



Forest  
Service

Washington  
Office

1400 Independence Avenue, SW  
Washington, DC 20250

# Appraisal Report Summary

**Mineral Withdrawal Area MWA (Federal)  
Pinal County, Arizona**

**Resolution Copper Legislated Land Exchange  
(Southeast Arizona Land Exchange and Conservation Act, 16 U.S.C. §539p)**



## **Date of Appraisal Report**

January 20, 2023

(Provided to US Forest Service on January 22, 2023)

## **Date of Appraisal Review**

January 25, 2023

## **Appraisers**

Marc P. Springer, SFMC Mining Geologist/Mineral Appraiser  
Spanish Flat Mining Company (sub-contractor to Weissenborn Appraisal, LLC)  
7024 Snapdragon Drive  
Carlsbad, CA 92011

Evan Mudd, PE, CG, MBA, PMP, QP, CMA  
Mining Engineer, Mineral Appraiser  
Arizona Certified General Real Estate Appraiser #1037748 (Expires  
03/31/2024) Rock Associates, Ltd  
Overland Park, KS 66214



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## Appraisal Summary

### Appraisal Report under Review

#### Appraisers

Marc P. Springer, SFMC Mining Geologist/Mineral Appraiser  
Arizona Certified General Real Estate Appraiser #1036208 (Expires 02/29/2024)  
California Certified General Real Estate Appraiser # AG044432 (Expires 09/20/2023)  
International Institute of Mineral Appraisers, 2006-4  
CA State Registered Professional Geologist PG# 7831  
BLM Certified Mineral Examiner CME #0139  
Spanish Flat Mining Company (sub-contractor to Weissenborn Appraisal, LLC)  
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Evan Mudd, PE, CG, MBA, PMP, QP, CMA  
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Overland Park, KS 66214

*(Note: Per USDA Forest Service Contract No. 12837120C0041, Weissenborn Appraisal LLC commissioned Spanish Flat Mining Company who has extensive experience, professional knowledge, and expertise in the valuation of mineralized and mine-related properties).*

#### Date of Inspection

The Subject Property was inspected on April 12, 2022 which is the effective date of the appraisal. Prior to this inspection, the mineral appraiser, Mr. Halmbacher (deceased) inspected the property on May 08, 2019. Between these dates, the Telegraph Fire started on June 4, 2021 and burned portions of the Subject. The appraisal notes burned areas were still apparent during the property inspection. The property owner(s) were provided the opportunity to accompany the appraiser on the property inspection.

#### Date of Report

January 20, 2023

#### Owner

The United States of America

#### Client

As part of USDA Forest Service Contract No. 12837120C0041, Weissenborn Appraisal LLC commissioned Spanish Flat Mining Company who has extensive experience, professional knowledge, and expertise in the valuation of mineralized and mine-related properties. Weissenborn Appraisal, LLC is the primary appraisal contractor for the USFS, relative to the Federal and non-Federal parcels of the Southeast Arizona Land Exchange and Conservation Act. Weissenborn Appraisal LLC commissioned Spanish Flat Mining Company to complete appraisals on the Federal real property (selected lands) portion of the land exchange; the appraisal will be used by the USFS to facilitate the land exchange.



Although the appraisal completed for Weissenborn Appraisal LLC by Spanish Flat Mining Company as a sub-contractor states the Client is Weissenborn Appraisal LLC, the letter of transmittal from Weissenborn Appraisal LLC to the USDA Forest Service states that the Client in the assignment is the USDA Forest Service specifically the USDA Forest Service, Director of Lands and Minerals, Southwestern Region.

### **Intended Use**

To provide a basis of value for the legislated land exchange between the United States of America and Resolution Copper Mining, LLC pursuant to 16 U.S.C. §539p.

### **Intended User(s)**

In the original appraisal contract, the intended users were broadly defined. It shall be noted that the intended users of the appraisal report are specifically identified as the USDA Forest Service, Director of Lands and Minerals, Southwestern Region, USDA Office of General Counsel, and Resolution Copper Mining, LLC.

### **Professional Standards**

The appraisal standards required for this assignment were the *Uniform Appraisal Standards for Federal Land Acquisitions* and *Uniform Standards of Professional Appraisal Practice*.

### **Estate Appraised**

The property rights reported and appraised includes the fee simple interest subject to valid and existing rights encompassing 766.58 acres.

#### **Outstanding Rights**

The appraisal adequately considered the following outstanding rights and reservations on the Subject Property: Existing Easements: United States Department of Interior Easement for Right-of-Way for Electric Transmission Line granted to Arizona Public Service Company, dated 12/22/75. Federal parcel will be conveyed subject to easement GLO401905 APS 500KV POWERLINE.

Permits and Temporary Easements to convert to Easements in perpetuity: Permit to Salt River Project Agricultural Improvement and Power District for an overhead transmission line Amendment dated 5/21/74. At closing, Resolution Copper Mining shall grant a replacement authorization to Salt River Project Agricultural Improvement and Power District for those sections involved in the conveyance. It shall contain terms at least equivalent to those in permit GLO4011143 SRP PERMIT.

In the context and scope of the appraisal, GLO401905 APS 500KV POWERLINE and GLO4011143 SRP PERMIT have no effect on the value of the subject MWA parcel.

### **Definition of Value**

Market Value means the most probable price in cash, or terms equivalent to cash, which lands or interest in lands should bring in a competitive and open market under all conditions requisite to a fair sale, where the buyer and seller each acts prudently and knowledgeable, and the price is not affected by undue influence (36 CFR 254.2).



### **Extraordinary Assumptions**

The appraisal is not based upon any Extraordinary Assumptions.

### **Hypothetical Conditions**

The appraisal was prepared subject to the following FS instructed Hypothetical Condition: The Federal Property shall be appraised as though it is in private ownership, is freely alienable, and zoned consistently with other similarly situated non-Federal properties within the jurisdiction of the zoning authority. Federal law provides that, upon conveyance, “[t]he Federal Property shall be available to Resolution Copper for mining and related activities subject to and in accordance with applicable Federal, State, and local laws pertaining to mining and related activities on land in private ownership.” 16 U.S.C. §539p(c)(8). This hypothetical condition does not alter the facts that: the Federal Property is encumbered by mining claims held by a party other than the United States; said mining claims confer all rights to locatable minerals to that party in accordance with the Mining Law and are not part of the estate owned by the United States, 30 U.S.C. §§26, 181, 611; that the United States currently holds the rights to reasonably regulate surface use of the Federal land for mining purposes under 36 C.F.R. 228 Subpart A, 16 U.S.C. § 551; or that the United States may not prohibit the use of the surface of NFS land for mining purposes, nor may it materially interfere with such uses. 30 U.S.C. § 612.

***Rationale for the Hypothetical Condition:*** The hypothetical condition is based upon direction and guidance from 36 CFR 254.9(b)(ii), FSH 5409.12\_65.11(5) which was updated in 2021 to FSH 5409.12\_45.1a, FSM 5454, and 16 U.S.C. §539p(c)(8). Federal land is generally not freely alienable, local government entities do not have the authority to zone land owned by the United States, and mining operations on National Forest System land are subject to federal laws and regulations applicable to the administration of the National Forest System and are often exempt from State and local laws. For the purposes of appraisal, the appraiser shall determine and support a conclusion of zoning based on similarly situated private property within the jurisdiction of the zoning authority. This hypothetical condition does not alter or affect the rights of Resolution Copper to the unpatented mining claims and locatable minerals on the Federal land pursuant to the United States Mining Law, or the estate to be appraised in consideration of the existence of the mining claims. The hypothetical condition shall be prominently reported on the transmittal letter, summary page, conclusion page, and certification.

### **Jurisdictional Exception**

The appraisal has been prepared in conformance with UASFLA, which requires that the opinion of value not be linked to a specific exposure time as required by USPAP SR 1-2(c) & UASFLA 1.2.4 & 4.2.1.2.

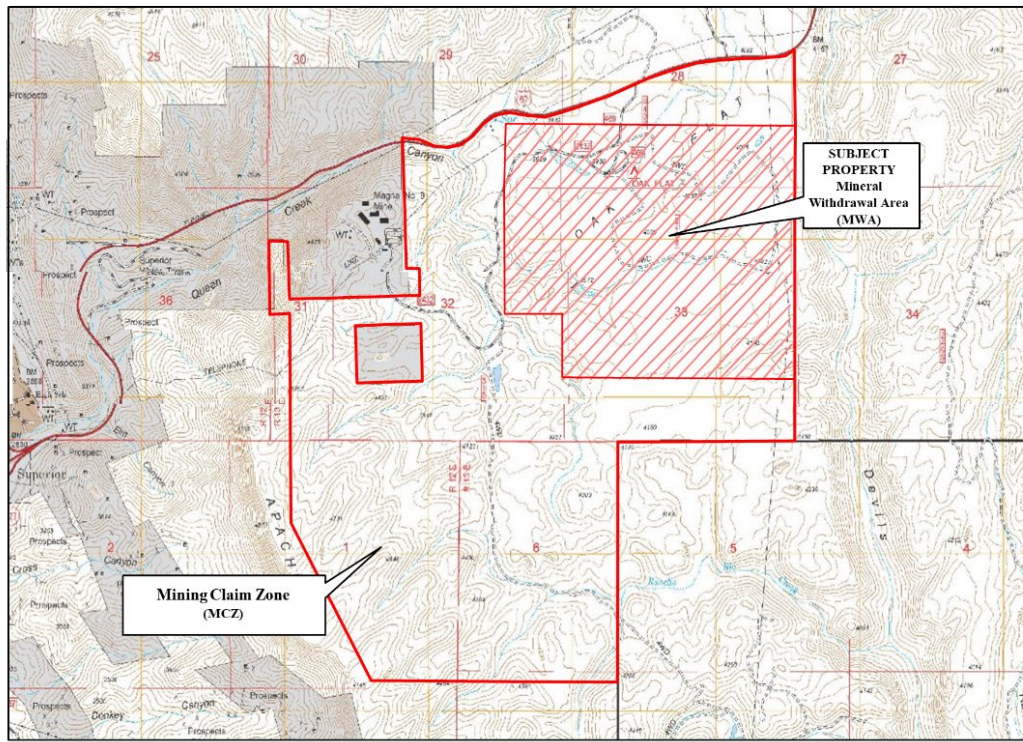
### **Legal Description**

Lands comprising the Oak Flat Withdrawal Area; Tract 50; partially surveyed, T.1S., R.13E., for 766.58 acres.

The following maps are for illustration purposes:



### Topographic View of Subject MWA Property

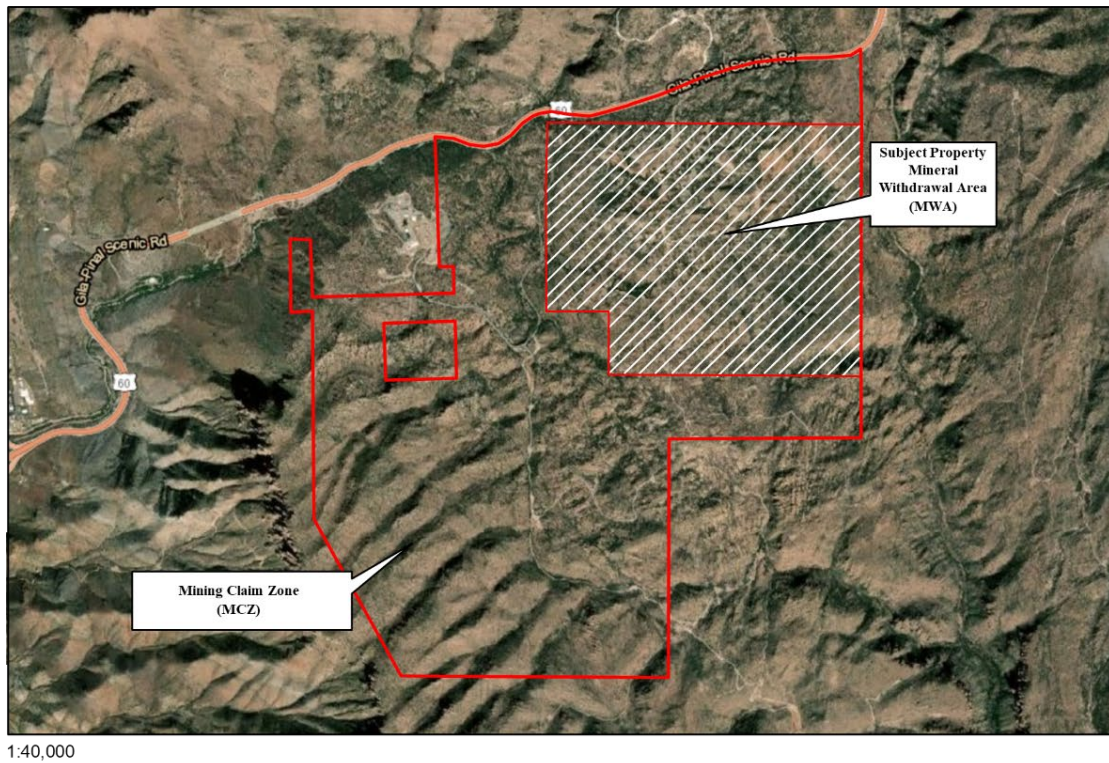


1:40,000





### Aerial View of Subject MWA Property

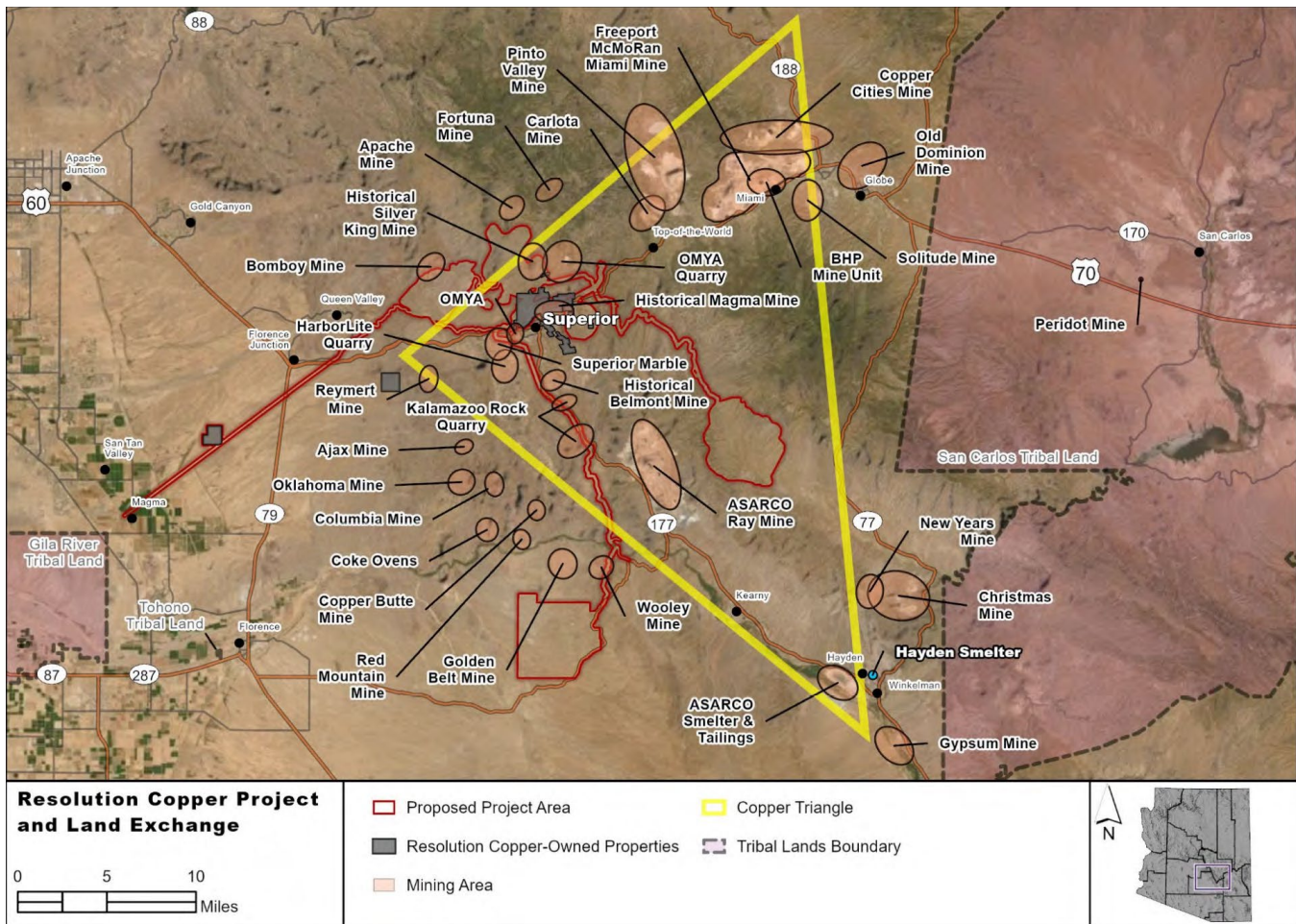


**Property Description** - The Subject Property is 766.58 acres located east of Superior and just south of U.S. 60.

**Location:** The Subject Property is located about two miles east-northeast of the town of Superior at the Oak Flat Campground on the Tonto National Forest. The subject neighborhood is the area in and adjacent to the Arizona Copper Triangle which extends from west of Superior to Globe/Miami, and southerly to Winkelman. The area is generally rural where mining and ranching occur. However, active mining, including processing and exploration operations, are common.

The following map illustrates the Arizona Copper Triangle:

## Subject MCZ located within Arizona Copper Triangle



**Configuration:** The Subject MWA Property is generally equidimensional, contiguous with, and bounded on three sides by the Mining Claim Zone (MCZ) federal property.

**Size:** The Subject Property is 766.58 acres.

**Topography:** The landscape is southcentral Arizona high desert terrain with elevations around 4,200 feet. The land is generally flat with moderate vegetation in the northern portion with moderately rolling hill, sparser vegetation and prominent volcanic rock outcrop in the southern portion. The Subject is in the Lower Mogollon Transition Zone Ecoregion.

**Soil Types:** The Phase 1 ESA reports that most of the soils on the subject are unmapped on the Web Soil Survey. The property previously mapped on the ALRIS General soil map with more than half showing as Mined Land and Rock Outcrop-Woodcutter complex, tuff. Significant areas were unmapped on the ALRIS map as well. The ESA, however, did not agree with this assessment and concluded that the soils were primarily rock outcrop with loamy and gravelly slope alluvium.



**Water:** There are two surface water rights belonging to the Tonto National Forest on or adjacent to the Subject Property. The water sources are filled by unnamed washes. These are:

- 38-65060 Oak Flat Tank – Stock/Wildlife Tank - 3.26-acre feet
- 33-77040 Rim Pond - Stock/Wildlife Tank – 0.77-acre feet

**Flood Zone:** The Phase I Environmental Site Assessment (ESA) indicates there are no identified flood hazard areas on the Subject Property. The area has been mapped by the Federal Emergency Management Agency (FEMA) map panels showing that the entirety of the Property is designated as flood Zone D, which is the designation for areas where FEMA has not conducted a flood hazard analysis and the potential flood hazard has not been determined. There are no FEMA-designated floodplains identified within the Property and none were observed during previous site visits (WestLand 2004a, 2015).

**Utilities:** There are no electrical, telephone, natural gas, water or sewer systems apparent on the Subject Property.

**Access:** Access to the property is available from U.S. 60. The Subject Property is about 60 miles east of Phoenix and about 2 miles east of Superior. Internal access is available from FR 469 which travels from U.S. 60, southerly to FR 2432 (Magma Mine Road) which goes to the south and then northwesterly towards the No. 9 Shaft parcel. A portion of the northwest corner of the Subject Property can be accessed by heading west on FR 2432. The northeast corner is traversed by E Oak Flat Road and FR 2438 which runs easterly from FR 469 through the Oak Flat area. E Oak Flat Road turns north and return to U.S. 60.

**Timber:** N/A

**Minerals:** The mineral rights have been withdrawn from mineral entry since September 27, 1955 and are owned by the United States.

**Environmental Hazards:** The Phase I ESA concluded that there are no Recognized Environmental Conditions (REC) on the Subject Property but noted that surface water quality in the Devils Canyon Watershed and the Queen Creek Watershed is in overall compliance with applicable surface water standards with the following exceptions: arsenic, copper, dissolved oxygen, E. coli bacteria, iron, lead, pH, and selenium (Resolution 2016). Water quality in regional groundwater basins meets EPA and State of Arizona overall drinking water standards, with a few exceptions. Several samples fell below the federal secondary standard for pH and slightly above the federal secondary standards for iron and manganese. In addition, several samples did not meet federal secondary standards for total dissolved solids and sulfate, and one sample also exceeded federal and state primary standards for nitrate (Resolution 2016). It is not known if these conditions are naturally occurring and/or the result of anthropogenic activity. Approximately six small spills of petroleum products (less than 100 gallons) have occurred at the drilling sites and immediately off-site between 2015 and 2020. Information provided from Resolution indicates that these spills were cleaned up and reported to the USFS pursuant to the requirements of the SPCC plan. WestLand did not observe any visible evidence of product spills on the Property. Due to the small quantity and number of spills, this is considered a de minimis condition. Known regional exceedances do not necessarily indicate contamination at the Property





that would be considered environmental liabilities associated with the Property. Given the Highest and Best Use of the property, it is unlikely that these environmental conditions would affect the overall value of the property.

### **Improvements**

USA-owned improvements located on the Subject Property are limited to two (2) vault toilets within the Oak Flat Campground. The appraisal states that since the highest and best use of the subject is exploration and development of the Subject MWA mineral resource as a portion of the Resolution Copper Deposit and the focus of the valuation is on the subsurface interest, surface improvements do not contribute value to the subsurface interest and suggests the UASFLA unit rule precludes adding the value of various interests, different physical elements, or components of a tract of land are not to be separately valued and added together.

Since the appraisal did not provide information on the vault toilets, the following discussion is provided for information purposes. The vault toilets were installed in 1994 (28 years ago) and have a 30-year economic life. The replacement costs range from \$60,000 to \$90,000. Applying a 93% depreciation rate (28/30), provides a range of \$4,200 - \$6,300 which suggests a nominal stand-alone value as they are almost fully depreciated and likely eligible for replacement if the exchange did not occur.

### **Use, Rent and Sale History**

The primary use for the Subject Property is public recreation and has never been sold or rented.

### **Zoning and Land Use Restrictions**

The following is a requirement regarding disclosure and analysis of property zoning:

“Determine "consistent" zoning (and other land use restrictions) of Federal land by research and analysis, not by making an assumption. As instructed, the appraisal considered the hypothetical condition that the Federal land be appraised as though in private ownership and zoned consistent with other non-Federal lands. In determining consistent zoning for the Federal land, the appraisal should not consider entitlements such as master planning that are not in place as of the date of value.”

The appraisal concluded that the Subject Property is zoned Pinal County GR – General Rural Zone. This is the predominant rural classification throughout the county and permitted uses include single family dwellings, various agricultural uses and quasi-public uses such as parks and schools. The minimum lot size is 1.25 acres. This classification does not specifically allow or prohibit mining but according to the Arizona Revised Statutes:

11-812. Restriction on regulation; exceptions; aggregate mining regulation; definitions

A. Nothing contained in any ordinance authorized by this chapter shall:

2. Prevent, restrict or otherwise regulate the use or occupation of land or improvements for railroad, mining, metallurgical, grazing or general agricultural purposes, if the tract concerned is five or more contiguous commercial acres. For the purposes of this paragraph:

(b) "Mining" has the same meaning prescribed in section 27-301...

10. "Mining" means those activities conducted to develop or extract materials from a mine including



on-site transportation, concentrating, milling, leaching, smelting or other processing of ores or other materials. Mining includes mined land reclamation activities regulated pursuant to chapter 5 or 6 of this title.

Pinal County Code affirms the state statutes at 2.05-050 – Statutory Exemptions:

As specified in A.R.S. title 11, Ch. 6 (A.R.S. § 11-801 et seq.), the provisions of this title shall not prevent, restrict, or otherwise regulate in any zoning district the use or occupation of land or improvements for railroad, mining, metallurgical, grazing or general agriculture purposes, as defined herein, provided the tract or premises so used is five or more contiguous commercial acres.

The county zoning map for the Ray Mine and surrounding area was also reviewed. All land in that area, including the mine, is zoned GR as well.

### **Highest and Best Use**

The Highest and Best use was determined to be exploration and development of a mineral resource as a portion of the Resolution Copper deposit.

### **Larger Parcel Determination**

The report indicates the subject property is contiguous, in the same ownership, and has a single, unified highest and best use. The appraisal report concludes that the subject parcel is considered the larger parcel.

### **Selection of Approaches to Value**

The appraisal included a **sales comparison approach** using sales of similar properties which are competitive in the marketplace having the same or similar highest and best use as the Subject.

The **income capitalization approach** was used in the appraisal to fulfill the requirement of the legislation which requires the use of a detailed income capitalization approach analysis of the federal land. It is noted in the appraisal that the Income Approach is not typically considered by buyers of mine support lands similar to the Subject Property but was included to comply with the legislation.

The **cost approach** is based upon the principal of substitution that a prudent buyer would not pay more for a property than the cost to acquire a similar site and construct improvements of a similar utility without undue delay. The cost approach was not included in the appraisal.

### **Sales Comparison Approach**

The appraisal gathered and analyzed 68 international copper projects from the USA, Pakistan, Peru, Ecuador, Chile, Indonesia, Philippines, Argentina, Mexico, Fiji, Democratic Republic of the Congo, Canada, Papua New Guinea, Mongolia, Kazakhstan, Namibia, Sweden, and Colombia. The copper projects were examined using the following criteria; **deposit setting, transaction date, transaction framework, deposit type and metal content**. The first set of criteria regarded deposit setting and mining methods. The Subject is proposed as an underground block-cave mine at a depth of 7,000 feet. The infrastructure required to support an underground mine is more extensive than surface mine requirements. As such, projects that utilized surface mining methods were removed from the data set. The remaining 13 comparable sales that had a combination of surface and underground mining were retained for further analysis. The next set of criteria regarded the transaction date. Those comparable sales older than five years were removed from the list. This narrowed the list to four comparable sales. The criteria for deposit type and metal content was examined on the remaining four comparable sales.



Since the MWA copper deposit consists of approximately 94% copper, comparable sales with similar metal content were selected. One of the sales (Cascabel Project in Ecuador) had significant gold and silver content and was excluded from the list. The remaining three sales were used for direct comparison to the Subject Property. Two of these sales were from the USA, and one was from Peru. They occurred from 2017-2022 and had a metal content ranging from 86%-100% copper.

The **unit of comparison** used within the appraisal report is US price per pound (\$/lb). This unit of comparison is also reflected in the comparable sales and provides for an analysis that is consistent with industry standards.

The appraisal analysis continued with the analysis of the characteristics of each individual sale to the subject property in both narrative format and on the adjustment grid for each sale. Quantitative and/or qualitative adjustments were made for the various elements cited as affecting overall value.

### **Property Rights**

The property rights for the subject includes the surface and sub-surface mineral interests. It does not include any business, marketing, or other values associated with mineral exploration. Sale 1 included both an operation firm and the mineral deposit and was considered superior to the subject due to these additional components of value and a downward adjustment was applied to the sale. Sale 2 included an interest holding real estate interests in the project and also actively participating in development which was regarded as superior to the subject and was adjusted downward. Sale 3 was a private equity placement that procured three stakes in the transaction. This form of ownership includes company attributes in addition to the mineral deposit, which is considered a superior form of ownership. However the sale include the acquisition of a partial interest, which is less than the fee simple estate as compared to the subject. The appraisal concluded the form of ownership, and the partial interest were offset, with no adjustment applied.

### **Financing Terms**

Financing terms that involve non-market terms require adjustments for cash equivalency. Sale 1 was an all-stock transaction where stockholders of the acquired company were compensated with 0.929 shares of stock for each share in the previously held company. This is considered to be slightly inferior to a cash payment since stock equity has a degree of market risk, thus an upward adjustment was applied to Sale 1. Sales 2 and 3 were cash transactions with no adjustment applied.

### **Conditions of Sale**

The appraisal report indicated that Sales 1 and 3 reflected typical sale conditions, no adjustment applied. Sale 2 involved a sale to a related firm that had controlling interest in the property. During the exploration state, an Australian firm owned 100% of the property. The initial exploration reported a reserve that was downgraded as a result of additional exploration. The company sold 51% ownership in 2016 which required the buyer to carry all project costs leading to a completed feasibility study. In 2017 the buyer purchased the remaining 49% interest for what was considered a significant discount from the previous sale. Company news releases at the time of sale indicated the seller desired to exit the project for strategic reasons and re-deploy capital on an alternate project. The conditions of this sale are inferior to the subject and an upward adjustment was made to this sale.

### **Market Conditions**

The comparable sales dates ranged from June 2017 to April 2022. The appraisal anecdotally states there is a linkage to commodity prices and a demand for mining related transactions. The appraisal further states that market elements such as inflation, deflation, competitive landscape changes, commodity price



fluctuations, and other factors may influence the sale price. The appraisal maintains that since the comparable sales include exploration and development projects, they are influenced by the commodity price. Therefore 2 of the 3 comparable sales were adjusted upward for metal pricing based on commodity prices at the time of sale as compared to commodity prices as of the effective date of value.

### **Property and Physical Adjustments**

#### **Geographic Location**

Sales 1 and 3 are in the Copper Triangle Region of Arizona which is similar to the subject. No adjustment applied to these sales. Sale 2 is located in a high-altitude mountainous region of Peru that has a complexity of political, social, labor, infrastructure, and jurisdictional risk challenges and is considered inferior to the subject with an upward adjustment applied.

#### **Mining Method**

Two of the three sales had a combination surface/underground mining operation, and one sale is a block cave mining operation. The appraisal states that surface mining operations are generally less costly to operate on a per-ton basis than underground operations. Surface mining generally uses large excavating/hauling equipment with lower unit cost methods. The surface mines are able to mine lower grade ore since they are well suited for low to moderate grade porphyry copper deposits and able to afford moderate dilution. Deep sulfide mineralization like the Subject is generally mined by underground methods. Underground mining requires costly development of an underground infrastructure capable of operating within the constraints of an underground environment. They are also subject to a variety of infrastructure requirements such as hoisting, pumping, and ventilation. Since Sales 1 and 3 were a combination open pit/underground mine, a downward adjustment was applied.

#### **Project Stage**

The Subject Property is considered to be in the Prefeasibility/Feasibility stage. It has not been explored, but all metal grade and rock mechanics data are inferred from exploration on adjacent properties. As noted in the appraisal, the Subject is in an advanced Exploration/Prefeasibility Stage with a conceptual mine plan and project economics being studied. Sale 1 is in the Exploration Stage and has established mineral resources with infill drilling planned but a mine plan or prefeasibility/feasibility economics has not been established and considered inferior to the subject with an upward adjustment applied. Sale 2 is in the Exploration/Prefeasibility Stage, it has an established mineral resource that had a feasibility study in process at the time of sale. Since this is similar to the Subject, no adjustment was made. Sale 3 had an established mineral resource and at the time of sale updated the mineral resource estimate and was updating the Preliminary Economic Assessment (PEA). Since the mineral resource estimate was completed and is in the Prefeasibility Stage it was considered superior to the Subject with a downward adjustment applied.

#### **Resource Classification**

The Subject is considered an Inferred Resource since it has not been explored and the quantity, grade, and quality of the deposit is based on limited geological evidence and sampling. An Inferred Resource has the lowest level of confidence of all resource classes. Indicated and Measured Resource classes have higher levels of confidence and are generally reported separately and in a combination which provides a benchmark to gauge the quantity of resources that fall within the higher confidence classes. The appraisal compared the combinations of Indicated and Measured resource classes to the Subject. All three sales had a combination of Indicated and Measured classes and were considered superior to the Subject with downward adjustments applied to all three sales.





### Deposit Size

The deposit size is directly related to mine capital and operating costs. Larger operations are typically able to extract and process material at a lower unit cost (\$/ton) relative to small operations. In general, deposits operating at a larger scale can extract and process generally lower grades with better economies of scale than smaller scale deposits. The appraisal states the Subject deposit is estimated at approximately 5.33 billion lbs., plus other base metals Cu equivalent of 0.28 billion lbs., plus precious metal Cu equivalent of 0.07 billion lbs., for an estimated total Cu and equivalent deposit of 5.68 billion lbs. Sale 1 was similar in size, so no adjustment was made. Sales 2 and 3 were smaller in size and considered inferior to the Subject with an upward adjustment applied to both sales.

### Zoning/Land Use

Although the appraisal did not include Zoning/Land Use in the sales comparison grid, it did discuss Zoning and Land Use throughout the report. Sale 1 and Sale 3 had the same General Rural/Vacant Ranch Land zoning that allowed mining and Sale 2 is located in a mining district. No adjustment applied.

The unadjusted and adjusted sale prices are reflected below.

#### Direct Sales Comparison Sales Summary

Sale	Date	Billion lbs.	Unadjusted \$/lb	Adjusted \$/lb
1	June-2018	4.65	\$0.0022	\$0.0026
2	June-2017	3.29	\$0.0015	\$0.0034
3	April-2022	3.59	\$0.0077	\$0.0045
Low	2017	3.29	\$0.0015	\$0.0026
High	2022	4.65	\$0.0077	\$0.0045

### Reconciliation

The appraisal report addressed the overall comparability of the sales as required by UASFLA. The appraisal stated that the comparable sales, after adjustments, shows a range of indicated values from a low of \$0.0026 per pound to a high of \$0.0045 per pound. The appraisal placed equal weight on all the comparable sales and concluded an opinion of value of \$0.0037 per pound.

The opinion of value conclusion is \$0.0037 per pound.

$$5.68 \text{ Billion lbs.} \times \$0.0037 \text{ per pound} = \$21,000,000 \text{ (ROUNDED)}$$



### **Income Capitalization Approach**

In developing an opinion of value using the income approach for a mineral property, it is generally recognized that the most appropriate method of capitalization is yield capitalization most notably the discounted cash flow (DCF) analysis (UASFLA). The income that is evaluated is the royalty income as opposed to the income or profit generated by the business of mining and selling the mineral. The income approach utilized to value mineral properties is commonly referred to as the royalty income approach by the Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA). The royalty income paid to the landowner over the life of the mine is capitalized to a net present value (NPV) using a discounted cash flow (DCF) analysis. The DCF analysis can be highly complex as a detailed mining plan for the property is often required.

Besides the mining plan, essential components include:

- the royalty rate,
- the unit sale price of the mineral to which the royalty rate is applied,
- the projected annual amount of mineral production,
- projected number of years of production,
- bonus payments prior to production,
- the year production will begin,
- transportation and smelter/refinery costs,
- metal recovery rates,
- NPV discount rate

### **MWA Mineral Resources**

For purposes of this appraisal, independent studies were completed by Dassault Systemes, an international mine modeling firm often utilized by mining companies worldwide who seek solutions to mine productivity, and Dr. David Wahl, Jr., PHD, Consulting Geologist. The results of these confidential and proprietary studies were used in the MWA appraisal. Dassault Systemes is home to world-renowned and award-winning mining solutions utilized by industry thought leaders who are pushing the boundaries of what's possible in mining, through the GEOVIA brand. The largest global supplier of mining software, GEOVIA delivers comprehensive solutions in all major mining centers in more than 130 countries at over 4,000 sites. Although these are confidential and proprietary reports, the Review Appraiser had controlled access to these reports during the course of the review. In May of 2019 the caving specialists of Dassault Systemes, owners of PCBC (Personal Computer Block Caving) Software and PCBC's Footprint Finder Application, were requested by the Forest Service to complete an evaluation of the annual mine production of the MWA block cave deposit. PCBC software is considered the standard software package for block cave mines across the globe and is used virtually by every mining company involved in block caving to improve profits through better mine plans, schedules and production management. The focus of the study was to independently determine the schedules with annual tons and grade, inside and outside of the MWA. Orebody specific parameters provided by Resolution Copper that included geologic and geotechnical data gathered from 15 years of exploratory drilling and subsequent analysis, testing, modeling and third-party validation were benchmarked against similar block cave operations worldwide. Ore body parameters for cave design and scheduling specific to the deposit included; density of caved material, drawpoint spacing and design, drawcone diameter, caveability and hydraulic radius, geotechnical domains and fines assumptions, inter-panel pillars, mixing and slicefile parameters, recompaction rule and panel sequencing, stress, and undercutting orientation.



Dassault utilized their proprietary software to independently develop a mine plan for the subject MWA property and Dr. Wahl, PHD independently evaluated the Dassault results and produced a consulting report that analyzed generalized geological mining scenarios, net smelter returns and discounted cash flow rates. The input variables of Dr Wahl's report were independently reviewed by a Forest Service Certified Mineral Examiner/Geologist and concluded the information presented in the report was supported with market/consensus/benchmarking data.

The results from the independent studies of the MWA deposit and Dassault Mine Plan are as follows:

- Block cave underground mine design with 10-year pre-production construction timeframe
- Mine life of 31 years
- Mining activities reach 2,175 feet below sea level (Approximately 6,400 feet below surface)
- 141,874,468 tons of inferred mineral resource grading 1.88% copper
- 5.33 billion pounds of copper within MWA minable ore
- 90% recovery of copper from ore body
- Maximum production of approximately 58,000 tons/day (reached in year 11)
- Overall metal content is 94% copper and 6% molybdenum and silver equivalents
- Molybdenum and silver production to occur concurrently with copper production
- In-place molybdenum resources at 81.23 million pounds
- In-place silver resources at 17.98 million ounces

### **Net Smelter Return (NSR)**

The royalty rate for the subject MWA property was determined using the Net Smelter Return (NSR) rate. The Net Smelter Return (NSR) is what a landowner is paid after the metals have been smelted and refined at a toll-based treatment facility. There are fees for these processes that take into account metal recovery and small metal deductions as part of the toll smelting/refining agreement. Once the ore is extracted, it is converted into a concentrated form that is shipped to a smelting facility. The cost to transport concentrates to the toll-based treatment facility and the metal treatment charged are deducted from the NSR that is paid to the landowner. To illustrate this, if a mine operator receives \$1,000 from a toll-based treatment facility as payment for the ore concentrates and say the cost of concentrate transport and processing was \$300, the final royalty payment to the landowner with a 3% NSR would be:  
 $\$1,000 - \$300 = \$700 \times .03 \text{ (NSR)} = \$210.$

### **Concentrate Transport Costs**

The appraisal evaluated the transport costs based on Dr. Wahl's research which concluded that the most likely copper smelting location for the copper concentrate is southeast Asia. Transportation costs for copper is based on freight to Wilmington Port, California then shipped to southeast Asia. Molybdenum processing is likely to occur in Mexico and Belgium. The appraisal cross-checked Dr. Wahl's transportation cost estimates against freight cost and ocean carrier estimates using the Mine Cost Service and affirmed the estimates. The appraisal estimated transport costs that include mine to port, ocean transport, and destination port to smelter and concluded a transport cost of approximately \$80-\$90 per ton which is similar to Dr. Wahl's estimate. The transport costs used in the appraisal are \$88.57 per concentrate ton.

### **Metal Recovery**

The estimate of metal recovery from concentrating and smelting the mined ore was based on the independent research conducted by Dassault and Dr. Wahl. The subject MWA recovery of copper, molybdenum, and silver metals include 90% for copper and 75% for molybdenum. After concentrate transport; smelter and roast recoveries are estimated to include a 96.6% smelter recovery for copper and



a 99% roasting recover for molybdenum. Silver is a minor byproduct of the MWA. Overall, 70% of the silver is projected to be recovered through both the concentrator and smelting processes.

### **Treatment and Refining Cost**

After transporting metal concentrates to the smelter, Treatment and Refinement costs are charged to refine concentrate into the finished metal. At the smelter, high temperatures are used to further purify the ore through smelting and electrolytic metal recovery. Based on research by Dr. Wahl, these costs are estimated to fall near \$84.82 per concentrate ton. Similar to the transportation cost estimates, the appraisers cross-checked Dr Wahl's estimates with publications from Mining Cost Service (Smelting and Refining, 2018) and found them to be reasonable by comparison to the Mine Cost Service industry survey.

### **Metal Pricing**

Commodity prices were determined by using consensus pricing from international investment banks, advisory firms, and data from the Arizona Department of Revenue. Long-term copper pricing was estimated at \$3.4514 per lb. The long-term pricing for molybdenum was estimated at \$10.6505 per lb, and the long-term silver pricing was estimated at \$20.80 per lb. The appraisal validated these forecasts against long-term projections by the Commodity Research Bureau (accessed via market data firm Barchart) and found them to be in alignment with industry-standard projections.

### **Royalty (Net Smelter Return)**

There are numerous factors that influence the NSR rate. Factors like, how promising does the project appear, how advanced is the project and how much has the NSR recipient done to advance the project? Dr. Wahl conducted a study of 13 NSR private, porphyry-type mining NSR royalty agreements in the Southwest United States with 11 in Arizona. The results show that 9 of the royalty agreements had a 2% NSR and four had a 2.5% NSR. A NSR between 2% and 2.5% would appear to be the only obligation the mining company would once it goes into production. It should be noted that private party options commonly have significant "up-front" payments due long before production begins. Typically payments are required to exercise an option, and yearly payments plus work commitments follow that. Also, as progress is made and certain milestones are reached, benchmark payments may be required. Initial resource estimates, pre-feasibility studies and feasibility studies are accomplishments that may initiate benchmark payments. So, by the time a mine goes into production, the "up-front" payments received by the royalty holders have significantly augmented the actual NSR payments due at production.

The appraisal reviewed the royalty agreements and cross-checked them with sources to verify their validity and applicability. The subject MWA is most similar to six specific agreements that call for varying degrees of "up-front" payments, milestone payments, advanced minimum royalties, and NSR payments. Most weight was given to royalty agreements that occurred within the past five years, were similar to the subject and did not involve complex stock transfers, "work-in" components, or connections with other related deal transactions. The appraisal concluded that a royalty structure with slightly lower "up-front" payments and higher NSR would be applied in the valuation of the subject MWA. Based on the body of work reviewed, the appraisal concluded a NSR of 2.5% be applied to the subject MWA parcel.





### Royalty Calculations

Utilizing the subject MWA parcel's metal pricing, concentrator recovery, smelting metal recovery, transportation costs, refining cost, and net smelter return, the royalty calculation is summarized as follows:

#### Copper Royalty Summary

Description	Amount
Potential Gross Revenue (\$/lb)	\$3.45
<u>Payable Metal Recovery (%)</u>	<u>96.60%</u>
Estimated Gross Revenue\$/lb)	\$3.33
Transportation Cost (\$/lb)	-\$0.15
Treatment Cost (\$/lb)	-\$0.14
<u>Refining Cost (\$/lb)</u>	<u>-\$0.09</u>
Net Smelter Return (\$/lb)	\$2.95
2.5% Royalty	2.5%
<b>Royalty (\$/lb)</b>	<b>\$0.074</b>

#### Molybdenum Royalty Summary

Description	Amount
Potential Gross Revenue (\$/lb)	\$10.65
<u>Payable Metal Recovery (%)</u>	<u>99.0%</u>
Estimated Gross Revenue\$/lb)	\$10.54
Transportation Cost (\$/lb)	-\$0.40
<u>Roasting Cost (\$/lb)</u>	<u>-\$0.98</u>
Net Smelter Return (\$/lb)	\$9.16
2.5% Royalty	2.5%
<b>Royalty (\$/lb)</b>	<b>\$0.229</b>

#### Silver Royalty Summary

Description	Amount
Potential Gross Revenue (\$/oz)	\$20.80
2.5% Royalty	2.5%
<b>Royalty (\$/lb)</b>	<b>\$0.520</b>

The Dassault Mine model estimates that over the life of the mine, the MWA portion will be paid for:

- 4,634,308,108 lbs. of copper
- 60,316,000 lbs. of molybdenum
- 12,582,647 oz. of silver.

If the MWA produces in excess of these amounts, a royalty will be paid to the United States as production continues as directed by the Southeast Arizona Land Exchange and Conservation Act.



### **Discount Rate**

The discount rate reflects the degree of risk associated with the property appraised. It is the rate that discounts all future benefits to an estimated present value. The appraisal analyzed the independent research conducted by Dr. Wahl regarding discount rates for mineral properties at various project stages ranging from early exploration, pre-feasibility, feasibility, initial production, and mid-life production. Mineral properties that are in the early exploration phase have higher discount rates, around 20% while those in the production phase have lower discount rates at 5% or less. The higher the risk, the higher the discount rate. Although block cave mining is the most efficient mining method for the MWA parcel, it also requires extensive pre-production development costs prior to generating any cash flows from mining. For the subject MWA parcel, it is conceivable that mine production would not begin until ten years after all permits and agreements are in place. Upfront payments for metal recovery values that are expected to come out of the ground at least ten to 41 years after the payment date are discounted to account for the time value of money over a long period of time.

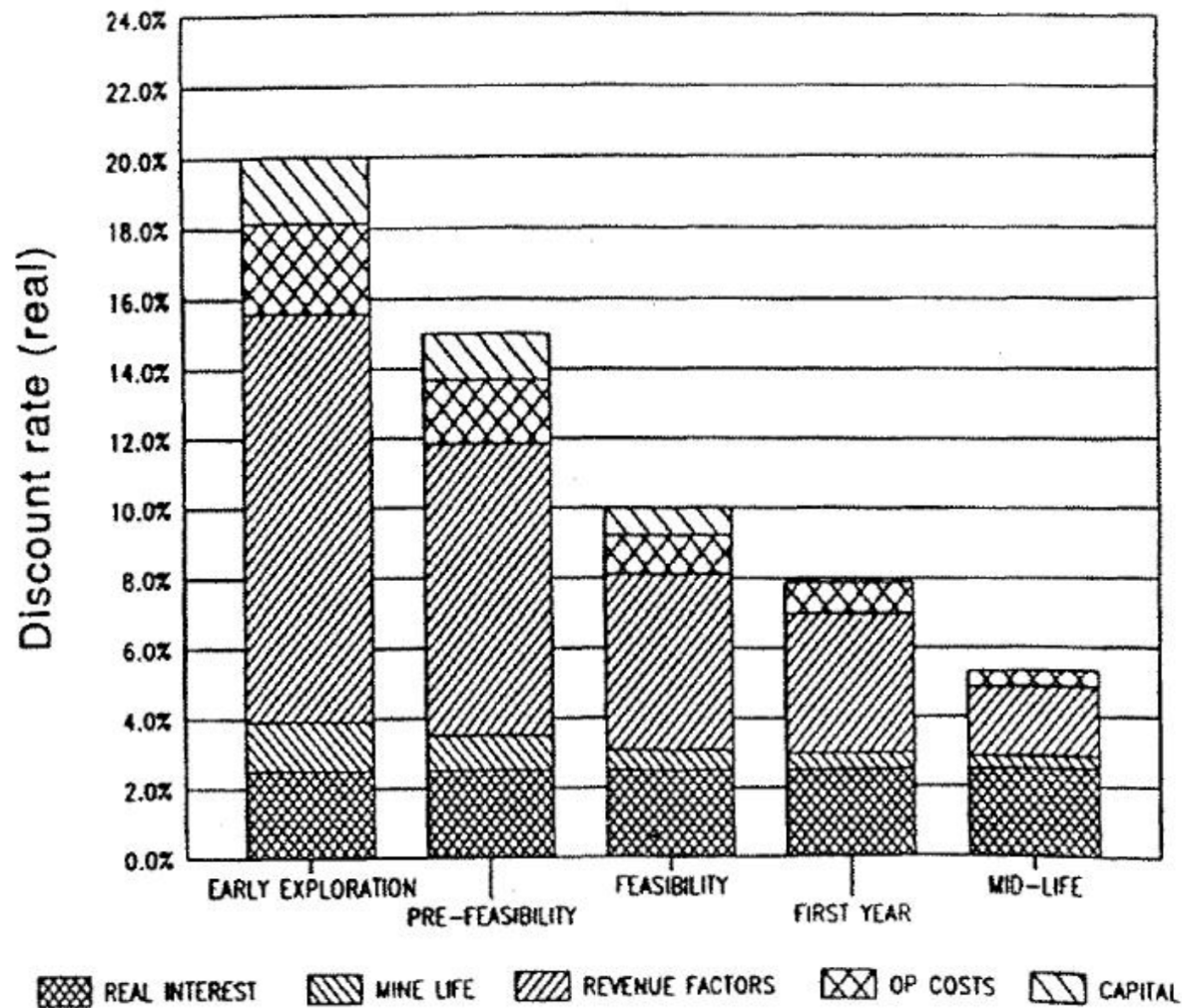
The risks associated with mining the MWA parcel correlates to the confidence of the mineral deposit, tonnage and grade, political stability and social/environmental issues, commodity prices, and demand. The undrilled nature of the MWA poses a risk in the grade and tonnage of the ore that will be mined. Mining at great depths in unknown conditions coupled with social, political and environmental issues also contribute to the risk associated with the subject MWA parcel.

Since the MWA has not been drilled, it could be considered being in the early exploration phase. However, since there is known mineralization and significant development work on the adjacent property, the subject MWA is considered to be at an advanced level beyond the early exploration stage.

The appraisal opined that the subject MWA is between the late pre-feasibility to early feasibility stage.

Figure 1 below illustrates different discount rates for various project stages and suggests a range of 10% to 15% for the subject MWA:





**Figure 1** - Components of real discount rates at different stages of project development. Revenue factors include metal price, grade, recovery, and throughput, 100% equity (Smith 2003b)

The following Table provided by the Wahl report illustrates discount rates for each project stage. The data is a culmination of the average discount rates from various sources for base metals projects:

PROJECT STAGE	DISCOUNT RATE
Exploration/Scoping	14% to 20%
Pre-feasibility	12% to 15%
Feasibility	10% to 12.5%
Operational	8% to 8.5%

Since the appraisal opined that the subject MWA parcel was between Pre-Feasibility and Feasibility stages the table suggests a discount rate between 10% to 15%.

In developing the discount rate for the subject MWA parcel, the appraisal utilized a variety of resources including market-based information and industry studies conducted pertaining to discount rates for properties with similar mineral resources as the subject.



The findings from Dr. Wahl's report were augmented with other market-based discount rate information of copper properties that also produced molybdenum and silver.

The Arizona Department of Revenue publishes an annual study on discount rates for mining properties. A base capitalization rate for discounting cash flows is determined annually by reviewing current industry practice. During the year, numerous transactions related to the metals industry is collected from merger and acquisition developments, technical project reports, annual financial reports, press releases, professional journals, and other publications. Based on this information, the range of discount rates for copper properties that includes a mix of pre-tax and post-tax rates ranges from 5% to 15%. Since all but one of these properties were surface mines, the appraisal conducted additional research and analysis to develop a discount rate using the Arizona Discount Rate Dataset Average for copper, molybdenum, and silver, while also addressing the after-tax premium, geologic certainty premium, project stage premium, and project specific premium to derive a discount rate of 14.25%.

The appraisal also utilized a Weighted Average Cost of Capital (WACC) approach that was derived by using five base metal mining companies for the past 5 years. All 5 of the companies have significant involvement in copper projects but also allocate financial resources to other commodities such as precious metals. The appraisal developed the WACC for copper, molybdenum, and silver and also accounted for after-tax premium, capital constraints, project risk, and capital appreciation to conclude a discount rate of 15.25%.

The state of Utah publishes an annual discount rate study. It derives discount rates from publicly traded equities of mining companies in coal, precious metals, non-precious metal, non-metals, and other types of mining. Using the equity yield rate for non-precious metals, adjusted for inflation, project-specific risks, and capital constraints, a discount rate of at least 15% was derived.

The appraisal took into consideration the following information to conclude a discount rate for the subject MWA parcel:

- Dr. Wahl's report – 10% -15%
- Metal mining project discount rate studies by Lawrence Smith – 14%
- Arizona DOR transaction surveys – 14.25%
- Arizona Valuation guidelines – Discount Rate dataset for CU, Mo, AG – 14%
- Weighted Average Cost of Capital (WACC) – 15.25%
- Utah State Tax Commission non-precious metal equity rate – 15%

The appraisal states the weighted average cost of capital indication is believed to be less reliable and was not given any weight. The Arizona DOR survey is considered a strong indicator because it is based on actual transactions involving copper, molybdenum, and silver properties. After taking into consideration the body of work analyzed, the appraisal concluded a discount rate of **14.25%** for the subject MWA parcel.

### **Project Delay**

The appraisal indicated that it is likely that production would not occur until year 14 from the effective date of value. The first 13 years will provide for non-production payments as identified by the Dassault Mine Model.





**Royalty Income Capitalization Approach Determination/Conclusion – Adequate**

The royalty income capitalization approach provides for 13 years of non-production payments, 31 years of production payments for Copper, Molybdenum, and Silver using a discount rate of 14.25%. The commodity production and recoverable metals was based on Dassault Systemes Mine Model.

The following table compares the DCF results between the appraisal and the FS review:

<b>Summary of MWA Royalty</b>		
<b>Present Value 14.25%</b>	<b>Appraisal Results</b>	<b>FS Review Calc</b>
Non-Production	\$ 3,693,465	\$ 3,693,465
Copper Royalty	\$ 17,584,784	\$ 17,615,854
Molybdenum Royalty	\$ 647,547	\$ 647,270
Silver Royalty	\$ 297,191	\$ 297,864
Total Royalty	\$ 22,222,986	\$ 22,254,453
Deduct Feasibility Milestones (-\$500K per year, Yrs 14-18)	\$ (301,939)	\$ (301,939)
<b>Grand Total \$</b>	<b>\$ 21,921,047</b>	<b>\$ 21,952,514</b>
<i>FS - Appraisal Difference</i>	<i>\$ 31,467</i>	<i>0.1435%</i>

A difference of \$31,467 (which falls within the range of tolerance) is likely attributed to the difference in the number of decimal places used in the calculations.

Based on the Royalty income approach, the appraisal concluded an opinion of value for the Subject MWA parcel of \$22,000,000 (Rounded)

**Final Reconciliation – Adequate**

The appraisal has completed a sales comparison and income capitalization analysis to provide a final opinion of value for the subject MWA parcel. The appraisal placed more weight on the income approach to value and states the sales comparison approach is used as a test of reasonableness regarding the magnitude and conclusion of the income approach.

**VALUE INDICATIONS**

Cost Approach: N/A

Sales Comparison Approach: \$21,000,000

Income Approach: \$22,000,000

**Conclusion: \$22,000,000**



### **Transaction Scale Analysis**

As a final step in the valuation of each larger parcel, in accordance with the SOW requirement, the appraisal analyzed the parcels comprising each side of the exchange as a whole in the context of the market and report if there is an additional increment of value or discount attributable to portfolio enhancement or the bulk nature of the transaction. Any value enhancement or diminution under this provision shall be recognized in the concluded values for each of the larger parcels as noted in the SOW.

As stated in the report, the Subject MWA parcel is one of two federal parcels included in the Southeast Arizona Land Exchange and Conservation Act. Although they are contiguous parcels, they are two different properties with different highest and best uses subject to two separate and distinct market forces and dynamics. The appraisal concluded that the properties would not compete against each other due to the different highest and best uses, and there would be no enhancement or diminution of value to either parcel. Further, the appraisal concluded there is no market data that would suggest an increment in value, or a discount attributable to the bulk nature of the legislated transaction.



## MWA CASH FLOWS – Non-Production Payments

Non-Production Payment Calculation		14.25%		FS Calc		Appraisal Calc		FS Calc		Appraisal Calc	
Period/Year	Option/Bonus \$	Advanced \$	Milestone \$	Non-Prod TTL Pmts \$	Non-Prod TTL Pmts APR	PV Factor @14.25%	PV of Cash Flow \$	PV CF \$ Appraisal			
1.0	\$ 1,000,000	\$ 200,000	\$ -	\$ 1,200,000	\$ 1,200,000	0.87527	\$ 1,050,328	\$ 1,050,328			
2.0	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.76610	\$ 153,221	\$ 153,221			
3.0	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.67055	\$ 134,110	\$ 134,110			
4.0	\$ -	\$ 200,000	\$ 500,000	\$ 700,000	\$ 700,000	0.58691	\$ 410,840	\$ 410,840			
5.0	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.51371	\$ 102,742	\$ 102,742			
6.0	\$ -	\$ 200,000	\$ 1,000,000	\$ 1,200,000	\$ 1,200,000	0.44964	\$ 539,565	\$ 539,565			
7.0	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.39356	\$ 78,711	\$ 78,711			
8.0	\$ -	\$ 200,000	\$ 2,500,000	\$ 2,700,000	\$ 2,700,000	0.34447	\$ 930,067	\$ 930,067			
9.0	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.30150	\$ 75,376	\$ 75,376			
10.0	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.26390	\$ 65,975	\$ 65,975			
11.0	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.23098	\$ 57,746	\$ 57,746			
12.0	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.20217	\$ 50,544	\$ 50,544			
13.0	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.17696	\$ 44,239	\$ 44,239			
14.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.15489	\$ -	\$ -			
15.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.13557	\$ -	\$ -			
16.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.11866	\$ -	\$ -			
17.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.10386	\$ -	\$ -			
18.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.09091	\$ -	\$ -			
19.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.07957	\$ -	\$ -			
20.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.06964	\$ -	\$ -			
21.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.06096	\$ -	\$ -			
22.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.05335	\$ -	\$ -			
23.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.04670	\$ -	\$ -			
24.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.04087	\$ -	\$ -			
25.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.03578	\$ -	\$ -			
26.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.03131	\$ -	\$ -			
27.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.02741	\$ -	\$ -			
28.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.02399	\$ -	\$ -			
29.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.02100	\$ -	\$ -			
30.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.01838	\$ -	\$ -			
31.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.01609	\$ -	\$ -			
32.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.01408	\$ -	\$ -			
33.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.01232	\$ -	\$ -			
34.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.01079	\$ -	\$ -			
35.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00944	\$ -	\$ -			
36.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00826	\$ -	\$ -			
37.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00723	\$ -	\$ -			
38.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00633	\$ -	\$ -			
39.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00554	\$ -	\$ -			
40.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00485	\$ -	\$ -			
41.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00425	\$ -	\$ -			
42.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00372	\$ -	\$ -			
43.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00325	\$ -	\$ -			
44.0	\$ -	\$ -	\$ -	\$ -	\$ -	0.00285	\$ -	\$ -			
<b>TOTAL</b>	<b>\$ 1,000,000</b>	<b>\$ 2,850,000</b>	<b>\$ 4,000,000</b>	<b>\$ 7,850,000</b>	<b>\$ 7,850,000</b>		<b>\$ 3,693,465</b>	<b>\$ 3,693,465</b>			

Summary:

Total PMTS \$7,850,000  
PV @ 14.25%  
FS calc \$3,693,465  
Appraisal calc \$3,693,465

Diff \$0



## MWA CASH FLOWS – COPPER

Copper Production			14.25%			1,000,000.00						
		Short Tons (2K)										
Period/Year	Prod (Mlbs)		Recovery (Mlbs)	Recovery rate calc	Royalty \$/lb	Royalty \$ FS calc	Appraisal \$calc	PV Factor @14.25%	PV of Cash Flow \$ FS calc	Appraisal \$calc	FS - Apprsl Diff	
1.0	0.00		0.00		\$0.000	\$ -	-	0.87527	\$ -	\$ -	\$ -	
2.0	0.00		0.00		\$0.000	\$ -	-	0.76610	\$ -	\$ -	\$ -	
3.0	0.00		0.00		\$0.000	\$ -	-	0.67055	\$ -	\$ -	\$ -	
4.0	0.00		0.00		\$0.000	\$ -	-	0.58691	\$ -	\$ -	\$ -	
5.0	0.00		0.00		\$0.000	\$ -	-	0.51371	\$ -	\$ -	\$ -	
6.0	0.00		0.00		\$0.000	\$ -	-	0.44964	\$ -	\$ -	\$ -	
7.0	0.00		0.00		\$0.000	\$ -	-	0.39356	\$ -	\$ -	\$ -	
8.0	0.00		0.00		\$0.000	\$ -	-	0.34447	\$ -	\$ -	\$ -	
9.0	0.00		0.00		\$0.000	\$ -	-	0.30150	\$ -	\$ -	\$ -	
10.0	0.00		0.00		\$0.000	\$ -	-	0.26390	\$ -	\$ -	\$ -	
11.0	0.00		0.00		\$0.000	\$ -	-	0.23098	\$ -	\$ -	\$ -	
12.0	0.00		0.00		\$0.000	\$ -	-	0.20217	\$ -	\$ -	\$ -	
13.0	0.00		0.00		\$0.000	\$ -	-	0.17696	\$ -	\$ -	\$ -	
14.0	8.03	4,015.00	7.22	89.913%	\$0.074	\$ 534,280	\$ 533,556	0.15489	\$ 82,753	\$ 82,641	\$ 112	
15.0	80.11	40,055.00	72.09	89.989%	\$0.074	\$ 5,334,660	\$ 5,325,562	0.13557	\$ 723,209	\$ 721,975	\$ 1,233	
16.0	159.95	79,975.00	143.95	89.997%	\$0.074	\$ 10,652,300	\$ 10,633,552	0.11866	\$ 1,263,991	\$ 1,261,767	\$ 2,225	
17.0	242.56	121,280.00	218.30	89.998%	\$0.074	\$ 16,154,200	\$ 16,125,587	0.10386	\$ 1,677,760	\$ 1,674,789	\$ 2,972	
18.0	254.86	127,430.00	229.40	90.010%	\$0.074	\$ 16,975,600	\$ 16,945,843	0.09091	\$ 1,543,169	\$ 1,540,464	\$ 2,705	
19.0	136.18	68,090.00	122.56	89.999%	\$0.074	\$ 9,069,440	\$ 9,053,214	0.07957	\$ 721,627	\$ 720,336	\$ 1,291	
20.0	141.30	70,650.00	127.17	90.000%	\$0.074	\$ 9,410,580	\$ 9,394,211	0.06964	\$ 655,379	\$ 654,239	\$ 1,140	
21.0	329.47	164,735.00	296.52	89.999%	\$0.074	\$ 21,942,480	\$ 21,903,549	0.06096	\$ 1,337,536	\$ 1,335,162	\$ 2,373	
22.0	668.34	334,170.00	601.50	89.999%	\$0.074	\$ 44,511,000	\$ 44,432,377	0.05335	\$ 2,374,820	\$ 2,370,626	\$ 4,195	
23.0	926.33	464,165.00	835.50	90.000%	\$0.074	\$ 61,827,000	\$ 61,717,271	0.04670	\$ 2,887,257	\$ 2,882,132	\$ 5,124	
24.0	805.57	402,785.00	725.01	90.000%	\$0.074	\$ 53,650,740	\$ 53,555,628	0.04087	\$ 2,192,940	\$ 2,189,052	\$ 3,888	
25.0	383.53	191,765.00	345.17	89.998%	\$0.074	\$ 25,542,580	\$ 25,497,626	0.03578	\$ 913,818	\$ 912,209	\$ 1,608	
26.0	78.14	39,070.00	70.32	89.992%	\$0.074	\$ 5,203,680	\$ 5,194,704	0.03131	\$ 162,948	\$ 162,667	\$ 281	
27.0	1.46	730.00	1.32	90.411%	\$0.074	\$ 97,680	\$ 97,341	0.02741	\$ 2,677	\$ 2,668	\$ 9	
28.0	0.92	460.00	0.83	90.217%	\$0.074	\$ 61,420	\$ 61,268	0.02399	\$ 1,473	\$ 1,470	\$ 4	
29.0	113.51	56,755.00	102.16	90.001%	\$0.074	\$ 7,559,840	\$ 7,546,087	0.02100	\$ 158,739	\$ 158,450	\$ 289	
30.0	195.39	97,695.00	175.85	89.999%	\$0.074	\$ 13,012,900	\$ 12,990,026	0.01838	\$ 239,160	\$ 238,739	\$ 420	
31.0	203.43	101,715.00	183.09	90.001%	\$0.074	\$ 13,548,660	\$ 13,524,575	0.01609	\$ 217,948	\$ 217,561	\$ 387	
32.0	178.02	89,010.00	160.22	90.001%	\$0.074	\$ 11,856,280	\$ 11,835,342	0.01408	\$ 166,936	\$ 166,641	\$ 295	
33.0	157.74	78,870.00	141.96	89.996%	\$0.074	\$ 10,505,040	\$ 10,486,518	0.01232	\$ 129,462	\$ 129,234	\$ 228	
34.0	113.33	56,665.00	102.00	90.003%	\$0.074	\$ 7,548,000	\$ 7,534,584	0.01079	\$ 81,418	\$ 81,273	\$ 145	
35.0	79.73	39,865.00	71.76	90.004%	\$0.074	\$ 5,310,240	\$ 5,300,583	0.00944	\$ 50,136	\$ 50,044	\$ 91	
36.0	28.27	14,135.00	25.44	89.989%	\$0.074	\$ 1,882,560	\$ 1,879,247	0.00826	\$ 15,557	\$ 15,530	\$ 27	
37.0	2.34	1,170.00	2.11	90.171%	\$0.074	\$ 156,140	\$ 155,810	0.00723	\$ 1,129	\$ 1,127	\$ 2	
38.0	10.11	5,055.00	9.10	90.010%	\$0.074	\$ 673,400	\$ 672,420	0.00633	\$ 4,263	\$ 4,257	\$ 6	
39.0	11.98	5,990.00	10.78	89.983%	\$0.074	\$ 797,720	\$ 796,580	0.00554	\$ 4,420	\$ 4,414	\$ 6	
40.0	10.36	5,180.00	9.33	90.058%	\$0.074	\$ 690,420	\$ 688,835	0.00485	\$ 3,349	\$ 3,341	\$ 8	
41.0	4.73	2,365.00	4.26	90.063%	\$0.074	\$ 315,240	\$ 314,330	0.00425	\$ 1,338	\$ 1,334	\$ 4	
42.0	1.70	850.00	1.53	90.000%	\$0.074	\$ 113,220	\$ 113,024	0.00372	\$ 421	\$ 420	\$ 1	
43.0	0.93	465.00	0.83	89.247%	\$0.074	\$ 61,420	\$ 61,602	0.00325	\$ 200	\$ 200	\$ (1)	
44.0	0.12	60.00	0.11	91.667%	\$0.074	\$ 8,140	\$ 8,022	0.00285	\$ 23	\$ 23	\$ 0	
TOTAL	5,330.44	2,665,220.00	4,797.39	90.000%	\$0.074	\$ 355,006,860	\$ 354,378,874		\$ 17,615,854	\$ 17,584,784	\$ 31,070	

Summary:

Total PMTS \$355,006,860

PV @ 14.25% FS calc \$17,615,854

Appraisal calc \$17,584,784

Diff \$31,070





## MWA CASH FLOWS – MOLYBDENUM

Molybdenum Production		14.25%			1,000,000.00						
Period/Year	Prod (Mlbs)	Recovery (Mlbs)	Recovery rate calc	Royalty \$/lb	Royalty \$ FS calc	Appraisal Scal	PV Factor @14.25%	PV of Cash Flow \$ FS calc	Appraisal Scal	FS - Apprsl Diff	
1.0	0.00	0.00		\$0.000	\$ -	\$ -	0.87527	\$ -	\$ -	\$ -	-
2.0	0.00	0.00		\$0.000	\$ -	\$ -	0.76610	\$ -	\$ -	\$ -	-
3.0	0.00	0.00		\$0.000	\$ -	\$ -	0.67055	\$ -	\$ -	\$ -	-
4.0	0.00	0.00		\$0.000	\$ -	\$ -	0.58691	\$ -	\$ -	\$ -	-
5.0	0.00	0.00		\$0.000	\$ -	\$ -	0.51371	\$ -	\$ -	\$ -	-
6.0	0.00	0.00		\$0.000	\$ -	\$ -	0.44964	\$ -	\$ -	\$ -	-
7.0	0.00	0.00		\$0.000	\$ -	\$ -	0.39356	\$ -	\$ -	\$ -	-
8.0	0.00	0.00		\$0.000	\$ -	\$ -	0.34447	\$ -	\$ -	\$ -	-
9.0	0.00	0.00		\$0.000	\$ -	\$ -	0.30150	\$ -	\$ -	\$ -	-
10.0	0.00	0.00		\$0.000	\$ -	\$ -	0.26390	\$ -	\$ -	\$ -	-
11.0	0.00	0.00		\$0.000	\$ -	\$ -	0.23098	\$ -	\$ -	\$ -	-
12.0	0.00	0.00		\$0.000	\$ -	\$ -	0.20217	\$ -	\$ -	\$ -	-
13.0	0.00	0.00		\$0.000	\$ -	\$ -	0.17696	\$ -	\$ -	\$ -	-
14.0	0.20	0.15	75.000%	\$0.229	\$ -	\$ -	0.15489	\$ -	\$ -	\$ -	-
15.0	1.71	1.28	74.854%	\$0.229	\$ 293,120	\$ 293,542	0.13557	\$ 39,738	\$ 39,795	\$ (57)	(57)
16.0	2.46	1.84	74.797%	\$0.229	\$ 421,360	\$ 422,187	0.11866	\$ 49,998	\$ 50,096	\$ (98)	(98)
17.0	2.23	1.68	75.336%	\$0.229	\$ 384,720	\$ 384,075	0.10386	\$ 39,957	\$ 39,890	\$ 67	67
18.0	1.73	1.29	74.566%	\$0.229	\$ 295,410	\$ 296,511	0.09091	\$ 26,854	\$ 26,954	\$ (100)	(100)
19.0	1.18	0.89	75.424%	\$0.229	\$ 203,810	\$ 203,646	0.07957	\$ 16,217	\$ 16,203	\$ 13	13
20.0	3.59	2.70	75.209%	\$0.229	\$ 618,300	\$ 617,680	0.06964	\$ 43,060	\$ 43,017	\$ 43	43
21.0	8.45	6.34	75.030%	\$0.229	\$ 1,451,860	\$ 1,452,318	0.06096	\$ 88,500	\$ 88,528	\$ (28)	(28)
22.0	11.73	8.80	75.021%	\$0.229	\$ 2,015,200	\$ 2,016,282	0.05335	\$ 107,518	\$ 107,576	\$ (58)	(58)
23.0	11.43	8.58	75.066%	\$0.229	\$ 1,964,820	\$ 1,965,228	0.04670	\$ 91,755	\$ 91,774	\$ (19)	(19)
24.0	7.69	5.77	75.033%	\$0.229	\$ 1,321,330	\$ 1,321,759	0.04087	\$ 54,009	\$ 54,026	\$ (18)	(18)
25.0	3.37	2.53	75.074%	\$0.229	\$ 579,370	\$ 579,059	0.03578	\$ 20,728	\$ 20,717	\$ 11	11
26.0	0.72	0.54	75.000%	\$0.229	\$ 123,660	\$ 124,447	0.03131	\$ 3,872	\$ 3,897	\$ (25)	(25)
27.0	0.02	0.01	50.000%	\$0.229	\$ 2,290	\$ 2,741	0.02741	\$ 63	\$ 75	\$ (12)	(12)
28.0	0.03	0.03	100.000%	\$0.229	\$ 6,870	\$ 5,786	0.02399	\$ 165	\$ 139	\$ 26	26
29.0	3.48	2.61	75.000%	\$0.229	\$ 597,690	\$ 597,371	0.02100	\$ 12,550	\$ 12,543	\$ 7	7
30.0	5.50	4.12	74.909%	\$0.229	\$ 943,480	\$ 944,969	0.01838	\$ 17,340	\$ 17,367	\$ (27)	(27)
31.0	4.84	3.63	75.000%	\$0.229	\$ 831,270	\$ 831,125	0.01609	\$ 13,372	\$ 13,370	\$ 2	2
32.0	3.54	2.65	74.859%	\$0.229	\$ 606,850	\$ 608,012	0.01408	\$ 8,544	\$ 8,561	\$ (16)	(16)
33.0	2.92	2.19	75.000%	\$0.229	\$ 501,510	\$ 501,343	0.01232	\$ 6,181	\$ 6,178	\$ 3	3
34.0	1.97	1.48	75.127%	\$0.229	\$ 338,920	\$ 338,630	0.01079	\$ 3,656	\$ 3,653	\$ 3	3
35.0	1.11	0.83	74.775%	\$0.229	\$ 190,070	\$ 190,229	0.00944	\$ 1,795	\$ 1,796	\$ (2)	(2)
36.0	0.31	0.23	74.194%	\$0.229	\$ 52,670	\$ 53,747	0.00826	\$ 435	\$ 444	\$ (9)	(9)
37.0	0.05	0.04	80.000%	\$0.229	\$ 9,160	\$ 8,154	0.00723	\$ 66	\$ 59	\$ 7	7
38.0	0.24	0.18	75.000%	\$0.229	\$ 41,220	\$ 40,862	0.00633	\$ 261	\$ 259	\$ 2	2
39.0	0.29	0.23	77.586%	\$0.229	\$ 51,525	\$ 50,202	0.00554	\$ 286	\$ 278	\$ 7	7
40.0	0.27	0.20	74.074%	\$0.229	\$ 45,800	\$ 45,964	0.00485	\$ 222	\$ 223	\$ (1)	(1)
41.0	0.14	0.10	71.429%	\$0.229	\$ 22,900	\$ 23,728	0.00425	\$ 97	\$ 101	\$ (4)	(4)
42.0	0.03	0.03	100.000%	\$0.229	\$ 6,870	\$ 5,919	0.00372	\$ 26	\$ 22	\$ 4	4
43.0	0.01	0.01	100.000%	\$0.229	\$ 2,290	\$ 1,545	0.00325	\$ 7	\$ 5	\$ 2	2
44.0	0.00	0.00	0.000%	\$0.229	\$ -	\$ 146	0.00285	\$ -	\$ 0	\$ (0)	(0)
TOTAL	81.24	60.96		\$0.229	\$ 13,924,345	\$ 13,927,207		\$ 647,270	\$ 647,547	\$ (276)	(276)

Summary:

Total PMTS \$13,924,345.00

PV @ 14.25%

FS calc \$647,270

Appraisal calc \$ 647,547

Diff -5276.13



## MWA CASH FLOWS – SILVER

Silver Calc		14.25%			1,000,000.00						
Period/Year	Prod (Moz)	Recovery (Moz)	Recovery rate calc	Royalty \$/lb	Royalty \$ FS calc	Appraisal Calc	PV Factor @14.25%	PV of Cash Flow \$ FS calc	Appraisal Calc	FS - Apprsl Diff	
1.0	0.00	0.00		\$0.000	\$ -	\$ -	0.87527	\$ -	\$ -	\$ -	-
2.0	0.00	0.00		\$0.000	\$ -	\$ -	0.76610	\$ -	\$ -	\$ -	-
3.0	0.00	0.00		\$0.000	\$ -	\$ -	0.67055	\$ -	\$ -	\$ -	-
4.0	0.00	0.00		\$0.000	\$ -	\$ -	0.58691	\$ -	\$ -	\$ -	-
5.0	0.00	0.00		\$0.000	\$ -	\$ -	0.51371	\$ -	\$ -	\$ -	-
6.0	0.00	0.00		\$0.000	\$ -	\$ -	0.44964	\$ -	\$ -	\$ -	-
7.0	0.00	0.00		\$0.000	\$ -	\$ -	0.39356	\$ -	\$ -	\$ -	-
8.0	0.00	0.00		\$0.000	\$ -	\$ -	0.34447	\$ -	\$ -	\$ -	-
9.0	0.00	0.00		\$0.000	\$ -	\$ -	0.30150	\$ -	\$ -	\$ -	-
10.0	0.00	0.00		\$0.000	\$ -	\$ -	0.26390	\$ -	\$ -	\$ -	-
11.0	0.00	0.00		\$0.000	\$ -	\$ -	0.23098	\$ -	\$ -	\$ -	-
12.0	0.00	0.00		\$0.000	\$ -	\$ -	0.20217	\$ -	\$ -	\$ -	-
13.0	0.00	0.00		\$0.000	\$ -	\$ -	0.17696	\$ -	\$ -	\$ -	-
14.0	0.02	0.02	100.000%	\$0.520	\$ 10,400	\$ 8,256	0.15489	\$ 1,611	\$ 1,279	\$ 332	
15.0	0.20	0.14	70.000%	\$0.520	\$ 72,800	\$ 73,218	0.13557	\$ 9,869	\$ 9,926	\$ (57)	
16.0	0.35	0.25	38.462%	\$0.520	\$ 130,000	\$ 129,175	0.11866	\$ 15,426	\$ 15,328	\$ 98	
17.0	0.46	0.33	44.000%	\$0.520	\$ 171,600	\$ 169,140	0.10386	\$ 17,822	\$ 17,567	\$ 255	
18.0	0.49	0.34	29.825%	\$0.520	\$ 176,800	\$ 178,387	0.09091	\$ 16,072	\$ 16,216	\$ (144)	
19.0	0.65	0.46	23.232%	\$0.520	\$ 239,200	\$ 237,236	0.07957	\$ 19,032	\$ 18,876	\$ 156	
20.0	0.75	0.52	23.529%	\$0.520	\$ 270,400	\$ 272,303	0.06964	\$ 18,831	\$ 18,964	\$ (133)	
21.0	1.14	0.80	33.058%	\$0.520	\$ 416,000	\$ 416,469	0.06096	\$ 25,358	\$ 25,386	\$ (29)	
22.0	1.98	1.38	64.486%	\$0.520	\$ 717,600	\$ 718,967	0.05335	\$ 38,287	\$ 38,359	\$ (73)	
23.0	2.21	1.55	131.356%	\$0.520	\$ 806,000	\$ 805,327	0.04670	\$ 37,639	\$ 37,608	\$ 31	
24.0	2.42	1.70	3400.000%	\$0.520	\$ 884,000	\$ 882,355	0.04087	\$ 36,133	\$ 36,066	\$ 67	
25.0	2.14	1.50	70.093%	\$0.520	\$ 780,000	\$ 778,549	0.03578	\$ 27,905	\$ 27,854	\$ 52	
26.0	1.18	0.83	70.339%	\$0.520	\$ 431,600	\$ 429,005	0.03131	\$ 13,515	\$ 13,434	\$ 81	
27.0	0.05	0.04	80.000%	\$0.520	\$ 20,800	\$ 19,826	0.02741	\$ 570	\$ 543	\$ 27	
28.0	0.00	0.00	#Div/0!	\$0.520	\$ -	\$ 831	0.02399	\$ -	\$ 20	\$ (20)	
29.0	0.34	0.24	70.588%	\$0.520	\$ 124,800	\$ 125,017	0.02100	\$ 2,621	\$ 2,625	\$ (5)	
30.0	0.63	0.44	69.841%	\$0.520	\$ 228,800	\$ 228,708	0.01838	\$ 4,205	\$ 4,203	\$ 2	
31.0	0.64	0.45	70.313%	\$0.520	\$ 234,000	\$ 233,653	0.01609	\$ 3,764	\$ 3,759	\$ 6	
32.0	0.54	0.38	70.370%	\$0.520	\$ 197,600	\$ 195,001	0.01408	\$ 2,782	\$ 2,746	\$ 37	
33.0	0.50	0.35	70.000%	\$0.520	\$ 182,000	\$ 181,313	0.01232	\$ 2,243	\$ 2,234	\$ 8	
34.0	0.43	0.30	69.767%	\$0.520	\$ 156,000	\$ 157,804	0.01079	\$ 1,683	\$ 1,702	\$ (19)	
35.0	0.43	0.30	69.767%	\$0.520	\$ 156,000	\$ 154,774	0.00944	\$ 1,473	\$ 1,461	\$ 12	
36.0	0.25	0.17	68.000%	\$0.520	\$ 88,400	\$ 89,530	0.00826	\$ 731	\$ 740	\$ (9)	
37.0	0.01	0.00	0.000%	\$0.520	\$ -	\$ 2,435	0.00723	\$ -	\$ 18	\$ (18)	
38.0	0.03	0.02	66.667%	\$0.520	\$ 10,400	\$ 9,320	0.00633	\$ 66	\$ 59	\$ 7	
39.0	0.04	0.03	75.000%	\$0.520	\$ 15,600	\$ 13,009	0.00554	\$ 86	\$ 72	\$ 14	
40.0	0.04	0.03	75.000%	\$0.520	\$ 15,600	\$ 15,501	0.00485	\$ 76	\$ 75	\$ 0	
41.0	0.03	0.02	66.667%	\$0.520	\$ 10,400	\$ 10,428	0.00425	\$ 44	\$ 44	\$ (0)	
42.0	0.01	0.01	100.000%	\$0.520	\$ 5,200	\$ 4,430	0.00372	\$ 19	\$ 16	\$ 3	
43.0	0.01	0.00	0.000%	\$0.520	\$ -	\$ 2,587	0.00325	\$ -	\$ 8	\$ (8)	
44.0	0.00	0.00	0.000%	\$0.520	\$ -	\$ 423	0.00285	\$ -	\$ 1	\$ (1)	
TOTAL		17.97		\$0.520	\$ 6,552,000	\$ 6,542,977		\$ 297,864	\$ 297,191	\$ 673	

Summary:

Total PMTS	\$ 6,552,000
PV @ 14.25%	
FS calc	\$ 297,864
Appraisal calc	\$ 297,191

Diff	\$ 673
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## MWA CASH FLOWS – TOTAL CASH FLOWS

MWA Total Cash Flows @ 14.25%		14.25%													
Period/Year	Copper \$Appraisal	Copper \$ FS calc	Molydenum \$Appraisal	Molydenum \$ FS calc	Silver \$Appraisal	Silver \$ FS calc	Non-Production Cash Flows	Deduct Feasibility Milestone (-500k/yr)	TOTAL PMTS \$ Appraisal	Total PMTS \$ FS Calc	PV Factor @14.25%	PV Cash Flow \$ FS Calc	PV Cash Flow \$ Appraisal	FS - Appraisal Difference	
1.0							\$ 1,200,000	\$ -	\$ 1,200,000	\$ 1,200,000	0.875274	\$ 1,050,328	\$ 1,050,328	\$ -	
2.0							\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.766104	\$ 153,221	\$ 153,221	\$ -	
3.0							\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.670550	\$ 134,110	\$ 134,110	\$ -	
4.0							\$ 700,000	\$ -	\$ 700,000	\$ 700,000	0.586915	\$ 410,840	\$ 410,840	\$ -	
5.0							\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.513711	\$ 102,742	\$ 102,742	\$ -	
6.0							\$ 1,200,000	\$ -	\$ 1,200,000	\$ 1,200,000	0.449638	\$ 539,565	\$ 539,565	\$ -	
7.0							\$ 200,000	\$ -	\$ 200,000	\$ 200,000	0.393556	\$ 78,711	\$ 78,711	\$ -	
8.0							\$ 2,700,000	\$ -	\$ 2,700,000	\$ 2,700,000	0.344469	\$ 930,067	\$ 930,067	\$ -	
9.0							\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.301505	\$ 75,376	\$ 75,376	\$ -	
10.0							\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.263899	\$ 65,975	\$ 65,975	\$ -	
11.0							\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.230984	\$ 57,746	\$ 57,746	\$ -	
12.0							\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.202174	\$ 50,544	\$ 50,544	\$ -	
13.0							\$ 250,000	\$ -	\$ 250,000	\$ 250,000	0.176958	\$ 44,239	\$ 44,239	\$ -	
14.0	\$ 533,556.00	\$ 534,280.00	\$ -	\$ -	\$ 8,256	\$ 10,400	\$ -	\$ (500,000)	\$ 41,812	\$ 44,680	0.154886	\$ 6,920	\$ 6,476	\$ 444	
15.0	\$ 5,325,562.00	\$ 5,334,660.00	\$ 293,542.00	\$ 293,120	\$ 73,218	\$ 72,800	\$ -	\$ (500,000)	\$ 5,192,322	\$ 5,200,580	0.135568	\$ 705,032	\$ 703,912	\$ 1,120	
16.0	\$ 10,633,552.00	\$ 10,652,300.00	\$ 422,187.00	\$ 421,360	\$ 129,175	\$ 130,000	\$ -	\$ (500,000)	\$ 10,684,914	\$ 10,703,660	0.118659	\$ 1,270,086	\$ 1,267,861	\$ 2,224	
17.0	\$ 16,125,587.00	\$ 16,154,200.00	\$ 384,075.00	\$ 384,720	\$ 169,140	\$ 171,600	\$ -	\$ (500,000)	\$ 16,178,802	\$ 16,210,520	0.103859	\$ 1,683,610	\$ 1,680,315	\$ 3,294	
18.0	\$ 16,945,843.00	\$ 16,975,600.00	\$ 296,511.00	\$ 295,410	\$ 178,387	\$ 176,800	\$ -	\$ (500,000)	\$ 16,920,741	\$ 16,947,810	0.090905	\$ 1,540,642	\$ 1,538,182	\$ 2,461	
19.0	\$ 9,053,214.00	\$ 9,069,440.00	\$ 203,646.00	\$ 203,810	\$ 237,236	\$ 239,200	\$ -	\$ -	\$ 9,494,096	\$ 9,512,450	0.079567	\$ 756,875	\$ 755,415	\$ 1,460	
20.0	\$ 9,394,211.00	\$ 9,410,580.00	\$ 617,680.00	\$ 618,300	\$ 272,303	\$ 270,400	\$ -	\$ -	\$ 10,284,194	\$ 10,299,280	0.069643	\$ 717,270	\$ 716,219	\$ 1,051	
21.0	\$ 21,903,549.00	\$ 21,942,480.00	\$ 1,452,518.00	\$ 1,451,860	\$ 416,469	\$ 416,000	\$ -	\$ -	\$ 23,772,336	\$ 23,810,340	0.060956	\$ 1,451,394	\$ 1,449,077	\$ 2,317	
22.0	\$ 44,432,377.00	\$ 44,511,000.00	\$ 2,016,282.00	\$ 2,015,200	\$ 718,967	\$ 717,600	\$ -	\$ -	\$ 47,167,626	\$ 47,243,800	0.053354	\$ 2,520,625	\$ 2,516,561	\$ 4,064	
23.0	\$ 61,717,271.00	\$ 61,827,000.00	\$ 1,965,228.00	\$ 1,964,820	\$ 805,327	\$ 806,000	\$ -	\$ -	\$ 64,487,826	\$ 64,597,820	0.046699	\$ 3,016,651	\$ 3,011,514	\$ 5,137	
24.0	\$ 53,555,628.00	\$ 53,650,740.00	\$ 1,321,759.00	\$ 1,321,330	\$ 882,355	\$ 884,000	\$ -	\$ -	\$ 55,759,742	\$ 55,856,070	0.040874	\$ 2,283,081	\$ 2,279,144	\$ 3,937	
25.0	\$ 25,497,626.00	\$ 25,542,580.00	\$ 579,059.00	\$ 579,370	\$ 778,549	\$ 780,000	\$ -	\$ -	\$ 26,855,234	\$ 26,901,950	0.035776	\$ 962,451	\$ 960,779	\$ 1,671	
26.0	\$ 5,194,704.00	\$ 5,203,680.00	\$ 124,447.00	\$ 123,660	\$ 429,005	\$ 431,600	\$ -	\$ -	\$ 5,748,156	\$ 5,758,940	0.031314	\$ 180,335	\$ 179,998	\$ 338	
27.0	\$ 97,341.00	\$ 97,680.00	\$ 2,741.00	\$ 2,290	\$ 19,826	\$ 20,800	\$ -	\$ -	\$ 119,908	\$ 120,770	0.027408	\$ 3,310	\$ 3,286	\$ 24	
28.0	\$ 61,268.00	\$ 61,420.00	\$ 5,786.00	\$ 6,870	\$ 831	\$ -	\$ -	\$ -	\$ 67,885	\$ 68,290	0.023990	\$ 1,638	\$ 1,629	\$ 10	
29.0	\$ 7,546,087.00	\$ 7,559,840.00	\$ 597,371.00	\$ 597,690	\$ 125,017	\$ 124,800	\$ -	\$ -	\$ 8,268,475	\$ 8,282,330	0.020988	\$ 173,909	\$ 173,618	\$ 291	
30.0	\$ 12,990,026.00	\$ 13,012,900.00	\$ 944,969.00	\$ 943,480	\$ 228,708	\$ 228,800	\$ -	\$ -	\$ 14,163,703	\$ 14,185,180	0.018379	\$ 260,705	\$ 260,310	\$ 395	
31.0	\$ 13,524,575.00	\$ 13,548,660.00	\$ 831,125.00	\$ 831,270	\$ 233,653	\$ 234,000	\$ -	\$ -	\$ 14,589,353	\$ 14,613,930	0.016086	\$ 235,085	\$ 234,689	\$ 395	
32.0	\$ 11,835,342.00	\$ 11,856,280.00	\$ 608,012.00	\$ 606,850	\$ 195,001	\$ 197,600	\$ -	\$ -	\$ 12,638,355	\$ 12,660,730	0.014080	\$ 178,263	\$ 177,947	\$ 315	
33.0	\$ 10,486,518.00	\$ 10,505,040.00	\$ 501,343.00	\$ 501,510	\$ 181,313	\$ 182,000	\$ -	\$ -	\$ 11,169,174	\$ 11,188,550	0.012324	\$ 137,886	\$ 137,647	\$ 239	
34.0	\$ 7,534,584.00	\$ 7,548,000.00	\$ 338,630.00	\$ 338,920	\$ 157,804	\$ 156,000	\$ -	\$ -	\$ 8,031,018	\$ 8,042,920	0.010787	\$ 86,757	\$ 86,628	\$ 128	
35.0	\$ 5,300,583.00	\$ 5,310,240.00	\$ 190,229.00	\$ 190,070	\$ 154,774	\$ 156,000	\$ -	\$ -	\$ 5,645,586	\$ 5,656,310	0.009441	\$ 53,403	\$ 53,302	\$ 101	
36.0	\$ 1,879,247.00	\$ 1,882,560.00	\$ 53,747.00	\$ 52,670	\$ 89,530	\$ 88,400	\$ -	\$ -	\$ 2,022,524	\$ 2,023,630	0.008264	\$ 16,723	\$ 16,714	\$ 9	
37.0	\$ 155,810.00	\$ 156,140.00	\$ 8,154.00	\$ 9,160	\$ 2,435	\$ -	\$ -	\$ -	\$ 166,399	\$ 165,300	0.007233	\$ 1,196	\$ 1,204	\$ (8)	
38.0	\$ 672,420.00	\$ 673,400.00	\$ 40,862.00	\$ 41,220	\$ 9,320	\$ 10,400	\$ -	\$ -	\$ 722,602	\$ 725,020	0.006331	\$ 4,590	\$ 4,575	\$ 15	
39.0	\$ 796,580.00	\$ 797,720.00	\$ 50,202.00	\$ 51,525	\$ 13,009	\$ 15,600	\$ -	\$ -	\$ 859,791	\$ 864,845	0.005541	\$ 4,792	\$ 4,764	\$ 28	
40.0	\$ 688,835.00	\$ 690,420.00	\$ 45,964.00	\$ 45,800	\$ 15,501	\$ 15,600	\$ -	\$ -	\$ 750,300	\$ 751,820	0.004850	\$ 3,646	\$ 3,639	\$ 7	
41.0	\$ 314,330.00	\$ 315,240.00	\$ 23,728.00	\$ 22,900	\$ 10,428	\$ 10,400	\$ -	\$ -	\$ 348,486	\$ 348,540	0.004245	\$ 1,480	\$ 1,479	\$ 0	
42.0	\$ 113,024.00	\$ 113,220.00	\$ 5,919.00	\$ 6,870	\$ 4,430	\$ 5,200	\$ -	\$ -	\$ 123,373	\$ 125,290	0.003716	\$ 466	\$ 458	\$ 7	
43.0	\$ 61,602.00	\$ 61,420.00	\$ 1,545.00	\$ 2,290	\$ 2,587	\$ -	\$ -	\$ -	\$ 65,734	\$ 63,710	0.003252	\$ 207	\$ 214	\$ (7)	
44.0	\$ 8,022.00	\$ 8,140.00	\$ 146.00	\$ -	\$ 423	\$ -	\$ -	\$ -	\$ 8,591	\$ 8,140	0.002847	\$ 23	\$ 24	\$ (1)	
TOTAL	\$ 354,378,874.00	\$ 355,006,860.00	\$ 13,927,207.00	\$ 13,924,345.00	\$ 6,542,977	\$ 6,552,000	\$ 7,850,000	\$ (2,500,000)	\$ 380,199,058	\$ 380,833,205		\$ 21,952,514	\$ 21,921,047	\$ 31,467	

Summary:

Total PMTS	\$ 380,833,205
PV @ 14.25% FS calc	\$ 21,952,514
Appraisal calc	\$ 21,921,047

Diff \$ 31,467



## MWA CASH FLOWS – SUMMARY AND MILESTONE DEDUCTIONS

<b>Summary of MWA Royalty</b>			
<b>Present Value 14.25%</b>	<b>Appraisal Results</b>	<b>FS Review Calc</b>	
Non-Production	\$ 3,693,465	\$ 3,693,465	
Copper Royalty	\$ 17,584,784	\$ 17,615,854	
Molybdenum Royalty	\$ 647,547	\$ 647,270	
Silver Royalty	\$ 297,191	\$ 297,864	
Total Royalty	\$ 22,222,986	\$ 22,254,453	
Deduct Feasibility Milestones (-\$500K per year, Yrs 14-18)	\$ (301,939)	\$ (301,939)	
<b>Grand Total \$</b>	<b>\$ 21,921,047</b>	<b>\$ 21,952,514</b>	
<i>FS - Appraisal Difference</i>	<i>\$ 31,467</i>	<i>0.1435%</i>	
<b>Feasibility Milestone Deductions PV @ 14.25%</b>			<b>PV - Feasibility Milestones</b>
Yr 14	\$ (500,000)	0.154886326	\$ (77,443)
Yr 15	\$ (500,000)	0.1355679	\$ (67,784)
Yr 16	\$ (500,000)	0.118658993	\$ (59,329)
Yr 17	\$ (500,000)	0.103859075	\$ (51,930)
Yr 18	\$ (500,000)	0.090905099	\$ (45,453)
			\$ (301,939)

