ROCKY MOUNTAIN RESOURCES

NI 43-101 Technical Report, Gibellini Vanadium Project, Nevada, USA

Prepared for RMP Resources Corporation by:

Kirk Hanson, P.E.
Todd Wakefield, M.AusIMM.
Edward Orbock III, M.AusIMM.
John C. Rust, M.AusIMM.

Effective Date: 8 October 2008
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IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report for RMP Resources Corporation (RMP) by AMEC E&C Services (AMEC). The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by RMP subject to the terms and conditions of its contract with AMEC. This contract permits RMP to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, *Standards of Disclosure for Mineral Projects.* Except for the purposes legislated under provincial securities law, any other uses of this report by any third party is at that party's sole risk.

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1.0 SUMMARY

AMEC E&C Services Limited (AMEC) was commissioned by RMP Resources Corporation (RMP), to provide an independent Qualified Person's Review and Technical Report (the Report) for the Gibellini vanadium project (the Project) located in Eureka County, Nevada, USA.

RMP is the name of the wholly-owned United States subsidiary of the TSX Venture Exchange-listed Rocky Mountain Resources Corp.

The Gibellini property is located in Eureka County, Nevada, about 27.5 miles south of the town of Eureka.

RMP acquired the property in March 2006. During 2006, RMP expanded the land position of the Gibellini Project, mapped the surface geology, collected surface and underground geochemical samples, and conducted preliminary metallurgical testwork. In 2007–2008, RMP undertook RC and core drilling at Vanadium Hill, Rich Hill and the historic Gibellini manganese–nickel mine, metallurgical testwork, and a preliminary economic analysis on the Vanadium Hill deposit.

The Gibellini Project encompasses an area of approximately 2,624 acres, comprising 140 contiguous, active unpatented lode mining claims covering portions of Sections 26, 34, 35, and 36 T16N, R52E and portions of Sections 1, 2, 3, 10, 11, and 15 T15N, R52E MDBM, in Eureka County. The Gibellini Project is situated entirely on public lands that are administered by the Bureau of Land Management (BLM).

Lease agreements cover 70 of the 140 claims making up the Gibellini Project:

The remaining claims (Dan and Buff series) were staked by RMP and are federal unpatented lode mining claims not subject to any agreements or royalties.

Current exploration activities are covered by an Exploration Notice that has been submitted to the BLM. To date, less than 10 acres of area have been disturbed, an area of disturbance permitted under the Exploration Notice.

AMEC reviewed the mine permits that would be applicable to the construction, start-up, and operation of the Gibellini project. The review indicated that there are no obvious impediments to obtaining the appropriate permits and approvals to conduct mine operations.

The vanadium deposits occur within organic-rich siliceous mudstone, siltstone, and chert of the Devonian Woodruff Formation. The black shale unit that hosts the

Vanadium Hill mineral resource is from 175 to over 300 feet thick and overlies grey mudstone. The shale has been oxidized to various hues of yellow and orange up to a depth of 100 feet.

Vanadium mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes. Higher vanadium grades are associated with a mixed oxide and sulphide zone that is sub-parallel to the topographic surface. Vanadium reportedly occurs in manganese nodules and organic matter. Vanadium mineralization is thought to be the result of syngenetic and early diagenetic metal concentration in the marine shale rocks.

The style of mineralization and host rocks at Rich Hill are the same as at the Vanadium Hill deposit.

Exploration activities from the 1950s to the current time on the Gibellini Project have included mapping, trenching, geochemical sampling, and drilling by multiple operators. Underground development was also conducted at the Gibellini manganese–nickel mine.

A total of 212 drill holes (about 46,335 ft) have been completed on the Gibellini Project since 1960, comprising 12 core holes (3,350 ft), 120 rotary drill holes (25,077 ft) and 80 RC holes (17907.5 ft).

During late 2007 and early 2008, RMP completed 18 RC holes (5,890 ft) and five core holes (1,650 ft) on the Gibellini property. Nine of these holes were drilled in the Vanadium Hill area, seven were drilled in the Gibellini manganese–nickel mine area, three were drilled in the Rich Hill prospect area, and four exploration holes were drilled elsewhere on the property. In mid-2008 to provide metallurgical samples, RMP completed an additional five core holes (1,200 ft) at Rich Hill, and a single core hole (500 ft) at Vanadium Hill.

The Vanadium Hill deposit has been drilled consistently to a depth of approximately 200 feet.

AMEC digitized legacy drill hole locations, surveys, logs and assays from paper maps, logs, and assay certificates to generate the Gibellini resource database. Subsequently results from the RMP drilling programs were added to the Gibellini Access database. AMEC conducted data integrity checks of the Gibellini digital database (checking for overlapping intervals, data beyond total depth of hole, unit conversion, etc.) and concludes that the resource database is reasonably error-free and acceptable for use in resource estimation.

Mineral resources were estimated for the Vanadium Hill deposit only. AMEC block model validation indicates that the vanadium estimate is globally un-biased and the resource model should give reasonable estimates of mineable tonnages and grades on an annual basis.

Confidence limits indicate a drill hole spacing of 200 ft x 200 ft grid is sufficient to identify Indicated Mineral Resources at Gibellini. However, tighter drill spacing may be required to better define limits of high-grade zones, ore and waste contacts and final pit limits.

AMEC reviewed the continuity of grade and geology at 200 ft drill spacing and is of the opinion that continuity is adequate for grade interpolation and mine planning.

AMEC determined the extent of resources that might have reasonable expectations for economic extraction by applying a Lerchs–Grossmann (L–G) pit outline to the mineral resources (Table 1-1). The pit cone was run using a long-term V_2O_5 price of $6.50 per pound and a 60% recovery for oxide, 70% for transition, and a 52% recovery for reduced mineralization. Processing and general and administrative (G&A) costs of $11.47 per ton, a mining cost structure that applied a base cost of $2.30 per ton, royalties, transportation and selling cost of $0.51 per pound V_2O_5, were applied to resource blocks above economic cut-off. All cones were run with a 45° pit slope.

The Qualified Person for the mineral resource estimate is Edward Orbock III, M.AusIMM, an employee of AMEC, and independent of RMP as independence is defined in Section 1.4 of NI 43-101. The mineral resource estimate has an effective date of 8 October, 2008. AMEC cautions that mineral resources are not mineral reserves until they have demonstrated economic viability.

Two metallurgical testing programs have been conducted since RMP acquired the Gibellini property. Based on the column test work, AMEC assumed recoveries to support the scoping study of 60%, 70%, and 52% for oxide, transition, and sulfide materials respectively. For the Base Case, AMEC developed a process flow sheet that included primary and secondary crushing to achieve a minus 2 inch product.

The Preliminary Assessment (PA) completed on the Gibellini Property has been based on the Inferred and Indicated Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary assessment based on these resources will be realized. The results of the economic analyses discussed represent forward-looking information as defined under Canadian securities law.

Table 1-1: Vanadium Hill Mineral Resources, Effective Date 8 October, 2008,

	Domain	V_2O_5 (% cut-off grade)	Tons (x 1,000)	V_2O_5 (%)	V_2O_5 (lbs. x 1,000)
INDICATED					
	Oxide	0.160	6,487	0.26	34,389
	Transition	0.137	8,679	0.43	73,932
	Sulfide	0.184	2,844	0.24	13,882
Total Indicated			18,010	0.34	122,236
INFERRED					
	Oxide	0.160	875	0.24	4,137
	Transition	0.137	1,801	0.31	11,098
	Sulfide	0.184	164	0.24	772
Total Inferred			2,839	0.28	16,006

The results depend on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

AMEC addressed initial open pit resources and pit designs, reviewed leach considerations, tailings for the mill case, and waste considerations, reviewed ancillary and infrastructure requirements, and proposed a project execution plan. The PA had three objectives:

- To evaluate preliminary economics of project development
- Compare various alternative development scenarios, and
- Establish the feasibility of heap leaching technology for recovery of vanadium from the Vanadium Hill mineralization.

The PA developed high level cost estimates (±30% to 35% accuracy) in United States dollars for a Base Case and five Alternative Cases (the Cases) for project development. The key variables investigated included annual production rate, in the range of one million to three million short tons per year; mine operating responsibility, either RMP or contractor; processing method, heap leach or milling; and final product for sale, either vanadium pentoxide or ferrovanadium. Key observations include the following:

- Higher production rates produce better economic returns
- Mining by contractor could yield slightly higher returns
- Heap leaching is preferred over milling
- Production of vanadium pentoxide is preferred over ferrovanadium production.

The Base Case for the Gibellini Project has a proposed nine year mine life at a 2.0 Mt per year heap leach processing rate. The assumed start date for production mining is January 1, 2012. Peak annual production is 2.56 Mt of total material in 2014.

AMEC assumed long-term metal prices based on a review of historical V_2O_5 prices from publicly available sources. The Base Case price is \$5.90/lb V_2O_5, and \$14.10/lb ferrovanadium. The resource price is \$6.50/lb V_2O_5 for resource shell determination. The resource price was escalated 10% above the base price which is a common industry practice.

With the exception of a two track dirt access road and drill roads, very little infrastructure exists at the Gibellini project site. Major infrastructure close to the Gibellini project site includes the Mt Wheeler power transmission line and Nevada State Route 379. The Mt Wheeler Power line is located approximately 7 miles north of the site and services the Fish Creek Aradan Ranch. State route 379, an improved gravel road, runs within three miles of the property.

Based on the observed site infrastructure and subsequent investigations, AMEC identified and estimated costs for site infrastructure required to develop the Gibellini Project. For study purposes, AMEC assumed that power would be taken from the local grid instead of self generated.

AMEC utilized several estimation approaches to determine capital and operating costs for the Gibellini Project. The approaches included calculating Gibellini mining costs from historical information, benchmarking Gibellini mining costs to area mines, and calculating first principle mining costs. For both the Base and Alternative Cases, the mine costs are based on open pit mining using conventional truck and loader equipment fleets.

A summary of the results of the PA is presented in Table 1-2.

A broad range of sensitivity work has been completed. The sensitivity work covers an array of costs, recoveries, metal prices and a case excluding Inferred Mineral Resources. The Base Case is repeated for reference. The sensitivity results show that the Gibellini Project is most sensitive to metal price and then to process recovery, which is typical for most projects.

The cash flow results for the Gibellini project are positive for the Base and all of the Alternate Cases. The Base Case has an after-tax undiscounted cash flow of $116.2 M and an after-tax project IRR of 27% (see Table 1-2). Both Alternate Case 2 and Alternate Case 3 show improved economics versus the Base Case, while Alternate Cases 1, 4, and 5 show reduced economics.

RMP consider that two cases could be advanced into feasibility, the Base Case with owner mining and Alternate Case 3 with contractor mining. These cases demonstrate the following favorable characteristics:

- Moderate capital requirements
- Project life of approximately nine years
- Low operating cost ($3.06 to $3.20 per pound V_2O_5)
- Potential Internal Rate of Return (IRR) in the range of 27%–30%.

AMEC has proposed a three-year budget that will encompass generation of sufficient data to support a project Feasibility Study. Prior to completing the next-phase study, initial programs will need to be undertaken that will ultimately support the study. These programs include claim staking, aerial surveys, field surveys, deposit and condemnation drilling, metallurgical testing, and geotechnical work. The budget contains allocations for additional reporting including a vanadium outlook report. Base line environmental programs, long lead time infrastructure projects, and long lead time permits will also need to be initiated.

The recommended work program budget allocated is approximately US$4.9 M, exclusive of RMP’s costs, as owner. Owner costs are estimated at an additional US$0.75 M.

Table 1-2: Development Case Alternatives

Description	Base Case	Alternate Case 1	Alternate Case 2	Alternate Case 3	Alternate Case 4	Alternate Case 5
Annual Tonnage (short tons)	2,000,000	1,000,000	3,000,000	2,000,000	1,000,000	2,000,000
Mine Operator	Rocky Mountain	Rocky Mountain	Rocky Mountain	Contractor	Rocky Mountain	Rocky Mountain
Process	Heap Leach	Heap Leach	Heap Leach	Heap Leach	Milling	Heap Leach
Product	Vanadium Pentoxide	Vanadium Pentoxide	Vanadium Pentoxide	Vanadium Pentoxide	Vanadium Pentoxide	Ferrovanadium
Mine Life (years)	8.5	17	5.7	8.5	10.5	8.5
Annual Product (lb V_2O_5)	9,370,000	4,685,000	13,972,000	9,370,000	5,681,000	9,370,000
Capital Cost	88,231,000	80,329,000	94,250,000	75,161,000	120,266,000	133,969,000
Operating Cost ($/short ton)	14.36	16.06	13.95	15.02	22.49	20.64
Operating Cost ($/lb V_2O_5)	3.06	3.42	2.97	3.20	3.93	4.40
After Tax IRR	27%	13%	40%	30%	3%	20%

Note: IRR = Internal Rate of Return.

The Development Case Alternatives completed on the Gibellini Property have been based on the Inferred and Indicated Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Development Case Alternatives based on these resources will be realized. The results of the economic analyses discussed represent forward-looking information as defined under Canadian securities law.

2.0 INTRODUCTION

AMEC E&C Services Limited (AMEC) was commissioned by RMP Resources Corporation (RMP), to provide an independent Qualified Person's Review and Technical Report (the Report) for the Gibellini vanadium project (the Project) located in Eureka County, Nevada, USA (Figure 2-1).

The Report has been prepared in compliance with National Instrument 43–101, *Standards of Disclosure for Mineral Projects* (NI 43–101) and documents the results of a Preliminary Assessment (PA) for the Gibellini Project. AMEC understands that this Report will be used by RMP in support of disclosure and filing requirements with the Canadian Securities Regulators.

RMP is the name of the wholly-owned United States subsidiary of the TSX Venture Exchange-listed Rocky Mountain Resources Corp.

The project is located in the USA, which uses US English measurements. Unless specified, all measurements in this Technical Report use the US English system. The report currency is expressed in US dollars.

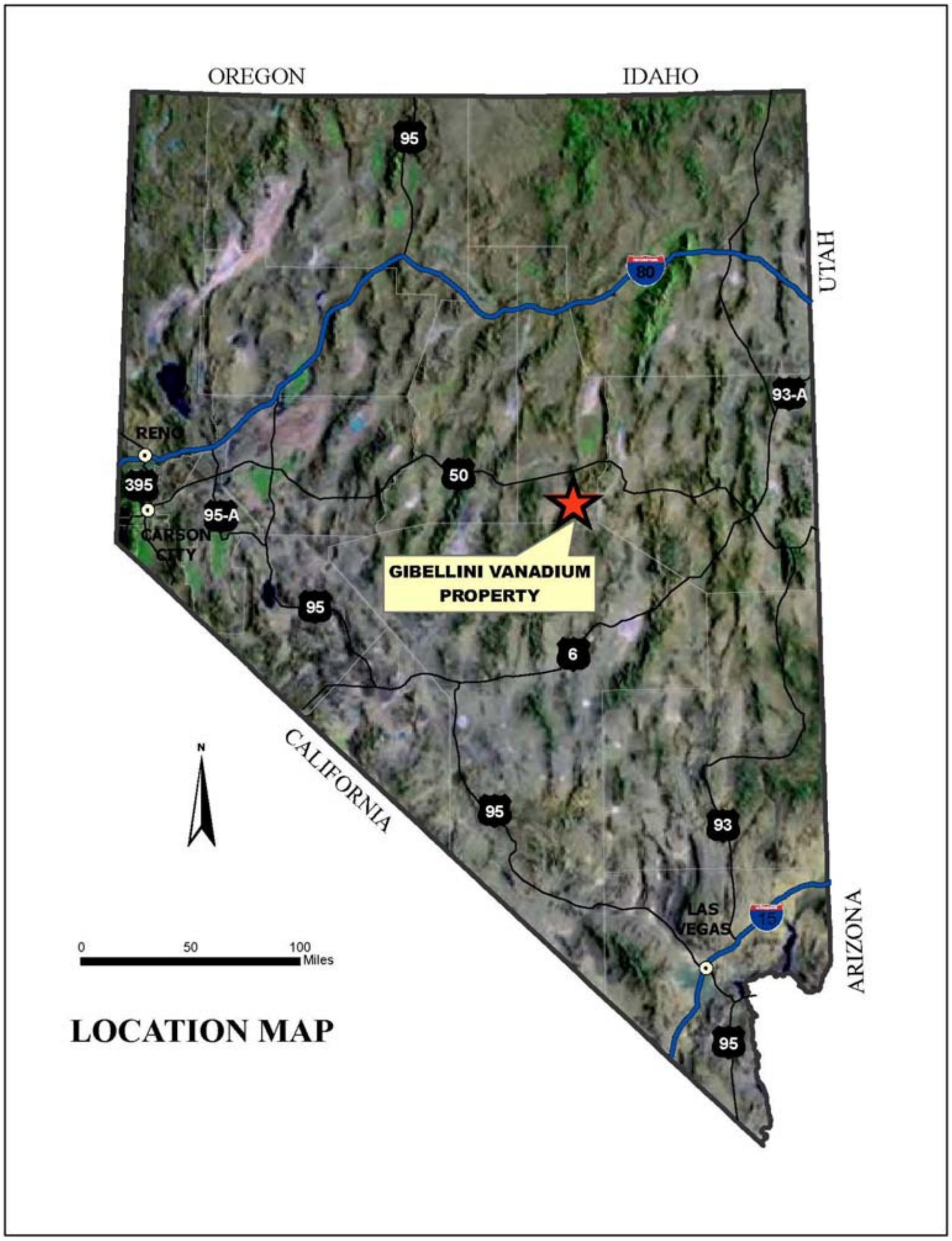
The exchange rate as of the effective date of 8 October 2008 was approximately $US1 equal to Canadian $1.12.

2.1 Qualified Persons

The Qualified Persons (QPs), as defined in NI 43–101 and in compliance with Form 43–101F1 (the Technical Report), responsible for the preparation of the technical report include:

- Kirk Hanson, P.E., Principal Mining Engineer, (AMEC, Reno)
- Todd Wakefield, M.AusIMM., Principal Geologist (AMEC, Santiago)
- Edward Orbock III, M.AusIMM., Principal Geologist (AMEC, Reno)
- John C. Rust, M.AusIMM., Senior Metallurgist (AMEC, Reno)

Figure 2-1: Project Location Map



2.2 Site Visits

AMEC QPs have conducted site visits to the Gibellini Project as shown in Table 2-1.

2.3 Effective Dates

The effective dates for the significant information incorporated in this report are shown below:

- Effective Date of the Mineral Resources – 8 October 2008
- Effective Date of the Preliminary Assessment – 8 October 2008
- Effective Date of the Report (date of supply of last significant information used to inform the Technical Report) – 8 October 2008

2.4 Previous Technical Reports

A previous Technical Report has been filed on the Gibellini Project titled:

Wakefield, T., and Orbock, E., 2007: 43-101 Technical Report Gibellini Property Eureka County, Nevada, Effective Date: 18 April, 2007

2.5 Technical Report Sections and Required Items under NI 43-101

Table 2-2 relates the sections as shown in the contents page of this report to the Prescribed Items Contents Page of NI 43-101.

Table 2-1: QPs for the Technical Report

Qualified Person	Site Visits	Report Sections of Responsibility (or Shared Responsibility)
Kirk Hanson	23 June, 2008	Sections 1, 2, 3, 4, 5, 17.8, 18, 19, 20, 21, 22, and 23, and those portions of the summary, conclusions and recommendations that pertain to these sections
Todd Wakefield	28 June 2006	Sections 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15, and those portions of the summary, conclusions and recommendations that pertain to these sections
Edward Orbock	23 June, 2008	Sections 14 and 17 and those portions of the summary, conclusions and recommendations that pertain to these sections
John Rust	No site visit	Section 16 and those portions of the summary, conclusions and recommendations that pertain to that section

Table 2-2: Contents Page Headings in Relation to NI 43-101 Prescribed Items—Contents

NI 43-101 Item Number	NI 43-101 Heading	Report Section Number	Report Section Heading
Item 1	Title Page		Cover page of report
Item 2	Table of Contents		Table of contents
Item 3	Summary	Section 1	Summary
Item 4	Introduction	Section 2	Introduction
Item 5	Reliance on Other Experts	Section 3	Reliance on Other Experts
Item 6	Property Description and Location	Section 4	Property Description and Location
Item 7	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Section 5	Accessibility, Climate, Local Resources, Infrastructure and Physiography
Item 8	History	Section 6	History
Item 9	Geological Setting	Section 7	Geological Setting
Item 10	Deposit Types	Section 8	Deposit Types
Item 11	Mineralization	Section 9	Mineralization
Item 12	Exploration	Section 10	Exploration
Item 13	Drilling	Section 11	Drilling
Item 14	Sampling Method and Approach	Section 12	Sampling Method and Approach
Item 15	Sample Preparation, Analyses and Security	Section 13	Sample Preparation, Analyses and Security
Item 16	Data Verification	Section 14	Data Verification
Item 17	Adjacent Properties	Section 15	Adjacent Properties
Item 18:	Mineral Processing and Metallurgical Testing	Section 16	Mineral Processing and Metallurgical Testing
Item 19	Mineral Resource and Mineral Reserve Estimates	Section 17	Mineral Resource and Mineral Reserve Estimates
Item 20	Other Relevant Data and Information	Section 19	Other Relevant Data and Information
Item 21	Interpretation and Conclusions	Section 20	Interpretation and Conclusions
Item 22	Recommendations	Section 21	Recommendations
Item 23	References	Section 22	References
Item 24	Date and Signature Page	Section 23	Date and Signature Page
Item 25	Additional Requirements for Technical Reports on Development Properties and Production Properties	Section 18	Additional Requirements for Technical Reports on Development Properties and Production Properties
Item 26	Illustrations		Incorporated in report under appropriate section number, immediately after first citation in text

3.0 RELIANCE ON OTHER EXPERTS

The QPs, authors of this Technical Report state that they are qualified persons for those areas as identified in the appropriate QP "Certificate of Qualified Person" attached to this report. The authors have relied upon and disclaim responsibility for information derived from the following reports pertaining to mineral rights, surface rights, and permitting issues.

3.1 Mineral Tenure

AMEC QPs have not reviewed the mineral tenure, nor independently verified the legal status or ownership of the Project area or underlying property agreements. AMEC has relied upon RMP experts, and independent experts retained by RMP in Sections 4.4 and 4.5 of this report for this information through the following documents:

- DeMull, T., 2008: Additional Information: email from RMP Resources to AMEC dated 17 October, 2008
- Smith, R.J., 2008: Gibellini Claim List: unpublished Word® document included in email from email from R.J. Smith, independent land consultant, to AMEC dated 17 October 2008

3.2 Surface Rights, Access and Permitting

AMEC QPs have relied on information regarding the status of the current Surface Rights, Road Access and Permits through opinions and data supplied by RMP representatives, and independent experts retained by RMP for Section 4.6 of this report as follows:

- DeMull, T., 2008: Additional Information: email from RMP Resources to AMEC dated 17 October, 2008
- Smith, R.J., 2008: RE: Additional Information: email from R.J. Smith, independent land consultant, to AMEC dated 17 October, 2008

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Gibellini property is located in Eureka County, Nevada; about 27.5 miles south of the town of Eureka (see Figure 2-1). 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. It is centered at latitude 39° 13’ North and longitude 116° 05’ West. Mineralization at Gibellini 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.

4.2 Name Changes

During exploration on the Gibellini Project, RMP has changed some deposit names.

For the purposes of this report, the name changes are:

- Gibellini vanadium deposit = Vanadium Hill vanadium deposit
- Bisoni vanadium prospect = Rich Hill vanadium prospect

4.3 Property and Title in Nevada

Information in this sub-section has been compiled from Papke and Davis, (2002). The QPs have not verified this information, and have relied upon the Papke and Davis report, which is in the public domain for the data presented.

4.3.1 Mineral Title

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

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

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

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

4.3.2 Surface Rights

About 85% of the land in Nevada is controlled by the Federal Government; most of this land is administered by the US Bureau of Land Management (BLM), the US Forest Service, the US Department of Energy, or the US Department of Defense. Much of the land controlled by the BLM and Forest Service is open to prospecting and claim location. The distribution of public lands in Nevada is shown on the BLM "Land Status Map of Nevada" (1990) at scales of 1:500,000 and 1:1,000,000.

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

4.3.3 Environmental Regulations

All surface management activities, including reclamation, must comply with all pertinent Federal laws and regulations, and all applicable State environmental laws and regulations. The fundamental requirement, implemented in 43 CFR 3809, is that all hard rock mining under Plan of Operations or Notice on the public lands must prevent unnecessary or undue degradation. The Plan of Operations and any modifications to the approved Plan of Operations must meet the requirement to prevent unnecessary or undue degradation.

Authorization to allow the release of effluents into the environment must be in compliance with the Clean Water Act, Safe Drinking Water Act, Endangered Species Act, other applicable Federal and State environmental laws, consistent with BLM’s multiple-use responsibilities under the Federal Land Policy and Management Act and fully reviewed in the appropriate National Environmental Policy Act (NEPA) document.

4.4 Mineral Tenure

The Gibellini Project encompasses an area of approximately 2,624 acres (see Figure 4-1). The Project consists of 140 contiguous, active, unpatented lode mining claims covering portions of Sections 26, 34, 35, and 36 T16N, R52E and portions of Sections 1, 2, 3, 10, 11, and 15 T15N, R52E MDBM, in Eureka County. Unpatented mining claims are kept active through payment of a maintenance fee due on 31 August of each year.

Table 4-1 shows the claims in the Gibellini mine property lease area held through agreement with registered owners Janelle Dietrich, Kenneth Campbell, and Jacqualeene Campbell. Table 4-2 presents the Van Lease area claims acquired through agreement with registered owners Pamela S. Scutt, Richard McKay, and Nancy Minoletti. Table 4-3 includes those claims in the Vanadium International Corporation area acquired by agreement with Dennis LaPrairie. Table 4-4 presents the claims that are 100%-owned by RMP.

Figure 4-1: Tenure Map

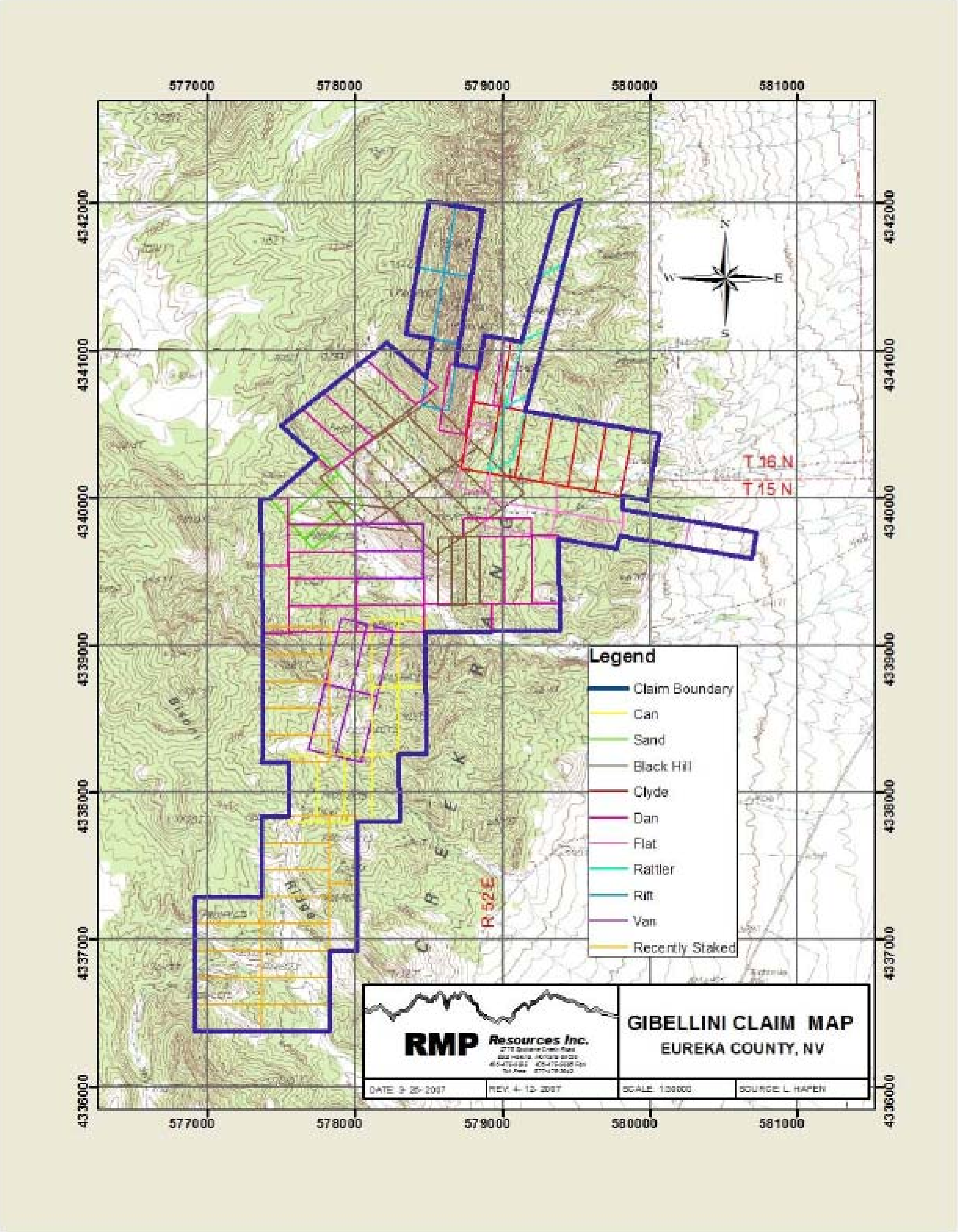


Table 4-1: Gibellini Mine Property Lease Claims (Janelle Dietrich, Kenneth Campbell, and Jacqualeene Campbell)

BLM Serial Number	Claim Name	First (MR, Township, Range, Section)
NMC82892	Black Hill # 1	21 0150N 0520E 002
NMC82893	Black Hill # 2	21 0160N 0520E 034
NMC82894	Black Hill # 3	21 0160N 0520E 034
NMC82895	Black Hill # 4	21 0150N 0520E 002
NMC82896	Black Hill # 7	21 0150N 0520E 002
NMC82897	Black Hill # 8	21 0150N 0520E 002
NMC82898	Black Hill # 9	21 0150N 0520E 002
NMC82899	Black Hill # 10	21 0150N 0520E 003
NMC793247	Black Hill 11	21 0150N 0520E 002
NMC793248	Black Hill 12	21 0150N 0520E 002
NMC793249	Black Hill 13	21 0150N 0520E 002
NMC793250	Black Hill 14	21 0150N 0520E 002
NMC82900	Black Iron # 1	21 0150N 0520E 002
NMC82901	Black Iron # 3	21 0160N 0520E 034
NMC82902	Black Iron # 4	21 0150N 0520E 002
NMC82903	Black Iron # 5	21 0150N 0520E 002
NMC82904	Black Iron # 6	21 0160N 0520E 034
NMC82921	Clyde # 1	21 0150N 0520E 002
NMC82922	Clyde # 2	21 0160N 0520E 035
NMC82923	Clyde # 3	21 0160N 0520E 035
NMC82924	Clyde # 4	21 0160N 0520E 035
NMC82925	Clyde # 5	21 0160N 0520E 035
NMC82926	Clyde # 6	21 0160N 0520E 035
NMC82927	Clyde # 7	21 0150N 0520E 001
NMC82928	Clyde # 8	21 0160N 0520E 035
NMC82905	Flat # 1	21 0150N 0520E 002
NMC82906	Flat # 2	21 0150N 0520E 002
NMC82907	Flat # 5	21 0150N 0520E 002
NMC82908	Flat # 10	21 0150N 0520E 002
NMC82909	Flat # 11	21 0150N 0520E 002
NMC82910	Flat # 12	21 0150N 0520E 001
NMC82911	Flat # 13	21 0150N 0520E 001
NMC82912	Manganese # 3	21 0160N 0520E 035
NMC82913	Rattler # 1	21 0160N 0520E 035
NMC82914	Rattler # 2	21 0160N 0520E 035
NMC82915	Rattler # 3	21 0160N 0520E 035
NMC82916	Rattler # 4	21 0160N 0520E 026
NMC82917	Rift # 1	21 0160N 0520E 035
NMC82918	Rift # 2	21 0160N 0520E 026
NMC82919	Rift # 3	21 0160N 0520E 035
NMC82920	Rift # 4	21 0160N 0520E 026

Table 4-2: Van Lease Claims (Pamela S. Scutt, Richard McKay, and Nancy Minoletti)

BLM Serial Number	Claim Name	County Book	Page Number	First Page (MR, Township, Range, Section)
NMC968757	VAN 1	466	182	21 0150N 0520E 010
NMC968758	VAN 2	466	183	21 0150N 0520E 003
NMC968759	VAN 3	466	184	21 0150N 0520E 002
NMC969607	VAN 3A	467	21	21 0150N 0520E 002
NMC968760	VAN 4	466	185	21 0150N 0520E 010

Table 4-3: Vanadium International Corporation Claims (Dennis LaPrairie)

BLM Serial Number	Claim Name	County Book	Page Number	First Page (MR, Township, Range, Section)
NMC728088	CAN #141	160	296	21 0150N 0520E 003
NMC728089	CAN #142	160	297	21 0150N 0520E 003
NMC728092	CAN #151	160	300	21 0150N 0520E 003
NMC728093	CAN #152	160	301	21 0150N 0520E 003
NMC728095	CAN #164	160	303	21 0150N 0520E 010
NMC728096	CAN #165	160	304	21 0150N 0520E 010
NMC797097	CAN 140	171	94	21 0150N 0520E 003
NMC797098	CAN 143	171	94	21 0150N 0520E 003
NMC797099	CAN 150	171	95	21 0150N 0520E 003
NMC797100	CAN 153	171	96	21 0150N 0520E 003
NMC797101	CAN 166	171	97	21 0150N 0520E 003
NMC797102	CAN 167	171	98	21 0150N 0520E 003
NMC797103	SAND 1	171	99	21 0150N 0520E 003
NMC797104	SAND 2	171	100	21 0150N 0520E 003
NMC797105	SAND 6	171	101	21 0150N 0520E 003
NMC797106	VAN 5	171	102	21 0150N 0520E 002
NMC797107	VAN 6	171	103	21 0150N 0520E 002

Table 4-4: RMP Claims

BLM Serial Number	Claim Name	County Book	Page Number	First Page (MR, Township, Range, Section)
NMC954477	BUFF 1	458	104	21 0150N 0520E 015
NMC954486	BUFF 10	458	113	21 0150N 0520E 010
NMC954487	BUFF 11	458	114	21 0150N 0520E 010
NMC954488	BUFF 12	458	115	21 0150N 0520E 010
NMC954489	BUFF 13	458	116	21 0150N 0520E 010
NMC954490	BUFF 14	458	117	21 0150N 0520E 010
NMC954491	BUFF 15	458	118	21 0150N 0520E 010
NMC954492	BUFF 16	458	119	21 0150N 0520E 010
NMC954493	BUFF 17	458	120	21 0150N 0520E 003
NMC954494	BUFF 18	458	121	21 0150N 0520E 003
NMC954495	BUFF 19	458	122	21 0150N 0520E 003
NMC954478	BUFF 2	458	105	21 0150N 0520E 015

BLM Serial Number	Claim Name	County Book	Page Number	First Page (MR, Township, Range, Section)
NMC954496	BUFF 20	458	123	21 0150N 0520E 003
NMC954497	BUFF 21	458	124	21 0150N 0520E 010
NMC954498	BUFF 22	458	125	21 0150N 0520E 002
NMC954479	BUFF 3	458	106	21 0150N 0520E 015
NMC954480	BUFF 4	458	107	21 0150N 0520E 015
NMC975406	BUFF 40	468	111	21 0150N 0520E 011
NMC954499	BUFF 41	458	126	21 0150N 0520E 010
NMC975407	BUFF 42	468	112	21 0150N 0520E 011
NMC954500	BUFF 43	458	127	21 0150N 0520E 003
NMC954501	BUFF 44	458	128	21 0150N 0520E 002
NMC954502	BUFF 45	458	129	21 0150N 0520E 003
NMC954503	BUFF 46	458	130	21 0150N 0520E 002
NMC954504	BUFF 47	458	131	21 0150N 0520E 003
NMC975408	BUFF 49	468	113	21 0150N 0520E 011
NMC954481	BUFF 5	458	108	21 0150N 0520E 010
NMC975409	BUFF 50	468	114	21 0150N 0520E 011
NMC975410	BUFF 51	468	115	21 0150N 0520E 011
NMC975411	BUFF 52	468	116	21 0150N 0520E 011
NMC975412	BUFF 53	468	117	21 0150N 0520E 011
NMC975413	BUFF 54	468	118	21 0150N 0520E 002
NMC975414	BUFF 55	468	119	21 0150N 0520E 002
NMC975415	BUFF 56	468	120	21 0150N 0520E 002
NMC975417	BUFF 57	468	122	21 0150N 0520E 002
NMC975418	BUFF 58	468	123	21 0150N 0520E 002
NMC975416	BUFF 59	468	121	21 0150N 0520E 002
NMC954482	BUFF 6	458	109	21 0150N 0520E 010
NMC975419	BUFF 60	468	124	21 0150N 0520E 002
NMC975420	BUFF 61	468	125	21 0150N 0520E 002
NMC954483	BUFF 7	458	110	21 0150N 0520E 010
NMC954484	BUFF 8	458	111	21 0150N 0520E 010
NMC954485	BUFF 9	458	112	21 0150N 0520E 010
NMC956620	BUFF 23	458	381	21 0160N 0520E 035
NMC956621	BUFF 24	458	382	21 0160N 0520E 034
NMC956622	BUFF 25	458	383	21 0160N 0520E 035
NMC956623	BUFF 26	458	384	21 0160N 0520E 034
NMC956624	BUFF 27	458	385	21 0160N 0520E 035
NMC956625	BUFF 28	458	386	21 0160N 0520E 034
NMC956626	BUFF 29	458	387	21 0160N 0520E 035
NMC956627	BUFF 30	458	388	21 0160N 0520E 034
NMC956628	BUFF 31	458	389	21 0160N 0520E 026
NMC956629	BUFF 32	458	390	21 0160N 0520E 026
NMC956630	BUFF 33	458	391	21 0160N 0520E 026
NMC956631	BUFF 34	458	392	21 0160N 0520E 026
NMC956632	BUFF 35	458	393	21 0160N 0520E 026
NMC956633	BUFF 36	458	394	21 0160N 0520E 026
NMC956634	BUFF 37	458	395	21 0160N 0520E 034
NMC956635	BUFF 38	458	396	21 0160N 0520E 034
NMC956636	BUFF 39	458	397	21 0160N 0520E 026

BLM Serial Number	Claim Name	County Book	Page Number	First Page (MR, Township, Range, Section)
NMC956637	BUFF 48	458	398	21 0160N 0520E 034
NMC926063	DAN 1	436	127	21 0160N 0520E 034
NMC926072	DAN 10	436	136	21 0150N 0520E 002
NMC926074	DAN 12	436	138	21 0150N 0520E 002
NMC926075	DAN 13	436	139	21 0150N 0520E 002
NMC926076	DAN 14	436	140	21 0150N 0520E 002
NMC926077	DAN 15	436	141	21 0150N 0520E 002
NMC926078	DAN 16	436	142	21 0150N 0520E 002
NMC926079	DAN 17	436	143	21 0150N 0520E 002
NMC926080	DAN 18	436	144	21 0160N 0520E 035
NMC926081	DAN 19	436	145	21 0160N 0520E 035
NMC926064	DAN 2	436	128	21 0160N 0520E 034
NMC926065	DAN 3	436	129	21 0160N 0520E 034
NMC926066	DAN 4	436	130	21 0150N 0520E 003
NMC926067	DAN 5	436	131	21 0150N 0520E 003
NMC926068	DAN 6	436	132	21 0150N 0520E 003
NMC926069	DAN 7	436	133	21 0150N 0520E 003

There has been no legal survey of the Property. Under Nevada law, each unpatented claim is marked on the ground, and does not require survey.

4.5 Agreements and Royalties

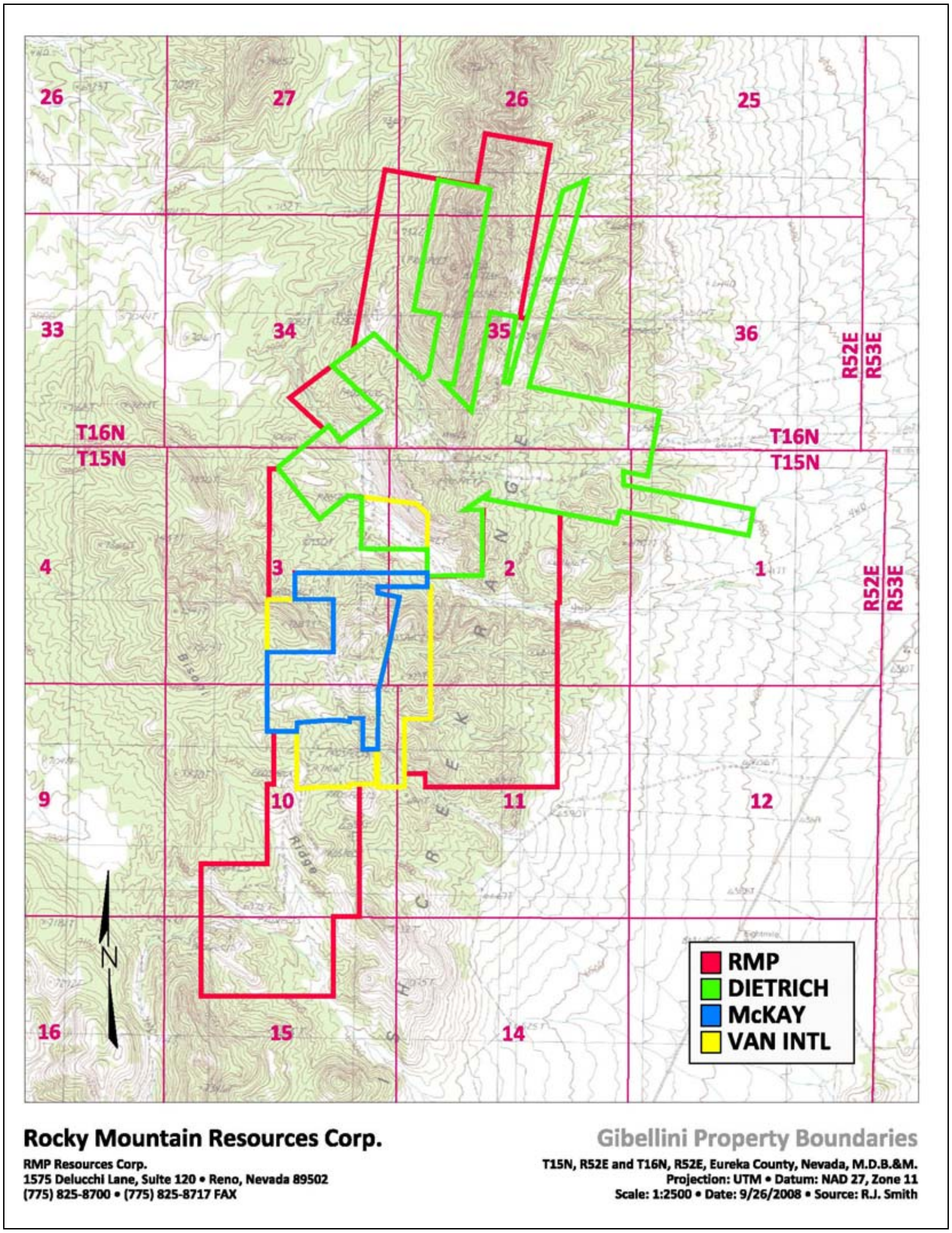
Lease agreements cover 70 of the 140 claims making up the Gibellini Project (Figure 4-2). The remaining claims (Dan and Buff series) were staked by RMP and are federal unpatented lode mining claims not subject to any agreements or royalties.

4.5.1 Gibellini Property

RMP signed a mineral lease agreement on 13 March 2006 for 100% interest in 41 claims (Black Hill, Black Iron, Flat, Manganese, Rattler, Rift, and Clyde series), covering portions of Sections 26, 34, 35, and 36 T16N, R52E and portions of Sections 1, 2 and 3, T15N, R52E MDBM, known as the Gibellini property, from the registered owners Janelle Dietrich, Kenneth Campbell, and Jacqualeene Campbell.

As advance royalties, RMP paid $60,000 upon execution of the agreement and will pay $30,000 for each calendar quarter thereafter until RMP begins payment of production royalties or terminates the lease agreement. Advance royalties are deductible cumulatively as a credit against production royalties. RMP will pay a production royalty of 2.5% of the Net Smelter Returns (NSR) until royalty payments reach a total of $3M, where the royalty decreases to 2.0%.

Figure 4-2: Agreements Map



Rocky Mountain Resources Corp.
RMP Resources Corp.
1575 Delucchi Lane, Suite 120 • Reno, Nevada 89502
(775) 825-8700 • (775) 825-8717 FAX

Gibellini Property Boundaries
T15N, R52E and T16N, R52E, Eureka County, Nevada, M.D.B.&M.
Projection: UTM • Datum: NAD 27, Zone 11
Scale: 1:2500 • Date: 9/26/2008 • Source: R.J. Smith

The agreement states that no conflicts exist with claims owned by other parties with the possible exception of the Black Hills number 11 and 12 claims (see Section 4.5.3).

4.5.2 Van Claims Lease

RMP signed a mineral lease agreement and option to purchase on 30 December 2006 for 100% interest in four claims (Van 1-4), covering portions of Sections 2, 3, and 10 T15N, R52E MDBM from the registered owners Pamela S. Scutt, Richard McKay, and Nancy Minoletti.

As advance royalties, RMP paid $9,000 upon execution of the agreement and will pay $12,000 for year two of the agreement, $15,000 for year three, $20,000 for year four, and $24,000 for each year thereafter until RMP begins payment of production royalties or terminates the lease agreement. Advance royalties are deductible cumulatively as a credit against production royalties and shall be credited toward the purchase price of $1,000,000. RMP will pay an initial production royalty payment of $30,000 within 60 days of production from the claims and will pay a production royalty of 3.0% of the Net Smelter Returns. These payments will be credited toward the purchase price.

In October–November 2007, as part of a mineral survey to ascertain validity of selected Vanadium International Corp. claims, it was discovered that the Van 1–4 claims had become invalid on a date after location. These claims were not previously known to be of questionable validity. In accordance with the terms of the lease agreement, RMP relocated the claims as Van 1–4 and Van 3A, and deeded Buff 16-18, Buff 22, Buff 43, and Buff 45–46 to the lease holders in order to provide them with the same ground previously embraced by the original Van 1–4 claims.

4.5.3 Vanadium International Corp. Lease

In April 2007, RMP leased 17 unpatented mining claims from Mr. Dennis LaPrairie, President of Vanadium International Corporation, a private Nevada Corporation, with offices in Reno, Nevada. The claims (Can, Sand, and Van 5 to 6 series) cover portions of Sections 2, 3, and 10 T15N, R52E, and portions of Section 34 T16N, R52E MDBM in Eureka County, Nevada.

An initial payment of $10,000 secured the lease for the first year. Advance royalty payments of $10,000 in years 2 and 3 and $15,000 per year thereafter and payments of the annual assessment filing fees keep the lease active for 10 years. The lease is renewable after the first ten years. Advance royalties are deductible cumulatively as a credit against production royalties and shall be credited toward the purchase price of $600,000. RMP will pay a production royalty of 2.5% of the Net Smelter Returns (NSR) until royalty payments reach a total of $1M, then the royalty is dropped.

Upon signing of the lease, there were validity questions in regards to overlap of more senior claims for CAN #142–143, CAN #152–153, and CAN #164–166, which were staked after the VAN 1–4 claims. A mineral surveyor has determined that the CAN #142–143, CAN #152–153, and CAN #165 claims are invalid. RMP intends to negotiate with the leaseholder to resolve these issues.

The VAN #5 and VAN#6 claims exactly overly two of the Black Hills #11 and #12 claims held under the Gibellini lease and are considered by RMP to be senior to the two Black Hills claims based upon date of location.

4.6 Surface Rights

The Gibellini Project is situated entirely on public lands that are administered by the Bureau of Land Management (BLM).

4.7 Permits

4.7.1 Current Operations

Current exploration activities are covered by an Exploration Notice that has been submitted to the BLM. To date, less than 10 acres of area have been disturbed, an area of disturbance permitted under the Exploration Notice.

No easements or rights of way are required for access over public lands.

4.7.2 Planned Operations

A number of county, state, and federal permits can be required to be granted prior to commencement of mining operations. These permits pertain to environmental and safety obligations by mining companies, and for day-to-day operations.

Regulated aspects of the mining process include: site disturbance, air quality, groundwater protection, solid waste management, hazardous materials management, stormwater control, water rights, surface water retention, wildlife protection, drinking water quality, sewage management, explosives, reclamation, and closure. Preparation and review times for the various applications are estimated to range from 2 months to 3 years. The actual time of review and approval by the various agencies can be highly variable. The regulatory components that will drive the timing of the Gibellini permit and approval processes are primarily the NEPA documentation (EIS/EA), and water rights appropriation. These are pre-requisite to all other permits. Additionally significant, but somewhat less time-critical, would be the engineered design components of the community water system, the sewage system, and the mining and process plan which are included in the Nevada Water Pollution Control Permit. The major permits that will be required for the Gibellini Project are summarized in Table 4-5.

4.8 Environmental

4.8.1 Current Operations

RMP is responsible for reclamation and rehabilitation of exploration-stage activities. To date, RMP has reclaimed drill roads from the Gibellini nickel–manganese mine 2007 drill program. That reclamation has been completed and signed off by the BLM.

RMP is of the opinion that the claimholders on the two block of claims where there are legacy workings would be responsible for the conditions existing on the site prior to the dates of the leases, if the BLM were to require any work be done. Most of the work on the properties such as the drill road building and the underground mining were undertaken prior to implementation of current Nevada regulations.

4.8.2 Planned Operations

Project development requires an approved Environmental Assessment (EA) with a Finding of No Significant Impact (FONSI), or an Environmental Impact Statement (EIS) with a Record of Decision (ROD).

The EA and EIS are review processes that demonstrate federal agency compliance with the National Environmental Policy Act (NEPA):

- An EA establishes either that significant impacts to the environment are not likely and that an EIS is not needed, or it documents that significant impacts are likely and that an EIS is needed.
- An EIS describes the project, identifies likely significant impacts, establishes mitigation measures if warranted, provides for public notice and comments, and results in a decision regarding either disapproval of the project or approval of the project with conditions, modifications and/or mitigation measures.

The BLM typically retains a contractor to prepare the documents. The first step in this process is to submit a Plan of Operations to the BLM, and from that document, they will scope the project specific NEPA requirements, including whether an EA or an EIS is needed. Some considerations include project size, complexity, controversy, and anticipated environmental issues.

Table 4-5: Major Operating Permits Required for Gibellini Project

Permits / Processes	Purpose	Agency
NEPA-EA (11.3.1)	Mine Approval	USDA-BLM, Battle Mt FO
NEPA-EIS (11.3.1)	Mine Approval	USDA-BLM, Battle Mt FO
Right-of-Way Grants of BLM administered land (11.3.1)	Land use, water lines, power lines, etc. outside of the project site	USDA-BLM, Battle Mt FO
Purchase, Transport or Storage of Explosives Permit (11.3.2)	Explosives	Federal Bureau of Alcohol, Tobacco and Firearms
Class III Waiver Landfill Permit (11.3.3)	On site disposal of standard waste	NDEP, Bureau of Waste Management
Mine Construction Stormwater NPDES General Permit (11.3.4)	Stormwater control – construction (SWPPP, BMPs)	NDEP, Bureau of Water Pollution Control
Mining Operation Stormwater NPDES General Permit (11.3.4)	Stormwater control – mining (SWPPP, BMPs)	NDEP, Bureau of Water Pollution Control
Ground Water Discharge Permit (11.3.4)	Sewage treatment and discharge	NDEP, Bureau of Water Pollution Control
Class II Stationary Air Permit (11.3.5)	Air emissions-crusher, power equipment, dust	NDEP, Bureau of Air Pollution Control
Surface Area Disturbance Dust Control Permit (11.3.5)	Dust control during mine site construction	NDEP, Bureau of Air Pollution Control
Water Pollution Control Permit (11.3.6)	Protection of groundwater from mining, milling and other beneficiation processes	NDEP Bureau of Mining Regulation and Reclamation
Reclamation Permit for Mining (11.3.6)	Reclamation of disturbed site areas	BLM, NDEP Bureau of Mining Regulation and Reclamation
Permit to Operate (11.3.7)	Non-transient, non-community public water system	Nevada State Health Division, Bureau of Safe Drinking Water
Dam Construction Permit (11.3.8)	Surface water impoundment	Nevada Division of Water Resources
Water Appropriation Permit (11.3.8)	Groundwater use	Nevada Division of Water Resources
Industrial Artificial Pond Permit (11.3.9)	Wildlife protection	Nevada Division of Wildlife
Hazardous Materials Storage Permit(11.3.10)	Hazardous materials	Nevada State Fire Marshall
Fire and Life Safety Review/Approval(11.3.10)	Life safety systems-construction designs	Nevada State Fire Marshall

Note: NEPA = National Environmental Policy Act; EA = Environmental Assessment; EIS = Environmental Impact Statement; BLM = Bureau of Land Management; USDA = United States Department of Agriculture; FO = field office; NDEP = Nevada Division of Environmental Protection; SWPPP = stormwater pollution prevention plan, BMP = best management practices

AMEC has estimated that the Gibellini Project will disturb approximately 320 acres. A summary break down follows: pits and dump at 100 acres, leach pad and processing facility at 160 acres, and site buildings, topsoil stockpiles, and roads at 60 acres. If the area of disturbance exceeds 640 acres, the BLM will require an EIS level of NEPA review.

AMEC notes that should the adjacent Rich Hill prospect be developed, the area of disturbance could be doubled.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Gibellini property is 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 8 miles to a fork in the road. At the fork, an improved gravel county road, on the right, is followed for approximately 7 miles to where a two-track road on the west leads to the property. Access to the property is good, and is possible year-round.

The nearest town to the Property is Eureka, Nevada, which is situated along US Highway 50 and hosts a population of 1651 (Census 2000 data). The nearest city is Reno, Nevada, approximately 215 miles to the west and hosts a population of 180,480 (Census 2000 data).

5.2 Climate

The climate in the Gibellini area is typical for east-central Nevada. Average monthly high temperatures range from 74 to 85° F in the summer and 37 to 47° 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 (Weather Channel website, 2006).

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.

5.3 Local Resources and Infrastructure

5.3.1 Infrastructure

There is currently no existing infrastructure on the Project.

There is sufficient area within the Project to host an open pit mining operation, including any proposed open pit, waste dumps, tailings, and leach pads. RMP has secured surface rights for the area that may host these facilities.

The most significant towns in the Project vicinity are Carlin, which has a rail-head, and Elko, which is the northeastern regional mining center. Workers would likely be imported from Elko County (Carlin and Elko) to supplement the work force available in Eureka.

5.3.2 Transport

Gibellini is located approximately 27.5 miles southeast of Eureka, NV. The 24.5 miles leading to the mine site is State owned and is either paved or improved gravel. The three miles of road access from Nevada State Route 379 to the mine is a two-track dirt road, however, it can be upgraded to service the mine at minimal cost because the road base appears fair, the grades are moderate (less then 5%), and no significant cuts or fills are required. AMEC estimated that the mine access road can be improved at a cost of $20,000 per mile, or $60,000 in total. If a local source of road base is available, the cost to improve the access road will be less.

This upgraded road would be the prime method of transport for goods and materials in and out of the Project.

5.3.3 Power

The nearest power line to the Project is located approximately 7 miles north and services the Fish Creek Aradan Ranch.

As part of the PA, Mt Wheeler Power provided an estimate of $7.7 M (without contingency) to bring power to the Gibellini site. The estimate is based on tying into an existing 69 KV transmission line at Machacek, and then building 20 miles of 69 KV transmission line to Strawberry Road where it would terminate at a newly-constructed 69 KV to 25 KV transformer. From the transformer, 30 miles of 25 KV transmission line would be built to the Gibellini mine site. The proposed transmission line route is within existing Mt Wheeler Power easements. Mt Wheeler Power noted that a more direct and less costly route may be available, but it would require procuring right-of-way easements.

AMEC recommended that due to the high cost to bring grid power to Gibellini, either a lower cost route should be investigated or the mine should assess self-generated power.

For the purposes of the PA, with the exception of the Ferrovanadium Case, all PA study scenarios assume $0.065/kwh grid provided power with an initial capital cost of $7.7 M. The Ferrovanadium Case assumed that the 69 KV transmission line would extend 50 miles from Machacek to the mine site due to the power draw required to produce ferrovanadium. Power transmission capital costs for the Ferrovanadium Case are $12.5 M excluding contingency.

5.3.4 Water

Process and potable water was envisaged in the PA, as being supplied by wells drilled on the Gibellini Property. AMEC envisages two wells will be required.

There is an abandoned dry well at the site, which was estimated at over 150 ft deep, but is partially backfilled. Peak water requirements are estimated at 525 gpm for the base case development plan, 2 Mt leach.

A water supply contingency was also considered, which consisted of importing water from the Little Smokey Valley to the east of the Project.

No water rights have been procured for the Gibellini Project. The water rights appropriation process may take as many as 24 months, including the drilling and development of a well(s), aquifer testing, modeling to assess for potential to affect neighboring water users or sensitive water bodies, and the application submittal and review process.

5.3.5 Communications

There are currently no communications facilities on site. The PA includes provision for all necessary equipment to set up site communications including telephone, internet, and radio.

5.3.6 Contractor Camp/Work Force Housing

Local resources necessary for the exploration and possible future development and operation of the Gibellini project 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. It is anticipated that the resources for operations at Gibellini would be available from Eureka and surrounding communities.

5.4 Physiography, Flora and Fauna

The Gibellini Project is located on the east flank of the Fish Creek Range along a northwest-trending ridge. Elevation at the Project ranges from 6,600 to 7,131 feet 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 Project is covered by sagebrush, grass, and various other desert shrubs. Fauna that have been observed in the Gibellini Project area are typical of those of the Great Basin area.

6.0 HISTORY

In 1942, Mr. Louis Gibellini located claims covering the Gibellini manganese–nickel mine (also known as the Niganz manganese–nickel mine) immediately east of the Vanadium Hill deposit. The deposit was intermittently mined until the mid-1950s. Workings at the mine 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 psilomene 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% manganese, 2.8% zinc, and 1.22% nickel. A shipment of 95.4 tons of mineralization in 1953 to the Combined Metals Company mill in Castleton, Nevada, reportedly contained 31.6% manganese (Roberts et al., 1967).

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

The Vanadium Hill deposit was first explored by Siskon Co. in 1960 to 1961 (Roberts et al, 1967). Cheschey & Co. (1960–1963), Terteling & Sons (1964–1965), and Atlas and TransWorld Resources (1969) reportedly worked one or both of the deposits during the 1960s (Morgan, 1989). Work during this period included rotary drilling, trenching, mapping and metallurgical testing. Terteling & Sons 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 per pound) discouraged further development (Morgan, 1989).

In 1972, Noranda optioned claims covering the Vanadium Hill and Rich Hill areas. In the same year, metallurgical research on Vanadium Hill drill hole composite samples and mine and market economic studies by the Colorado School of Mines Research Institute (CSMRI) indicated that the Vanadium Hill deposit was potentially economic. In 1972 and 1973 Noranda drilled 52 rotary and reverse circulation (RC) drill holes in the Vanadium Hill deposit to provide data for a mineral resource estimate and to provide material for additional metallurgical testing. Five holes were also drilled in the Rich 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 Vanadium Hill mineralization. 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 Vanadium Hill deposit was not economically viable.

Noranda also completed a resource estimate on the Rich Hill prospect. Noranda estimated that the Rich Hill deposit contained between 5 and 8Mt of vanadium-rich shale, but that further work was required before an accurate resource estimate could be performed (Condon, 1975). Intercepts (all starting from 5 to 10 feet below surface) returned from the five drill holes at Rich Hill included 120 feet of 0.53% V2O5, 85 feet of 0.43% V_2O_5, 45 feet of 0.61% V_2O_5, and 30 feet of 0.64% V_2O_5. Morgan (1989), using the Noranda drill plan and ore blocks, estimated a mineral resource for Rich Hill.

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 Noranda, Atlas, and Terteling drilling and to provide material for metallurgical test work (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 AMEC.

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

RMP commissioned AMEC to review exploration work completed on the Project and to develop a mineral resource estimate conforming to CIM Definition Standards for Mineral Resources and Mineral Reserves (2005), as referenced by Canadian National Instrument 43-101. This work was the subject of a Technical Report completed in April 2007.

Following this initial technical report, RMP completed RC and diamond drilling (see Section 11 of this Report), and additional metallurgical testwork (discussed in Section 16). As a result of encouraging results, RMP commissioned AMEC to complete a preliminary assessment for the Vanadium Hill deposit. The preliminary assessment is the subject of this Report.

7.0 GEOLOGICAL SETTING

7.1 Regional Geology

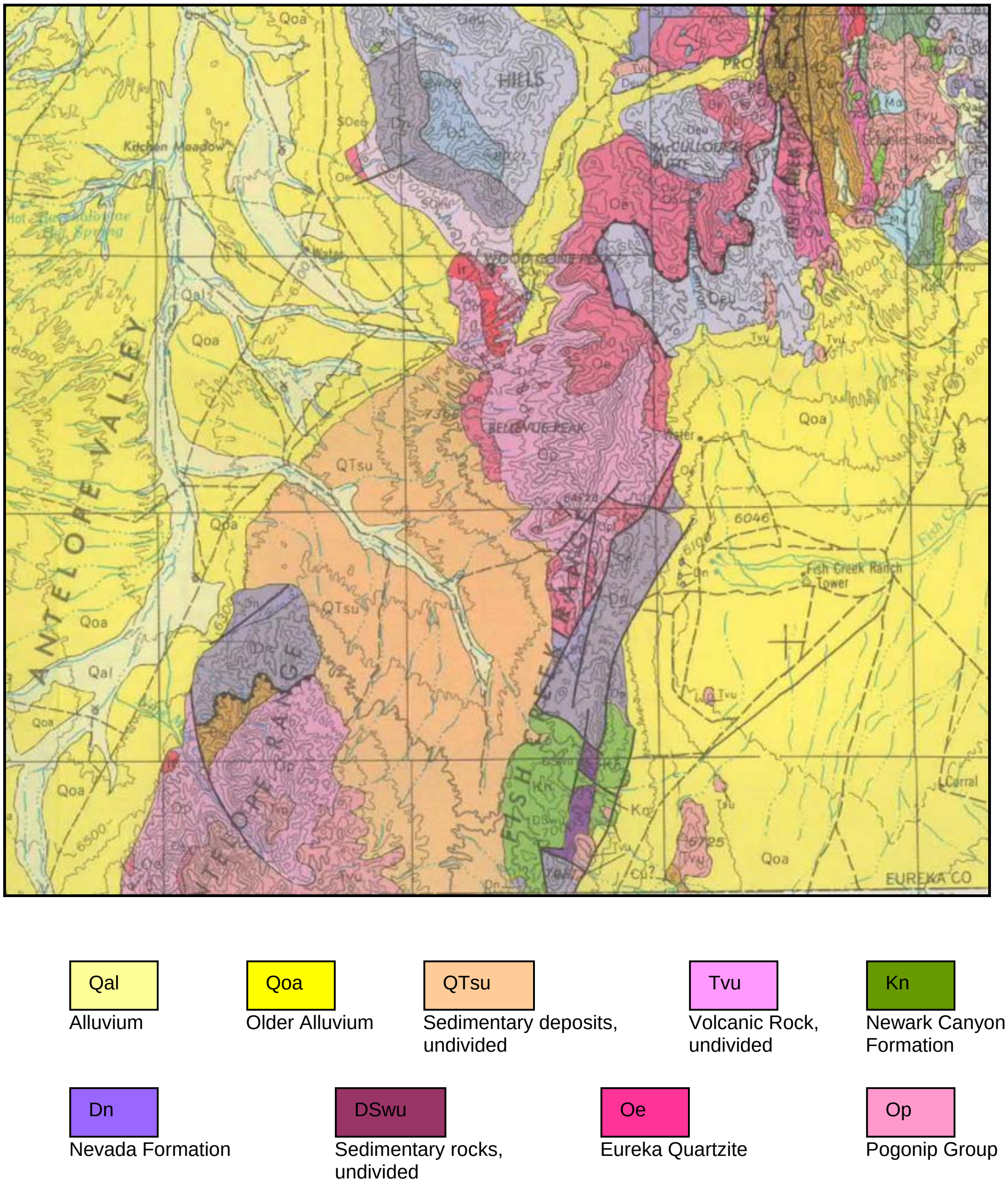
The Gibellini Project is located on the east flank of the southern part of the Fish Creek Range (Figure 7-1). The southern parts of the Fish Creek Range consist primarily of Palaeozoic sedimentary rocks of Ordovician to Mississippian Age of the eastern carbonate, western siliceous, and overlap assemblages. 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 deposit and the Vanadium Hill and Rich Hill black shale-hosted vanadium deposits are the most significant deposits in the district and all occur within the Gibellini Project boundaries (Figure 7-2). The Bisoni–McKay black shale-hosted vanadium deposit occurs several miles south of the Gibellini Project (see Section 15). A fluorite–beryl prospect and vein-hosted silver–lead–zinc mines with minor production are also reported to occur in the district (Roberts et al., 1967).

7.2 Property Geology

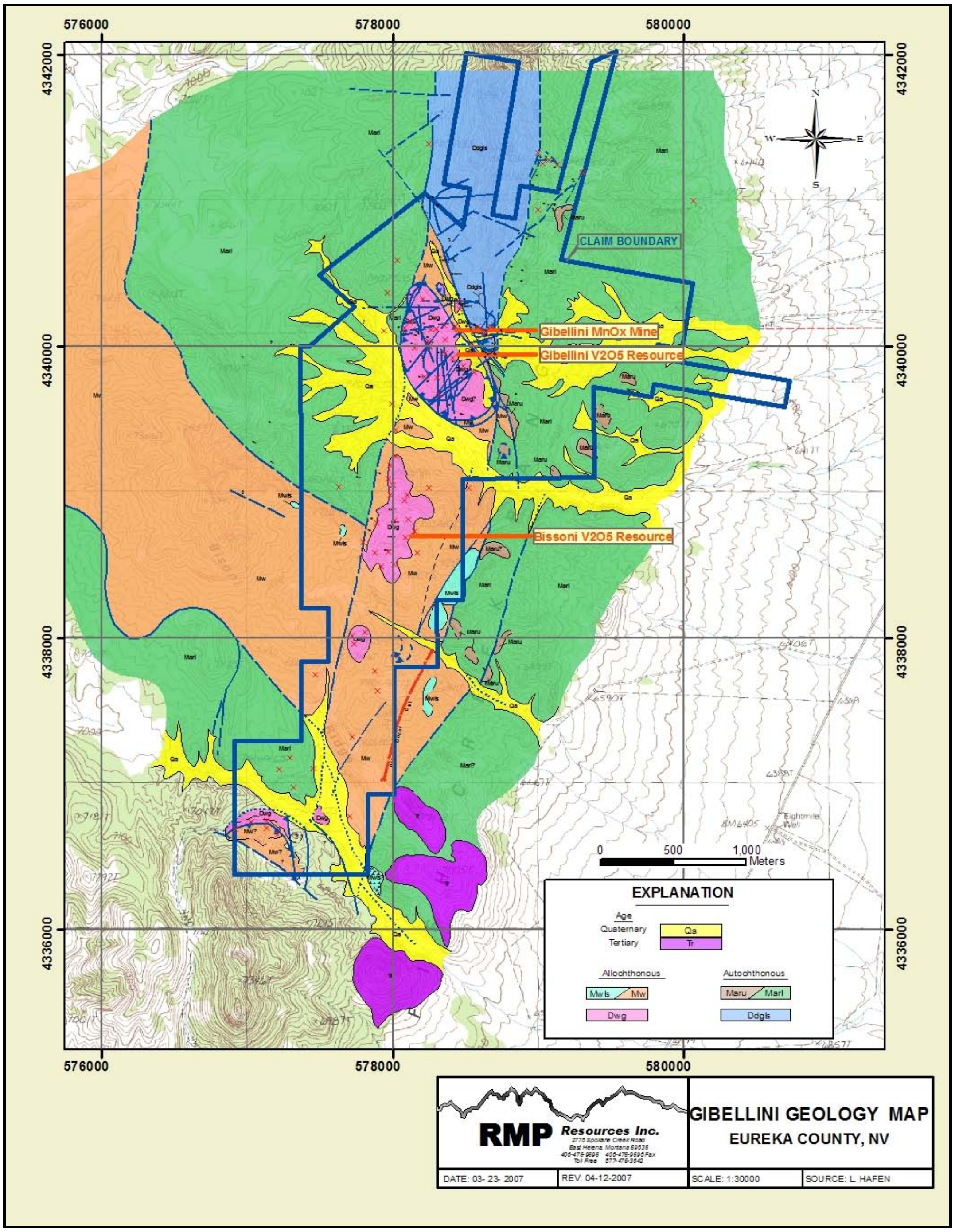
The Vanadium Hill deposit occurs within an allochthonous fault wedge of organic-rich siliceous mudstone, siltstone, and chert, which forms a northwest trending prominent ridge (Figure 7-2). These rocks are mapped as the Gibellini facies of the Woodruff Formation of Devonian Age (Desborough et al., 1984). Noranda described the rocks as thin bedded shales, very fissile and highly folded, distorted and fractured (Condon, 1975); RMP have confirmed this description. In general, the beds strike north–northwest and dip from 15º to 50º to the west. Outcrops of the shale are scarce except for along road cuts and trenches. The black shale unit which hosts the vanadium mineral resource is from 175 to over 300 feet thick and overlies grey mudstone. The shale has been oxidized to various hues of yellow and orange to as much as 100 feet in depth.

Figure 7-1: Gibellini Project Regional Geological Map



Note: from Roberts et al., 1967. Grid on map is 6 miles x 6 miles. Vertical grid lines reflect grid north, which approximates magnetic north.

Figure 7-2: Gibellini Property Geological Map with Current Property Outline.



Note: Figure courtesy RMP

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.

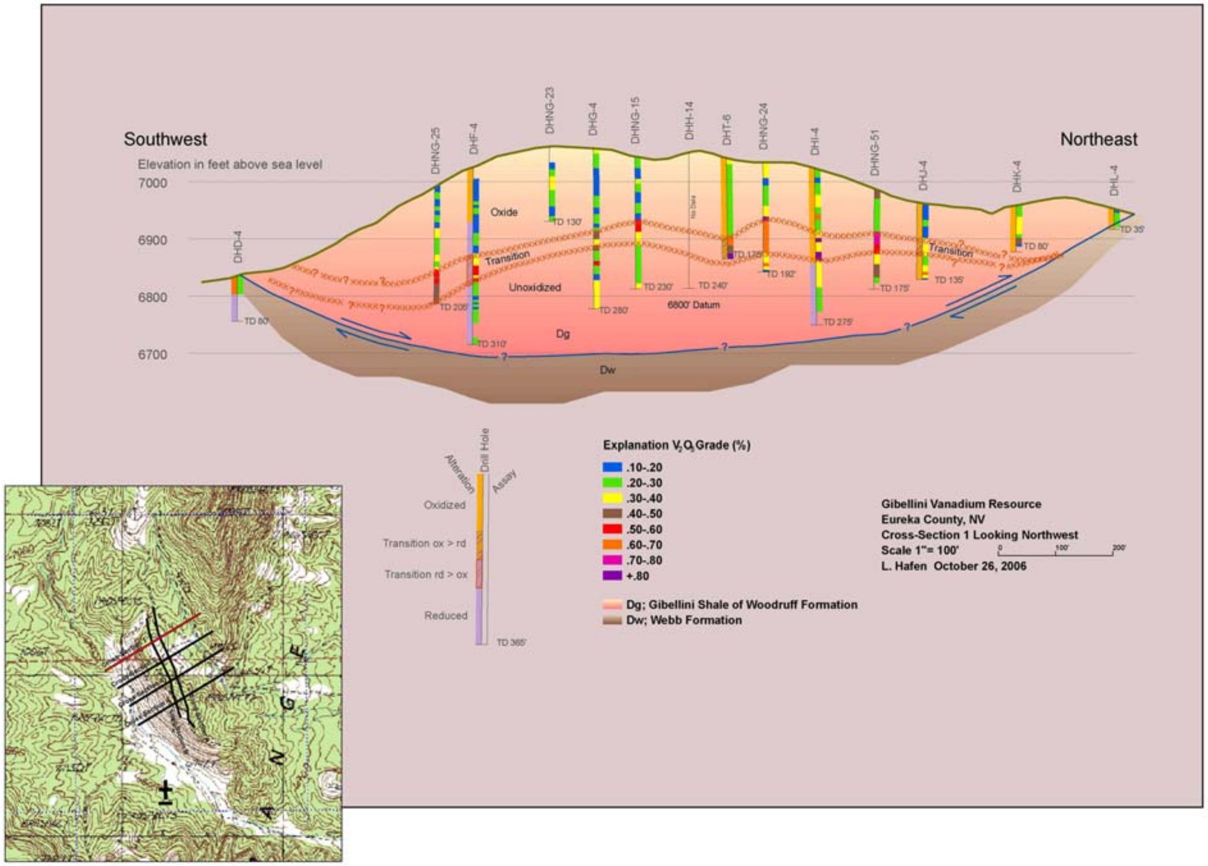
Figures 7-3 and 7-4 are cross and long sections, respectively, through the Vanadium Hill deposit showing typical V_2O_5 grades, alteration (oxidation), and lithological units.

Alteration of the rocks is limited to oxidation and is classified as one of three oxide codes: oxidized, transitional, and unoxidized (Figure 7-5). Vanadium grades change across these boundaries. The transitional zone reports the highest average grades and RMP geologists interpret this zone to have been upgraded by supergene processes. The oxide zone reports the next highest average grades and the unoxidized zone reports the lowest average grades.

The Rich Hill prospect is located in the same formation and lithological units as the Vanadium Hill deposit. The general geology in this area is thought to be similar to the Vanadium Hill area, but more work is required to confirm this.

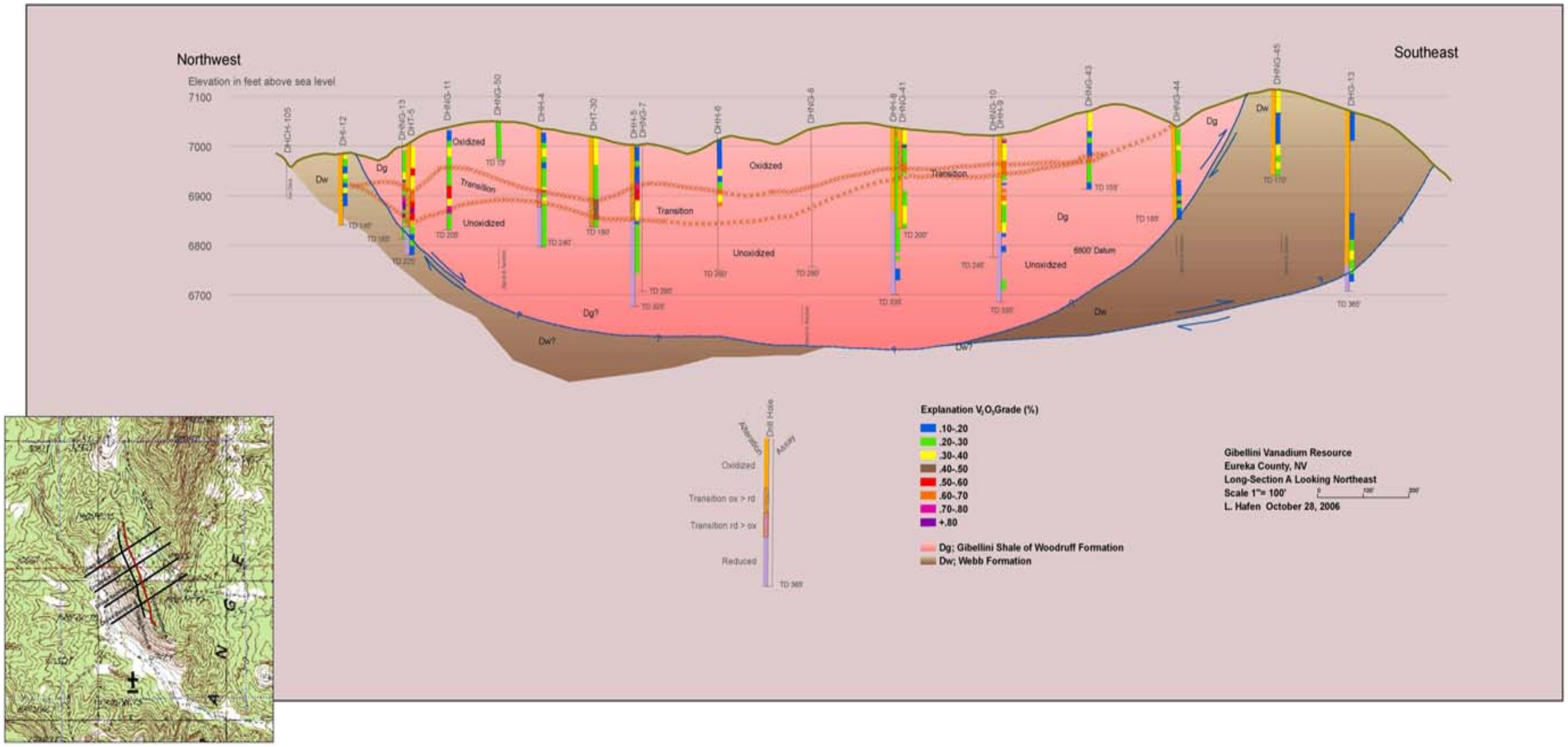
The ridge on which the Gibellini manganese–nickel mine lies is underlain by yellowish-grey, fine-grained limestone. This limestone is well bedded with beds averaging two feet thick. A fossiliferous horizon containing abundant bryozoan remains crops out on the ridge about 100 feet higher than the mine. The lithologic and faunal evidence suggest that this unit is part of the Upper Devonian Nevada Limestone. Beds strike N18E to N32W and dip at 18º to 22º to the west.

Figure 7-3: Typical Vanadium Hill Cross Section



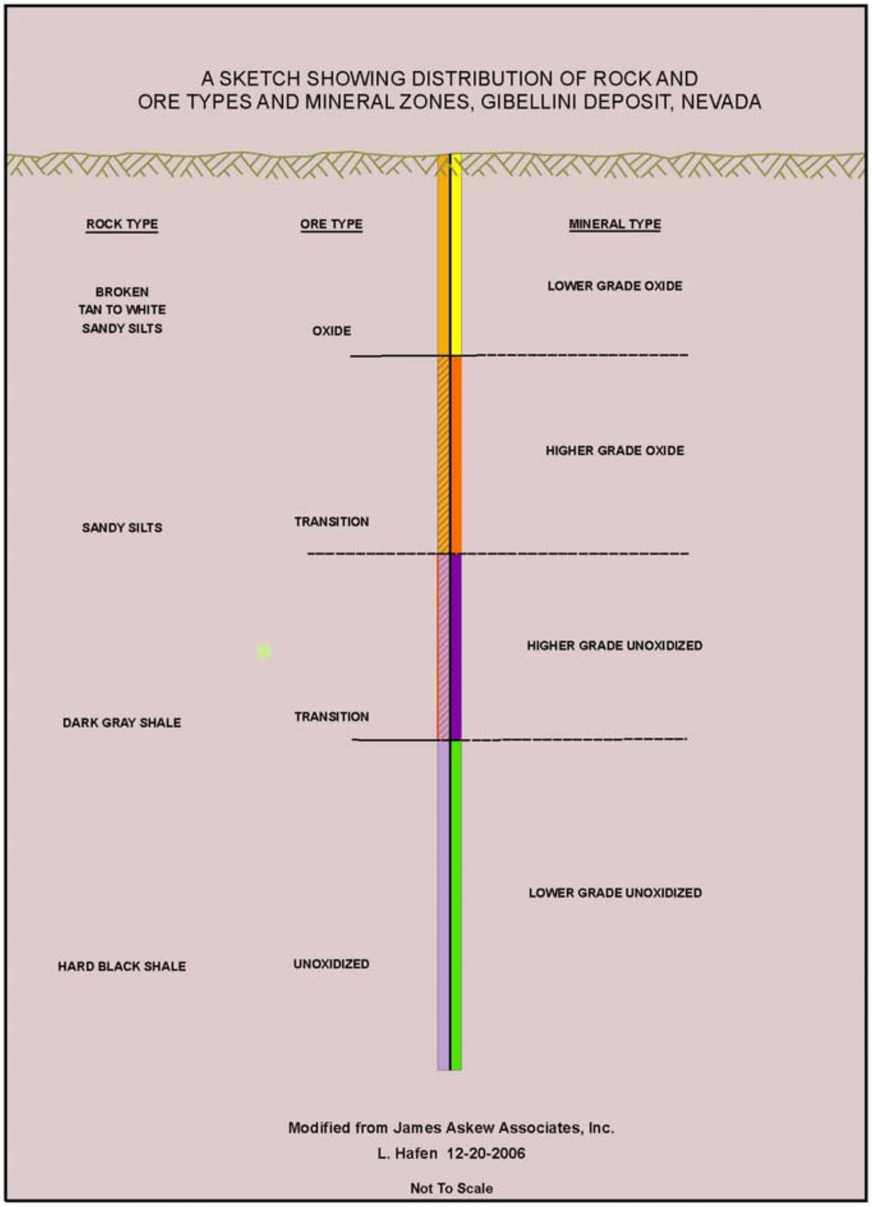
Note: Figure courtesy RMP

Figure 7-4: Typical Vanadium Hill Longitudinal Section (source: RMP).



Note: Figure courtesy RMP

Figure 7-5: Distribution of Rock and Ore Types and Mineral Zones for the Vanadium Hill Deposit



Note: Figure courtesy RMP

Bodies of manganese–nickel mineralization occur within this unit. Alluvium, up to 10 ft thick, mantles 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 25º to the northwest. This may be either a normal sedimentary contact or a fault contact (interpreted to be a thrust fault but evidence is inconclusive).

8.0 DEPOSIT TYPES

The vanadium mineralization of the Vanadium Hill and Rich Hill areas is hosted in black shale sedimentary rocks. Mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes.

Limited mineralogical work conducted in the early 1970s suggests that the vanadium occurs within manganese nodules in the shale (Assad and Laquitton, 1973). 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.

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.

Similarities with the style of mineralization for the Project exist in the USGS manganese nodule model, model 33a of Cox and Singer (1986).

9.0 MINERALIZATION

9.1 Vanadium Hill and Rich Hill

In the oxidized zone, complex vanadium oxides occur in fractures in the sedimentary rocks including metahewettite (CaV_6O_{16}–H_2O), bokite ($KAl_3Fe_6V_{26}O_{76}$–$30H_2O$), schoderite, and metaschoderite ($Al_2(PO_4)$ (VO_4)–6-8H_2O). In the unoxidized sediments, vanadium occurs in organic material (kerogen) made up of fine grained, flaky, and stringy organism fragments less than 15 micrometers in size (Bohlke et al., 1981).

Vanadium mineralization can also occur within manganese nodules (psilomene family) in the shale (Assad and Laguiton, 1973). XRD mineralogy work by SGS Lakefield Research in Ontario, Canada reported the occurrence of the vanadium mineral fernandinite (CaV_8O_{20} - H_2O) (SGS, 2007). Other minerals reported to occur at Gibellini are marcasite, sphalerite, pyrite, and molybdenite (Desborough et al., 1984).

The top 100 ft to 120 ft of the Vanadium Hill deposit is oxidized, producing various orange, pink, and purple vanadium oxide minerals. Vanadium grades in the oxide zone are generally higher than in the unoxidized zone but lower than in the transition zone. Below the oxidized zone is the transition zone (mixed oxide and unoxidized rocks), which typically contains the highest grades in the deposit. An unoxidized zone underlies the transition zone and typically is lower in vanadium grade than the oxide and transition zones.

9.2 Gibellini Manganese–Nickel Mine

Mineralization at the Gibellini manganese–nickel mine is composed essentially of manganese oxides in a pipe-like structure.

Anomalous amounts of zinc, vanadium, and nickel occur in the mineralization but no minerals incorporating these metals have been found. The origin of the deposit is not known. The mineralized zone may represent a hydrothermal deposit in a favorable, porous bed which has since been leached leaving only the manganese oxides. It may also represent a residual concentration derived from the erosion of nearby manganese-rich blocks. Another alternative is that the deposit may have a sedimentary origin, with the manganese oxides having been directly precipitated during a given period of deposition.

Pyrolusite and psilomelane are the manganese ore minerals at the Gibellini manganese–nickel mine. They occur together as a mixture of black, earthy material with dense, metallic layers showing botryoidal structures.

10.0 EXPLORATION

Exploration activities on the Gibellini Project have included mapping, trenching, geochemical sampling, and drilling by multiple operators from the 1950s to current time. Underground development was also conducted at the Gibellini manganese–nickel mine. Exploration activities and results are discussed in the following subsections.

10.1 Exploration Prior to 1960

The Nevada Bureau of Geology and Mines (NBGM) drilled four holes at the Gibellini manganese–nickel mine in 1946. Hogle Brothers developed the underground workings at the mine in the 1950s. Channel samples were collected from the underground workings by the NBGM and assayed for Mn, Zn, and Ni. This work is not part of the resource database for the Vanadium Hill deposit.

Union Carbide reportedly drilled a series of holes in 1956 at the Rich Hill prospect; however, no information from this campaign has survived.

10.2 Terteling

In 1964 and 1965, Terteling drilled 33 rotary drill holes totaling 5,695 feet. No documentation of other exploration work by Terteling remains. Details of the exploration drilling by Terteling are discussed in Section 11 of this Report.

10.3 Atlas

In 1969, Atlas drilled 77 rotary drill holes totaling 15,685 feet. No documentation of other exploration work by Atlas remains. Details of the exploration drilling by Atlas are discussed in Section 11.

10.4 Noranda

Noranda exploration work on the Gibellini Project included an aerial photographic survey, drilling, and metallurgical testwork.

10.4.1 Drilling

A total of 52 drill holes (10 rotary, 42 RC) totaling 10,556 feet were completed by Noranda at the Vanadium Hill deposit from 1972 to 1973 to provide assay data for a vanadium resource estimate and to provide material for metallurgical testing. Noranda drilled a series of holes at the Rich Hill vanadium deposit, but the locations of these holes are unknown. Details of the exploration drilling by Noranda are discussed in Section 11 of this Report.

10.4.2 Aerial Photographic Survey

In 1972, Noranda contracted Olympus Aerial Surveys (OAS) of Salt Lake City, Utah, to conduct an aerial photographic survey over the Gibellini Project and Bisoni-McKay deposit to provide a 1:1,200 scale (1”=100’) base map for mapping and sampling activities. AMEC contacted OAS in an attempt to reclaim digital results from the original work and was informed that nothing remained from the original work. The 25 foot contour lines from the Noranda base map were digitized by AMEC to provide the topographic control for the Vanadium Hill resource estimate.

10.4.3 Metallurgical Testwork

From 1972 through 1974, Noranda conducted metallurgical testwork on surface samples and composite samples from their drilling campaign. Details of the metallurgical testwork performed by Noranda at the Gibellini Project are discussed in Section 16 of this Report.

10.5 Inter-Globe

10.5.1 Drilling

A total of 11 drill holes totaling 2,538 feet were completed in 1989 by Inter-Globe throughout the Vanadium Hill area to confirm grades reported by Noranda, Atlas, and Terteling, and to provide material for metallurgical testing. Details of the exploration drilling by Inter-Globe at Gibellini are discussed in Section 11.

10.5.2 Trench Mapping and Sampling

In August, 1989, Inter-Globe mapped and sampled nine bulldozed trenches and seven backhoed pits throughout the Gibellini vanadium resource area (Figure 10-1). 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 10-1.

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).

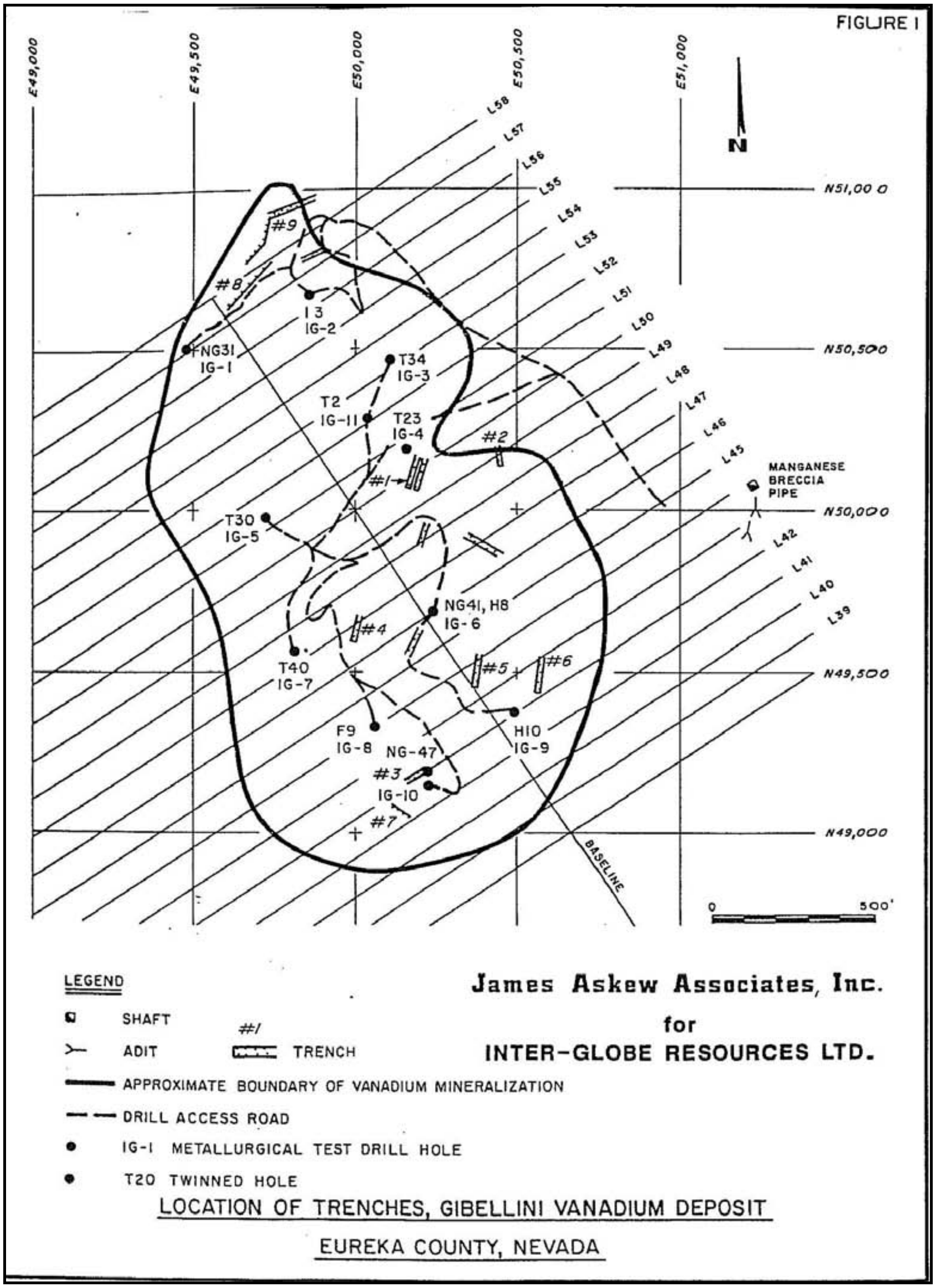
10.6 RMP Resources

RMP acquired the Gibellini Project in March 2006 and immediately began exploration activities, including claim staking, geologic mapping and geochemical sampling. Identification of prospective areas of vanadium mineralization south of the original claim block prompted additional claim staking and leasing.

10.6.1 Geologic Mapping

In 2006, RMP geologists mapped the Gibellini Project at a scale of 1” = 200 m (656 ft). Results from this mapping effort are shown earlier in Figure 7-2. This mapping program identified additional targets for both vanadium and manganese oxide mineralization on the property.

Figure 10-1: Inter-Globe Trench Mapping and Sampling Map



Note: Figure from JAA, 1989b

Table 10-1: Length-Weighted Average V_2O_5 Assays for 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

10.6.2 Geochemical Sampling

RMP have completed two rock chip geochemical sampling programs. Results of these programs have been superceded by the drilling programs discussed in Section 11 of this Report.

In January 2006, RMP geologists collected 20 rock-chip samples from surface outcrops around the Gibellini manganese–nickel mine area. Manganese mineralization was observed to be principally structurally controlled along northwest- and northeast-trending fault zones. Fault gouge and strong decalcification were noted at many sample locations. The rock chips returned consistently elevated values of Mn, Zn, Ni, V, Mo, Co, and Cu. Most assays returned greater than 10% Mn, between 1.0% and 8.0% Zn, and between 1.0% and 3.3% Ni. Elevated values of Pt, up to 0.429 g/t, were also returned for some samples.

Between June and December 2006, RMP geologists collected an additional 464 rock-chip samples from the Gibellini Project and surrounding areas, with the aim of confirming mineralization at the known prospects and deposits, and for exploration purposes. All samples were assayed for a multi-element suite, including Au, Ag, Pt, Pd, Cd, Co, Cu, Mn, Mo, Pb, Ni, Se, U, V, and Zn.

As part of this program, RMP collected 82, five foot, horizontal chip channel samples along all of the underground workings at the Gibellini manganese–nickel mine, and approximately 60 channel samples in road cuts above the underground workings.

Results from the geochemical sampling program confirmed anomalous concentrations and thicknesses of vanadium mineralization at Vanadium Hill and Rich Hill, and anomalous concentrations of nickel, vanadium, and zinc at the Gibellini manganese–nickel mine. Additional prospective areas for vanadium and manganese oxide mineralization were identified and covered by additional claim-staking where necessary.

11.0 DRILLING

A total of 212 drill holes (about 46,335 ft) have been completed on the Gibellini Project since 1960, comprising 12 core holes (3,350 ft), 120 rotary drill holes (25,077 ft) and 80 RC holes (17,907.5 ft).

A drill hole location plan for the drilling completed to January 2008 at Vanadium Hill is presented in Figure 11-1.

11.1 Legacy Drill Campaigns

11.1.1 Vanadium Hill

A total of 35,789 ft of drilling in 173 drill holes was completed 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.

A summary of the drilling campaigns carried out on the Vanadium Hill deposit is shown in Table 11-1. Figure 11-2 shows the spatial distribution of the drill holes from the different drill campaigns and the location of the mineralized zones.

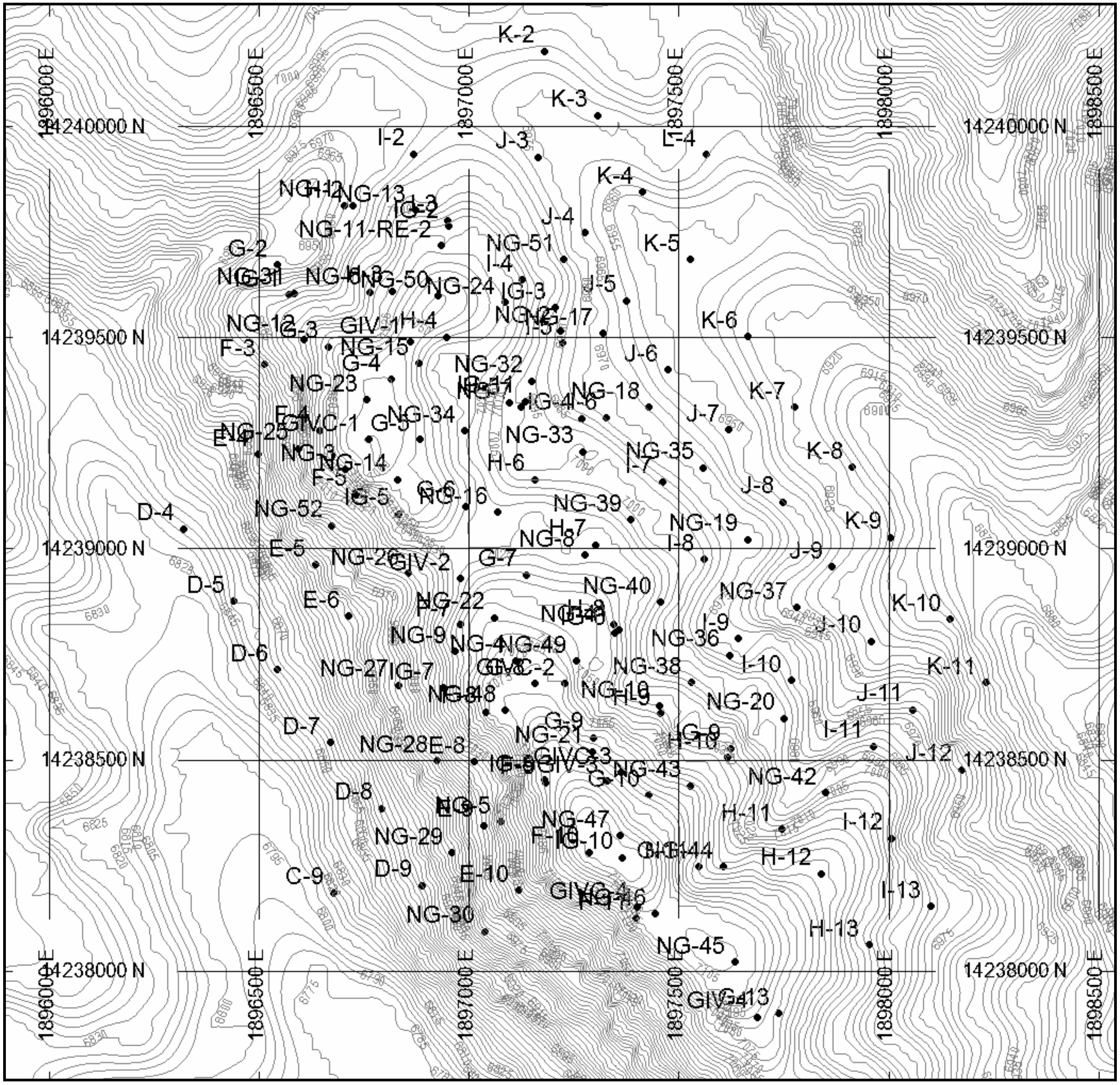
Terteling drilled holes in an uneven pattern in the central and northern parts of the vanadium resource area. Atlas drilled the main vanadium resource area in a rough 200 ft square grid pattern oriented parallel to the trend of the main ridge. Noranda re-drilled this same area with holes spaced 200 ft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

No cuttings, assay rejects, or pulps remain from these drilling campaigns.

11.1.2 Gibellini Manganese–Nickel Mine

A total of 895.5 ft of drilling in four core drill holes was completed at the Gibellini manganese–nickel mine by NBGM in 1946 (Table 11-2).

Figure 11-1: Vanadium Hill Drill Hole Location Map

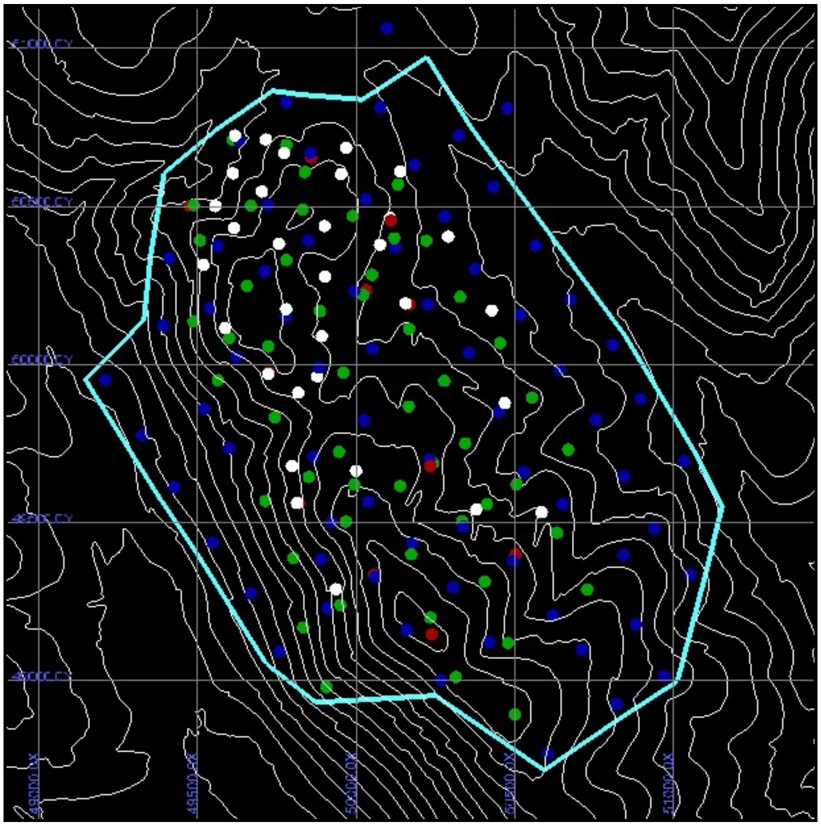


Drill Hole Prefix Key: C, D, E, F, G, J, K, L = Atlas drill holes; IG = Inter-Globe drill holes; NG = Noranda drill holes; GIV = RMP drill holes, T = Terteling drill holes

Table 11-1: Summary of Vanadium Hill Legacy Drilling Campaigns

Campaign	Timeframe	Rotary Drill Holes	Rotary Drill Footage (ft)	RC Drill Holes	RC Drill Footage (ft)	Core Drill Holes	Core Drill Footage (ft)
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	—	—
Totals		**120**	**25,077**	**53**	**10,712**	**—**	**—**

Figure 11-2: Drill Pattern at the Vanadium Hill Deposit Showing the Four Legacy Drilling Campaigns and the Location of Mineralization



Terteling drill holes are shown in white; Atlas drill holes are shown in blue; Noranda drill holes are shown in green; and Inter-Globe drill holes are shown in red (source: AMEC).

Table 11-2: Summary of Nevada Bureau of Geology and Mines Drilling Campaigns at the Historic Gibellini Manganese–Nickel Mine.

Campaign	Timeframe	Rotary Drill Holes	Rotary Drill Footage (ft)	RC Drill Holes	RC Drill Footage (ft)	Core Drill Holes	Core Drill Footage (ft)
NBGM	1946	—	—	—	—	4	895.5
Totals		**—**	**—**	**—**	**—**	**4**	**895.5**

11.1.3 Rich Hill

Union Carbide reportedly drilled a series of holes at Rich Hill in 1956, but no reliable information remains from this campaign. Noranda completed five RC holes (610 ft) at Rich Hill in 1973 (Table 11-3). No cuttings, assay rejects, or pulps remain from this drilling campaign.

11.2 Legacy Drilling Procedures and Conditions

Documentation of drilling methods employed by the various operators at Gibellini is sparse. Terteling and Atlas are reported to have used conventional rotary tools (Condon, 1975). NBGM 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 ten 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 7/8” diameter long-tooth tricone bit. The Inter-Globe drilling is well documented and employed RC methods with a 5 1/4” 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 five foot 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.

Table 11-3: Summary of Legacy Drilling Campaigns at Rich Hill.

Campaign	Timeframe	Rotary Drill Holes	Rotary Drill Footage (ft)	RC Drill Holes	RC Drill Footage (ft)	Core Drill Holes	Core Drill Footage (ft)
Union Carbide	1956	Unknown	—	—	—	—	—
Noranda	1973	—	—	5	610	—	—
Totals		**—**	**—**	**5**	**610**	**—**	**—**

Select drill core from the NBGM holes were sampled, typically on one to five foot intervals. No indication of core recovery was noted on the graphic logs.

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

11.3 Legacy Drill Hole Logging

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 essentially 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 NBGM 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 11-4. Rock color, alteration mineralogy, stain color, and oxide zone were also transcribed into codes and loaded into the resource database.

Table 11-4: 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

11.4 Legacy Drill Hole Surveys

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 are 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.

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 NBGM core holes were inclined to best intersect known zones of mineralization intersected in the underground workings. None of the Gibellini drill holes were surveyed down-hole.

11.5 Legacy Drill Hole Results

The vanadium intercepts in the historic drill holes ranged in depth from surface to 370 ft, ranged in thickness from 4 ft to 290 ft, averaging 75 ft. Grades averaged 0.26% V_2O_5, with a lowest average grade of 0.1% V_2O_5 and a maximum average grade of 0.82% V_2O_5. Intercepts over 0.1% V_2O_5 are summarized in Table 11-5.

11.6 RMP Drill Programs

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 Vanadium Hill area, seven were drilled in the historic Gibellini manganese–nickel mine area, nine were drilled in the Rich Hill prospect area, and four exploration holes were drilled elsewhere on the property (Table 11-6).

11.6.1 Vanadium Hill Area

A total of 3,150 ft of drilling in nine drill holes was completed by RMP in 2007 in the Vanadium Hill area. This included 1,500 ft of RC drilling in four drill holes and 1,650 ft of HQ diameter (2.5”) core drilling in five drill holes.

The drill holes completed in the Vanadium Hill area were designed to confirm the geology, and thickness and grade of vanadium mineralization encountered in historical drilling along the length of the Vanadium Hill deposit (Figure 11-3). The core holes were drilled to provide material for metallurgical test work and were not assayed.

The geological logs were used to update the geological model, but the core holes were not used for grade estimation purposes. A total of 63 intervals from these core holes were submitted for specific gravity determination. These intervals were selected to be representative of the oxidation types encountered during drilling.

A comparison of 2007 drilling with historical drilling is provided in east–west cross sections through drill holes GIV-1, GIV-2, and GIV-3 (refer to Figures 11-4 to 11-6). 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. Figures 11-4 to 11-6 include results from the Terteling campaign (T-prefix drill hole names); however, the vanadium grades for these drill holes were shown to be biased high relative to Noranda drilling and thus were not used for resource estimation purposes.

Table 11-5: Summary, Legacy Drill Results

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
C-9	5	25	20	0.24
D-4	5	30	25	0.16
D-5	10	35	25	0.16
D-6	5	35	30	0.21
D-7	85	155	70	0.21
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
D-9	110	120	10	0.23
D-9	5	65	60	0.34
E-10	200	205	5	0.11
E-10	245	260	15	0.25
E-10	0	190	190	0.29
E-4	5	120	115	0.39
E-5	215	245	30	0.22
E-5	10	190	180	0.27
E-6	185	245	60	0.23
E-6	10	150	140	0.26
E-8	165	235	70	0.24
E-8	155	160	5	0.25
E-8	310	330	20	0.27
E-8	10	150	140	0.34
E-8	0	5	5	0.39
E-9	245	250	5	0.12
E-9	270	305	35	0.24
E-9	0	225	225	0.25
F-10	280	325	45	0.25
F-10	355	365	10	0.31
F-10	0	270	270	0.34
F-11	110	130	20	0.13
F-11	155	205	50	0.23
F-11	5	105	100	0.30
F-3	10	40	30	0.39
F-4	300	310	10	0.23
F-4	20	270	250	0.24
F-5	290	305	15	0.22
F-5	5	270	265	0.27
F-7	50	65	15	0.11
F-7	285	295	10	0.14
F-7	5	45	40	0.21
F-7	225	275	50	0.21
F-7	310	370	60	0.22
F-7	70	220	150	0.29
F-8	305	310	5	0.11

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
F-8	330	390	60	0.24
F-8	5	245	240	0.32
F-9	370	375	5	0.12
F-9	265	350	85	0.28
F-9	5	255	250	0.34
G-10	195	210	15	0.2
G-10	265	285	20	0.22
G-10	5	175	170	0.34
G-10	220	235	15	0.62
G-11	280	285	5	0.12
G-11	5	85	80	0.24
G-11	90	135	45	0.25
G-11	180	195	15	0.26
G-11	290	350	60	0.27
G-13	15	20	5	0.11
G-13	55	60	5	0.11
G-13	25	45	20	0.14
G-13	0	5	5	0.15
G-13	205	235	30	0.17
G-13	240	345	105	0.24
G-3	5	290	285	0.34
G-4	0	280	280	0.26
G-5	265	275	10	0.11
G-5	285	320	35	0.20
G-5	185	245	60	0.22
G-5	0	180	180	0.24
G-6	275	280	5	0.10
G-6	295	300	5	0.13
G-6	245	260	15	0.24
G-6	0	240	240	0.25
G-6	310	330	20	0.26
G-7	0	285	285	0.33
G-8	265	300	35	0.28
G-8	5	185	180	0.37
G-8	190	235	45	0.37
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
H-11	40	45	5	0.13
H-11	150	155	5	0.13
H-11	25	30	5	0.15
H-11	160	260	100	0.25
H-12	165	230	65	0.27
H-13	165	170	5	0.10
H-13	195	200	5	0.13

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
H-13	75	85	10	0.15
H-13	110	135	25	0.20
H-2	85	120	35	0.19
H-2	5	80	75	0.32
H-3	240	245	5	0.11
H-3	0	5	5	0.19
H-3	10	15	5	0.25
H-3	20	205	185	0.32
H-4	0	240	240	0.26
H-5	310	325	15	0.16
H-5	170	245	75	0.20
H-5	250	305	55	0.22
H-5	0	160	160	0.30
H-6	205	260	55	0.23
H-6	0	170	170	0.35
H-7	265	270	5	0.10
H-7	250	260	10	0.13
H-7	305	315	10	0.15
H-7	0	240	240	0.31
H-8	295	310	15	0.13
H-8	260	270	10	0.23
H-8	135	250	115	0.24
H-8	0	95	95	0.28
H-9	95	100	5	0.10
H-9	235	245	10	0.15
H-9	290	310	20	0.22
H-9	120	205	85	0.28
H-9	5	90	85	0.41
H-9	110	115	5	0.44
I-10	50	60	10	0.11
I-10	20	45	25	0.20
I-10	100	175	75	0.33
I-11	5	10	5	0.15
I-11	15	25	10	0.15
I-11	30	35	5	0.16
I-11	55	145	90	0.16
I-12	15	20	5	0.12
I-12	65	80	15	0.25
I-2	5	80	75	0.22
I-2	120	135	15	0.27
I-3	200	210	10	0.14
I-3	0	185	185	0.39
I-4	0	140	140	0.32
I-4	145	250	105	0.38
I-5	245	250	5	0.14
I-5	190	240	50	0.21
I-5	100	160	60	0.23

Hole ID	**From (ft)**	**To (ft)**	**Intercept (true width ft)**	**Average Grade (% V_2O_5)**
I-5	0	75	75	0.24
I-5	85	90	5	0.32
I-6	160	190	30	0.15
I-6	95	155	60	0.28
I-6	0	75	75	0.31
I-7	195	200	5	0.13
I-7	120	130	10	0.17
I-7	135	155	20	0.23
I-7	5	110	105	0.29
I-8	130	165	35	0.20
I-8	10	120	110	0.28
I-9	5	10	5	0.13
I-9	170	175	5	0.14
I-9	70	110	40	0.29
I-9	15	35	20	0.32
IG-1	0	120	120	0.60
IG-10	0	225	225	0.32
IG-11	0	90	90	0.25
IG-2	195	200	5	0.14
IG-2	0	185	185	0.46
IG-3	0	200	200	0.28
IG-4	135	150	15	0.24
IG-4	0	110	110	0.3
IG-5	100	110	10	0.12
IG-5	240	250	10	0.15
IG-5	0	95	95	0.21
IG-5	115	235	120	0.22
IG-6	130	250	120	0.25
IG-6	0	105	105	0.32
IG-7	0	40	40	0.18
IG-7	50	250	200	0.25
IG-8	265	375	110	0.23
IG-8	0	50	50	0.29
IG-8	60	235	175	0.31
IG-9	150	155	5	0.11
IG-9	200	205	5	0.12
IG-9	210	280	70	0.30
IG-9	0	105	105	0.33
J-10	65	85	20	0.16
J-10	0	50	50	0.22
J-11	50	85	35	0.13
J-11	5	40	35	0.14
J-11	110	115	5	0.14
J-12	40	60	20	0.14
J-3	90	110	20	0.20
J-3	0	70	70	0.22
J-4	0	130	130	0.25

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
J-5	0	120	120	0.28
J-6	115	125	10	0.10
J-6	10	25	15	0.19
J-6	40	110	70	0.22
J-7	115	125	10	0.21
J-7	50	75	25	0.22
J-7	0	40	40	0.37
J-8	125	130	5	0.22
J-8	0	55	55	0.25
J-9	50	120	70	0.26
K-10	10	20	10	0.21
K-2	5	10	5	0.10
K-2	35	50	15	0.22
K-3	40	50	10	0.11
K-3	0	35	35	0.19
K-4	0	70	70	0.32
K-5	0	40	40	0.23
K-6	5	65	60	0.24
K-7	80	95	15	0.22
K-7	0	65	65	0.27
K-8	70	100	30	0.25
K-9	0	5	5	0.11
K-9	25	75	50	0.15
L-4	0	35	35	0.26
NG-1	135	140	5	0.11
NG-1	145	159	14	0.11
NG-1	0	120	120	0.63
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-11-RE-2	10	204	194	0.36
NG-12	10	200	190	0.51
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-15	10	230	220	0.28
NG-16	195	215	20	0.19
NG-16	10	190	180	0.26
NG-17	85	90	5	0.14
NG-17	95	120	25	0.22
NG-17	140	205	65	0.25
NG-17	10	75	65	0.31
NG-18	150	160	10	0.17
NG-18	10	25	15	0.18

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
NG-18	30	140	110	0.23
NG-19	130	135	5	0.10
NG-19	10	120	110	0.24
NG-2	180	185	5	0.11
NG-2	190	195	5	0.11
NG-2	205	269	64	0.26
NG-2	0	175	175	0.31
NG-20	35	40	5	0.11
NG-20	10	20	10	0.12
NG-20	45	200	155	0.25
NG-21	15	185	170	0.38
NG-22	10	185	175	0.31
NG-22	200	215	15	0.32
NG-22	220	245	25	0.34
NG-22	190	195	5	0.46
NG-23	25	130	105	0.23
NG-24	10	192	182	0.46
NG-25	5	205	200	0.34
NG-26	10	50	40	0.18
NG-26	175	215	40	0.23
NG-26	55	170	115	0.39
NG-27	80	220	140	0.25
NG-27	10	75	65	0.37
NG-28	210	220	10	0.14
NG-28	225	230	5	0.17
NG-28	10	200	190	0.36
NG-29	5	175	170	0.32
NG-3	0	291	291	0.31
NG-30	10	79	69	0.46
NG-31	70	80	10	0.15
NG-31	5	65	60	0.82
NG-32	150	155	5	0.14
NG-32	5	140	135	0.41
NG-33	5	120	115	0.33
NG-34	5	70	65	0.26
NG-34	80	208	128	0.33
NG-35	125	135	10	0.10
NG-35	140	150	10	0.16
NG-35	170	175	5	0.31
NG-35	5	120	115	0.33
NG-36	110	170	60	0.23
NG-36	5	90	85	0.31
NG-37	45	50	5	0.11
NG-37	5	40	35	0.12
NG-37	85	130	45	0.28
NG-38	10	140	130	0.38
NG-39	5	140	135	0.37

Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
NG-4	0	220	220	0.38
NG-40	180	185	5	0.15
NG-40	10	175	165	0.39
NG-41	125	130	5	0.19
NG-41	135	200	65	0.31
NG-41	35	95	60	0.34
NG-41	5	30	25	0.36
NG-42	40	50	10	0.10
NG-42	55	65	10	0.10
NG-42	15	30	15	0.11
NG-42	75	80	5	0.11
NG-42	160	200	40	0.23
NG-42	85	145	60	0.24
NG-43	5	150	145	0.29
NG-44	95	100	5	0.10
NG-44	130	180	50	0.21
NG-44	5	90	85	0.27
NG-45	5	45	40	0.29
NG-45	105	165	60	0.31
NG-46	140	200	60	0.26
NG-46	10	130	120	0.35
NG-47	5	224	219	0.48
NG-48	5	255	250	0.32
NG-49	175	182	7	0.14
NG-49	5	170	165	0.42
NG-5	0	87	87	0.35
NG-50	5	75	70	0.26
NG-51	5	160	155	0.37
NG-52	5	210	205	0.37
NG-6	0	250	250	0.42
NG-7	0	240	240	0.34
NG-7	250	295	45	0.34
NG-8	0	280	280	0.32
NG-9	0	120	120	0.24
NG-9	125	255	130	0.30
T-1	105	150	45	0.46
T-10	0	150	150	0.43
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
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

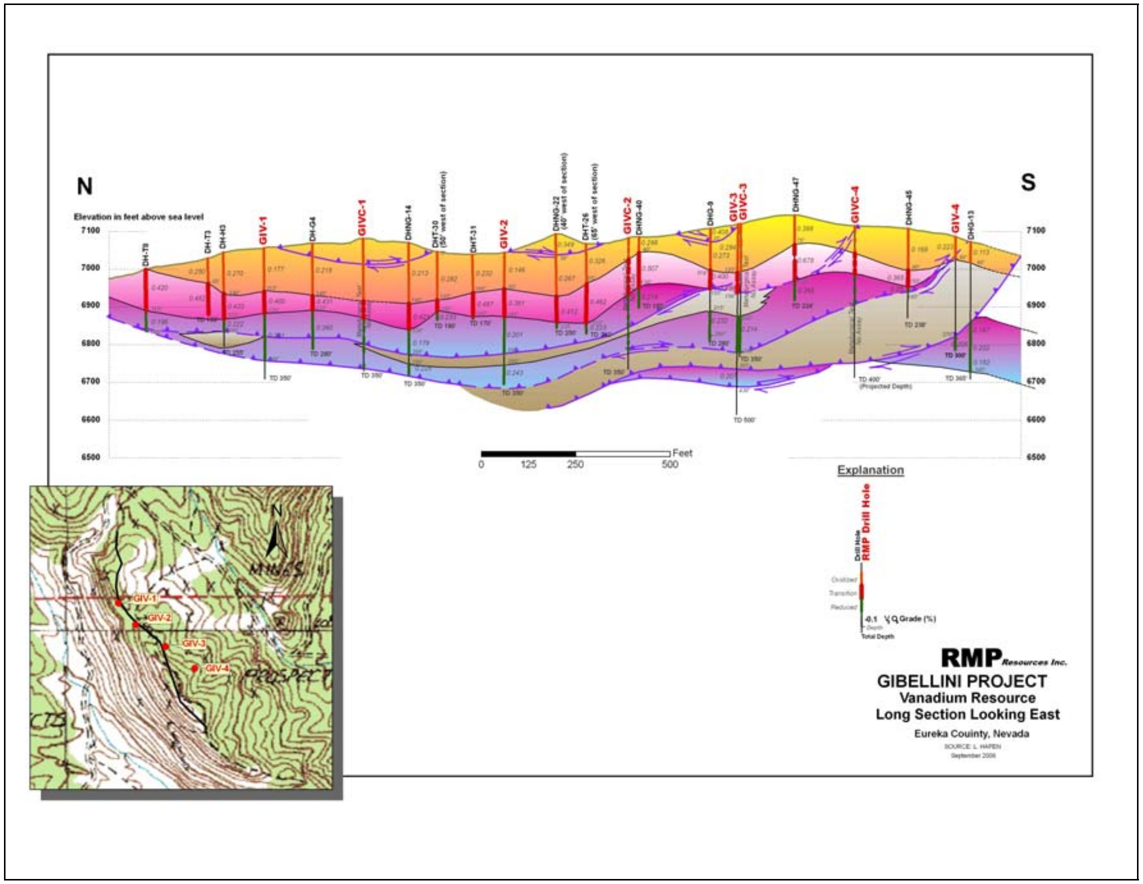
Hole ID	From (ft)	To (ft)	Intercept (true width ft)	Average Grade (% V_2O_5)
T-22	115	170	55	0.49
T-23	130	145	15	0.25
T-23	5	120	115	0.35
T-24	55	225	170	0.23
T-24	10	30	20	0.32
T-24	35	50	15	0.37
T-25	5	180	175	0.29
T-26	5	140	135	0.34
T-26	150	240	90	0.48
T-27	5	200	195	0.42
T-28	5	130	125	0.25
T-28	135	200	65	0.47
T-29	5	235	230	0.34
T-3	0	30	30	0.25
T-3	35	150	115	0.42
T-30	5	95	90	0.30
T-30	100	180	80	0.33
T-31	5	165	160	0.34
T-32	5	240	235	0.35
T-33	210	240	30	0.27
T-33	5	95	90	0.36
T-33	100	205	105	0.53
T-34	5	150	145	0.35
T-35	5	150	145	0.29
T-36	5	140	135	0.41
T-37	15	150	135	0.22
T-38	5	150	145	0.74
T-39	5	145	140	0.42
T-4	0	135	135	0.45
T-40	5	150	145	0.33
T-41	0	150	150	0.47
T-5	15	225	210	0.39
T-6	0	105	105	0.29
T-6	110	175	65	0.55
T-7	35	95	60	0.26
T-7	0	30	30	0.27
T-7	100	156	56	0.43
T-8	0	165	165	0.38
T-9	0	140	140	0.48

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

Table 11-6: Summary of the RMP 2007 and 2008 Drilling Campaigns

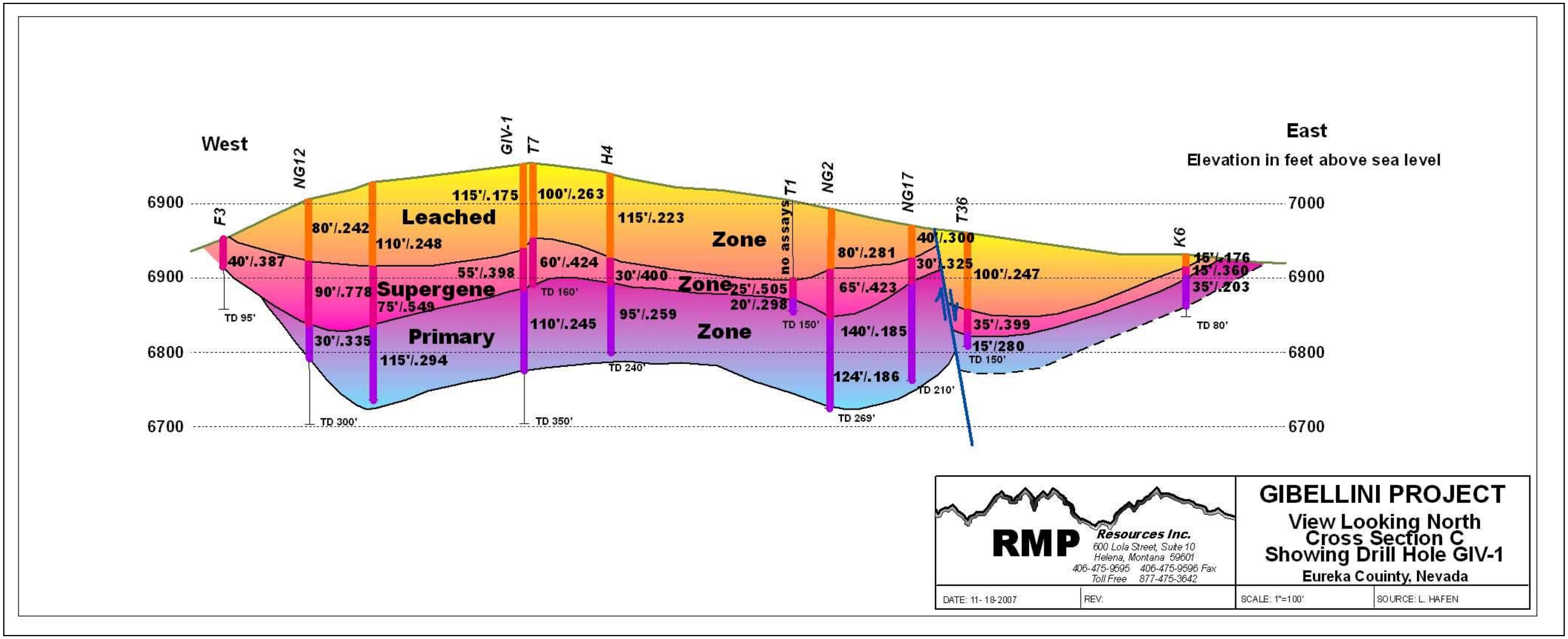
Campaign	Timeframe (year)	RC Drill Holes	RC Drill Footage (ft)	Core Drill Holes	Core Drill Footage (ft)
Vanadium Hill	2007	4	1,500	5	1,650
Vanadium Hill	2008	—	—	1	300
Rich Hill	2007	3	1,430	0	0
Rich Hill	2008	0	0	6	1,200
Gibellini Manganese–Nickel Mine	2007	7	1,660	—	—
Exploration	2007	4	1,300	—	—
Totals		**18**	**5,890**	**12**	**3,150**

Figure 11-3: Typical North–South Long-Section



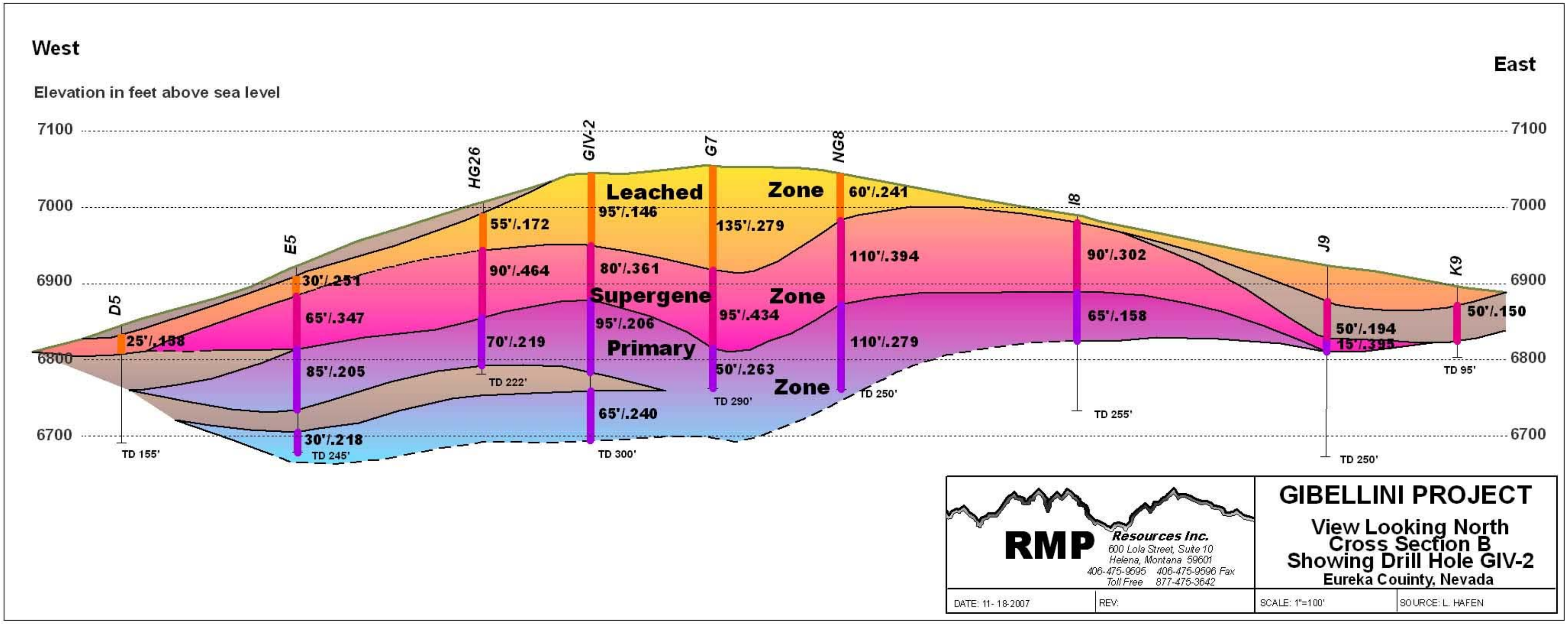
Note: Key: leached = oxide; supergene = transition; primary = sulfide/reduced. Figure courtesy RMP.

Figure 11-4: Vanadium Hill East–West Cross Section through GIV-1



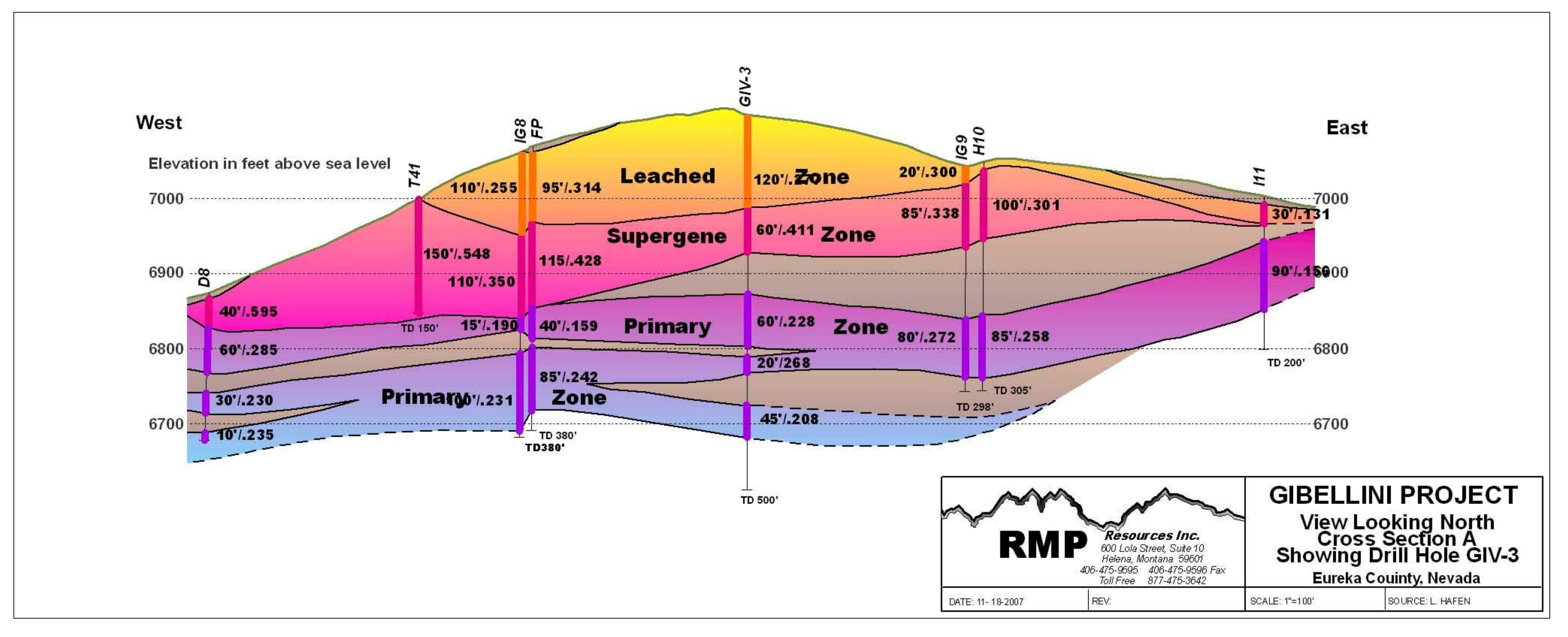
Note: Key: leached = oxide; supergene = transition; primary = sulfide/reduced. Figure courtesy RMP.

Figure 11-5: Vanadium Hill East–West Cross Section through GIV-2



Note: Key: leached = oxide; supergene = transition; primary = sulfide/reduced. Figure courtesy RMP.

Figure 11-6: Vanadium Hill East–West Cross Section through GIV-3



Note: Key: leached = oxide; supergene = transition; primary = sulfide/reduced. Figure courtesy RMP.

During August, 2008, a single core hole, GIVC-5 (500 ft), was drilled to collect metallurgical samples for use in column leach testing in support of the PA (Figure 11-7). Drill hole results are summarized in Table 11-6.

11.6.2 Rich Hill Area

Drilling of the Rich Hill area was carried out by RMP in 2007–2008 to determine the thickness and grade of vanadium mineralization at this prospect located across the valley to the south of Vanadium Hill. Although some documentation in RMP's files suggests an extensive drill campaign was carried out on Rich Hill in the past, the data are insufficient to construct a digital database from which estimates of grade and tonnage could be performed.

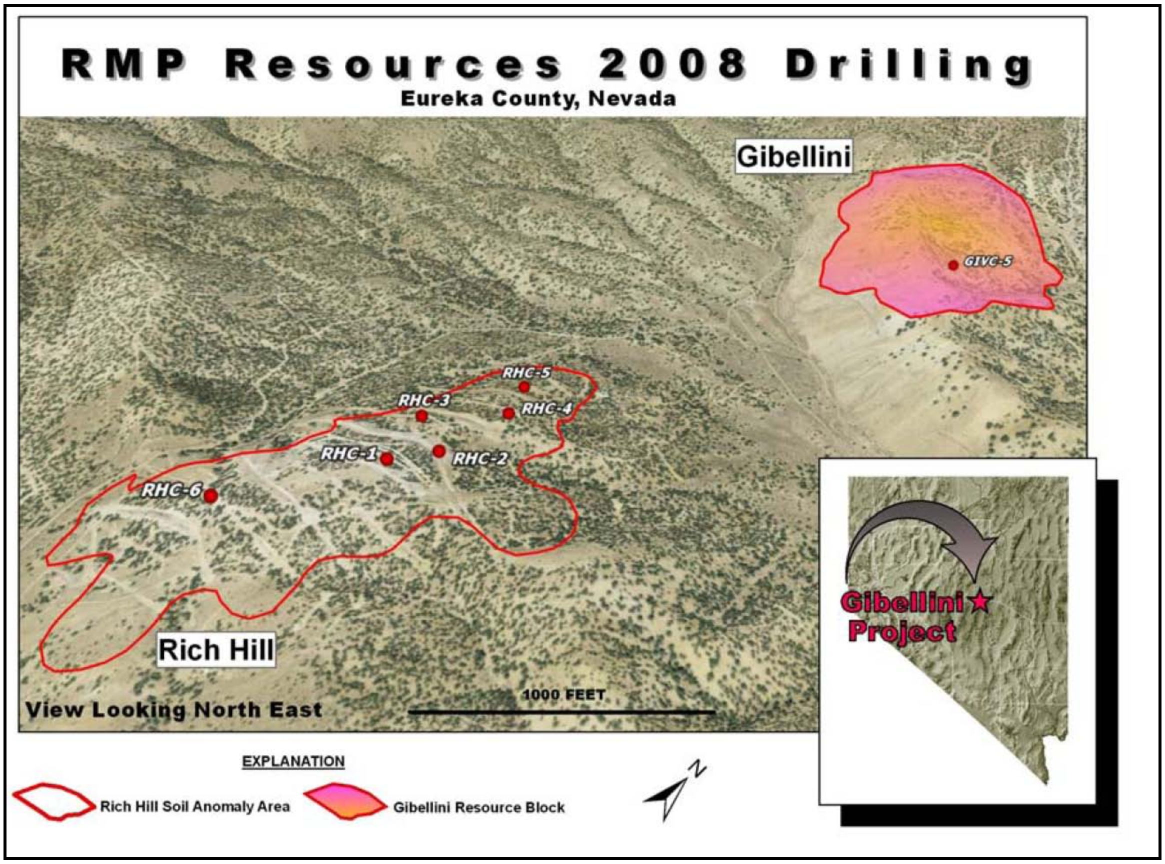
A total of 1,430 ft of drilling in three RC drill holes was completed by RMP in 2007 in the Rich Hill area. These holes were drilled along a north–south section through the middle of the vanadium mineralization (Figure 11-8).

Significant thicknesses of vanadium mineralization were encountered in all three drill holes, comparable in thickness and grade to the oxide zone at Vanadium Hill. Higher grade vanadium mineralization, like that of the transition zone at Vanadium Hill, was not encountered at Rich Hill, except for at the surface in the northernmost drill hole (RH-1).

An additional drill program, completed in August 2008, comprising six core holes (1,200 ft) in the Rich Hill area (see Figure 11-6), was designed with the dual purposes of confirming the vanadium zone outlined by anomalous soil samples and collecting metallurgical test samples. Results are shown in Table 11-8.

Rich Hill vanadium mineralization was not considered in the PA, as the drilling information is presently insufficient to support mineral resource estimation.

Figure 11-7: 2008 Drill Locations, Gibellini and Rich Hill

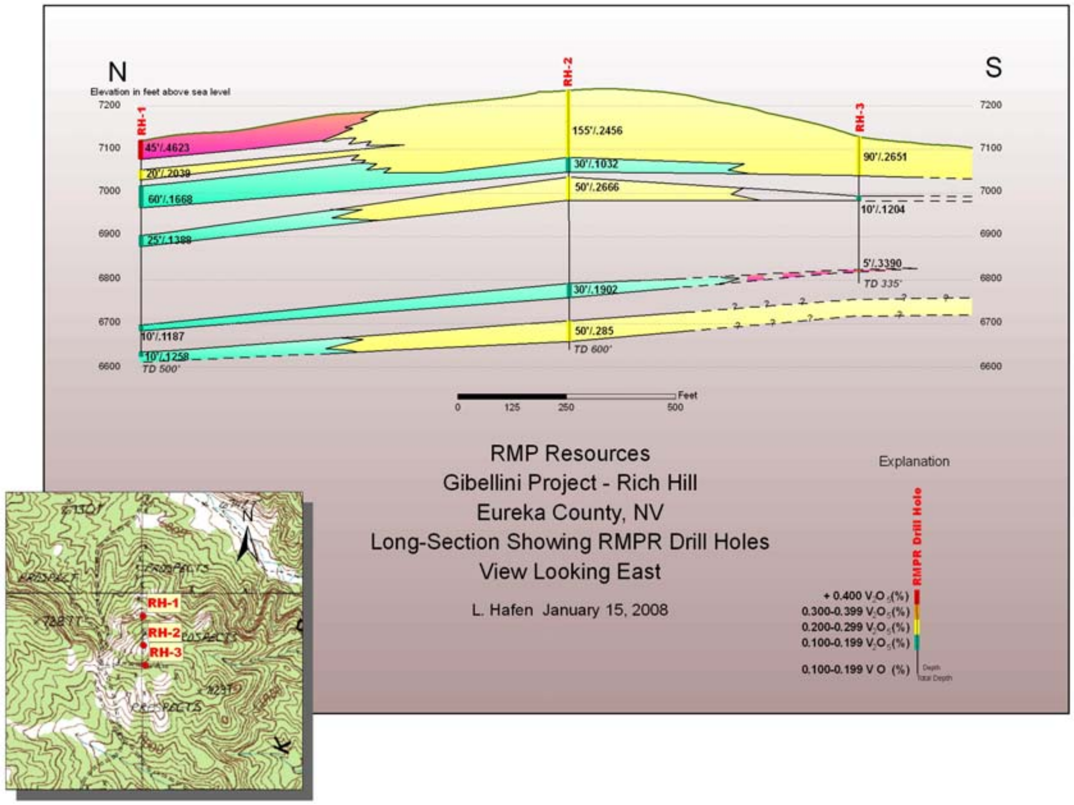


Note: Figure courtesy RMP

Table 11-7: Summary Drill Results, GIVC-5

Hole ID	Intercept (ft from–to)	True Width (ft)	Average Grade (% V_2O_5)
GIVC-5	7–83	76	0.32
	98–143	45	0.22
	148–173	25	0.24
	188–212	24	0.25

Figure 11-8: Rich Hill Cross Section



Note: Figure courtesy RMP

Table 11-8: Summary Drill Results, 2008 Rich Hill Program

Hole ID	Intercept (ft from–to)	True Width (ft)	Average Grade (% V_2O_5)
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

11.6.3 Gibellini Manganese Mine Area

Seven RC holes totaling 1,660 ft were drilled by RMP in the Manganese Mine area, located immediately north of Vanadium Hill. The primary goal of this drilling was to define the size of the manganese–nickel–zinc (plus other metals) mineralization that had seen limited underground mining in the past. The 2007 drill results show that the mineralization does not extend to depth, and that the volume of mineralized material is not currently of interest to RMP at this time. This drilling was not considered in the resource estimate in Section 17 of this report.

11.6.4 Exploration Drilling

RMP drilled four RC holes totaling 1,300 ft exploring for vanadium and manganese–nickel–zinc mineralization away from the known occurrences of Vanadium Hill, Rich Hill, and the Gibellini Manganese Mine area. Short intercepts of vanadium and zinc mineralization were encountered; however these results were not considered in the PA.

11.6.5 Drill Hole Logging and Logging Codes

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 were included in Table 11-4.

Logging forms also contain 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.

Recovery data are not recorded for RC samples. Core recoveries are discussed in Section 14.

11.6.6 Drill Hole Surveys

Collar coordinates for the 2007 drill holes were obtained in UTM coordinates by RMP personnel using a hand-held GPS unit. Local grid coordinates for historic 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. While this is considered adequate for the PA study level, AMEC recommends that RMP accurately locate the position of

2007 and legacy drill holes using a registered surveyor by differential GPS or another method having similar accuracy.

AMEC recommends that to accommodate drill collars that cannot be found in the re-survey, the historic local grid should be accurately located in UTM Zone 11 space.

11.7 Drilling Results

The Vanadium Hill deposit has been drilled consistently to a depth of approximately 200 feet. The approximate drill spacing in the main vanadium resource area is 200 by 200 feet. The average depth of drilling is 200 feet below surface with deeper drill holes located on the top of the ridge in the center of the vanadium resource area and shallower drill holes located on the slopes to the east, west, and north.

11.8 True Thickness of Mineralization

Mineralized zones at Vanadium Hill are irregular in shape but generally conform to the stratigraphy of the host shales, modified somewhat by post-mineral oxidation and supergene enrichment. The stratigraphy dips at low angles to the west and so vertical intersections of mineralization are roughly approximate to the true mineralized thickness.

11.9 Orientation of Mineralization

Mineralization at Vanadium Hill is roughly stratabound, strikes northwest–southeast and dips at low angles to the west. The mineralization is parallel to the orientation of the main ridge in the vanadium mineral resource area.

12.0 SAMPLING METHOD AND APPROACH

No records remain for the drill sampling methods employed by NBGM (core), Terteling (rotary), or Atlas (rotary).

12.1 Legacy Reverse Circulation Sampling

Noranda collected samples continuously over five foot 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 five foot intervals. Dust lost was minimized by the use of 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.

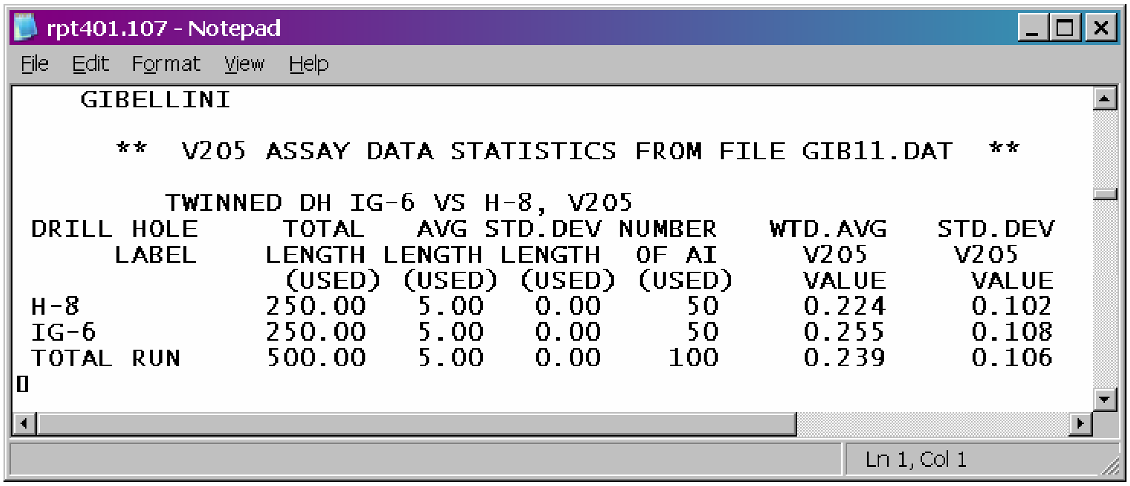
AMEC evaluated rotary and RC drill holes for evidence of down-hole contamination in the form of asymmetric grade decay down-hole or spikes in grade at cyclical intervals. Analyses revealed evidence of possible down-hole contamination in one Atlas drill hole and one Noranda drill hole below intercepts 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’ collar separation) found that there was no evidence of significant down-hole contamination in the rotary holes (Figure 12-1).

12.2 RMP Reverse Circulation Sampling

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. Cuttings for each 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.

Figure 12-1: Comparison of Inter-Globe RC Hole IG-6 with Nearby Atlas Rotary Hole, H-8



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   GIBELLINI

     **  V205 ASSAY DATA STATISTICS FROM FILE GIB11.DAT  **

        TWINNED DH IG-6 VS H-8, V205
DRILL HOLE     TOTAL   AVG STD.DEV NUMBER   WTD.AVG   STD.DEV
     LABEL    LENGTH LENGTH LENGTH  OF AI     V205     V205
               (USED) (USED) (USED) (USED)    VALUE     VALUE
H-8           250.00   5.00   0.00     50     0.224     0.102
IG-6          250.00   5.00   0.00     50     0.255     0.108
TOTAL RUN     500.00   5.00   0.00    100     0.239     0.106
▯
```

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 five foot 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.

12.3 RMP Core Sampling

Diamond drilling was conducted by Morning Star of Three Forks, Montana, using HQ diameter (2.5 in/6.36 cm) tools. 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 test work. 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, and the mode and median are 5 ft. Sample intervals were broken at geologic contacts.

13.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Discussion of sample preparation and assay procedures, assay QA/QC program results, and security is divided into sections by drill campaign.

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 core and RC samples were analysed by ALS Chemex, a well-established and recognized assay and geochemical analytical services company. The Sparks (Reno) laboratory of ALS Chemex is ISO 9002-registered; the Vancouver laboratory holds ISO17025 accreditation.

13.1 NBGM Drill Campaign (1946)

Manganese, nickel, and zinc assays for NBGM 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 QA/QC program is noted on the logs either.

These manganese, nickel, and zinc assays from the Gibellini manganese–nickel mine are not used in the resource estimate of the Vanadium Hill deposit.

13.2 Terteling Drill Campaign (1964 to 1965)

V_2O_5 assays for 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 feet 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 (see Section 13.5) and so AMEC 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 (Table 13-1).

Table 13-1: Comparison of Terteling, Atlas, and Noranda Mineralized Intercepts with Nearby (within 20') Inter-Globe Intercepts

Campaign	Drill Hole	Intercept Width (ft)	Intercept Grade (V_2O_5%)	Inter-Globe Nearby Hole	Intercept Width (ft)	Intercept Grade (V_2O_5%)	Pct. Diff. (%)
Terteling	T-2	85	0.43	IG-11	90	0.26	73%
	T-23	140	0.32	IG-4	145	0.26	29%
	T-30	170	0.31	IG-5	180	0.20	57%
	T-34	145	0.35	IG-3	150	0.27	30%
	T-40	145	0.33	IG-7	150	0.23	42%
Total/Avg.		**685**	**0.34**		**715**	**0.24**	**43%**
Atlas	F-9	375	0.30	IG-8	380	0.25	18%
	H-8	250	0.22	IG-6	250	0.26	-12%
	H-10	280	0.20	IG-9	280	0.22	-7%
	I-3	200	0.37	IG-2	200	0.43	-14%
Total/Avg.		**1,105**	**0.27**		**1,110**	**0.28**	**-2%**
Noranda	NG-7	90	0.30	IG-11	90	0.25	16%
	NG-31	110	0.38	IG-1	115	0.42	-12%
	NG-41	170	0.27	IG-6	180	0.26	2%
Total/Avg.		**370**	**0.30**		**385**	**0.31**	**-1%**

The mineralized intervals were, on average, 4% shorter for Terteling drill holes.

13.3 Atlas Drill Campaign (1969)

V_2O_5 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 feet of the Atlas drill holes indicated that the Atlas assays were comparable (Table 13-1). 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 feet and the total length of the Inter-Globe intervals equal to 1,110 feet.

13.4 Noranda Drill Campaign (1972 to 1973)

V_2O_5 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. The sample was oxidized with nitric acid and potassium perchlorate, digested with hydrochloric and hydrofluoric acids, then fumed strongly with sulphuric 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. AMEC plotted the check assays against the original assays and found that the Union assays are biased marginally (9% to 14%) high 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 Vanadium Hill 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 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 feet 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 feet and the average grade was 0.30% V_2O_5, where the total length of the nearby Inter-Globe holes was 385 feet and the average grade was 0.30%.

13.5 Inter-Globe Drill Campaign (1989)

Inter-Globe assayed samples for V_2O_5 at Skyline Laboratories (Skyline) in Denver, Colorado. 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 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.

13.6 RMP Drill Campaigns (2007 to 2008)

All 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 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).

13.7 Quality Assurance and Quality Control

Quality assurance and quality control (QA/QC) for the Gibellini Project is discussed in Section 14 of this report.

13.8 Databases

Drill data collected from geological logging are currently stored in an Access® database. This database is stored on the RMP server in Reno, Nevada. Legacy drill data, in paper format, are stored in the RMP offices at Reno, Nevada.

Geological data from the RMP programs are collected in Excel® format, and subsequently uploaded to the Access® database. Collar survey data are recorded as part of the geological data. Analytical data are supplied in digital (CSV) format by ALS Chemex and loaded into the Access® database. Assay certificates are supplied in PDF® format and are stored on the RMP Reno office.

13.9 Density Data

Density determinations are discussed in Section 14 of this Report.

13.10 Sample Security

Sample security procedures for legacy drilling at the Gibellini Project are unknown.

RMP drill samples are 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.

RMP remaining core, RC reject material, and returned assay pulps are stored in the secure layout area in Eureka.

14.0 DATA VERIFICATION

14.1 Legacy Data

14.1.1 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 Vanadium Hill 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 is estimated to be ±10 feet. 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 feet in easting or northing, the base map was consulted and the digitized coordinates were used (NG-8, NG-9, NG-28, and NG-45). NBGM 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 NBGM) were digitized and entered into 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 NBGM drill holes 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 feet) 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. NBGM 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.

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

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

14.1.2 Legacy Data Used in Mineral Resource Estimation

All legacy data in the Gibellini Project resource database were entered by AMEC and accurately represent the source documents. Details of the data quality of the surveys, assays, and geology are discussed in the following sub-sections.

Drill Hole Surveys

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 considers the locations to be accurate to ±10 feet, but recommends that RMP survey available drill collars using a registered surveyor to ascertain the accuracy of the digitized and drill log coordinates. 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.

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

Assays

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 (Section 13.5). 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 (refer to Figure 11-2), 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 (Figure 11-1), 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 considers the Noranda assays acceptable for use in resource estimation, but because of the uncertainty in the assays, AMEC recommends that blocks affected by Noranda assays have a maximum classification of Indicated Mineral Resources.

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 (Figure 14-1). 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, Nevada by a four-acid digestion, ICP determination. The results of this sampling are shown in Table 14-1.

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 recommends that confirmation sampling of the trenches be completed by RMP 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, therefore AMEC was unable to independently verify these assays with check assays.

Geological Logging

The quality of the geological logging of drill holes at Vanadium Hill 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–sulfide) contacts.

Figure 14-1: Channel Sample Collected by AMEC from Trench #9 for Data Verification Purposes (source: AMEC).

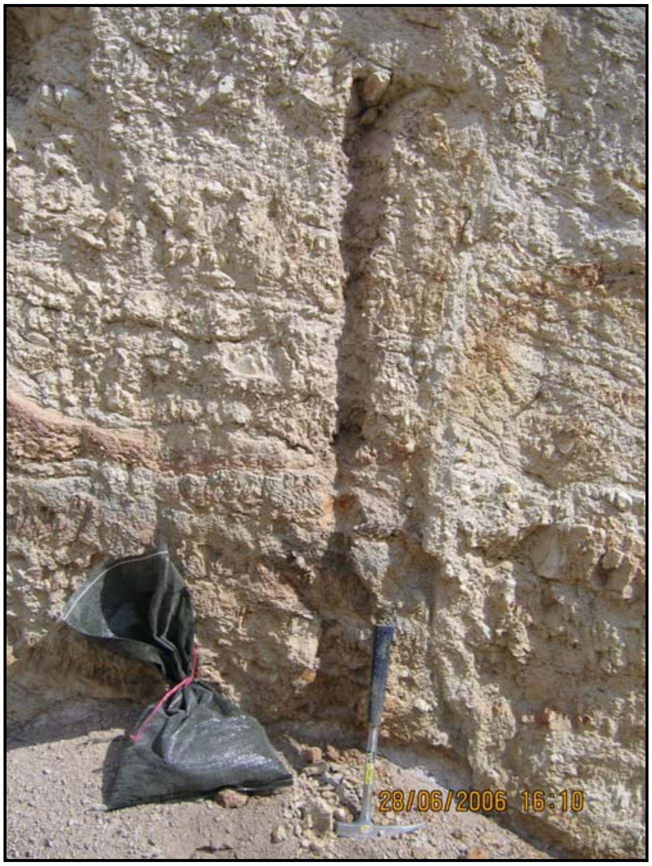


Table 14-1: V_2O_5 Assays from AMEC Sampling of Trenches on the Vanadium Hill Deposit.

Trench	AMEC V_2O_5%	Inter-Globe V_2O_5%
Trench #4	0.26%	0.22 to 0.37%
Trench #8	0.37%	0.21 to 0.51%
Trench #8	0.33%	0.25 to 1.20%
Trench #9	0.25%	0.55 to 1.40%
Trench #9	0.22%	0.59 to 1.30%

Domaining of the Vanadium Hill 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. AMEC considers the domains derived from this interpretation to be adequate and reasonable for this level of study.

14.2 RMP Drill Data Quality

14.2.1 Inspections of Recent Drill Programs

AMEC did not observe any of the drilling programs on the Gibellini Project.

14.2.2 Core and RC Recovery

Core recovery was logged for the five diamond drill holes completed in the Vanadium Hill area. The results are summarized in Table 14-2. A photograph of core from the oxidized zone of drill hole GIVC-1 is shown in Figure 14-2. The average recovery from 92 ft to 102 ft was logged as 71%.

Generally, 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 AMEC's opinion, core recovery is generally adequate, averaging 91.6%. The fine-grained and diffuse nature of mineralization would favor there being no grade bias caused by poor recovery.

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

14.3 Quality Assurance and Quality Control 2007–2008 Drill Programs

AMEC reviewed the QA/QC for the drilling programs completed on the Vanadium Hill area to June 2008. Drill data generated post June 2008 have not been reviewed, as the drill holes are not used to support the mineral resource estimate in Section 17 of this report.

Standard reference materials (SRMs), blanks, and duplicates were inserted by RMP with routine drill samples during the 2007–2008 drill programs to control assay accuracy and precision.

Table 14-2: Summary of Core Recovery for Vanadium Hill Core Holes

Drill Hole	Average Recovery
GIVC-1	84.5%
GIVC-2	93.6%
GIVC-3	94.0%
GIVC-4	96.7%
GIVC-5	89.3%
Average	91.6%

Figure 14-2: Core Photograph of Drill Hole GIVC-1 from 91.0 to 102.5 ft

A total of 25 SRMs were submitted with 1,125 routine samples for an insertion rate of 2.2%. SRMs used for the November 2007 to June 2008 Vanadium Hill drilling campaign were obtained from Minerals Exploration and Environment Geochemistry in Reno, Nevada, and were sourced from material in the Gibellini Project area.

AMEC reviewed the round robin programs performed to generate the recommended values for the SRMs and found them to be acceptable. Five splits of each SRM were sent to five separate laboratories for determination of vanadium. The recommended value (RV) for the SRMs was calculated as the mean of all round robin results. The lower acceptable limit (LAL) and upper acceptable limit (UAL) were calculated as the recommended value minus 10% and plus 10%, respectively. The 95% confidence interval for the mean value of the SRMs ranged between 2.5% and 3.3% of their respective means, using all 25 assay results. The recommended values are acceptably close to the values returned by ALS Chemex, a participant in the round robin program, and thus show that there should be no significant bias in the primary laboratory assay results for vanadium.

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 is acceptable to support resource estimates.

While these SRMs cover the low and medium ranges of vanadium grades expected at Vanadium Hill, AMEC recommends that RMP obtain a SRM with an expected vanadium value between 0.7% and 1.0% to be used to ensure the accuracy of assays for local high grades of vanadium that are expected to occur at Vanadium Hill.

A total of four blanks were submitted with 1.125 routine samples for an insertion rate of 0.4%. In AMEC's opinion, this insertion rate should be increased to the same rate as the SRMs and duplicate samples. Blanks assayed between 80 ppm and 110 ppm V, which is significantly above the lower detection limit for vanadium of 10 ppm, but significantly below the anticipated cut-off grade. AMEC recommends that RMP generate a new blank sample 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%. AMEC calculated the precision for vanadium to be ±24% at the 90th percentile. In AMEC's opinion the precision for 2007 ALS Chemex vanadium assays is acceptable to support mineral resource estimates.

14.4 Density Determinations

A total of 63 core intervals from the 2007 drilling campaign at Vanadium Hill were submitted by RMP for determination of specific gravity. Intervals were selected from four core drill holes so as 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 partitioned by oxidation type and average values were computed (Table 14-3). These average values were used to calculate tonnage in the mineral resource model (see also Table 17-5 in Section 17).

14.5 Topography

Topographic contours for Vanadium Hill were digitized by AMEC on 25 foot contour intervals, using a locally established mine grid coordinate system (AMEC, 2007). The topography encompasses the immediate mineralized area, but its extent is inadequate for project infrastructure development. The mine coordinate system has been 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. AMEC concluded that the spatial relationships between drill holes were maintained and any shift of the drill holes in relation to topography is minimal. AMEC accepts that any errors inherent from the use of the current topography most likely will be minor as it relates to the total resource tonnage.

AMEC recommends that RMP expand the topographic coverage to include the expected project footprint and verify the conversion from the local mine grid to UTM with surveyed points from the field.

AMEC compared drill hole collar elevations to the electronic topography. Five of the 148 drill hole collars showed elevation differences of greater than ten feet as they relate to topography (Table 14-4), which suggests an incorrect location or an error in the current topographic base.

Table 14-3: Average Dry Bulk Density Values by Oxidation Type

Oxidation Type	N	Mean Density (g/cm^3)	Std. Dev. Density (g/cm^3)	C.V.
Oxidized	22	1.85	0.20	0.11
Transition	15	1.90	0.16	0.08
Unoxidized	26	2.19	0.21	0.10

Table 14-4: Collar Elevation Differences Greater than Ten Feet from Topography

Drill Hole Identification	Elevation Difference (feet) (Collar – Topo)
GIVC-2	18.5
GIVC-3	21.3
NG-1	-15.7
NG-5	-11.6
NG-23	13

15.0 ADJACENT PROPERTIES

There are no adjacent properties that are at the same stage of development as the Gibellini Project. The Bisoni–McKay vanadium property is located several miles south of the Gibellini Project, and is discussed in the sub-section below.

The QPs have not verified this information, and have relied upon cited reports in the public domain and corporate websites for the data presented. Mineralization discussed in the subsections below is not necessarily indicative of the mineralization and mineral resources of the Gibellini Project.

15.1 Bisoni–McKay

Stratabound and stratiform vanadium mineralization at the Bisoni–McKay deposit is hosted in weathered carbonaceous shales of the Devonian Woodruff Formation. Shale thicknesses can be as much as 300 ft (Ullmer, 2008).

The main metallic mineral in the shales is manganese oxide in nodular form, which also contains barium and vanadium. The vanadium content of the nodules is about 5%. Fine dusty disseminations and platey masses of hematite are ubiquitous in the shales. In the oxidized and transition zones the vanadium mineralization occurs as complex red, green and yellow vanadium oxides in globular shaped grains (Turner and James, 2005).

Exploration to date has included trench and dump sampling, RC and core drilling, metallurgical testwork, and mineralization studies. Hecla Mining Company (Hecla) drilled 19 drill holes on the property in the 1970s, and undertook metallurgical testwork to test methods of vanadium extraction from the carbonaceous and oxidized shale mineralization. TRV Resources–Inter-Globe Resources undertook heap leach testwork (Ullmer, 2008).

Stina Resources (Stina) currently controls the property, and has completed five core and 23 RC holes. Stina’s metallurgical testwork has focused on the front end of an overall process flow sheet that would determine what chemistry is required to bring vanadium into solution in order to separate it economically from the host (or gangue) minerals.

During 2008, a mineral resource estimate was completed, based on the 2007 drilling of twelve RC holes, six RC holes completed in 2005, and three core holes completed in 2005. The estimate is summarized in Table 15-1.

Table 15-1: Mineral Resource Estimate, Bisoni–McKay Deposit, (Ullmer, 2008)

	0.1% V_2O_5 Cut-off	0.2% V_2O_5 Cut-off	0.3% V_2O_5 Cut-off
	Indicated Mineral Resource - Area A-North		
Tons	13,455,000	10,627,000	8,074,000
	Inferred Mineral Resource Area A -North		
Tons	1,065,000	893,000	746,000
	Inferred Mineral Resource Area A-South		
Tons	8,216,000	6,488,000	4,744,000

The quoted cut-off for the mineral resources is at 0.3% V_2O_5 cut-off. This cut-off represents a minimum of 6 lbs of V_2O_5 per ton which converts to a value of $51/t at the average V_2O_5 price of $8.50/lb used in the estimation procedure.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

16.1 Metallurgical Testwork

16.1.1 Legacy Metallurgical Testwork

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 Vanadium Hill mineralization (Condon, 1975). Only the Noranda Research Centre testwork results were available for review by AMEC (Stanley, 1975). These results are compiled in Table 16-1.

The process that yielded the highest recovery for the Vanadium Hill mineralization was one that added 10% moisture and concentrated sulfuric acid to material that was then allowed to cure for four hours at an elevated temperature (110°C) after reagent contact and then leached with dilute (pH of 1.5) sulfuric acid. Recovery on the various samples ranged from 65% to 98% and an average recovery of 74% was quoted. The material was prepared by crushing the sample, screening out the minus 65 mesh (212 µm) material and using a ring-and-puck pulverizer to stage crush the remaining material to 100% minus 65 mesh.

AMEC concludes the following from the review of the test work results:

- Test results show an increase in recovery when water is added during curing. Sulfuric acid is a more aggressive leaching agent at concentrations below 90% due to the change of iron solubility and the additional dilution might have allowed better leaching. Depending upon the oxidizing conditions, the vanadium ion can be soluble over a wider range of pH, and the additional dilution could have reduced the Eh.
- The recovery time appears to be dependent upon the retention time with the longer leach time producing higher recovery
- Higher temperatures of curing do not substantially impact recovery
- The use of surfactant did not appreciably impact recovery, so surface tension-controlled mass transport is not a factor in the recovery
- The direct leaching appears to have limited temperature dependence with 75°C leaching giving better recovery than 25°C or 95°C leaching
- Salt roasting did not show very good recovery, which is consistent with the solubility of chloride and oxychloride compounds of vanadium

Table 16-1: Vanadium Recovery Results from CSMRI and Noranda Metallurgical Test Work

	% Vanadium Recovery									
Sample	1	2	3	4	5	6	7	8	9	10
% passing +150 mesh	26.6	24.3	26.4	37.3	41.1	33.3	31.3	33.0	40.5	36.3
Baseline, 4 hours cure 110°C, water wash	91.8	92.4	75.2	64.6	85.4	49.4	74.8	71.7	67.5	64.9
Baseline conditions with acid wash	92.4		71.4	64.0	86.4	49.6	70.7	76.3	67.3	64.9
6 hour cure 110°C, 10% extra water	98.5		78.2	69.9	90.5	49.6	85.6	81.1	74.0	75.6
6 hour cure 110°C,10% extra water, acid wash				80.7	89.6	71.4	85.4	78.9	80.7	75.2
Baseline with surfactant	94.9		72.8							
Baseline with 160°C cure	94.1		73.8							
Direct H_2SO_4 leaching 120 lb/t acid, 25°C		67								
Direct H_2SO_4 leaching 240 to 300 lb/t acid, 75°C	67	78	45				48	49		
Direct H_2SO_4 leaching 230 lb/t acid, 95°C		70								
Pressure leach, 110°C, 100 psi O_2							60	60		
Reducing leach, 75°C, 30 gpl $FeSO_4$		78								
Reducing leach, 75°C, SO_2 sparge		68								
Salt Roast, 10 g NaCl,, 700°C							11.9	15.4		
Salt Roast, 10 g NaCl,, 800°C							12.1	5.0		
Salt Roast, 10 g NaCl,, 900°C							7.1	17.2		

- The ferrous leach had a positive affect on the direct leaching, but the region of the Eh-pH diagram that this leach occupied is uncertain. The reducing leach with sulfur dioxide sparging yielded increased recoveries but to a lesser extent than the ferrous leach
- The size distribution of these samples is different from a traditionally ground material. The size analysis shows more coarse-grained material and less fine-grained material than would be expected from the product of a grinding mill. Because the vanadium mineralization is disseminated, the unusually high proportions of coarse material in these samples could decrease recovery, making recoveries appear worse than actual. No liberation size details were provided to AMEC nor any leach residue screen analysis with assay grade.

16.1.2 RMP Metallurgical Testwork

Following the review of the historic testwork, two metallurgical testing programs were conducted by RMP, comprising bottle roll tests and ½” and 2” column tests.

2007 Phase 1 Testwork

Initial bottle roll tests were completed by SGS Lakefield Research Limited (SGS) in Ontario Canada on three samples of oxide vanadium mineralization, GI-9583, GI-9585 and GI-9633, which were collected from trenches located on the north end of the Gibellini deposit,

The samples were stage crushed to -1/2 inch. The crushed sample was split into 4 samples. Two splits were reserved, one split was used for testing at -1/2 inch and the last split was stage crushed to -10 mesh. The -10 mesh sample was split into four parts: one for testing, one for head analysis, one pulverized, and one reserved. The pulverized split was tested as the -200 mesh sample.

The samples were analyzed for vanadium and a multi-element analysis was completed. The samples were screened and the individual fractions were analyzed for vanadium. The minus fractions (pan) were also analyzed using XRD (X-ray Diffraction).

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

The cured samples were then put into bottles and sufficient water was added to make a 40% solids slurry. The bottles were placed on a set of rolls and rolled for 96 hours.

Samples were removed at timed periods and analyzed. After 96 hours the slurry was removed from the bottle, filtered, and washed. The initial filtrate and the washed residue were analyzed for vanadium. The residue was also analyzed using the multi-element method. ORP and pH measurements were taken at each sample point. A portion of the dried residue was screened and the individual fractions were analyzed for vanadium.

Head Analysis

Table 16-2 provides an overview of the bottle roll sample head grades. 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 XRD analysis identified a vanadium mineral (fernandinite) in sample GI-9633. XRD analysis 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.

Bottle Roll Test Results

The leaching data indicates that sample GI-9583 behaved differently to samples GI-9585 and GI-9633. The recovery of the GI-9583 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 16-3 and Table 16-4 summarize the bottle roll results.

Test Results Interpretations

The data accumulated shows several important factors about the vanadium 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 samples do not appear to be the same
- The amount of acid used may be decreased in future tests.

Table 16-2: Sample Head Grade

Sample	%V	%V_2O_5
GI-9583	0.19%	0.34%
GI-9585	0.30%	0.54%
GI-9633	0.37%	0.66%

Table 16-3: Recovery for Tests Using 300 lbs per ton Sulfuric Acid

Sample	-1/2 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 16-4: Recovery for Tests Using 300 lbs per ton Sulfuric Acid and Manganese Dioxide

Sample	-1/2 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%

The XRD analysis of the samples identified fernandinite ($CaV_8O_{20} \cdot xH_2O$). This mineral is a mixture of 4^+ and 5^+ vanadium ions. This 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, leaching data has 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 fraction. This information is important since it indicated that heap leaching is a potentially viable recovery method. It also indicated that leaching at a coarser material sizing may be possible. These data also indicate that it could 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.

The difference in recovery between samples indicates that there may be either different vanadium minerals present, or that liberation was an issue. Since the pulverized samples should have shown higher recovery, liberation was not thought to be an issue. Another possible interpretation for these data is that some of the vanadium mineralization is encapsulated as ultra-fine minerals in a mineral matrix, or that some of the vanadium minerals are in a reduced form that was not solubilized.

The amount of acid consumed during the leaching was quite low and it is possible that the amount of acid utilized was more than would be necessary to achieve dissolution of the vanadium. The reduction of acid required to dissolve vanadium would enhance the project economics since acid usage accounts for over half of the processing costs.

2007–2008 Phase II Testwork

The Phase II metallurgical testing program encompassed multiple programs including: material handling and preparation procedures, sulfuric acid concentration determination, testing for fixed tail relationships, and performing column leach tests on -2” and -1/2” size fractions for oxide, transition, and sulfide material.

Acid Concentration Determination

The initial test work at Dawson Metallurgical Laboratories Inc (Dawson) was set up to benchmark procedures with the SGS work. The initial work was undertaken on the samples used by SGS to test the effect of acid concentration. These tests showed that the acid concentration could be lowered to 200 lbs per ton sulfuric acid. The samples tested at SGS were surface samples whereas the test samples for the columns were core samples. When the initial bottle roll tests were completed at 200 lbs per ton the recovery was lower than expected. An additional series of tests were performed using 300 lbs per ton and the recovery increased to the levels expected. AMEC determined from these data that the columns would use 300 lbs per ton sulfuric acid on the oxide and transition samples and 350 lbs per ton on the sulfide sample. Additionally, the grade of the sulfide sample was lower than expected and a fourth sample was acquired from additional core drilling undertaken by RMP.

Fixed Tail Test

AMEC was of the opinion that the material might exhibit a constant tail characteristic since the recovery was essentially the same across size fractions, based on results from the initial metallurgical program. As part of Phase II, a bottle roll program was set up to test the fixed-tail theory from RC cuttings collected from across the property. The bottle roll program showed that recovery varied with grade and sample type, and showed that there was no fixed-tail relationship. The RC test data is summarized in Table 16-5.

Table 16-5: Fixed Tail Bottle Roll Recovery Results

Sample	Average Head Grade % V_2O_5	Avg. Recovery	Recovery Range	No. of Samples
Oxide	0.30	54.9	39.9–70.4	5
Transition	0.41	53.7	43.7–65.1	10
Sulfide	0.26	23.3	22.4–25.0	3

Column Tests

The column test material head grades are shown in Table 16-6. The column test recoveries shown in Table 16-7 are higher than the bottle roll recoveries shown in Table 16-5. Part of the difference is related to the difference between the assay head and the calculated head grades of the mineralization used in the column tests; however, the primary difference is due to solubility problems encountered while running the bottle roll tests. Specifically, the bottle roll tests hold the leach solution throughout the test, whereas the column tests utilized the application of fresh solution continually throughout the test. Column test data showed crystals forming during early leaching. The early formation of crystals during the column tests confirms that limited solubility is the most likely reason for the difference between bottle roll test and column leaching test recoveries. AMEC considers that the bottle roll test results are not a good indication of Gibellini vanadium recoveries, and believes that the column test results provide a more reliable indication of Gibellini vanadium recovery.

The initial ½” columns (oxide and transition) did not utilize 25 g/ℓ acid solution as the column wash, and it appears that the recovery was slightly reduced compared to the 2” columns as a result. The columns are also showing low acid consumption. Columns almost always show higher reagent usage than actual heap operations. Table 16-8 shows the column acid consumption.

For the purposes of the PA, the recovery rates derived from the column test work are the recoveries used for mineral resource estimation and potential project economics. The bottle roll tests were excluded due to the solubility issues identified. For oxide and transition material, the 2” tests were utilized because they had the 25 g/ℓ solution washing the material throughout the process, while the ½” samples utilized a lower concentration solution initially, which seemed to inhibit dissolution. The recovery rates recommended for use in the PA are shown in Table 16-9.

Table 16-6: Core Sample Head Grades

Sample	Head Grade %V	Head Grade % V_2O_5
Oxide	0.14	0.25
Transition	0.18	0.33
Sulfide	0.18	0.33

Table 16-7: Column Test Recovery Results

Sample	-1/2 inch	-2 inch
Oxide	59.7%	63.7%
Transition	66.3%	74.1%
Sulfide	52.3%	No Column

Table 16-8: Column Acid Consumption

Sample	-1/2 “	-2”
Oxide	119 lbs/t	101 lbs/t
Transition	115 lbs/t	90 lbs/t
Sulfide	115 lbs/t	No Column

Table 16-9: PA Study Recommended Recoveries

Material	Recovery
Oxide	60%
Transition	70%
Sulfide	52%

During the bottle roll testing, it was noted that the filtration of the samples was very slow. AMEC concluded that there were clay or silt particles present and that these particles might adversely affect the percolation of the columns. AMEC recommended that when the samples were contacted with acid that a polymer be utilized to agglomerate the fines. Samples of polymers were obtained from Hychem and a screening test was done to determine which polymer would work best.

Polymer AE 852 appeared to work the best and the addition rate of 0.5 lbs/t was chosen. No fines migration or plugging was observed during the column tests when the polymer was added to the material prior to being loaded into the columns. However, this does not prove that polymer addition is necessary because no column tests were done without polymer addition to see if plugging or fines migration is an issue with the Vanadium Hill leach material.

Recommended Additional Work for the Next Phase of the Project

The Phase II metallurgical testing program was completed to provide additional information for the PA because it was considered that the previous data were not sufficient to forecast the applicability of heap leaching to the Vanadium Hill material. The previous work indicated the amenability of the Vanadium Hill material to heap leaching, but AMEC considered that column testing would be a better indication of that amenability.

The Phase II test program has indicated that bottle roll testing does not give a direct relationship to the ability to heap leach. The bottle roll data had as much as 20% to 30% lower recovery than the column leach tests. One item that might be tested is the longer retention time or lower bottle roll slurry density. The longer time might allow additional leaching to occur. A lower slurry density (30% rather than 40%, which was used in the Phase II testing) would ensure that all available vanadium minerals dissolved (assuming that a finite dissolution of the vanadium was reached). The conclusion that vanadium reached saturation in the bottle roll tests was reached because crystals formed in the column solution required dilution to dissolve; consequently, if vanadium dissolution is a factor, doing additional test work using a lower slurry density in the bottle roll test may help to get the bottle roll and column results closer together. In addition, lock cycle column tests, where leach solution is circulated back to the column after removal of the leached metal, are being recommended. The lock cycle column tests should show whether the solubility problems found in the bottle roll tests are a result of increasing concentrations of a gangue material causing the lower vanadium solubility.

AMEC also recommends that additional column tests be performed to determine if leaching can be undertaken 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, and if the material can be leached without polymer addition.

This additional testwork is suggested so a lower cost method of testing (bottle roll tests) can be developed to gather additional information for the deposit. The testwork is also set up to determine if the polymer usage could be decreased and the cost lowered or eliminated. Another purpose of the testwork is to determine if lowering the acid added during curing can still provide sufficient leach recovery.

16.2 Potential Process Alternatives

The PA reviewed five alternative processing scenarios. The processing scenarios include:

- Heap leach 2 Mt/year (Base Case)
- Heap leach 1 Mt/Year (Case 1)
- Heap leach 3 Mt/year (Case 2)
- Mill 1 Mt/year (Case 4)
- Ferrovanadium production from a 2 Mt/year heap leach (Case 5).

With the exception of Case 5, all other cases produce a V_2O_5 product.

16.2.1 Base Case

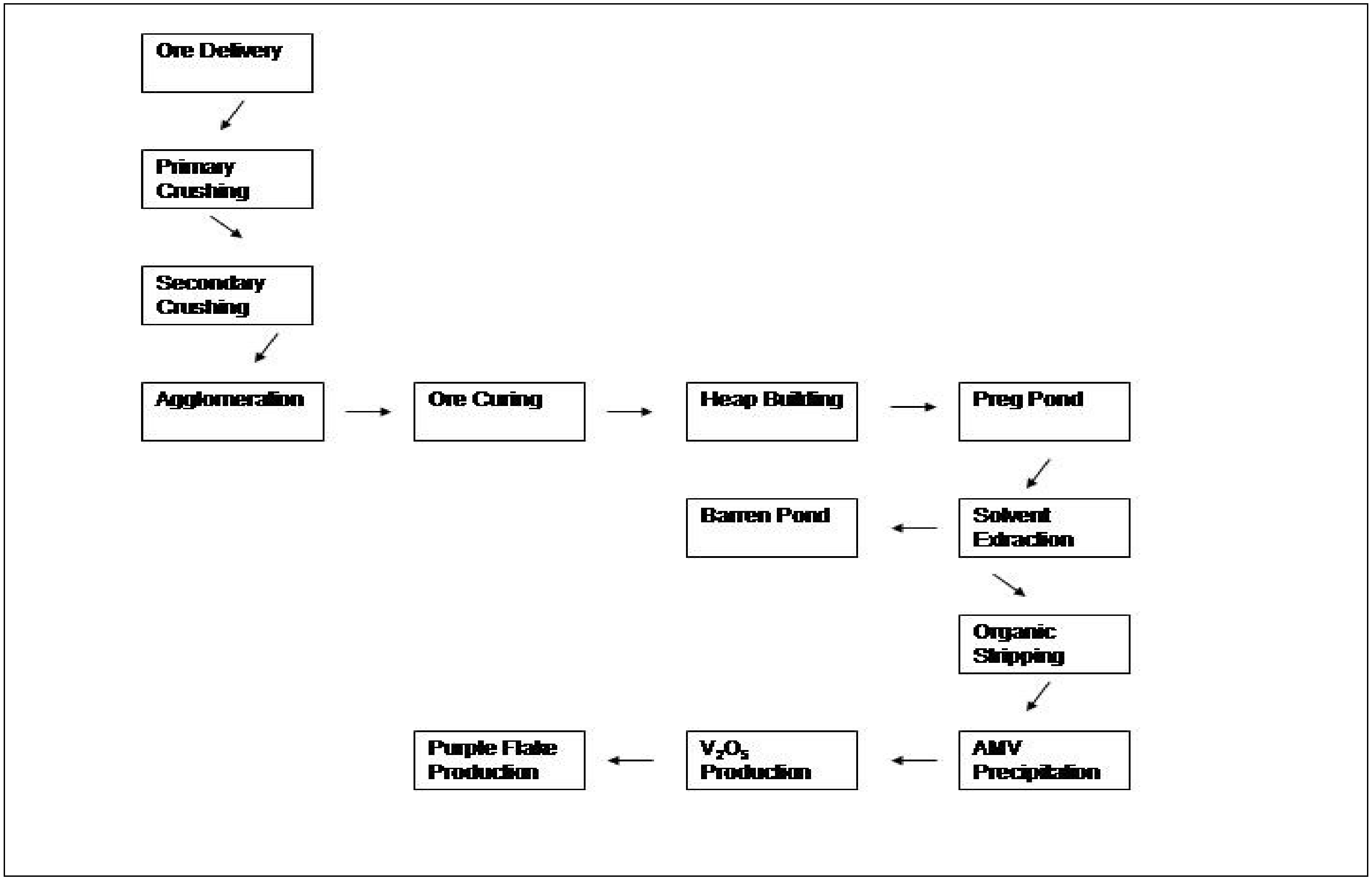
Figure 16-1 shows a proposed process flow sheet for the Base Case scenario of the PA. Leach material, in this scenario, is delivered to the primary crusher from the mine at a rate of 2 Mt per year which is approximately 5,500 t/d. The mine is expected to deliver a minus 24 inch product to the jaw crusher.

The planned jaw crusher has a 4:1 reduction ratio and will produce a nominal 6 inch product for the secondary crusher. The planned secondary crusher, designed at a 3:1 reduction ration, will produce a 2 inch product from the six inch primary feed. Once crushed, the leach material will be agglomerated and acid treated. An acid tank and pumping system will be used in tandem with a flocculent make up and storage system. The leach material will be placed on the curing pad via a 100’ long radial stacker. The curing pad pile is designed to accommodate two days of crusher feed.

From the curing pad, agglomerates will be picked up using a front end loader and loaded onto a grasshopper conveyor that will stack the material on the leach pad by way of a 180’ radial stacker and extension conveyors. The stacked material will rest for approximately a week prior to leaching.

After the material is rested for a week, leach solution is applied at a 0.003 gpm/ft^2 application rate for 90 days. The pregnant heap solution from leaching flows to a central collection pregnant pond. The solution from the pregnant pond is pumped to a mixer–settler system where the vanadium is loaded onto an organic extractant/diluent mixture. The loaded organic is then advanced to the strip circuit, while the solvent extract loading circuit tailing (raffinate) is sent to a barren pond.

Figure 16-1: Base Case Process Flow Sheet



The raffinate is adjusted for acid concentration by sulfuric acid addition in the barren pond, pumped back onto of the heap, and reapplied to the heap via a drip irrigation system.

The loaded organic is transferred to a second mixer/settler where it is stripped using a strip solution that has ammonium sulfate present. The strip solution is then treated with ammonia to form ammonium meta-vanadate (AMV). The AMV is then sent to a thickener where the liquids and solids are separated. The thickener underflow is centrifuged prior to the AMV going to the calciner. The AMV is calcined and the resultant product is placed on a casting wheel to make the final V_2O_5 product which is crushed and drummed for shipment. The overflow from the thickener is pH-balanced and returned to the strip circuit.

The planned 1 Mt/a plant would utilize the same sized primary crusher as the two and three million ton per year plants, however, its utilization time will only be 6 hours per day as compared to the 12 hours per day for 2 Mt/a per year estimate and 18 hours per day for 3 Mt/a estimate. For the estimate, the primary crusher will be a jaw crusher operated in an open circuit that has 15% of the material scalped on the feed grizzly.

To operate at three million tons per year, increases in the leach pad area, the SX system, the reclaim system, the pump sizes, the organic tanks, and the thickeners will be required.

16.2.2 Base Case Design Criteria

The basic design and operational criteria for the proposed base case comprises:

- Base Case Tonnage: 2,000,000 tons per year
- Crusher Availability: primary and secondary – 70%
- Crusher Feed: 100% minus 24”
- Primary Crusher: 36” x 48” jaw crusher. Reduction ratio of 4:1 (24” to 6”)
- Secondary Crusher - 7’ standard cone crusher. Cone crusher operates in an open circuit with a crusher set of 1.25”. Reduction ratio of 3:1 (6” to 2”)
- Curing Pad Capacity: 2 days crusher capacity
- Curing Pad Stacking Method: Radial Stacker
- Heap Pad Loading Method: Loader Feed to Overland Conveyors to Extendable Radial Stacker

- Leach Pad Construction: Primary HDPE 80 mill liner and a 12" secondary clay liner separated by geotextile. Leak detection system designed to detect leaks from primary liner.
- Lift Height: 20 feet
- Heap Solution Application Rate: 0.003 gpm/ft^2
- Leaching Time: 90 days
- Pregnant and Barren Pond Capacity: Material drain down volume approximately 10,000,000 million gallons
- Processing Facility Availability: 95%
- Solvent Extraction Capacity: Loading at 2,000 gpm and stripping at 200 gpm.
- Organic Extractant: 2-Di Ethyl Hexa Phosphoric Acid (DEHPA) 50%
- High Purity Kerosene: 50%
- Stripping Solution: Ammonium Sulfate
- Vanadium Recovery Method: Oxidize strip solution and add gaseous ammonia, settle material, centrifuge and calcine. Take molten V_2O_5 product and cool on casting wheel, crush and drum product.

16.2.3 Alternative Cases

Case 1 – 1 M Leach, V_20_5 Product

Case 1 is an alternate to the Base Case that would process one million heap leach tons per year instead of the two million heap leach tons per year processed in the Base Case. The main impacts of Case 1 are that the start-up capital is lower because not as much pad space is initially required and that the operating cost is higher due to the smaller unit operational scale.

Case 2 – 3 M leach, V_20_5 Product

Case 2 is an alternate to the Base Case that process three million heap leach tons per year instead of the two million heap leach tons per year processed in the Base Case. The main impacts of Case 2 are that the start-up capital is higher because more pad space is initially required and the operating cost is higher due to processing a higher volume of heap leach material while the sulfuric acid prices are at their highest.

Case 4 – 1 M Mill, V_20_5 Product

Case 4 is an alternate to the Base Case that process one million tons per year through a mill instead of the two million tons per year processed by a heap leach in the Base Case. Case 4 requires the addition of a crusher, a grinding mill, leach tanks, a counter current decantation (CCD) facility with clarifier, and substitution of a tailing facility for the heap pads and ponds. Both capital and operating costs are higher for Case 4.

Case 5 – 2 M Leach, Ferrovanadium Product

Case 5 is an alternate to the Base Case that produces ferrovanadium as a final product instead of producing V_2O_5 as a final product. Case 5 requires the addition of a large induction furnace and casting facilities to produce the ferrovanadium. Both capital and operating costs are higher for Case 5.

For the Ferrovanadium Case, the approach will be to produce a V_2O_5 product using the same flowsheet as is described for the other cases. The ferrovanadium product will be produced by adding V_2O_5 to an induction furnace with scrap iron, and then the product is readied for shipment.

To produce ferrovanadium the following additional equipment will be required: a 6 ton induction furnace, metal storage and handling equipment, a V_2O_5 holding bin, and an overhead crane.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

A first mineral resource estimate was disclosed for the Gibellini Project in 2007. The updated estimate for Vanadium Hill in this report incorporates additional drill data and metallurgical testwork.

Drilling at the nearby Gibellini manganese–nickel mine and the Rich Hill vanadium deposit were not included in the vanadium resource estimation because of the lack of sufficiently close-spaced drilling.

17.1 Database

A total of 37,289 feet of drilling in 181 drill holes in five drilling campaigns by Terteling, Atlas, Noranda, Inter-Globe and RMP were available for resource modeling and estimation at Vanadium Hill. Of this drilling, 120 holes totaling 25,077 feet were drilled using rotary, 57 holes totaling 12,192 feet were drilled using RC and four holes totaling 1,337 feet were drilled by core. Drill holes from the Terteling campaign were excluded from this study because they were deemed to be unreliable due to a high grade bias (AMEC, 2007). There are sufficient drill holes nearby from the other drill campaigns to compensate for not using the Terteling drill hole assays. The four core holes were drilled for metallurgical testing and were not assayed for resource modeling.

Drill hole assay data (collars, oxidation and assay files) were loaded into MineSight® (MS) and collated into a “drill hole” file. All missing sample intervals were set to null values and were not used in the resource estimation.

17.2 Exploratory Data Analysis

17.2.1 Assay Statistics

Histograms and basic statistics were produced for each drill campaign. Assay data were reviewed to three decimal places for the purposes of model construction and model validation.

Noranda drilling shows the highest average grade at 0.30% V_2O_5, whereas RMP has the lowest average grade at 0.18% 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 were five feet in length. Seventeen assay intervals were shorter and three were greater than five feet, but none exceeded 15 feet.

AMEC developed assay statistics based upon oxidation domains. The transition zone shows a mean grade of almost twice that of the oxide zone, and almost three times that of the reduced zone (see Table 17-1).

The transition domain shows much higher mean grade at 0.40% V_2O_5 as compared to oxide and reduced at 0.21% V_2O_5 and 0.14% V_2O_5 respectively.

17.2.2 Assay Contact Plots

In 2007 (AMEC, 2007), AMEC developed assay contact plots based upon lithological boundaries. AMEC found that the grade discontinuity between major lithologies was minor and that grade interpolation should not be restricted across lithological boundaries. However, contact analysis between oxidation domains show discontinuity of grades along boundaries. As a result, in the 2008 estimate, AMEC has treated the contacts between oxide to transition, transition to reduced and oxide to reduced as hard.

17.2.3 Metal Risk Analysis (Grade Capping)

Capping limits were investigated using a Monte-Carlo risk simulation methodology and decile analysis. AMEC uses an in-house-developed Fortran program (RISKHI2A.exe) to define a grade capping level such that the mine will exceed the predicted metal content for four out of five years.

Results from RISKHI2A.exe indicate capping for oxide to be set at 0.31% V_2O_5 and for transition at 0.56% V_2O_5. These values are not much higher than the average grades for these domains. The assay distribution of the three oxidation domains approach a normal distribution, are not heavily skewed, and lack a long grade tail. Monte-Carlo risk simulation is more appropriate for skewed distributions.

AMEC's decile analysis by oxidation domain indicates the metal is not heavily concentrated in any given decile or percentiles.

Table 17-2 lists the metal content by deciles and percentiles for the reduced domain. The 90–100 decile shows a total metal content of 18.40%. The 99–100 percentile shows a total metal content of 2.4%. This suggests that capping is not warranted.

AMEC did not cap the assays but range-restricted the area of influence from composites greater than 1% V_2O_5 to 100 feet during grade interpolation. AMEC compared the range-restricted block model to an unrestricted block model and determined that 0.3 of a percent of V_2O_5 has been removed.

Table 17-1: Assay Statistics by Oxidation State

Explanation	Model Code	Number of Samples	Avg. V_2O_5 (%)	Min V_2O_5 (%)	Max V_2O_5 (%)	Std. Dev.	C.V.
Oxide	1	1807	0.208	0.013	0.850	0.107	0.515
Transition	2	1871	0.400	0.018	5.500	0.229	0.572
Reduced	3	2437	0.141	0.001	1.247	0.107	0.759

Table 17-2: Percent V_2O_5 Content by Deciles and Percentiles for Reduced Domain

Decile Range	No. of Samples	Mean % V_2O_5	Min. % V_2O_5	Max. % V_2O_5	Contained Metal	
					GT (V_2O_5*ft)	% of Total
0-10	170	0.060	0.052	0.069	50.9	3.2
10-20	170	0.077	0.070	0.090	65.6	4.1
20-30	170	0.105	0.090	0.120	88.7	5.6
30-40	170	0.137	0.120	0.154	115.9	7.3
40-50	170	0.175	0.154	0.195	146.8	9.2
50-60	170	0.211	0.196	0.225	178.7	11.2
60-70	170	0.236	0.225	0.247	200.8	12.6
70-80	170	0.255	0.247	0.268	218.4	13.7
80-90	170	0.280	0.268	0.297	237.6	14.9
90-100	166	0.354	0.297	1.247	293.9	18.4
0-100	1696	0.187	0.052	1.247	1597.4	100.0

Percentile Range	No. of Samples	Mean % V_2O_5	Min. % V_2O_5	Max. % V_2O_5	Contained Metal	
					GT (V_2O_5*ft)	% of Total
90-91	17	0.300	0.297	0.300	25.5	1.6
91-92	17	0.305	0.300	0.310	25.9	1.6
92-93	17	0.312	0.310	0.318	26.5	1.7
93-94	17	0.320	0.319	0.320	27.2	1.7
94-95	17	0.325	0.320	0.330	27.6	1.7
95-96	17	0.334	0.330	0.340	28.4	1.8
96-97	17	0.352	0.340	0.360	29.9	1.9
97-98	17	0.365	0.360	0.370	31.0	1.9
98-99	17	0.396	0.371	0.420	33.6	2.1
99-100	13	0.589	0.430	1.247	38.3	2.4
90-100	166	0.354	0.300	1.247	293.9	18.4

17.2.4 Compositing

Assays were composited down-the-hole to 20 foot fixed length. Any remaining lengths at the end of a drill string less then 10 feet were appended to the previous 20 foot composite. A minimum of 10 feet was required to construct a composite. AMEC confirmed that the composites were properly calculated by manually compositing a few selected assays and comparing composite values to MineSight (MS) results.

The coefficients of variation (CVs) of all composites by oxidation state are less than one, which indicates that ordinary kriging of block grades, should provide reasonable estimates. Grade interpolations were limited to blocks within a 0.100 % V_2O_5 mineralization envelope that was constructed on 200-foot spaced cross sections and wire-framed into a solid. Composites within the grade shell were assigned a unique mineralization code. .

17.3 Block Model Parameters

A three-dimensional MS block model was created to estimate the V_2O_5 resource. The block size selected was 25 ft x 25 ft x 20 ft. Topography, mineralization envelope and oxidation domains were loaded into the model and blocks were coded.

17.4 Geological Models

17.4.1 Geological Domains

Grade Domain

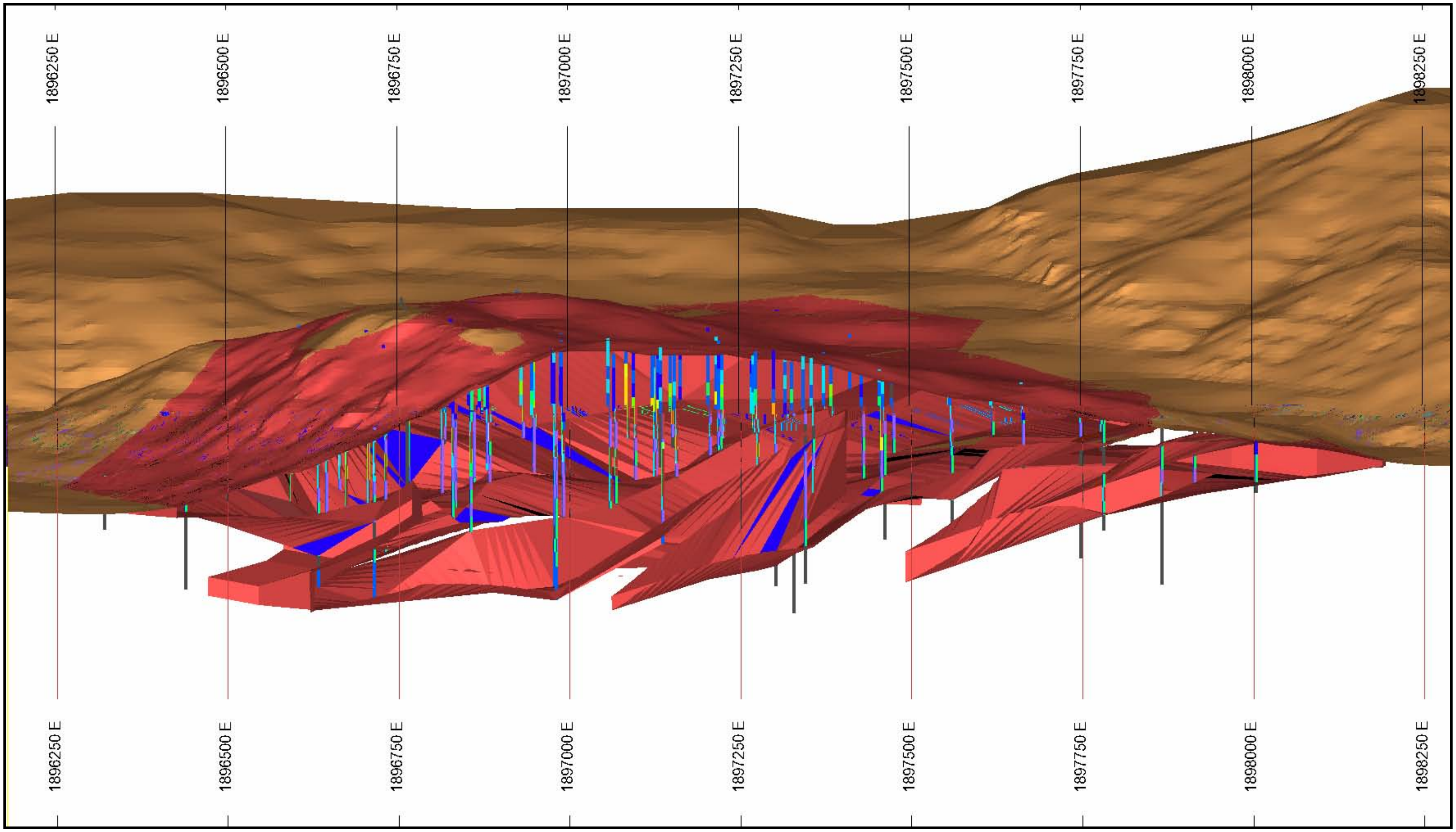
AMEC developed a mineralized envelope or “grade shell” to control the limits of grade interpolation in combination with oxidation state domains. This grade shell was drawn around drill holes projected onto cross sections spaced 200 feet apart with grade equal to or greater than 0.10% V_2O_5 (see Figure 17-1). Cross sections were reviewed in long section and grade shells modified depending upon the geometry of the zone. Grade shells were then wire-framed to create 3-D solids in order to code the block model. Composites and blocks were coded based on 50% or greater length or volume, respectively, within the grade shell solid.

Proper assignment of the grade shell solid domain code was visually confirmed by AMEC by inspecting drill hole composites in cross sections and mine blocks in bench plans on the computer screen. Volume comparison of the grade shell solid versus the volume of the tagged blocks shows approximately three-tenths of a percent difference.

Oxidation Domain

RMP geologists coded drill hole intervals based upon three oxidation state classifications: oxidized, transition, and reduced. Oxidation state domains were interpreted from drill logs based upon color, assay grades, and lithology. The oxide domain was classified based upon low V_2O_5 grades and lithology logged as broken, tan to white, sandy siltstone.

Figure 17-1: An Oblique, Cut-Away-View, Looking North into the 0.100% V_2O_5 Grade Shell with Drill Holes. East Grid Lines are Spaced 250 Feet Apart



Note: Red Area Shows the 0.100% V_2O_5 Grade Shell

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 upon a drop in grade and lithology logged as hard black shale. AMEC loaded oxidation domain codes from the drill logs into the drill hole assay database with oxide = 1, transition = 2 and reduced = 3. Oxidation domain codes were added to the composites from the assay database by majority rule. An indicator interpolation approach was undertaken to tag all blocks within the model with an oxidation domain code.

AMEC used Sage2001® to calculate the correlogram for the indicator values for transition and oxide domains. Kriging parameters for the transition and oxide probability models are listed in Table 17-3. The minimum number of composites required for interpolation was set to three, maximum number of composites was six, and no more than two composites from each drill hole were allowed in the estimate. These parameters require at least two drill holes to estimate a block. Nugget values are relatively low indicating good grade correlation between samples and long ranges show good spatial continuity of grade.

AMEC visually reviewed oxidation block assignments in cross section and plan and is of the opinion that the tagged blocks adequately represent their respective oxidation domains.

17.4.2 Spatial (Variographic) Analysis

AMEC used Sage2001® to construct and model experimental variograms using the correlogram method. 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.

17.4.3 Density Model

Tonnage factors were calculated from specific gravities discussed in Section 14 and assigned to the blocks based on oxidation codes as listed in Table 17-4.

AMEC recommends that a minimum of 30 density determinations be collected by RMP per rock and alteration type that are spatially representative of the deposit from surface to the base and spread over the lateral extent of the deposit.

Table 17-3: Variogram Parameters for Transition and Oxide Probability Models

Transition Domain								
C0	**C1**	**C2**	**Range Y**	**Range X**	**Range Z**	**Rot. Z**	**Rot. X**	**Rot. Y**
0.117	0.521	0.362	760.6	67.9	51.9	-73	-36	-80
			1014.8	78.8	2420.2	109	-1	90
Oxide Domain								
C0	**C1**	**C2**	**Range Y**	**Range X**	**Range Z**	**Rot. Z**	**Rot. X**	**Rot. Y**
0.060	0.484	0.456	467.9	268.1	75.7	-21	-12	12
			3208.9	12779.8	699.5	-73	-1	-1

Table 17-4: Block Model Tonnage Factor

Oxidation Domain	Average S.G. (gm/cm^3)	Tonnage Factor (ft^3/ton)
Oxide	1.85	17.3
Transition	1.90	16.9
Reduced	2.19	14.6
Undefined	1.98	16.3

17.5 Grade Estimation

17.5.1 Kriging Implementation

Only composites from RMP, Noranda and Inter-Globe were used for Indicated Mineral Resource grade interpolation. Additional composites from Atlas drilling were used during the interpolation for Inferred Mineral Resource grades. 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 100 ft was placed on grades greater than 1% V_2O_5 for each of the domains.

Ordinary kriging was used to estimate vanadium grade into mine blocks previously tagged as within the vanadium mineralized shell. Two kriging passes were employed to interpolate blocks with potentially Indicated Mineral Resource vanadium grades. Third and fourth kriging passes were used to interpolate potentially Inferred Mineral Resource grades.

A less restrictive first pass interpolation required a minimum of two composites, a maximum of two composites and no more than one composite per drill hole. The second pass was allowed to overwrite the first pass but required a minimum of three composites, a maximum of five composites, and no more than two composites per drill hole.

17.6 Model Validation

17.6.1 Visual Inspection

Visual inspection of the V_2O_5 model grades in plan and section indicate that the interpolation parameter files were implemented successfully and compared well with the composite grades.

17.6.2 Global Bias Check

AMEC checked the model estimates of V_2O_5 grades for global bias by comparing the means of the ordinary kriged (OK) grade to a nearest-neighbor (NN) model grade for blocks identified as potentially being Indicated Mineral Resources. The NN model theoretically produces an unbiased estimate of the average value at a zero cut-off grade. 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 relative mean differences ranged from -1.5% to 2.5% and suggest that the kriged model is globally unbiased.

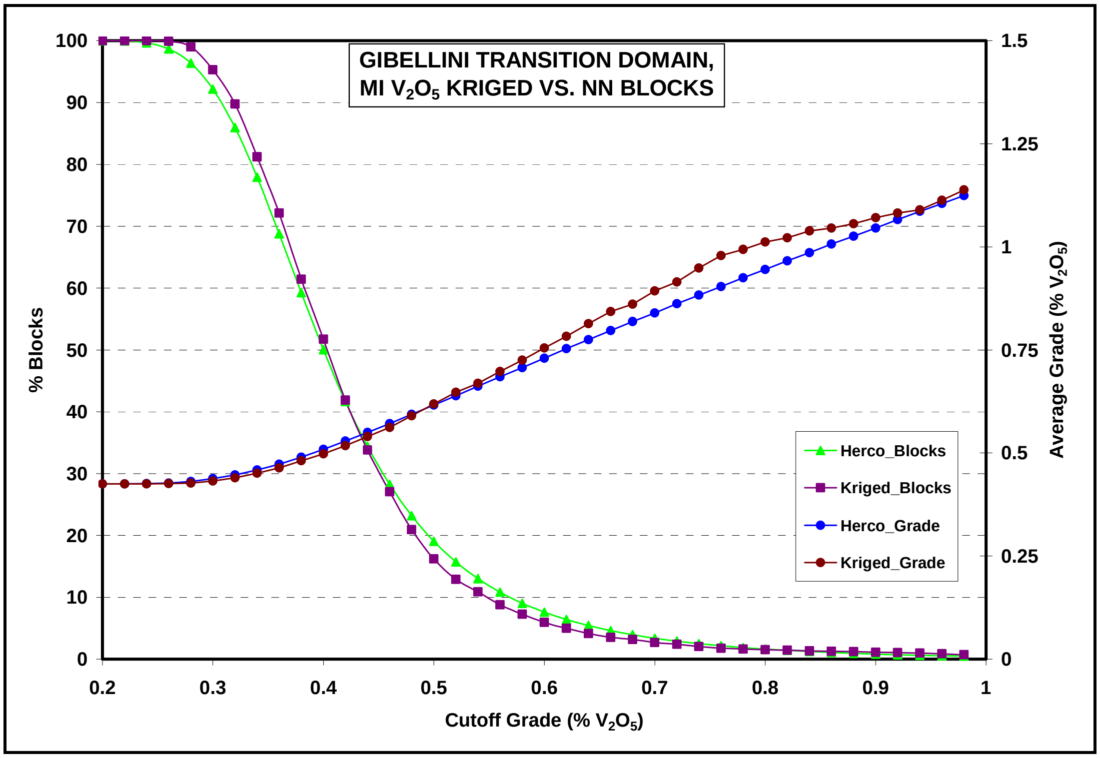
17.6.3 Model Check for Change of Support (HERCO)

The degree of smoothing in the kriged block model estimates was evaluated using the Discrete Gaussian or Hermitian Polynomial Change of Support method. The Herco validation was performed with the AMEC-generated FORTRAN programs HERCO04D.EXE and GTCOMP.EXE. The grade and grade-tonnage distribution of calculated 25 foot x 25 foot x 20 foot transition blocks that potentially may be classified as Indicated Mineral Resources is presented in Figure 17-2. The figure shows that the grade and tonnages estimated by OK closely follows the Herco predictions up to about 0.6% V_2O_5. Above a cut-off grade of 0.137% V_2O_5, the model should produce slightly more tons at a slightly lower grade, than predicted by the theoretical Herco model. Grade–tonnage and grade-above-cut-off curves generated for oxide and reduced compared well to the Herco curves.

17.6.4 Swath Plots

Swath plot validation was performed with the in-house AMEC FORTRAN program SWATH2.EXE that allows for spatial comparison of the kriged estimate, the NN estimate, and the drill hole composites.

Figure 17-2: Herco Chart of Indicated Blocks from the Transition Domain.



The program separates the block model into user-defined slices (swaths) that are orthogonal to easting, northing, and elevation and calculates the average grade and number of blocks (or composites) for each swath. Swath plots of kriged and NN models compare well and indicate that the estimation is spatially unbiased.

17.7 Mineral Resource Classification

17.7.1 Drill Data Support

AMEC developed an opinion in 2007 that Terteling drill hole assay information shows a high degree of uncertainty pertaining to its quality and reliability (Wakefield and Orbock, 2007) and continues to maintain that opinion. Many of the original assay certificates have been lost or are not available. Drill hole locations are assumed to be correct but have not been verified. Assay results indicate a high bias when compared to other sampling campaigns in the area. Whether this bias originated at the drill site during sampling or at the laboratory during assaying is unknown. AMEC strongly recommends that these assays should not be used in resource calculations until twin drilling can verify historical assay results

AMEC believes that Atlas drill hole assay data are of adequate quality for Inferred Mineral Resource classification. This conclusion is based upon results that showed Atlas NN model to be biased low compared to the Noranda/Inter-Globe NN model but the pseudo-twin drill hole study showed good agreement between Atlas and Inter-Globe drill holes (AMEC, 2007). Atlas lacks original assay certificates and any information on any QA/QC procedures, drill hole collar locations are unconfirmed, and reports of poor sample recovery at the drill site exist (which may explain the low assay bias).

AMEC believes that Noranda and Inter-Globe assay data are of adequate quality for Indicated and Inferred Mineral Resource classification. Both drill campaigns show good correlation in determining an average model grade and have some original assay certificates and QA/QC results. However, AMEC was able to confirm the locations of only a few Inter-Globe drill hole collars, but no Noranda hole collars, and the results of QA/QC for these drilling campaigns are incomplete.

AMEC believes that RMP assay data are of adequate quality for Indicated and Inferred Mineral Resource classification.

17.7.2 Confidence Limits

AMEC reviewed the continuity of grade and geology at 200 ft drill spacing and concludes that continuity is adequate for grade interpolation and mine planning.

AMEC calculated the confidence limits for determining appropriate drill hole spacing for Indicated Mineral Resources. The statistical criterion used by AMEC for Indicated Mineral Resources is that a yearly production (2 Mt) should be known to at least within ±15% with 90% confidence. A drill hole grid spacing of 200 feet gives a 90% confidence interval of ±6% on an annual basis. Mineral resources were classified as Indicated Mineral Resources when a block is located within 156 ft to the nearest composite and one additional composite from another drill hole is within 220 ft. Drill hole spacing for Indicated Mineral Resources would broadly correspond to a 200 x 200 foot 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, ore and waste contacts and to define final pit limits. AMEC recommends that RMP continue to maintain a maximum drill grid spacing of 200 feet for Indicated Mineral Resources.

AMEC recommends that until issues regarding location of drill hole collars, twin hole results and the model's topography and coordinates are tied to points in the field, that Mineral Resource be limited to Indicated and Inferred Mineral Resource categories. Once these issues are satisfactorily addressed, AMEC expects Measured Mineral Resources to correspond to a drill spacing in the range of 100 ft to 125 ft.

17.8 Assessment of Reasonable Prospects of Economic Extraction

AMEC determined the extent of resources that might have reasonable expectation for economic extraction, as required by CIM (2003, 2005), by applying a Lerchs-Grossmann (L–G) pit outline to the block model. The pit shell was run using a long-term V_2O_5 price assumption of $6.50 per pound and a 60% recovery for oxide, 70% for transition, and a 52% recovery for reduced.

Processing and general and administrative (G&A) costs of $11.47 per ton, a mining cost structure that applied a base cost of $2.30 per ton, royalties, transportation and selling cost of $0.51 per pound V_2O_5, were applied to resource blocks above economic cut-off. All shells were run with a 45° pit slope.

The $6.50 vanadium price was selected based on the long-term forward price of $5.90 for V_2O_5 and approximately a 10% increase in the price to allow more optimistic parameters such that any future mineral reserves will be declared as a sub-set of the mineral resources.

17.9 Mineral Resource Statement

Table 17-5 lists the resource at the oxidation domain cut-off grades and Table 17-6 lists the mineral resource at various V_2O_5 cut-off grades. AMEC believes that there is a reasonable expectation for economic extraction for the mineralized material within this L–G pit cone and therefore this material conforms to criteria set forth in the 2005 CIM Definition Standards for Mineral Resources and the 2003 CIM Estimation of Mineral Resources and Mineral Reserves – Best Practice Guidelines.

The Qualified Person for the mineral resource estimate is Edward Orbock III, M.AusIMM, an employee of AMEC, and independent of RMP as independence is defined in Section 1.4 of NI 43-101. The mineral resource estimate has an effective date of 8 October, 2008. AMEC cautions that mineral resources are not mineral reserves until they have demonstrated economic viability.

Table 17-5: Vanadium Hill Base Case Mineral Resource at Various V_2O_5 (%) Domain Cut-off Grades

	Domain	V_2O_5 cut-off grade (%)	Tons (x 1,000)	V_2O_5) (%)	V_2O_5 lbs. (x 1,000)
INDICATED					
	Oxide	0.16	6,487	0.26	34,389
	Transition	0.14	8,679	0.43	73,932
	Sulfide	0.18	2,844	0.24	13,882
Total Indicated			18,010	0.34	122,236
INFERRED					
	Oxide	0.16	875	0.24	4,137
	Transition	0.14	1,801	0.31	11,098
	Sulfide	0.18	164	0.24	772
Total Inferred			2,839	0.28	16,006

Table 17-6: Vanadium Hill Mineral Resource at Different V_2O_5 (%) Cut-off Grades, Effective Date 8 October, 2008

Cut-off V_2O_5 (%)	Tons (x 1,000) Indicated	V_2O_5 (%) Indicated	Tons (x 1,000) Inferred	V_2O_5 (%) Inferred
0.1	18,415	0.34	3,053	0.27
0.2	17,133	0.35	2,545	0.29
0.3	9,903	0.42	929	0.38
0.4	4,592	0.50	262	0.46
0.5	1,425	0.62	49	0.55

18.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORT ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

The Gibellini Project is not a development property as defined under NI 43-101. Information relating to the PA is included in Section 19 of this Report.

19.0 OTHER RELEVANT DATA AND INFORMATION

This subsection, which describes the PA completed on the Gibellini Project, has been based on the Inferred and Indicated Mineral Resources outlined in Section 17.9.

Thus, this section includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary assessment based on these resources will be realized. The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

19.1 Work Undertaken

AMEC has addressed initial pit resources and design, reviewed tailings and waste considerations, reviewed ancillary and infrastructure requirements, and proposed a project execution plan at a preliminary assessment (scoping) level of study. A long-term vanadium price assumption of $5.90/lb V_2O_5 was used for the PA.

19.2 Pit Optimization Inputs

A summary of the pit optimization limits is presented in Table 18-1.

19.2.1 Mining

Base Case mining costs are $2.25/ton mined. Both historical mining costs in the Nevada area and a first principle build up of mining costs were used to arrive at the mining cost. An additional $0.05/ton mined for a sustaining capital cost allowance was added, for a total of $2.30/ton mined. No other allowances for dewatering, ARD or closure costs have been added to the mining cost because the pit is expected to be dry and ARD issues are not well enough understood to quantify.

No bench incremental cost was used as the deposit is in a ridge and is shallow. The material to leach pad and waste dump hauls were considered to be approximately equal and no incremental cost between leach and waste has been added.

No mining dilution or material loss has been assumed. This is considered reasonable as the mining capacity and equipment sizes will allow for selective mining to minimize dilution and losses.

Table 19-1: LG Input Parameter Comparison (Base Case, Resource Case and Sensitivity Cases)

Item	Unit	Base Case	Resource Case	Sensitivity Cases												
				Case 1 (Low Metal Price)	Case 2 (High Metal Price)	Case 3 (-20% Rec.)	Case 4 (-5% Rec.)	Case 5 (+10% Rec.)	Case 6 (Min. Cost +35%)	Case 7 (Min. Cost -35%)	Case 8 (Pr. + G&A Cost +35%)	Case 9 (Pr. + G&A Cost -35%)	Case 10 (Ind Only)	Case 11 (Contr. Mining Quote)	Case 12 (Mill Case)	Case 13 (Ferro-vanadium Case)
Mining Costs																
Waste	$/t	2.30	2.30	2.30	2.30	2.30	2.30	2.30	3.11	1.49	2.30	2.30	2.30	2.80	2.30	2.30
Processed	$/t	2.30	2.30	2.30	2.30	2.30	2.30	2.30	3.11	1.49	2.30	2.30	2.30	2.80	2.30	2.30
Process																
Processing	$/t	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	13.85	6.67	10.26	10.26	18.48	15.34
G & A																
All	$/t	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.63	0.79	1.21	1.21	1.21	1.21
Recovery																
Oxide	%	60	60	60	60	40	55	70	60	60	60	60	60	60	60	60
Transition	%	70	70	70	70	50	65	80	70	70	70	70	70	70	70	70
Sulfide	%	25	52	25	25	5	20	35	25	25	25	25	25	25	25	25
Material																
Resource*	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If	In+If
Price																
V_2O_5	$/lb	5.90	6.50	4.00	13.00	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	7.90
*Selling Cost***																
V_2O_5	$/lb	0.47	0.51	0.34	0.97	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.61
Pit Slopes																
Overall	°	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Cut-Off																
Oxide	$\%V_2O_5$	0.18	0.16	0.26	0.08	0.26	0.19	0.15	0.18	0.18	0.24	0.11	0.18	0.18	0.30	0.19
Transition	$\%V_2O_5$	0.15	0.14	0.22	0.07	0.21	0.16	0.13	0.15	0.151	0.20	0.10	0.15	0.15	0.26	0.16
Sulfide	$\%V_2O_5$	0.42	0.18	0.63	0.19	2.11	0.53	0.30	0.42	0.42	0.57	0.28	0.42	0.42	0.73	0.45

***Note:** In = Indicated, If = Inferred as in Block Model "II"

****Note:** Selling Cost calculated as V_2O_5 Price*(2% Royalty + 5% Selling Costs) + 0.057/lb Shipping, i.e. 5.90(0.02+0.05)+0.057=$0.47/lb V_2O_5

Rec. = recovery, Min. = mining, Pr. = process, G&A = general and administrative, Contr. = contract

19.2.2 Process

V_2O_5 leaching costs are estimated at $9.60/ton leached. The costs are based on an AMEC cost estimate that assumes 100 lbs/ton acid consumption at long-term $100/ton acid cost (including $20/ton shipping) and a $0.15/kwh site-generated power cost.

Process sustaining capital is estimated at $0.66/ton processed. To accommodate 20 Mt of leach material, a pad size of approximately 2,300 feet by 2,300 feet (5.3 M sqft of liner) is required. Assuming liner cost of $2.5/sqft the heap leach cost is $13.2 M or $0.66/ton.

No further allowance for incremental leaching costs, expansion allowance or rehandle costs was assumed.

Total process cost is $10.26/t leached including sustaining capital.

Fixed recovery assumptions are used for the three material types of oxide, transition and sulfide. A figure of 60% is used for oxide recovery whereas 70% is used for transition recovery, both of which are based on 2” and ½” column test work. A figure of 25% recovery is used for sulfide and is based on bottle roll test work, the only information available for sulfide recovery at the time of the pit optimization work.

19.2.3 Overhead Costs

Overhead and administrative costs are estimated at $1.02/ton leached. Overhead costs are based on anticipated labor levels and a factor for other costs that is 85% of the labor costs.

The reclamation costs were estimated by AMEC Earth and Environmental at $5 million for bonding where the Federal Government does the reclamation, and $2.5 million for owner reclamation costs. At approximately 20 million tons leached, the reclamation costs are between $0.25 and $0.125 per ton leached. An average value of $0.19 per ton leached was used.

The total overhead and administrative cost (including reclamation) for the purposes of pit optimization is $1.21/t leached.

19.2.4 Refining & Freight and Royalties

RMP estimated a selling cost of 5% of the selling price. For the base case V_2O_5 price of $5.90 per pound, the selling cost is $0.295 per pound V_2O_5 sold.

Material transport costs are \$0.057/lb sold. Material transportation costs are based on AMEC experience of approximately \$0.20/ton-mile for trucking and \$0.04/ton-mile for rail. The truck haul and rail haul are 120 miles (mine location to Carlin, NV) and 2200 mile (Carlin, NV to Ohio), respectively.

AMEC reviewed the project royalties and determined that only the Gibellini Mine Property Lease royalty applies to the L–G pit design. The Gibellini Mine Property Lease royalty is applied as a 2% royalty on the metal price in the optimization work.

The total selling cost for the Base Case including selling, transporting, and royalties is \$0.47 per pound of V_2O_5 sold.

19.2.5 Metal Prices

AMEC has assumed long-term metal prices based on a review of historical V_2O_5 prices from publicly available sources. The Base Case price is \$5.90/lb V_2O_5, and \$14.10/lb ferrovanadium. The resource price is \$6.50/lb V_2O_5 for resource shell determination. The resource price was escalated 10% above the base price which is a common industry practice.

19.2.6 Geotechnical Assumptions

Geotechnical studies have not been carried out yet to establish design slopes for the open pit. The high wall slope angles were estimated at 45 degrees overall for optimization, which is a generally accepted value by industry at scoping study level.

19.3 Pit & Phase Design

19.3.1 Pit Shell Selection

A pit by pit graph of the nested pit shells created in Whittle® is shown in Table 19-1. This shows the tons of oxide and transition material tons, waste tons, and discounted and undiscounted pit shell values for a series of revenue factors, or factored pit shells. A revenue factor is a multiplier used to generate pit shells at a range of metal values. This results in a series in which the actual metal prices can be applied to create curves of values. In the base case, revenue factor 1.0 represents the shell generated at \$5.90/lb V_2O_5.

The revenue factor 1.0 shell was selected as the Ultimate or Final pit shell for this study. An internal shell was selected to be a Starter pit shell, to provide higher grade material. The starter shell selected was for the 0.52 revenue factor. In addition to the higher grade, this shell was selected as it provided 2.5 years of leach feed at a low 0.06 strip ratio. The internal shell is actually two distinct shells, one to the north and one to the south.

The results of the Base Case Whittle® analysis are summarized in Table 19-2. The Whittle® analysis mine life is based on a 2,000 kt per year processing rate. The value column in Table 19-2 shows the undiscounted cash flow excluding initial capital.

19.3.2 Pit & Phase Design

Smoothed pit shells were completed without ramps. The shells utilize double benching of 20-foot benches, with 20-foot wide berms. A batter angle of 70 degrees was used to achieve the overall smoothed pit shell. As the pit shells are on top of a ridge, no surface inflow of water is expected. Consequently, the pit shells do not include any surface water diversion structures.

Pit smoothing added 1.349 Mt of waste at the overall average waste grade of 0.128% V_2O_5 and eliminated 0.267 process tons. In total, approximately 5.6% tons were added during smoothing which is well within the industry standard of 10%.

Starter pit shells are shown in Figure 19-1, and ultimate pit shells in Figure 19-2.

19.3.3 General Design Comment

The block model required expansion to the south in order to produce the initial L–G shells but this did not impact the resulting selected Ultimate pit shell. It would impact some of the larger sensitivity cases where smoothed shells were not used, but where L–G shells were used instead.

Inferred Mineral Resources represent 2.4 million tons of leach material inside the ultimate pit design. This is approximately 14% of the tons, and under 12% of the contained metal.

Table 19-2: Selected Base Case LG Results

Study	Waste kt	Total Process kt	V_2O_5 grade %	Strip Ratio W:O	Oxide Tonnes Kt	Oxide V_2O_5 grade %	Transition Tonnes kt	Transition V_2O_5 grade %	Mine life yr	Value $M
Starter Shell	310	5,036	0.41	0.06	2,352	0.28	2,684	0.52	2.5	80.0
Ultimate Shell	1,963	12,201	0.33	0.16	4,614	0.26	7,587	0.37	6.1	118.0
Total	2,273	17,237	0.35	0.13	6,966	0.27	10,271	0.41	8.6	198.0

Figure 19-1: Starter Pits (North and South), Topography and Dump Location

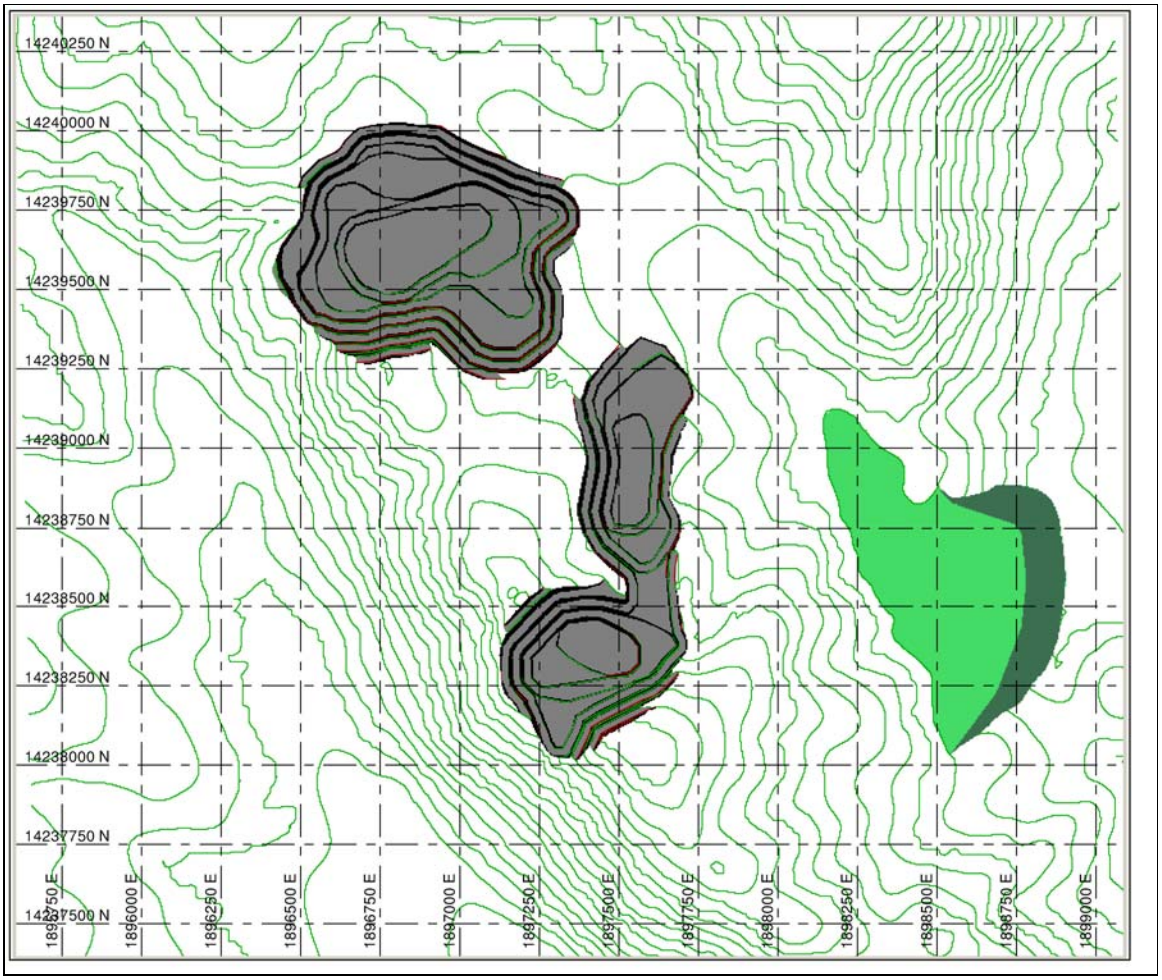
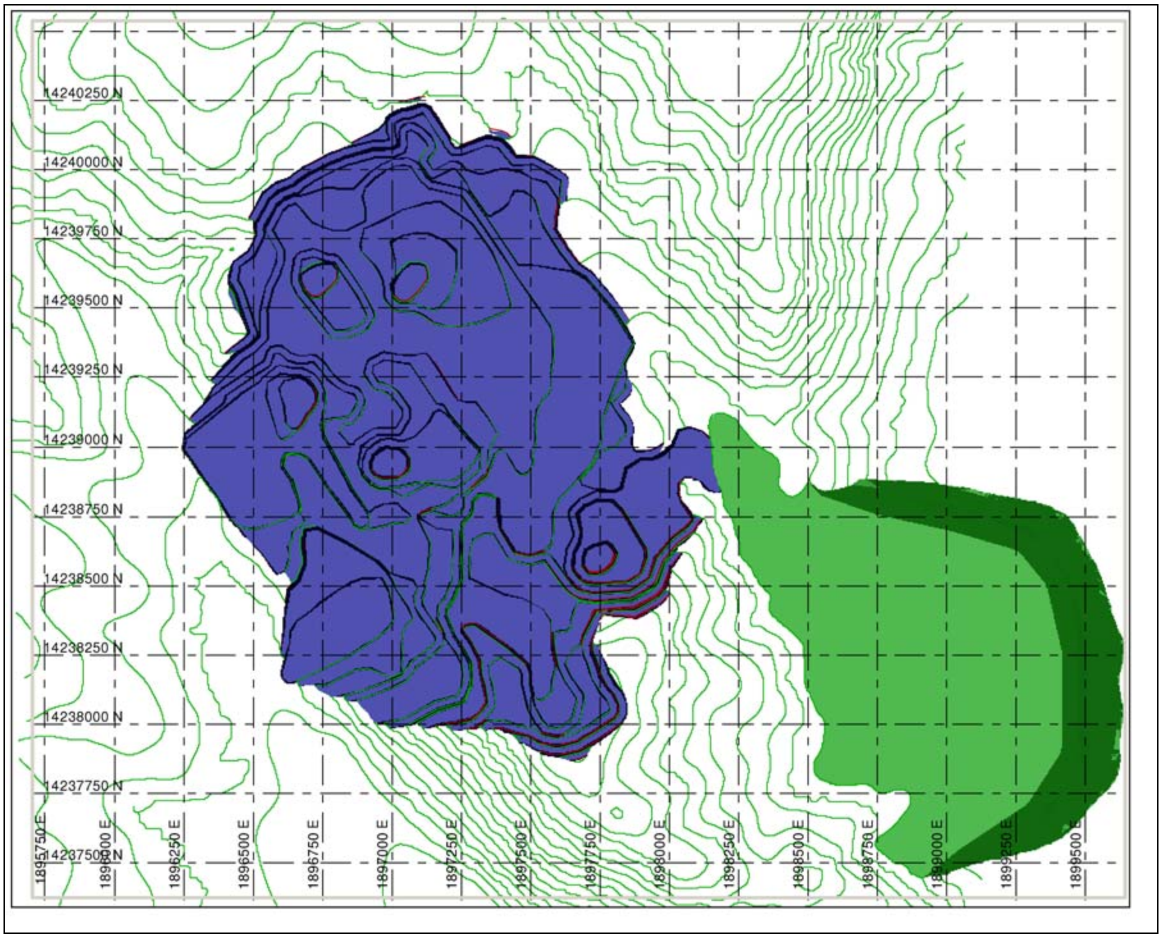


Figure 19-2: Ultimate Pit Shell Design, Topography and Dump Location



19.4 Sensitivity Analysis

A broad range of sensitivity work has been completed, see Table 19-3. The sensitivity work covers an array of costs, recoveries, metal prices and a case excluding inferred Mineral Resource material. The Base Case is repeated for reference. A graphical undiscounted value ranking of the sensitivities with leached tonnage and waste tonnage is shown in Figure 19-3. The actual sensitivity case input parameters were summarized in Table 19-1. The sensitivity results show that the Gibellini project is most sensitive to metal price and then to process recovery, which is typical for most projects.

19.5 Mine Life

Vanadium Hill has a potential nine year mine life at a 2.0 Mt per year heap leach processing rate (Base Case). The assumed start date in the PA for production and mining is Jan 1, 2012. Proposed peak annual production is 2.56 Mt in 2014. Table 19-4 summarizes the Base Case leach schedule.

19.6 Open Pit Mine Operating Costs

AMEC utilized several estimation approaches to determine mining costs for the Gibellini Project. The approaches included calculating mining costs from historical information, benchmarking mining costs to Nevada area mines, and calculating first-principle mining costs. The Base Case mining cost used for pit optimization and for project economics is $2.25/ton mined.

19.7 Open Pit Mine Capital Costs

Total estimated open pit mine capital for the proposed Vanadium Hill operation is $14.0 M including a 20% contingency (see Table 19-5).

The mobile equipment fleet selection shown in Table 19-6 is based on operating one twelve hour shift per day, seven days per week. Operating a twenty-four hour shift seven days a week would reduce the number of haul trucks required by two; however, it would require twice the mine operators to staff.

The mobile equipment capital costs are based on recent quotes received for other mine studies. The capital costs have been adjusted to include delivery to site, taxes, and assembly.

Table 19-3: Sensitivity Case Results (Revenue Factor 1.0)

	Description	Waste kt	Total Process kt	V_2O_5 Grade %	Strip Ratio W:O	Oxide Tonnes kt	Oxide V_2O_5 Grade %	Transition Tonnes kt	Transition V_2O_5 grade %	Sulfide Tonnes kt	Sulfide V_2O_5 Grade %	Mine Life yr	Cumulative Cash Flow $M
Base Case		2,273	17,237	0.35	0.13	6,966	0.27	10,271	0.41	-	-	8.6	198.0
Case 1	Low Metal Price	3,851	12,392	0.39	0.31	3,231	0.31	9,161	0.42	-	-	6.2	63.6
Case 2	High Metal Price	5,378	22,636	0.32	0.24	8,785	0.25	10,846	0.40	3,005	0.24	11.3	766.3
Case 3	-20% Recovery	4,070	12,471	0.39	0.33	3,130	0.31	9,342	0.42	-	-	6.2	75.1
Case 4	-5% Recovery	2,484	16,567	0.367	0.15	6,391	0.27	10,176	0.41	-	-	8.3	165.2
Case 5	+10% Recovery	2,475	17,942	0.34	0.14	7,451	0.26	10,481	0.41	10	0.31	9.0	264.4
Case 6	+35 % Mining Cost	1,987	16,955	0.35	0.12	6,698	0.27	10,157	0.41	-	-	8.5	180.2
Case 7	-35% Mining Cost	2,974	17,564	0.35	0.17	7,080	0.27	10,484	0.41	-	-	8.8	214.2
Case 8	+35% Process Cost	3,087	14,394	0.38	0.21	4,602	0.29	9,791	0.41	-	-	7.2	133.7
Case 9	-35% Process Cost	2,309	18,517	0.34	0.12	7,885	0.26	10,550	0.40	83	0.29	9.3	269.6
Case 10	Indicated Mineral Resources Only	2,480	14,663	0.36	0.17	6,077	0.27	8,586	0.43	-	-	7.3	178.4
Case 11	Contract Mining Cost	2,037	17,000	0.35	0.12	6,818	0.27	10,182	0.41	-	-	8.5	188.1
Case 12	Mill Case	5,575	10,427	0.42	0.53	1,520	0.34	8,908	0.43	-	-	5.3	81.8
Case 13	Ferrovanadium Case	2,755	16,793	0.36	0.16	6,497	0.27	10,296	0.41	-	-	8.4	261.2

Figure 19-3: Cumulative Cash Flow Ranking Comparison

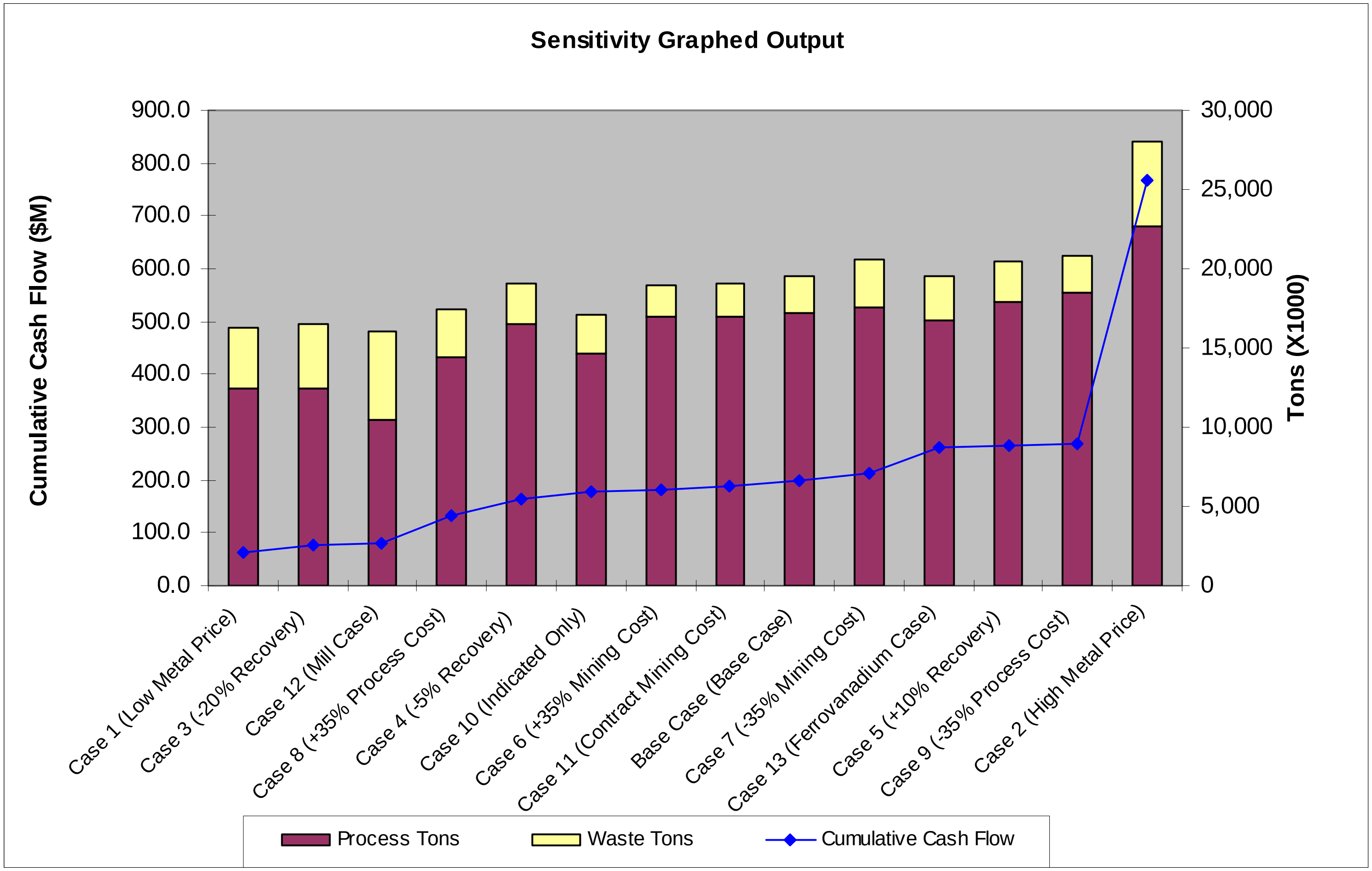


Table 19-4: 2 M ton Leach Schedule

	Total (ktons)	Leach (ktons)	Grade $\%V_2O_5$
2009	–	–	–
2010	–	–	–
2011	–	–	–
2012	2,172	2,000	0.33
2013	2,193	2,000	0.40
2014	2,564	2,000	0.43
2015	2,370	2,000	0.29
2016	2,499	2,000	0.30
2017	2,523	2,000	0.33
2018	2,435	2,000	0.36
2019	2,520	2,000	0.37
2020	1,316	969	0.34
Total	**20,592**	**16,969**	**0.35**

Table 19-5: Total Open Pit Mine Capital

Total Open Pit Mine Capital		USD (000's)
Mobile Equipment Cost		$9,735
Fixed Equipment Cost		$1,928
Contingency	20.0%	
Contingency		$2,333
Total		**$13,995**

Table 19-6: Mine Mobile Equipment Fleet

Mobile Equipment Cost	Number	USD Each	Total USD (000's)
CAT 988 FEL	2	$850,000	$1,700
CAT 773 Haul Truck	5	$750,000	$3,750
CAT D9 Dozer	1	$650,000	$650
CAT 834 RTD	1	$650,000	$650
CAT 14H Grader	1	$500,000	$500
CAT 769 Water Truck	1	$500,000	$500
IR DM45 Drill	1	$985,000	$985
Misc.	1	$1,000,000	$1,000
Total			**$9,735**

The one million dollars in miscellaneous capital is for light vehicles, a fork lift, a backhoe, service vehicles, and other auxiliary equipment required for mine operations. It also includes first fills for the mine fleet.

Mine infrastructure costs are $1.9 M (see Table 19-7). The InfoMine Mine Costing Service guide was referenced to determine mine infrastructure costs (InfoMine, 2008).

The 4.4 M sqft of site preparation includes 2.7 M sqft for the open pit, 1.5 M sqft for the waste dump, and 0.2 M sqft for the mine buildings. Site preparation for the leach pads, ponds, and process facilities is included under the process capital.

19.8 Process Operating Costs

Operating costs for the Base Case are $8.71/ton leached. Table 19-8 provides a break down of the operating costs by area.

19.8.1 Reagent Costs

Reagent costs are the largest component of the operating costs (Table 19-9). Of the reagent costs, sulfuric acid contributes the most to operating costs and accounts for approximately 70% of reagent cost. Based on metallurgical test work, the sulfuric acid consumed is estimated at 100 pounds per ton processed.

Not only is sulfuric acid costly, but it will pose both material handling challenges and delivery challenges due to the quantities that are consumed. For pricing, AMEC estimated the values based on a $270 spot price, a $60 long term price, and pricing regression that follows the vanadium regression pricing curve.

19.8.2 Trucking and Rail Haul Cost

Trucking and rail haul costs account for $1.21/ton processed. The majority of the trucking cost is from trucking approximately 100,000 tons of sulfuric acid from Carlin, NV to Gibellini on an annual basis. All reagents are priced freight on board (FOB) Carlin, NV. Only vanadium incurs a rail charge because it is shipped FOB Ohio. AMEC referenced the InfoMine pricing guides for estimating both trucking and rail haul costs and then verified the estimates by contacting Santa Fe rail and a local trucking company.

Table 19-7: Mine Fixed Equipment

Fixed Equipment Cost	Number	USD Each	Total USD (000's)
Truck Shop/Fuel Bay	1	$659,400	$659
Warehouse	1	$420,000	$420
Powder Magazine	2	$5,200	$10
Explosive Storage Bin	1	$52,500	$53
Washbay	1	$120,000	$120
Erosion Control	1	$50,000	$50
Site Preparation	4,400,000	$0.10	$440
EPCM	1		$175
Total			**$1,928**

Table 19-8: Base Case Process Operating Costs

Total Processing	USD/ton Processed
Reagent Cost	$5.81
Shipping Cost	$1.21
Process Maintenance Cost	$0.50
Process Labor Cost	$1.19
Total Processing Cost	**$8.71**

Table 19-9: Reagent Cost

Reagent Unit Cost	Units	Cost/Unit
Sulfuric Acid	$/ton	204.23
Kerosene	$/gallon	5.50
DEHPA	$/gallon	12.00
Polymer	$/lb	2.20
Electrical Power	$/kwh	0.065
Propane	$/gallon	3.20

19.8.3 Maintenance Costs

Maintenance costs account for $0.50/ton processed. The maintenance cost accounts for crusher, conveyor, plant, and mobile equipment maintenance.

19.8.4 Process Labor Costs

Process labor costs account for a $1.19/ton processed. The process labor numbers are based on AMEC's recent project experience in northern Nevada. In addition to the base salaries, fringe benefits were applied at 40% of the base.

19.9 Process Capital Costs

Total capital costs for the Base Case are $42.6 M excluding contingency. The total cost is comprised of both mobile and fixed equipment capital, and initial and sustaining capital. The mobile equipment is estimated at less than one million dollars, while the fixed equipment is estimated at approximately $41.6 M (see Table 19-10 and Table 19-11).

19.10 Water Balance

Make-up water requirements for the Base Case are estimated at 337 gpm. Under the Base Case, 2 Mt of leach material at 3.5% moisture requires wetting to 12.5% moisture. Material wetting accounts for 78 gpm of make up water. Evaporation at 125 gpm is the single largest consumer of make up water. Evaporative losses are based on 5% evaporative losses and a 2500 gpm process solution application rate. Mine usage and sanitary usage account for 42 and 25 gpm of make-up water respectively.

19.11 Alternative Cases

In addition to the Base Case, five Alternative Case mining and processing cases were developed. Schedules and operating costs for each of the Alternative Cases are discussed in the following subsection.

For comparison purposes, Table 19-12 provides an overview of the operating cost per ton of material processed for the Base Case.

Table 19-10: Mobile Equipment

Mobile Equipment Cost	Number	USD Each	Total USD (000's)
CAT 966 FEL		$400,000	$0
CAT 773 Haul Truck		$750,000	$0
CAT D9 Dozer		$650,000	$0
35 T Mobile Crane	1	$470,000	$470
Backhoe		$150,000	$0
Light Vehicles	4	$20,000	$80
Mechanics Truck	2	$120,000	$240
Misc.	1	$200,000	$200
Total			**$990**

Table 19-11: Total Capital Costs

Base Case - 2 M Leach Process Capital	Total USD (000's)
Sub Total Mobile Equipment	$990
Fixed Equipment Cost	
Mill office/warehouse	$420
Lab	$519
Crushing/Conveying	$3,969
Grinding	$0
Curing Equipment	$149
Heap Ponds	$1,378
Leach pad	$11,237
Solvent Extraction	$6,300
Precipitation Circuit	$1,463
Ferrovanadium Circuit	$0
Electrical	$1,937
Civil -Site Prep	$1,937
Concrete	$2,906
Structural	$2,906
Organic Inventory	$1,250
1st Year Spares	$1,453
EPCM	$3,782
Sub Total Fixed Equipment	$41,605
Total	**$42,595**

Note: leach pad capital cost includes both initial and sustaining capital costs

Table 19-12: Base Case – 2 M Leach Operating Costs

Base Case - 2 M Leach Operating Costs	USD/ton Processed
G&A	$1.11
Mine	$2.73
Processing	$8.71
Shipping & Selling	$1.81
Total Operating Cost	**$14.36**

19.11.1 Case 1 – 1 M Leach, V_20_5 Product

Mining

The Base Case smoothed pit shell was used to develop a mining schedule for Case 1. By reducing the material leached per year to one million tons, the mine life is extended to 2028 which is an additional eight years compared to the Base Case. Operating costs for Case 1 are shown in Table 19-13. G&A, processing, and shipping and selling costs for Case 1 are based on first principle calculations while the mining cost was factored from the Base Case mining cost.

Process

The main impacts of Case 1 are that the start-up capital is lower because not as much pad space is initially required and that the operating cost is higher due to the smaller unit operational scale (Table 19-14 and Table 19-15).

19.11.2 Case 2 – 3 M Leach

Mining

The Base Case smoothed pit shell was used to develop a mining schedule for Case 2. By increasing the material leached per year to three million tons, the mine life is shortened to 2017 which is three years less then the Base Case. Operating costs for Case 2 are shown in Table 19-16. G&A, processing, and shipping and selling costs for Case 2 are based on first principle calculations while the mining cost was factored from the Base Case mining cost.

Table 19-13: Case 1 – 1 M Leach Operating Costs

Case 1 - 1 M Leach Operating Costs	USD/ton Processed
G&A	$1.58
Mine	$3.36
Processing	$9.40
Shipping & Selling	$1.72
Total Operating Cost	**$16.06**

Table 19-14: Case 1 Process Operating Costs

Case 1 - 1 M Leach Operating Costs	USD/ton Processed
Reagent Cost	$5.53
Shipping Cost	$1.21
Process Maintenance Cost	$0.50
Process Labor Cost	$2.16
Total Processing Cost	**$9.40**

Table 19-15: Case 1 Process Capital Cost

Case 1 - 1 M Leach Process Capital	Total USD (000's)
Sub Total Mobile Equipment	$780
Fixed Equipment Cost	
Mill office/warehouse	$420
Lab	$519
Crushing/Conveying	$3,969
Grinding	$0
Curing Equipment	$149
Heap Ponds	$1,006
Leach pad	$11,237
Solvent Extraction	$4,425
Precipitation Circuit	$1,463
Ferrovanadium Circuit	$0
Electrical	$1,454
Civil -Site Prep	$1,454
Concrete	$2,180
Structural	$2,180
Organic Inventory	$1,250
1st Year Spares	$1,090
EPCM	$3,280
Sub Total Fixed Equipment	$36,075
Total	**$36,855**

Note: leach pad capital cost includes both initial and sustaining capital costs

Table 19-16: Case 2 – 3 M Leach Operating Costs

Case 2 - 3 M Leach Operating Costs	USD/ton Processed
G&A	$0.71
Mine	$2.43
Processing	$8.93
Shipping & Selling	$1.89
Total Operating Cost	**$13.95**

Process

The main impacts of Case 2 are that the start-up capital is higher because more pad space is initially required and the operating cost is higher due to processing additional heap leach material while modeled sulfuric acid prices are at their highest (Table 19-17 and Table 19-18).

19.11.3 Case 3 – Contract Mining

Mining

The Base Case schedule and costs, with the exception of mining costs, were used for Case 3, the Contract Mining Case. Table 19-19 shows the contract mining cost quoted by Degerstrom and shows the additional owner's costs. Total contract mining costs are estimated at $2.80 per ton mined which is a 24.4% increase over the owner operated mining cost of $2.25/ton mined. The increase in contract mining costs reflects contractor profit and equipment ownership costs.

19.11.4 Case 4 – Mill Option

Mining

Due to significant differences in operating costs for the Milling Option Case, Case 4, versus the Base Case, AMEC completed a pit optimization for the Milling Option Case and then generated a schedule for a one million ton per year mill. The optimized mill option pit shell contains 10.4 million tons of mill feed at a 0.416% average grade. Because there is no recovery benefit from milling, the recoveries used for leaching were applied (60% oxide recovery, 70% transition recovery, and 52% sulfide recovery). The resulting production schedule shows 59.6 million pounds of V_2O_5 produced from 2012 to 2022. When compared to the Base Case, Case 4 results project 4.6 million fewer total tons mined, 5.6 million fewer tons processed and 20.0 million fewer pounds of V_2O_5 produced.

Table 19-17: Case 2 Process Operating Costs

Case 2 - 3 M Leach Operating Costs	USD/ton Processed
Reagent Cost	$6.17
Shipping Cost	$1.21
Process Maintenance Cost	$0.50
Process Labor Cost	$1.05
Total Processing Cost	$8.93

Table 19-18: Case 2 Process Capital Cost

Case 2 - 3 M Leach Process Capital	Total USD (000's)
Sub Total Mobile Equipment	$1,510
Fixed Equipment Cost	
Mill office/warehouse	$420
Lab	$519
Crushing/Conveying	$3,969
Grinding	$0
Curing Equipment	$149
Heap Ponds	$1,219
Leach pad	$11,237
Solvent Extraction	$6,825
Precipitation Circuit	$1,838
Ferrovanadium Circuit	$0
Electrical	$2,270
Civil -Site Prep	$2,270
Concrete	$3,405
Structural	$3,405
Organic Inventory	$1,250
1st Year Spares	$1,702
EPCM	$4,048
Sub Total Fixed Equipment	$44,525
Total	**$46,035**

Note: leach pad capital cost includes both initial and sustaining capital costs

Table 19-19: Contract Mining Costs

Case 3 - Contract Mining Leach Operating Costs	**USD/ton Processed**
G&A	$1.11
Mine	$3.40
Processing	$8.71
Shipping & Selling	$1.81
Total Operating Cost	**$15.02**

Table 19-20 shows the Mill Option operating costs. G&A, processing, and shipping and selling costs for Case 4 are based on first principle calculations while the Case 1 factored mining cost was used for Case 4.

Process

Case 4 requires the addition of a crusher, a grinding mill, leach tanks, a counter current decantation (CCD) facility with clarifier, and substitution of a tailing facility for the heap pads and ponds. Both capital and operating costs are higher for Case 4 (Table 19-21 and Table 19-22).

19.11.5 Case 5 – Ferrovanadium

Mining

Because there was little difference between the Base Case pit shell and the Ferrovanadium Case pit shell, the Base Case smoothed pit shell and the Base Case schedule were used for Case 5. Specifically, the Base Case pit shell contained 19.510 Mt versus the Ferrovanadium pit shell that contained 19.549 Mt, a difference of 0.2%. The significant differences between the Base Case and Case 5 are the operating cost to convert V_2O_5 to ferrovanadium and the premium selling price received for ferrovanadium.

Table 19-23 shows Case 5 operating costs. G&A, processing, and shipping and selling costs for Case 5 are based on first principle calculations while the mining cost from the Base Case was used in Case 5 costing.

Process

Case 5 requires the addition of a large induction furnace and casting facilities to produce the ferrovanadium. Both capital and operating costs are higher for Case 5 (Table 19-24 and Table 19-25).

Table 19-20: Case 4 Mill Option Operating Costs

Case 4 - Mill Option Operating Costs	USD/ton Processed
G&A	$1.50
Mine	$4.25
Processing	$14.55
Shipping & Selling	$2.18
Total Operating Cost	**$22.49**

Table 19-21: Case 4 Process Operating Costs

Case 4 - 1 M Mill Operating Costs	USD/ton Processed
Reagent Cost	$9.17
Shipping Cost	$1.23
Process Maintenance Cost	$0.75
Process Labor Cost	$3.40
Total Processing Cost	**$14.55**

Table 19-22: Case 4 Process Capital Cost

Case 4 - 1 M Mill Process Capital	Total USD (000's)
Sub Total Mobile Equipment	$990
Fixed Equipment Cost	
Mill office/warehouse	$420
Lab	$519
Crushing/Conveying	$3,969
Grinding	$10,425
Curing Equipment	$149
Heap Ponds	$13,725
Leach pad	$4,875
Solvent Extraction	$4,425
Precipitation Circuit	$1,463
Ferrovanadium Circuit	$0
Electrical	$3,997
Civil -Site Prep	$3,997
Concrete	$5,995
Structural	$5,995
Organic Inventory	$1,250
1st Year Spares	$2,998
EPCM	$6,420
Sub Total Fixed Equipment	$70,621
Total	**$71,611**

Table 19-23: Case 5 Ferrovanadium Operating Costs

Case 5 - Ferrovanadium Operating Costs	USD/ton Processed
G&A	$1.11
Mine	$2.73
Processing	$14.48
Shipping & Selling	$2.33
Total Operating Cost	**$20.64**

Table 19-24: Case 5 Process Operating Costs

Case 5 - 2 M Ferrovanadium Operating Costs	USD/ton Processed
Reagent Cost	$11.12
Shipping Cost	$1.24
Process Maintenance Cost	$0.60
Process Labor Cost	$1.51
Total Processing Cost	**$14.48**

Table 19-25: Case 5 Process Capital Operating Cost

Case 5 - 2 M Ferrovanadium Process Capital	Total USD (000's)
Sub Total Mobile Equipment	$990
Fixed Equipment Cost	
Mill office/warehouse	$420
Lab	$519
Crushing/Conveying	$3,969
Grinding	$0
Curing Equipment	$149
Heap Ponds	$1,378
Leach pad	$11,237
Solvent Extraction	$6,300
Precipitation Circuit	$1,463
Ferrovanadium Circuit	$22,000
Electrical	$4,137
Civil -Site Prep	$4,137
Concrete	$6,206
Structural	$6,206
Organic Inventory	$1,250
1st Year Spares	$3,103
EPCM	$7,247
Sub Total Fixed Equipment	$79,720
Total	**$80,710**

Note: leach pad capital cost includes both initial and sustaining capital costs

19.12 Site Infrastructure

AMEC and RMP conducted a site field investigation of the Gibellini site. During the site investigation, with the exception of exploration roads and historical mine workings, very little site infrastructure was observed at or adjacent to the site. The nearest power line is located approximately 7 miles north and services the Fish Creek Aradan Ranch, the road access to the mine is a two track dirt road, and one abandoned and partially backfilled well is located on site.

Based on the observed site infrastructure and subsequent investigation, AMEC identified and estimated costs for site infrastructure required to develop the proposed Gibellini mine. For study purposes, AMEC assumed that power would be taken from the local grid instead of self generated. Table 19-26 provides an overview of the site infrastructure capital.

19.12.1 Power Supply

Mt Wheeler Power provided an estimate of $7.7 M (without contingency, see Table 19-27) to bring power to the Vanadium Hill site. The estimate is based on tying into an existing 69 KV transmission line at Machacek, and then building 20 miles of 69 KV transmission line to Strawberry road where it would terminate at a newly constructed 69 KV to 25 KV transformer. From the transformer, 30 miles of 25 KV transmission line would be built to the Gibellini mine site. The proposed transmission line route is within existing Mt Wheeler Power easements. Mt Wheeler Power noted that a more direct and less costly route may be available, but it would require procuring right-of-way easements. Mt Wheeler Power estimated that the transmission line would take a year and a half to two years to construct.

Because of the high cost to bring grid power to Gibellini, either a lower cost route should be investigated or the mine should assess self-generated power. For study purposes, with the exception of the Ferrovanadium Case, all study scenarios assume $0.065/kwh grid provided power with an initial capital cost of $7.7 M. The Ferrovanadium Case assumed that the 69 KV transmission line would extend 50 miles from Machacek to the mine site due to the power draw required to produce ferrovanadium. Power transmission capital costs for the Ferrovanadium Case are $12.5 M excluding a contingency.

Table 19-26: Site Infrastructure Capital

Site Infrastructure Capital	Total USD (000's)
Main Power Supply	$7,700
Main Office Building	$550
Main Access Road	$60
Communications	$200
Water System	$750
EPCM	$926
Contingency	
Contingency	$1,852
Total	**$12,038**

Table 19-27: Gibellini Power Supply

Main Power Supply	Number	USD Each	Total USD (000's)
69 KV Transmission Line	20	$250,000	$5,000
Transformer 69KV to 25KV	1	$750,000	$750
25 KV Transmission Line	30	$65,000	$1,950
Total			**$7,700**

19.12.2 Main Office Building

Utilizing the InfoMine 2008 cost guide, a stick-built 50 foot by 110 foot office building will cost $450,000. With the addition of office furniture, estimated at 10% of the building cost, and the cost of power, sewer, and water hook ups, estimated at $55,000, the total building cost excluding contingency is $550,000. The office building will house the mine manager, accounting, and other overhead support staff. It is sized to include a conference room, lunch room, mine library, copy room, and data storage space.

19.12.3 Main Access Road

Gibellini is located approximately 27.5 miles southeast of Eureka, NV. The 24.5 miles leading to the mine site is either State or County owned and is either paved or improved gravel. The three miles of County road access to the mine is a two track dirt road, however, it can be upgraded to service the mine at minimal cost because the road base appears fair, the grades are moderate (less then 5%), and no significant cuts or fills are required. AMEC estimated that the mine access road can be improved at a cost of $20,000 per mile, or $60,000 in total. If a local source of road base is available, the cost to improve the access road will be less.

19.12.4 Communications

AMEC utilized a 2005 communication quote of $150,000 for the Gibellini scoping study. In addition, AMEC added another $50,000 to the communication quote, bringing the total to $200,000, to account for IT equipment and software. The communication quote is from an advanced open pit mining project in northern Nevada. It includes all necessary equipment to set up the site communications including telephone, internet, and radio.

19.12.5 Water System

AMEC scaled up a water system quote from a May 2008 project to arrive at a capital estimate for the Gibellini water system of $500,000 (excluding contingency). The water system costs are scaled up from the following well system: "*The wells would be installed to a maximum depth of 250' and have a -+30hp pump capable of 200' of lift at 400 gpm. Wells would be constructed of mild steel with 150' of 10" diameter louvered screen. Each well installation would cost approximately $175,000"* Using this scenario, scaled costs were applied to a well system designed to lift water 500 feet on average utilizing two wells each with a 50 hp pump to produce approximately 350 gpm on average. An additional backup well is included in the cost estimate to provide up to 525 gpm (150% of average consumption) of water during peak water consumption.

19.13 Environmental Considerations

Permitting requirements for the Gibellini Project are discussed in Section 4.7.

19.13.1 Reclamation

A Reclamation Permit for Mining is issued prior to construction of any exploration, mining, milling or other beneficiation process activity that will disturb over 5 acres or remove in excess of 36,500 tons of material from the earth. This permit is issued in conjunction with the Water Pollution Control Permit (WPC Permit). This permit also requires that a surety be filed with the State of Nevada NDEP or a participating federal land management agency (BLM for this project) before land disturbance activities commence. This surety can be in the form of a trust fund, a bond, an irrevocable letter of credit, insurance, a corporate guarantee or a combination of these mechanisms.

The Application for A Mining Operation (NDEP) includes a Plan of Operation (BLM), and reclamation bond calculations. NDEP provides a Reclamation Bond Checklist, Standardized Reclamation Cost Estimator (SRCE) software (required), and a Cost Estimation Summary Sheet (required). Based on these submittals, the NDEP will concur or modify the bond estimate. The bond will be held by the BLM. The NEPA process will then commence as well as state permitting activities.

The SRCE establishes costs in the following categories:

- Earthwork/recontouring
- Revegetation/stabilization
- Detoxification/water treatment/disposal of wastes
- Structure/equipment and facility removal
- Monitoring
- Construction management and support
- Operational and maintenance goals.

AMEC input assumed parameters into the SRCE program to obtain a very preliminary idea of what reclamation bonding might be for this site. The estimate derived from the software is approximately $5,000,000. This figure needs to be refined with the use of more accurate input parameters, but is suitable for a scoping-level study. Additionally, the final estimate must be approved by the NDEP. The preliminary estimate does however provide a very rough estimate of what the bonding requirements may be.

19.13.2 Closure

Closure does not have a separate permit, but rather follows from the requirements of the WPC Permit, which contains a component called the Tentative Permanent Closure Plan. The closure and stabilization requirements pertain to process and non-process components (solid and liquid process mine wastes) such as heap leach pads, tailings impoundments, pits, waste rock dumps, material stockpiles, structures, and any other associated mine components that, if not properly managed during operation and closure, could potentially lead to the degradation of waters of the State.

The closure process is as follows:

- Tentative Permanent Closure Plan.

This is prepared as part of the WPC Permit.

- Final Permanent Closure Plan (FPCP).

The FPCP is prepared and submitted to the BMRR two years prior to the anticipated closure of the mine site. The FPCP will provide closure goals, detailed methodologies of activities needed to achieve stabilization of known and potential contaminants at the mine site, and a detailed description of all proposed monitoring that will demonstrate how the closure goals will be met.

- Final Closure Report (FCP).

The FCP is prepared and submitted to the BMRR following the completion of all closure related activities. The FCP will document the closure activities, and include post-closure monitoring activities for at least 5 years that will demonstrate that site stabilization has been achieved.

- Request for Final Closure (RFC).

The RFC is made following the completion of the post-closure monitoring period. The RFC will contain all post-closure monitoring information and clearly demonstrate stabilization. Upon concurrence, the BMRR will grant final closure.

19.14 Vanadium Pricing and Marketing

19.14.1 Pricing

AMEC conducted a desk-top review of vanadium (V_2O_5) and ferrovanadium pricing and markets to support the Gibellini Project PA. The desk-top study is an update to AMEC's 2006 report titled "Market Study on Vanadium for Gibellini Project", which was done to support the 2007 Gibellini NI 43-101 Technical Report. In addition to the pricing study, RMP conducted an independent marketing review for vanadium by contacting three potential buyers of vanadium and soliciting letters of interest from each.

Based on a consensus of publicly available information, AMEC recommends a guideline long-term price of US$5.90/lb for vanadium pentoxide and US$14.10/lb for ferrovanadium in real (constant 2008) dollars in years 2019 and beyond. For near term pricing, AMEC recommends using the forward prices in Table 19-28. These order of magnitude estimated guideline prices, along with a marketing analysis, are adequate to support a PA level study.

Table 19-28: Guideline Prices

Time	Year	Guideline Vanadium Pentoxide Price, $US/lb	Guideline Ferrovanadium Price, $US/lb
0	2008	15.00	35.00
1	2009	12.15	28.51
2	2010	10.26	24.18
3	2011	8.96	21.20
4	2012	8.05	19.09
5	2013	7.40	17.58
6	2014	6.92	16.47
7	2015	6.57	15.65
8	2016	6.30	15.04
9	2017	6.10	14.57
10	2018	5.95	14.22
11	2019	5.84	13.95
12	2020	5.75	13.74
13	2021	5.68	13.59
14	2022	5.63	13.46
15	2023	5.59	13.37

For Pre-feasibility and Feasibility studies further investigation, marketing studies, and negotiations with end-users will be required to support product pricing to allow declaration of reserves.

19.14.2 Potential Markets

To assess the marketability of the vanadium production from Vanadium Hill, RMP contacted three potential buyers of the product. The contacts involved describing the Gibellini Project, describing the likely range of potential vanadium pentoxide production, and describing project timing. The three groups contacted were Louis Dreyus Commodities, a metals trading company; Strategic Metals Corporation (Stratcor), a producer and distributor of ferrovanadium; and Metallurg Vanadium, a producer and marketer of ferrovanadium.

During the initial contact, all three groups expressed interest in the Gibellini Project and expressed interest in purchasing 100% of the vanadium pentoxide produced from Gibellini.

19.14.3 Vanadium Pentoxide vs. Ferrovanadium

The final product from Gibellini could be either vanadium pentoxide or ferrovanadium. Factors involved in choosing which material to produce include the following:

- Vanadium pentoxide is an intermediate material that can be used to make ferrovanadium or chemical grade vanadium oxides and it has more potential outlets,
- Ferrovanadium is a final product sold to steel producers,
- Capital cost and operating cost for ferrovanadium production is higher, but the higher price may justify the extra costs,
- Ferrovanadium will require marketing and distribution staff and expertise,
- Ferrovanadium is not a bulk commodity and must be packaged to suit end users.

The decision to produce vanadium pentoxide or ferrovanadium would be an economic as well as strategic decision.

19.15 Financial Analysis

AMEC carried out a financial analysis of the Project after capital and operating cost estimates were developed.

The results of the following economic analysis represent forward-looking information as defined under Canadian securities law. Forward-looking information in this analysis includes, but is not limited to, statements regarding future mining and mineral processing plans, rates and amounts of metal production, capital and operating costs, tax and royalty terms, smelter and refinery terms, the ability to finance the project, and metal price forecasts.

The analysis depends on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here. This assessment is preliminary in nature, includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary assessment will be realized.

Some of the key technical risks include:

- Changes in government and changes in regulations affecting the ability to permit and operate a mining operation
- Discussions with stakeholders that may be impacted by any proposed mining operation are at a very early stage

- The fact that mineral resources are estimates based on interpretation of geology and assumptions applied that may change with additional information derived from increased exploration, development and mining activities
- Actual mining and metallurgical recoveries that may be achieved
- There are a variety of issues related to the production and marketing of saleable vanadium products that represent a risk to the project and will have to be addressed in future work
- Variations in operating and capital costs
- Provision of electrical power to the mine site
- Future metal prices may change from those used in the economic model; the Gibellini Project is sensitive to metal prices.

19.15.1 Base Case Financial Model

AMEC developed an annual cash flow model in Excel® for the Gibellini PA. The cash flow model is developed according to generally accepted practices (Stermole, 1993) and is more fully described below.

Net Revenue

Net revenue is the difference between the product selling price and the royalty cost. Selling prices are based on the recommendations from Section 19.14. Royalty costs are based on the Gibellini Mine Property Lease royalty described in Section 4.5. The royalty is applied in the cash flow model according to Table 19-29. Annual fees are assumed to be paid back via mining proceeds. Once payback occurs in 2012, there is no longer a fee, only a royalty.

Table 19-30 shows the Base Case net revenue on a USD/ton processed basis and in total. For the Base Case, approximately $30.98/ton processed is generated from sales. The royalty cost is approximately $0.59/ton processed.

Cash Operating Costs

Cash Operating Costs are the sum of the operating costs for G&A, mining, processing, and shipping and selling.

Table 19-29: Gibellini Mine Property Royalty

Gibellini Mine Property Lease		2009	2010	2011	2012	2013 and beyond
Annual Fee	USD/yr	120,000	120,000	120,000	(420,000)	
NSR Royalty	%	2.5%	2.5%	2.5%	2.3%	2.0%

Table 19-30: Base Case Net Revenue

Revenue - $'s	USD/ton Processed	Total USD 000's
V_2O_5 Sales	$30.98	$525,644
Royalty Payment	$0.59	$10,043
Total Net Revenue	**$30.38**	**$515,601**

Table 19-31: G&A Annual Costs

	Number	Annual Salary USD	Fringe	Total
General Manager	1	137,500	55,000	192,500
Controller and Admin Manager	1	81,250	32,500	113,750
Human Relations	1	68,750	27,500	96,250
Computer Technician	1	56,250	22,500	78,750
Accountant	1	56,250	22,500	78,750
Buyer/Expediter/Warehouse	1	56,250	22,500	78,750
Secretary	1	46,800	18,720	65,520
Security Guards	4	46,800	18,720	262,080
Warehouse Clerk	2	41,600	16,640	116,480
Sub Total	13			1,082,830
Other G&A Costs				920,406
Total Annual G&A Cost				2,003,236

G&A costs applied in the cost model are based on G&A manpower estimates and a 85% factor applied to total G&A labor costs to account for the G&A non operating costs (see Table 19-31). Labor costs are based on salaries from a recent northern Nevada mining project with a 40% fringe rate applied.

Mining, processing, and shipping costs applied in the cost model are described in Sections 19.6 to 19.9. Selling costs are 5% of the selling price and are based on an estimate provided by RMP.

Table 19-32 shows a life of mine Base Case cash operating cost of $14.36 per ton of material processed.

Production Costs

Production costs are the sum of the cash operating costs, closure and reclamation costs, and depreciation.

The reclamation costs were estimated by AMEC Earth and Environmental at $5 million for bonding where the Federal Government does the reclamation. The reclamation costs are applied in the cost model in the two years following the end of production at $2.5 M per year.

Cost model depreciation is based on unit of production depreciation. It is applied on a per pound of V_2O_5 produced basis over the total capital amount. That is, all capital is fully depreciated within the cost model. Table 19-33 shows a life of mine Base Case production cost of $19.85 per ton of material processed.

Net Income Before and After Tax

Net income before tax is the difference between the net revenue and the production costs. The after-tax net income is calculated by applying a 35% tax rate to the before-tax net income and then adding back the depreciation expense (see Table 19-34). The 35% tax rate is an estimated tax rate agreed to by both AMEC and RMP for use in the cost model.

Cash Flow

The cash flow summary results for the Base Case are shown in Table 19-35. Both the pre-tax and after-tax cash flows are positive. The project internal rate of return is 41% and 27% before and after tax respectively. The pre-tax project NPV@10% is $72.8 M with a 4.9 year payback period, and the after-tax project NPV@10% is $39.8 M with a 5.6 year payback period.

Table 19-32: Base Case Cash Operating Costs

Cash Operating Costs - $'s	USD/ton Processed	Total USD 000's
G&A	$1.11	$18,811
Mine	$2.73	$46,331
Processing	$8.71	$147,776
Shipping & Selling	$1.81	$30,688
Total Cash Operating Costs	$14.36	$243,607

Table 19-33: Base Case Production Costs (Life-of-Mine)

Total Production Costs - $'s	USD/ton Processed	Total USD 000's
Total Cash Costs	$14.36	$243,607
Reclamation & closure	$0.29	$5,000
Depreciation	$5.20	$88,231
Total Production Costs	**$19.85**	**$336,838**

Table 19-34: Base Case Net Income Before and After Tax

Income from Operations - $'s	USD/ton Processed	Total USD 000's
Net Revenue	$30.38	$515,601
Production Costs	$19.85	$336,838
Net Income Before Taxes - $'s	**$10.53**	**$178,763**
Income from Operations - $'s		
Taxes	$3.69	$62,567
Depreciation	$5.20	$88,231
Net Income After Taxes - $'s	**$12.05**	**$204,427**

Table 19-35: Base Case Cash Flow

Cash Flow Before Tax		**$178,763**
Cumulative Before Tax Cash Flow		
NPV @	5%	$113,721
NPV @	7%	$95,110
NPV @	10%	$72,786
IRR Before Tax		40.7%
Payback - Years from Start-up		4.93
Cash Flow After Tax		**$116,196**
Cumulative After Tax Cash Flow		
NPV @	5%	$68,876
NPV @	7%	$55,561
NPV @	10%	$39,787
IRR After Tax		27.3%
Payback - Years from Start-up		5.55

19.15.2 Sensitivity Analysis

Sensitivity analyses were completed for the Base Case by varying the V_2O_5 selling price, the operating costs and the capital costs through a range of ±30%. The sensitivity analyses were done for the pre-tax cash flow, the pre-tax NPV@10%, the after-tax cash flow, and the after-tax NPV@10%. Each of the analyses is presented in a series of spider diagrams (see Figures 19-4 to 19-7). With the exception of the pre-tax and after-tax NPV@10% at a -30% selling price, all of the sensitivities were at or above break-even.

Figure 19-4 Undiscounted Pre-Tax Cash Flow Sensitivity Analysis

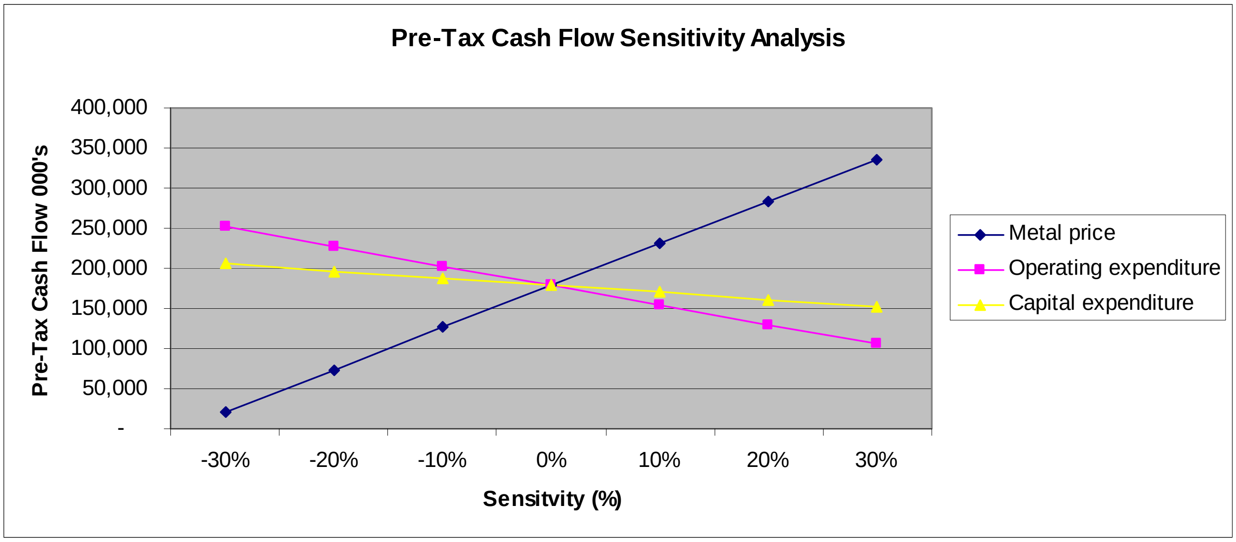


Figure 19-5: Pre-Tax NPV@10% Sensitivity Analysis

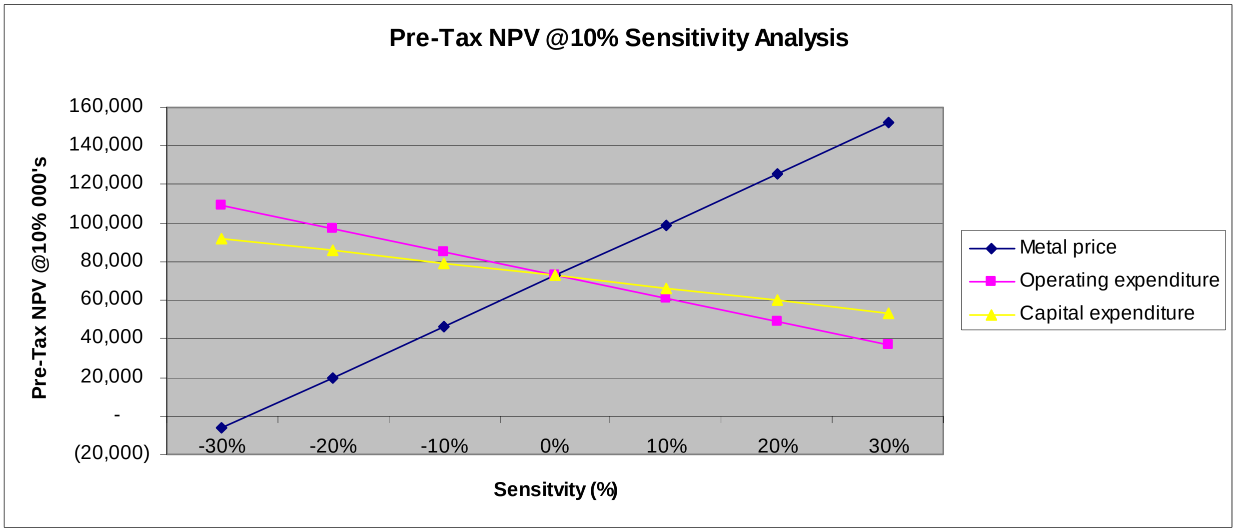


Figure 19-6: Undiscounted After Tax Cash Flow Sensitivity Analysis

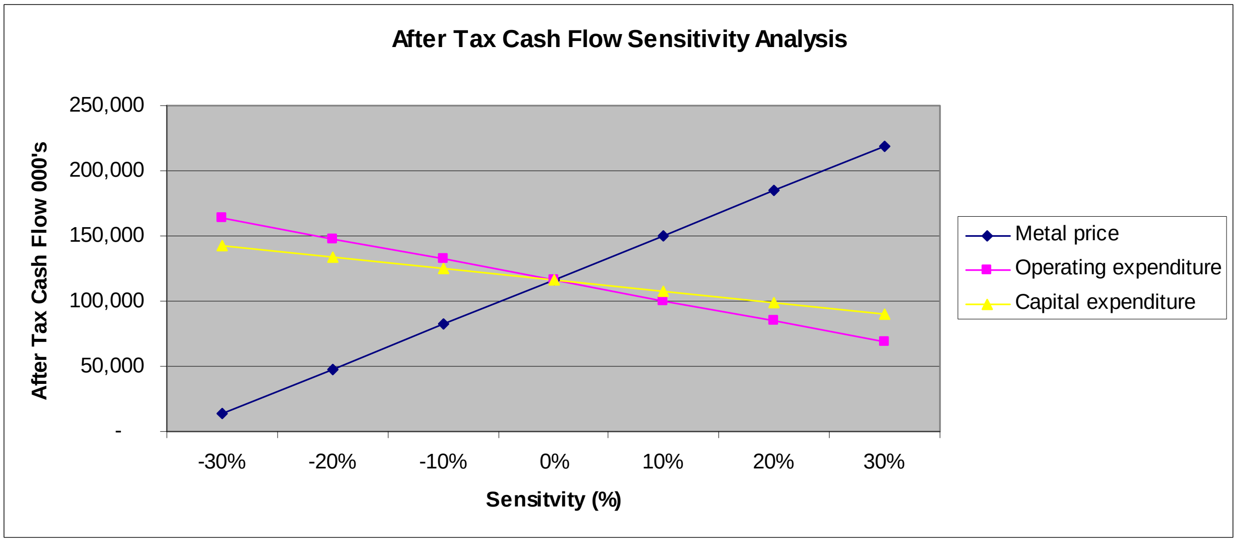
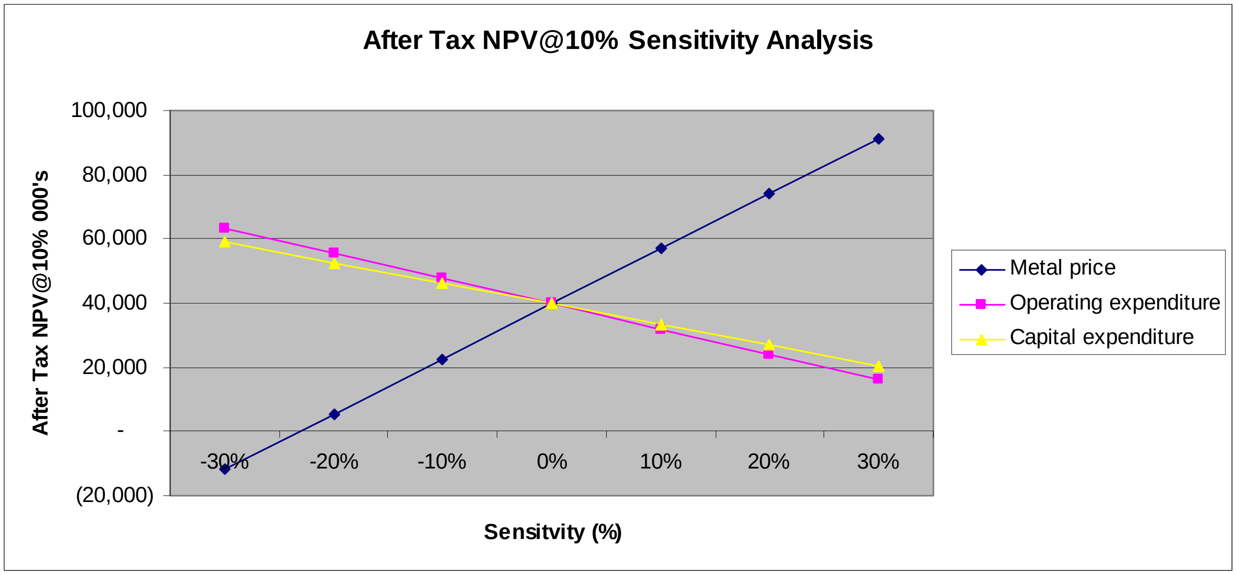


Figure 19-7: After Tax NPV@10% Sensitivity Analysis



19.15.3 Alternative Cases

The cash flow results for the Gibellini project are positive for all Cases. Both Case 2 and Case 3 show improved economics versus the Base Case, while Cases 1, 4, and 5 show reduced economics.

Case 2 benefits from both scale of economics and timing and shows an increase of $17.6 M in after-tax cash flow versus the Base Case. The scale of economics benefit comes from reduced operating costs; however, the scale of economics benefit is partially offset because Case 2 processes a greater share of tonnage during modeled near-term high sulfuric acid pricing. The timing benefit for Case 2 comes from selling a greater proportion of V_2O_5 during the near term higher V_2O_5 pricing. Note that any Case which brings metal production forward benefits from the near term higher V_2O_5 pricing.

Case 3 has an improved after-tax cash flow versus the Base Case of $1.1 M, and shows a 3% improvement in after-tax IRR. The benefit of Case 3 is that it does not require upfront capital for mobile mining equipment. There are also logistics and strategic issues that make Case 3 appealing.

Case 1 shows a reduced after-tax cash flow compared to the Base Case of $31.7 M because of higher operating costs and lower realized V_2O_5 pricing. The lower V_2O_5 selling price is realized because more metal is sold at the long term V_2O_5 price of $5.9/lb instead of the higher near term prices.

Case 4 suffers from both higher operating costs and higher capital costs compared to the Base Case. Unlike traditional mill versus leach operations, Case 4 does not have improved mill recoveries versus the Base Case leach recoveries. Case 4 has an after-tax project IRR of 3%.

Case 5 has higher after-tax cash flow than the base case, $129.5 M compared to $116.2 M, but a lower after-tax project IRR, 20% compared to 27%. The upfront capital employed to produce ferrovanadium and the higher operating costs are not offset by a higher realized selling price at discount rates above 10%.

19.16 Risks and Opportunities

No significant risks were identified with the resource model.

- With the a planned expansion of the Ruby Hill mine and the construction of the Mount Hope molybdenum mine, two local area mines, competition for resources will be a project risk. Competition for experienced manpower is especially critical.

Seasonal operations will further exacerbate personnel retention. Using a contract for both mining and heap leach pad loading at Gibellini could reduce manpower and resource risks.

- Although leaching base minerals is common in the copper industry, vanadium has not been commercially produced from a heap leach operation. Because vanadium leaching has been demonstrated by five column tests in the lab, AMEC believes that leaching risk is somewhat moderated, however, until metallurgical test work is completed that spatially and mineralogically represents leaching recovery for the deposit, leaching recoveries are a significant project risk.
- Sulfuric acid handling and delivery could pose a significant project risk. Approximately 100,000 tons of sulfuric acid is required for the Gibellini project on an annual basis. A trucking company will need to operate two delivery trucks twenty-four hours per day, seven days a week to meet the acid deliveries. Additionally, the amount of acid used to cure the leach material will create material handling issues and corrosion issues for the rehandle equipment and for the conveyor/stacker system. Further metallurgical testing may be able to reduce the acid required for heap leaching which would reduce the material handling risk.
- All of the acid applied to the heap material is not consumed during the curing, but there is a minimum acid concentration needed to drive leaching; consequently, there is the potential to recycle excess acid. Excess acid was not quantified or included within the Scoping Study since specific test work was not done to quantify the amount recyclable. Excess acid will have the potential to decrease the amount of acid required which will lower leaching operating costs. Not accounting for the recycled acid poses a moderate project risk since the project's leaching operating costs may be overstated and the project's economics may be understated. Additional metallurgical test work will remediate the heap rinsing risk.
- AMEC has less confidence in the capital and operating costs for the Ferrovanadium Case since the process is not as well understood as the other processing Cases. There is significant risk that both operating and capital costs for the Ferrovanadium Case are outside of the ±35% project estimation limits.
- Power line construction timing may pose a minor project risk. According to Mt Wheeler Power, due to the amount of activity in the area the construction schedule from design to build could take up to two and a half years to complete. The project would only be delayed if the power line design and construction work are delayed at the project front end.
- Eureka County and Nevada State road maintenance could pose a minor project risk. Either Eureka County or Nevada State may require Gibellini to maintain or

pay for the maintenance of significant portions of the State highway system located to the south of State Highway 50.

- Further in-depth investigation, marketing study, and negotiations with end-users are necessary to estimate more definitive vanadium pentoxide and ferrovanadium prices. Metal pricing is a significant project risk. A 25% drop in vanadium pentoxide to an average realized price of $4.95/lb for the Base Case would result in zero project pre tax cash flow. Entering into a long term purchase contract with one of the end users will substantially reduce or potentially eliminate pricing risk.
- Sulfuric acid accounts for approximately 70% of the process operating costs. Changes in consumption or price of sulfuric acid will have significant implications to the project. Additional test work to better determine acid consumption will help to remediate sulfuric acid consumption risk. A long-term supply contract would remediate the sulfuric acid-pricing risk.

20.0 INTERPRETATION AND CONCLUSIONS

20.1 Geological Setting

The Vanadium Hill deposit occurs within organic-rich siliceous mudstone, siltstone, and chert of the Gibellini facies of the Devonian Age Woodruff Formation. In general, the beds strike north–northwest and dip from 15 to 50° to the west. The black shale unit which hosts the vanadium resource is from 175 to over 300 feet 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 feet.

Alteration of the rocks is limited to oxidation and is classified as one of three oxide codes: oxidized, transitional, and unoxidized. Vanadium grades change across these boundaries: the transitional zone reports the highest average vanadium grades, the oxide zone reports the next highest average vanadium grades, and the unoxidized zone reports the lowest average vanadium grades.

AMEC is of the opinion that the regional and local geological settings are adequately known for the purposes of supporting mineral resource estimates, and PA-level mine planning.

20.2 Deposit Types

Similarities with the style of mineralization for the Gibellini Project exist in the USGS manganese nodule model, model 33a of Cox and Singer (1986).

The vanadium mineralization at Vanadium Hill and Rich Hill is hosted in black shale sedimentary rocks. Mineralization is tabular, conformable with bedding, and remarkably continuous in grade and thickness between drill holes.

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.

20.3 Mineralization

Mineralized zones at Vanadium Hill are irregular in shape but generally conform to the stratigraphy of the host shales, modified somewhat by post-mineral oxidation and supergene enrichment. The stratigraphy dips at low angles to the west and so vertical intersections of mineralization are roughly approximate to the true mineralized thickness.

Mineralization at Vanadium Hill is roughly stratabound, strikes northwest–southeast and dips at low angles to the west. The mineralization is parallel to the orientation of the main ridge in the Vanadium Hill area.

In the Vanadium Hill oxidized zone, complex vanadium oxides occur in fractures in the sedimentary rocks. In the unoxidized sediments, vanadium occurs in organic material (kerogen) made up of fine grained, flaky, and stringy organism fragments less than 15 micrometers in size.

Mineralization at the Gibellini manganese–nickel mine is composed essentially of manganese oxides in a pipe-like structure. This prospect in the Gibellini Project represents a new type of potentially high-grade metal-rich deposit, similar to uranium-bearing breccia pipes found in the Colorado Plateau.

AMEC is of the opinion that the nature of the mineralization at Vanadium Hill is sufficiently adequately known to support mineral resource estimation and PA-level mine planning.

20.4 Exploration and Drilling

Exploration activities on the Gibellini Project have included mapping, trenching, geochemical sampling, and drilling by multiple operators from the 1950s to current time. Underground development was also conducted at the Gibellini manganese–nickel mine.

The Vanadium Hill deposit has been drilled consistently to a depth of approximately 200 feet. The approximate drill spacing in the main vanadium resource area is 200 by 200 feet. The average depth of drilling is 200 feet below surface with deeper drill holes located on the top of the ridge in the center of the vanadium resource area and shallower drill holes located on the slopes to the east, west, and north.

20.4.1 Legacy Data

A total of 35,789 feet of drilling in 173 drill holes was completed in four drilling campaigns in the Vanadium Hill area by Terteling, Atlas, Noranda, and Inter-Globe. Of this, 120 holes totaling 25,077 feet (70%) were drilled using conventional rotary (RO) methods and 53 holes totaling 10,712 feet (30%) were drilled using reverse circulation (RC) methods. A total of 895.5 feet of drilling in four core drill holes was completed at the Gibellini manganese–nickel mine by the Nevada Bureau of Mines (NBGM) in 1946.

Drill hole locations were digitized from a Noranda base map or taken directly from the drill logs and therefore contain a small level of uncertainty as to their exact location.

All holes were drilled in a vertical orientation relative to shallow-dipping mineralization, and no down-hole surveys were completed. AMEC verified the existence and location of Inter-Globe hole collars. Drill holes for other drilling campaigns are evident from drill pads, but do not have monumented collars. Local grid coordinates for historic 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.

Because mineralization is relatively shallow, the total depth of 98% of the holes is less than 350 feet, and the continuity of the mineralization is excellent, AMEC believes that the lack of surveyed collar coordinates and down-hole surveys poses a small risk to the accurate location of the mineralized intercepts.

Sampling is believed to have been conducted to industry standards at the time. Drill holes were consistently logged for lithology and rock color. Inter-Globe holes were also logged for alteration mineralogy, stain color, and oxidation. Logs are considered adequate to support mineral resource estimation.

20.4.2 RMP Data

During 2007 and 2008, RMP completed a total of 9,040 ft of drilling in 30 drill holes holes on the Gibellini Project. The majority of these holes were drilled at Vanadium Hill.

Collar coordinates for the 2007 and 2008 drill holes were obtained in UTM coordinates by RMP personnel using a hand-held GPS unit.

All drill holes making up the Vanadium Hill mineral resource database are relatively short (98% of holes are less than 350 feet in length) and vertical and so AMEC does not consider the lack of down-hole surveys to be a significant concern. In AMEC’s experience, drill holes of 300 feet or less in length are not likely to deviate significantly, in this case, more than 25 feet or the block size being used in the mineral resource model. However, downhole surveys are recommended for all future drill programs.

Generally, 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 AMEC’s opinion, core recovery is generally adequate, averaging 91.6%.

RMP’s sampling protocol was adequate to support mineral resource estimates and PA-level mine planning.

Bulk density was performed using standard procedures. Those data are useable for mineral resource estimation. Specific gravity values were partitioned by oxidation type and average values were computed. Additional density measurements are recommended.

20.4.3 Exploration Potential

There are no drill holes constraining the northeast, northwest, or southwest edges of the ultimate pit. Geology and topography do indicate that the chance of locating additional mineralization in these locations is remote; however, the pit limits require additional drilling.

The most advanced vanadium target outside the Vanadium Hill mineral resource is at Rich Hill, which RMP has tested with eight drill holes. Indications are that the oxide mineralization encountered in the drilling to date is comparable in thickness and grade to the oxide zone at Vanadium Hill. Higher grade vanadium mineralization, like that of the transition zone at Vanadium Hill, has not, to date, been encountered at Rich Hill. Additional drilling is warranted.

20.5 Sampling

No records remain for the drill sampling methods employed by NBGM (core), Terteling (rotary), or Atlas (rotary). Noranda collected samples continuously over five foot intervals in a cyclone collector. Inter-Globe collected one to five pounds of material for assay on five foot intervals. AMEC reviewed the legacy drilling for instances of biases, and noted two suspect drill holes. AMEC concluded that the width and grade of the possible contamination was not significant enough to warrant adjusting the grade of the intervals. Comparison of RC drill holes with nearby rotary drill holes (less than 20’ collar separation) found that there was no significant down-hole contamination in the rotary holes.

Sampling by RMP has been done in accordance with industry standard practices. RC samples were typically 5 ft in length, whereas core was sampled on nominal 5 foot intervals, with a minimum of 1 ft and a maximum of 9 ft. Sample intervals are considered by AMEC to be adequate to support mineral resource estimates and PA-level mine planning.

20.6 Sample Preparation, Assaying, and QA/QC

No information is available as to the credentials of the analytical laboratories used for the drill campaigns prior to the RMP drilling. The RMP core and RC samples were analysed by ALS Chemex.

The original assay certificates are not available for the Terteling and Atlas campaigns.

Check assays completed on samples from the first 10 Noranda drill holes were identified by Noranda to indicate that the original assays were biased high. 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. Comparison of Inter-Globe drill holes within 20 feet 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 feet and the average grade was 0.30% V_2O_5, where the total length of the nearby Inter-Globe holes was 385 feet and the average grade was 0.30%.

Inter-Globe drilling designed to validate the thickness and grade of mineralized intervals in Terteling, Atlas, and Noranda drill holes show that the Terteling assays are biased significantly high and that Atlas and Noranda assays are comparable to Inter-Globe values and reasonably accurate relative to Inter-Globe assays with proper quality assurance and quality controls.

AMEC found Inter-Globe assays to be acceptable and precise and considers comparison against Inter-Globe assays to be an acceptable indicator of assay accuracy.

Standard reference materials (SRMs), blanks, and duplicates were inserted by RMP with routine drill samples during the 2007 and 2008 drill programs to control assay accuracy and precision. AMEC reviewed the RMP QA/QC data available for Vanadium Hill as at June 2008. In AMEC’s opinion the accuracy and precision for 2007 ALS Chemex vanadium assays is acceptable to support mineral resource estimates

20.7 Database Validation

AMEC digitized existing legacy drill hole locations, surveys, logs and assays from paper maps, logs, and assay certificates to generate the Gibellini resource database, and subsequently added the results from the 2007–2008 drill programs to the database.

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

AMEC exported separate collar, survey, lithology and assay files for import into MineSight® for subsequent geological modeling and mineral resource estimation.

20.8 Metallurgy

AMEC designed a metallurgical testing program to support the PA, and to generate operating and capital cost estimates for the Base Case and Alternative cases. The processing scenarios include heap leach 2 Mt/year (Base Case), heap leach 1 Mt/Year (Case 1), heap leach 3 Mt/year (Case 2), mill 1 Mt/year (Case 4), and ferrovanadium production from a 2 Mt/year heap leach (Case 5). With the exception of Case 5, all other cases produce a V_2O_5 product.

The metallurgical testing program utilized oxide, transition, and sulfide core samples to run a set of column tests for ½” and 2” fraction size material. Based on the column test work, AMEC recommends recoveries to support the PA of 60%, 70%, and 52% for oxide, transition, and sulfide materials respectively.

The testwork indicated that the Base Case heap leach process was feasible, and could produce a saleable product.

AMEC estimated operating and capital costs for the Base Case and for each Alternative Case. Operating costs for the Base Case are $8.71/ton leached, and total capital costs for the Base Case are $42.6 M excluding contingency.

20.9 Mineral Resource Estimation

Mineral resource estimation comprised an initial review of the vanadium assay statistics, use of grade caps (metal at risk analysis), and domain boundaries, followed by development of geological models, generation of composites, exploratory data analysis, and variography. These data were used to interpolate a block model, using ordinary kriging methods.

The model was iteratively modified and validated using visual checks on bench plans and cross sections, statistical analysis, and comparison to NN estimation. Resources were classified as Indicated and Inferred Mineral Resources within a simple L–G pit shell based on first-order estimates of operating costs, metallurgical recovery and assumed long-term metal prices.

AMEC is of the opinion that the resource model and the reported resources for the Vanadium Hill deposit meets the current CIM Definition Standards for Mineral Resources and Mineral Reserves (2005).

20.10 Mining and Mine Planning

AMEC addressed initial pit resources and design, reviewed tailings and waste considerations, reviewed ancillary and infrastructure requirements, and proposed a project execution plan.

The PA developed high level cost estimates (±30% to 35% accuracy) for a Base Case and five Alternative Cases for project development. The key variables investigated included annual production rate, in the range of 1 million to 3 million short tons per year; mine operating responsibility, either RMR or contractor; processing method, heap leach or milling; and final product for sale, either vanadium pentoxide or ferrovanadium. Key observations include the following:

- Higher production rates produce better economic returns
- Mining by contractor could yield slightly higher returns
- Heap leaching is preferred over milling
- Production of vanadium pentoxide is preferred over ferrovanadium.

The Base Case and five Alternative Case mining operations comprise conventional open pit operations with low strip ratios, based on the Inferred and Indicated Mineral Resources. Inferred Mineral Resources represent 2.4 million tons of leach material inside the ultimate pit design. This is approximately 14% of the tons, and under 12% of the contained metal. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the mining scenarios based on these resources will be realized.

Vanadium Hill has a proposed nine year mine life at a 2.0 Mt per year heap leach processing rate (Base Case). For the purposes of the PA study, the assumed start date for production is January 1, 2012. Peak annual production is 2.56 Mt of total material in 2014.

With the exception of a two track dirt access road and drill roads, very little infrastructure exists at the Gibellini Project site. Major infrastructure close to the Gibellini Project includes the Mt Wheeler power transmission line and Nevada State Route 379. The Mt Wheeler Power line is located approximately 7 miles north of the site and services the Fish Creek Aradan Ranch. State route 379, an improved gravel road, runs within three miles of the property.

Based on the observed site infrastructure and subsequent investigations, AMEC identified and estimated costs for site infrastructure required to develop the Gibellini Project. For study purposes, AMEC assumed that power would be taken from the local grid instead of self-generated.

AMEC utilized several estimation approaches to determine capital and operating costs for the Gibellini Project. The approaches included calculating mining costs from historical information, benchmarking mining costs to area mines, and calculating first principle mining costs. For all Cases, the mine costs are based on open pit mining using conventional truck and loader equipment fleets.

Two cases could be advanced into feasibility, the Base Case with owner mining and Case 3 with contractor mining. These cases demonstrate the following favorable characteristics:

- Moderate capital requirements
- Long project life (approximately 10 years)
- Low operating cost ($3.06 to $3.20 per pound v2o5),
- Potential IRR in the range of 27%–30%.

20.11 Environmental Considerations

AMEC reviewed the mine permits that would be applicable to the construction, start-up, and operation of the Gibellini Project. The review indicated that there are no obvious impediments to obtaining the appropriate permits and approvals to conduct mine operations.

The regulatory components that will drive the timing of the Gibellini permit and approval processes are primarily the NEPA documentation (EIS/EA), and water rights appropriation. These are pre-requisite to all other permits. Additionally significant, but somewhat less time-critical, would be the engineered design components of the community water system, the sewage system, and the mining and process plan which are included in the Nevada Water Pollution Control Permit.

20.12 Financial Considerations

20.12.1 Vanadium Market

AMEC conducted a desk-top vanadium (V_2O_5) and ferrovanadium pricing and marketing study to support the Gibellini PA. In addition to the pricing study, RMP conducted an independent marketing review for vanadium by contacting three potential buyers of vanadium and soliciting letters of interest from each.

Based on a consensus of publicly available information, AMEC recommends a long-term price of US$5.90/lb for V_2O_5 and US$14.10/lb for ferrovanadium in real (constant 2008) dollars in years 2019 and beyond.

These preliminary consensus prices along with a marketing analysis are adequate to support a PA-level study. For Pre-feasibility and Feasibility Studies further investigation, a more detailed marketing study, and negotiations with end-users will be required to support product pricing.

20.12.2 Financial Analysis

The cash flow results for the Gibellini Project are positive for all Cases. The Base Case has an after-tax undiscounted cash flow of $116.2 M and an after-tax project IRR of 27%. Both Case 2 and Case 3 show improved economics versus the Base Case, while Cases 1, 4, and 5 show reduced economics.

A sensitivity analysis was completed for the Base Case. Sensitivities were run for pre-tax cash flow, after-tax cash flow, pre-tax NPV@10%, and after-tax NPV@10% by adjusting V_2O_5 prices, operating costs, and capital costs through the range of ± 30%. . With the exception of the before and after tax NPV@10% at a -30% V_2O_5 selling price, all of the sensitivities were at or above break even.

20.13 Project Execution

Initially, the critical path task for getting the Gibellini Project into production is permitting. The EIS is estimated to take 18 months to complete and an additional 6 months to receive approval. Baseline work is not scheduled to begin until April of 2009 or as soon as weather permits. Although power line design and construction and water rights appropriation and supply will take 20 months and 27 months respectively, they are not on the critical path because the mine can be built while both are in process; nonetheless, each will need to be completed before mining and processing can commence. Once the EIS is approved, a nine month construction phase begins in late March of 2011. Both facility and leach pad construction are critical path items during construction. At the conclusion of construction, 2 weeks are scheduled to load the leach pad and commission the plant. The execution plan envisages mining and processing starting on January 1, 2012.

21.0 RECOMMENDATIONS

AMEC has proposed a budget that will encompass generation of sufficient data over a three-year period to support a project Feasibility Study.

Prior to completing the next-phase study, initial programs will need to be undertaken that will ultimately support the study. These programs include claim staking, aerial surveys, field surveys, deposit and condemnation drilling, metallurgical testing, and geotechnical work. In addition, base line environmental programs, long lead time infrastructure projects, and long lead time permits will need to be initiated.

The proposed work program includes:

- Claim staking: AMEC anticipates that RMP will need to stake claims upon which water wells will be located to supply the project with water.
- Aerial survey: Flying of an airborne survey with sufficient accuracy to provide accurate topographic surfaces
- Field surveys: Accurate drill hole collar locations are required to support the Measured and Indicated Mineral Resource classification categories. AMEC recommends that RMP survey all RMP and legacy drill holes, using a registered surveyor, and survey points on the Noranda local grid to generate a Noranda grid to UTM meter conversion factor for use with holes recorded originally in local grid coordinates.
- Verification drill program: AMEC recommends that RMP upgrade the confidence in the Noranda and Inter-Globe holes by twinning 10% of the holes (6 RC holes, approximately 1,300 ft). An additional 8 RC holes (approximately 1,700 ft) are recommended to twin 10% of the Atlas drill holes. Infill RC drilling is recommended on the limits of the current pit shell, comprising 12 RC holes for approximately 1,200 ft of drilling. Permits will be required for this program. In addition, AMEC has recommended that selected drill holes be downhole surveyed.
- Condemnation drill program: AMEC estimates that the condemnation of the waste dump area will require four, 200 ft RC drill holes (800 ft total), spaced roughly on 500 ft centers.
- Metallurgical drill program: Further metallurgical testing will require collection of two large composite samples from each material type (oxidized, transition, and un-oxidized). AMEC estimates that six, 300 ft deep HQ core holes (1,800 ft total) will be sufficient to provide approximately 500 ft of core of each material type.
- Geotechnical drill program: Geotechnical drilling will be required at Gibellini to guide pit slope, waste dump, and access road design. AMEC estimates that four,

300 ft deep oriented core drill holes (1,200 ft total) within the ultimate pit limits will be sufficient to help design the pit slopes. Test pits, in combination with the condemnation drill program will be sufficient to study the waste dump and access road sites. Additional testwork is envisaged to support leach pad design.

- Metallurgical testwork: The specific goals of the program will include: verifying recovery across the deposit, developing a bottle roll procedure for Gibellini, optimizing the leaching process, and verifying solvent extraction viability. In addition to the base work, AMEC proposes to undertaken additional geotechnical testwork to determine the stability and permeability of heap leach material under compaction pressure.
- Powerline: Review of powerline supply and design, and subsequent detailed design work.
- Water rights application and field survey.
- Baseline environmental studies.
- Baseline social studies.
- EIS preparation.
- Compilation of permits.
- Report preparation.

AMEC has estimated a three-year budget for this work, as shown in Table 21-1. Owner costs, estimated by RMP, are an additional $754,000 to this program.

Table 21-1: Recommended Work Program Budget ($US)

Task	Total
Claim Staking Cost	900
Survey Cost	39,900
Drill Permitting Cost	2,000
Drilling Cost	482,800
Metallurgical Testing Cost	470,000
Geotechnical Program Cost	204,400
Power Line Design Cost	5,000
Water Rights Appropriation Cost	320,000
Permitting Cost	732,000
Feasibility Study Cost	1,750,000
Miscellaneous Reports Cost	70,000
Total	4,077,000
Contingency @ 20%	815,400
Total Including contingency	4,892,400

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23.0 DATE AND SIGNATURE PAGE

The effective date of this Technical Report, entitled “NI 43-101 Technical Report, Gibellini Vanadium Property, Nevada, USA” is 8 October, 2008.

“signed and sealed”

Kirk Hanson P.E. December 2, 2008

“signed”

Todd Wakefield, M.AusIMM. December 2, 2008

“signed”

Edward Orbock, M.AusIMM. December 2, 2008

“signed”

John Rust, M.AusIMM. December 2, 2008