provided to Flying Nickel Mining Corp., dated November 2022
- Ron Espell, 2023: Email regarding permit and environmental content in Section 4 of technical report, dated 27 September 2023.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Introduction

The Gibellini Project is located in Eureka County, Nevada; about 25 miles south of the town of Eureka. The Property is situated on the east flank of the Fish Creek Range in the Fish Creek Mining District and is accessed by dirt road extending westward from State Route 379.

The Property can be located on the USGS Summit Mountain 1:100,000 scale topographic map and the USGS Eightmile Well 1:24,000 scale, 7.5 minute series quadrangle map (Gibellini and Louie Hill deposits) and the USGS Snowball Ranch 1:2,4000 scale, 7.5 minute series quadrangle map (Bisoni–McKay).

Mineralization at Gibellini and Louie Hill is located within the southeast quadrant of Section 34 and the southwest quadrant of Section 35, Township 16 North, Range 52 East (T16N, R52E) Mount Diablo Base and Meridian (MDBM) and the northwest quadrant of Section 2 and the northeast quadrant of Section 3, Township 15 North, Range 52 East (T15N, R52E) MDBM. It is centered at latitude 39° 13′ north and longitude 116° 05′ west.

Mineralization at Bisoni–McKay is located within Township 14 North, Range 52 East within Sections 17, 18, 19, 20, 29, and 30. It is centered at latitude 39° 05′ north and longitude 116° 09′ west.

4.2 Project Ownership

Nevada Vanadium holds a 100% interest in the claims presented in Section 4.4 by way of lease agreements and staked claims.

Claims are in the name of NVMC's wholly-owned Nevada subsidiary, Nevada Vanadium LLC (formerly Vanadium Gibellini Company LLC (Vanadium Gibellini)).

4.3 Agreements

On September 18, 2020, Nevada Vanadium and Silver Elephant concluded an agreement with Stina Resources Nevada Ltd. (Stina Resources) and Cellcube Energy Storage Systems Inc (Cellcube Energy), to purchase a set of claims, the Bisoni–McKay claims, which are situated adjacent the Gibellini claims, in Eureka and Nye Counties, Nevada. The purchase agreement included:

- Cash payment of C$200,000
- Issuance of four million shares in Silver Elephant.

A share bonus is payable if, on or before December 31, 2023, the price of European vanadium pentoxide published by Metal Bulletin (or an equivalent publication) remains ≥US$12/lb for a period of 30 consecutive calendar days (referred to as the vanadium price condition). The payment will consist of the number of Silver Elephant shares that is equal to the quotient obtained by dividing C$500,000 by the volume-weighted average price of one Silver Elephant share on the Toronto Stock Exchange during the five-trading day period immediately following the date upon which the vanadium price condition is satisfied.

On August 21st, 2021, NVMC entered into a royalty agreement with Silver Elephant Mining Corp. whereby it agreed to pay, in each quarter where the average V_2O_5 Vanadium Pentoxide Flak 98% Price per pound exceeds $12.00 per pound a royalty equal to: a) 2% of the returns (based on an agreed to formulae) in respect of all mineral products produced from the Gibellini Property after commencement of commercial production; and b) in respect of coal, $2.00 per tonne of coal extracted from the royalty area. On January 14, 2022, Silver Elephant Mining Corp. assigned its right to this royalty to Oracle Commodity Holding Corp. (formerly Battery Metals Royalties Corp.).

This royalty was executed at the corporate parent level and was therefore not granted the U.S. subsidiary that owns the mining claims and lease, Nevada Vanadium LLC. The royalty was not recorded in the real property records and does not encumber the claims or the lease.

4.4 Mineral Tenure

The Gibellini Project ground holdings include:

- 40 unpatented lode mining claims situated in Eureka County, Nevada. The owner of record is Jacqualeene Campbell, successor to Janelle Dietrich (deceased) and the unpatented lode mining claims (Campbell Claims) are leased to NVMC under assignment of a lease originally granted to Prophecy Development Corp., now known as Silver Elephant. The Campbell lease was assigned by Silver Elephant to NVMC by an Amended Memorandum of Assignment and Assumption of Mineral Lease Agreement, recorded with the County Recorder in Eureka County on June 29, 2022.
- 547 unpatented lode mining claims situated in Eureka County, Nevada. The owner of record is Nevada Vanadium LLC.

Table 4A in Appendix I provides a list of the 40 Campbell Claims, Table 4B in Appendix I lists the 105 Nevada Vanadium claims formerly owned by VC Exploration, and Table 4C in Appendix I lists the 442 Nevada Vanadium claims.

Figure 2-1 shows the Gibellini and Bisoni-McKay claims in relation to local towns, roads, and infrastructure. Figure 4-1 is a claim location plan for the Gibellini claims. Figure 4-2 shows the

Bisoni–McKay claim locations. Note that due to the proximity of the two areas, a portion of the Bisoni–McKay claims are also shown in Figure 4-2.

Within Nevada, unpatented claims can have a maximum area of 20.66 acres.

Unpatented mining claims are kept active through payment of a BLM maintenance fee due by 1 September of each year. and county fees due by October 31 of each year. There has been no legal survey of the Property claims. Under Nevada law, each unpatented claim is marked on the ground, and does not require survey.

According to the online BLM serial register pages the annual mining claim maintenance fees for the assessment years up to and including the assessment year beginning September 1, 2023 have been properly and timely paid.

4.4.1 Campbell Claims/Campbell Lease

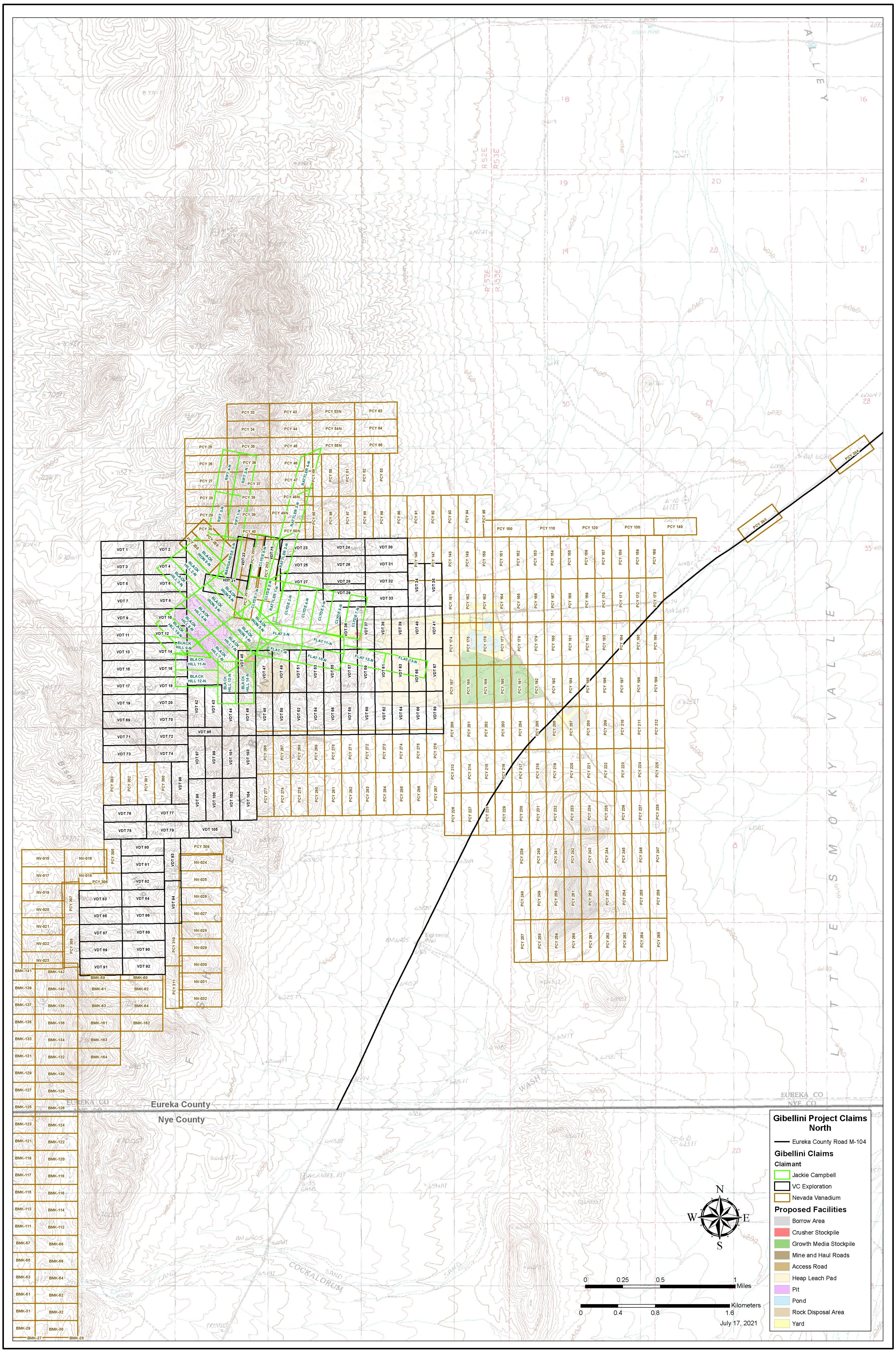
The 40 unpatented lode claims are located within un-surveyed Sections 1, 2 and 3, Township 15 North, Range 52 East, and un-surveyed Sections 26, 34, 35 and 36, Township 16 North, Range 52 East, MDM, Eureka County, Nevada.

According to the online BLM serial register pages the Campbell claims, annual mining claim maintenance fees for the assessment years up to and including the assessment year beginning September 1, 2023, have been properly and timely paid.

Janelle Dietrich (Ms. Dietrich now deceased) leased the Dietrich claims (now Campbell claims) on 22 June 2017 to Prophecy (the Dietrich Lease, now Campbell lease). Public notice of the Dietrich Lease was made on 7 November, 2017, and recorded in the official records of the Eureka County Recorder's office as Document No. 234657 on 17 January, 2018.

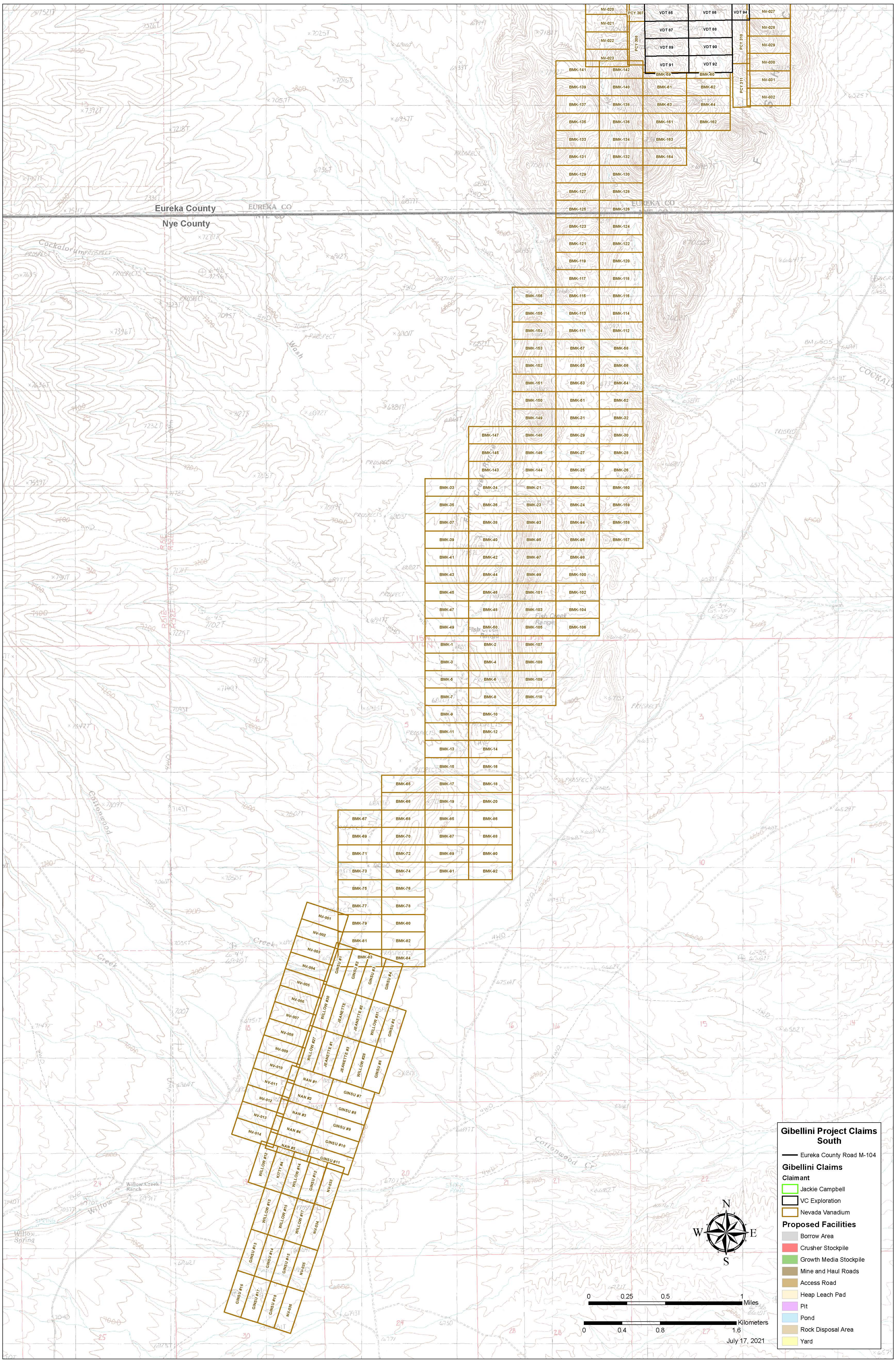
The Campbell Lease has a 10-year period, commencing on 22 June, 2017, unless terminated earlier under provisions in the lease agreement. The lease can be extended for a second 10-year term. If mining operations are underway at either the end of the first or second year term, the lease will continue for additional one-year terms for as long as the mining operations continue. If no active mining is underway on the Dietrich Claims, but the claim area is being used to support mining operations on other claims, then the lease will continue for as long as operations are underway.

Figure 4-1: Mineral Tenure Plan, Gibellini Area



Source: Figure courtesy Nevada Vanadium, 2021. VC Exploration claims are now held by Nevada Vanadium.

Figure 4-2: Mineral Tenure Plan, Bisoni–McKay Area



Source: Figure courtesy Nevada Vanadium, 2021. VC Exploration claims are now held by Nevada Vanadium.

Under an Amendment to Mineral Lease Agreement (Amendment to Lease), signed on 18 April 2018, NVMC has the option to require Ms. Campbell to transfer title over all but four of the unpatented mining claims within the Campbell Claims at any time in exchange for US$1 million to be paid as an advance royalty or transfer payment. The four claims exempted are:

- Black Iron 1-N
- Black Iron 4-N
- Black Iron 5-N
- Manganese 3-N.

The Campbell lease was assigned by Silver Elephant to NVMC by an Amended Memorandum of Assignment and Assumption of Mineral Lease Agreement, recorded with the County Recorder in Eureka County on June 29, 2022.

4.4.2 Nevada Vanadium (previously VC Exploration)

The 105 unpatented lode claims are located within un-surveyed Sections 1, 2 and 3, 10, 11, and 15, Township 15 North, Range 52 East, and un-surveyed Sections 34, 35 and 36, Township 16 North, Range 52 East, MDM, Eureka County, Nevada.

4.4.3 Nevada Vanadium

The 442 unpatented lode claims are located within un-surveyed Sections 25, 26, 27, 34, 35, 36 Township 16 North, Range 52 East; Sections 28, 31, 32, 33 Township 16 North, Range 53 East; Section 5, 6, 7, 8, 17, 18, Township 15 North, 53 East; Sections 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 27, 28, 29, 32, 33, 34, Township 15 North, Range 52 East; Sections 4, 5, 7, 8, 9, 17, 18, 19, 20, 30, Township 14 North, Range 52 East 21 MDM (Eureka and Nye Counties).

The Nevada Vanadium claims comprise a number of different claim blocks.

4.5 Royalties

4.5.1 Campbell Lease (Campbell Royalty)

The Campbell (Dietrich) Lease contains both an advance royalty and a production royalty. Under the advance royalty provision, NVMC was required to pay $35,000 to Ms. Campbell upon execution of the lease. Thereafter, on the anniversary date of the execution of the lease, NVMC must pay a sliding scale advance royalty as follows:

- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is below $7.00/lb during the preceding 12 months, $35,000 during the initial term and $50,000 during the additional term; or

- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is equal to or above $7.00/lb during the preceding 12 months, $10,000 multiplied by the average vanadium pentoxide price per pound, up to a maximum of $120,000 annually.

The advance royalty payments will continue until such time NVMC begins payment of the production royalty. If the production royalty payable in any one year is less than the advance royalty that would otherwise be paid for that year, then NVMC will pay the difference between the two amounts. All advance royalty payments, as well as the difference between the advance royalty payment made and the production royalty that would otherwise be due in such year, may be deducted as credits against NVMC future production royalty payments, provided that the credit will not be applied to payment of the difference between the production royalty paid during any year and the advance royalty that would otherwise be payable.

The Campbell Lease does not specifically set forth what events trigger the payment of the production royalty; the legal opinion provided notes that a reasonable interpretation is that payment of such a royalty would be due upon commencement of commercial mining operations. The production royalty requires NVMC to pay a 2.5% net smelter return (NSR) until $3 million in payments is made. After that milestone is reached, the NSR falls to 2%.

The Amendment to Lease agreement requires Ms. Campbell to transfer title over all but four of the unpatented mining claims (claims Black Iron 1-N, Black Iron 4-N, Black Iron 5-N, and Manganese 3-N are exempted) within the Campbell Claims at any time in exchange for US$1 million to be paid as an advance royalty or transfer payment.

NVMC has agreed to pay a federal tax lien against the Campbell Claims of $99,027.22. Should NVMC exercise the option under the Amendment to Lease, the tax lien payment will be deducted from the transfer payment, and a transfer payment of the remaining US$900,972.78 will be immediately due when the Campbell Claims are transferred from Ms. Campbell to Nevada Vanadium.

If NVMC does develop a mine on the Campbell claims, or construct mining-related facilities within the claims, then NVMC must notify Ms. Campbell as to which claims NVMC requires. Ms. Campbell may request that NVMC "*acquire title to the portion*" of the Campbell Claims "*required for [l]essee's proposed uses for nominal consideration of $1*." If Ms. Campbell does require NVMC to take title to all or any portion of the Campbell claims, then the advance royalty and production royalty contained in the lease would not be affected.

The Gibellini mineral resource is almost entirely within the Campbell claims (Figure 4-3), and the Campbell Royalty will be payable on production. The advance royalty obligation and production royalty is not "affected, reduced or relieved" by the transfer of title.

Figure 4-3: Location Plan, Mineral Resource Outlines in Relation to Campbell Lease

Source: Wood, 2023

4.5.2 McKay Lease (McKay Royalty)

On October 22, 2018, Prophecy (now NVMC and the McKay claimants entered into a Royalty Agreement, under which the McKay claimants agreed to waive and release all claims against Nevada Vanadium and VC Exploration related to the interests, if any, they had in the 2018 MSM Replacement Claims under the MSM Lease, in exchange for an advance royalty and a production royalty. The Royalty Agreement also affirmatively terminated and cancelled the MSM Lease.

Under the advance royalty provision, upon commencement of "Commercial Production" from the "Gibellini Project," NVMC must pay $75,000 to the McKay claimants. Upon the sale of "all or any portion" of the 2018 MSM Replacement Claims to any third party, NVMC must pay the McKay claimants $50,000. In addition, no later than July 10 of each year during the term of the Royalty Agreement, NVMC must pay a sliding scale advance royalty as follows:

- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is below $7.00/pound during the preceding 12 months, $12,500; or
- If the average vanadium pentoxide price per pound, as quoted on Metal Bulletin, is equal to or above $7.00/pound during the preceding 12 months, $2,000 times the average vanadium pentoxide price per pound, up to a maximum of $28,000 annually.

The advance royalty payments will continue until such time as NVMC begins payment of the production royalty, provided, however, that if the production royalty payable in any year is less than the advance royalty otherwise payable for such year, the NVMC must pay the difference between such amounts. All advance royalty payments, as well as the difference between the advance royalty payment made and the production royalty that would otherwise be due in such year, may be deducted as credits against NVMC's future production royalty payments, provided that the credit will not be applied to payment of the difference between the production royalty paid during any year and the advance royalty that would otherwise be payable.

Under the production royalty provision, NVMC is required to pay a 2.5% net smelter return (NSR) until $1 million in payments is made. After that milestone is reached, the NSR falls to 1.0%.

4.6 Surface Rights

The Project is situated entirely on public lands that are administered by the BLM.

No easements or rights of way are required for access over public lands. Rights-of-way would need to be acquired for future infrastructure requirements, such as pipelines and powerlines.

4.7 Water Rights

Pursuant to a Water Rights Lease Agreement ("Water Lease") dated August 9, 2018, Nevada Vanadium leased water rights owned by John C. Gretlein and appurtenant to the Fish Creek Ranch ("Fish Creek Water"). The Water Lease had a 10-year term from 2018, with extensions available at Nevada Vanadium's option, and would allow Nevada Vanadium the right to use up to 1,046.5 acre-feet of the Fish Creek Water per year.

In 2022, Nevada Vanadium purchased Fish Creek Ranch and all appurtenant water rights from Gretlein, eliminating the need for the Water Lease and its payments. Proper documentation was provided to the Nevada Division of Water Resources to memorialize the transfer of ownership of the Fish Creek Water to Nevada Vanadium.

The majority of the Fish Creek Water has been "certificated," meaning that beneficial use has been proven to the Nevada Division of Water Resources and the Fish Creek Water can only be lost through forfeiture, which requires five consecutive years of non-use. A portion of the water remains "permitted," meaning that beneficial use has not yet been proven and extensions of time to prove that use must be filed annually until the permits are certificated. Additionally, certain management elements such as pumping records and reports required in permit terms, remain.

The Fish Creek Water is currently permitted for irrigation purposes on Fish Creek Ranch, and diverted from a canal located in the SE¼ NW¼ of Sec. 8, Township 16N, Range 53E, MDB&M. To use the Fish Creek Water for mining operations, Nevada Vanadium will be required to submit applications with the Nevada Division of Water Resources to change place and manner of use of 500 gallons per minute (gpm) of the Fish Creek Water for mine makeup water demand.

To offset the amount of water used for mining that would have recharged the groundwater aquifer through irrigation, the Nevada Division of Water Resources will require approximately 30 percent of the total flows – 150 GPM or 240 AFA – to remain in the canal to provide aquifer recharge. The combined makeup and infiltration water will be 650 gpm and represents approximately 15% of the Fish Creek water flow that averages 4,500 gpm.

4.7.1 Fraser Institute Annual Survey of Mining Companies

The MTS QP used the Policy Perception Index from the 2022 Fraser Institute Annual Survey of Mining Companies report (the 2022 Fraser Institute survey) as a credible source for the assessment of the overall political risk facing an exploration or mining project in Nevada. Each year, the Fraser Institute sends a questionnaire to selected mining and exploration companies globally. The Fraser Institute survey is an attempt to assess how mineral endowments and public policy factors such as taxation and regulatory uncertainty affect exploration investment.

The MTS QP used the 2022 Fraser Institute survey because it is globally regarded as an independent report-card style assessment to governments on how attractive their policies are from the point of view of an exploration manager or mining company and forms a proxy for the assessment by industry of political risk in specific political jurisdictions from the mining industry's perspective.

Of the 62 jurisdictions surveyed in the 2022 Fraser Institute survey, Nevada ranks first for investment attractiveness, first for policy perception and fifth for best practices mineral potential.

Based on the 2022 Fraser Institute Survey, Nevada is considered by the mining industry as a relatively low risk jurisdiction for mineral projects.

4.8 Permitting Considerations

Notices of Intent with the Bureau of Land Management are currently in place to conduct the recommended drilling work proposed in Section 26 on the property. Permitting is currently being completed to expand the approved exploration disturbance area to 46 acres that will allow further expansion of the exploration areas.

4.9 Environmental Liabilities

There are no known environmental liabilities other than minor disturbance (less than 1 acre) associated with water monitoring wells on the property. A reclamation bond is in place with the Nevada Division of Minerals to cover the plugging and reclamation of these monitoring wells.

4.10 Social License Considerations

Nevada Vanadium to date has completed extensive community consultations. The company plans to continue to take all the necessary steps to engage the local community to create awareness regarding any future development of the Property.

4.11 Comments on Section 4

Information provided by legal experts retained by Flying Nickel supports the following:

- There has been no legal survey of the Project claims. Under Nevada law, each unpatented claim is marked on the ground, and does not require survey.
- The MTS QP was supplied with legal opinion that indicates the annual claim maintenance fees have been paid for assessment year beginning 1 September, 2023 where claims had assessments due.

- Surface rights are held by the BLM.
- Permits, environmental studies and public consultation will be required for any future Project development.

To the extent known to the MTS QP, there are no other significant factors and risks that may affect access, title, or right or ability to perform work on the Property that are not discussed in this Report.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

5.1.1 Gibellini and Louie Hill

The Gibellini and Louie Hill deposits are accessed from Eureka by traveling southeast on US Highway 50 approximately 10 miles to Nevada State Route 379, then following SR 379 southwest for approximately eight miles to a fork in the road. At the fork, an improved gravel county road, on the right, is followed for approximately seven miles to where a two-track road on the west leads to the Gibellini portion of the property.

The 24.5 miles leading to the Property is either Federal, State or County-owned. The road can be paved, improved gravel, or two-track dirt. The three miles of road access from County Road M-104 to the Property is a two-track dirt road; however, it can be upgraded. This upgraded road would be the principal method of transport for goods and materials in and out of the Property.

Access to the Property area is good and is possible year-round.

5.1.2 Bisoni–McKay

The Bisoni–McKay claims are accessed from Eureka via US Highway 50 by driving south-east about 12 miles, then turning south on State Route 379 toward Duckwater. About eight miles south of Highway 379, the road forks, and the right (west fork) is followed southwestward along County Road M-104 for about 20 miles, passing the Gibellini and Louie Hill vanadium properties. Approximately 20 miles south of the fork, the road curves west and a sign to the Bisoni–McKay property indicates a left turn onto an unmaintained four-wheel drive track that goes southward directly onto the Bisoni–McKay claim block.

The interior of the property block is accessed by a system of unimproved roads.

As with the Gibellini claims, access to the Bisoni-McKay claims is good, and is possible year-round.

5.2 Climate

The climate in the Gibellini Property area is typical for east–central Nevada. Average monthly high temperatures range from 74–85°F in the summer and 37–47°F in the winter.

Yearly rainfall averages approximately 12 inches with nearly uniform distribution from September through May. June, July, and August are typically hot and dry months; December, January, and February receive the bulk of the snowfall.

Exploration is possible year-round, though snow levels in winter and wet conditions in late autumn and in spring can make travel on dirt and gravel roads difficult. It is expected that any future mining operations will be able to be conducted year-round.

5.3 Local Resources and Infrastructure

The nearest town to the Property is Eureka, Nevada, which is situated along US Highway 50 and hosts a population of 1,651 (Census 2021 data). The nearest city is Reno, Nevada, approximately 215 miles to the west, which hosts a population of 180,480 (Census 2000 data). The most significant towns in the Property vicinity are Carlin, which has a rail-head, and Elko, which is the northeastern regional mining center.

Local resources necessary for the exploration and possible future development and operation are located in Eureka. Some resources would likely have to be brought in from the Elko area.

Nevada has a long mining history and a large resource of equipment and skilled personnel. Workers would likely be imported from Elko County (Carlin and Elko) to supplement the work force available in Eureka.

A 69 kV power line is located approximately seven miles north of the Property and currently services Calibre Mining Corp's Gold's Pan Mine. A second, smaller-rated, powerline services the Fish Creek Ranch.

Exploration activities have been serviced by diesel generator as required, and this approach is likely to be used on recommencement of exploration activities.

Water was supplied for exploration purposes from wells, and this water source remains an option for such future work programs.

There are currently no communications facilities on site. The Property is within cellular signal range.

5.4 Physiography

The Property is located on the east flank of the Fish Creek Range along a northwest-trending ridge. Elevation at the Property ranges from 6,600 to 7,131 ft above mean sea level and the topographic relief can be characterized as moderate to steep.

Vegetation is typical of the Basin and Range physiographic province. The Property is covered by sagebrush, grass, and various other desert shrubs. Fauna that has been observed in the Property area are typical of those of the Great Basin area.

6.0 HISTORY

6.1 Exploration History

6.1.1 Gibellini

In 1942, Mr. Louis Gibellini located claims covering the Gibellini manganese-nickel mine (also known as the Niganz manganese–nickel mine) immediately northeast of the Gibellini deposit. The deposit was intermittently mined until the mid-1950s. Workings at the historical mine site consist of a shaft 37 ft deep, an adit 176 ft long, several shallow pits, and some trenches. Manganese mineralization consists of pyrolusite and dense nodules of psilomelane within Devonian limestone on the footwall of a northeast-trending fault zone. The average grade of the ore produced from the workings was about 9.5% Mn, 2.8% Zn, and 1.22% Ni. A shipment of 95.4 st of mineralization in 1953 to the Combined Metals Company mill in Castleton, Nevada, reportedly contained 31.6% Mn (Roberts et al., 1967).

During 1946, the Nevada Bureau of Mines and Geology (NBMG) completed four core holes at the Gibellini manganese-nickel mine.

In 1956, Union Carbide discovered vanadium mineralization one mile south of the Gibellini manganese-nickel mine, on what is now known as the Louie Hill deposit. A resource estimate was completed in 1969 (Joralemon, 1969). The Gibellini deposit was discovered shortly thereafter.

The Gibellini deposit was first explored by Siskon Co. in 1960–1961 (Roberts et al, 1967). Cheschey & Co. (1960–1963), Terteling & Sons (Terteling; 1964–1965), and Atlas Minerals Company (Atlas; 1969) and TransWorld Resources Ltd (TransWorld; 1969) reportedly worked one or both deposits during the 1960s (Morgan, 1989). Work during this period included rotary drilling, trenching, mapping, and metallurgical testing. Terteling drilled 33 rotary holes in the Gibellini area and Atlas drilled 77 holes. Cheschey & Co. appear to have drilled several holes in the area, but no information from these holes remain beyond a drill hole location map. The low grade and complex metallurgy of the deposits, together with the low trading price of V_2O_5 at the time (about \$2.50/lb) discouraged further development (Morgan, 1989).

In 1972, Noranda Inc. (Noranda) optioned claims covering the Gibellini and Louie Hill areas. In the same year, metallurgical research on Gibellini drill hole composite samples and mine and market economic studies by the Colorado School of Mines Research Institute (CSMRI) indicated that the Gibellini deposit was potentially economic. In 1972 and 1973 Noranda drilled 52 rotary and reverse circulation (RC) drill holes in the Gibellini deposit to provide data for a mineral resource estimate and to provide material for additional metallurgical testing. Five holes were also drilled in the Louie Hill area at this time.

Based upon the drilling results, Noranda completed a resource estimate using polygonal methods (Condon, 1975). Noranda did not use the assays from the Terteling or Atlas drill holes in their resource estimate. Noranda's review of previous drilling noted 'serious discrepancies in grade and continuity of mineralization between holes' (Condon, 1975).

Noranda conducted extensive research into the metallurgy of the Gibellini deposit. They found that acceptable extractions could be achieved by sulfuric acid extraction, but at that time, reagent costs were prohibitive. In 1974, after critical review of the CSMRI work and in-house investigations into the metallurgy of the vanadium ores, Noranda concluded the Gibellini deposit was not economically viable.

Noranda also completed a resource estimate on the Louie Hill prospect but noted that further work was required before an accurate resource estimate could be performed (Condon, 1975). Morgan (1989), using the Noranda drill plan and ore blocks, estimated a mineral resource for Louie Hill.

Inter-Globe Resources Ltd (Inter-Globe) picked up the Gibellini Project in 1989 and contracted James Askew Associates (JAA) to drill 11 vertical RC holes to confirm grades reported in the Noranda, Atlas, and Terteling drilling and to provide material for metallurgical testwork (JAA, 1989a). JAA also mapped and sampled nine trenches and pits constructed by previous operators (JAA, 1989b).

Vanadium grades from the Inter-Globe drill holes confirmed the width and grade of the Noranda, Terteling, and Atlas drill holes (JAA, 1989a). There is no evidence that the planned metallurgical testing took place; the report/results were not provided to Nevada Vanadium.

RMP acquired the property in March 2006. During 2006, RMP expanded the land position of the Gibellini property, mapped the surface geology, collected surface and underground geochemical samples, and conducted preliminary metallurgical testwork.

A Mineral Resource estimate was completed by AMEC for RMP in 2007. Following this initial technical report, RMP completed RC and core drilling, and additional metallurgical testwork. As a result of encouraging results, RMP commissioned AMEC in 2008 to complete a preliminary assessment (2008 PA) for the Gibellini deposit. The preliminary assessment indicated that a heap leach operation producing vanadium pentoxide was the most likely processing method.

In January 2011, RMP changed its name to American Vanadium. No on-ground work or exploration drilling has been conducted in the Gibellini area since 2011.

A feasibility study was commissioned from AMEC in late 2010 and completed in 2011 (2011 Feasibility Study). The study assumed the following:

- A conventional open pit mine at Gibellini using a truck and shovel fleet
- Heap leach operation to produce V_2O_5 on site as a bagged product.

Additional metallurgical testwork and closure column leach and attenuation studies were conducted in 2013 and 2014. Environmental baseline studies were conducted in 2012–2015.

Prophecy acquired the Project from American Vanadium in 2017. Prophecy completed no exploration or drilling activities after the Project acquisition. Prophecy requested that Amec Foster Wheeler prepare a preliminary economic assessment (the 2018 PEA) on the Gibellini and Louie Hill vanadium deposits. The 2018 PEA assumed:

- Conventional open pit mines at Gibellini and Louie Hill, using a truck and shovel fleet
- Heap leach operation to produce V_2O_5 on site as a bagged product.

Flying Nickel is not treating the results from the 2011 Feasibility Study as current. Flying Nickel is not treating the economic results of the 2018 PEA as current.

Some of the information generated during the 2011 Feasibility Study and the 2018 PEA was used for assumed mining and processing methods in assessing RPEEE for the mineral resource estimates.

6.1.2 Bisoni–McKay

On 18 September 2020, Nevada Vanadium completed the acquisition of the Bisoni–McKay vanadium property. The Bisoni–McKay claim block is immediately south of and contiguous with the Gibellini claim block. This acquisition effectively consolidated all known significant vanadium mineralization in the district within the Gibellini properties.

Union Carbide Corporation (Union Carbide) evaluated the vanadium mineralization at Bisoni–McKay in 1958 and 1959, shortly after the discovery of mineralization at Louie Hill. Documentation of work completed by Union Carbide at Bisoni–McKay is not available to Flying Nickel.

Hecla Mining Company (Hecla) carried out an extensive exploration program at Bisoni–McKay in the 1970s, including drilling of 19 RC drill holes and significant trenching of outcropping vanadium mineralization. The drill results from the Hecla drilling campaign are included in the Project resource database but the trench mapping and sampling results are not available to Flying Nickel.

TRV Minerals Corp. (TRV) and Inter-Globe Resources acquired the Bisoni–McKay property in 1981 and conducted bulk sampling for heap leach testing, but the results of this testwork are not available to Flying Nickel. In 1993, the claims covering the Bisoni–McKay property lapsed and were re-staked by Vanadium International Corporation (Vanadium International). In 2004, Vanadium International completed two RC drill holes and the sampling of 27 bulldozed trenches previously dug by Hecla.

In 2005, Stina Resources optioned the Bisoni–McKay property from Vanadium International and completed five core drill holes, 11 RC drill holes, and the sampling of 11 trenches formerly excavated by Hecla. In 2007, Stina Resources completed a campaign of 12 drill holes focused on the North A area and an estimate of mineral resources for the Bisoni–McKay property.

6.2 Production

There is no modern commercial vanadium production recorded from the Property.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Gibellini Project occurs on the east flank of the southern part of the Fish Creek Range (Figure 7-1).

The southern part of the Fish Creek Range consists primarily of Paleozoic sedimentary rocks of Ordovician to Mississippian Age of the eastern carbonate, western siliceous, and overlap assemblages. Tertiary volcanic rocks crop out along the eastern edge of the range and Tertiary to Quaternary sedimentary rocks and alluvium bound the range to the west and east in the Antelope and Little Smoky valleys, respectively. North to northeast-trending faults dominate in the region, particularly along the eastern range front (Roberts et al., 1967).

The Gibellini Project lies within the Fish Creek Mining District. The limestone-hosted Gibellini Manganese-Nickel mine and the Gibellini, Louie Hill, and Bisoni–McKay sediment-hosted vanadium deposits are the most significant deposits in the district and all occur within the Gibellini Project boundary. A fluorite–beryl prospect and silver–lead–zinc vein mines with minor production are also reported to occur in the district (Roberts et al., 1967).

7.2 Local Geology

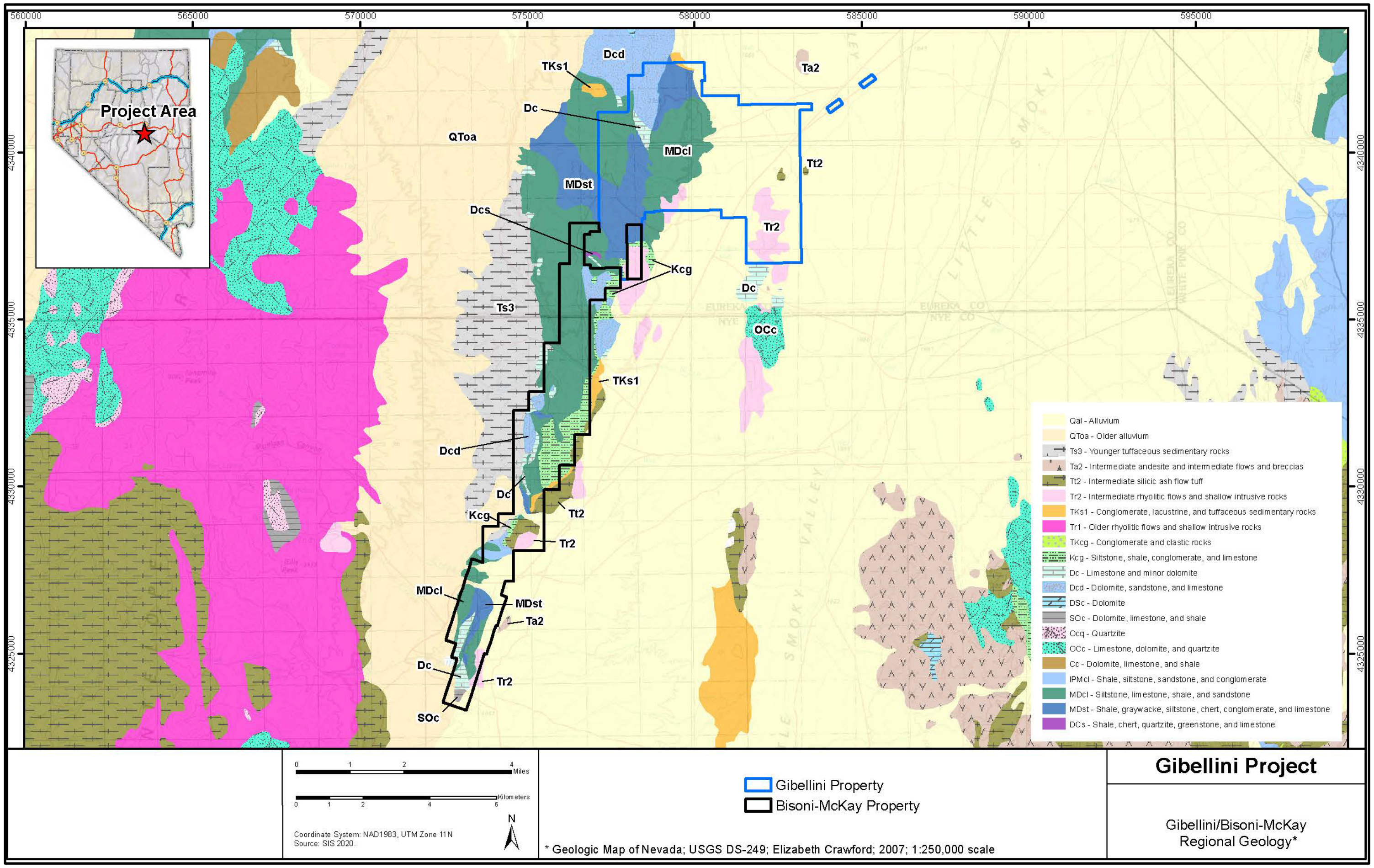
The Gibellini deposit occurs within an allocthonous fault wedge of organic-rich siliceous mudstone, siltstone, and chert, which forms a northwest trending prominent ridge. These rocks are mapped as the Gibellini facies of the Woodruff Formation of Devonian Age (Desborough et al., 1984). These rocks are described by Noranda as thin-bedded shales, very fissile and highly folded, distorted, and fractured (Condon, 1975).

The Woodruff Formation is interpreted to have been deposited as eugeosynclinal rocks (western assemblage) in western Nevada that have been thrust eastward over miogeosynclinal rocks (eastern assemblage) during the Antler Orogeny in late Devonian time.

The Gibellini facies is structurally underlain by the Bisoni facies of the Woodruff Formation. The Bisoni unit consists of dolomitic or argillaceous siltstone, siliceous mudstone, chert, and lesser limestone and sandstone (Desborough et al., 1984).

Structurally underlying the Woodruff Formation are coarse clastic rocks of the Antelope Range Formation. These rocks are interpreted to have been deposited during the Antler Orogeny and are attributed to the overlap assemblage.

Figure 7-1: Regional Geology Map



Source: Figure courtesy Nevada Vanadium, 2021

The ridge on which the Gibellini manganese–nickel mine (a.k.a. Niganz mine) lies is underlain by yellowish-gray, fine-grained limestone. This limestone is well bedded with beds averaging 2 ft thick. A fossiliferous horizon containing abundant bryozoa crops out on the ridge about 100 ft higher than the mine. The lithologic and faunal evidence suggest that this unit is part of the Upper Devonian Nevada Limestone. Beds strike at N18E to N32W and dip at 18° to 22° west. The manganese–nickel mineralization occurs within this unit. Alluvium up to 10 ft thick overlies part of the area and is composed mostly of limy detritus from the high ridge north of the mine. Minor faulting has taken place in the limestone near the mine. A contact between the mineralization and overlying limestone strikes northeast and dips at 25° northwest. This may be either a normal sedimentary contact or a fault contact (interpreted to be thrust fault but evidence is inconclusive).

The Louie Hill and Bisoni–McKay deposits are located in the same formation and lithologic units as the Gibellini deposit. The general geology in these areas is interpreted to be the same geological units as seen in the Gibellini deposit area.

7.3 Property Geology Descriptions

7.3.1 Gibellini

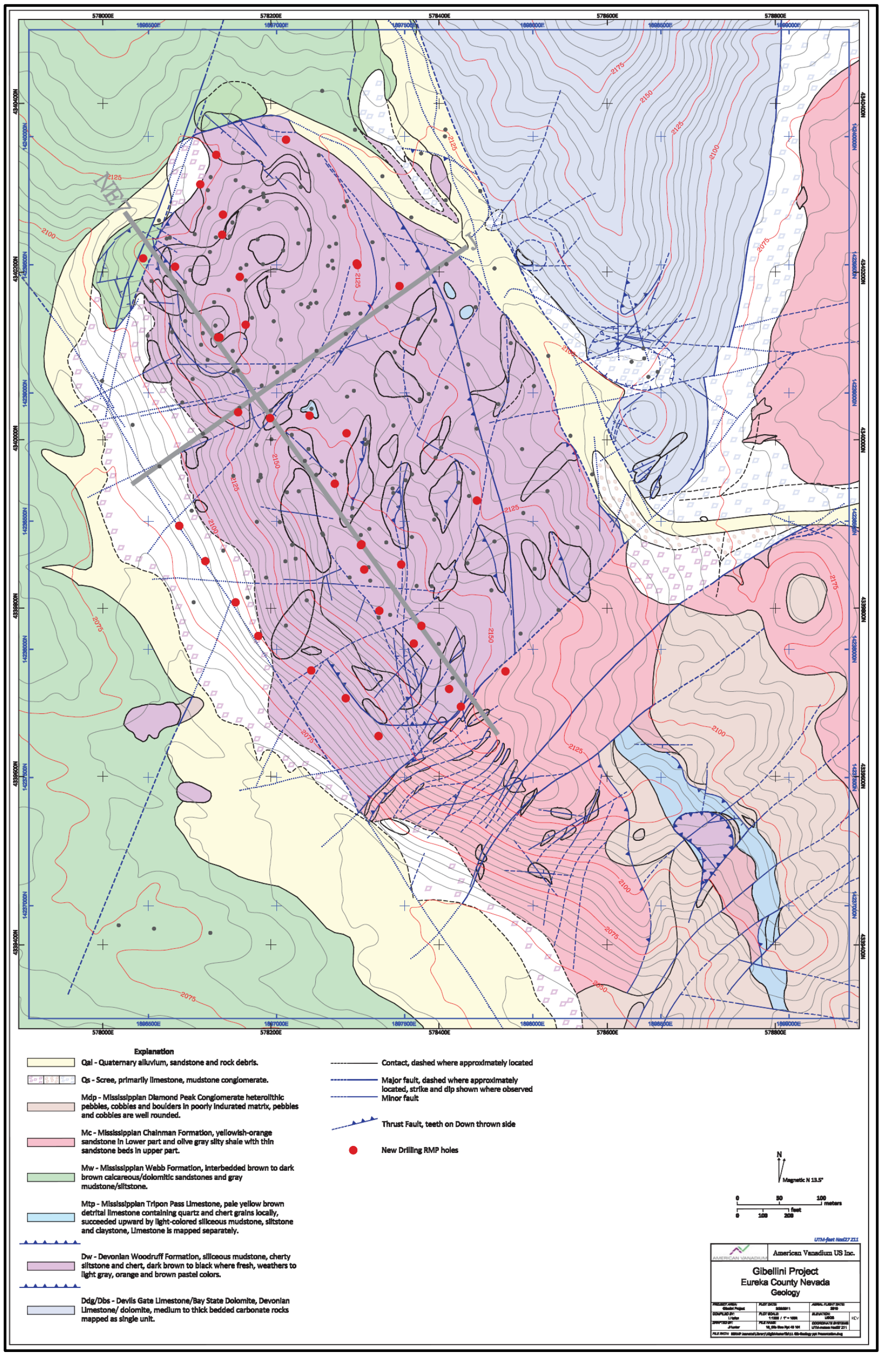
The Gibellini deposit occurs within organic-rich siliceous mudstone, siltstone, and chert of the Gibellini facies of the Devonian Age Woodruff Formation (Figure 7-2).

In general, the beds strike north–northwest and dip from 15–50° to the west. The siltstone/shale unit that hosts the vanadium Mineral Resource estimate is from 175 ft to over 300 ft thick and overlies gray mudstone of the Bisoni facies. The shale has been oxidized to various hues of yellow and orange up to a depth of 100 ft.

Descriptions of the lithological units mapped at the Gibellini deposit are as follows:

- *Qal*: Quaternary alluvium, sandstone and rock debris
- *Qs*: Scree, primarily limestone, mudstone and conglomerate
- *Mdp*: Mississippian Diamond Peak Conglomerate heterolithic pebbles, cobbles and boulders in poorly-indurated matrix, pebbles and cobbles are well rounded
- *Mc*: Mississippian Chainman Formation, yellowish-orange sandstone in lower part and olive gray silty shale with thin sandstone beds in upper part
- *Mw*: Mississippian Webb Formation, interbedded brown to dark brown calcareous to dolomitic sandstones and gray mudstone/siltstone

Figure 7-2: Gibellini Deposit Geology Map



Source: Hanson et al., 2011. Note: New drilling as indicated on the plan refers to drilling completed in 2010 (see Section 10)

- *Mtp*: Mississippian Tripon Pass Limestone, pale yellow–brown detrital limestone containing quartz and chert grains locally succeeded upward by light-colored siliceous mudstone, siltstone and claystone
- *Dw*: Devonian Woodruff Formation, siliceous mudstone, cherty siltstone and chert, dark brown to black where fresh, weathers to light gray, orange and brown pastel colors
- *Ddg/Dba*: Devonian Devils Gate Limestone/Bay State Dolomite, medium- to thick-bedded carbonate rocks. Forms resistant ledges up to 10 ft thick. Locally dolomitic where altered.

Figure 7-3 and Figure 7-4 are cross- and long-sections through the Gibellini deposit showing typical V_2O_5 grades, alteration (oxidation), and lithologic units.

Alteration (oxidation) of the rocks is classified as one of three oxide codes: oxidized, transitional, and reduced. Vanadium grade changes across these boundaries. The transitional zone reports the highest average grades and RMP geologists interpreted this zone to have been upgraded by supergene processes.

7.3.2 Louie Hill

The Louie Hill deposit lies approximately 500 m south of the Gibellini deposit, being separated from the latter by a prominent drainage. Mineralization at Louie Hill is hosted by organic-rich siliceous mudstone, siltstone, and chert of the Gibellini facies of the Devonian Woodruff Formation and probably represents a dissected piece of the same allochthonous fault wedge containing the Gibellini deposit.

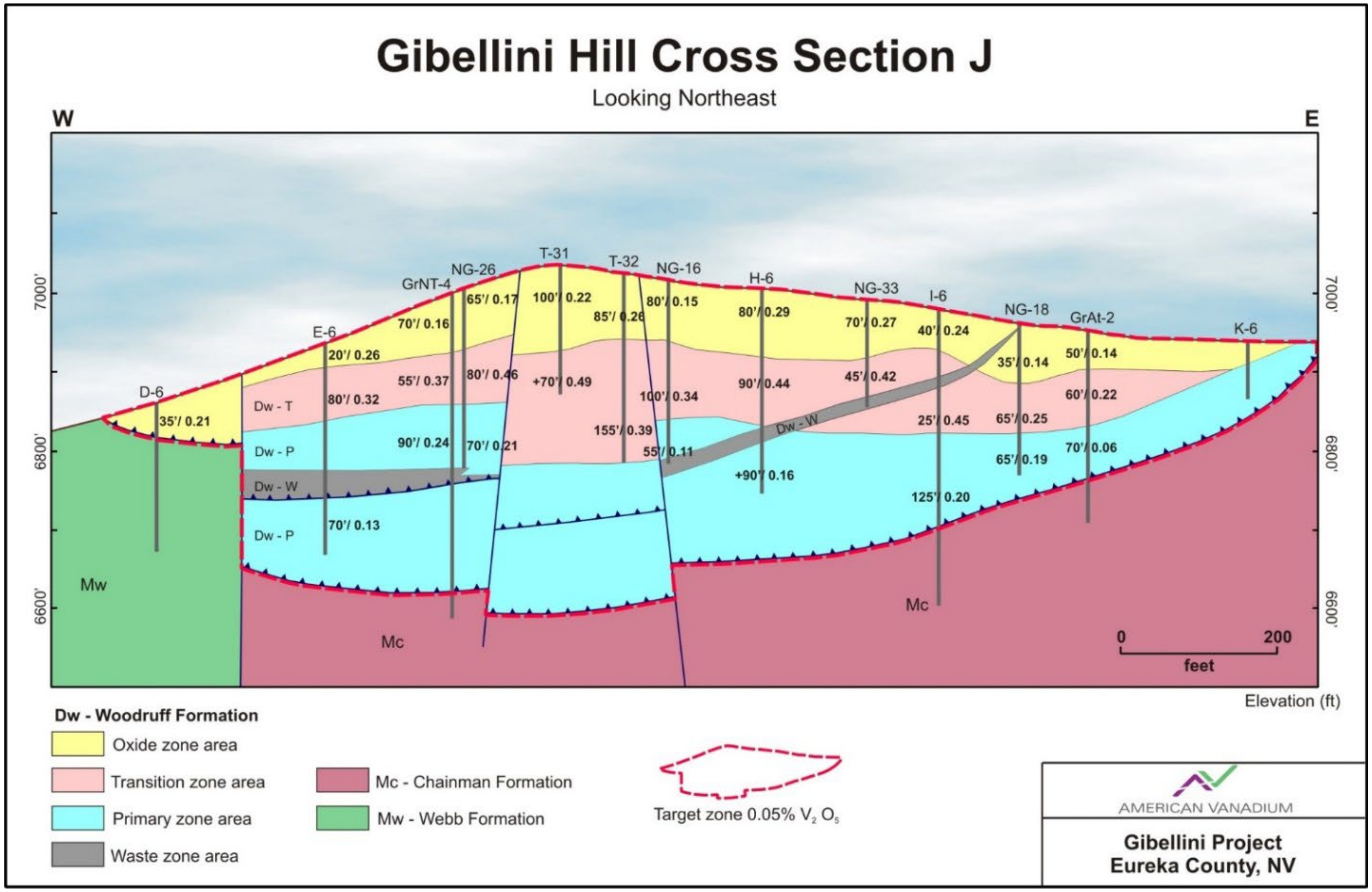
Mineralized beds cropping out on Louie Hill are often contorted and shattered but in general strike in a north–south direction, and dip to the west at 0–40°.

Rocks underlying the Louie Hill Deposit consist of mudstone, siltstone, and fine-grained sandstone probably of Mississippian age (Webb and/or Chainman Formations).

Oxidation of the mineralized rocks has produced light-colored material with local red and yellow bands of concentrated vanadium minerals.

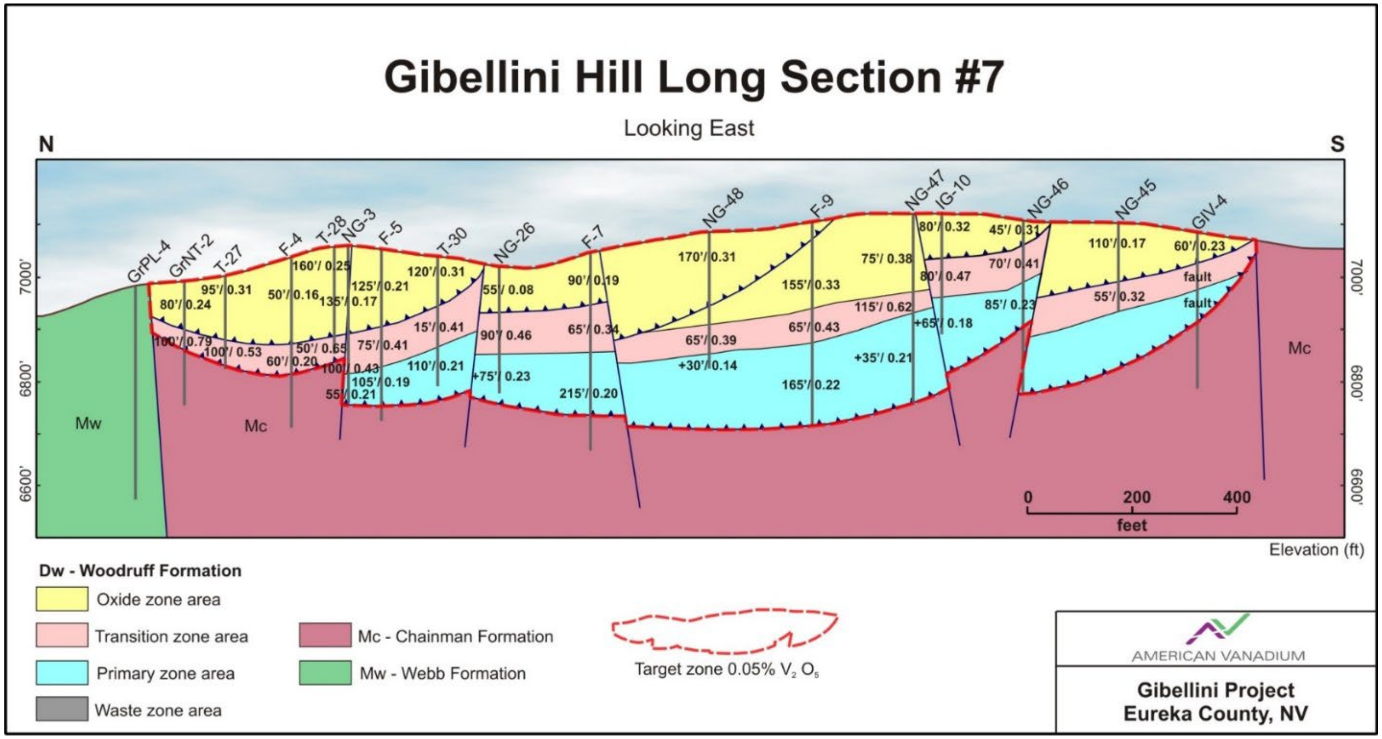
A geological section through the Louie Hill deposit is included as Figure 7-5.

Figure 7-3: Cross-section Across Gibellini (looking northwest)



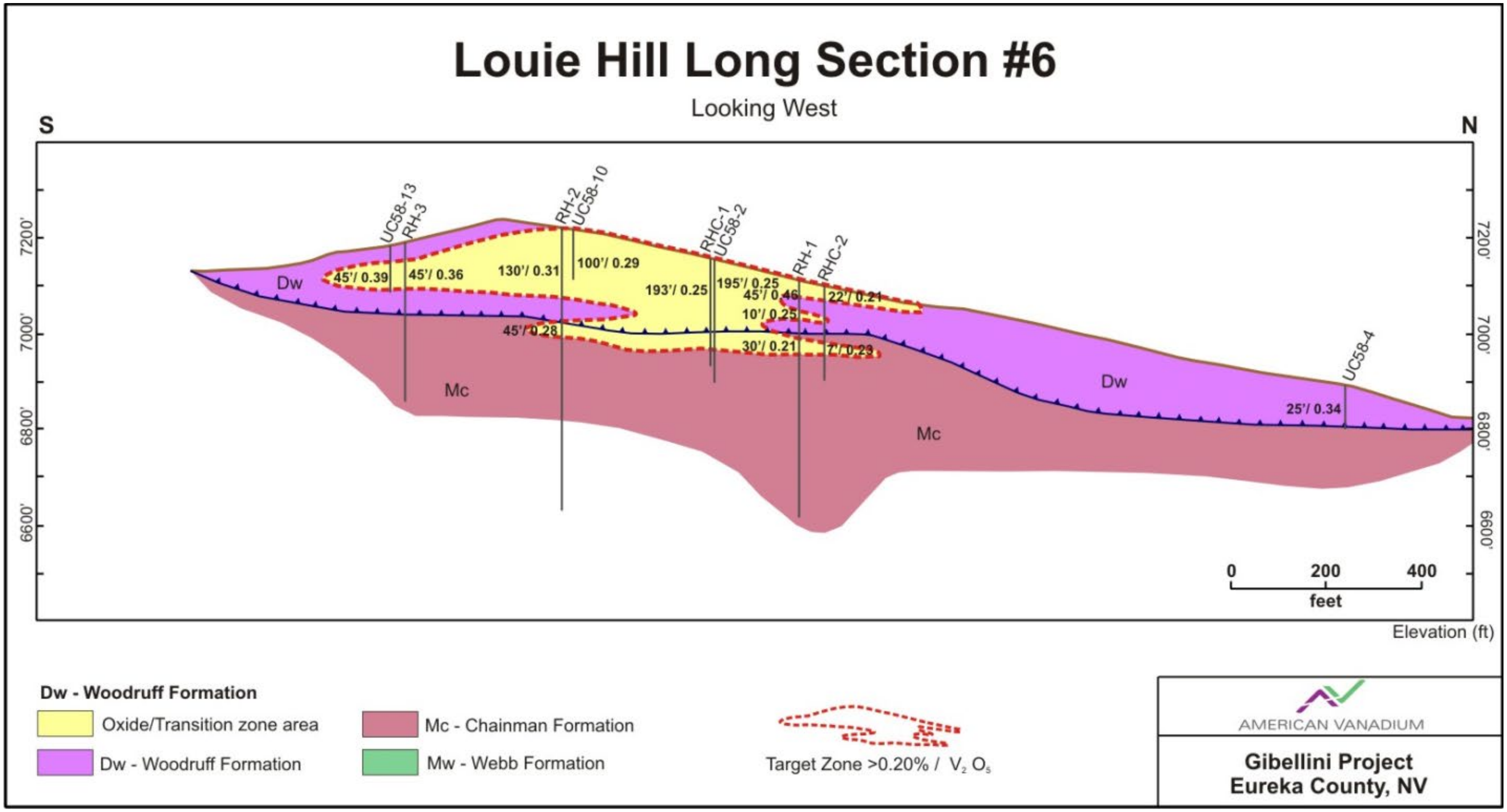
Source: Hanson et al., 2011. Note: Red outline shows the 0.050% V_2O_5 grade shell outline with drill hole trace.

Figure 7-4: Long-section Across Gibellini (looking northeast)



Source: Hanson et al., 2011. Note: Red outline showing 0.050% V_2O_5 grade shell with drill hole trace. East grid lines are spaced 500 ft apart.

Figure 7-5: Long-section Across Louie Hill (looking west)



Source: Hanson et al., 2011. Note: Red outline showing 0.20% V_2O_5 grade shell with drill hole trace.

7.3.3 Bisoni–McKay

The geological description of the Bisoni–McKay area is taken largely from Ullmer (2008).

The Bisoni–McKay deposits occur approximately eight miles south of the Gibellini deposit. Vanadium mineralization at Bisoni–McKay is hosted by the Gibellini facies of the Devonian Woodruff Formation. The exposed Woodruff rocks are composed of carbonaceous shale, mudstone, siltstone and minor limey shale and sandstone. The Bisoni facies of the Woodruff Formation underlies the Gibellini facies and consists of gray dolomitic or argillaceous mudstone and siltstone with less carbonaceous material. Devonian Devils Gate Limestone and Mississippian Webb Formation rocks are also mapped in the area (Figure 7-6).

The Woodruff and underlying Devils Gate Limestone contact relationship is mapped as a fault, which may be a slide block plane. Prior to Tertiary faulting, the Devils Gate Limestone, the overlying Woodruff Formation, and the Webb Formation appear to have been folded as a unit as exemplified by the north-trending fold and an accompanying fault that extends along the west side of the North A area. The fold may be due to drag along the north–south fault trend.

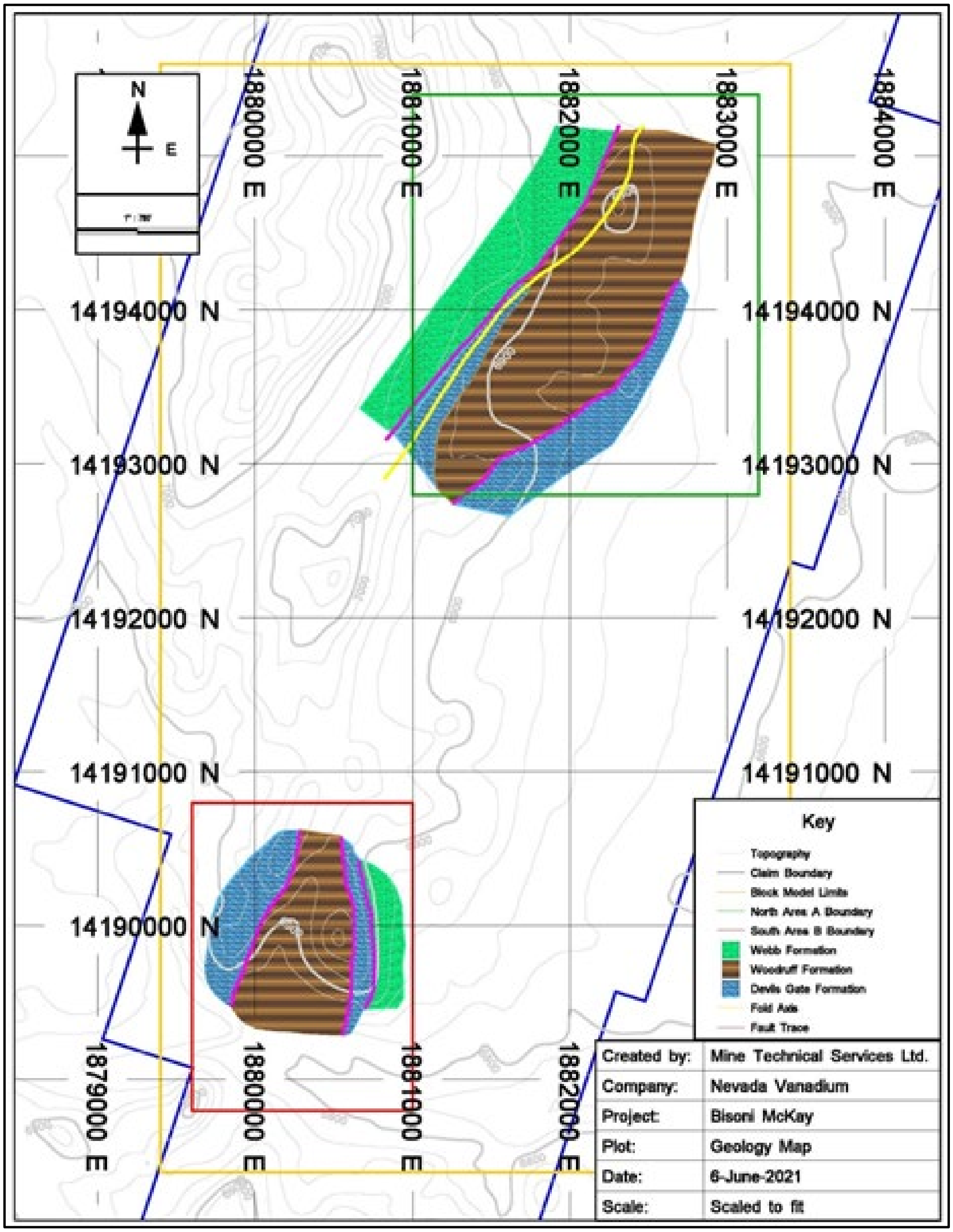
The Gibellini facies and the greater Woodruff Formation are typically preserved and exposed in down-dropped fault blocks. The Woodruff Formation is juxtaposed with the older, massive outcrops of Devils Gate Limestone on the east and west in the North A and South B areas. In the northwestern part of the North A area, a northwest trending concealed fault has juxtaposed the Devils Gate limestone against the Webb Formation rocks that has resulted in placing the Woodruff rocks in fault contact with the younger Webb Formation rocks.

The thickness of the Woodruff Formation is uncertain because complete sections have not been drilled, but it is likely to be between 300–400 ft.

Mapping work by Poole and Sandberg (2015) at Bisoni–McKay suggests the geology of the area may be significantly more structurally complex than initially recognized.

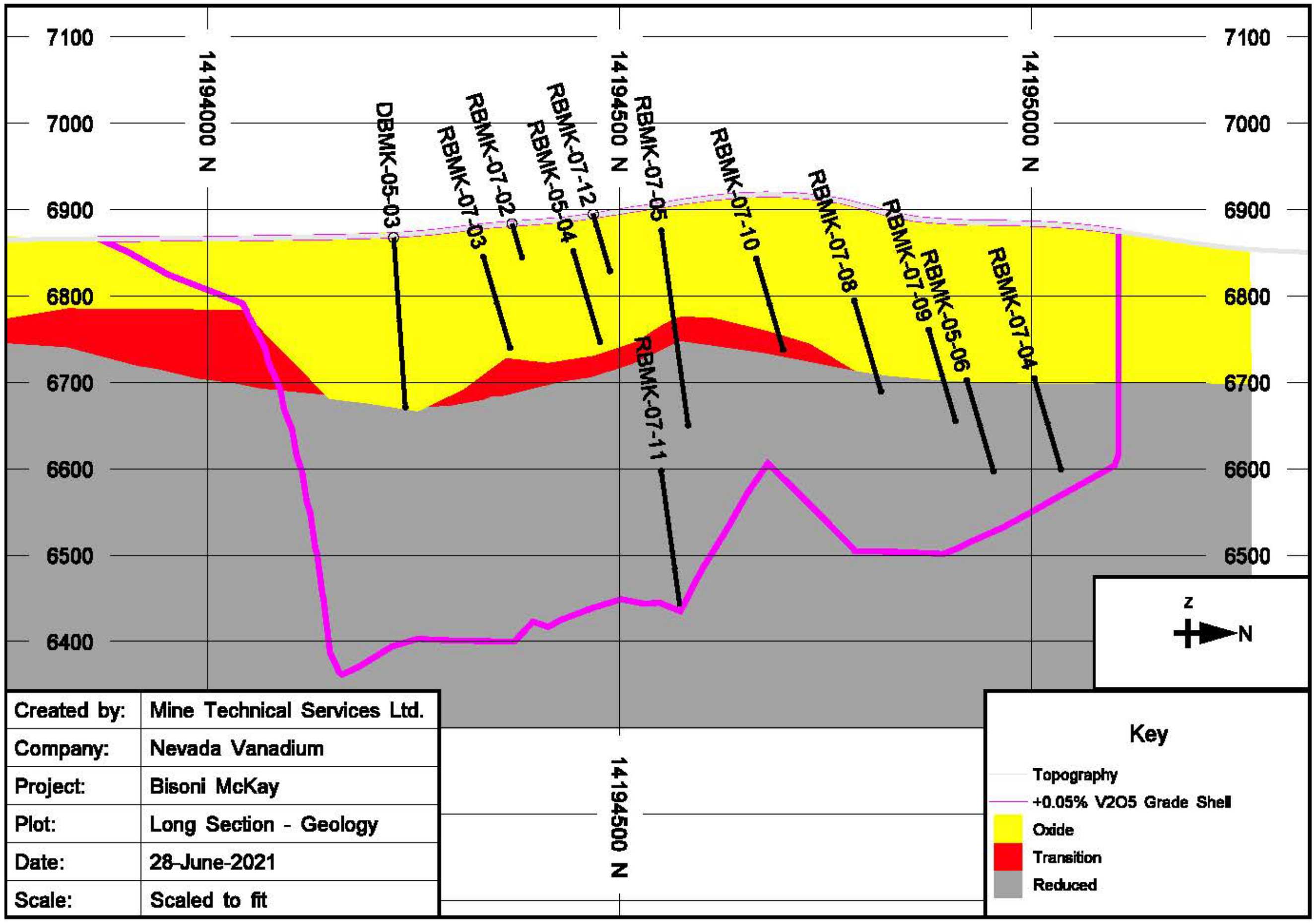
A geological section through the Bisoni–McKay deposit is included as Figure 7-7.

Figure 7-6: Bisoni–McKay Geology Map



Source: Mine Technical Services, Ltd., 2021

Figure 7-7: Long-section Across Bisons–McKay (looking west)



Source: Mine Technical Services Ltd., 2021

7.4 Mineralization and Alteration

Vanadium mineralization at Gibellini, Louie Hill, and Bisoni–McKay is hosted in siltstone/shale sedimentary rocks. Mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes.

The Gibellini deposit is approximately 2,200 ft (670 m) long, 1,500 ft (460 m) wide, and as much as 400 ft (120 m) thick. The Louie Hill deposit is approximately 2,400 ft (730 m) long, 600 ft (180 m) wide, and as much as 250 ft (75 m) thick. The Bisoni-McKay North Area A deposit is approximately 2,500 ft (760 m) long, 800 ft (245 m) wide, and as much as 500 ft (150 m) thick. The Bisoni-McKay South Area B deposit is approximately 1,200 ft (365 m) long, 700 ft (215 m) wide, and as much as 200 ft (60 m) thick. The limits of mineralization in all three areas are adequately defined by surface mapping and drilling and no directions remain open for significant extensions.

Alteration of the rocks is limited to oxidation and is classified as one of the three oxide codes: 1 = oxidized, 2 = transitional, and 3 = reduced. Vanadium grades change across these boundaries. In general, the transitional zone reports the highest average grades, the oxide zone reports the next highest average grades, and the reduced zone reports the lowest average grades. At Bisoni–McKay, the oxide zone has the lowest grades, the transition zone is much thinner than at Gibellini, and may or may not be higher in vanadium grade than the reduced zone.

In the oxidized zone, complex vanadium oxides occur in fractures in the sedimentary rocks including metahewettite ($CaV_6O_{16}{\cdot}H_2O$), bokite ($KAl_3Fe_6V_{26}O_{76}{\cdot}30H_2O$), schoderite ($Al_2PO_4VO_4{\cdot}8H_2O$), and metaschoderite ($Al_2PO_4VO_4{\cdot}6\text{-}8H_2O$). In the reduced sediments, vanadium occurs in organic material (kerogen) made up of fine grained, flaky, and stringy organism fragments less than 15 µm in size (Bohlke et al., 1981).

Other workers found vanadium mineralization to occur within manganese modules (psilomene family) in the shale (Assad and Laguiton, 1973). X-ray diffraction (XRD) mineral identification by SGS Lakefield Research in Ontario, Canada (SGS Lakefield) reported the occurrence of the vanadium mineral fernandinite ($CaV_8O_{20}{\cdot}H_2O$) (SGS Lakefield, 2007). Other minerals reported to occur at Gibellini are marcasite, sphalerite, pyrite, and molybdenite (Desborough et al., 1984).

7.5 Comments on Section 7

In the opinion of the MTS QP:

- Knowledge of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support mineral resource estimation.
- The mineralization style and setting of the Project deposit are sufficiently well understood to support mineral resource estimation.

8.0 DEPOSIT TYPES

8.1 Overview

The vanadium deposits that occur on the Property are examples of the "USGS Shale-Hosted Vanadium" deposit type of Kelley et al. (2017). Vanadium-rich metalliferous black shales occur primarily in late Proterozoic and Phanerozoic marine successions. The term shale is used broadly to include a range of carbonaceous rocks that include marls and mudstones. These fine-grained sedimentary rocks were deposited in inland seas and on continental margins. They typically contain high concentrations of organic matter, reduced sulfur, and a suite of metals including copper, molybdenum, nickel, platinum group elements (PGEs), silver, uranium, vanadium, and zinc.

The vanadium mineralization of the Gibellini, Louie Hill, and Bisoni–McKay areas is hosted in sedimentary rocks. Oxidation of the primary organic and reduced sulfide material in portions of the deposit resulted in the presence of secondary vanadium oxide minerals. The depth and intensity of oxidation is variable across the deposits and accounts for the three primary stratiform facies recognized on the project: oxide, transitional, and reduced. Mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes.

Desborough et al. (1984) reported that vanadium occurs principally in association with organic matter and that metahewettite is the main vanadium mineral in the oxidized zone. Vanadium mineralization is thought to be the result of syngenetic and early diagenetic metal concentration in the marine shale rocks.

Similarities with the style of mineralization for the Project exist in other known vanadium deposits and occurrences worldwide, notably the black-shale-hosted vanadium deposits of the Guangxi Province in China (Zhang et al., 2015).

The mineralization at the Gibellini manganese–nickel mine forms a pipe-like structure hosted in limestone, is primarily enriched in manganese, zinc, and nickel, and may be hydrothermal or sedimentary in origin, or a combination of the two.

8.2 Comments on Section 8

A shale-hosted vanadium deposit model is suitable for exploration vectoring and is used in support of geological modeling.

9.0 EXPLORATION

Flying Nickel has not completed any exploration programs on the Property. The following discussions describe exploration work completed by previous operators.

9.1 Grids and Surveys

In 1972, Noranda contracted Olympus Aerial Surveys (OAS) of Salt Lake City, Utah, to conduct an aerial photographic survey over the Gibellini property and Bisoni-McKay deposit to provide a 1:1,200 scale (1”=100’) base map for mapping and sampling activities.

During 2007–2008, topographic contours for Gibellini were digitized by AMEC on 25 ft contour intervals, using a locally-established mine grid coordinate system (Wakefield and Orbock, 2007). The topography encompassed the immediate Gibellini mineralized area. The mine coordinate system was converted to UTM NAD27. Grid coordinate conversion was conducted by RMP using a visual best-fit method by lining up contours and drill holes from one topographic map with the other.

In 2011, aerial photos and graphics for the Gibellini and Louie Hill areas were generated by PhotoSat of Vancouver, Canada. Satellite data were collected as 50 cm stereo satellite photos with a photo pixel size set at 50 cm. Topographic contours were produced at intervals of 1 m, 5 m, 10 m, and 50 m. The topographic photos were delivered to American Vanadium in ASCII XYZ and 3D DWG file formats in both meters and US survey feet. The PhotoSat-produced topography has an overall relative horizontal accuracy of ±6.6 ft (±2 m) over 6.2 miles (10 km). The vertical accuracy is approximately ±1 ft (±30 cm). An example of the contoured files is shown in Figure 9-1.

In 2021, Nevada Vanadium created a topographic surface covering the area of the Bisoni–McKay North A and South B deposits. The surface was sourced from a USGS 10m digital elevation model (DEM) and is projected using the NAD83 datum, UTM Zone 11N data in US feet.

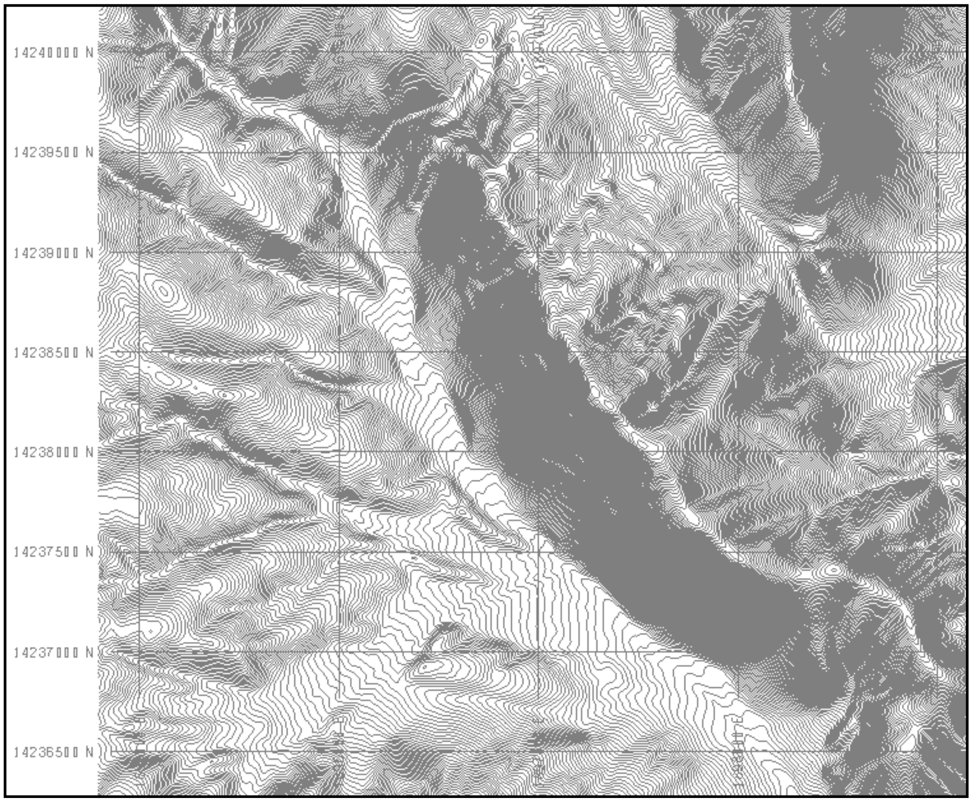
The topography is used in support of the conceptual pit shells used to constrain the mineral resource estimates in Section 14.

9.2 Geological Mapping

In 2006, RMP geologists mapped the Gibellini property area at a scale of 1” = 200 m (656 ft). Results from this mapping effort are shown earlier in Figure 7-2.

Stina Resources mapped the Bisoni–McKay North A and South B deposit areas in 2006 at a scale of 1”=200’. Results from this mapping is shown in Figure 7-6.

Figure 9-1: Gibellini 2011 Surface Topography



Source: Hanson et al., 2011

9.3 Geochemical Sampling

RMP geologists collected 20 rock-chip samples from surface outcrops of strong mineralization around the historical Gibellini manganese–nickel mine, returning consistently elevated values of manganese, zinc, nickel, vanadium, molybdenum, cobalt, and copper. An additional 464 rock-chip samples from the Gibellini deposit and surrounding areas confirmed anomalous concentrations and thicknesses of vanadium mineralization.

9.4 Geophysics

During 2010–2011, American Vanadium completed a surface sampling program using a field portable XRF unit (Niton model XL3t) over the property. Approximately 1,800 determinations were made using the instrument; however, most of these readings are outside the current mineral claim areas.

9.5 Pits and Trenches

In August 1989, Inter-Globe mapped and sampled nine bulldozed trenches and seven backhoed pits throughout the Gibellini area (Figure 9-2). The purpose of the program was to evaluate the near-surface oxide mineralization (JAA, 1989b). A total of 173 five foot horizontal and vertical channel samples were collected and assayed for V_2O_5. The exact locations of these trenches were not surveyed and so the trench results have not been incorporated into the current resource database. The length-weighted average V_2O_5 assays for the trenches are shown in Table 9-1.

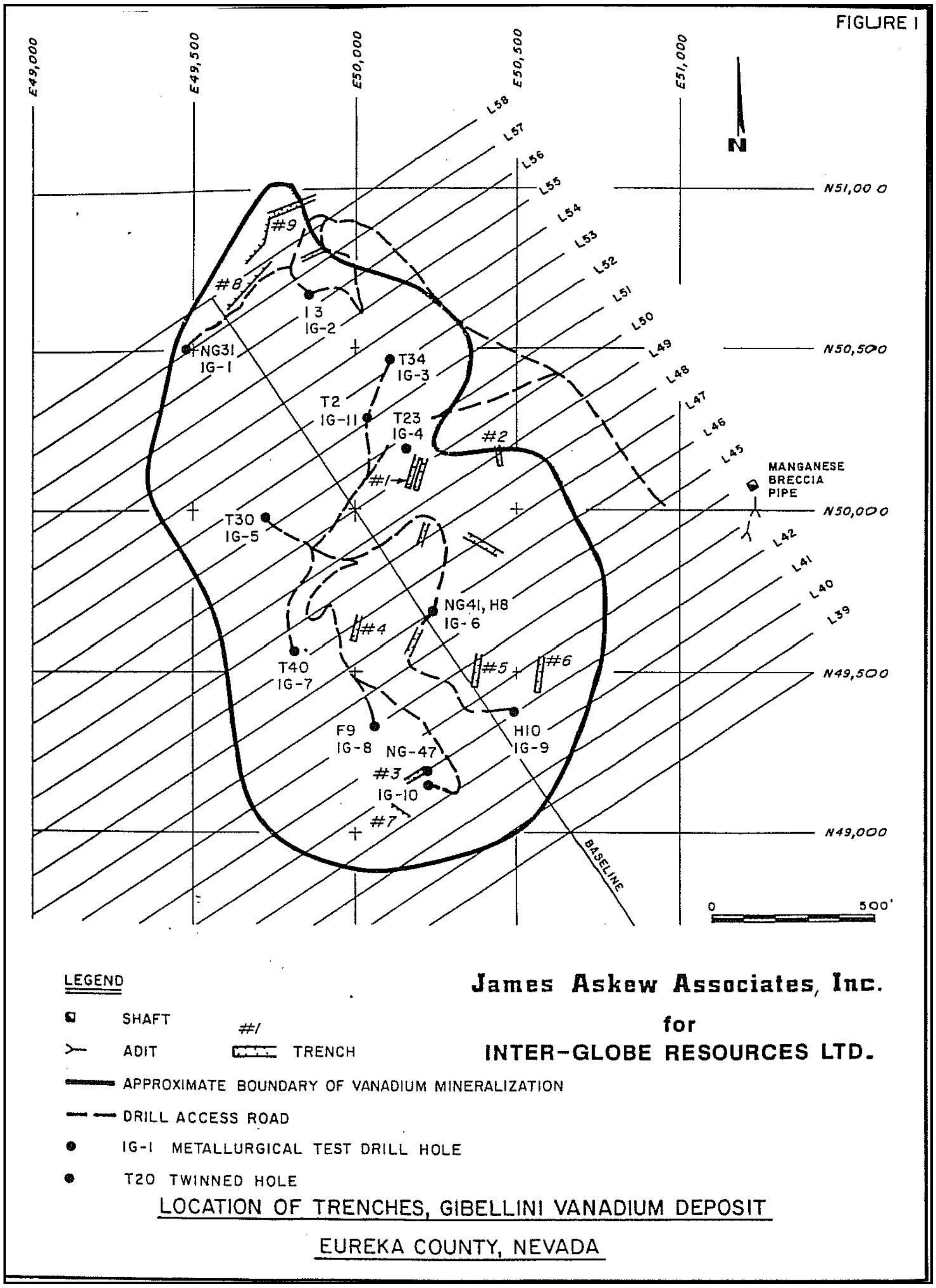
Inter-Globe concluded from this work that:

- Vanadium mineralization occurs in bedrock up to the base of overburden.
- The depth of overburden varies from 0.5 ft to 7.0 ft.
- Most mineralized beds are gently folded and dip at shallow angles.
- Trench V_2O_5 assays compare well on average with assays from the top of the RC holes in the vicinity of the trenches (0.43% V_2O_5 in trenches vs. 0.48% V_2O_5 in RC).

In the 1970s, Hecla completed an extensive set of bulldozed trenches in the Bisoni–McKay area. The Hecla trenches are spaced at irregular intervals and are nominally oriented east-west, perpendicular to the strike of lithology. From 2004 to 2005, Stina Resources mapped and sampled 38 of the Hecla trenches in the North A, South B, and South C areas. Stina Resources reported that few trenches traversed the entire mineralized zone, but the average trench mineralized zone has a true width of 58 ft and an average grade of 0.19% V_2O_5. Figure 9-3 shows the location of Hecla trenches that were resampled by Stina Resources. The length-weighted average V_2O_5 assays for the trenches are shown in Table 9-2.

In 2021, Nevada Vanadium digitized the location and assays for these trenches but has not compiled or evaluated these data. The exact locations of the trench samples were not surveyed, and the quality of the assays was unknown and so the trench results were not incorporated into the Bisoni–McKay resource database.

Figure 9-2: Inter-Globe Gibellini Trench Mapping and Sampling Map



Source: Hanson et al., 2011

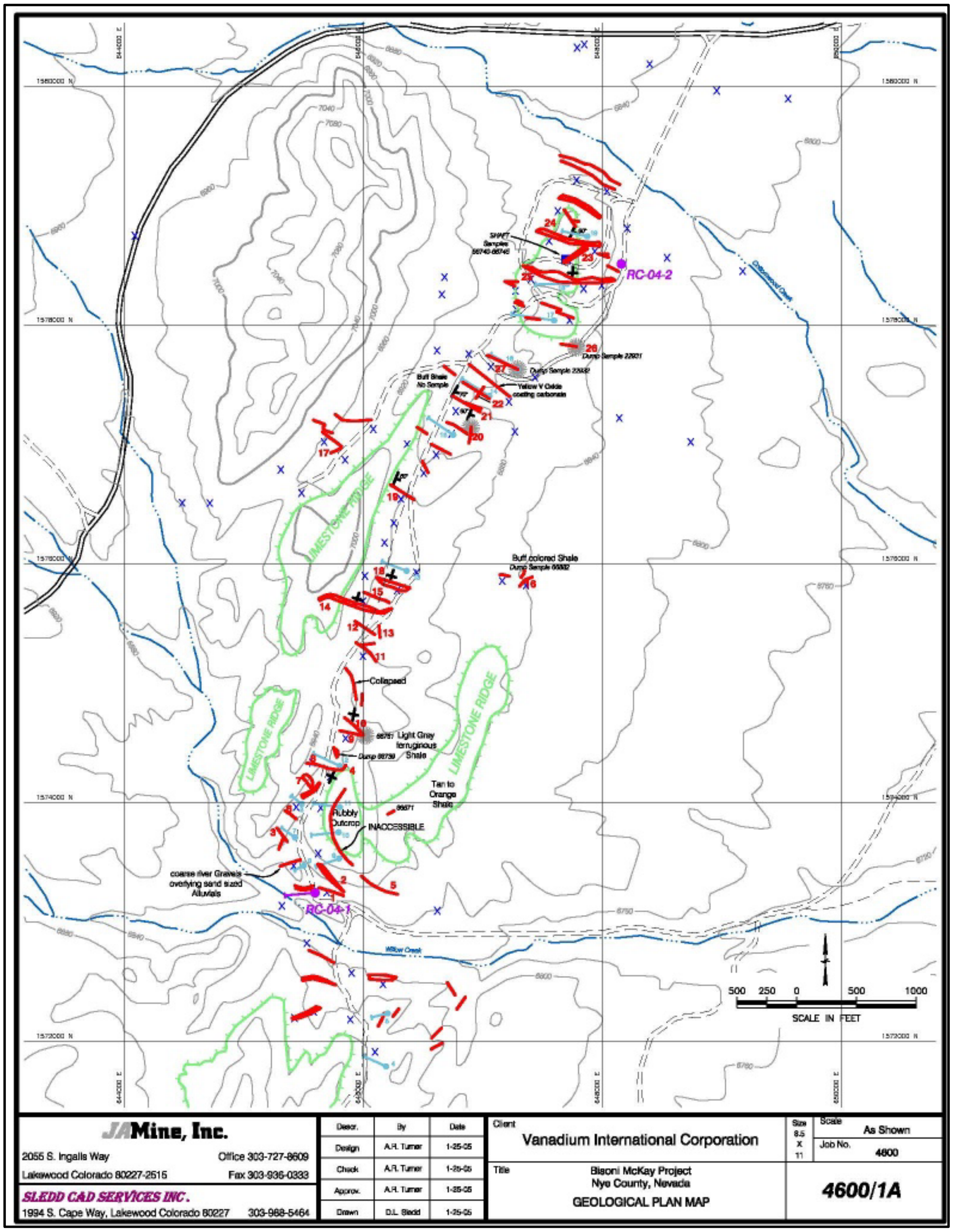
Table 9-1: Length-Weighted Average V_2O_5 Assays for Gibellini Trenches Sampled by Inter-Globe

Trench	Length-weighted Assay (V_2O_5 in %)
BT-1	0.18
BT-2	0.35
BT-3	0.26
BT-4	0.34
BT-5	0.32
BT-6	0.14
BT-7	0.34
BT-8	0.56
BT-9	0.89

Table 9-2: Length-Weighted Average V_2O_5 Assays for Bisoni–McKay Trenches Sampled by Stina Resources

Trench	Length-weighted Assay, (V_2O_5 in %)	Trench	Length-weighted Assay, (V_2O_5 in %)
AS50C	0.42	19	0.16
1	0.11	20	0.17
2	0.09	21	0.21
3	0.15	22	0.13
4	0.10	23	0.21
5	<0.06	24	0.24
6	0.27	25	0.18
7	0.33	26	<0.06
8	0.22	27	<0.06
9	0.16	05-01	0.10
10	0.17	05-02	0.07
11	0.18	05-03	0.08
12	<0.06	05-04	0.12
13	<0.06	05-05	0.27
14	0.16	05-06	0.32
15	0.24	05-07	0.22
16	<0.06	05-08	0.30
17	<0.06	05-09	0.24
18	0.19	05-10	0.19

Figure 9-3: Stina Resources Trench Mapping and Sampling Map



Note: Trenches shown in red.

9.6 Geotechnical and Hydrological Studies

9.6.1 Geotechnical Studies

Site investigations have been undertaken to:

- Characterize and evaluate subsurface soil and groundwater conditions
- Evaluate potential borrow source materials and locations
- Provide preliminary foundation recommendations
- Identify seismic hazards.

The site investigation consisted of an extensive field program followed by laboratory testwork and a seismic hazard analysis. Additional discussion is provided in Section 10.11.

9.6.2 Hydrological Studies

Enviroscientists conducted a spring, seep, and riparian study to identify surface water resources within the Little Smoky Valley Basin (155A). No springs, seeps, or riparian areas were located within the current Property or vicinity.

Specific data were collected from the Property and vicinity. In addition, water quality samples were collected from the Fish Creek ranch located to the north of the Property for comparison to the U.S. Environmental Protection Agency's Primary Drinking Water Standards.

9.7 Comments on Section 9

In the opinion of the MTS QP, the exploration programs completed to date are appropriate to the style of mineralization and the deposit type.

10.0 DRILLING

Flying Nickel has not completed any drilling at Gibellini, Louie Hill, or Bisoni–McKay. The following discussions describe drilling completed by previous operators.

10.1 Introduction

A total of 335 drill holes (about 73,424 ft) have been completed on the Gibellini property since 1946, comprising 21 core holes (5,800 ft), 180 rotary drill holes (30,642 ft; note not all drill holes have footages recorded) and 130 RC holes (36,982 ft). Drilling is summarized by operator in Table 10-1. The drill collar location plan for Gibellini and Louie Hill is included as Figure 10-1. The drill collar location plan for Bisoni–McKay is included as Figure 10-2.

10.2 Legacy Drill Campaigns

A total of 35,789 ft of drilling in 173 drill holes was completed in the Gibellini deposit area in four drilling campaigns by Terteling, Atlas, Noranda, and Inter-Globe. Of this, 120 holes totaling 25,077 ft (70%) were drilled using conventional rotary (rotary) methods and 53 holes totaling 10,712 ft (30%) were drilled using reverse circulation (RC) methods.

Terteling drilled holes in an uneven pattern in the central and northern parts of the vanadium mineralized area. Atlas drilled the main mineralized area in a rough 200 ft square grid pattern oriented parallel to the trend of the main ridge. Noranda re-drilled this same area with holes spaced 200 ft apart on sections oriented at 043° azimuth and spaced 200 ft apart. Inter-Globe drilled 11 metallurgical holes as twins of previous drill holes.

At Louie Hill, Union Carbide drilled a series of 60 holes in 1956. Noranda completed five RC holes (610 ft) in 1973.

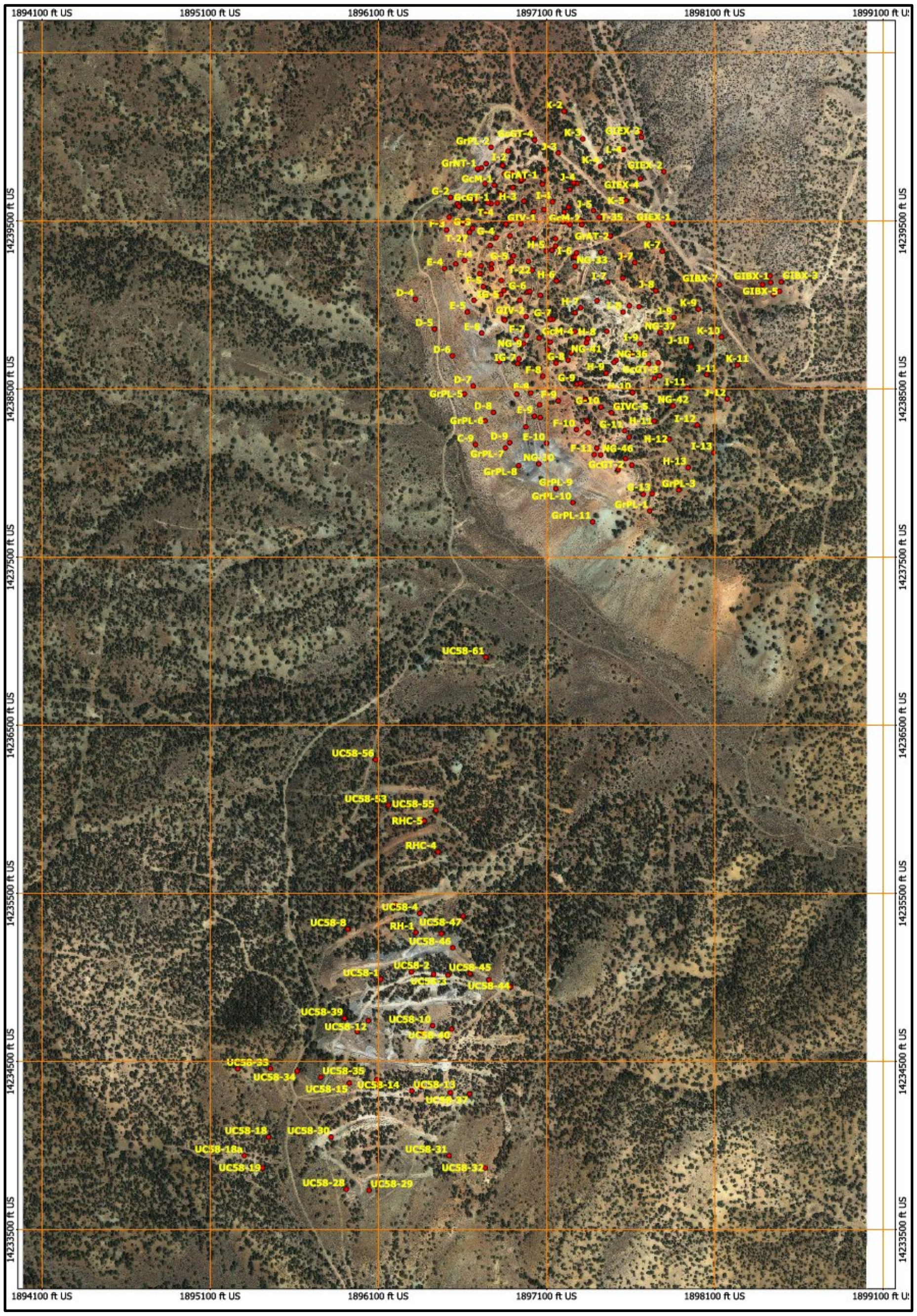
At Bisoni–McKay, a total of 16,594.5 ft in 49 drill holes was completed in four drilling campaigns by Hecla, Vanadium International, and Stina Resources. Hecla's drilling campaign included 19 RC drill holes; six in the North A area, seven in the South B area, and six outside the North A and South B areas. Vanadium International completed two RC drill holes, one in the North A area and one in the South B area. Stina Resources completed 23 RC drill holes and five diamond core drill holes in two campaigns. The 2005 Stina Resources campaign tested both the North A and South B areas where the 2007 campaign focused on the North A area only.

A total of 895.5 ft of drilling in four core drill holes was completed at the Gibellini manganese–nickel mine by the NBMG in 1946.

Table 10-1: Drill Summary Table

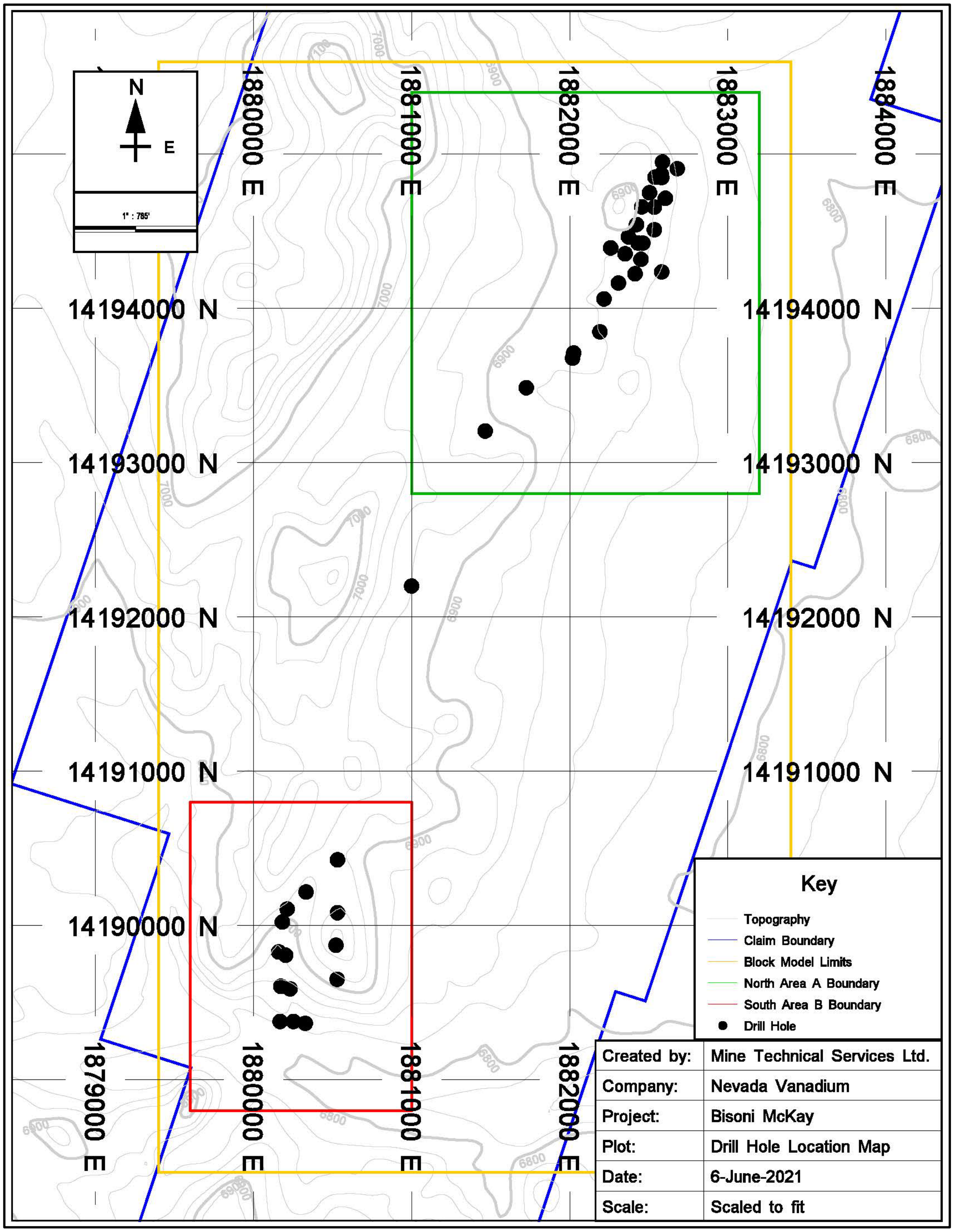
Deposit	Campaign	Timeframe	Rotary Drill Holes	Rotary Drill Footage (ft)	RC Drill Holes	RC Drill Footage (ft)	Core Drill Holes	Core Drill Footage (ft)
Gibellini	Terteling	1964–1965	33	5,695	—	—	—	—
	Atlas	1969	77	17,000	—	—	—	—
	Noranda	1972–1973	10	2,382	42	8,174	—	—
	Inter-Globe	1989	—	—	11	2,538	—	—
	American Vanadium	2007	—	—	4	1,500	5	1,650
	American Vanadium	2008	—	—	—	—	1	300
	American Vanadium	2010	—	—	19	4930	—	—
Louie Hill	Union Carbide	1956	60	5,565	—	—	—	—
	Noranda	1973	—	—	5	610	—	—
	American Vanadium	2007	—	—	3	1,430	—	—
	American Vanadium	2008	—	—	—	—	6	1,200
Bisoni–McKay	Hecla	1970s	—	—	19	5,480	—	—
	Vanadium International	2004	—	—	2	585	—	—
	Stina Resources	2005	—	—	11	3,835	5	1754.5
	Stina Resources	2007	—	—	12	4,940	—	—
Gibellini Mn–Ni mine	Nevada Bureau of Geology and Mines	1946	—	—	—	—	4	895.5
	American Vanadium	2007–2008	—	—	7	1,660	—	—
Exploration	American Vanadium	2007–2008	—	—	4	1,300	—	—
Total			**180**	**30,642**	**139**	**36,982**	**21**	**5,800**

Figure 10-1: Drill Hole Location Plan, Gibellini and Louie Hill



Note: Hanson et al., 2011. Note: Drill hole collar identifiers are labelled by company as follows: UC = Union Carbide, C, D, E, F, G, J, K, L = Atlas drill holes; IG = Inter-Globe drill holes; NG = Noranda drill holes; T = Terteling drill holes; Gc, Gr, GIB, GIV = RMP or American Vanadium drill holes.

Figure 10-2: Drill Hole Location Plan, Bisoni–McKay



Source: Mine Technical Services Ltd., 2021

10.3 American Vanadium/RMP Drill Campaigns

During 2007 and 2008, RMP completed a total of 9,040 ft of drilling in 30 drill holes on the Gibellini Project. Ten of these holes were drilled in the Gibellini area, seven were drilled in the historic Gibellini manganese–nickel mine area, nine were drilled in the Louie Hill area, and four exploration holes were drilled elsewhere on the property.

American Vanadium completed a total of 19 RC drill holes in 2010. Four drill holes were designed to twin Atlas legacy drill holes at Gibellini, four drill holes were designed to twin Noranda legacy drill holes at Gibellini, and eleven drill holes were designed to test the limits of the Gibellini ultimate pit limit from the 2008 PA study.

10.4 Nevada Vanadium

Nevada Vanadium has not completed any drilling at Gibellini, Louie Hill, or Bisoni–McKay.

10.5 Flying Nickel

Flying Nickel has not completed any drilling at Gibellini, Louie Hill, or Bisoni–McKay.

10.6 Drill Methods

10.6.1 Legacy Programs

10.6.1.1 Gibellini

Documentation of drilling methods employed by the various legacy operators at Gibellini is sparse. Terteling and Atlas are reported to have used conventional rotary tools (Condon, 1975). NBMG graphic logs note the assay of core samples, but no documentation as to core tool diameter is mentioned.

Noranda (Condon, 1975) reports that the first 10 Noranda holes were drilled in 1972, using rotary methods with a vacuum-type drill, a probable pre-cursor to the RC drill rig. In 1973, Noranda drilled 42 holes with a reverse circulation Con-Cor rotary rig. The holes were drilled dry with a 4 ⅞" diameter long-tooth tricone bit. The Inter-Globe drilling is well documented and employed RC methods with a 5 ¼" diameter tri-cone bit injecting water to control dust. The drill contractor for the Inter-Globe program was Davis Bros. Drilling from Polson, Montana.

RC samples were collected on 5 ft intervals from all drill campaigns. Many of the Noranda drill holes had no cuttings recovery for the first 5 ft to 10 ft. The water table was noted in some drill logs as occurring at a depth of approximately 200 ft below surface. Cuttings and core recovery was not documented on drill logs other than noting when no sample was returned for a given interval. Several drill logs note the loss of a hole due to poor ground conditions.

Select drill core from the NBMG drill holes were sampled, typically on 1–5 ft intervals. No indication of core recovery was noted on the graphic logs.

Most RC holes were drilled from 50 ft to 350 ft in total length. The average drill hole depth for legacy drill holes at Gibellini is 207 ft. The deepest legacy drill hole at Gibellini was drilled to 395 ft.

10.6.1.2 Louie Hill

Union Carbide logs indicate that drilling was completed using rotary drilling methods. All holes are assumed to be vertical, though the inclination and azimuth are not expressly stated.

No information exists for the drill hole sampling conducted by Union Carbide. Drill logs state that drilling was conducted by rotary methods, and this would be consistent with tools available at the time the drilling was completed in the late 1950s. No information on tool size, sample splitting, or sample recovery is available for this drilling campaign.

10.6.1.3 Bisoni–McKay

Hecla logs indicate that drilling was completed using RC drilling methods. All holes were inclined -45° and oriented to the west (270° azimuth). RC drill holes were drilled from 100 to 500 ft in total length and samples were collected on 5-ft intervals. No information on tool size, sample splitting, or sample recovery is available for the Hecla drilling campaign.

Vanadium International drill holes were drilled using an Ingersoll Rand Reverse Circulation drilling rig owned and operated by O'Keefe Drilling of Butte, Montana. A 4-inch diameter hammer bit was employed, and samples were collected on 5-ft intervals down hole. The recovered samples were passed through a cyclone set to reject two thirds of the sample and retain one third.

Stina Resources core drill holes were drilled using an Atlas Copco Diamec U8 APC rig owned and operated by Kettle Drilling, Inc. of Coeur d' Alene, Idaho. Samples were collected on nominal 5-ft intervals. The 2005 Stina Resources RC drill holes were drilled by O'Keefe using the same drill rig and sampling methods as used by Vanadium International in 2004. The 2007 Stina Resources RC drill holes were drilled by O'Keefe using a truck-mounted Rich 650 WS buggy rig with a 5 ¾" bit. RC samples were collected on 5-ft intervals with sample material passed through a cyclone set to reject two thirds of the sample and retain one third.

10.6.2 RMP/American Vanadium Programs

RC drilling was conducted by Drift Exploration of Elko, Nevada and supervised by Lonny Hafen of RMP. Drilling was performed dry, with water added to suppress dust. Ground water was encountered in several drill holes, but this was reportedly a rare occurrence.

Core drilling during 2007–2008 was conducted by Morning Star of Three Forks, Montana, using HQ diameter (2.5 in/6.36 cm) tools. For the 2010 drill programs, O'Keefe Drilling completed all the RC drill holes using a 5 ¾" diameter bit. Morning Star Drilling completed the core drilling at HQ diameter.

10.7 Geological Logging

10.7.1 Legacy Programs

10.7.1.1 Gibellini

Drill holes from the Terteling, Atlas, Noranda, and Inter-Globe drill campaigns were consistently logged for lithology and rock color. Inter-Globe holes were also logged for alteration mineralogy, stain color, and oxide zone (oxidized, transition, un-oxidized). Logs appear consistent within drill campaigns; however, differences do occur between campaigns. For instance, Atlas logged 90% of the cuttings from their drilling as shale where Noranda, drilling in the same area, logged 54% of the cuttings as siltstone and 36% as shale. For this reason, correlation of log units is difficult on cross sections displaying both Atlas and Noranda drill holes.

Lithological units for the NBMG drill holes were transcribed from graphic logs.

AMEC transcribed lithological logs into codes for entry in the digital resource database using the convention detailed in Table 10-2. Rock color, alteration mineralogy, stain color, and oxide zone were also transcribed into codes and loaded into the resource database.

The quality of the geological logging of drill holes at Gibellini is variable by campaign. The logs for the Terteling and Atlas campaigns consist of lithology and rock color codes only. Noranda and Inter-Globe logs also contain detailed descriptions of alteration, mineralogy, and redox (oxide–transition–reduced) contacts.

Table 10-2: Lithology Code Convention for Gibellini Drill Holes

Code	Explanation
1	Claystone, mudstone
2	Shale
3	Silty shale
4	Siltstone
5	Sandy siltstone
6	Silty sandstone
7	Sandstone
8	Alluvial fill

10.7.1.2 Louie Hill

Drill logs, including assays, and a drill hole location map showing the Union Carbide drill holes completed in the late 1950s were recovered by American Vanadium from the son of the former president of Atlas, who had explored the area in the 1960s.

10.7.1.3 Bisoni–McKay

Hecla drill log compilations were included in the technical report completed on the Bisoni–McKay property in 2005 (Turner and James, 2005). Original logs are not available to Flying Nickel. Logging includes a description of the lithology for each interval and the limit of oxidation, including transition zones.

Vanadium International and Stina Resources drill logs from 2004 and 2005 are compiled in the technical reports completed on the Bisoni–McKay property in 2005 and 2006 (Turner and James, 2005; Ullmer and James, 2006). Lithology, color, and oxidation state are consistently logged for all drill holes in these campaigns.

Stina Resources' 2007 drill logs were first completed by hand and then transcribed into digital Microsoft Excel drill logs. Each interval was logged for formation, lithology, and sulfide and oxide intensity (numerical values from 1-4).

The QP compiled lithology and color logging text codes into a numerical coding system for use in geological and resource modeling (Table 10-3, Table 10-4). The QP converted oxidation logs to the numerical system used at Gibellini where 1 = oxidized rock, 2 = transitional, and 3 = reduced.

Table 10-3: Lithology Code Convention for Bisoni–McKay Drill Holes

Code	Explanation
100	Alluvium
200	Caliche
300	Clay
400	Shale
500	Mudstone
600	Siltstone
700	Sandstone
800	Limestone
900	Void
1000	Not Logged

Table 10-4: Color Code Convention for Bisoni–McKay Drill Holes

Code	Explanation
100	White
200	Tan
300	Gray
400	Brown
500	Black
600	Yellow
700	Orange
800	Red
1000	Not Logged

10.7.2 RMP/American Vanadium Programs

Formation, lithology, alteration, color, structure, and oxidation were logged in Excel spreadsheets for each drill hole of the RMP programs. Lithological logging codes used during the RMP program are included in Table 10-2.

Logging forms also contained the drill hole name, the collar coordinates, the total depth, drill type, hole diameter, and the date drilled. Core recovery and rock mechanics information (fracture density, presence of breccia or shattered zones) were recorded for all core drill holes.

Domaining of the Gibellini deposit is based upon the redox boundaries. Lithology and rock color do not appear to control grade and/or they do not form consistent, mappable units.

RMP geologists interpreted the position of redox boundaries based upon the lithology, rock color, alteration, mineralogy, and redox contact codes recorded in logs. The QP considers the domains derived from this interpretation to be adequate and reasonable for the purposes of Mineral Resource estimation.

10.8 Collar Surveys

10.8.1 Legacy Programs

10.8.1.1 Gibellini

Collar locations (easting and northing) for the NBGM, Terteling, and Atlas drill campaigns were digitized from a 1:1,200 scale (1″ = 100′) Noranda base map showing the previous operators drill hole locations in relation to the Noranda drill holes. Drill hole collar locations were recorded in local units established by Noranda where the grid point 50,000E, 50,000N is located at the section corner of Sections 34 and 35, T16N, R52E MDBM and Sections 2 and 3, T15N, R52E MDBM. Noranda collar locations (easting, northing and elevation) were taken directly from the drill logs. These locations were compared with the digitized locations from the Noranda base map to confirm the accuracy of the map locations.

Because drill hole locations were either digitized from a Noranda drill hole location map or taken directly from the drill logs, there is some uncertainty as to the exact location of the drill holes. No records of the original surveys or survey method remain.

AMEC considered the locations to be accurate to ±10 ft. AMEC was able to locate the mine grid in the field and verify the location of several Inter-Globe drill holes using a global positioning system (GPS) instrument but was unable to locate the exact location of Terteling, Atlas, and Noranda drill holes. Drill sites exist in locations as indicated on maps, but monuments or drill casing at these sites were not evident, likely because they were drilled over 30 years ago.

10.8.1.2 Louie Hill

Collar locations for Union Carbide drill holes were collected by American Vanadium using a hand-held GPS. Collar coordinates on the drill logs were recorded in local grid coordinates; however, American Vanadium geologists surveyed the drill holes in UTM meters using the NAD83 datum.

10.8.1.3 Bisoni–McKay

Collar locations for Hecla drill holes were digitized by Nevada Vanadium from drill hole location maps provided in the 2005 technical report on the Bisoni-McKay property (Turner and James, 2005). No original collar surveys are available to Flying Nickel. Collar locations were compared to aerial photos and adjusted where necessary to match drill pads in the field. Collar elevations were adjusted to match the topographic elevation at the drill collar location.

Vanadium International and Stina Resources drill hole survey coordinates are listed in the 2005, 2006, and 2008 technical reports (Turner and James, 2005; Ullmer and James, 2006; Ullmer, 2008). No original collar surveys are available to Flying Nickel. Collar locations were compared to aerial photos and adjusted where necessary to match drill pads in the field. Collar elevations were adjusted to match the topographic elevation at the drill collar location.

10.8.2 RMP/American Vanadium Programs

Collar coordinates for the 2007 and 2010 drill holes were obtained in UTM coordinates by RMP personnel using a hand-held GPS unit.

Local grid coordinates for historical drill holes were converted to UTM by RMP by overlaying UTM topography over a local grid topographic map containing the historic drill holes, and digitizing the drill hole coordinates in UTM units using GIS software.

10.9 Down Hole Surveys

10.9.1 Legacy Programs

10.9.1.1 Gibellini

All Gibellini rotary and RC drill holes were drilled in a vertical orientation. The orientation of Noranda and Inter-Globe drill holes were documented. The orientation of the Terteling and Atlas drill holes were not documented but are assumed to be vertical due to the low dip angle of mineralization. This assumption is supported by the continuity of lithologies and mineralization types between Atlas and other holes, and by results of twin-hole drilling by Inter-Globe. The NBMG core holes were inclined to best intersect known zones of mineralization intersected in the underground workings.

Most drill holes making up the Gibellini Project resource database are relatively short (98% of holes are <350 ft in length) and vertical, and so the QP does not consider the lack of down-hole surveys to be a significant concern. In the QP's experience, vertical drill holes of 300 ft or less in length are not likely to deviate significantly, in this case, more than 25 ft or the block size being used in the resource model.

10.9.1.2 Louie Hill

Union Carbide logs from Louie Hill indicate that drilling was completed using rotary drilling methods. All holes are assumed to be vertical, though the inclination and azimuth were not expressly stated. Because most Union Carbide drilling was relatively shallow (total depths are generally between 100–200 ft), the risk of mineralized intercepts being significantly misplaced because of the lack of down-hole surveys is considered by the QP to be small.

10.9.1.3 Bisoni–McKay

Most of the Bisoni–McKay drill holes were inclined -45° to the west. None of the drill holes were surveyed down-hole; the inclination was indicated either in the drill log or in the description of the drilling in the Vanadium International and Stina Resources technical reports. About half of the inclined drill holes at Bisoni–McKay were >300 ft in length and there is a risk that mineralized intercepts may be misplaced because of the lack of down-hole surveys in the inclined drill holes.

10.9.2 RMP/American Vanadium Programs

All drill holes were drilled in a vertical orientation. None of the holes were surveyed down-hole.

10.10 Recovery

There is no information available on the legacy drilling recoveries for Gibellini and Louie Hill. No information is available on the legacy RC drilling recoveries for Bisoni–McKay. Core recovery for the 2005 Stina Resources campaign at Bisoni–McKay ranged between 91–98%.

While ALS Chemex typically reports the weight of samples received at their sample preparation facilities, the sample weights of the Gibellini RC samples were not included in the assay certificates provided to RMP.

Core recovery was logged for the five core holes completed in the Gibellini area. Generally, Gibellini and Louie Hill core recovery in the oxidized and unoxidized oxidation types was good to fair, where core recovery in the transition oxidation type was generally very good. In the QP's opinion, core recovery is generally adequate for the Project, averaging 91.6%. The fine-grained and diffuse nature of mineralization would favor there being no grade bias caused by poor recovery.

10.11 Sample Length/True Thickness

The RC drill holes completed by RMP in the Gibellini area were designed to confirm the geology, and thickness and grade of vanadium mineralization encountered in historical drilling along the length of the Gibellini deposit.

The geology and thickness of vanadium mineralization in all three drill holes closely matches that expected from previous drilling. Vanadium grades are lower in some cases, and higher in other cases.

During the drilling at Louie Hill in 2007, significant thicknesses of vanadium mineralization were encountered in all three drill holes, comparable in thickness and grade to the oxide zone at Gibellini. Higher grade vanadium mineralization, like that of the transition zone at Gibellini, was not encountered at Louie Hill, except for at the surface in the northernmost drill hole.

No confirmation drilling has been completed by Nevada Vanadium at Bisoni–McKay. Legacy drilling at Bisoni–McKay has intercepted similar thicknesses of vanadium mineralization as encountered at Gibellini and Louie Hill. The transition zone at Bisoni–McKay is not as thick as it is at Gibellini.

Mineralized zones at Gibellini and Louie Hill are irregular in shape but generally conform to the stratigraphy of the host shales, modified somewhat by post-mineral oxidation and supergene enrichment.

Mineralization at Gibellini is roughly stratabound, strikes northwest–southeast and dips at low angles to the west. Vertical intersections of mineralization are roughly approximate to the true mineralized thickness. The mineralization is parallel to the orientation of the main ridge in the Gibellini area.

Mineralization at Louie Hill is also stratabound, strikes north-south, and dips at very low angles to the west. Vertical intersections of mineralization are roughly approximate to the true mineralized thickness.

Mineralized zones at Bisoni–McKay generally conforms to the stratigraphy of the host shales and is interpreted to be stratabound. Mineralization strikes north-south to northeast–southwest and dips moderately to steeply to the east. Drilling at Bisoni–McKay is largely oriented perpendicular to the strike of mineralization, and the drilled thickness of mineralization roughly approximates the true thickness.

Table 10-5 presents an example of the types of drill intercepts that have been returned for the Project deposit areas in the legacy drill programs. Table 10-6 shows example intercepts from the American Vanadium and RMP drill programs.

Drill hole orientations and representative examples of drill sections through the mineral deposit are indicated on the cross-sections included in Section 7 of this Report.

Table 10-5: Example Drill Intercepts, Legacy Programs

Deposit	Hole ID	From (ft)	To (ft)	Intercept True Width (ft)	Average Grade (% V_2O_5)
Gibellini	C-9	5	25	20	0.24
	D-7	5	25	20	0.29
	D-8	130	160	30	0.20
	D-8	185	195	10	0.24
	D-8	5	105	100	0.41
	E-10	200	205	5	0.11
	E-10	245	260	15	0.25
	E-10	0	190	190	0.29
	F-3	10	40	30	0.39
	G-9	215	280	65	0.23
	G-9	5	160	155	0.33
	H-10	165	170	5	0.18
	H-10	200	285	85	0.26
	H-10	0	110	110	0.28
	I-6	95	155	60	0.28
	I-6	0	75	75	0.31
	IG-1	0	120	120	0.60
	IG-10	0	225	225	0.32
	IG-11	0	90	90	0.25
	J-10	65	85	20	0.16
	J-10	0	50	50	0.22
	K-5	0	40	40	0.23
	NG-10	215	245	30	0.17
	NG-10	100	120	20	0.18
	NG-10	125	200	75	0.26
	NG-10	0	80	80	0.30
	NG-13	180	184	4	0.15
	NG-13	165	175	10	0.17
	NG-13	10	155	145	0.38
	NG-14	320	350	30	0.23
	NG-14	10	300	290	0.25
	NG-45	5	45	40	0.29
	NG-45	105	165	60	0.31
	T-12	95	100	5	0.14
	T-12	105	130	25	0.17
	T-12	8	60	52	0.26
	T-12	65	90	25	0.29
	T-2	5	180	175	0.43

Deposit	Hole ID	From (ft)	To (ft)	Intercept True Width (ft)	Average Grade (% V_2O_5)
	T-20	5	155	150	0.49
	T-21	0	10	10	0.32
	T-21	25	155	130	0.42
	T-22	65	110	45	0.26
	T-22	5	50	45	0.44
	T-26	5	140	135	0.34
	T-40	5	150	145	0.33
	T-41	0	150	150	0.47
Louie Hill	UC58-1	0	125	125	0.37
	UC58-2	0	75	75	0.30
	UC58-2	105	200	95	0.25
	UC58-3	0	95	95	0.40
	UC58-7	0	40	40	0.30
	UC58-7	50	75	25	0.24
	UC58-10	0	100	100	0.29
	UC58-15	0	90	90	0.32
	UC58-23	0	30	30	0.27
	UC58-46	0	40	40	0.52
	UC58-54	0	60	60	0.23
	UC58-59	0	60	60	0.14
	UC58-63	0	90	90	0.31
Bisoni–McKay	BMK-07	10	160	150	0.38
	BMK-15	30	170	140	0.27
	BMK-19	110	250	140	0.51
	RC-04-01	10	60	50	0.33
	DBMK-05-03	83	428	360	0.49
	RBMK-05-01	10	315	305	0.45
	RBMK-05-04	55	205	150	0.51
	RBMK-05-05	17	49	32	0.27
	RBMK-05-09	0	55	55	0.41
	RBMK-07-02	45	245	200	0.33
	RBMK-07-06	180	525	345	0.35
	RBMK-07-07	145	240	95	0.33
	RBMK-07-10	200	290	90	0.65
	RBMK-07-12	0	70	70	0.36

Note: Legacy drill hole prefix key: C, D, E, F, G, J, K, L = Atlas drill holes; IG = Inter-Globe drill holes; NG = Noranda drill holes; T = Terteling drill holes; UC58 = Union Carbide drill holes; BMK = Hecla drill holes; RC = Vanadium International drill holes; DBMK/RBMK = Stina Resources drill holes.

Table 10-6: Example Drill Intercepts, RMP and American Vanadium Programs

Deposit	Hole ID	Intercept (ft from–to)	True Width (ft)	Average Grade (% V2O5)
Gibellini	GIVC-5	7–83	76	0.32
		98–143	45	0.22
		148–173	25	0.24
		188–212	24	0.25
Louie Hill	RHC-1	7–43	36	0.24
		53–200	147	0.26
	RHC-2	7–106	99	0.19
	RHC-3	10–37	27	0.54
	RHC-4	13–53	40	0.15
	RHC-5	7–56	49	0.16
	RHC-6	7–78	71	0.25
		78–144	66	0.78

10.12 Geotechnical and Hydrological Drilling

10.12.1 Project Site Investigations

Site-wide geotechnical drilling was performed with a number of objectives, including:

- Characterize and evaluate the subsurface soil and groundwater conditions
- Evaluate potential borrow source materials and locations
- Provide preliminary foundation recommendation
- Identify seismic hazards.

To characterize and evaluate the existing soil and groundwater conditions at the site, multiple test pits were excavated, and seven exploratory borings were completed to depths of 45.5 to 101 ft below existing grade. In general, soils encountered typically consist of poorly graded silty and clayey gravels with sand, clayey sands and silty sands with gravels and some cobbles and boulders to the depth explored. Surface soils containing abundant root and rootlets were encountered in all borings and test pits with an average thickness of approximately 1 ft. Groundwater was not encountered to the maximum depth penetrated of 101 ft during the site investigation.

AMEC completed a borrow source investigation to identify material that could be suitable for use in construction and operation. The borrow source investigation focused on identifying three primary material types:

- A durable non-acid buffering overliner material
- A durable material source for use in manufacturing rip-rap, roadway bedding and surfacing, and drain rock
- A low permeability underliner material.

Results of the permeability testing indicate that the materials from a rhyolite borrow source could be suitable for use as overliner material provided the material is crushed and or screened to provide the required gradation. The rhyolite borrow source could also be used for manufacturing rip-rap, roadway bedding and surfacing, and drain rock.

10.12.2 Seismic Hazard Analysis

A seismic hazard analysis for the Gibellini Project site was completed. This included the development of design ground motions associated with the maximum credible earthquake (MCE) and the operating basis earthquake (OBE). The ground motions for the MCE were estimated using a deterministic approach and the ground motions for the OBE were estimated using a probabilistic approach.

10.12.3 Gibellini Deposit Investigations

Five vertical and four oriented drill holes (1,011 ft) were completed using wireline triple tube diamond drill core (HQ core size). Rock mass ratings indicate that the majority of rock units encountered (siltstone, mudstone, chert) were of poor rock quality and can be classified as either extremely weak rock or stiff soil. Dolomite and limestone were encountered and are estimated to be of fair rock quality, although limited information is available for these units from the geotechnical drilling.

Exploration drilling did not indicate any instances of shallow or perched groundwater.

10.13 Metallurgical Drilling

A program of metallurgical drilling was performed in 2010. Details of the metallurgical testwork performed are provided in Section 13.

10.14 Potential Infrastructure Site Drilling

RMP drilled six RC drill holes with a total footage of 1,400 ft in an area that had potential to host a heap leach pad, which was located about 1.5 miles east of the Gibellini deposit. Three, 200 ft, holes were drilled along the north edge of the area, a 600 ft drill hole was drilled in the center of the area and two, 200 ft long drill holes were sited at each of the respective south corners of the general area.

Geology consisted of Quaternary alluvium of interbedded coarse conglomerate, medium to coarse sandstone, and claystone. The water table was not encountered in the drilling. No significant vanadium assay values were encountered.

10.15 Sample Storage

No cuttings, assay rejects, or pulps remain from the legacy drilling campaigns at Gibellini and Louie Hill.

Drill core, RC cuttings, assay rejects and pulps remain from the Vanadium International and Stina Resources campaigns at Bisoni–McKay and are securely stored at the Fish Creek Ranch warehouse.

10.16 Comments on Section 10

In the opinion of the QP, the quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs completed by RMP and American Vanadium, and the verification performed by American Vanadium on legacy drill data are sufficient to support Mineral Resource estimation as follows:

- RC chip and core logging meets industry standards for exploration of an oxide vanadium deposit.
- Collar surveys and re-surveys of legacy drill hole collar locations have been performed using industry-standard instrumentation.
- No down hole surveys were performed. The QP does not consider the lack of down-hole surveys to be a significant concern. In the QP's experience, vertical drill holes of 300 ft or less in length are not likely to deviate significantly, in this case, more than 25 ft or the block size being used in the resource model.
- Recovery data from RMP and American Vanadium RC and core drill programs are acceptable.
- Geotechnical logging of drill core meets industry standards for planned open pit operations.
- Drill hole orientations are generally appropriate for the mineralization style, and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the deposit area.

- Drill hole orientations are shown in the example cross-sections included in Section 7, and can be seen to appropriately test the mineralization.
- Drill hole intercepts as summarized in Table 10-5 and Table 10-6 appropriately reflect the nature of the vanadium mineralization encountered in both the legacy and the RMP/American Vanadium drill programs. The tables demonstrate that sampling is representative of the vanadium oxide grades in the deposits, reflecting areas of higher and lower grades.
- No material factors were identified with the data collection from the drill programs that could affect Mineral Resource estimation.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Legacy Reverse Circulation Sampling

Noranda collected samples continuously over 5 ft intervals in a cyclone collector (Condon, 1975). Dust loss was reported to be minimal. Samples were split with a Gilson splitter and the rejects were stored for possible metallurgical testing. Color, texture, and other diagnostic features were logged. The average weight of 1,138 samples reported by the assay laboratory for Noranda samples was 59 pounds.

Inter-Globe collected one to five pounds of material for assay on 5 ft intervals. Dust lost was minimized by using water in drilling. All cuttings were directed from the cyclone into one to three, five-gallon buckets, from which samples for assay and samples for metallurgical tests were collected. Samples were split using a Jones riffle splitter. Metallurgical samples were also collected for each interval. The cyclone and splitter were cleaned manually and with compressed air between intervals.

Hecla collected samples continuously on 5 ft intervals. No other information on sample collection of Hecla RC samples is available to Flying Nickel.

RC samples from the Vanadium International and Stina Resources programs were collected on 5 ft intervals with sample material passed through a cyclone set to reject ⅔ of the sample and retain ⅓. After logging, samples were bagged in 10″ x 17″ Hubco Sentry, non-woven, polyester bags. Each bag was sealed with an 8″ long locking tie to prevent access prior to sample preparation and analysis. The samples were transported by pick-up truck by Vanadium International and Stina Resources personnel to ALS Chemex Laboratories in Reno, Nevada (ALS Chemex).

The QP evaluated rotary and RC drill holes for evidence of down-hole contamination in the form of asymmetric grade decay down-hole or spikes in grade at cyclical intervals. Analyses revealed evidence of possible down-hole contamination in one Atlas drill hole and one Noranda drill hole at Gibellini below intercepts of greater than 1.0% V_2O_5, but AMEC concluded that the width and grade of the possible contamination was not significant enough to warrant adjusting grades assigned to the intervals.

Comparison of RC drill holes with nearby rotary drill holes (less than 20 ft collar separation) found that there was no evidence of significant down-hole contamination in the rotary holes.

11.2 Legacy Core Sampling

Stina Resources core holes were sampled on nominal 5 ft intervals with core cut in halves with a diamond-studded saw where necessary. After logging, samples were bagged in 10″ x 17″

Hubco Sentry, non-woven, polyester bags. Each bag was sealed with an 8" long locking tie to prevent access prior to sample preparation and analysis. The samples were transported by pick-up truck by Vanadium International and Stina Resources to ALS Chemex. The remaining half of the core was stored in core trays in Eureka, Nevada.

11.3 RMP Reverse Circulation Sampling

Cuttings for each 5 ft interval were collected in five-gallon buckets and split manually, using a riffle splitter. A split (½ of the material from the interval) of the material was bagged for assaying and the remaining material was bagged for archive purposes. Where ground water was encountered, a wet splitter was placed below the cyclone.

A small portion of the cuttings for each interval was retained in a plastic container (RC chip tray) for logging purposes. RC samples were collected in 5 ft intervals.

Sample bags were labeled with sequential sample numbers. Sample bags were transported each day by RMP or drill personnel to the RMP office in Eureka and stored in a secure layout area until ready for dispatch to the assay laboratory. Trucks from ALS Chemex, either from the Winnemucca or Elko sample preparation facilities, picked up samples at the RMP Eureka office.

11.4 RMP Core Sampling

Drill core was transported by RMP personnel to the RMP office in Eureka and stacked in a secure layout area. There, core was photographed, logged, and prepared for shipment to Dawson Laboratories for metallurgical testwork. Selective six-inch intervals were removed and sent to ALS Chemex for determination of specific gravity. These intervals were selected to be representative of the oxidation types encountered during drilling. There is some risk that the intervals selected may be more competent than the remaining drill core, and may overestimate the density of the deposit.

Core was sampled on nominal 5 ft intervals, with a minimum of 1 ft and a maximum of 9 ft. The average is 4.5 ft.

11.5 Metallurgical Sampling

Trench samples were collected as bulk samples from the field. Drill core for the 2010 metallurgical testwork programs was supplied as whole core intervals from selected drill holes. Drill core prior to 2010 used in metallurgical testwork was half-core, from selected drill holes.

11.6 Density Determinations

A total of 63 core intervals from the 2007 drilling campaign at Gibellini were submitted by RMP for determination of specific gravity. Intervals were selected from four core drill holes to be representative of the major oxidation zones. Six-inch intervals of whole core were sent to ALS Chemex in Reno, Nevada for determination of dry bulk density by the wax coated water immersion method (ALS Chemex procedure OA-GRA08a).

Specific gravity values were grouped by oxidation type and average values were computed (Table 11-1). These average values were used to calculate tonnage in the Mineral Resource model.

AMEC used the oxide density data from the Gibellini deposit to define density within the Louie Hill model. The QP used the oxide, transitional, and reduced density data from Gibellini deposit to define density within the Bisoni–McKay model. The QP recommends that for density at Louie Hill and Bisoni–McKay a minimum of 30 density determinations be collected per rock type and alteration type, and that the samples are spatially representative of the deposit from surface to the base and spread over the lateral extent of the deposit. These data should then be used to define density in the Louie Hill and Bisoni–McKay block models.

Table 11-1: Summary of Gibellini Density Data

Oxidation Domain	N	Mean	Standard Deviation	Coefficient of Variation
Oxidized	35	1.90	0.24	0.13
Transition	51	1.96	0.27	0.14
Reduced	36	2.26	0.20	0.09

11.7 Analytical and Test Laboratories

The RMP and American Vanadium core and RC samples were analyzed by ALS Chemex, a well-established and recognized assay and geochemical analytical services company that was independent of RMP and American Vanadium. The Sparks (Reno) laboratory of ALS Chemex is ISO 9002-registered; the Vancouver laboratory holds ISO17025 accreditation for selected analytical techniques.

11.8 Sample Preparation and Analysis, Legacy Drill Programs

11.8.1 NBMG

Manganese, nickel, and zinc assays for NBMG drill holes were transcribed by AMEC from graphic drill logs. The original assay certificates are not available from this drill campaign. Neither the assay laboratory name nor the sample preparation or assay methodology is noted on the logs. No evidence of a quality assurance quality control (QA/QC) program is noted on the logs either.

11.8.2 Terteling

The V_2O_5 assays for the Terteling drill holes were transcribed by AMEC from typewritten drill logs. The original assay certificates are not available from this drill campaign. Neither the assay laboratory name nor the sample preparation or assay methodology is noted on the logs. No evidence of a QA/QC program is noted on the logs either.

AMEC compared Terteling assays to assays from Inter-Globe drill holes that were within 20 ft of the Terteling drill holes and found the Terteling assays to be consistently biased high. Inter-Globe V_2O_5 assays contained adequate QA/QC controls and are considered to be acceptably accurate and precise, and so the QP considers comparison against Inter-Globe assays to be an acceptable indicator of assay accuracy. For five drill holes compared (15% of campaign), the average grade of Terteling assays from the mineralized intervals were between 29% and 73% higher than the comparable Inter-Globe assays, with an average difference of 43% higher. The mineralized intervals were, on average, 4% shorter for Terteling drill holes.

11.8.3 Atlas

Vanadium pentoxide assays for Atlas drill holes were transcribed by AMEC from typewritten drill logs. The original assay certificates are not available from this drill campaign. Neither the assay laboratory name nor the sample preparation or assay methodology is noted on the logs. No evidence of a QA/QC program is noted on the logs either.

Comparison of Atlas assays to assays from Inter-Globe drill holes that were within 20 ft of the Atlas drill holes indicated that the Atlas assays were comparable. For four drill holes compared (5% of campaign), Atlas assays were between 14% lower to 18% higher than the comparable Inter-Globe assays, with an average difference of 2% lower. The mineralized intervals were also equivalent, with the total length of the Atlas mineralized intervals equal to 1,105 ft and the total length of the Inter-Globe intervals equal to 1,110 ft.

11.8.4 Noranda

Vanadium pentoxide assays for Noranda drill holes NG-1 to NG-10 were performed by Union Assay Office Inc. (Union) using a direct titration procedure on a 2 g sub-sample. Union was independent of Noranda. It is not known whether Union was accredited by ISO or any standards organization at the time the assays were performed. The sample was oxidized with nitric acid and potassium perchlorate, digested with hydrochloric and hydrofluoric acids, then fumed strongly with sulfuric acid. The filtered solution was then oxidized with potassium permanganate solution and reduced by repeated boiling with hydrochloric acid.

Check assays for all samples for these holes were performed by the Colorado School of Mines Research Institute (CSMRI) in Golden, Colorado and by Noranda's in-house laboratory using similar, but slightly different, procedures. CSMRI was independent of Noranda but Noranda's in-house laboratory was not independent of Noranda. It is not known whether CSMRI or Noranda's in-house laboratory was accredited by ISO or any standards organization at the time the check assays were performed. AMEC plotted the check assays against the original assays and found that the Union assays are biased marginally high (9–14%) compared to CSMRI and Noranda check assays.

Noranda recognized this bias and conducted a study after the initial drill program to determine the source of the bias and to determine the optimum analytical method for V_2O_5. In this study, analytical results for the laboratories were compared on three head-grade samples and three tail-grade samples from the Gibellini deposit (Noranda, 1973). Noranda concluded that the laboratories were reporting essentially equivalent results but recommended that all samples be fused in sodium peroxide to ensure complete dissolution and oxidation of vanadium prior to analysis. This recommendation was carried out for the remainder of the assaying of Noranda samples.

V_2O_5 assays for Noranda drill holes NG-11 to NG-52 were performed at CSMRI using sodium peroxide fusion and colorimetry as recommended by Dr. Kerbyson of the Noranda Research Centre (Condon, 1975). Sample preparation procedures are not documented. AMEC attempted to contact CSMRI for more information but found that CSMRI has been defunct for over 20 years and that no information remains from the Noranda assays (Dr. L.G. Closs, personal communication).

Comparison of Inter-Globe drill holes within 20 ft of Noranda drill holes found the average length and grade of mineralized intervals to be equivalent. The total length of the mineralized intercepts from three Noranda drill holes (6% of campaign) was 370 ft and the average grade was 0.30% V_2O_5, where the total length of the nearby Inter-Globe holes was 385 ft and the average grade was 0.30%.

11.8.5 Inter-Globe

Inter-Globe assayed samples for V_2O_5 at Skyline Laboratories (Skyline) in Denver, Colorado. Skyline was independent of Inter-Globe. It is not known whether Skyline was accredited by ISO or any standards organization at the time the assays were performed. The original assay certificates are not available from this drill campaign; however, JAA (1989a) describes the sample preparation and assay methodology. Approximately five pounds of drill cuttings were dried as necessary, split in a riffle splitter to generate a 150 g sub-sample, and pulverized in a ring mill (size and percent passing not noted). A 0.1 g aliquot of the pulverized sample was dissolved in hydrofluoric, nitric, and perchloric acids, taken to dryness, diluted in hydrochloric acid, diluted to 5% hydrochloric acid and measured on an inductively coupled argon plasma spectrometer (ICP-ES).

About 15% of the samples were assayed in duplicate by Skyline and sent for check assay at Bondar Clegg (Bondar) in Denver, Colorado. Bondar was independent of Inter-Globe. It is not known whether Inter-Globe was accredited by ISO or any standards organization at the time the assays were performed. Bondar assayed V_2O_5 by four-acid digestion (hydrofluoric, nitric, perchloric, hydrochloric) on a 0.5 g sample followed by atomic absorption spectrometry.

AMEC contacted Skyline for more information on the assay method used but was told that no information remains from the Inter-Globe assays. The Bondar Clegg company no longer exists.

AMEC plotted Bondar Clegg check assays against the Skyline original assays to determine the accuracy of the Skyline V_2O_5 assays and found them to be acceptable. AMEC also plotted Skyline duplicates to determine the precision of the Skyline V_2O_5 assays and found them to be acceptable.

11.8.6 Union Carbide

No information is available to Flying Nickel concerning the sample preparation and assaying methods employed for the Union Carbide drill campaign. Assays in V_2O_5 (assumed to be in units of percent) were hand entered into the drill logs opposite the drill interval. Where sample numbers were also noted, no information regarding assay laboratory or assay methodology is present.

11.8.7 Hecla

No information is available to Flying Nickel concerning the sample preparation and assaying methods employed for the Hecla drill campaign. Assays in V_2O_5 in units of percent were included in drill log tabulations that are included in the 2005 Technical Report (Vanadium

International, 2005). No original assay certificates or information regarding assay laboratory or assay methodology is available to Flying Nickel.

11.8.8 Vanadium International Corp

Vanadium International RC samples from 2004 were sent to ALS Chemex for sample preparation and analysis. ALS Chemex was independent of Vanadium International. Samples were weighed, dried, and crushed to 70% passing 2 mm. A nominal 250 g split was then taken and pulverized to 85% passing 75 µm. Vanadium pentoxide (V_2O_5) was determined by four-acid digestion on a 2.0 g subsample and inductively-coupled plasma atomic emission spectroscopy (ICP-AES) finish (ALS Chemex procedure code ME-ICP61). The lower detection limit for vanadium pentoxide by this method is 2 ppm. An additional 26 elements were reported from this procedure.

11.8.9 Stina Resources

RC and core samples from the 2005 and 2007 Stina Resources drill campaigns were sent to ALS Chemex for sample preparation and analysis. ALS Chemex was independent of Stina Resources. Samples were weighed, dried, and crushed to 70% passing 2 mm. A nominal 250 g split was then taken and pulverized to 85% passing 75 µm. Vanadium was determined by four-acid digestion on a 2.0 g subsample and ICP-AES finish (ALS Chemex procedure code ME-ICP61). The lower detection limit for vanadium by this method is 1 ppm. An additional 26 elements were reported from this procedure.

11.9 Sample Preparation and Analysis, RMP and American Vanadium

All 2007–2008 drill samples were submitted to ALS Chemex in Winnemucca or Elko Nevada for sample preparation. Assays were performed at the ALS Chemex laboratories in Reno, Nevada and Vancouver, Canada.

Samples were weighed, dried, and crushed to 70% passing 2 mm. A nominal 250 g split was then taken and pulverized to 85% passing 75 µm.

Vanadium was determined by four-acid digestion on a 2.0 g subsample and ICP-AES finish (ALS Chemex procedure code ME-ICP61a). The lower detection limit for vanadium by this method is 10 ppm. An additional 32 elements are reported from this procedure, including zinc. Gold, platinum, and palladium were determined by standard fire assay on a 30 g subsample (ALS Chemex code PGM-ICP23). Select samples were assayed for uranium and selenium concentrations by X-ray fusion (XRF) (ALS Chemex procedure code ME-XRF05).

Specific gravity was determined by ALS Chemex on whole core samples using the wax-coated water immersion method (ALS Chemex procedure code OA-GRA08A).

Sample preparation and assaying procedures for the 2010 drill campaigns were unchanged from those used during 2007–2008.

11.10 Quality Assurance and Quality Control

11.10.1 Legacy Data in Database

AMEC digitized existing legacy drill hole locations, surveys, logs and assays from paper maps, logs, and assay certificates to generate the Gibellini database. AMEC assembled all the data into a series of database tables (collar, survey, lithology, assay, and redox) in Access. Prior to the creation of the Access database, all drill information was in paper format.

AMEC digitized drill hole collar locations in local grid coordinates for the Terteling, Atlas, and Noranda drill campaigns from a 1:1200 scale base map generated by Noranda. The accuracy of these collar locations was estimated to be ±10 ft. Noranda and Inter-Globe drill hole coordinates were taken from the drill logs. Noranda collar locations were compared with the digitized coordinates and where the drill log and digitized coordinates did not agree within 10 ft in easting or northing, the base map was consulted, and the digitized coordinates were used (NG-8, NG-9, NG-28, and NG-45). NBMG drill hole coordinates were taken from 1:1,200 scale drill hole location maps. Underground workings at the Gibellini manganese–nickel mine (channel sampled by NBMG) were digitized and entered the database as "pseudo-drill holes".

Assays for the Terteling and Atlas drill campaigns were entered from typed drill logs; the original assay certificates are no longer available from these campaigns. The assays for the Noranda drill holes were entered from both original assay certificates and drill logs. Assays for Inter-Globe drill holes were entered from compiled assay tabulations found in Appendix D of JAA (1989a). Assays for NBMG drill holes were entered from original assay certificates.

Assays for the Hecla drill campaign were transcribed by the QP from drill log tabulations. Assays from the Vanadium International and Stina Resources drill campaigns were entered from original assay certificates.

AMEC entered V_2O_5 assays using a double-data-entry system. Assays were entered into two separate spreadsheets by separate operators. The two data sets were then compared by a third operator and all matching values were entered into the assay table. Assay values not matching were checked against the original certificates or logs, corrected, and loaded into the assay database.

Drill logs for the Noranda and Inter-Globe drill holes were evaluated by an AMEC geologist, transcribed into appropriate codes, and loaded into the Lithology table. Redox boundaries for all drill holes were interpreted from logs by RMP geologists and loaded into the redox table.

All Noranda and Inter-Globe drill holes were drilled in a vertical orientation and so AMEC entered vertical orientations (azimuth = 0 and inclination = -90) for the collar (0 ft) and total depth positions in the Survey table. Terteling and Atlas drill holes were assumed to be vertical and were also given vertical orientations in the Survey table. NBMG drill hole orientations were noted on the maps and were digitized by AMEC accordingly. Underground working traces were digitized by AMEC and are approximations at best. Surveying of these workings to give them accurate three-dimensional coordinates relative to other assay information in the area will be required should the information be required to support additional work programs.

Drill logs for the Hecla, Vanadium International, and Stina Resources drill campaigns were transcribed by The QP from original drill logs or drill log tabulations. None of the drill holes from these legacy drill campaigns were surveyed down-hole. Drill hole orientations were transcribed from drill logs or from written text in Turner and James (2005), Ullmer and James (2006), or Ullmer (2008).

The QP conducted data integrity checks of the Gibellini Project digital database (checking for overlapping intervals, data beyond total depth of hole, unit conversion, etc.) and concluded that the resource database is reasonably error-free and acceptable for use in resource estimation.

The QP exported separate collar, survey, lithology, and assay files for import into MineSight for subsequent geological modeling and resource estimation.

Inter-Globe V_2O_5 assays were found to be accurate and precise based upon check assays and duplicates included in the QA/QC program for the drill campaign. AMEC considered these assays to be acceptable for use in resource estimation, but because no original assay certificates remain from this campaign, AMEC recommended that blocks affected by Inter-Globe assays be assigned a maximum classification of Indicated Mineral Resources.

Inter-Globe V_2O_5 assays from nearby drill holes provide a check of assay accuracy for the Terteling, Atlas, and Noranda assays. No evidence of a QA/QC program was encountered for the Terteling or Atlas campaigns. No evidence of a QA/QC program was encountered for Noranda drill holes NG-11 to NG-52. Inter-Globe assays are considered accurate and comparing grades in nearby drill holes provides a check of the assay accuracy for these holes.

Terteling V_2O_5 assays were found to be biased high an average of 43% relative to Inter-Globe based upon a comparison of mineralized intervals from nearby holes. AMEC recommended that the Terteling drill holes not be used for resource estimation. Because the Terteling drill pattern is adequately covered by both Atlas and Noranda drilling, the impact of not using these holes is minimal regarding adequate drill spacing throughout the deposit.

Atlas V_2O_5 assays were found to be comparable to Inter-Globe assays based upon a comparison of mineralized intervals from nearby holes. However, because the original certificates are not available, the assay laboratory and analytical method are not known, and drill collars cannot be confirmed, the lower confidence in these data require that resources estimated with the Noranda data be classified as no better than Inferred Mineral Resources. Because the Atlas drill pattern is covered by the Noranda drill pattern through the main resource area, the impact of assessing a lower classification to blocks affected by Atlas holes is mainly on the fringes of the deposit.

Noranda V_2O_5 assays were also found to be comparable to Inter-Globe assays based upon a comparison of mineralized intervals from nearby holes. Noranda drill holes NG-1 to NG-10 were part of several QA/QC programs which showed that, although the original assays were biased marginally high compared to the check assay laboratories, the procedure used likely produced low-biased data compared to the best assay procedure for V_2O_5, which was used for Noranda drill holes NG-11 to NG-52. AMEC considered the Noranda assays acceptable for use in resource estimation, but because of the uncertainty in the assays, AMEC recommended that blocks affected by Noranda assays have a maximum classification of Indicated Mineral Resources.

Hecla V_2O_5 assays are of unknown quality because the original certificates are not available, the assay laboratory and analytical method are not known, there is no evidence of an assay QA/QC program, and drill collar locations and orientations cannot be confirmed. The lower confidence in these data require that resources estimated with the Hecla data be classified as no better than Inferred Mineral Resources.

Vanadium International and Stina Resources V_2O_5 assays were transcribed from original assay certificates but there is no evidence of an assay QA/QC program. The QP completed a check assay program in 2021 on pulp and coarse reject material from these campaigns to confirm the quality of the V_2O_5 assays. Evaluation of this work is presented in Section 12 of this Report. Drill locations and orientations were transcribed from drill logs and from written text in Turner and James (2005), Ullmer and James (2006), or Ullmer (2008). Blocks estimated with Vanadium International and Stina Resources data were classified by the QP as no better than Inferred Mineral Resources until further validation work is completed by Flying Nickel.

AMEC collected five samples on the Gibellini vanadium deposit from trenches that were previously sampled by Inter-Globe (JAA, 1989b). One sample was collected from trench #4, two samples were collected from trench #8, and two samples were collected from trench #9. Trench samples were collected as horizontal or vertical channels according to the original sampling method. AMEC was unable to duplicate exactly the Inter-Globe sample locations because the sample markers from the sampling carried out 19 years previously were mostly missing or illegible. Samples were assayed for vanadium by ALS Chemex in Reno by a four-acid digestion, ICP determination.

AMEC sampling generally returned V_2O_5 assays of economic grade and in the range expected from Inter-Globe sampling, but the grades are generally lower than Inter-Globe, especially from trench #9. AMEC submitted one standard reference material (SRM) sample with the sample submittal that returned an acceptable result and so considers the ALS Chemex V_2O_5 assay values to be accurate.

The trench assays are not part of the mineral resource model and so the uncertainty in the accuracy of these assays poses no risk to the current Mineral Resource estimate. No QA/QC program was reported to have been included in the Inter-Globe trench program. AMEC recommended that confirmation sampling of the trenches be completed prior to any consideration of inclusion of the trench data for mineral resource estimation. No material from drill samples making up the resource database remains, and therefore AMEC was unable to independently verify these assays with check assays.

11.10.2 RMP and American Vanadium

SRMs, blanks, and duplicates were inserted by RMP with routine drill samples during the 2007-2008 and 2010 drill programs to control assay accuracy and precision.

Evaluation of this work is presented in Section 12 of this Report.

11.11 Databases

Legacy drill data collected from geological logging at Gibellini and Louie Hill were stored in an Access database. This database was stored on an American Vanadium server in Reno. Legacy drill data, in paper format, were stored in the American Vanadium offices at Reno (Hanson et al., 2011).

Geological data from the RMP and American Vanadium programs were collected in Excel format, and subsequently uploaded to the Access database. Collar survey data were recorded as part of the geological data. Analytical data were supplied in digital (CSV) format by ALS Chemex and loaded into the Access database. Assay certificates were supplied in PDF format and were stored in American Vanadium’s Reno office (Hanson et al., 2011).

The Gibellini Project database was migrated by Nevada Vanadium to the GeoSequel sample data management system in January 2021.

Legacy data from Bisoni–McKay were compiled in Excel format by the QP in January 2021 and merged into the Gibellini Project GeoSequel database by Nevada Vanadium personnel. All original Bisoni–McKay data and documentation are stored in digital format on a file server in the Nevada Vanadium offices in Reno.

11.12 Sample Security

Sample security procedures for legacy drilling at Gibellini and Louie Hill are unknown. Sample security procedures for legacy drilling by Hecla at Bisoni–McKay is unknown.

Vanadium International and Stina Resources sealed sample bags with an 8" long locking tie to prevent access prior to sample preparation and analysis and samples were transported by pick-up truck by company staff to ALS Chemex in Reno. Core, RC reject material, and returned assay pulps were stored in a secure facility in Eureka.

RMP drill samples were transported each day by RMP or drill personnel to the RMP office in Eureka and stored in a secure layout area until ready for dispatch to the assay laboratory. Trucks from ALS Chemex, either from the Winnemucca or Elko sample preparation facilities, picked up samples at the RMP Eureka office. A similar procedure was followed for the 2010 American Vanadium program.

RMP and American Vanadium remaining core, RC reject material, and returned assay pulps were stored in a secure facility in Eureka.

11.13 Comments on Section 11

The QP is of the opinion that the quality of the analytical data is sufficiently reliable (also see discussion in Section 12) to support Mineral Resource estimation as follows:

- Documentation of drilling methods employed by the various legacy operators is sparse. No cuttings, assay rejects, or pulps remain from these drilling campaigns.
- All legacy data in the Project resource database were entered by the QP, and accurately represent the source documents.
- No records remain for the drill sampling methods employed by NBMG (core), Terteling (rotary), Atlas (rotary), Union Carbide (rotary), and Hecla (RC). Noranda and Inter-Globe collected drill samples on 5 ft intervals. Vanadium International and Stina Resources collected RC drill samples on 5 ft intervals and core drill samples on nominal 5 ft samples.
- RC and core methods sampling employed by RMP and American Vanadium are in line with industry norms. RMP collected RC samples on 5 ft intervals. Core was sampled by RMP and American Vanadium on nominal 5 ft intervals, with a minimum of 1 ft and a maximum of 9 ft.
- Drill sampling has been adequately spaced to first define, then infill, vanadium anomalies to produce prospect-scale and deposit-scale drill data. Drill hole spacing varies with depth. Drill hole spacing increases with depth as the number of holes decrease and holes

deviate apart, and is more widely-spaced on the edges of the Gibellini, Louie Hill, and Bisoni–McKay deposits.

- Sample preparation for samples that support Mineral Resource estimation has followed a similar procedure for the RMP and American Vanadium drill programs.
- For portions of the legacy data, the names of the laboratories that performed the assays are known; however, no information is available as to the credentials of the analytical laboratories used for the drill campaigns prior to the RMP drilling.
- The RMP and American Vanadium core and RC samples were analyzed by reputable independent, accredited laboratories using analytical methods appropriate to the vanadium concentration.

12.0 DATA VERIFICATION

12.1 Introduction

AMEC performed two data verification exercises, one in 2008, and a second during 2011, in support of technical reports on the Project. No additional work has been undertaken on Gibellini or Louie Hill since the 2011 data verification program.

The QP compiled all available drill data for the Bisoni–McKay property into a digital database in 2021, surveyed drill locations in the field, and conducted a verification program of assays from legacy drilling.

The Wood QP completed a review of the available Bisoni–McKay metallurgical testwork in 2021 (see discussion in Section 13.6.2). Based on the review and a comparison to the Gibellini metallurgical testwork, the QP was able to provide recovery recommendations for the three Bisoni–McKay material types.

No on-ground work, exploration drilling, or metallurgical work has been conducted in the Gibellini area since 2011.

12.2 2008 Verification Program

12.2.1 Legacy Data Review

All legacy data in the Gibellini Project resource database in 2008 were entered by AMEC and accurately represent the source documents. Data quality of the surveys, assays, and geology were reviewed as follows (Hanson et al., 2008):

- AMEC was able to locate the mine grid in the field and verify the location of several Inter-Globe drill holes using a Global Positioning System (GPS) instrument but was unable to locate the exact location of Terteling, Atlas, and Noranda drill holes.
- All drill holes making up the Gibellini mineral resource database in 2008 are relatively short (98% of holes are less than 350 ft in length) and vertical, and so AMEC does not consider the lack of down-hole surveys to be a significant concern.
- AMEC conducted data integrity checks of the Gibellini resource digital database in 2008 (checking for overlapping intervals, data beyond total depth of hole, unit conversion, etc.) and concluded that the resource database is reasonably error-free and acceptable for use in Mineral Resource estimation.
- Inter-Globe V_2O_5 assays were found to be accurate and precise based upon check assays and duplicates included in the QA/QC program for the drill campaign. AMEC considers

these assays to be acceptable for use in resource estimation, but because no original assay certificates remain from this campaign, AMEC recommends that blocks affected by Inter-Globe assays be assigned a maximum classification of Indicated Mineral Resources.

- Inter-Globe V_2O_5 assays from nearby drill holes provide a check of assay accuracy for the Terteling, Atlas, and Noranda assays. No evidence of a QA/QC program was encountered for the Terteling or Atlas campaigns. No evidence of a QA/QC program was encountered for Noranda drill holes NG-11 to NG-52. Inter-Globe assays are considered accurate and comparing grades in nearby drill holes provides a check of the assay accuracy for these holes.
- Terteling V_2O_5 assays were found to be biased high an average of 43% relative to Inter-Globe based upon a comparison of mineralized intervals from nearby holes. AMEC recommends that the Terteling drill holes not be used for resource estimation. Because the Terteling drill pattern is adequately covered by both Atlas and Noranda drilling, the impact of not using these holes is minimal regarding adequate drill spacing throughout the deposit.
- Atlas V_2O_5 assays were found to be comparable to Inter-Globe assays based upon a comparison of mineralized intervals from nearby holes. However, because the original certificates are not available, the assay laboratory and analytical method are not known, and drill collars cannot be confirmed, the lower confidence in these data require that resources estimated with the Atlas data be classified as no better than Inferred Mineral Resources. Because the Atlas drill pattern is covered by the Noranda drill pattern through the main Gibellini resource area, the impact of assessing a lower classification to blocks affected by Atlas holes is mainly on the fringes of the deposit.
- Noranda V_2O_5 assays were also found to be comparable to Inter-Globe assays based upon a comparison of mineralized intervals from nearby holes. Noranda drill holes NG-1 to NG10 were part of several QA/QC programs which showed that, although the original assays were biased marginally high compared to the check assay laboratories, the procedure used likely produced low-biased data compared to the best assay procedure for V_2O_5, which was used for Noranda drill holes NG-11 to NG-52. AMEC considered the Noranda assays acceptable for use in resource estimation, but because of the uncertainty in the assays, AMEC recommended that blocks affected by Noranda assays have a maximum classification of Indicated Mineral Resources.
- The Gibellini trench assays are not part of the mineral resource model and so the uncertainty in the accuracy of these assays poses no risk to the Mineral Resource estimate.
- The quality of the geological logging of drill holes at Gibellini is variable by campaign.

- Redox domain boundaries as interpreted by American Vanadium at Gibellini are acceptable for use in the Mineral Resource model.

12.2.2 RMP Data Review

The fine-grained and diffuse nature of mineralization would favor there being no grade bias caused by poor recovery.

The round robin programs performed to generate the recommended values for the SRMs used in the 2007–2008 drill campaigns were reviewed and found them to be acceptable. All SRM results fell within acceptable limits and no significant bias was observable in the control charts. In AMEC's opinion, the accuracy of the 2007 ALS Chemex vanadium assays was acceptable to support Mineral Resource estimates.

A total of four blanks were submitted with 1,125 routine samples for an insertion rate of 0.4%. The insertion rate should be increased to the same rate as the SRMs and duplicate samples. Blanks assayed between 80 ppm and 110 ppm vanadium, which is significantly above the lower detection limit for vanadium of 10 ppm, but significantly below the anticipated cutoff grade. A new blank sample is recommended consisting of material lower grade in vanadium, with an average grade of less than 10 ppm vanadium.

A total of 23 field duplicates were submitted with 1,125 routine samples for an insertion rate of 2.0%. The precision for vanadium was calculated to be ±24% at the 90^{th} percentile. The precision for 2007 ALS Chemex vanadium assays was acceptable to support mineral resource estimates.

Drill hole collar elevations were compared to the electronic topography. Five of the 148 drill hole collars showed elevation differences of greater than 10 ft as they relate to topography, which suggested an incorrect location or an error in the topographic base.

12.3 2011 Verification Program

12.3.1 QA/QC Review

A total of 55 SRMs, 30 duplicates, and 25 blanks were submitted with a total of 1,003 project samples during the 2010 drilling at Gibellini and Louie Hill.

The insertion rates of the control samples are less than best practice and an increase in the rate of SRMs, duplicates, and blanks to 5% each is recommended.

RMP used three SRMs from Minerals, Exploration, and Environment Geochemistry (MEG) located in Washoe Valley, Nevada. The SRMs have a range of grades consistent with what is expected from project samples at Louie Hill. All SRM results for vanadium except four were within 6% of the recommended value of the SRM. AMEC considered the ALS Chemex vanadium data to be acceptably accurate.

Blank samples submitted with the drill samples reported values consistent with the grades expected from the material. The blank material is considered to contain too much vanadium to be useful as a blank, and RMP subsequently produced another blank for use with the Gibellini and Louie Hill projects.

Duplicate data show acceptable precision for field duplicates at the 90th percentile. Field duplicate data is considered to be acceptably precise if 90% of the duplicate pairs report absolute relative differences (ARD) less than 30%. The Louie Hill data reported 13% ARD at the 90th percentile.

RMP submitted a total of 61 pulps from 2010 drill samples and submitted them to ACME in Vancouver, Canada. A comparison of the ACME check assays to the original ALS Chemex assays found them to be comparable. No significant bias was observed in the check assay data and thus the ALS Chemex data are considered acceptably accurate. No quality control samples were submitted with the batch of pulps submitted to ACME.

The ALS Chemex vanadium assay data for Gibellini and Louie Hill are considered to be acceptably accurate, precise, and free of contamination in the sample preparation process for use in Mineral Resource estimation.

12.3.2 Gibellini Twin Drill Program Review

RMP twinned eight legacy drill holes at Gibellini to verify legacy assay results. The cumulative relative grade differences between RMP and legacy Noranda and Atlas drill holes were tabulated by oxidation state. For example, Atlas drill holes within the oxide domain show a total cumulative footage of 305 ft and weighted average V_2O_5% grade of 0.221. This compares well to RMP twin drill holes totaling 305 ft and a weighted average V_2O_5% grade of 0.223, a relative difference of +1%. Relative differences that are generally within ±5% confirm the legacy drill results. Relative differences in the 10% range or greater require further investigation, and adjustments to assay grade may be required before use in resource estimation.

Two domains with elevated relative differences, Atlas transition at -9% and Noranda reduced at -22% as compared to RMP drill results. All other domains have less than 5% relative differences or just slightly above and no adjustments to the vanadium grades are recommended.

A plot of the Atlas transition domain assay results against RMP drill results on a quintile–quintile plot show the Atlas transition domain has different linear trends from 0% V_2O_5 to 0.410% V_2O_5, from 0.410% V_2O_5 to 0.510% V_2O_5, and greater than 0.510% V_2O_5. The Atlas assays should be adjusted as follows:

- From 0% V_2O_5 to 0.409% V_2O_5 – adjusted down by 25%
- From 0.410% V_2O_5 to 0.510% V_2O_5 – adjusted down by 5%
- Greater than 0.510% V_2O_5 – adjusted up by 15%.

Additional twin holes to the Atlas drilling are recommended to duplicate approximately 10% of legacy drill holes.

A plot of the Noranda primary domain assays against American Vanadium drill results using a quintile–quintile plot show that Noranda reduced assays be adjusted downward by 20%.

12.3.3 Louie Hill Twin Drill Program Review

A comparison of the legacy Union Carbide data to the American Vanadium assay data at Louie Hill found that the Union Carbide assays are biased about 10% high on average. The V_2O_5 grades for the Union Carbide drilling were reduced by 7% prior to resource estimation. Because of the uncertainty in the drilling methods, sample preparation and assay methodology, and the grade bias when compared to the American Vanadium assays, the classification of resource blocks that depend upon the Union Carbide drill holes at Louie Hill were limited to the Inferred Resources category.

12.4 2021 Verification Program

12.4.1 Bisoni–McKay Legacy Drill Data

The QP compiled all legacy drill data from the Bisoni–McKay property from original documents in January 2021 (MTS, 2021). Collar, geology, survey, and assay information were compiled for 49 drill holes. Trench sampling data were compiled by Nevada Vanadium but were not included in the resource database due to lack of confidence in location and sampling methods. A summary of the compilation process follows:

- Drill data were compiled from various sources, including drill logs, assay certificates, drill hole location maps, and tabulations of data from prior operators in Microsoft Excel or scanned document (e.g., portable document format (pdf)) format.
- Collar locations were converted to UTM NAD83 Zone 11 feet units, consistent with the coordinate system used for Gibellini and Louie Hill.
- Where necessary, vanadium assays were converted to vanadium pentoxide percent units (V_2O_5%), consistent with the assay units used for Gibellini and Louie Hill.
- Oxidation, color, and lithology logging codes were standardized into a numerical system for use in resource estimation.

All data in the Bisoni–McKay resource database were entered by the QP and accurately represent the source documents. A summary of known data quality issues with the legacy surveys, assays, and geology follows:

- No original collar coordinate survey records are available other than those found in the drill logs or tabulations in prior technical reports.
- Some collar coordinates were recorded using different units (e.g., feet vs. meters) and some were recorded using different datums (e.g., NAD27 vs. NAD83).
- The drill hole azimuth and dip for some drill holes conflict between the drill logs and the text in the technical reports for the property, based on data in Turner and James (2005), Ullmer and James (2006), and Ullmer (2008).
- No original assay certificates are available for the Hecla drill campaign and the laboratory and assay methodology are unknown.
- None of the drill holes were surveyed down-hole.
- No evidence of an assay QA/QC program is available for any of the legacy drill campaigns.

The QP and Nevada Vanadium staff completed several data verification programs to confirm the data quality of the resource database. The QP and Nevada Vanadium staff compared the drill hole collar locations in the database to air photographs and topographic surfaces of the area to confirm the location of drill hole collars. The locations and elevations of some drill holes were modified based on these comparisons.

The QP surveyed five legacy drill holes in the field using a handheld GPS device as a check on the accuracy of the collar coordinates in the database. All five drill holes were identified in the field by the presence of a wooden stake and the relative location of the stake to the closest drill hole on the drill hole location maps from prior technical reports. One of the stakes had the drill hole name clearly marked. Three of the collars surveyed were within four meters of the database coordinates; however, two collars were between 10 m to 29 m away from the database location. The accuracy of the handheld GPS used by the QP is known to be ±10 m accuracy in easting and northing.

The QP selected 127 pulps and 19 coarse rejects from the Vanadium International and Stina Resources legacy drill campaigns and submitted them for check assay at ALS Minerals in Reno, Nevada. The results of the check assays indicate that there is no significant bias in the vanadium pentoxide assays and they are sufficiently accurate to support resource estimation purposes.

In summary, in the QP's opinion, the Bisoni–McKay resource database contains the best location, assay, and geology information available to Flying Nickel and is acceptable for resource estimation purposes. Because of data quality issues identified in the legacy drill data, the QP assigned a maximum classification of Inferred to the Bisoni–McKay Mineral Resource estimate.

The QP recommends that Flying Nickel conduct additional verification work to confirm the accuracy of the location and assay data, including:

- Re-log available drill core and RC cuttings to produce geological information consistent with Nevada Vanadium logging in the Gibellini and Louie Hill areas
- Complete confirmation drilling in the North A and South B to confirm the thickness and grade of legacy mineralized intercepts.

12.4.2 Metallurgical Data

The mineral process QP reviewed the composite samples that were selected for metallurgical testing and the metallurgical test results and considers them suitable to support Mineral Resource estimation at the confidence category assigned.

12.5 Comments on Section 12

The QPs consider that a reasonable level of verification has been completed, and that no material issues have been left unidentified from the programs undertaken.

The QP, who participated in, and relies upon this work is of the opinion that the data verification programs undertaken on the data collected from the Property adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation:

- Sample data collected adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits.
- A database audit for Gibellini in 2008 (Hanson et al., 2008) concluded that the data were generally acceptable for Mineral Resource estimation.
- Data made available for Gibellini and Louie Hill after the 2008 review were audited by in 2011 (Hanson et al., 2011). Conclusions from that audit were that corrections were required to Noranda and Atlas assay data at Gibellini, and to the Union Carbide assays at Louie Hill. Findings from the audit recommended that additional twin holes should be drilled at Gibellini to verify Atlas data.
- Drill data for Gibellini and Louie Hill were verified by running a software program check.
- The QP compiled legacy data for Bisoni–McKay in 2021. Because of data quality issues identified in the legacy drill data, the QP assigned a maximum classification of Inferred to the Bisoni–McKay Mineral Resource estimate. The QP recommends that Flying Nickel conduct additional verification programs including relogging available drill core and cuttings, and plan a drill program to confirm the thickness and grade of legacy intercepts.

- The available Bisoni–McKay metallurgical testwork in 2021 (see Section 13.6.2) were reviewed and compared to the Gibellini metallurgical testwork. The Wood QP provided recovery recommendations for the three Bisoni–McKay material types. The Wood QP considers that the metallurgical information would only support an Inferred confidence classification.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Extensive metallurgical research was carried out by CSMRI, Noranda Research Centre, and Hazen Research from 1972 to 1975 on various aspects of metallurgical testwork on Gibellini mineralization (Condon, 1975). Only the work completed by Noranda was available for review. American Vanadium undertook testwork from 2008–2011.

13.2 Gibellini Metallurgical Testwork

The Gibellini metallurgical testwork spans material obtained by Noranda, to composites sample of core that was accumulated from earlier exploration core drilling, to confirmatory core drilling programs to trench samples leached at coarse sizes, to finally pilot programs where trench samples were taken across the deposit to make a composite of transition and oxide material that has a deposit-type break down of material (~50% oxide/50% transition) from numerous trenches.

The sample testing varied from bottle roll tests, to small diameter columns (approximately six to eight times the diameter to mineralized material size ratio) to large diameter pilot columns. These columns used either single pass solution leaching or continuous solution recycling with batch wise or semi-continuous solvent extraction recovery of vanadium.

13.2.1 Noranda

Three material samples, GI-9583 (oxide), GI-9585 (transition) and GI-9633 (reduced), were taken by Noranda and sent to SGS Lakefield Research Laboratories (SGS Lakefield) in Canada.

The test samples were prepared by mixing an amount of concentrated sulfuric acid with the material and allowing the material to rest (cure) for 24 hours. A second set of samples was prepared in the same manner, but also had manganese dioxide added to them prior to acid addition.

The cured samples were then added to bottles and sufficient water was added to make a 40% solid slurry. The bottles were rolled for 96 hours.

13.2.1.1 Head Analysis

The vanadium head grade analyses for the three samples are shown in Table 13-1.

The multi-element analysis indicates that there is a slight difference in the samples with GI-9583 having more zinc, aluminum, magnesium and iron than the other two samples. Sample GI-9633 contained more calcium than the other two samples.

The x-ray diffraction (XRD) analysis identified a vanadium mineral (fernandinite) in sample GI-9633. The XRD analysis also identified mineral species that are in excess of 1%. Since the grade of the samples is low, the lack of identification in the other samples is not unexpected. Other minerals identified were quartz, feldspar, mica, and kaolinite.

Table 13-1: Vanadium Grades, Material Samples

Sample	%V	%V_2O_5
GI-9583	0.19	0.39
GI-9585	0.30	0.54
GI-9633	0.37	0.66

13.2.1.2 Bottle Roll Test Results

Bottle roll test results are presented in Table 13-2 for the tests that used 300 lb/st of sulfuric acid, and in Table 13-3 for the bottle roll tests that used the same concentration of sulfuric acid, but also had manganese dioxide added.

The leaching data indicate that GI-9583 behaves differently to GI-9585 and GI-9633. The recovery of this sample was significantly lower than the other samples. The screen analysis showed that all size fractions were leached to a similar extent. The addition of manganese dioxide was probably not required since the recovery was not substantially improved.

Table 13-2: Recovery for Tests using 300 lb/st Sulfuric Acid

Sample	-½ inch (%)	-10 mesh (%)	-200 mesh (%)
GI-9583	40.3	38.5	41.7
GI-9585	70.1	66.5	69.9
GI-9633	83.6	85.3	86.5

Table 13-3: Recovery for Tests using 300 lbs/st Sulfuric Acid and Manganese Dioxide

Sample	-½ inch (%)	-10 mesh (%)	-200 mesh (%)
GI-9583	36.5	40.3	38.7
GI-9585	69.9	70.5	68.4
GI-9633	86.7	87.4	85.8

13.2.1.3 Interpretation of Test Results

The data accumulated shows several important factors about the mineralized material:

- The vanadium mineral identified is an oxide mineral
- The recovery from the coarse material is essentially the same as the fine ground material
- The material samples do not appear to be the same
- The amount of acid used may be able to be decreased.

The XRD analysis of the samples identified fernandinite (CaV_8O_{20}. xH_2O). This mineral is a mixture of 4^+ and 5^+ vanadium ions. The mixed oxidation state indicates that the mineral would require oxidation to form the soluble vanadate ion.

Since the vanadium minerals are at a concentration below the detection limit, the leaching data would have to be used to determine if the mineral species are similar. From this leaching data, it appears that the samples contain the same, or similar, oxide forms of vanadium.

The recovery for each sample was essentially the same for all three size ranges tested. The fractional analysis shows vanadium recovery from all size fractions, indicating that the mineral is liberated even at a coarse size. This information is important since it indicates that heap leaching could be a viable recovery method.

The data also indicated that leaching at a coarser material sizing may be possible. Data also indicate that it would be valid to use a leaching procedure on pulverized samples to predict the amount of soluble vanadium present. This type of method could be used as an exploration tool and as an ore-control method during mining operations.

It is possible that the amount of acid used was more than would be necessary to achieve dissolution of the material. The reduction of acid required to dissolve the vanadium could enhance future project economics since acid usage is about half of the production cost for the vanadium.

13.2.2 2008 Metallurgical Testwork

13.2.2.1 Mineralized Material Description

The initial phase of the test program was for Dawson Mineral Laboratories (Dawson) in Salt Lake City, Utah to take the core samples supplied by American Vanadium (then RMP) and prepare the samples. Data generated by Dawson for this showed the sample head grades for the core samples are indicated in Table 13-4.

Table 13-4: Head Grades, 2008 Samples

Sample	Head Grade %V	Head Grade % V_2O_5
Oxide	0.139	0.248
Transition	0.185	0.330
Low Grade Reduced	0.104	0.186
High Grade Reduced	0.185	0.330

13.2.2.2 Test Results

The initial testwork at Dawson was set up to benchmark their procedures with the SGS Lakefield work. The initial work on the same samples as used by SGS Lakefield was to test the effect of acid concentration. These tests showed that the acid concentration could be lowered to 100 kg/t (200 lb/st) sulfuric acid.

The samples tested at SGS Lakefield were surface samples and the Dawson test samples for the columns were core samples. When the initial bottle roll tests were done at 200 lb/st, the recovery was lower than expected. An additional series of tests were done using 300 lb/st and the recovery increased to the levels expected.

Based on these data the columns were set up to use 300 lb/st sulfuric acid on the oxide and transition samples and 350 lb/st on the reduced sample. Additionally, because the reduced sample's grade was lower than expected, a fourth sample was acquired from sampling another RMP core drill hole.

A bottle roll program was set up to test RC cuttings from around the Gibellini deposit area. This testwork indicated that the recoveries for oxide, transitional and reduced material would be as indicated in Table 13-5.

This program showed that recovery varied with grade and sample and, at least for bottle roll tests, there was no constant tail relationship.

Table 13-5: Bottle Roll Test Recovery Data

Sample	Recovery (%)
Oxide	34.6
Transition	55.4
Reduced	25.4

Two additional tests were performed to determine if increased retention time would affect recovery. The column test data shows higher recovery than the bottle roll test data. Part of the difference is associated with the difference in the assay head and the calculated head of the columns but there also appears to be more overall recovery despite the head differences. These data show the recoveries indicated in Table 13-6.

The initial minus half-inch columns (oxide and transition) did not use 25 g/L acid solution as the column wash solution and this appears to have slightly affected the recovery to the low side as compared to the minus two-inch columns that used 25 g/L throughout the testwork. The columns also showed low acid consumption (see Table 13-7).

Columns almost always show higher reagent usage than used in actuality during heap operations as there are issues associated with wall effects in the columns and lower contact time due to lower bulk density.

Table 13-6: Column Test Recovery Data

Sample	-½" (%)	-2" (%)
Oxide	57.2	59.6
Transition	65.4	72.1
Reduced	52.3	No Column

Table 13-7: Comparison of Acid Consumption, -½" and -2" Columns

Sample	-½" (lb/st)	-2" (lb/st)
Oxide	119	101
Transition	115	90
Reduced	115	No Column

Since the columns contain the largest samples used, and represent the more rigorous comparison to what would be expected from a heap leach operation, the recoveries derived from the columns are considered to be the most reliable indicator of heap leach recovery. Table 13-8 outlines the recommended study recovery values and acid consumption from the 2008 PA.

The difference between the column results and the bottle roll tests (which are usually considered to perform the more complete leaching) may be due to the longer time of contact of the solution and material (bottle roll 96 hours versus column 46 days) or possibly that the bottle roll test may allow a saturation of the vanadium in solution and therefore inhibit further dissolution.

The recovery rates were derived from the column testwork. The bottle roll tests were excluded due to the solubility and/or leach duration issues identified, and for oxide and transition material the 2" tests were used because they had the 25 g/L solution washing the material throughout the process, while the ½" samples used a lower concentration solution initially, which seemed to inhibit dissolution.

During the bottle roll testing, it was noted that the filtration of the samples was very slow. It was postulated that there were clay or silt particles present and that these particles might adversely affect the percolation of the columns.

It was recommended that when the samples were contacted with acid that a polymer be used to agglomerate the fines. Samples of polymers were obtained from Hychem and a screening test was done to determine which polymer would work best.

AE 852 appeared to work the best and the addition rate of 0.5 lb/st wash was chosen. No fines migration or plugging were observed during the column tests when the polymer was added to the material prior to being loaded into the columns.

Table 13-8: Recommended Study Recovery Values and Acid Consumption

Material	Recovery (% V_2O_5)	Acid Consumption (lb/t)
Oxide	65.0	300
Transition	70.0	300
Reduced	52.3	300

13.2.2.3 Recommended Additional Work as a Result of the 2008 PA

The 2008 metallurgical testing was done to determine the viability of heap leaching for the Gibellini vanadium material. The previous work indicated the amenability of the Gibellini material to heap leaching; however, the results were not conclusive.

Bottle roll testing does not give a direct relationship to the ability to heap leach. The bottle roll data had as much as 20–30% lower recovery than the column leach data.

Testing for the results of longer retention time or lower bottle roll slurry density is recommended. The longer time might allow additional leaching to occur. If a lower slurry density was used (30% rather than 40%), this would make sure that all available vanadium minerals would be dissolved (assuming that all possible dissolution of the vanadium was achieved). It was thought that saturation of vanadium may have been reached in the bottle roll test because crystals formed in the column solutions that had to be diluted to be dissolved. Consequently, if vanadium dissolution is a factor, doing additional testwork using a lower slurry density in the bottle roll test may help to get the bottle roll and column results more closely correlated.

Additional column tests are recommended to determine if the leaching can be done with different polymers at a lower concentration, if lower amounts of acid can be used to obtain the same recovery, if samples from different parts of the deposit will have the same recovery profile as the samples tested in this program, if the material can be leached without polymer addition, and if the material could be run without crushing (run of mine leaching). The run of mine leach would require that the material be delivered to a process area where it could be contacted with the concentrated acid, so it could be cured. The material would have to be minus six inch for proper material handling.

Testwork was suggested to prove that a lower-cost method of testing (bottle roll tests) could be used to gather additional information for the deposit. The testwork was also recommended to determine if the polymer usage could be decreased and the cost lowered or eliminated. Another purpose of the testwork was to determine if lowering the acid added during curing can still provide sufficient leach recovery. And finally, the program would be used to determine if one or all the stages of crushing could be eliminated and still maintain recovery.

13.2.3 2011 Testwork

American Vanadium instituted a metallurgical drilling program where six core holes were drilled to obtain samples for metallurgical testing. All testwork was performed by McClelland Laboratories (McClelland), of Sparks, NV.

Since the 2008 PA samples were taken across the central portion of the deposit in an east–west direction, which is an easily accessible portion of the deposit, drill holes were set up north and south of these previous holes.

13.2.3.1 Test Samples

The drill core samples were prepared at McClelland and the head grades for the samples are shown in Table 13-9.

The holes were broken down into oxide and transition composites, and a master composite of the various zones was also composited for testing. In addition to the oxide and transition zones, composites were made for the reduced zone. These samples, north zone reduced and south zone reduced, were tested for future consideration and to test a belief that they would exhibit lower recovery with high acid consumption.

The composite material for the column was undertaken to determine if the composited material behaved in a similar manner to the individual composites. Table 13-10 summarizes the testwork results. The recovery used in the 2011 Feasibility Study is provided in Table 13-11. The acid consumption was assumed to be 37 kg/t across the oxide and transition materials.

13.2.3.2 Solvent Extraction Testwork

Solvent extraction scoping testing was done to determine if:

- Di-2-ethyl hexyl phosphoric acid (DEHPA) or Alamine 336 (tertiary amine) would be superior extractants
- Maximum vanadium loading of selected organic
- Isotherm loading curve (McCabe–Thiele) diagrams to determine required stages
- Substitution of tri-octyl phosphorous oxide with Cytec 923
- Test the effectiveness of powdered iron, zinc and ascorbic acid as a reducing agent for DEPHA usage
- Determine the sulfuric acid concentration for optimum stripping of loaded organic.

Column solutions from early-stage leaching were collected and combined to produce a solvent extraction test solution. Due to the potential of producing a limited market product that would contain uranium due to using Alamine 336, it was determined that DEPHA would be the preferred extractant due to the higher selectivity for vanadium. Initial screening tests showed that powdered iron was the best (least expensive), had no gas evolution and the lowest required amount of material to achieve target oxidation reduction potential (ORP) reductant for the process.

Table 13-9: Head Grades, 2011 Testwork Samples

Sample	Initial Assay Grade (% V)	Duplicate Assay Grade (%V)	Triplicate Assay Grade (%V)	Average Assay Grade %V (V_2O_5)
North zone oxide	0.103	0.103	0.103	0.103 (0.184%)
North zone transition	0.151	0.145	0.147	0.148 (0.264%)
South zone oxide	0.163	0.162	0.162	0.162 (0.288%)
South zone transition	0.196	0.190	0.197	0.194 (0.345%)

Table 13-10: Summary of Test Results for 2011 Feasibility Study Samples

Sample	Size Maximum	Test Type	Days	% Recovery V	Calculated Head %V	Acid Consumed (kg/t)
North zone oxide	12.5 mm	Column	86	42.0	0.112	59
	6.3 mm	Column	86	41.5	0.118	65
	6.3 mm	B. Roll	4	18.4	0.114	48
	850 µm	B. Roll	4	20.3	0.118	54
	75 µm	B. Roll	4	21.2	0.113	53
South zone oxide	12.5 mm	Column	86	44.1	0.179	48
	6.3 mm	Column	86	48.4	0.186	39
	6.3 mm	B. Roll	4	16.0	0.169	24
	850 µm	B. Roll	4	19.9	0.166	29
	75 µm	B. Roll	4	17.8	0.180	29
North zone transition	12.5 mm	Column	86	53.8	0.158	34
	6.3 mm	Column	86	55.4	0.157	33
	6.3 mm	B. Roll	4	41.1	0.151	20
	850 µm	B. Roll	4	42.9	0.154	23
	75 µm	B. Roll	4	45.2	0.155	25
South zone transition	19 mm	Column	86	60.3	0.219	50
	9.5 mm	Column	86	62.5	0.208	49
	9.5 mm	B. Roll	4	41.3	0.206	41
	850 µm	B. Roll	4	43.4	0.221	44
	75 µm	B. Roll	4	54.9	0.195	43
Master composite	19 mm	Column	87	57.3	0.157	45
	75 µm	B. Roll	4	46.8	0.154	55

Table 13-11: Master Composite Comparison

Sample	Composite (%)	Recovery (%)	Acid Consumption (kg/t)	Head Grade (%V)
North zone oxide	9.45	42.0	59	0.115
North zone transition	41.65	53.8	48	0.155
South zone transition	48.90	60.3	50	0.210
Master composite predicted	—	55.9	48	0.168–0.185
Master composite actual	—	57.3	45	0.158

The selected testwork design parameters were:

- SX extraction pH range 1.8 to 2.0
- DEHPA concentration 0.45 M (~17.3% w/w)
- Cytec 923 concentration 0.13 M (~5.4% w/w)
- Orform SX-12 (high purity kerosene as an organic diluent)
- Powdered iron addition 3 to 4 g/L PLS
- Strip solution sulfuric acid concentration 225 to 250 g/L
- Solvent extraction efficiency ~97%
- Solvent extraction strip efficiency ~98%.

13.2.3.3 Agglomeration Testing

A series of tests on the north zone oxide and south zone transition composites was performed on material crushed to 100% passing 12.5 mm. Two polymers were tested, HYCHEM AF306, a high molecular weight anionic poly acrylamide (recommended by manufacturer and used in DML testing) and C-492 (a poly vinyl alcohol solution). The samples were acid agglomerated (with 25 kg/t sulfuric acid) and allowed to cure for 24 hours. The testing was done using the McClelland method (jigging) as opposed to the Kappes, Cassiday and Associates (KCA) method, which tests the flow of fluids through a bed of agglomerates that have been saturated with water.

Polymer concentrations of 0–60 g/t were tested, and partial degradation was seen in all samples, with the least degradation being seen in the 60 g/t concentration. Previous testwork (DML) used 136 g/t, and it was determined to use this quantity for design requirements. An agglomerated sample (30 g/L sulfuric acid and 0.18 lb/st AF306) was column leached, rinsed and the drained material was sent to the AMEC geotechnical laboratory to do a load permeability test. The material was tested at compressive loads from 0 to 100 ft, and a hydraulic conductivity of 2.99 x 10-4 cm/sec or higher was maintained throughout the testing on the north zone oxide sample and 3.04 x 10-4 cm/sec or higher was maintained on the south zone transition sample. The agglomeration moisture was approximately 10% for the samples.

13.2.3.4 Testwork Interpretation

The testwork of the north zone oxide and the south transition material showed that all of the material (oxide and transition) was amenable to acid agglomerated heap leaching.

The material had a grade from 0.112–0.210% vanadium. The recovery ranged from 42–60.3% on the coarse sample (-2") and from 41.5–62.5% on the minus ½" sample. The recovery from this material was close to the expected recovery with the average recovery being approximately 1% higher than expected.

The agglomeration testing indicated that HYCHEM AF306 was a better agglomeration aid than C-492. The leached material maintained acceptable solution conductivity even with a static load equivalent to 100 ft of heap. The agglomeration moisture ranged from 9.2 to 12.4%. The expected agglomeration moisture was 10%.

The solvent extraction work showed that iron powder was an effective reductant and that the optimum pH range to the ORP adjustment was 1.8–2.0. The organic make-up for a processing plant should be 0.45 M DEHPA, 0.13 M Cytec 923 and the remainder Orform SX-12. The strip circuit should use 225–250 g/L sulfuric acid and use a HCL wash to remove iron.

13.2.4 Pilot Plant 1 and 2 Testing

The 2011 Feasibility Study recommended that a pilot plant study be done to demonstrate that a locked-cycle would not adversely affect recovery due to recycling of impurities and organic from any solvent extraction step. The pilot plant tests were conducted at McClelland in 2012 and -2013.

13.2.4.1 Samples

A series of trenches was excavated and approximately 18 st of material were sent to McClelland for pilot testing. The material was air dried and stage crushed to 2" where a column sample was cut for 12" columns and then the mineralized material was crushed to – ½". A head sample was taken, and material for benchmarking columns and a bottle roll test was also collected. Pilot column 1 contained approximately 4,000 kg of material that was agglomerated with 37 kg/t acid and 0.3 lb/st of HYCHEM AF306.

13.2.4.2 Head Analysis

Splits from the sample were sent out to five laboratories (including McClelland) for four-acid digestion with an ICP finish.

As shown in Table 13-12, the head assays were substantially higher than the estimated head grade of 0.160% V in the Mineral Resource estimate; thus, the tests are expected to be more representative of results obtained in an optimized mining plan.

Table 13-12: Gibellini Bulk Sample Leach Results

Crush Size 100% Passing	Test Type	Time (days)	% Recovery Vanadium (%)	Head Grade (%V)	Acid Consumption (kg/t)
50 mm (2")	Column, open circuit	123	76.6	0.299	44
12.5 mm (½")	Column, open circuit	123	80.2	0.313	36
12.5 mm ((½")	Column, closed circuit	199	68.3	0.284	42
12.5 mm (½")	Column, closed circuit	198	74.0	0.313	48
12.5 mm (½")	Bottle roll	4	67.1	0.286	37
1.7 mm (-10 m)	Bottle roll	4	66.3	0.286	33
-75 µm	Bottle roll	4	67.6	0.279	31
-75 µm	Bottle roll	30	74.2	0.298	27

13.2.4.3 Column Tests

The crushed and agglomerated material was allowed to cure at least one day (sample preparation and agglomeration took two days) prior to loading in the column. The material was loaded into a 36" column. When the column was wetted, the column subsided, causing temporary damage to the irrigation equipment. The drip tubes separated, and the solution was added to only part of the column. This partial wetting of the column caused the initial low recovery seen in the test data.

A total of 199 days of active solution application was done on pilot column 1.

Due to the issues with the solution application, a second pilot column (pilot column 2) was started in a 44" column.

The solution application and material subsidence were closely monitored, and no application issues occurred during this test. Supporting column tests were done on -2" material and -½" material in an open circuit to compare with results from the closed circuit. Additionally, a bottle roll test on -75 µm material for four days and 30 days was done to determine if a longer leach time would show recovery closer to the column recovery (see Table 13-2).

Leaching on the second pilot column was continued for 198 days. The column washing was continued after the resting column drained. The washing was started initially with surging of the column (adding for three to four days and draining for four to five days. A resting period of 53 days followed, and the washing restarted continuously from day 488 until it was completed on the 526th day.

The open circuit columns showed higher recovery than the closed-circuit columns. The 30-day bottle roll showed 6.6% more recovery and was 2% above the average column recovery. It appears that the pulverized sample leached for 30 days, is a better prediction of final recovery than the four-day bottle roll test.

The difference in recovery is probably due to removal of vanadium from the matrix by acid leaching over the extended period due to apatite or dolomite dissolution.

The pilot plant test used continuous solvent extraction and recycling of the raffinate back to the column. The continuous solvent extraction unit was used on accumulated PLS and run discontinuously to match its capacity to the production rate of PLS. The organic for the solvent extraction was 0.45 M DEHPA, 0.13 M Cytec 923 and the remainder was Orform SX-12. The SX was operated on a 1:1 aqueous phase to organic phase (A to O) ratio.

The solvent extraction design appears to require three stages of extraction and three stages of stripping with an HCl wash on the barren organic to remove iron. Due to the potential for iron loading, it is necessary to control the free acid to the range where ferrous (Fe^{+2}) is the predominant iron species and ORP to a point where the vanadyl (VO^{+2} or V^{+4}) is the predominant vanadium species.

The final pregnant strip solution was 6.1% vanadium, 250 g/L sulfuric acid with approximately 2% Fe and Al. The solution oxidized using sodium chlorate ($NaClO_3$) to convert the V^{+4} to V^{+5}, then precipitated using ammonia to make ammonium metavanadate (AMV). To make a vanadium product for the steel industry, this AMV would be calcined (ammonia driven off) and heated to above 700°C (the fusion temperature of V_2O_5). This fused V_2O_5 would then be cooled on a casting wheel, pulverized and packaged.

13.2.4.4 Solvent Extraction and Ion Exchange Resin Testwork

The iron and aluminum impurities in the pregnant strip solution make the vanadyl solution unusable as an electrolyte for vanadium flow batteries.

To be able to meet the specifications, American Vanadium researched the potential of using ion exchange resins in conjunction with solvent extraction. Laboratory testing showed that cationic resins would load the vanadium, iron and aluminum while allowing the phosphorous and other anions to pass through. Using an acidic stripping of the resin (10 to 50 g/L sulfuric acid) stripped the metals off into a solution that could have the ORP modified to above 400 millivolts so the

Fe^{3+} removal was minimized. DEHPA solvent extraction of this solution allowed preferential capture of vanadium in the organic and the subsequent pregnant strip solution contained decreased amounts of other cations.

The testwork started with screening both cationic and anionic resins. It was determined that C-211 (Siemens Water Technology) was the best resin. Initially, ammonia precipitation was done on the resin discharge, but the iron concentration was too high. Additional solvent extraction testing was done on the sample and it was determined that a large-scale test using the pregnant strip solution from pilot plant 1 and 2 would be done.

The resin testwork with solvent extraction produced the required reduction of impurities and it was determined that three stages of solvent extraction would produce a vanadium flow battery grade electrolyte. Additional bench scale testwork was done with a 500 ml column. This testwork included numerous loading, unloading sequences to produce sufficient solution to use solvent extraction shake tests to produce sufficient material to complete the full three phases of solvent extraction recovery. The resultant final strip solution met or exceeded (Fe was <10 ppm) the Gildemeister specifications shown in Table 13-13.

With these data in hand, a large-scale test was set up using the pregnant strip solution from pilot plant 1 and 2. The strip solution was loaded onto the resin and stripped off using a load cycle (1.75 L) of pregnant strip solution, followed by two volumes of 20 g/L H_2SO_4 stripping, followed by a single volume deionized water wash, then the cycle was repeated. The solution was loaded in 13 cycles (a total of about 23 L of pregnant strip solution) and the subsequent (two acid washes plus water wash) solution collected, and the solution free acid diluted to between 20 and 25 g/L sulfuric acid. The resulting solution was just over 100 L. This solution was then run through a solvent extraction system with 0.45 DEHPA, 0.13 Cytec 923, and the remainder SX-12.

The loaded organic was stripped using a solution with between 225 to 250 g/L sulfuric acid. Unfortunately, the ORP of this phase and the next phase was not measured and modified as is the norm with the PLS SX system. What occurred was that the SX did recover vanadium and rejected most other cations except iron, which was in the ferric form and loaded along with the vanadium. In three stages of extraction only 46% of the vanadium was recovered and even though the iron content was reduced, the reduction was not sufficient to meet electrolyte specifications. When data were finally available, it was noted that the ORP of the resin column solution was over 600 millivolts.

The final solvent extraction was run with the solution ORP being modified with SO_2 (in the form of sodium metabisulfite, $NaHSO_3$). This extraction showed 97% extraction and a similar level of stripping as was anticipated. The organic make-up for phase 2 and phase 3 was 0.75 M DEHPA, 0.20 M Cytec 923 with the remainder SX-12.

Table 13-13: Gildemeister's Electrolyte Specification

Specification Vanadium electrolyte solution

Client	Gildemeister Energy Solutions	Date	7/1/2011

Electrolyte formula / calculation			
substance	**unit**	**amount**	
V_{Gesamt}	mol/l	1.6	
V^{3+} / V^{4+}	-	1 : 1	
$V_2(SO_4)_3$	mol/l	0.4	
$VOSO_4$	mol/l	0.8	
H_2SO_4 free	mol/l	2	196 g/l
H_3PO_4	mol/l	0.05	

Specified values and limits				
parameter	**unit**	**specified value**	**limits (min./max.)**	**conditions**
V_{total}	wt. %	6.1	+/-0.2	20°C
density	kg/l	typical. 1.355	1.34 - 1.37	20°C
V^{4+} / V_{Gesamt}	%	50	47 - 52	-
filtration test 0,45 µm		no visible particles		homogenous, representative sample

impurities:		
element	**unit**	**limits (max.)**
Ca	ppm	<200
Mg	ppm	<200
Ni	ppm	<200
Cu	ppm	<1
Al	ppm	<300
Fe	ppm	<300
Cl	ppm	<300

classification hazardous materials
UN3264
corrosive, acidic, inorganic N.O.S
(Vanadium electrolyte solution)
8, II

packaging
UN IBC - container, 1000 l
(no outlet at the bottom)

agreements
10 liters samples per batch in advance
delivery upon approval of the samples by the client
shipping with MSDS

It is anticipated when the next phase of pilot column work is done, that the electrolyte purification may only take one or possibly two stages of solvent extraction to produce an electrolyte-grade solution. The strip circuit also contained a 10% HCl wash stage used to remove iron from the stripped organic.

In addition to running the solvent extraction recovery during a future pilot testing stage, work would be undertaken for chemical grade V_2O_5 production by oxidation of the solution using $NaClO_3$. This oxidized solution would then be treated with NH_4OH (in the plant with anhydrous ammonia), heat and time to produce AMV. The AMV would then be dried and calcined to remove the ammonia and produce a non-fused V_2O_5 powder. Another product to be produced during this test phase would be vanadyl sulfate crystals. It is well known that 6% vanadyl sulfate solution will crystallize if the solution temperature is dropped to 0°C (32°F). This product would be screened and dried for study of the impurities and re-dissolution properties.

American Vanadium patented this electrolyte purification process.

13.2.4.5 Vanadyl Sulfate Production

Vanadyl sulfate was formed from the dissolution of chemical grade V_2O_5, sulfuric acid and SO_2 gas placed in an electrowinning cell where it was converted to V^{+3} from V^{+4}. This conversion was done to test the conversion of a vanadyl sulfate solution, which will be produced directly in the solvent extraction circuit. The conversion was done in an electrowinning cell that had two graphite electrodes and two compartments were separated by a membrane (Nafion N438) that allowed electrons to pass. The electricity was supplied by a battery charger.

The solution color changed from a deep blue solution to a solution that was emerald green (this is an indication of conversion from V^{+4} to V^{+3}). The unit was operated at 12 volts direct current at about 11 amps. It took 16 hours to convert the V^{+4} to V^{+3}, which was close to the time it was calculated to convert 10 L of 5.9% V solution (1.15 M).

13.2.4.6 Additional Work Requirements

Due to operating and environmental requirements, additional pilot tests should be undertaken. These tests will differ from the original pilot tests.

Pilot column 3 should be operated to generate the gypsum precipitate that is expected to be produced when lime is used to bring the SX feed range to a pH of between 1.8 to 2.2. Additionally, SO_2 should be used as a reductant substituting for the powdered iron used previously. The gypsum precipitate formed during the operation of column 3 should be used in the agglomeration of an additional column, pilot column 4, as the return of the gypsum formed in the pH modification should be filtered and sent to the agglomeration to be combined with the mineralized material being agglomerated.

Pilot column 4 should also use lime and SO_2. The solvent extraction for columns 3 and 4 should be run in the same manner as pilot columns 1 and 2. The vanadium recovered should be tested for production of V_2O_5, as well as added value products such as vanadyl sulfate crystals, V_2O_3 and V^{+3}/V^{+4} electrolyte. These pilot columns should be used to produce solution for end-product testing and to demonstrate the present flowsheet, which will differ from the flowsheet tested in pilot columns 1 and 2.

13.2.5 Interpretation of Metallurgical Testing Programs

The samples tested represent the deposit material as they are from a variety of locations across the deposit. Some of the testing has been done on surface samples and some tests were done on size ranges that are not the present process design.

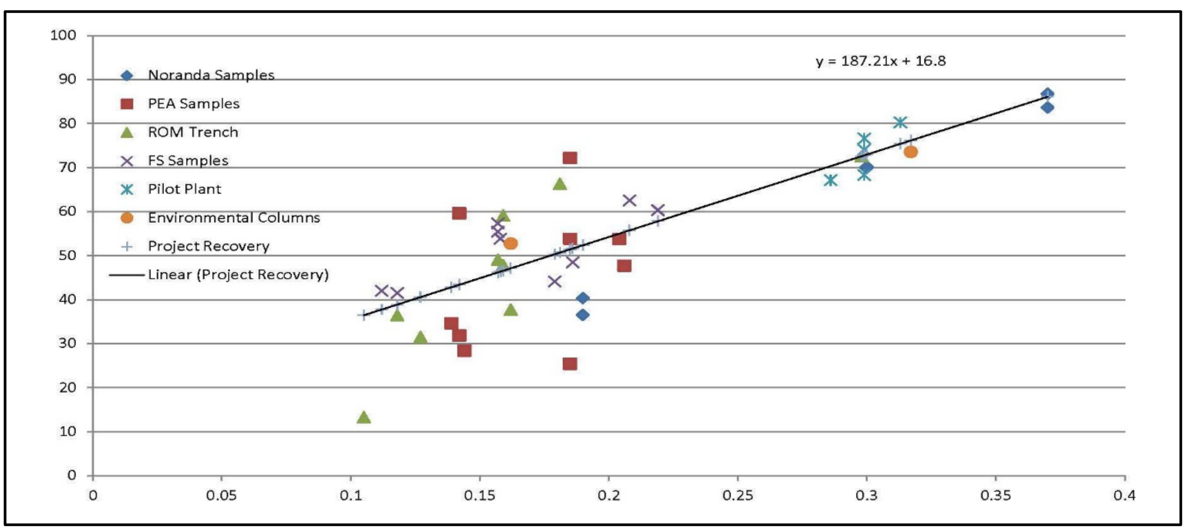
The various metallurgical testwork programs have shown consistent recovery of the various mineralized material types with the variation being tied mostly to the grade and the time the sample has been leached.

A grade recovery curve was developed using the equation:

$$\textit{Recovery\%} = (\textit{Grade}\ (\%V) \times 187.21) + 16.8$$

This is shown in Figure 13-1.

Figure 13-1: Recovery Data, All Samples



Note: Figure prepared by Scotia, 2018. PEA = 2008 PA; FS = 2011 feasibility study, ROM = projected run-of-mine.
Y-axis shows recovery in percent; X-axis shows vanadium head grade, in percent.

There were 25 data points included from the various tests and when the actual test recovery versus the projected recovery was compared, 47% of the actual recoveries were above the projected recovery. Since these samples represent a mixed sampling of parameters, that is, that samples with ¼" size (three samples), $^3/_8$" (four samples) and ¾" (five samples) were included with the ½" column test samples, the variation seen is reasonable. When the other size range samples were removed from the data set and only ½" material tests were used, the recovery curve equation (shown in Figure 13-2) is:

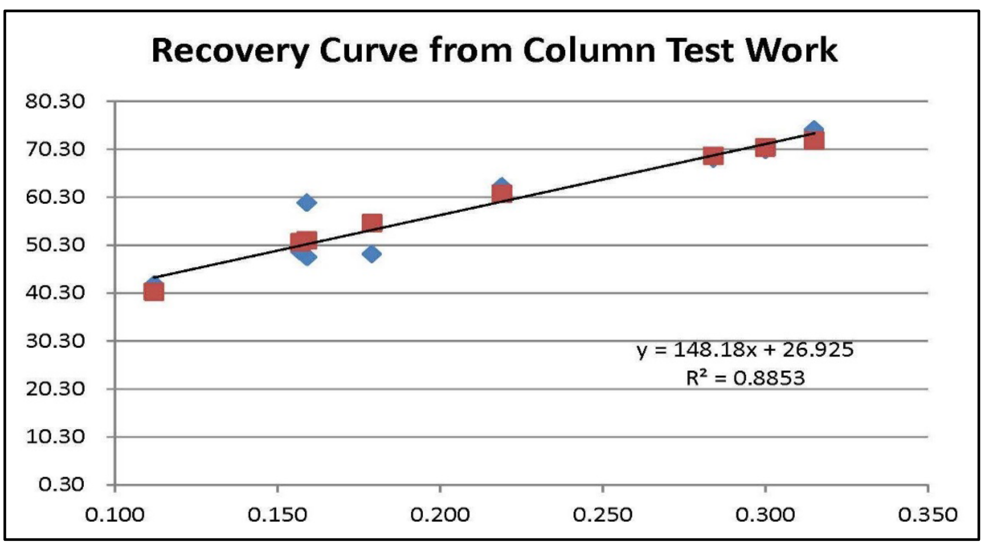
Recovery = (Grade(%V) x 148.18) + 26.92

The recovery is consistent from surface to subsurface sample, from the north, center or south of the deposit and appears to back up the consistency seen geologically when the grade is modeled. The recoveries obtained on the small scale and the large scale agree as well as the recovery determined by the three various metallurgical laboratories.

The pilot column testwork shows that DEHPA/Cytec 923 extraction and recovery works well with about 97% extraction recovery and 99% stripping recovery. Vanadium in strip solution grades can be brought up to 6.0% V or higher (crystallization did occur if recycling allowed to go too high).

Use of ion exchange and solvent extraction to purify vanadyl solution produced in the solvent extraction circuit has been shown to be feasible. Precipitation of vanadium from an oxidized solvent extraction strip solution with ammonia was shown to be feasible, so that V_2O_5 production is possible.

Figure 13-2: Recovery versus Grade Curve



Note: Figure prepared by Scotia, 2018. -Y-axis shows recovery in percent; X-axis shows vanadium head grade, in percent.

13.3 Recovery Estimates

No Gibellini samples showed anomalously low recovery, while the pilot columns (mixture of oxide and transition material) showed almost exactly the predicted recovery of 71.38% (average pilot column grade 0.300% V and 71.30% average recovery).

Therefore, an average recovery of 60% for oxide, 70% for transition, and 52% for reduced material is supportable for the Gibellini deposit, and the recoveries can be considered conservative.

13.4 Metallurgical Variability

Figure 13-3 shows the various core holes, RC holes and trenches where test samples were taken. When the various samples are viewed as a whole, the Gibellini deposit-wide coverage is good, with only the extreme north and south side of the pit missing samples. In general, since the recovery versus grade line has such good correlation and the samples represented in this graph are from trench and core samples, it is considered the deposit is well represented by the various samples. The RC samples indicate that the material represented by the RC holes is leachable to the same extent as the core and trench samples. These samples show lower recovery, but since only bottle roll tests of relatively short duration were done, the lower recovery is expected.

13.5 Louie Hill

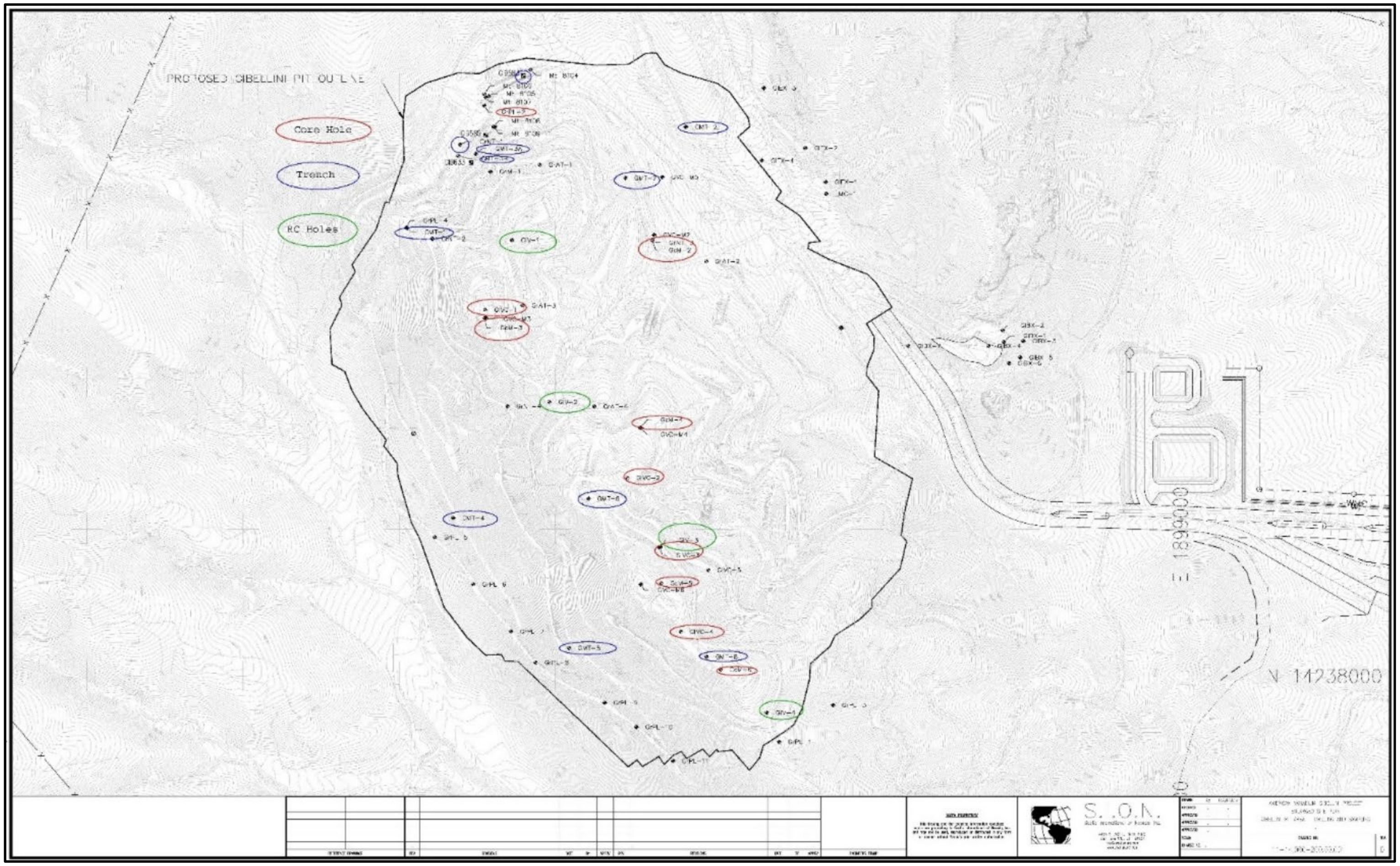
Screening testwork was performed by McClelland in 2013 on Louie Hill material. Three column tests (oxide, transition, and reduced) were performed on mineralized material composites from Louie Hill. The composite samples were collected from previously-drilled core holes. The grade of the composites was lower than similar composites from Gibellini, and the acid consumption for the Louie Hill composites was higher than seen from Gibellini composites.

Overall recovery indications for Louie Hill were 65.8% for oxide and 60.5% for transition material based on column test head results. Acid consumptions were 100 kg/t for oxide and 114 kg/t for transition.

Due to the limited testwork at Louie Hill, the recoveries and acid consumption from the more comprehensive Gibellini test program are adopted for Louie Hill.

Additional metallurgical testwork will be required to support of more detailed deposit evaluations.

Figure 13-3: Metallurgical Testwork Sample Locations, Gibellini Deposit



13.6 Bisoni–McKay

13.6.1 Overview

Scoping-level metallurgical testwork was carried out by Hazen Research on Bisoni–McKay samples in 2006. The purpose of the testwork was to examine potentially suitable front-end processing options that included magnetic separation, direct leaching, acid pugging and curing, and roasting experiments.

A series of acid pugging and curing tests were then conducted on pulverized samples from the oxide, transition and reduced mineralization. The oxide tests were carried out at varying water and acid additions, curing times, and curing temperatures. Two tests were then performed on the transition and reduced mineralization samples. The leach residues were examined using optical microscopy, and the electron microprobe indicated that the residual vanadium remained in the organic material which is largely impervious to acid attack and dissolution ambient leach conditions.

The testwork results indicated a similar leach response and acid consumption to the equivalent Gibellini mineralization. Overall recovery indications for Bisoni–McKay at a scoping level of study were 65% for oxide, 56% for transition and 50% for reduced mineralization (see discussion in Section 12.6.2).

Due to the very limited testwork conducted at Bisoni–McKay, the acid consumption from the more comprehensive Gibellini test program is adopted for Bisoni–McKay.

Additional metallurgical testwork will be required to support more detailed deposit evaluations.

13.6.2 Bisoni–McKay Metallurgy Review

The Wood QP completed a data gap analysis for the mineral processing and metallurgical testing aspects of the Bisoni–McKay mineralization in April 2021, to determine if sufficient data were available to support classification of a Mineral Resource estimate for the Bisoni–McKay area based on an assumption that a heap leach process similar to Gibellini could be used (Wood, 2021).

A comparison of the vanadium mineralization for Gibellini and Bisoni–McKay was summarized and described in the 2016 technical report (Ullmer and Benzten, 2016). In addition, the Bisoni–McKay drill logs were reviewed for indications of differences in mineralogy as compared to Gibellini. The Bisoni–McKay intervals are logged as shale or mudstone with only the color of the intervals being described as variations, which is a function of the degree of oxidation. The average vanadium grades by rock type and color as compared against Gibellini appear similar and no particular differences in mineralogy are evident from the information available.

The metallurgical testwork for Bisoni–McKay was preliminary in nature and intended to identify possible treatment routes, whereas the Gibellini testwork is fairly advanced and was focused on developing the heap leach process. While there are differences in the tests conducted which do not necessarily allow direct comparison of leach results, it is possible to compare the relative response of the samples to the particular testing conditions.

The conclusions and recommendations from the technical memorandum are summarized as follows:

- The leach response for the pugging, cure and leach tests conducted on the Bisoni–McKay oxidized zone does not compare well with the Gibellini column tests. For the purposes of reasonable prospects of eventual economic extraction, the maximum extractions on the Bisoni–McKay oxide mineralization should be assumed to be similar to Gibellini, so the recommended recovery to be applied is 65%.
- The leach recovery for the Bisoni–McKay transition zone is lower than Gibellini. The Bisoni–McKay test results represents the highest practical extraction so the recommended extraction for purposes of reasonable prospects of eventual economic extraction is 56%.
- The leach recovery for Bisoni–McKay reduced zone is similar, although slightly lower than the Gibellini reduced mineralization recovery. A recovery of 50% can be applied to the Bisoni–McKay reduced mineralization for the purposes of reasonable prospects of eventual economic extraction.
- The costs for the Bisoni–McKay resource are expected to be similar to Gibellini, so the Gibellini costs can be applied for the purposes of reasonable prospects of eventual economic extraction.

Metallurgical testwork data will only support an Inferred classification. Additional support for confidence category upgrades from the perspective of the metallurgical modifying factors will require supporting testwork.

13.7 Deleterious Elements

The acid leaching did not mobilize any elements during leach that would be deleterious to the solvent extraction recovery.

The major elements mobilized were aluminium, phosphorus and iron. Of these, iron loads at the pH and Eh conditions associated with solvent extraction and iron may be used as a reductant to reduce vanadate (leached species) to vanadyl (extracted species). A HCl wash may need to be included in any future process to eliminate iron build-up on the recirculating organic phase.

The reagent suite selected for solvent extraction is designed to exclude uranium if any should be mobilized in the leaching reactions.

13.8 Comments on Section 13

In the opinion of the Wood QP, the following conclusions are appropriate:

- Metallurgical testwork and associated analytical procedures were performed by recognized testing facilities, and the tests performed were appropriate to the mineralization type.
- Samples selected for testing were representative of the various types and styles of mineralization at the Gibellini deposit. Samples were selected from a range of depths within the deposit. Sufficient samples were taken to ensure that tests were performed on sufficient sample mass.
- The process recovery for the 2011 column testwork showed a slow ascending trend of between 0.1% and 0.4% per day, which was consistent with the trend seen in the 2008 column testwork.
- Metallurgical parameters appropriate for use for determining reasonable prospects for eventual economic extraction and in the 2021 PEA are:
  - Gibellini and Louie Hill recovery: 60% for oxide, 70% for transition, and 52% for reduced mineralization
  - Bisoni–McKay recovery: 65% for oxide mineralization, 56% for transition, and 50% for reduced mineralization
  - Gibellini, Louie Hill and Bisoni–McKay acid consumption: 80 lb/st.
- Recoveries may increase beyond the above levels if extended duration leaching results from additional washing or leaching by solutions percolating from subsequent lifts.
- The acid leaching did not mobilise any elements during leach that would be deleterious to the solvent extraction recovery predictions.

The Wood QP notes that commercial heap leaching of vanadium mineralisation has not been done before. Nonetheless, heap leaching with SX recovery are common technologies in the mining industry. Column and pilot plant testing has demonstrated that heap leach technology can be successfully applied at Gibellini, with known and tested SX and precipitation processes applied to recover the vanadium to a final product. The Gibellini process is similar to uranium heap leach, SX and precipitation processes that have historical and current commercial application. In addition, there are notable examples of copper heap leach projects that use an acid-leach solution to mobilize the metal followed by metal recovery using SX and electrowinning.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Introduction

The QP personally performed the Bisoni–McKay Mineral Resource estimate and reviewed the estimates for Gibellini and Louie Hill that were performed by Mr. E.J.C. Orbock III, RM SME and Mr. Mark Hertel, RM SME (Principal Geologists at AMEC at the time the Gibellini and Louie Hill estimates were performed) respectively, and is responsible for those estimates.

14.2 Gibellini

14.2.1 Basis of Estimate

A total of 43,785 ft of drilling in 195 drill holes by four operators, Atlas, Noranda, Inter-Globe and RMP were available for geological domain modeling. A sub-set of this database totaling 39,384 ft of drilling, in 174 drill holes, was available for resource estimation.

Twenty-one drill holes totaling 5,201 ft were drilled for metallurgical, geotechnical and condemnation studies and were not used in grade estimation. The twenty-one drill holes consist of 11 core holes for metallurgical testing totaling 2,801 ft, four oriented core holes for geotechnical studies totaling 1,000 ft, and six RC condemnation drill holes totaling 1,400 ft.

Thirty-three rotary drill holes totaling 5,695 ft from a fifth operator, Terteling, were excluded from this study due to a high-grade bias (Wakefield and Orbock, 2007). There is sufficient drill hole coverage from the other operators to compensate for not using the Terteling drill hole assays.

Twin drilling analysis performed by AMEC indicates that Atlas assays within the transition domain and Noranda assays within the reduced domain should be down-graded (Wakefield and Orbock, 2007).

A three-dimensional Hexagon MinePlan (MinePlan, formerly MineSight) block model was created to estimate the V_2O_5% resource. The model is rotated at -34° from north so the long axis is oriented at 326° azimuth. Topography was loaded into the model and blocks were coded. Block size was 25 ft x 25 ft x 20 ft.

14.2.2 Geological Models

RMP geologists coded drill hole samples based on the three oxidation states: oxidized, transition, and reduced. Oxidation domains were interpreted from drill logs based on color, assay grades, and lithology. The oxide domain was classified based on low V_2O_5 grades and lithology logged as broken, tan to white, sandy siltstone. Drill hole intervals were classified as transition if assay grades were high and drill hole logs showed a lithological change from sandy siltstone to dark gray shale. The reduced domain was interpreted based on a drop in grade and lithology logged as hard black shale.

RMP developed oxidation envelopes around drill holes projected onto cross and long sections spaced 100 ft apart. AMEC imported RMP oxidation envelopes into MinePlan. From these envelopes, AMEC created polylines between the oxide-transition boundary and transition-reduced boundary. Oxidation polylines were then linked to the adjacent section to create a three-dimensional (3D) surface to code the block model. Blocks and composites were set to a default code of reduced, then all blocks and composites above the reduced-transition surface were set to transition, and finally all blocks and composites above the transition-oxide surface was set to oxide. Proper assignment of the oxidation state was visually confirmed by AMEC by inspecting drill hole composites and blocks in cross sections, long sections, and in bench plans on the computer screen.

RMP developed mineralized envelopes or "grade polygons" to control the limits of grade interpolation in combination with oxidation state domains. Grade polygons were drawn around drill holes projected onto cross-sections spaced 100 ft apart with assay grades equal to or greater than 0.050% V_2O_5. AMEC imported RMP assay grade polygons into MinePlan and adjusted the polygons to match composite lengths. Grade polygons were wireframed to create a 3D grade domain solid to code composites and blocks. Composites and blocks were coded based on 50% or greater length or volume, respectively, within the grade domain. Within the 0.050% V_2O_5 grade domain, the total number of composites coded was 3,106 and total number of blocks coded was 55,168. Proper assignment of the grade domain code was confirmed by AMEC by inspecting composites and blocks in cross-sections, long-sections, and bench plans on the computer screen. Volume comparison of the grade domain solid versus the volume of the tagged blocks shows approximately four-tenths of a percent difference.

14.2.3 Composites

Assays from Gibellini were composited along the trace of the drill hole to 10 ft fixed lengths. Oxidation boundaries were treated as a hard boundary during composite construction. Composites with a length of less than 5 ft were not used in grade interpolation. AMEC confirmed that the composites were properly calculated by manually compositing a few selected assays and comparing composite values to MinePlan results.

14.2.4 Exploratory Data Analysis

Noranda drilling shows the highest average grade at 0.296% V_2O_5, whereas RMP has the lowest average grade at 0.122% V_2O_5. Noranda concentrated their drilling to the central portion of the vanadium occurrence and tested only the higher-grade oxide and transition zone. Approximately 99.7% of the sample intervals are 5 ft in length. Eighteen assay intervals are shorter than and eight assay intervals are greater than 5 ft, but none exceeds 15 ft.

AMEC investigated and developed assay statistics based upon oxidation domains. The transition domain shows a mean grade 50% higher than that of the oxide domain and more than three times that of the reduced domain. The transition domain shows much higher mean grade at 0.344% V_2O_5 as compared to oxide and reduced at 0.229% V_2O_5 and 0.106% V_2O_5 respectively.

AMEC found that the grade discontinuity between major lithologies was minor and that grade interpolation should not be restricted across lithological boundaries. AMEC ran contact plots for vanadium grades by oxidation domain. Contact analysis between the oxidation domains shows a large grade disparity between domains. AMEC treated the domain contacts between the oxidation states as hard boundaries for grade estimation.

14.2.5 Density Assignment

Tonnage factors were calculated from specific gravity measurements and assigned to the blocks based on oxidation domain (Table 14-1).

Table 14-1: Block Model Tonnage Factor

Oxidation Domain	Average S.G. (gm/cm^3)	Tonnage Factor (ft^3/st)
Oxide	1.90	16.86
Transition	1.96	16.35
Reduced	2.26	14.18

14.2.6 Grade Capping/Outlier Restrictions

Capping limits for Gibellini were investigated using a Monte-Carlo risk simulation methodology which showed the suggested capping levels were not much higher than the mean grades. The assay distribution, at a cut-off grade above 0.1% V_2O_5, displays a normal distribution, is not heavily skewed, and lacks a long grade tail. Monte-Carlo risk simulation would be more appropriate for skewed distributions.

Using all assays above 0.05% V_2O_5, the 90–100 decile shows a total metal content of 6.6%. The 99–100th percentile shows a total metal content of 1.3%. This suggests that capping is not warranted. AMEC did not cap assays but capped three high-grade composites greater than 1.5% V_2O_5 to 1.5% V_2O_5. AMEC allowed all composites to interpolate grade out to 110 ft and capped composites greater than 1% V_2O_5 to 1% V_2O_5 beyond 110 ft.

Comparing an uncapped and unrestricted kriged model to the capped and outlier restricted kriged model indicates that approximately 0.2% of the metal has been removed.

14.2.7 Variography

AMEC used Sage2001 to construct and model experimental variograms using the correlogram method and henceforth referred to as variograms. AMEC developed and reviewed variograms for each of the oxidation domains within the grade shell and a set of variograms that included all data within the grade shell. The variograms from each of the oxidation domains were considered poorer quality than the variograms produced by using all composites within the grade shell. AMEC expects that this is due to the smaller number of composites for each of the oxidation domains. AMEC is of the opinion that the quality of the variograms for all composites within the grade shell is very good and supports their use in resource estimation.

Spherical models with two structures were fitted to the V_2O_5 experimental variograms. The nugget effects were established using down-the-hole variograms where the short-range variability is well defined.

14.2.8 Estimation/Interpolation Methods

14.2.8.1 Within Grade Shells

Only composites from RMP, Noranda, Inter-Globe, and Atlas were used for grade interpolation. Hard contacts were maintained between oxidation domains – oxide blocks were estimated using oxide composites; transition blocks were estimated using transition composites; and reduced blocks were estimated using reduced composites. A range restriction of 110 ft was placed on grades greater than 1% V_2O_5 for each of the domains.

Ordinary kriging (OK) was used to estimate vanadium grade into blocks previously tagged as being within the 0.05% V_2O_5 grade domain solid. Two kriging passes were employed to interpolate blocks with vanadium grades.

A larger first pass interpolation required a minimum of eight composites, a maximum of 12 composites and no more than four composites per drill hole. A second pass using a smaller search distance was allowed to overwrite the first pass but required a minimum of eight composites, a maximum of 16 composites, and no more than four composites per drill hole.

Passes one and two used a quadrant search with a maximum number of four composites per quadrant.

14.2.8.2 Outside of Grade Shells

AMEC interpolated grade for blocks that were outside of the grade shell using only composites external to the 0.05% V_2O_5 grade shell. These composites generally contain values of less than 0.05% V_2O_5. Block model tabulation indicates that there were no oxide or transition blocks above the resource cut-off grades, and only minor reduced material that was classified as Inferred.

14.2.9 Block Model Validation

The block model was validated using:

- Visual inspection
- At a zero cut-off grade, comparing the means of the OK grade to a nearest-neighbor (NN) grade for blocks identified as potentially being Measured and Indicated Mineral Resources
- Evaluating degree of smoothing in the kriged block model estimates
- Swath plots.

No potential biases were noted in the model from the validations.

14.2.10 Classification of Mineral Resources

AMEC calculated the confidence limits for determining appropriate drill hole spacing for Measured and Indicated Mineral Resources. The statistical criterion used by AMEC for Measured Mineral Resources is that a quarterly production (0.75 Mst) should be known to at least within ±15% with 90% confidence. A drill hole grid spacing of 110 ft gives a 90% confidence interval of ±6% on a quarterly basis.

Mineral Resources were classified as Measured when a block is located within 85 ft to the nearest composite and two additional composites from two drill holes are within 120 ft. Drill hole spacing for Measured Mineral Resources would broadly correspond to a 110 x 110 ft grid.

The statistical criterion used by AMEC for Indicated Mineral Resources is that a yearly production (3 Mst) should be known to at least within ±15% with 90% confidence. A drill hole grid spacing of 220 ft gives a 90% confidence interval of ±6% on an annual basis. Mineral Resources were classified as Indicated when a block is located within 170 ft to the nearest composite and one additional composite from another drill hole is within 240 ft. Drill hole spacing for Indicated Mineral Resources would broadly correspond to a 220 x 220 ft grid.

Visual checks on cross section and plan show good geological and grade continuity at this distance. However, tighter drill grid spacing may be required to define high grade zones, mill feed material and waste contacts, structural offsets, and to define final pit limits. AMEC recommended that a maximum drill grid spacing of less than 220 ft be maintained for Indicated Mineral Resources.

The MTS QP is of the opinion that continuity of geology and grade is adequately known for Measured and Indicated Mineral Resources for grade interpolation purposes.

Classification of Inferred Mineral Resources required a composite within 300 ft from the block.

14.2.11 Reasonable Prospects of Economic Extraction

The 2011 resource estimate that was updated in 2018, was constrained within a conceptual pit shell that used the following assumptions: Mineral Resource V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 60% for oxide material, 70% for transition material and 52% for reduced material; tonnage factors of 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb. An overall 40° pit slope angle assumption was used.

Multiple sources were used to arrive at the forecast long term resource price of $9.85 per pound V_2O_5 sold including consensus pricing from recently published technical reports, three-year average pricing published by the European market, and the trading range of the spot price from the Europe market over the past year. The average price of the three sources is supportive of a long-term market price of $8.20/lb V_2O_5. An elevated, $9.85/lb V_2O_5 price (20% higher) was used for inputs to the mineral resources, which is an accepted mining industry practice. The mineral resources are most sensitive to metal price and grade and significant changes to either will significantly affect the reasonable prospects of eventual economic extraction.

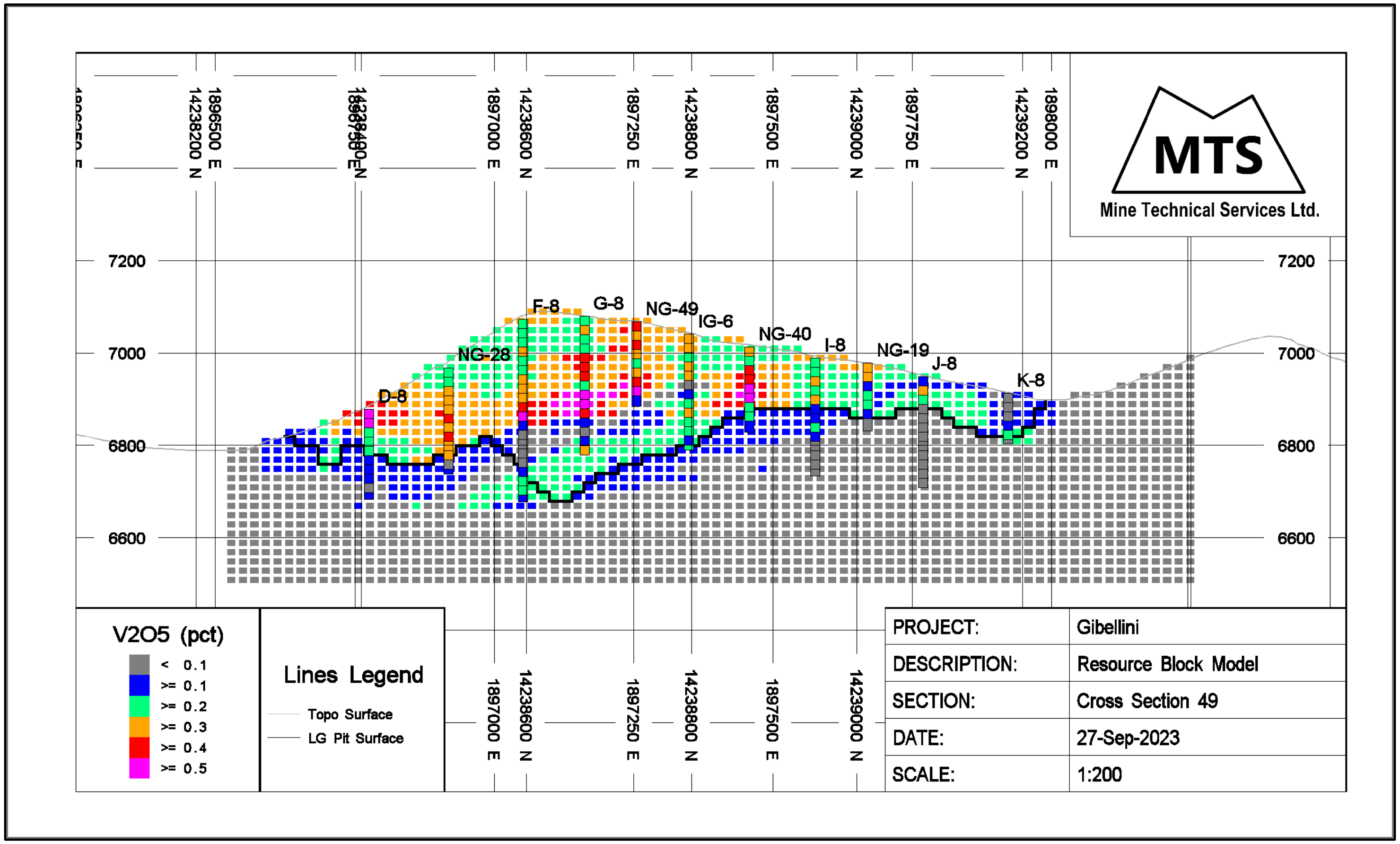
Figure 14-1 shows a cross-section view of Gibellini blocks and composites color coded by V_2O_5 grades that lie within the Mineral Resource LG pit.

14.3 Louie Hill

14.3.1 Basis of Estimate

The drill hole database used in developing the Mineral Resource estimate totaled 7,665 ft in 58 drill holes and was closed as of 1 May 2011. Union Carbide contributed 49 drill holes to the database with a total of 706 V_2O_5% assays. Nine drill holes drilled by American Vanadium with a total of 547 V_2O_5% assays were also included.

Figure 14-1: Gibellini Cross-Section NonOrtho 49



Source: MTS, 2023. Note: Looking northwest. Figure shows V_2O_5 color-coded blocks and composites within Mineral Resource LG pit.

A three-dimensional MinePlan block model was created to estimate the V_2O_5% resource. The model is un-rotated. Topography was loaded into the model and blocks were coded. Block size was 25 ft x 25 ft x 20 ft.

14.3.2 Geological Models

American Vanadium supplied AMEC with geological interpretations on 10 cross-sections and three long-sections. The cross-sections are spaced at 300 ft and long-sections are spaced at 200 ft. The sections were comprised of lithology, fault, and mineralization interpretations. AMEC recommended that oxidation states be modeled in the next iteration of modeling at Louie Hill.

AMEC reconciled the cross-sections in plan and used the mid-bench poly-lines to code the block model for mineralization percent. Block codes for mineralization were then used to code composites as being mineralized or non-mineralized.

14.3.3 Composites

Assays from Louie Hill were composited down-the-hole to 20 ft fixed lengths. AMEC confirmed that the composites were properly calculated by manually compositing a few selected assays and comparing composite values to MineSight results.

14.3.4 Exploratory Data Analysis

AMEC coded the Louie Hill composites as mineralized if they were within the mineralized envelope, and as non-mineralized if outside of the mineralized envelope. The envelope was defined by American Vanadium and supported by AMEC probability plot data.

Using all composite data, the probability plot shows two distinct domains, a mineralized domain and a non-mineralized domain, split at 0.2% V_2O_5. AMEC coded the composites for the two domains and ran the probability plots by domain. Back tagging the mineralization code from the blocks to the composites appropriately separated the two domains. A hard boundary was used to separate the domains.

Box plots show two populations with low coefficients of variation (CV calculated as standard deviation/mean) of 0.57 for mineralized and 0.757 for non-mineralized. The low CV values indicate that estimating the block grades for the two domains should not be problematic.

14.3.5 Density Assignment

As no density measurements have been completed to date on mineralization from Louie Hill, the Gibellini data were used in the Louie Hill estimate.

14.3.6 Grade Capping/Outlier Restrictions

AMEC did not consider that grade capping was warranted at Louie Hill. Assay grades were continuous and did not show high grade outliers.

14.3.7 Variography

AMEC ran the Louie Hill variograms using Sage2001® software. First a down hole variogram was run and modeled for obtaining the nugget value. All variograms were run using all composites as there were insufficient data to run composites by individual domain.

Grade interpolations were limited to blocks within a 0.05% V_2O_5 mineralized domain that was constructed on 100 ft-spaced cross sections and wireframed into a solid. Composites within the grade domain were assigned a unique domain code and composites external to the grade domain were given a unique domain code.

A set of variograms were run at increments of 30° vertically and horizontally to obtain an anisotropy ellipsoid for OK grade estimation. The anisotropy ellipsoid defined by the variogram analysis was used to define the 3D search ellipsoid and composite weighting used in the OK grade estimation of V_2O_5%.

14.3.8 Estimation/Interpolation Methods

OK was used to estimate V_2O_5% grades into blocks tagged as mineralized and non-mineralized domains. Hard contacts were maintained between the domains. A range restriction of 200 ft was placed on grades greater than 0.15% V_2O_5 for blocks within the non-mineralized domain. The range restriction was only used for blocks outside of the mineralized domain. Blocks within the non-mineralized domain were not considered as having resource potential; hence no metal was lost in the resource due to the 200 ft range restriction. The sparse mineralization found within the non-mineralized domain does not have the continuity required for resource classification.

Two kriging passes were employed to interpolate grades into the mineralized domain blocks. Blocks that contained both percentages of mineralized and non-mineralized material were weight averaged for a whole block V_2O_5 percentage grade.

For the mineralized domain a less restrictive first pass interpolation required a minimum of three composites, a maximum of twelve composites and no more than three composites per drill hole. A second pass was allowed to overwrite the first pass but required a minimum of four composites, a maximum of twelve composites, and no more than three composites per drill hole. The first pass used search distances of 2,000 ft along the long axis, 410 ft along the short axis, and 200 ft along the vertical axis. The second pass restricted the search to 1,500 ft, 310 ft, and 150 ft, for the long, short, and vertical axes respectively.

14.3.9 Block Model Validation

AMEC constructed an NN model to compare to the OK grade block model. NN grade interpolation also honored the interpolation parameters as applied to the OK grade model. For all blocks classified as Inferred, the V_2O_5% OK estimation matched the NN grade estimation very well.

A relative percentage value of less than 5% difference between the means is an acceptable result and indicates good correlation between the two models; the mean grades of the two models show less than 3% difference for Inferred blocks.

14.3.10 Classification of Mineral Resources

Because of the uncertainty in the drilling methods, sample preparation, assay methodology, and the slight grade bias of the Union Carbide assays as compared to the American Vanadium assays, AMEC limited the classification of resource blocks to the Inferred Resources category.

Additional infill, deeper, and step-out drilling is recommended at Louie Hill to test for possible higher-grade transition zone below the oxide domain, contacts between mineralization and waste, location of structural offsets, and further twin sampling of Union Carbide drill holes. When additional drill data is available, AMEC recommended that a drill hole spacing study be completed that applies confidence limits for calculation of drill spacing required for Measured and Indicated Mineral Resource confidence classifications.

14.3.11 Reasonable Prospects of Economic Extraction

The 2011 resource estimate that was updated in 2018, was constrained within a conceptual pit shell that used the following assumptions: Mineral Resource V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 60% for mineralized material; tonnage factors of 16.86 ft^3/st for mineralized material, 16.35 ft^3/st; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547lb. An overall 40° pit slope angle assumption was used.

Multiple sources were used to arrive at the forecast long term resource price of $9.85 per pound V_2O_5 sold including consensus pricing from recently published technical reports, three-year average pricing published by the European market, and the trading range of the spot price from the Europe market over the past year. The average price of the three sources is supportive of a long-term market price of $8.20/lb V_2O_5. An elevated, $9.85/lb V_2O_5 price (20% higher) was used for inputs to the mineral resources, which is an accepted mining industry practice. The mineral resources are most sensitive to metal price and grade and significant changes to either will significantly affect the reasonable prospects of eventual economic extraction.

Figure 14-2 shows a cross section view of Louie Hill blocks and composites color coded by V_2O_5 grades that lie within the Mineral Resource LG pit.

14.4 Bisoni–McKay

14.4.1 Basis of Estimate

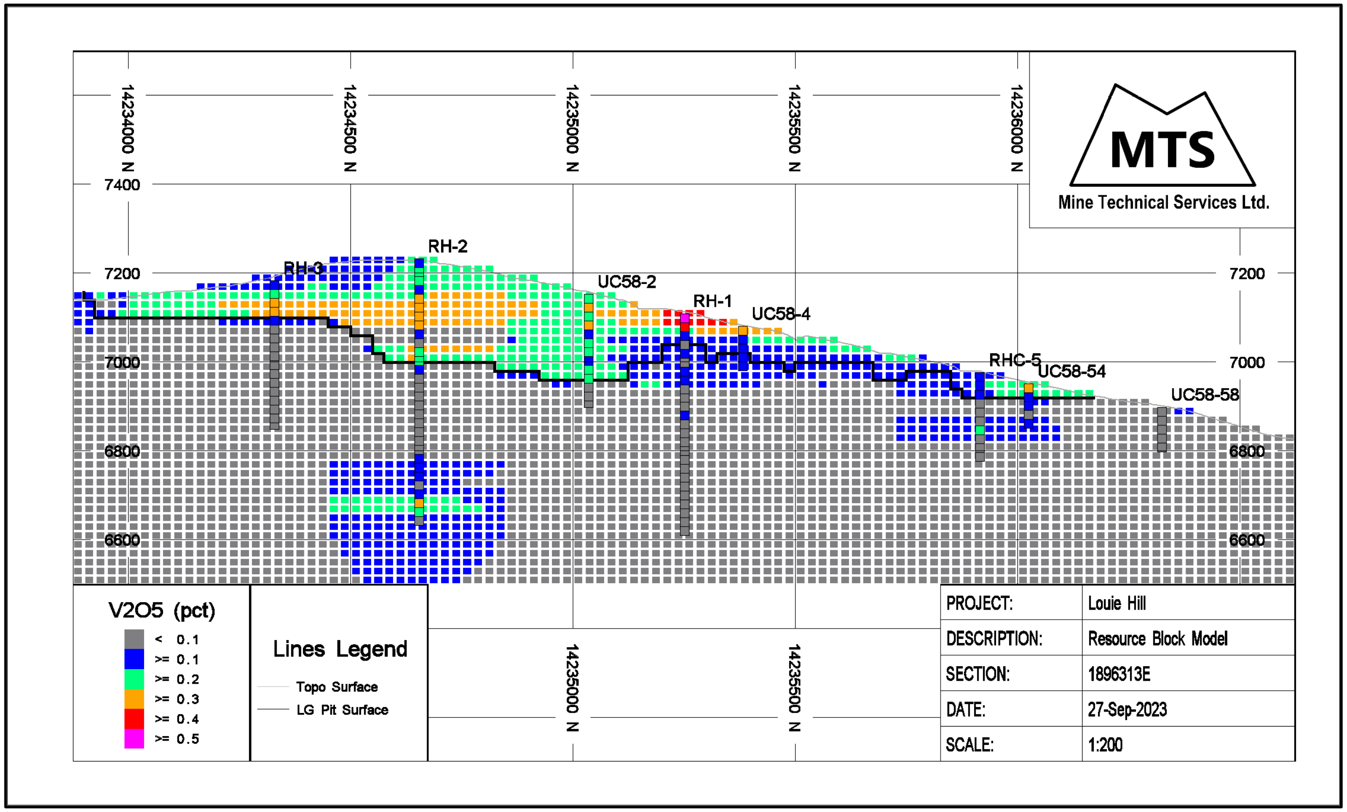
The QP compiled all legacy drill data from the Bisoni–McKay property from original documents in January 2021. The resource database at Bisoni–McKay includes 14,984.5 ft of drilling in 43 drill holes from four drilling campaigns. Twenty-eight drill holes are in the North A area and 15 are located in the South B area (refer to Figure 10-2). A further six drill holes are located outside these two areas and are not included in the resource database. One drill hole in the North A area is missing logs and assays for the first 450 ft of the 500 ft total length. Assays were set to missing for this interval for purposes of resource estimation.

A 3D MinePlan block model was created for geological and resource modeling. The model is un-rotated and the block size is 25 ft x 25 ft x 20 ft. The topographic surface was used to code each block with the percent area of the block under the surface.

14.4.2 Geological Models

Geologic mapping of the surface of the North A and South B areas was conducted by Stina Resources in 2005. The QP digitized the surface geology for use in geological modeling (refer to Figure 7-6). Mapping by Stina Resources indicates that Devonian Woodruff Formation shale outcrops occur as down-dropped fault blocks (grabens) flanked by ridges of Devonian Devils Gate limestone in upthrown blocks (horsts). Surrounding rocks are interpreted to be part of the Mississippian Webb Formation. Stina Resources mapped an anticlinal axis on the western edge of the graben in North A area (yellow line in Figure 7-6). There is approximately a 400 ft thickness of prospective Woodruff Formation shales in the Bisoni–McKay area. The QP did not geologically map the Bisoni–McKay property but did visit the North A and South B areas and observed that the geological setting appears to be very similar to those at Gibellini and Louie Hill.

Figure 14-2: Louie Hill Cross-Section 1896313E



Source: Mine Technical Services, Ltd., 2023.

Note: Looking West. Figure shows V_2O_5 color-coded blocks and composites within Mineral Resource LG pit.

Stina Resources also interpreted geology on cross sections through both areas. The QP used the geological interpretations as a guide in its geological modeling.

For the North A area, the QP generated a series of 18 cross sections oriented perpendicular to the strike of mineralization and parallel to the nominal historical drill orientation at azimuth 290°. The QP created grade polygons around drill holes projected onto cross sections spaced 100 ft apart with assay grades equal to or greater than 0.05% V_2O_5. Oxidation-type polygons were also created on these cross-sections.

In the South B area, the QP generated a series of eight cross sections at azimuth 090°, spaced between 200 and 250 ft apart and oriented perpendicular to the strike of mineralization and parallel to the nominal orientation of the historical drill holes. The QP created grade and oxidation type polygons on these sections.

The QP then linked the grade and oxidation polygons to create 3D surfaces or domain solids to code the block model.

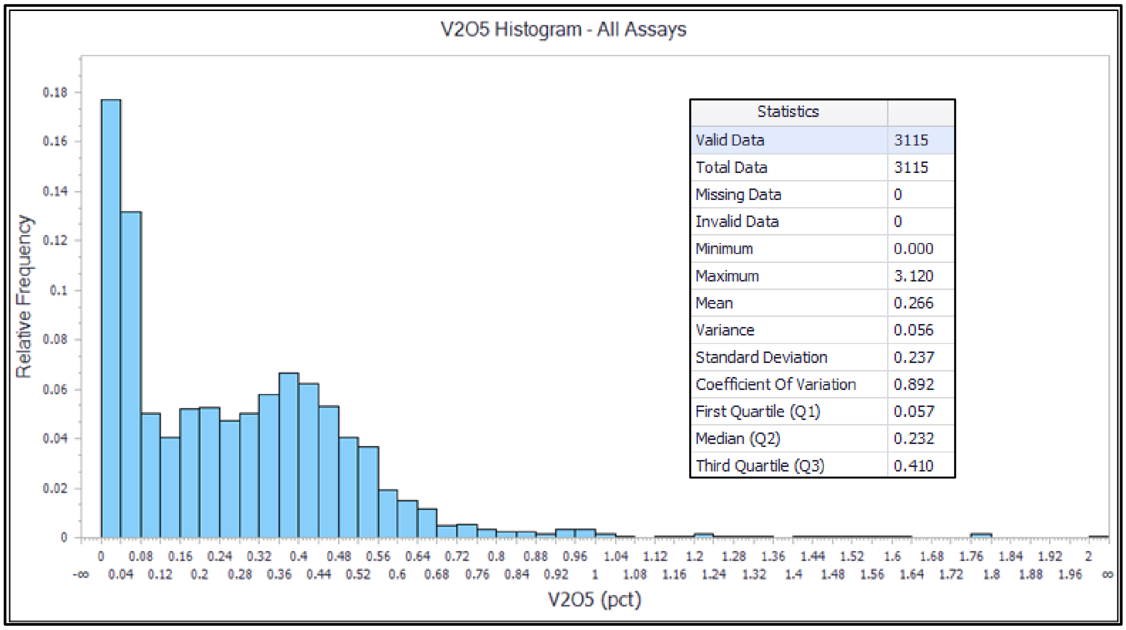
14.4.3 Composites

The QP composited assays to 20 ft fixed lengths. The composite length is based primarily on the anticipated mining bench height of 20 ft. The compositing process reduced the number of data from 3,115 to 841, the maximum grade from 3.120% to 1.275% V_2O_5, and the CV from 0.89 to 0.80. The average grade of the composites (0.265% V_2O_5) remained very similar to the average grade of the assays (0.266% V_2O_5). The QP confirmed the compositing process by manually calculating the composited grade for a few drill hole intervals. Lithology and color codes were also composited based on majority code.

14.4.4 Exploratory Data Analysis

The QP reviewed the V_2O_5 assays using histograms, cumulative frequency plots, box plots, and contact plots comparing several categorical variables. The histogram and basic statistics for all V_2O_5 assays are provided as Figure 14-3. The histogram of V_2O_5 assays shows a low-grade population from 0.0 to 0.12% V_2O_5 and a strong gaussian (normal) population centered on 0.40% V_2O_5. The maximum assay is 3.12% V_2O_5, but 99% of the assays are less than 1.0% V_2O_5. The coefficient of variation (CV) is 0.9 for the entire population, indicating that the data are not strongly skewed. A CV below 1.0 is one measure typically used by resource estimators to indicate that the data population is adequate for use in resource estimation.

Figure 14-3: Histogram and Basic Statistics of Bisoni–McKay V_2O_5 Assays



Source: Mine Technical Services, Ltd., 2021

Boxplots comparing V_2O_5 grade by drill type, oxidation type, and campaign were generated and evaluated. The boxplot by drill type shows that the average V_2O_5 grade of the RC assays is higher than the average V_2O_5 grade of the core assays; however, the core drill holes are clustered in two places and so this apparent bias in V_2O_5 grade is likely related to drill location and not to sample quality.

The boxplot by oxidation type shows that there is a slight increase in average grade in the transitional and reduced material types relative to the oxidized material. There is not a strong enrichment in V_2O_5 grade in the transitional material as was recognized at Gibellini. The mean grade of the transitional and reduced material is very similar. This may be due in part because the QP used the original logging to define oxidation type whereas oxidation type at Gibellini was defined partly based on V_2O_5 grade. There appears to be a much smaller transitional zone at Bisoni–McKay than at Gibellini. The QP created contact plots comparing grades at the contact between oxide and transitional, transitional and reduced, and oxide and reduced. The contact plots clearly show that grade changes at the contacts are gradational and there are no abrupt V_2O_5 grade changes at the contacts.

The boxplot by drill campaign shows that the average grade of the 2004 Vanadium International drill campaign assays is significantly lower than the other campaigns, which have fairly similar statistical characteristics. In the QP's opinion, the low bias of the 2004 campaign assays is most likely due to the drill holes from that campaign being collared away from the main mineralized zones.

The Hecla (1970s) campaign has a slightly lower average grade than the 2005 and 2007 campaigns, and this is likely partially due to some Hecla drill holes being located outside of the two main mineralized zones.

14.4.5 Density Assignment

No density data are available for the Bisoni–McKay area. The QP assigned density to the block model based on the density factors by oxidation type used for the Gibellini resource model. The rocks and geologic setting are very similar and the QP considers it reasonable to use the Gibellini values until Flying Nickel complete a drill program and acquire core samples for determination of density factors for use at Bisoni–McKay. The density values from the 2018 Gibellini technical report (Hanson et. al, 2018) are shown in Table 14-1.

14.4.6 Grade Capping/Outlier Restrictions

The QP reviewed the V_2O_5 assays for extreme values to determine whether capping of the assays was warranted to prevent inappropriate influence of high-grade values in the resource model. The QP reviewed cross-sections, investigated histograms and cumulative frequency plots, and performed decile analysis and concluded that capping is not warranted. Results from decile analysis of Bisoni–McKay assays show that 27% of the metal is contained in the top decile (90-100%) of assays which is below the threshold of 40% used as a rule-of-thumb by practitioners to indicate that capping is warranted. Furthermore, a relatively equal proportion of assays is represented in each of the top 10 percentiles (90-100%), indicating a relatively even distribution in the high-grade part of the assay population.

In the QP's opinion geological and grade continuity between drill holes is good, the CV of the assays is less than one, and outliers do not represent an unusually large proportion of the population, therefore capping is not warranted for the Bisoni–McKay assays.

14.4.7 Variography

The QP created downhole variograms for the North A and South B areas using the declustered composites within the mineralized domain and using lag distances of 20 ft to investigate the expected variance in the downhole direction. There is low variability at short distances downhole, indicating good continuity in the downhole direction. The nugget effect (variability at zero distance) is about 10% of the sill for North A and 20% for South B. The good continuity is confirmed by visual inspection of cross-sections where the V_2O_5 grade downhole is relatively consistent and not highly variable.

The QP generated horizontal directional variograms at 15° intervals from azimuth 000° to 165°. For the North A Area, the variogram at azimuth 030° shows the highest continuity (longest range) of V_2O_5 grade and was selected as the principal direction. This direction closely matches the known strike of mineralization in the North A area.

The QP then generated directional variograms for the North A area with the azimuth fixed at 030° and varying the dip between -90° and 90° at 10° intervals. The variogram at azimuth 030° and dip -40° shows the highest continuity. This dip (to the east) also makes sense geologically as the dip of mineralization in cross-section is roughly 45° near the fold axis of North A area, but then the becomes less steep (flattens out) on the east boundary of mineralization. Surface mapping by previous operators mostly note dips from 60–70°, but continuity of mineralization in cross-sections suggests that dips are not that steep at depth.

The QP investigated the variogram in the minor direction, but the variograms do not behave well as there is a lack of pairs perpendicular to mineralization as many cross sections only have one or two drill holes on them.

The anisotropy ellipsoid defined by the variogram analysis was used to define the 3D search ellipsoid and composite weighting used in the OK grade estimation of V_2O_5%.

Insufficient data exist to generate reasonable variograms for the South B area. This is likely because there are only 15 drill holes in the area. For estimation in the South B area, the QP used a north–south-(azimuth 000°) oriented search ellipse with the same search distances as used for North A area.

14.4.8 Estimation/Interpolation Methods

Estimation of V_2O_5% in the North A area was completed by OK and inverse distance (ID) methods using soft boundaries between oxidation types and hard boundaries between the mineralized and unmineralized domains. The parameters used for OK estimation are shown in Table 14-2. Estimation within the mineralized domain was completed in two passes using OK. The first pass estimated blocks using search ellipse distances determined from variography and the second pass estimated blocks using an extended minor axis (Y) distance and a minimum of one composite. A third pass estimated blocks in the unmineralized domain using ID (Table 14-3).

The QP estimated resources for the South B area using the ID method. The parameters used for ID are shown in Table 14-3.

Table 14-2: OK Estimation Parameters

Ordinary Kriging Parameter	Unit	North A Area Estimation Pass 1	North A Area Estimation Pass 2
Data	-	20 ft composites	20 ft composites
Search ellipse distances (X, Y, Z)	ft	350, 150, 100	350, 350, 100
Search ellipse rotation (X, Z, Y)	degree	015, -30, 0	015, -30, 0
Minimum number of composites	#	2	1
Maximum number of composites	#	12	12
Maximum number of composites per hole	#	2	2
Block restrictions	-	mineralized domain	mineralized domain

Table 14-3: ID Estimation Parameters

Inverse Distance Parameter	Unit	North A Area Estimation Pass 3	South B Area Estimation Pass 1	South B Area Estimation Pass 2
Data	-	20 ft composites	20 ft composites	20 ft composites
Search ellipse distances (X, Y, Z)	ft	500, 500, 500	350, 150, 100	500, 500, 500
Search ellipse rotation (X, Z, Y)	degree	000, 0, 0	000, 0, 0	000, 0, 0
Inverse distance power		2	2	2
Minimum number of composites	#	1	2	1
Maximum number of composites	#	12	12	12
Maximum number of composites per hole	#	2	2	2
Block restrictions	-	unmineralized domain	mineralized domain	unmineralized domain

14.4.9 Block Model Validation

The QP performed several checks for local and global bias in the OK and ID models, including visual inspection, swath plots, volume and tonnage checks, and comparing mean grades. A NN model was created to facilitate comparisons.

Visual inspection on cross sections and level plans confirmed that block grades closely correspond to composite grades and the trend of mineralization matches the strike and dip based on surface mapping and drill hole logging. Mineralized blocks are generally restricted to the mineralized domain.

The OK and ID grades generally follow the NN grades very closely for easting, northing, and elevation swath plots at both areas. Some deviations between the average model grades are seen in the southernmost part of the North A area where the drilling is very sparse and more drilling in this area will be required to improve the model in this area. Some differences are also seen at the edges of the model and these differences are attributed to edge effects.

As a check on volume and tonnage, the QP checked the estimated volume and tons from the block model against the volume and tonnage reported from the +0.05% V_2O_5 grade shell. These checks confirmed that the volume and tons in the mineralized domain for the North A and South B areas are reasonable.

The QP also checked for global bias by comparing the global means of the declustered composites, and the OK, ID, and NN block grades at a zero cut-off grade within the grade shells. Global means for all estimation methods are within 10% relative difference of the global mean for the declustered composites. Therefore, there is no global bias in the estimates.

14.4.10 Classification of Mineral Resources

All Mineral Resources at Bisoni–McKay are classified in the Inferred category. Based only on data spacing, some proportion of Mineral Resources could be classified as Indicated, but the data quality issues with the legacy drill data discussed in this Report preclude the QP from classifying the Mineral Resources above the Inferred category. A recommendation to prepare a work plan to increase the confidence of the Mineral Resources at Bisoni–McKay is included in Section 26.

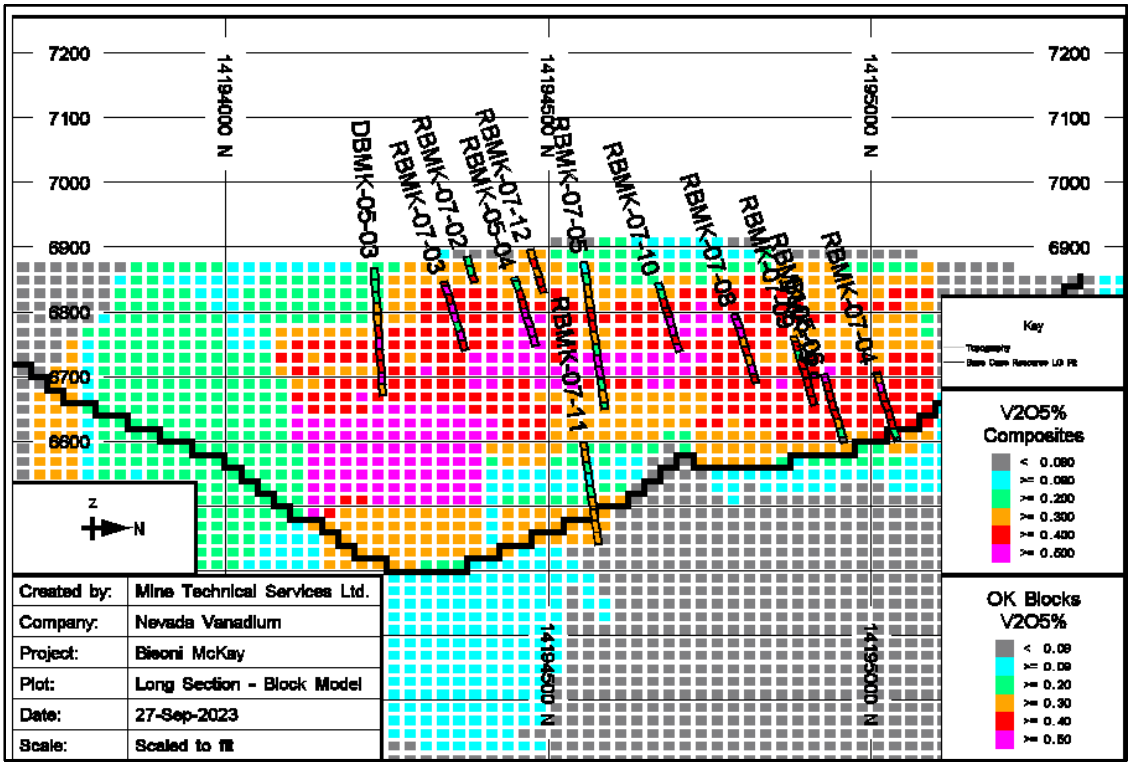
14.4.11 Reasonable Prospects of Economic Extraction

Mineralization was confined within an LG pit outline that used the following key assumptions: Mineral Resource V_2O_5 price: $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumption: 65% for oxide material, 56% for transition material and 50% for reduced material; tonnage factor: 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% NSR; shipping and conversion costs: $0.547/lb V_2O_5; and an overall 40º slope angle on the constraining pit shell.

Multiple sources were used to arrive at the forecast long term resource price of $9.85 per pound V_2O_5 sold including consensus pricing from recently published technical reports, three-year average pricing published by the European market, and the trading range of the spot price from the Europe market over the past year. The average price of the three sources is supportive of a long-term market price of $8.20/lb V_2O_5. An elevated, $9.85/lb V_2O_5 price (20% higher) was used for inputs to the mineral resources, which is an accepted mining industry practice. The mineral resources are most sensitive to metal price and grade and significant changes to either will significantly affect the reasonable prospects of eventual economic extraction.

Figure 14-4 shows a cross-section view of Bisoni–McKay blocks and composites color coded by V_2O_5 grades that lie within the mineral resource LG pit.

Figure 14-4: Bisoni–McKay North Area A Long-Section 1882363E



Source: Mine Technical Services, Ltd., 2021; Note: Figure looks west.

14.5 Mineral Resource Statement

Mr. Todd Wakefield, an SME Registered Member, is the Qualified Person (QP) for the Mineral Resource estimates. The estimates have an effective date of 27 September 2023.

Mineral Resources are reported using the 2014 CIM Definition Standards.

Mineral Resources for Gibellini are included as Table 14-4, the Mineral Resources for Louie Hill are included as Table 14-5, and the Mineral Resources for Bisoni–McKay are included in Table 14-6.

Mineral Resources are stated using cut-off grades appropriate to the oxidation state of the mineralization.

Table 14-4: Mineral Resource Statement, Gibellini

Confidence Category	Domain	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
Measured	Oxide	0.129	3,880	0.253	19,660
	Transition	0.111	3,940	0.379	29,860
Indicated	Oxide	0.129	6,560	0.242	31,780
	Transition	0.111	6,920	0.331	45,820
Total Measured and Indicated			**21,300**	**0.298**	**127,120**
Inferred	Oxide	0.129	120	0.181	440
	Transition	0.111	<10	0.206	20
	Reduced	0.149	3,890	0.207	16,120
Total Inferred			**4,010**	**0.206**	**16,580**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023.

(2) Mineral Resources are reported at various cut-off grades for oxide, transition, and reduced material.

(3) Mineral Resources are reported within a conceptual pit shell that uses the following assumptions: Mineral Resource V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 60% for oxide material, 70% for transition material and 52% for reduced material; tonnage factors of 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(4) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

Table 14-5: Mineral Resource Statement, Louie Hill

Confidence Category	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
Inferred	0.129	6,790	0.290	39,420
Total Inferred		**6,790**	**0.290**	**39,420**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023

(2) Oxidation state was not modeled.

(3) Mineral Resources are reported within a conceptual pit shell that uses the following assumptions: Mineral Resource V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st processed; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 65% for mineralized material; tonnage factor of 16.86 ft^3/st for mineralized material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(4) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

Table 14-6: Mineral Resource Statement, Bisoni–McKay

Area	Confidence Category	Domain	Cut-off V_2O_5 (%)	Tons (kton)	Grade V_2O_5 (%)	Contained V_2O_5 (klb)
North Area A	Inferred	Oxide	0.119	6,810	0.291	39,660
		Transition	0.138	1,580	0.325	10,220
		Reduced	0.155	10,270	0.371	76,200
Total North Area A	Inferred	All	Variable	18,660	0.338	126,080
South Area B	Inferred	Oxide	0.119	1,320	0.292	7,740
		Transition	0.138	300	0.414	2,520
		Reduced	0.155	440	0.318	2,820
Total South Area B	Inferred	All	Variable	2,060	0.316	13,080
Total	**Inferred**	**All**	**Variable**	**20,720**	**0.336**	**139,160**

Note: (1) The Qualified Person for the estimate is Mr. Todd Wakefield, RM SME, of Mine Technical Services Ltd. The Mineral Resources have an effective date of 27 September 2023.

(2) Mineral Resources are reported at various cut-off grades for oxide, transition, and reduced material.

(3) Mineral Resources are reported within a conceptual pit shell that uses the following assumptions: Mineral Resource V_2O_5 price of $9.85/lb; mining cost: $3.54/st mined; process cost: $12.81/st; general and administrative (G&A) cost: $1.21/st processed; metallurgical recovery assumptions of 65% for oxide material, 56% for transition material and 50% for reduced material; tonnage factors of 16.86 ft^3/st for oxide material, 16.35 ft^3/st for transition material and 14.18 ft^3/st for reduced material; royalty: 2.5% net smelter return (NSR); shipping and conversion costs: $0.547/lb V_2O_5. An overall 40° pit slope angle assumption for the constraining pit shell was used.

(4) Rounding as required by reporting guidelines may result in apparent summation differences between tons, grade and contained metal content. Tonnage and grade measurements are in US units. V_2O_5 grades are reported in percentages.

14.6 Factors That May Affect the Mineral Resource Estimates

Factors which may affect the conceptual pit shells used to constrain the mineral resources, and therefore the mineral resource estimates include changes to the following assumptions and parameters:

- Commodity price assumptions
- Metallurgical recovery assumptions
- Pit slope angles used to constrain the estimates
- Lithology and faulting models for Louie Hill and Bisoni–McKay deposits
- Assignment of oxidation state values
- Assignment of SG values
- Input values to the LG shells used to constrain the Mineral Resource estimates.

14.7 Comments on Section 14

Mineral Resources take into account geological, mining, processing and economic constraints, and have been confined within appropriate LG pit shells, and therefore are classified in accordance with the 2014 CIM Definition Standards.

The Gibellini resource model has a known error that has effectively reduced the overall grade for Measured and Indicated Mineral Resources by approximately 1%. An adjustment to Atlas's transition assays between zero percent and 0.410% V_2O_5 was implemented twice. The model was re-run with the correction applied, and the results indicated an approximate error of 1% which is considered not material.

15.0 MINERAL RESERVE ESTIMATES

Not relevant for this technical report.

16.0 MINING METHODS

Not relevant for this technical report.

17.0 RECOVERY METHODS

Not relevant for this technical report.

18.0 PROJECT INFRASTRUCTURE

Not relevant for this technical report.

19.0 MARKET STUDIES AND CONTRACTS

Not relevant for this technical report.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Not relevant for this technical report.

21.0 CAPITAL AND OPERATING COSTS

Not relevant for this technical report.

22.0 ECONOMIC ANALYSIS

Not relevant for this technical report.

23.0 ADJACENT PROPERTIES

There are no material adjacent properties.

24.0 OTHER RELEVANT DATA AND INFORMATION

There is no additional information or explanation necessary to make the technical report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions, based on the review of data available for this Report.

25.2 Mineral Tenure, Surface Rights, Water Rights, and Royalties and Agreements

- Information from legal experts supports that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources.
- Claims are held in the names of Jacqualeene Campbell and Nevada Vanadium LLC.
- Royalties are payable on the Campbell Lease and on the 2018 MSM Replacement Claims
- Royalties are payable on the McKay Lease at Louie Hill.
- There has been no legal survey of the Property claims. Under Nevada law, each unpatented claim is marked on the ground, and does not require survey.
- No surface rights are currently held. Mineral deposits are located on land administered by the BLM.
- To the extent known to the QP, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the property that have not been discussed in this Report.

25.3 Geology and Mineralization

- Knowledge of the deposit settings, lithologies, mineralization style and setting, and structural and alteration controls on mineralization is sufficient to support Mineral Resource estimation.

25.4 Exploration, Drilling and Analytical Data Collection in Support of Mineral Resource Estimation

- In the opinion of the QP, the quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs completed by RMP and American Vanadium, and the verification performed by numerous parties, including the QP, on legacy drill data are sufficient to support Mineral Resource estimation.

- The quality of the analytical data is sufficiently reliable to support Mineral Resource estimation.
- The QP, who participated in, and relies upon the data verification performed, is of the opinion that the data verification programs undertaken on the data collected from the Property adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

25.5 Metallurgical Testwork

- Metallurgical testwork on the Gibellini deposit and associated analytical procedures were performed by recognized metallurgical testing facilities, and the tests performed were appropriate to the mineralization type.
- Due to the limited testwork at Louie Hill and Bisoni–McKay, the recoveries and acid consumption from the more comprehensive Gibellini test program are adopted for Louie Hill and Bisoni–McKay.
- Samples selected for testing were representative of the various types and styles of mineralization at the Gibellini deposit. Samples were selected from a range of depths within the deposit. Sufficient samples were taken to ensure that tests were performed on sufficient sample mass.
- Additional metallurgical testwork, including variability testing, will be required to support more detailed deposit evaluations for Louie Hill and Bisoni–McKay.
- Commercial heap leaching and SX recovery of vanadium ores has not been done before; nonetheless, heap leaching and SX recovery are common technologies in the mining industry. The Gibellini process assumed in 2011 applied the same acid heap leaching and SX technology to recover vanadium. However, instead of electro-winning to produce a final product, the Gibellini process is assumed to use an acid strip followed by precipitation to produce a final product.

25.6 Mineral Resource Estimates

- The mineral resource estimates for Gibellini, Louie Hill, and Bisoni–McKay, which have been estimated using RC and core drill data, have been performed using CIM industry best practice guidelines, and conform to the requirements of the 2014 CIM Definition Standards.

- Factors which may affect the mineral resource estimates include commodity price assumptions, metallurgical recovery assumptions, pit slope angles used to constrain the estimates, assignment of oxidation state values and assignment of SG values.

Under the assumptions in this Report, the Project has RPEEE and represents an opportunity for future development when market conditions are favorable.

26.0 RECOMMENDATIONS

26.1 Introduction

A two-phase work program is recommended. The first phase should include additional testwork and studies, including the development of a work plan necessary to allow preparation of a prefeasibility study, totaling approximately $225,000. The proposed second work phase is dependent on the results of the first phase. If conducted, the suggested program would include confirmation and infill drilling programs, metallurgical testwork, and a prefeasibility study. The proposed budget for the second phase is approximately $4,525,000 to $6,130,000.

26.2 Phase 1

26.2.1 Claim Surveys

Although all of the leased claims have claim markers, they have not been surveyed. Prior to any future mining studies, the claim outlines should be legally surveyed. The survey should be performed by a licensed surveyor.

The total cost to carry out this work is estimated to be $10,000.

26.2.2 Gibellini and Louie Hill Geology and Mineral Resource Estimation Planning Work

The recommendations pertain to geological data gathering and preparation of a work plan to increase the confidence of the Gibellini and Louie Hill mineral resource estimates, as follows:

- Develop oxidation domains for Louie Hill.
- Prepare recommendations for a drill program, including metallurgical and geotechnical testwork that would support increasing the confidence of the Inferred mineral resources to at least Indicated category to allow for their inclusion in a pre-feasibility level of study.

The total cost to carry out this is estimated to be $15,000.

26.2.3 Bisoni–McKay Geology, Data Verification, and Mineral Resource Planning Work

The recommendations pertain to geology, data verification, and preparation of a work plan to upgrade Inferred mineral resources on the Bisoni–McKay property area, to the Indicated category. The recommended work includes the following:

- Map the surface geology of the Bisoni–McKay property area in sufficient detail to support infill and exploration drill programs

- Map and resample legacy trenches
- Organize and categorize core, coarse reject, and pulp reject from legacy drilling campaigns
- Relog available legacy core and cuttings using the Gibellini logging system
- Submit coarse rejects (one for every 50 ft drilled) from portions of drill holes in the Stina Resources 2007 campaign that were not included in the 2021 check assay program
- Prepare recommendations for a drill program, including metallurgical and geotechnical testwork that would support increasing the confidence of the Inferred mineral resources to at least Indicated category to allow for their inclusion in a pre-feasibility level of study.

The total cost to carry out this work is estimated to be $190,000 for geologist and field assistant time, travel and accommodation, and sample assays.

26.2.4 Metallurgical Testwork Planning

The Wood QP recommends Flying Nickel prepare plans for a metallurgical test program on Louie Hill and Bisoni–McKay deposits that would support the higher confidence mineral resource categories and bring the level of understanding of their material to the same level as for the Gibellini deposit, to support a pre-feasibility level of process design.

The total cost to carry out this work is estimated to be $10,000.

26.3 Phase 2

The proposed second work phase is dependent on the results of the first phase. If conducted, the suggested program would include the following work.

26.3.1 Gibellini and Louie Hill Drill Program

The recommendations pertain to drilling programs supporting Mineral Resource estimation as follows:

- Twin drill an additional four to five Atlas drill holes through the transition zone at the Gibellini deposit and evaluate the results in conjunction with the previous completed twins.
- Test and evaluate the potential for high-angled structures at the Gibellini deposit to carry elevated vanadium grades by drilling a series of angled drill holes.
- Conduct an infill drill program at Louie Hill.

The total cost to carry out this is estimated to be $1,225,000 to $1,780,000, depending on the amount of condemnation and angled drilling that may be required. This is based on an all-in drilling cost of $71/ft for 16,000 ft from 64 drill holes for the infill drill program at Louie Hill. The remaining drilling is expected to be 12-15 drill holes totaling 5,000 ft.

26.3.2 Bisoni-McKay Drill Program

The recommendations pertain to drilling programs supporting Mineral Resource estimation as follows:

- Conduct confirmation and infill drill programs at Bisoni–McKay, including metallurgical and geotechnical testwork.

The total cost to carry out this work is estimated to be $1,450,000 to $2,150,000, depending on the amount of drilling required to adequately delineate the North A and South B deposit areas. Costs are based on an all-in drilling cost of $71/ft for 61 drill holes for 23,400 ft. Average assay costs are estimated at $50/sample for 2,000 samples. Density determinations are estimated at $20/sample for 120 samples.

26.3.3 Metallurgical Testwork and Process

The following recommendations are made for Louie Hill and Bisoni-McKay:

- Reduced material testing on Louie Hill mineralization should be reviewed, and additional work done to see if better recovery for the reduced material is possible.

- A sampling and testing program for the Louie Hill and Bisoni–McKay deposits is advisable to bring the level of understanding of this material to the same level as for Gibellini.

- Complete geochemical characterizations of the Louie Hill and Bisoni–McKay deposit materials.

The total cost to carry out this work is projected to be approximately $1,000,000 to $1,200,000, depending on the amount of metallurgical testwork required for Louie Hill and Bisoni–McKay. This includes approximately $50,000 to $60,000 of metallurgical consulting work to interpret the test results. The estimated costs are based on the assumption that the drilling recommended in Section 26.3.1 and Section 26.3.2 will provide adequate sample material for the metallurgical testing.

26.3.4 Prefeasibility Study

When the drilling programs and metallurgical testwork are completed and all data are available and applicable data verification has been completed, a prefeasibility study should be undertaken. The proposed budget for the prefeasibility study is $850,000 to $1,000,000.

27.0 REFERENCES

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APPENDIX I – LIST OF CLAIMS

Table 4A: Campbell Claims

Claim Name	Serial Number	Claimant	Count
BLACK IRON 1-N	NV101672749	CAMPBELL JACQUALEENE	1
BLACK IRON 3-N	NV101673675	CAMPBELL JACQUALEENE	2
BLACK IRON 4-N	NV101673676	CAMPBELL JACQUALEENE	3
BLACK IRON 5-N	NV101673677	CAMPBELL JACQUALEENE	4
BLACK IRON 6-N	NV101673678	CAMPBELL JACQUALEENE	5
FLAT 1-N	NV101673679	CAMPBELL JACQUALEENE	6
FLAT 2-N	NV101673680	CAMPBELL JACQUALEENE	7
FLAT 10-N	NV101673681	CAMPBELL JACQUALEENE	8
FLAT 11-N	NV101673682	CAMPBELL JACQUALEENE	9
FLAT 12-N	NV101673683	CAMPBELL JACQUALEENE	10
FLAT 13-N	NV101673684	CAMPBELL JACQUALEENE	11
MANGANESE 3-N	NV101673685	CAMPBELL JACQUALEENE	12
RATTLER 1-N	NV101673686	CAMPBELL JACQUALEENE	13
RATTLER 2-N	NV101673687	CAMPBELL JACQUALEENE	14
RATTLER 3-N	NV101673688	CAMPBELL JACQUALEENE	15
RATTLER 4-N	NV101673689	CAMPBELL JACQUALEENE	16
RIFT 1-N	NV101673690	CAMPBELL JACQUALEENE	17
RIFT 2-N	NV101673691	CAMPBELL JACQUALEENE	18
RIFT 3-N	NV101673692	CAMPBELL JACQUALEENE	19
RIFT 4-N	NV101673693	CAMPBELL JACQUALEENE	20
CLYDE 1-N	NV101673694	CAMPBELL JACQUALEENE	21
CLYDE 2-N	NV101673695	CAMPBELL JACQUALEENE	22
CLYDE 3-N	NV101674675	CAMPBELL JACQUALEENE	23
CLYDE 4-N	NV101674676	CAMPBELL JACQUALEENE	24
CLYDE 5-N	NV101674677	CAMPBELL JACQUALEENE	25
CLYDE 6-N	NV101674678	CAMPBELL JACQUALEENE	26
CLYDE 7-N	NV101674679	CAMPBELL JACQUALEENE	27
CLYDE 8-N	NV101674680	CAMPBELL JACQUALEENE	28
BLACK HILL 1-N	NV101674681	CAMPBELL JACQUALEENE	29
BLACK HILL 2-N	NV101674682	CAMPBELL JACQUALEENE	30
BLACK HILL 3-N	NV101674683	CAMPBELL JACQUALEENE	31
BLACK HILL 4-N	NV101674684	CAMPBELL JACQUALEENE	32
BLACK HILL 7-N	NV101674685	CAMPBELL JACQUALEENE	33
BLACK HILL 8-N	NV101674686	CAMPBELL JACQUALEENE	34
BLACK HILL 9-N	NV101674687	CAMPBELL JACQUALEENE	35
BLACK HILL 10-N	NV101674688	CAMPBELL JACQUALEENE	36
BLACK HILL 11-N	NV101674689	CAMPBELL JACQUALEENE	37
BLACK HILL 12-N	NV101674690	CAMPBELL JACQUALEENE	38
BLACK HILL 13-N	NV101757059	CAMPBELL JACQUALEENE	39
BLACK HILL 14-N	NV101757060	CAMPBELL JACQUALEENE	40

Table 4B: Nevada Vanadium LLC Claims (formerly VC Exploration Claims)

Claim Name	Serial Number	Claimant	Count
VDT 1	NV101733928	NEVADA VANADIUM LLC	1
VDT 2	NV101733929	NEVADA VANADIUM LLC	2
VDT 3	NV101733930	NEVADA VANADIUM LLC	3
VDT 4	NV101733931	NEVADA VANADIUM LLC	4
VDT 5	NV101733932	NEVADA VANADIUM LLC	5
VDT 6	NV101733933	NEVADA VANADIUM LLC	6
VDT 7	NV101733934	NEVADA VANADIUM LLC	7
VDT 8	NV101733935	NEVADA VANADIUM LLC	8
VDT 9	NV101733936	NEVADA VANADIUM LLC	9
VDT 10	NV101733937	NEVADA VANADIUM LLC	10
VDT 11	NV101734938	NEVADA VANADIUM LLC	11
VDT 12	NV101734939	NEVADA VANADIUM LLC	12
VDT 13	NV101734940	NEVADA VANADIUM LLC	13
VDT 14	NV101734941	NEVADA VANADIUM LLC	14
VDT 15	NV101734942	NEVADA VANADIUM LLC	15
VDT 16	NV101734943	NEVADA VANADIUM LLC	16
VDT 17	NV101734944	NEVADA VANADIUM LLC	17
VDT 18	NV101734945	NEVADA VANADIUM LLC	18
VDT 19	NV101561549	NEVADA VANADIUM LLC	19
VDT 20	NV101561550	NEVADA VANADIUM LLC	20
VDT 21	NV101734946	NEVADA VANADIUM LLC	21
VDT 22	NV101734947	NEVADA VANADIUM LLC	22
VDT 23	NV101734948	NEVADA VANADIUM LLC	23
VDT 24	NV101734949	NEVADA VANADIUM LLC	24
VDT 25	NV101734950	NEVADA VANADIUM LLC	25
VDT 26	NV101734951	NEVADA VANADIUM LLC	26
VDT 27	NV101734952	NEVADA VANADIUM LLC	27
VDT 28	NV101734953	NEVADA VANADIUM LLC	28
VDT 29	NV101561551	NEVADA VANADIUM LLC	29
VDT 30	NV101734954	NEVADA VANADIUM LLC	30
VDT 31	NV101734955	NEVADA VANADIUM LLC	31
VDT 32	NV101734956	NEVADA VANADIUM LLC	32
VDT 33	NV101734957	NEVADA VANADIUM LLC	33
VDT 34	NV101734958	NEVADA VANADIUM LLC	34
VDT 35	NV101737180	NEVADA VANADIUM LLC	35

Claim Name	Serial Number	Claimant	Count
VDT 36	NV101737181	NEVADA VANADIUM LLC	36
VDT 37	NV101561552	NEVADA VANADIUM LLC	37
VDT 38	NV101737182	NEVADA VANADIUM LLC	38
VDT 39	NV101737183	NEVADA VANADIUM LLC	39
VDT 40	NV101737184	NEVADA VANADIUM LLC	40
VDT 41	NV101737185	NEVADA VANADIUM LLC	41
VDT 42	NV101561553	NEVADA VANADIUM LLC	42
VDT 43	NV101561554	NEVADA VANADIUM LLC	43
VDT 44	NV101737186	NEVADA VANADIUM LLC	44
VDT 45	NV101561555	NEVADA VANADIUM LLC	45
VDT 46	NV101737187	NEVADA VANADIUM LLC	46
VDT 47	NV101737188	NEVADA VANADIUM LLC	47
VDT 48	NV101737189	NEVADA VANADIUM LLC	48
VDT 49	NV101737190	NEVADA VANADIUM LLC	49
VDT 50	NV101737191	NEVADA VANADIUM LLC	50
VDT 51	NV101737192	NEVADA VANADIUM LLC	51
VDT 52	NV101737193	NEVADA VANADIUM LLC	52
VDT 53	NV101737194	NEVADA VANADIUM LLC	53
VDT 54	NV101737195	NEVADA VANADIUM LLC	54
VDT 55	NV101737196	NEVADA VANADIUM LLC	55
VDT 56	NV101737197	NEVADA VANADIUM LLC	56
VDT 57	NV101737198	NEVADA VANADIUM LLC	57
VDT 58	NV101737199	NEVADA VANADIUM LLC	58
VDT 59	NV101737200	NEVADA VANADIUM LLC	59
VDT 60	NV101738184	NEVADA VANADIUM LLC	60
VDT 61	NV101738185	NEVADA VANADIUM LLC	61
VDT 62	NV101738186	NEVADA VANADIUM LLC	62
VDT 63	NV101738187	NEVADA VANADIUM LLC	63
VDT 64	NV101738188	NEVADA VANADIUM LLC	64
VDT 65	NV101738189	NEVADA VANADIUM LLC	65
VDT 66	NV101738190	NEVADA VANADIUM LLC	66
VDT 67	NV101738191	NEVADA VANADIUM LLC	67
VDT 68	NV101738192	NEVADA VANADIUM LLC	68
VDT 69	NV101561556	NEVADA VANADIUM LLC	69
VDT 70	NV101561557	NEVADA VANADIUM LLC	70

Claim Name	Serial Number	Claimant	Count
VDT 71	NV101738193	NEVADA VANADIUM LLC	71
VDT 72	NV101561558	NEVADA VANADIUM LLC	72
VDT 73	NV101562317	NEVADA VANADIUM LLC	73
VDT 74	NV101562318	NEVADA VANADIUM LLC	74
VDT 75	NV101738194	NEVADA VANADIUM LLC	75
VDT 76	NV101738195	NEVADA VANADIUM LLC	76
VDT 77	NV101738196	NEVADA VANADIUM LLC	77
VDT 78	NV101738197	NEVADA VANADIUM LLC	78
VDT 79	NV101738198	NEVADA VANADIUM LLC	79
VDT 80	NV101738199	NEVADA VANADIUM LLC	80
VDT 81	NV101738200	NEVADA VANADIUM LLC	81
VDT 82	NV101738243	NEVADA VANADIUM LLC	82
VDT 83	NV101738244	NEVADA VANADIUM LLC	83
VDT 84	NV101738245	NEVADA VANADIUM LLC	84
VDT 85	NV101738246	NEVADA VANADIUM LLC	85
VDT 86	NV101739284	NEVADA VANADIUM LLC	86
VDT 87	NV101739285	NEVADA VANADIUM LLC	87
VDT 88	NV101739286	NEVADA VANADIUM LLC	88
VDT 89	NV101739287	NEVADA VANADIUM LLC	89
VDT 90	NV101739288	NEVADA VANADIUM LLC	90
VDT 91	NV101739289	NEVADA VANADIUM LLC	91
VDT 92	NV101739290	NEVADA VANADIUM LLC	92
VDT 93	NV101739291	NEVADA VANADIUM LLC	93
VDT 94	NV101739292	NEVADA VANADIUM LLC	94
VDT 95	NV101562319	NEVADA VANADIUM LLC	95
VDT 96	NV101562320	NEVADA VANADIUM LLC	96
VDT 97	NV101562321	NEVADA VANADIUM LLC	97
VDT 98	NV101562322	NEVADA VANADIUM LLC	98
VDT 99	NV101562323	NEVADA VANADIUM LLC	99
VDT 100	NV101739293	NEVADA VANADIUM LLC	100
VDT 101	NV101739294	NEVADA VANADIUM LLC	101
VDT 102	NV101739295	NEVADA VANADIUM LLC	102
VDT 103	NV101739296	NEVADA VANADIUM LLC	103
VDT 104	NV101739297	NEVADA VANADIUM LLC	104
VDT 105	NV101739298	NEVADA VANADIUM LLC	105

Table 4C: Nevada Vanadium LLC Claims

Claim Name	Serial Number	Claimant	Count
BMK 1	NV101853868	NEVADA VANADIUM LLC	1
BMK 2	NV101853869	NEVADA VANADIUM LLC	2
BMK 3	NV101853870	NEVADA VANADIUM LLC	3
BMK 4	NV101853871	NEVADA VANADIUM LLC	4
BMK 5	NV101853872	NEVADA VANADIUM LLC	5
BMK 6	NV101853873	NEVADA VANADIUM LLC	6
BMK 7	NV101853874	NEVADA VANADIUM LLC	7
BMK 8	NV101853875	NEVADA VANADIUM LLC	8
BMK 9	NV101853876	NEVADA VANADIUM LLC	9
BMK 10	NV101853877	NEVADA VANADIUM LLC	10
BMK 11	NV101854983	NEVADA VANADIUM LLC	11
BMK 12	NV101854984	NEVADA VANADIUM LLC	12
BMK 13	NV101854985	NEVADA VANADIUM LLC	13
BMK 14	NV101854986	NEVADA VANADIUM LLC	14
BMK 15	NV101854987	NEVADA VANADIUM LLC	15
BMK 16	NV101854988	NEVADA VANADIUM LLC	16
BMK 17	NV101854989	NEVADA VANADIUM LLC	17
BMK 18	NV101854990	NEVADA VANADIUM LLC	18
BMK 19	NV101854991	NEVADA VANADIUM LLC	19
BMK 20	NV101854992	NEVADA VANADIUM LLC	20
BMK 21	NV101854993	NEVADA VANADIUM LLC	21
BMK 22	NV101854994	NEVADA VANADIUM LLC	22
BMK 23	NV101854995	NEVADA VANADIUM LLC	23
BMK 24	NV101854996	NEVADA VANADIUM LLC	24
BMK 25	NV101854997	NEVADA VANADIUM LLC	25
BMK 26	NV101854998	NEVADA VANADIUM LLC	26
BMK 27	NV101854999	NEVADA VANADIUM LLC	27
BMK 28	NV101855000	NEVADA VANADIUM LLC	28
BMK 29	NV101855010	NEVADA VANADIUM LLC	29
BMK 30	NV101855011	NEVADA VANADIUM LLC	30
BMK 31	NV101855012	NEVADA VANADIUM LLC	31
BMK 32	NV101856096	NEVADA VANADIUM LLC	32
BMK 33	NV101856097	NEVADA VANADIUM LLC	33
BMK 34	NV101856098	NEVADA VANADIUM LLC	34
BMK 35	NV101856099	NEVADA VANADIUM LLC	35

Claim Name	Serial Number	Claimant	Count
BMK 36	NV101856100	NEVADA VANADIUM LLC	36
BMK 37	NV101856101	NEVADA VANADIUM LLC	37
BMK 38	NV101856102	NEVADA VANADIUM LLC	38
BMK 39	NV101856103	NEVADA VANADIUM LLC	39
BMK 40	NV101856104	NEVADA VANADIUM LLC	40
BMK 41	NV101856105	NEVADA VANADIUM LLC	41
BMK 42	NV101856106	NEVADA VANADIUM LLC	42
BMK 43	NV101856107	NEVADA VANADIUM LLC	43
BMK 44	NV101856108	NEVADA VANADIUM LLC	44
BMK 45	NV101856109	NEVADA VANADIUM LLC	45
BMK 46	NV101856110	NEVADA VANADIUM LLC	46
BMK 47	NV101856111	NEVADA VANADIUM LLC	47
BMK 48	NV101856112	NEVADA VANADIUM LLC	48
BMK 49	NV101856113	NEVADA VANADIUM LLC	49
BMK 50	NV101856114	NEVADA VANADIUM LLC	50
BMK 51	NV101856115	NEVADA VANADIUM LLC	51
BMK 52	NV101856116	NEVADA VANADIUM LLC	52
BMK 53	NV101857188	NEVADA VANADIUM LLC	53
BMK 54	NV101857189	NEVADA VANADIUM LLC	54
BMK 55	NV101857190	NEVADA VANADIUM LLC	55
BMK 56	NV101857191	NEVADA VANADIUM LLC	56
BMK 57	NV101857192	NEVADA VANADIUM LLC	57
BMK 58	NV101857193	NEVADA VANADIUM LLC	58
BMK 59	NV101857194	NEVADA VANADIUM LLC	59
BMK 60	NV101857195	NEVADA VANADIUM LLC	60
BMK 61	NV101857196	NEVADA VANADIUM LLC	61
BMK 62	NV101857197	NEVADA VANADIUM LLC	62
BMK 63	NV101857198	NEVADA VANADIUM LLC	63
BMK 64	NV101857199	NEVADA VANADIUM LLC	64
BMK 65	NV101857200	NEVADA VANADIUM LLC	65
BMK 66	NV101857201	NEVADA VANADIUM LLC	66
BMK 67	NV101857202	NEVADA VANADIUM LLC	67
BMK 68	NV101857203	NEVADA VANADIUM LLC	68
BMK 69	NV101857204	NEVADA VANADIUM LLC	69
BMK 70	NV101857205	NEVADA VANADIUM LLC	70

Claim Name	Serial Number	Claimant	Count
BMK 71	NV101857206	NEVADA VANADIUM LLC	71
BMK 72	NV101857207	NEVADA VANADIUM LLC	72
BMK 73	NV101857208	NEVADA VANADIUM LLC	73
BMK 74	NV101858260	NEVADA VANADIUM LLC	74
BMK 75	NV101858261	NEVADA VANADIUM LLC	75
BMK 76	NV101858262	NEVADA VANADIUM LLC	76
BMK 77	NV101858263	NEVADA VANADIUM LLC	77
BMK 78	NV101858264	NEVADA VANADIUM LLC	78
BMK 79	NV101858265	NEVADA VANADIUM LLC	79
BMK 80	NV101858266	NEVADA VANADIUM LLC	80
BMK 81	NV101858267	NEVADA VANADIUM LLC	81
BMK 82	NV101858268	NEVADA VANADIUM LLC	82
BMK 83	NV101858269	NEVADA VANADIUM LLC	83
BMK 84	NV101858270	NEVADA VANADIUM LLC	84
BMK 85	NV101858271	NEVADA VANADIUM LLC	85
BMK 86	NV101858272	NEVADA VANADIUM LLC	86
BMK 87	NV101858273	NEVADA VANADIUM LLC	87
BMK 88	NV101858274	NEVADA VANADIUM LLC	88
BMK 89	NV101858275	NEVADA VANADIUM LLC	89
BMK 90	NV101858276	NEVADA VANADIUM LLC	90
BMK 91	NV101858277	NEVADA VANADIUM LLC	91
BMK 92	NV101859469	NEVADA VANADIUM LLC	92
BMK 93	NV101859470	NEVADA VANADIUM LLC	93
BMK 94	NV101859471	NEVADA VANADIUM LLC	94
BMK 95	NV101859472	NEVADA VANADIUM LLC	95
BMK 96	NV101859473	NEVADA VANADIUM LLC	96
BMK 97	NV101859474	NEVADA VANADIUM LLC	97
BMK 98	NV101859475	NEVADA VANADIUM LLC	98
BMK 99	NV101859476	NEVADA VANADIUM LLC	99
BMK 100	NV101859477	NEVADA VANADIUM LLC	100
BMK 101	NV101859478	NEVADA VANADIUM LLC	101
BMK 102	NV101859479	NEVADA VANADIUM LLC	102
BMK 103	NV101859480	NEVADA VANADIUM LLC	103
BMK 104	NV101859481	NEVADA VANADIUM LLC	104
BMK 105	NV101859482	NEVADA VANADIUM LLC	105
BMK 106	NV101859483	NEVADA VANADIUM LLC	106

Claim Name	Serial Number	Claimant	Count
BMK 107	NV101859484	NEVADA VANADIUM LLC	107
BMK 108	NV101859485	NEVADA VANADIUM LLC	108
BMK 109	NV101859486	NEVADA VANADIUM LLC	109
BMK 110	NV101859487	NEVADA VANADIUM LLC	110
BMK 111	NV101859488	NEVADA VANADIUM LLC	111
BMK 112	NV101859489	NEVADA VANADIUM LLC	112
BMK 113	NV101732959	NEVADA VANADIUM LLC	113
BMK 114	NV101732960	NEVADA VANADIUM LLC	114
BMK 115	NV101732961	NEVADA VANADIUM LLC	115
BMK 116	NV101732962	NEVADA VANADIUM LLC	116
BMK 117	NV101732963	NEVADA VANADIUM LLC	117
BMK 118	NV101732964	NEVADA VANADIUM LLC	118
BMK 119	NV101732965	NEVADA VANADIUM LLC	119
BMK 120	NV101732966	NEVADA VANADIUM LLC	120
BMK 121	NV101732967	NEVADA VANADIUM LLC	121
BMK 122	NV101732968	NEVADA VANADIUM LLC	122
BMK 123	NV101732969	NEVADA VANADIUM LLC	123
BMK 124	NV101732970	NEVADA VANADIUM LLC	124
BMK 125	NV101732971	NEVADA VANADIUM LLC	125
BMK 126	NV101732972	NEVADA VANADIUM LLC	126
BMK 127	NV101732973	NEVADA VANADIUM LLC	127
BMK 128	NV101732974	NEVADA VANADIUM LLC	128
BMK 129	NV101732975	NEVADA VANADIUM LLC	129
BMK 130	NV101732976	NEVADA VANADIUM LLC	130
BMK 131	NV101732977	NEVADA VANADIUM LLC	131
BMK 132	NV101732978	NEVADA VANADIUM LLC	132
BMK 133	NV101732979	NEVADA VANADIUM LLC	133
BMK 134	NV101733938	NEVADA VANADIUM LLC	134
BMK 135	NV101733939	NEVADA VANADIUM LLC	135
BMK 136	NV101733940	NEVADA VANADIUM LLC	136
BMK 137	NV101733941	NEVADA VANADIUM LLC	137
BMK 138	NV101733942	NEVADA VANADIUM LLC	138
BMK 139	NV101733943	NEVADA VANADIUM LLC	139
BMK 140	NV101733944	NEVADA VANADIUM LLC	140

Claim Name	Serial Number	Claimant	Count
BMK 141	NV101733945	NEVADA VANADIUM LLC	141
BMK 142	NV101733946	NEVADA VANADIUM LLC	142
BMK 143	NV101733947	NEVADA VANADIUM LLC	143
BMK 144	NV101733948	NEVADA VANADIUM LLC	144
BMK 145	NV101733949	NEVADA VANADIUM LLC	145
BMK 146	NV101733950	NEVADA VANADIUM LLC	146
BMK 147	NV101733951	NEVADA VANADIUM LLC	147
BMK 148	NV101733952	NEVADA VANADIUM LLC	148
BMK 149	NV101733953	NEVADA VANADIUM LLC	149
BMK 150	NV101733954	NEVADA VANADIUM LLC	150
BMK 151	NV101733955	NEVADA VANADIUM LLC	151
BMK 152	NV101733956	NEVADA VANADIUM LLC	152
BMK 153	NV101733957	NEVADA VANADIUM LLC	153
BMK 154	NV101733958	NEVADA VANADIUM LLC	154
BMK 155	NV101734980	NEVADA VANADIUM LLC	155
BMK 156	NV101734981	NEVADA VANADIUM LLC	156
BMK 157	NV101734982	NEVADA VANADIUM LLC	157
BMK 158	NV101734983	NEVADA VANADIUM LLC	158
BMK 159	NV101734984	NEVADA VANADIUM LLC	159
BMK 160	NV101734985	NEVADA VANADIUM LLC	160
BMK 161	NV101734986	NEVADA VANADIUM LLC	161
BMK 162	NV101734987	NEVADA VANADIUM LLC	162
BMK 163	NV101734988	NEVADA VANADIUM LLC	163
BMK 164	NV101734989	NEVADA VANADIUM LLC	164
GINSU 1	NV101437076	NEVADA VANADIUM LLC	165
GINSU 2	NV101437077	NEVADA VANADIUM LLC	166
GINSU 3	NV101437078	NEVADA VANADIUM LLC	167
GINSU 4	NV101437079	NEVADA VANADIUM LLC	168
GINSU 5	NV101437080	NEVADA VANADIUM LLC	169
GINSU 6	NV101437081	NEVADA VANADIUM LLC	170
GINSU 7	NV101437082	NEVADA VANADIUM LLC	171
GINSU 8	NV101437083	NEVADA VANADIUM LLC	172
GINSU 9	NV101437084	NEVADA VANADIUM LLC	173
GINSU 10	NV101437085	NEVADA VANADIUM LLC	174

Claim Name	Serial Number	Claimant	Count
GINSU 11	NV101437086	NEVADA VANADIUM LLC	175
GINSU 12	NV101437087	NEVADA VANADIUM LLC	176
GINSU 13	NV101437088	NEVADA VANADIUM LLC	177
GINSU 14	NV101437089	NEVADA VANADIUM LLC	178
GINSU 15	NV101437090	NEVADA VANADIUM LLC	179
GINSU 16	NV101437091	NEVADA VANADIUM LLC	180
GINSU 17	NV101371193	NEVADA VANADIUM LLC	181
GINSU 18	NV101371194	NEVADA VANADIUM LLC	182
JEANETTE	NV101347209	NEVADA VANADIUM LLC	183
JEANETTE #1	NV101405759	NEVADA VANADIUM LLC	184
JEANETTE #2	NV101754251	NEVADA VANADIUM LLC	185
JEANETTE #3	NV101347535	NEVADA VANADIUM LLC	186
KITTY #4	NV101526491	NEVADA VANADIUM LLC	187
NAN #1	NV101606137	NEVADA VANADIUM LLC	188
NAN #2	NV101349079	NEVADA VANADIUM LLC	189
NAN #3	NV101452645	NEVADA VANADIUM LLC	190
NAN #4	NV101520495	NEVADA VANADIUM LLC	191
NAN #5	NV101607226	NEVADA VANADIUM LLC	192
NV 1	NV101958051	NEVADA VANADIUM LLC	193
NV 2	NV101958052	NEVADA VANADIUM LLC	194
NV 3	NV101958053	NEVADA VANADIUM LLC	195
NV 4	NV101958054	NEVADA VANADIUM LLC	196
NV 5	NV101958055	NEVADA VANADIUM LLC	197
NV 6	NV101958056	NEVADA VANADIUM LLC	198
NV 7	NV101958057	NEVADA VANADIUM LLC	199
NV 8	NV101958058	NEVADA VANADIUM LLC	200
NV 9	NV101958059	NEVADA VANADIUM LLC	201
NV 10	NV101958485	NEVADA VANADIUM LLC	202
NV 11	NV101958486	NEVADA VANADIUM LLC	203
NV 12	NV101958487	NEVADA VANADIUM LLC	204
NV 13	NV101958488	NEVADA VANADIUM LLC	205
NV 14	NV101958489	NEVADA VANADIUM LLC	206
NV 15	NV101958490	NEVADA VANADIUM LLC	207
NV 16	NV101958491	NEVADA VANADIUM LLC	208
NV 17	NV101958492	NEVADA VANADIUM LLC	209
NV 18	NV101958493	NEVADA VANADIUM LLC	210

Claim Name	Serial Number	Claimant	Count
NV 19	NV101958494	NEVADA VANADIUM LLC	211
NV 20	NV101958495	NEVADA VANADIUM LLC	212
NV 21	NV101958496	NEVADA VANADIUM LLC	213
NV 22	NV101958497	NEVADA VANADIUM LLC	214
NV 23	NV101958498	NEVADA VANADIUM LLC	215
NV 24	NV101958499	NEVADA VANADIUM LLC	216
NV 25	NV101958500	NEVADA VANADIUM LLC	217
NV 26	NV101958501	NEVADA VANADIUM LLC	218
NV 27	NV101958502	NEVADA VANADIUM LLC	219
NV 28	NV101958503	NEVADA VANADIUM LLC	220
NV 29	NV101958504	NEVADA VANADIUM LLC	221
NV 30	NV101958505	NEVADA VANADIUM LLC	222
NV 31	NV101958864	NEVADA VANADIUM LLC	223
NV 32	NV101958865	NEVADA VANADIUM LLC	224
PCY 25	NV101642711	NEVADA VANADIUM LLC	225
PCY 26	NV101642712	NEVADA VANADIUM LLC	226
PCY 27	NV101642713	NEVADA VANADIUM LLC	227
PCY 28	NV101642714	NEVADA VANADIUM LLC	228
PCY 29	NV101642715	NEVADA VANADIUM LLC	229
PCY 30	NV101642716	NEVADA VANADIUM LLC	230
PCY 33	NV101642717	NEVADA VANADIUM LLC	231
PCY 34	NV101642718	NEVADA VANADIUM LLC	232
PCY 35	NV101642719	NEVADA VANADIUM LLC	233
PCY 36	NV101642720	NEVADA VANADIUM LLC	234
PCY 37	NV101642721	NEVADA VANADIUM LLC	235
PCY 38	NV101642722	NEVADA VANADIUM LLC	236
PCY 39	NV101642723	NEVADA VANADIUM LLC	237
PCY 40	NV101642724	NEVADA VANADIUM LLC	238
PCY 43	NV101642725	NEVADA VANADIUM LLC	239
PCY 44	NV101643924	NEVADA VANADIUM LLC	240
PCY 45	NV101643925	NEVADA VANADIUM LLC	241
PCY 46	NV101643926	NEVADA VANADIUM LLC	242
PCY 47	NV101643927	NEVADA VANADIUM LLC	243
PCY 48 N	NV101643928	NEVADA VANADIUM LLC	244
PCY 49	NV101790319	NEVADA VANADIUM LLC	245
PCY 49 N	NV101643929	NEVADA VANADIUM LLC	246

Claim Name	Serial Number	Claimant	Count
PCY 50	NV101790320	NEVADA VANADIUM LLC	247
PCY 50 N	NV101643930	NEVADA VANADIUM LLC	248
PCY 51	NV101790321	NEVADA VANADIUM LLC	249
PCY 52	NV101790322	NEVADA VANADIUM LLC	250
PCY 53	NV101790323	NEVADA VANADIUM LLC	251
PCY 53 N	NV101643931	NEVADA VANADIUM LLC	252
PCY 54 N	NV101643932	NEVADA VANADIUM LLC	253
PCY 55 N	NV101643933	NEVADA VANADIUM LLC	254
PCY 63	NV101643934	NEVADA VANADIUM LLC	255
PCY 64	NV101643935	NEVADA VANADIUM LLC	256
PCY 65	NV101643936	NEVADA VANADIUM LLC	257
PCY 85	NV101790324	NEVADA VANADIUM LLC	258
PCY 86	NV101790325	NEVADA VANADIUM LLC	259
PCY 87	NV101790326	NEVADA VANADIUM LLC	260
PCY 88	NV101790327	NEVADA VANADIUM LLC	261
PCY 89	NV101790328	NEVADA VANADIUM LLC	262
PCY 90	NV101790329	NEVADA VANADIUM LLC	263
PCY 91	NV101790330	NEVADA VANADIUM LLC	264
PCY 92	NV101790331	NEVADA VANADIUM LLC	265
PCY 93	NV101790332	NEVADA VANADIUM LLC	266
PCY 94	NV101790333	NEVADA VANADIUM LLC	267
PCY 95	NV101790334	NEVADA VANADIUM LLC	268
PCY 100	NV101643937	NEVADA VANADIUM LLC	269
PCY 110	NV101643938	NEVADA VANADIUM LLC	270
PCY 120	NV101643939	NEVADA VANADIUM LLC	271
PCY 130	NV101643940	NEVADA VANADIUM LLC	272
PCY 140	NV101643941	NEVADA VANADIUM LLC	273
PCY 146	NV101643942	NEVADA VANADIUM LLC	274
PCY 147	NV101643943	NEVADA VANADIUM LLC	275
PCY 148	NV101643944	NEVADA VANADIUM LLC	276
PCY 149	NV101645148	NEVADA VANADIUM LLC	277
PCY 150	NV101645149	NEVADA VANADIUM LLC	278
PCY 151	NV101645150	NEVADA VANADIUM LLC	279
PCY 152	NV101645151	NEVADA VANADIUM LLC	280
PCY 153	NV101645152	NEVADA VANADIUM LLC	281
PCY 154	NV101645153	NEVADA VANADIUM LLC	282

Claim Name	Serial Number	Claimant	Count
PCY 155	NV101645154	NEVADA VANADIUM LLC	283
PCY 156	NV101645155	NEVADA VANADIUM LLC	284
PCY 157	NV101645156	NEVADA VANADIUM LLC	285
PCY 158	NV101645157	NEVADA VANADIUM LLC	286
PCY 159	NV101645158	NEVADA VANADIUM LLC	287
PCY 160	NV101645159	NEVADA VANADIUM LLC	288
PCY 161	NV101645160	NEVADA VANADIUM LLC	289
PCY 162	NV101645161	NEVADA VANADIUM LLC	290
PCY 163	NV101645162	NEVADA VANADIUM LLC	291
PCY 164	NV101645163	NEVADA VANADIUM LLC	292
PCY 165	NV101645164	NEVADA VANADIUM LLC	293
PCY 166	NV101645165	NEVADA VANADIUM LLC	294
PCY 167	NV101645166	NEVADA VANADIUM LLC	295
PCY 168	NV101645167	NEVADA VANADIUM LLC	296
PCY 169	NV101645168	NEVADA VANADIUM LLC	297
PCY 170	NV101646391	NEVADA VANADIUM LLC	298
PCY 171	NV101646392	NEVADA VANADIUM LLC	299
PCY 172	NV101646393	NEVADA VANADIUM LLC	300
PCY 173	NV101646394	NEVADA VANADIUM LLC	301
PCY 174	NV101646499	NEVADA VANADIUM LLC	302
PCY 175	NV101646500	NEVADA VANADIUM LLC	303
PCY 176	NV101646501	NEVADA VANADIUM LLC	304
PCY 177	NV101646502	NEVADA VANADIUM LLC	305
PCY 178	NV101646503	NEVADA VANADIUM LLC	306
PCY 179	NV101646504	NEVADA VANADIUM LLC	307
PCY 180	NV101646505	NEVADA VANADIUM LLC	308
PCY 181	NV101646506	NEVADA VANADIUM LLC	309
PCY 182	NV101646507	NEVADA VANADIUM LLC	310
PCY 183	NV101646508	NEVADA VANADIUM LLC	311
PCY 184	NV101646509	NEVADA VANADIUM LLC	312
PCY 185	NV101646510	NEVADA VANADIUM LLC	313
PCY 186	NV101646511	NEVADA VANADIUM LLC	314
PCY 187	NV101646512	NEVADA VANADIUM LLC	315
PCY 188	NV101646513	NEVADA VANADIUM LLC	316
PCY 189	NV101646514	NEVADA VANADIUM LLC	317
PCY 190	NV101646515	NEVADA VANADIUM LLC	318

Claim Name	Serial Number	Claimant	Count
PCY 191	NV101647715	NEVADA VANADIUM LLC	319
PCY 192	NV101647716	NEVADA VANADIUM LLC	320
PCY 193	NV101647717	NEVADA VANADIUM LLC	321
PCY 194	NV101647718	NEVADA VANADIUM LLC	322
PCY 195	NV101647719	NEVADA VANADIUM LLC	323
PCY 196	NV101647720	NEVADA VANADIUM LLC	324
PCY 197	NV101647721	NEVADA VANADIUM LLC	325
PCY 198	NV101647722	NEVADA VANADIUM LLC	326
PCY 199	NV101647723	NEVADA VANADIUM LLC	327
PCY 200	NV101647724	NEVADA VANADIUM LLC	328
PCY 201	NV101647725	NEVADA VANADIUM LLC	329
PCY 202	NV101647726	NEVADA VANADIUM LLC	330
PCY 203	NV101647727	NEVADA VANADIUM LLC	331
PCY 204	NV101647728	NEVADA VANADIUM LLC	332
PCY 205	NV101647729	NEVADA VANADIUM LLC	333
PCY 206	NV101647730	NEVADA VANADIUM LLC	334
PCY 207	NV101647731	NEVADA VANADIUM LLC	335
PCY 208	NV101647732	NEVADA VANADIUM LLC	336
PCY 209	NV101647733	NEVADA VANADIUM LLC	337
PCY 210	NV101790387	NEVADA VANADIUM LLC	338
PCY 211	NV101790388	NEVADA VANADIUM LLC	339
PCY 212	NV101790389	NEVADA VANADIUM LLC	340
PCY 213	NV101790390	NEVADA VANADIUM LLC	341
PCY 214	NV101790391	NEVADA VANADIUM LLC	342
PCY 215	NV101790392	NEVADA VANADIUM LLC	343
PCY 216	NV101790393	NEVADA VANADIUM LLC	344
PCY 217	NV101790394	NEVADA VANADIUM LLC	345
PCY 218	NV101790395	NEVADA VANADIUM LLC	346
PCY 219	NV101790396	NEVADA VANADIUM LLC	347
PCY 220	NV101790397	NEVADA VANADIUM LLC	348
PCY 221	NV101790398	NEVADA VANADIUM LLC	349
PCY 222	NV101641537	NEVADA VANADIUM LLC	350
PCY 223	NV101641538	NEVADA VANADIUM LLC	351
PCY 224	NV101641539	NEVADA VANADIUM LLC	352
PCY 225	NV101641540	NEVADA VANADIUM LLC	353
PCY 226	NV101641541	NEVADA VANADIUM LLC	354

Claim Name	Serial Number	Claimant	Count
PCY 227	NV101641542	NEVADA VANADIUM LLC	355
PCY 228	NV101641543	NEVADA VANADIUM LLC	356
PCY 229	NV101641544	NEVADA VANADIUM LLC	357
PCY 230	NV101641545	NEVADA VANADIUM LLC	358
PCY 231	NV101641546	NEVADA VANADIUM LLC	359
PCY 232	NV101641547	NEVADA VANADIUM LLC	360
PCY 233	NV101641548	NEVADA VANADIUM LLC	361
PCY 234	NV101641549	NEVADA VANADIUM LLC	362
PCY 235	NV101641550	NEVADA VANADIUM LLC	363
PCY 236	NV101641551	NEVADA VANADIUM LLC	364
PCY 237	NV101641552	NEVADA VANADIUM LLC	365
PCY 238	NV101641553	NEVADA VANADIUM LLC	366
PCY 239	NV101641554	NEVADA VANADIUM LLC	367
PCY 240	NV101641555	NEVADA VANADIUM LLC	368
PCY 241	NV101641556	NEVADA VANADIUM LLC	369
PCY 242	NV101641557	NEVADA VANADIUM LLC	370
PCY 243	NV101642726	NEVADA VANADIUM LLC	371
PCY 244	NV101642727	NEVADA VANADIUM LLC	372
PCY 245	NV101642728	NEVADA VANADIUM LLC	373
PCY 246	NV101642729	NEVADA VANADIUM LLC	374
PCY 247	NV101642730	NEVADA VANADIUM LLC	375
PCY 248	NV101642731	NEVADA VANADIUM LLC	376
PCY 249	NV101642732	NEVADA VANADIUM LLC	377
PCY 250	NV101642733	NEVADA VANADIUM LLC	378
PCY 251	NV101642734	NEVADA VANADIUM LLC	379
PCY 252	NV101642735	NEVADA VANADIUM LLC	380
PCY 253	NV101642736	NEVADA VANADIUM LLC	381
PCY 254	NV101642737	NEVADA VANADIUM LLC	382
PCY 255	NV101642738	NEVADA VANADIUM LLC	383
PCY 256	NV101642739	NEVADA VANADIUM LLC	384
PCY 257	NV101642740	NEVADA VANADIUM LLC	385
PCY 258	NV101642741	NEVADA VANADIUM LLC	386
PCY 259	NV101642742	NEVADA VANADIUM LLC	387
PCY 260	NV101642743	NEVADA VANADIUM LLC	388

Claim Name	Serial Number	Claimant	Count
PCY 261	NV101642744	NEVADA VANADIUM LLC	389
PCY 262	NV101642745	NEVADA VANADIUM LLC	390
PCY 263	NV101642746	NEVADA VANADIUM LLC	391
PCY 264	NV101643945	NEVADA VANADIUM LLC	392
PCY 265	NV101643946	NEVADA VANADIUM LLC	393
PCY 266	NV101643947	NEVADA VANADIUM LLC	394
PCY 267	NV101643948	NEVADA VANADIUM LLC	395
PCY 268	NV101643949	NEVADA VANADIUM LLC	396
PCY 269	NV101643950	NEVADA VANADIUM LLC	397
PCY 270	NV101643951	NEVADA VANADIUM LLC	398
PCY 271	NV101643952	NEVADA VANADIUM LLC	399
PCY 272	NV101643953	NEVADA VANADIUM LLC	400
PCY 273	NV101643954	NEVADA VANADIUM LLC	401
PCY 274	NV101643955	NEVADA VANADIUM LLC	402
PCY 275	NV101643956	NEVADA VANADIUM LLC	403
PCY 276	NV101643957	NEVADA VANADIUM LLC	404
PCY 277	NV101643958	NEVADA VANADIUM LLC	405
PCY 278	NV101643959	NEVADA VANADIUM LLC	406
PCY 279	NV101643960	NEVADA VANADIUM LLC	407
PCY 280	NV101643961	NEVADA VANADIUM LLC	408
PCY 281	NV101643962	NEVADA VANADIUM LLC	409
PCY 282	NV101643963	NEVADA VANADIUM LLC	410
PCY 283	NV101643964	NEVADA VANADIUM LLC	411
PCY 284	NV101643965	NEVADA VANADIUM LLC	412
PCY 285	NV101645169	NEVADA VANADIUM LLC	413
PCY 286	NV101645170	NEVADA VANADIUM LLC	414
PCY 287	NV101645171	NEVADA VANADIUM LLC	415
PCY 288	NV101645172	NEVADA VANADIUM LLC	416
PCY 289	NV101645173	NEVADA VANADIUM LLC	417
PCY 290	NV101645174	NEVADA VANADIUM LLC	418
PCY 291	NV101645175	NEVADA VANADIUM LLC	419
PCY 292	NV101645176	NEVADA VANADIUM LLC	420
PCY 293	NV101645177	NEVADA VANADIUM LLC	421
PCY 294	NV101645178	NEVADA VANADIUM LLC	422
PCY 300	NV101561538	NEVADA VANADIUM LLC	423

Claim Name	Serial Number	Claimant	Count
PCY 301	NV101561539	NEVADA VANADIUM LLC	424
PCY 302	NV101561540	NEVADA VANADIUM LLC	425
PCY 303	NV101561541	NEVADA VANADIUM LLC	426
PCY 305	NV101561542	NEVADA VANADIUM LLC	427
PCY 306	NV101561543	NEVADA VANADIUM LLC	428
PCY 307	NV101561544	NEVADA VANADIUM LLC	429
PCY 308	NV101561545	NEVADA VANADIUM LLC	430
PCY 309	NV101561546	NEVADA VANADIUM LLC	431
PCY 310	NV101561547	NEVADA VANADIUM LLC	432
PCY 311	NV101561548	NEVADA VANADIUM LLC	433
WILLOW 12	NV101754076	NEVADA VANADIUM LLC	434
WILLOW 13	NV101543532	NEVADA VANADIUM LLC	435
WILLOW 14	NV101492836	NEVADA VANADIUM LLC	436
WILLOW 15	NV102521540	NEVADA VANADIUM LLC	437
WILLOW 17	NV101600749	NEVADA VANADIUM LLC	438
WILLOW 27	NV101300691	NEVADA VANADIUM LLC	439
WILLOW 28	NV101479461	NEVADA VANADIUM LLC	440
WILLOW 30	NV101478112	NEVADA VANADIUM LLC	441
WILLOW 31	NV101455368	NEVADA VANADIUM LLC	442