NI 43-101 TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT

Miami, Gila County, Arizona

Centred at 3,695,560 N and 512,000 E (NAD 27)

Submitted to:

Copper Fox Metals Inc.
Suite 650, 340-12th Avenue SW
Calgary, Alberta V2R 1L5

4 May 2020

Submitted by:

Moose Mountain Technical Services
#210 1510-2nd St. North
Cranbrook, B.C. V1C 3L2 Canada
Tel: 250.489.1212
Email:
sueb@moosemmc.com
bobl@moosemmc.com
traceym@moosemmc.com

DATE & SIGNATURE PAGES

Herewith, our report entitled 'Technical Report and Updated Resource Estimate for the Van Dyke Copper Project with an effective date of January 9, 2020.

"Signed and Sealed"

______________________________ ______________________________

Sue C. Bird, M.Sc., P.Eng. **Dated the _4th__May 2020**
Moose Mountain Technical Services
Principal Engineer

"Signed and Sealed"

______________________________ ______________________________

R. A. (Bob) Lane, P.Geo. **Dated the _4th__May 2020**
Moose Mountain Technical Services
Associate Geologist

"Signed and Sealed"

______________________________ ______________________________

Tracey D. Meintjes, P.Eng. **Dated the _4th__May 2020**
Moose Mountain Technical Services
Principal Engineer

CONSENT OF QUALIFIED PERSONS

I, **Sue C. Bird, P.Eng.**, consent to the public filing of the technical report titled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" with the effective date of January 9, 2020 by Copper Fox Metals Inc. I certify that I have read the News Release dated March 25, 2020 filed by Copper Fox Metals Inc. and any other News Releases relating to the report that fairly and accurately represents the information in the Sections of the Technical Report for which I am responsible.

Dated this 4th day of May 2020

"Signed and Sealed"

Sue C. Bird, M.Sc., P.Eng.
B.C. Registration No. 25007

I, **R. A. (Bob) Lane, P.Geo.**, consent to the public filing of the technical report titled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" with the effective date of January 9, 2020 by Copper Fox Metals Inc. I certify that I have read the News Release dated March 25, 2020 filed by Copper Fox Metals Inc. and any other News Releases relating to the report that fairly and accurately represents the information in the Sections of the Technical Report for which I am responsible.

Dated this 4th day of May 2020

"Signed and Sealed"

R. A. (Bob) Lane, P.Geo.
B.C. Registration No. 18993

I, **Tracey D. Meintjes, P.Eng.**, consent to the public filing of the technical report titled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" with the effective date of January 9, 2020 by Copper Fox Metals Inc. I certify that I have read the News Release dated March 25, 2020 filed by Copper Fox Metals Inc. and any other News Releases relating to the report that fairly and accurately represents the information in the Sections of the Technical Report for which I am responsible.

Dated this 4th day of May 2020

"Signed and Sealed"

Tracey D. Meintjes, P.Eng.
B.C. Registration No. 37018

CERTIFICATE & DATE – Sue C. Bird

I, Sue C. Bird, M.Sc., P.Eng., do hereby certify that as a co-author of the report titled: **TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**

1. I am a Principal of Moose Mountain Technical Services, residing at 1752 Armstrong Ave., Victoria, B.C.
2. I graduated with a Geologic Engineering degree (B.Sc.) from the Queen's University in 1989.
3. I graduated with a M.Sc. in Mining from Queen's University in 1993.
4. I am a member of the Association of Professional Engineers and Geoscientists of B.C. (No. 25007).
5. I have worked as an engineering geologist for a total of 18 years since my graduation from university.
6. My past experience with Cu deposits includes acting as qualified person (QP) for the resource estimate on a number of deposits including Rosemont, AZ, Ilovitza, as well as resource and reserve estimation for Taseko's Gibraltar Mine, BC.
7. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional organization, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
8. I am responsible for Section 14 of this report titled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" date 4 May 2020.
9. I am independent of Copper Fox Ltd., as described in Section 1.5 of NI 43-101 and do not own any of their stocks or shares. I work as a geological and mining consultant to the mining industry.
10. To the best of my knowledge, information and belief at the effective date, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this _4th_ day of May 2020

"Signed and Sealed"

Sue C. Bird, M.Sc., P.Eng.
B.C. Registration No. 25007

CERTIFICATE & DATE – R. A. (Bob) Lane

I, R. A. (Bob) Lane, P.Geo., do hereby certify that as a co-author of the report titled: **TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**

1. I am an associate of Moose Mountain Technical Services, and the president of Plateau Minerals Corp., a mineral exploration consulting company with an office located at 3000-18th Street, Vernon, British Columbia.
2. I am a graduate of the University of British Columbia in 1990 with a M.Sc. in Geology.
3. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of British Columbia (Registration #18993) and have been a member in good standing since 1992.
4. I have practiced my profession continuously since 1990 and have more than 25 years of experience investigating a number of mineral deposit types, including copper porphyry and related deposits, primarily in British Columbia.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional organization, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
6. I visited the Van Dyke Copper Project on May 24-25, 2019.
7. I am responsible for Sections 1 - 12 and Sections 15 – 27 of the technical report entitled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" dated 4 May 2020.
8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101. I hold no direct or indirect interest in the Van Dyke Copper Project.
9. I am not aware of any material fact or material change with respect to the subject matter of the report that is not disclosed in the report which, by its omission, would make the report misleading.
12. To the best of my knowledge, information and belief at the effective date, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this _4th_ day of May 2020

"Signed and Sealed"

R. A. (Bob) Lane, P.Geo.
B.C. Registration No. 18993

CERTIFICATE & DATE – Tracey D. Meintjes

I, Tracey D. Meintjes, P.Eng., of Vancouver B.C. do hereby certify that:

1. I am a Metallurgical Engineer with Moose Mountain Technical Services with a business address at 1975 1st Avenue South, Cranbrook, BC, V1C 6Y3.
2. This certificate applies to the technical report entitled "**TECHNICAL REPORT AND UPDATED RESOURCE ESTIMATE FOR THE VAN DYKE COPPER PROJECT**" dated 4 May 2020 (the "Technical Report").
3. I am a graduate of the Technikon Witwatersrand, (NHD Extraction Metallurgy – 1996)
4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (#37018).
5. My relevant experience includes metallurgy and process engineering, and mine planning in North America, South America, South Africa and Europe. My experience includes both operations and metallurgical process development including base metals, precious metals, industrial minerals, coal, uranium, and rare earth metals. My base metals project experience includes both operations and metallurgical process development. I have been working in my profession continuously since 1996.
6. I am a "Qualified Person" for the purposes of National Instrument 43-101 (the "Instrument").
7. I have not visited the Property.
8. I am responsible for Section 13 of the Technical Report.
9. I am independent of Copper Fox Metals Inc. as defined by Section 1.5 of the Instrument.
10. I have been involved with the Van Dyke Project during the preparation of previous Technical Reports.
11. I have read the Instrument and the Technical Report has been prepared in compliance with the Instrument.
12. As of the date of this certificate, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this _4th_ day of May 2020

"Signed and Sealed"

Tracey D. Meintjes, P.Eng.
B.C. Registration No. 37018

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1 Summary

Copper Fox Metals Inc. (Copper Fox) retained Moose Mountain Technical Services (MMTS) to prepare a National Instrument 43-101 (NI 43-101) Technical Report and Updated Resource Estimate for the Van Dyke Copper Project (the "Project"), Gila County, Arizona, U.S.A. The Mineral Resource Estimate for the Van Dyke deposit has been prepared by Bob Lane, P.Geo and Sue Bird, P.Eng. of Moose Mountain Technical Services (MMTS). Updated assays and re-interpretation of the geology model since the previous Resource Estimate have resulted in the need for an update.

Copper Fox Metals Inc. (Copper Fox) and its wholly owned subsidiary Desert Fox Copper Inc. (Desert Fox) have been involved in exploration at the Van Dyke deposit intermittently since 2013.

The Resource Estimate of the Van Dyke deposit with an effective date of January 9, 2020 is listed in Table 1-1. Mineral resources are estimated within both a 0.025% Recovered Cu grade shell and within a "reasonable prospects for eventual economic extraction" shape, which includes internal dilution or all "must take" material within the confining shape.

The mineral resources are estimated using criteria consistent with the CIM Definition Standards (2014) and the "CIM Estimation of Mineral Resources and Reserves Best Practice Guidelines" (2019).

In order to account for 12.7 Mlbs of Cu removed during historic mining operations, it has been assumed that all previous mining occurred in the Oxide Zone. The tonnage has been reduced by the amount required to reduce the total resource by the mined amount, with the average grades remaining constant.

Table 1-1 Resource Estimate for the Van Dyke Deposit, effective date January 9, 2020

							Cu Metal (Mlbs)	
Class	**KTonnes (000)**	**Rec Cu (%)**	**TCu (%)**	**ASCu (%)**	**CNCu (%)**	**Recovery (%)**	**Soluble Cu**	**Total Cu**
Indicated	97,637	0.24	0.33	0.23	0.04	90	517	717
Inferred	168,026	0.19	0.27	0.17	0.04	90	699	1,007

Notes:

1. *The "reasonable prospects for eventual economic extraction" shape has been created based on a copper price of US$2.80/lb, employment of in situ leach extraction methods, processing costs of US$0.60/lb copper, and all in operating and sustaining costs of $US 1.25/tonne, a recovery of 90% for total soluble copper and an average Specific Gravity of 2.6t/m3.*
2. *Approximate drill-hole spacing is 80m for Indicated Mineral Resources*
3. *The average dip of the deposit within the Indicated and Inferred Mineral Resource outlines is 20 degrees. Vertical thickness of the mineralized envelope ranges from 40m to over 200m.*
4. *Numbers may not add due to rounding.*

The author is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate for the Van Dyke deposit that have not been accounted for in the reporting.

1.1 Project Location, Description and Ownership

The Van Dyke Copper Project is in the Globe-Miami mining district, Gila County, east-central Arizona, approximately 110 kilometers east of Phoenix. The land survey coordinates for the Project include Sections 29, 30, and 33 of Township 1 North, Range 15 East, Gila and Salt River Baseline and Meridian (GSRBM) and Sections 25, 31, and 36 of Township 1 North, Range 14 East, GSRBM. The Project is centered at 512000 E and 3695600 N (UTM; NAD27) within the administrative boundaries of, and well beneath, the town of Miami, Arizona.

The Project consists of 26 patented parcels of mineral estate lands and 35 unpatented lode mining claims. The mineral estate lands cover a total area of 531.5 hectares (ha) and are 100%-owned by Desert Fox Van Dyke Company (a wholly-owned subsidiary of Copper Fox Metals Inc.). The unpatented lode mining claims occur immediately south of, and in part overly the mineral estate lands. They cover 292.0ha of Federal Land administered by the Bureau of Land Management (BLM) and are also 100%-owned by Copper Fox Van Dyke Company.

1.2 History

In 1916, newly formed Desert Fox Van Dyke Co. (DFVD) drilled its first hole (V-1) on the Van Dyke property, mineral estates that lay adjacent to those owned by Miami Copper Company and Inspiration Consolidated Copper Company. The vertical rotary hole was drilled in the hope of intersecting a blind copper deposit. At a depth of 1169 feet, it encountered a fault zone (1169 – 1212ft) with abundant copper carbonate and copper silicate minerals and prompted the drilling of a second hole (V-2). Hole V-2 reportedly intersected 41 feet of copper carbonate and copper silicate-filled breccia averaging about 4% Cu (Peterson, 1962). In the spring of 1919, DFVD began to excavate the vertical Van Dyke shaft located near the first drillhole (Rice, 1921; Peterson, 1962). By 1921, the shaft had reached a depth of 1,692 feet and had intersected mineralization similar to that cut by hole V-1 (Rice, 1921).

Further development was suspended because of low copper prices, but by 1928, copper prices had recovered and DFVD resumed its exploration and development activities. Underground drifts were developed on the main 1212, 1312 and 1412 Levels. The first ore shipments were made in 1929 and continued through to 1931, when copper prices declined to uneconomic levels (Peterson, 1962). The mine re-opened in 1943 as a National Defense project but closed again in June 1945. Metal production for the two periods of operation (1929-1931 and 1943-1945) totaled 11,851,700 pounds of copper (Peterson, 1962). In the ensuing 20 years, two limited surface exploration drilling programs evaluated the property, but were of no consequence. In 1968, Occidental Minerals Corporation (Occidental) acquired the property through a lease and Option to Purchase agreement and began to systematically drill the property. In the early 1970s, Occidental optioned its interest in the property at different times to AMAX and to Utah International. While the two companies conducted considerable amounts of drilling, both terminated their option agreements with Occidental. By 1975, a total of 50 holes had been drilled throughout the project area, including many within the town of Miami, covering an area measuring approximately 1300m east-west by approximately 1000m north-south. Mineralization encountered consisted primarily of the secondary copper minerals azurite, malachite and chrysocolla in tectonically fractured to brecciated Early Proterozoic Pinal Schist. Drilling determined that the Van Dyke deposit is covered by from 186 - 627m of unmineralized Tertiary Gila Conglomerate. Modeling of the deposit determined that the Van Dyke deposit resides in the downthrown hangingwall block of the Miami fault, and occurs within the elongate Miami-Inspiration trend of deposits. Four different resource estimates were completed between 1973 – 1976 and range from 103,000,000 tons averaging 0.53% Cu to 140,858,000 tons averaging 0.40% Cu (the estimates were calculated before implementation of National Instrument 43-101 and are therefore historical in nature and are not relied upon).

In 1976, Occidental initiated an in situ leaching (ISL) pilot program in an area due west of the Van Dyke shaft. The pilot program was completed in 1977 and confirmed that ISL was suitable for extracting copper from the deposit. In 1978, Occidental initiated a second ISL test that continued until May 1980, and further proved the feasibility of a surface ISL operation at Van Dyke (Huff et al, 1981). However, the town of Miami under which the deposit resides would not support such an operation, and under the threat of litigation, Occidental abandoned its option on the property.

In 1986, Kocide Chemical Corporation (Kocide), negotiated a deal with DFVD to develop an ISL and copper recovery operation in the area that Occidental had tested. Kocide applied for and received the necessary permits to conduct its work and production commenced in December 1988 (Beard, 1990). Kocide suspended its operations in 1990 due to iron build up in the recycled leach solution. Approximately 4 million pounds of copper cement was produced in 1988-89 and 1989-90. Later in 1990, Arimetco International Inc. acquired the Van Dyke property, and rehabilitated the Van Dyke shaft with the intent of leaching the entire deposit using it as an extraction well. In 1992, Arimetco abandoned its plans and the Van Dyke property lay dormant until 2012.

In 2012, Bell Copper Corporation (Bell) entered into a purchase and sale agreement with Bennu Properties, LLC, Albert W. Fritz Jr. and Edith Spencer Fritz (Bennu-Fritz) who had recently acquired the Van Dyke property through a tax lien foreclosure process. Bell also acquired 35 unpatented federal mineral lode claims (the MIA 1-35 claims) to cover approximately 600 acres of ground contiguous with the southern edge of the property.

In July 2012, Copper Fox signed a purchase agreement with Bell to acquire 100% of its interest in the Van Dyke property. Under the terms of the purchase agreement Copper Fox, through wholly-owned subsidiary Desert Fox Van Dyke Company, acquired 100% of the Van Dyke property, including the MIA claims, by paying to Bell CDN$500,000, by paying to Bennu-Fritz US$1.5 million and by assuming the continuing obligations with respect to the Van Dyke property, subject to certain terms and conditions. Bennu-Fritz retains a 2.5% Net Smelter Return ("NSR") production royalty from the Van Dyke deposit. Copper Fox completed its purchase of the Van Dyke property on April 5, 2013 and has the right to purchase up to 2% of the 2.5% NSR for a period of two years from that date by making payments of US$1.5 million for each 1% NSR purchased.

Late in 2013, Copper Fox initiated a review of all available data on the Van Dyke project, including drill core and pulps stored in Miami, and began to plan its 2014 work program.

In 2014, Copper Fox completed six PQ diameter diamond drillholes with an aggregate length of 3,211.7m. The holes were drilled across the Van Dyke copper deposit, covering a west-to-east distance of approximately 825m and a north-south distance of approximately 500m. All six drillholes were completed to their desired depth and encountered geology, alteration and mineralization consistent with a secondary or enriched copper deposit. Each drillhole penetrated the base of the post-mineral Gila Conglomerate, passed through broad intervals of secondary copper mineralization and was terminated in unoxidized, weakly to non-mineralized Pinal Schist. Mineralization was hosted primarily by variably broken to shattered or brecciated Pinal Schist, and by intrusive breccia and granite porphyry of the Schultz Granite. The first hole was drilled to evaluate an area that had been the subject of ISL. The remaining five drillholes were twins of original holes and encountered intervals of copper mineralization consistent with those of their respective original holes. A summary of the 2014 drill results is shown in Table 1-2.

Table 1-2 2014 Diamond Drill Intersections, Van Dyke Copper Project

Drillhole ID	From (m)	To (m)	Interval (m)	Total Copper (%)	Acid Soluble Copper (%)
VD14-01	246.9	368.4	121.5	0.357	0.249
VD14-02	375.2	591.6	216.4	0.444	0.359
incl	375.2	398.1	22.9	1.41	1.299
VD14-03	315.5	434.7	119.2	0.681	0.391
VD14-04	452.3	598.0	145.7	0.376	0.316
VD14-05	401.3	448.1	46.8	0.583	0.528
VD14-06	249.0	383.7	134.7	0.346	0.246
incl	249.0	281.6	32.6	0.749	0.631

All historical drillholes were originally surveyed in local mine grid coordinates; there is no record of where the mine grid originates nor which way it is oriented. Copper Fox undertook a search for historic drillhole collars using existing exploration plan maps of the project area and was able to positively identify numerous collars in the field. A Trimble GeoHX GPS with sub-metre accuracy was used to survey the located collars in North American Datum (NAD) 27, UTM zone 12 (metres). The locations of 15 exploration drillhole collars and 9 ISL test well collars were confirmed and surveyed. Three old survey monuments that had mine coordinates associated with them were also located and surveyed. The location information for the survey monuments and drillhole collars was then used to perform a regression that translated undiscovered collar locations from mine grid coordinates into NAD 27 UTM coordinates.

Modeling of the deposit showed that the deposit is open to the south and southwest, where additional drilling was recommended (Bird and Lane, 2015).

In 2015, Copper Fox completed a NI-43-101 Technical Report entitled "Preliminary Economic Assessment Technical Report for the Van Dyke Copper Project" dated November 18, 2015 prepared under the direction of Moose Mountain Technical Services, Mr. Jim Gray, P.Eng., et al as Qualified Persons. The PEA suggested that Van Dyke is a technically sound ISL copper project, utilizing underground access and conventional SX-EW recovery methods with low cash costs, strong cash flow, an after-tax NPV of US $149.5 million and IRR of 27.9%. The PEA was based on $US 3.00/lb copper and included an Inferred Resource of 183 million tonnes containing 1.33 billion pounds of copper at an average total copper grade of 0.33%. Mine life was estimated to be 11 years with annual copper production of 60 million pounds in Years 1-6, declining thereafter. The project economics are most sensitive to copper recovery and copper price.

The PEA recommended that a pre-feasibility study (estimated cost of $US 16.6 million) consisting of 10,000m of diamond drilling to upgrade and to expand the resource as well as a five-hole ISL pilot test program to investigate, among other things, soluble copper recoveries, hydraulic connectivity, hydrology and other geotechnical parameters related to In Situ Leaching be completed.

The results of this PEA were preliminary in nature as they include an Inferred Mineral Resource which is considered too speculative geologically to have the economic considerations that would enable them to be categorized as mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

1.3 Geology, Mineralization and Deposit Characteristics

The Van Dyke Copper Project is located in the Basin and Range province of east-central Arizona, and centrally within the Globe quadrangle. East-central Arizona, including the Globe-Miami mining district, has undergone considerable structural deformation that began in the Paleoproterozoic and persisted through to the Tertiary. The Globe-Miami mining district is underlain by igneous, sedimentary and metamorphic rocks of Precambrian, Paleozoic, Tertiary, and Quaternary age. The oldest exposed rocks in the district are Early Proterozoic (1.6-1.7 Ga) turbidites and felsic volcanic rocks of the Pinal Schist that were metamorphosed to greenschist facies. Subsequently, the Late Proterozoic Apache Group, a relatively thin (~1km) succession of regionally extensive marine sedimentary rocks was deposited across the region. Paleozoic rocks in the district include Cambrian Troy Quartzite, Devonian Martin Limestone, Mississippian Escabrosa Limestone, and Pennsylvanian to Permian Naco Formation. On the Van Dyke property, the post-Pinal Proterozoic strata and Paleozoic strata are absent; Pinal Schist is overlain directly by Tertiary Gila Conglomerate.

Laramide ages, intrusions, ranging from granodiorite to diorite, granite, and granodiorite to quartz monzonite, were emplaced during several phases of igneous activity. The most recent of these is the Schultz Granite, a composite pluton that was emplaced during the Paleocene (59 to 64 Ma). It underlies the southern part of the district; its younger porphyritic phases are genetically and spatially related to the area's porphyry copper and vein deposits.

The Van Dyke copper deposit is located within the Miami-Inspiration trend of deposits that includes five principal orebodies; from west to east they are Live Oak, Thornton, Miami Caved, Copper Cities and Miami East. The Van Dyke copper deposit lies to the east, and on the hangingwall side, of the Miami fault, a district-scale northerly-trending, east-dipping normal fault that developed during Tertiary extension. East-side down displacement on the Miami fault is estimated to be approximately 200-220m, placing the Van Dyke deposit at deeper levels than the adjacent Miami Caved deposit. The entire Van Dyke copper deposit resides beneath a blanket of Gila Conglomerate and alluvium that ranges from 186 – 627m in thickness.

Deposit modeling during the 1970's identified at least two normal faults in the hangingwall of the Miami fault that were interpreted to dismember the Van Dyke deposit. The deposit as modeled at this time consisted of two (or more) structural blocks or segments each bound by moderately east-dipping, east-side down normal faults. The portion of the deposit bound by the Porphyry fault and the Azurite fault consists of two crude, gently east-dipping panels separated by a barren to weakly mineralized core.

In 2019, Copper Fox re-analyzed 2,193 samples from 38 historical drillholes and updated the geological model for the Van Dyke deposit. The updated model indicates that the pre-Gila conglomerate geology of the Van Dyke is more complex than previously depicted due to a series of interpreted WNW trending granite porphyry dikes of the Schultz intrusive. The 2019 modelling recognized a number of faults, but these faults are not interpreted to dismember the Van Dyke deposit as was interpreted by Occidental. As well the distribution of the secondary copper mineralization outlined in 2019 does not support Occidental's interpretation of two mineralized panels separated by a low grade to non-mineralized zone.

The 2019 modelling shows that the Van Dyke deposit exhibits three distinct mineralogical zones consistent with a porphyry copper system that has been subjected to several weathering/oxidization/enrichment cycles. The hangingwall of the mineralized zone occur below a "leach cap" located immediately below the Gila/Pinal Schist erosional unconformity. In several places within the deposit, the mineralized zone is exposed at the Gila/Pinal Schist unconformity. Vertically, the deposit exhibits an upper Oxide zone, a middle Supergene zone which is underlain by a Hypogene zone. About 60m northeast of the Van Dyke shaft, mineralization is truncated by the Van Dyke fault, a post-mineral structure coincident with the footwall of an NNW trending granite porphyry dyke. The fault and dyke strike 110° and dip 70°NE. The localization of higher-grade secondary copper minerals in this area appears to have been controlled by the intersection of a low-angle (15-20 degrees) east dipping fault zone with the Van Dyke fault.

Secondary copper mineralization comprises the majority of the Van Dyke deposit. The Oxide zone consists primarily of malachite, azurite, chrysocolla, cuprite and native copper. Tenorite was previously identified within the Van Dyke deposit based on visual identification, but the mineralogical work completed by Copper Fox in 2014 and 2015 did not detect tenorite. The secondary copper mineralization occurs in fractures, quartz veins and in tectonically fractured to brecciated Pinal Schist. Beneath the Oxide zone there exists a weakly developed Supergene zone. It contains sparse malachite, azurite, chrysocolla and locally abundant chalcocite, and is transitional at depth into zones of low grade hypogene (chalcopyrite-molybdenite) mineralization, primarily in the central and western parts of the deposit.

1.4 Deposit Type

The principal type of mineral deposit found to-date on the Van Dyke property is that of an enriched secondary or supergene copper deposit that is genetically and spatially tied to the well-known and well-developed porphyry copper systems located adjacent to the Project and the hypogene mineralization beneath it. Malachite, azurite, chrysocolla and chalcocite comprise the majority of the copper-bearing minerals at Van Dyke. They formed from the weathering and oxidization of primary copper and iron sulphides creating copper-laden solutions that migrated laterally and downward primarily along interconnected zones of fracturing and brecciation.

1.5 Relevant Exploration Data

Prior to Copper Fox acquiring the Project, a total of 70 exploration holes and 17 ISL wells had been drilled on the property. Of the 70 historic exploration holes, 23 were drilled between 1916 and 1964; they were a combination of churn, rotary or reverse circulation (RC) and diamond drillholes that tested the breadth of the property, and for which only anecdotal information is known. The remaining 48 exploration holes were diamond drillholes completed from 1968-1975 to systematically assess the Van Dyke deposit area; near-complete technical data has been compiled for the majority of these holes. The 17 ISL wells were drilled in close proximity to one-another from 1976-1978 and in 1988 in an area immediately west of the Van Dyke shaft. At least seven were diamond drillholes for which limited core, but no written descriptions exist. Mineralized intervals for these wells were sampled, analyzed and later reported as weighted averages in Clary et al. (1981), but no other detail exists for the wells. In 2019, Copper Fox completed quick logs describing the lithologies (Pinal Schist cut by dykes of Schultz granite) for holes DDH OXY-41 to OXY-48A.

The historical exploration data base includes detailed logs for 45 holes, totaling 37,145m in aggregate length, drilled between 1968 and 1975. The manual logs describe lithology, alteration and mineralization, and provide total copper and acid soluble copper analytical results for each interval sampled. A number of the logs also list analytical results for silver, gold and molybdenum, but the data is incomplete. The historical data base also includes acid soluble copper data for channel samples taken on three levels of the underground workings. These data were manually recorded on underground level plan maps prepared by L.C. Brichta in 1929 on behalf of the Van Dyke Copper Company. There are no assay certificates or laboratory reports to support the underground sampling data or historical drillhole data. In the opinion of the qualified persons, the historic data are sufficient in detail and worthy of being subjected to a verification program.

Late in 2013, MMTS took part in the evaluation of the exploration materials which included: a detailed assessment of core, drillhole logs and pulps remaining from seven selected drillholes; a core box and drill footage determination of core remaining from drillholes OXY-1 through OXY-30, and; a general account of the pulps that remain from core sample analysis. The six drillholes selected for detailed review (OXY-6, -7, -8, -15, -27 and VD-73-6) cover 800m of eastward strike length and up to 550m of width; they provide an accurate representation of the geology and mineralization of the copper deposit.

The 2014 drilling (six drillholes; 3,211.7m) completed by Copper Fox verified the integrity of the historical exploration data base and contributed modern era data that was used in conjunction with the historical data to produce an initial NI 43-101 resource estimate for the Project (Bird and Lane , 2014), which is replaced by the updated resource presented below.

1.6 2019 Sampling Program

A 2019 resampling program of drill core chips, rejects, and pulps from 38 historic drillholes located within the Van Dyke deposit added 2,193 new analyses for Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu). This data, together with data collected from the company's 2014 drill program and other historic drillhole data, was used to remodel the deposit using a Total Soluble Copper (TSCu) cut-off grade of 0.025%. This data, coupled with the use of a robust Quality

Assurance/Quality Control program, adequately verified the historical data base. Weighted average grades of the mineralized intervals are shown in Section 10.3.

1.7 Analytical Methods

Copper Fox used Skyline Assayers and Laboratories (Skyline) in Tucson, Arizona, for the analysis of all historic drill core chip, drill core reject, and drill core pulp samples collected from the 2019 resampling program with the exception of check samples which were analyzed by Activation Laboratories Ltd. (Actlabs) in Ancastor, Ontario, Canada. A comprehensive Quality Assurance/Quality Control QA/QC program was instituted to check for lab accuracy and precision. Samples were analyzed for total copper, acid soluble copper, and cyanide soluble copper.

1.8 Data Verification

Copper Fox's 2019 sampling program of historic drill core chip, reject and pulp samples was designed to provide a complete as possible modern data set to support the estimation of an updated resource estimate for the Van Dyke Copper Project. A total of 2,193 historic drill core chip, reject and pulp samples were collected and analyzed for copper using a sequential analysis to determine Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu). Copper Fox's 2019 exploration program of resampling and analysis of existing stored drill core (chips), rejects and pulps was designed to provide results to compliment and update where possible the historic data set. In order to provide a resource estimate for the Van Dyke Copper Project, it was necessary to verify and integrate as much of the historic data as possible.

Lane visited the site while the 2019 sampling and shipping program was actively underway and verifies that sampling procedures employed by Copper Fox personnel was consistent with modern best exploration management practices, including use of a comprehensive QA/QC program.

A comparison of weighted averages for continuously mineralized intervals of identical length for each of the historic drillholes sampled and re-analyzed shows excellent reproducibility for Total Copper on an interval by interval basis (100% are within 8% of the original composited value). Data for Acid Soluble Copper (ASCu) shows a higher range of variability on an interval by interval basis, but the re-assays are consistently higher (50% are within 8% of the original composited value, and 50% range from 13% to 53% higher than the original composited value). Weighted average grades for the selected mineralized intervals show that the 2019 analytical results range from +4.3% in DDH OXY-4 to +931% in DDH VD-10 when compared to historical ASCu results.

Overall, the new data produced from the re-analysis of selected historical drill core and drill core pulps correlated strongly with the original values for total copper. However, the new acid soluble copper values were consistently higher than the historical values. The variances in the latter may be the result of 40 years of oxidation that affected stored historic drill core and drill core pulps. Also, modern acid soluble copper or sequential copper analytical methods, such as the use of a ferric-bearing leachate, may be more aggressive, and therefore extract more copper, than the techniques used four decades ago. The re-analysis of a selection of historical drill core and drill core pulps verify that earlier operators followed proper procedures and used adequate care to obtain reproducible results. However, some historical reporting suggested that the copper contribution from chrysocolla was not fully represented in the analytical results.

MMTS is of the opinion that the 2019 Copper Fox sampling program:

1. generated analytical results that are suitable for use in resource estimation,
2. where both historic data and 2019 data exist, data from 2019 will be used for resource estimation,
3. through a rigorous QA/QC assessment of the data, verified that the remainder of the historical analytical results are suitable for use in resource estimation.

1.9 Conclusions and Interpretations

The Mineral Resource Estimate for the Van Dyke deposit has been updated with the following Conclusions:

1. Modelled grades have been validated and compared to the de-clustered composite data, suggesting that there is no global bias and the overall tonnage and grade of the deposit is reasonable.
2. The exploration potential for additional resources is extensive to the south, and at depth.
3. The grades of the legacy assay data are generally lower than the re-assayed values suggesting that modern analytical procedures are more aggressive in extracting soluble copper than those used in the past.
4. Sample preparation, analysis, and security are acceptable for all drilling used in the Resource. Legacy drilling has been verified by twinning of holes in 2014 and by re-assaying of core and coarse rejects in both 2014 and 2019.
5. Recent metallurgical test work indicates that the deposits are amenable to recovery using in situ leaching (ISL) with a metallurgical recovery of 90% for Acid Soluble Cu.

Further detail on the Interpretation of the deposit during this study includes:

1. The Van Dyke Copper Project hosts a copper deposit of significance within the prolific Miami-Inspiration trend of porphyry copper and related deposits. The Van Dyke copper deposit lies at a depth of between 185 and 625m, a portion of which occurs under the town of Miami, Arizona.
2. The Van Dyke Copper Project has been the subject of limited historic underground development, widespread surface exploration drilling and localized in situ leaching. The activities have contributed immensely to the understanding of the Project and generated a valuable data set that forms the basis for advancing the Project.
3. A 2019 resampling program completed by Desert Fox Van Dyke Co., a wholly owned subsidiary of Copper Fox Metals, Inc., included sampling and analysis of drill core chips, rejects and pulps from 38 historic drillholes added 2193 new analyses for Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu). This data, together with data collected from the company's 2014 drill program and other historic drillhole data, was used to remodel the deposit using a 0.025% TSCu cut-off. This data, coupled with the use of a robust Quality Assurance/Quality Control program, adequately verified the historical data base.
4. The overall geometry of the Van Dyke copper deposit is that of a fault-bounded gently east-dipping tabular like body. The tabular like body is situated in the hanging wall of the Miami East fault, a northerly trending, moderately east-dipping normal fault that truncates the Miami

Caved deposit to the northeast. The Miami fault forms the western limit of the Van Dyke deposit. To the north the Van Dyke copper deposit is constrained by the Van Dyke fault and the northern property boundary.

5. The Van Dyke deposit exhibits features of a primary low pyrite, low grade porphyry copper system that has been subjected to a number of weathering/oxidization/erosion cycles. The unconformity between the Gila Conglomerate and the Pinal Schist is marked by a red hematitic clay layer interpreted to be the upper weathering zone of a Leach Cap. Below the Leach Cap, the Van Dyke deposit exhibits copper mineralogy characteristic of Oxide, Supergene and Hypogene zones of mineralization. The secondary copper mineralization is hosted primarily by variably quartz-sericite-chlorite altered, shattered to brecciated Proterozoic Pinal Schist, and minor, equally structurally prepared, porphyritic granodiorite of the Tertiary Schultz Granite. The secondary copper minerals also occur in quartz veins, fractures and along cleavage planes in the Pinal Schist.
6. The principal copper minerals in the deposit, in order of importance, are malachite, azurite, chrysocolla, tenorite, cuprite, native copper and chalcocite. There are no relict sulphide grains in the upper part of the deposit. The upper Oxide zone is dominated by malachite, azurite and chrysocolla, secondary copper minerals that characterize in situ oxidization of primary copper minerals in a low pyrite environment. Beneath the Oxide zone, there exists a Supergene zone. Several drillholes exhibit “stacked” chalcocite zones. The Supergene zone consists primarily of chalcocite and sparse malachite, azurite and chrysocolla; it is transitional down-section locally into weakly-developed zones of low grade hypogene mineralization, primarily in the western and central part of the project area.
7. The secondary copper mineralization in the Van Dyke copper deposit is believed to have formed from the weathering and oxidization of primary copper sulphides in a low pyrite environment. The grade of the secondary copper mineralization is in part a function of pyrite content and how well the country rock was structurally prepared prior to the mobilization and deposition of the secondary copper minerals.

The following recommendations are based upon the review of all data available for the Van Dyke Copper Project.

1.10 Recommendations for Future Exploration Work

Future drill programs should utilize robust QA/QC procedures similar to those implemented in 2014 and used in 2019. The use of drillhole logs that allow for detailed geological descriptions is encouraged, as is the collection of geotechnical data and metallurgical samples.

The recommended exploration program includes the following elements:

1. Diamond Drilling & Analysis: an 8-hole, 4500-metre program is recommended to test the extension of the secondary copper mineralization to the southwest and westwards towards the property boundary and to collect core for metallurgical test work.
2. Down-Hole Geophysics (acoustic televiewer)
3. Metallurgical Test Work: 6-8 pressure leach tests on whole core from select areas of the deposit.
4. Hydrogeology: Installation of piezometers to measure water levels.

The recommended program has an estimated cost of $US 2.13 million as shown in the Table below.

Table 1-3 Summary of Recommended Expenditures

Item	**Estimated Cost ($CDN)**
Drilling	$1,475,000
Assaying	$30,000
Geological Labour	$125,000
Metallurgical Test Work	$220,000
Downhole Geophysics	$25,000
Accommodation & Meals	$80,000
Field Supplies	$25,000
Transportation & Travel	$45,000
Hydrogeology	$50,000
Community Relations	$20,000
Permitting & Legal	$15,000
Data Compilation & Reporting	$20,000
Total	**$2,130,000**

1.11 Recommendations for Ongoing Engineering Studies

Recommendation for ongoing engineering studies include; run a Pilot ISL test, update the Cost Estimate, Geotechnical and Water Management Studies and then revise the Van Dyke ISL PEA project dated December 18, 2015 using the updated Resource Estimate.

The estimated cost for this work is $US 10 million.

2 Introduction

2.1 Purpose of Report and Terms of Reference

Desert Fox Van Dyke Co. (Desert Fox) retained Moose Mountain Technical Services (MMTS) to prepare a National Instrument 43-101 (NI 43-101) compliant Technical Report and Resource Estimate for the Van Dyke Copper Project, Gila County, Arizona, U.S.A. The authors of the report are Sue C. Bird, P.Eng., Robert A. (Bob) Lane, P.Geo., and Tracey D. Meintjes, P.Eng. of MMTS who are "Qualified Persons" as defined by NI 43-101.

Desert Fox is a wholly owned subsidiary of Copper Fox Metals Inc. (Copper Fox). Copper Fox is a Canadian resource company listed on the TSX-Venture Exchange (TSX VENTURE: CUU) focused on copper exploration and development in North America with offices in Calgary, Alberta and Miami, Arizona. Copper Fox holds, through Desert Fox and its wholly-owned subsidiaries, the Van Dyke Copper Project in the Globe-Miami Mining District, Arizona, the Sombrero Butte copper project in the Bunker Hill Mining District, Arizona and the Mineral Mountain copper project in the Mineral Mountain Mining District, Arizona. Copper Fox also owns a 25% interest in the Schaft Creek Joint Venture in northwest British Columbia, Canada.

In 2014, MMTS completed a Technical Report and a resource estimate for the Van Dyke project prepared in accordance with National Instrument 43-101. The Technical Report supporting the resource estimate for the Van Dyke Copper Project was based on the evaluation of historical data, re-assaying of drill core and drill core pulps from a selection of holes drilled by Occidental Minerals Corporation, AMAX and Utah International between 1968 and 1975, and six diamond drillholes completed by Desert Fox in 2014. The 2014 Technical Report provided a compilation of all historic exploration and development activities conducted on the property, a basic understanding of regional and local geology and mineralization, and recommendations for future work.

This Technical Report is an update to the resource estimate based on the new data from the 2019 analytical program and modelling work completed by Copper Fox on forty historical drillholes from the Van Dyke project. The 2019 analytical program utilized existing drill core pulp samples and core from historical drillholes if pulp samples were not available.

This Technical Report was prepared using industry accepted Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Best Practices and Reporting Guidelines" for disclosing mineral exploration information; the Canadian Securities Administers revised regulations in NI 43-101 (Standards of Disclosure for Mineral Projects, June 24, 2011); Companion Policy 43-101CP and Form 43-101F1; and the updated CIM Definition Standards for Mineral Resources and Mineral Reserves (November, 2019).

2.2 Sources of Information

This report is based on historical information and data compiled by Desert Fox including unpublished paper and electronic copies of reports, technical memos and correspondence, geologic maps, drill logs and cross-sections, analytical results from re-sampling of stored historic drill core and drill core pulps in 2014 and 2019, analytical results from diamond drilling completed in 2014, and publicly available reports and documents. All sources of data referenced in the text are listed alphabetically in Section 27 of this report.

2.3 Site Visits and Scope of Personal Inspections

Robert A. (Bob) Lane, P.Geo., visited the Project on four occasions commencing on November 26, 2013, up to and including May 24-25, 2019. Mr. Lane's 2014 visits to the site coincided with Desert Fox's 2014 Phase 1 drilling program, and included an inspection of the core logging and core processing station, stops at two of the in-progress drillholes, examination of core from three of the completed 2014 drillholes, review of drill core handling procedures, drill core Chain-of-Custody procedures, and QA/QC methodologies. Mr. Lane also completed a tour of the site including stops at the historic Van Dyke Shaft, the former Kocide Chemical copper recovery plant, several pertinent outcrops and a number of historic drillhole collar locations. Mr. Lane examined core from four holes drilled in the 1970s by Occidental Minerals Corporation, the drillholes completed by Desert Fox in 2014 and the cataloging of sample pulps that remained in storage from the Occidental period of drilling. The May 24-25, 2019, visit included an inspection of the company offices and core and sample storage facilities, review of core sampling procedures, sample Chain of Custody procedures and QA/QC methodologies.

Sue Bird, P.Eng., visited the Project on April 12, 2014 and examined the overall site geology, rock types, drillhole collars, adit, core, and pulps through a tour by the site geologists.

2.4 Definitions and Units of Measurement

The units of measure used in this report are shown in Table 2-1. All currency quoted in this report refers to U.S. dollars unless otherwise noted. All distances and linear measurements are provided in metres and kilometres unless otherwise noted. Frequently used abbreviations and acronyms are shown in Table 2-2.

Historical exploration and mining data in Arizona were documented using the Imperial system, with units of length expressed in feet and inches, mass in short tons, and precious metal grades in ounces per short ton. More recent exploration and mining data in Arizona is also commonly quoted using Imperial units. However, in this report the metric system is used preferentially, with units of length expressed in kilometres, metres or centimetres, units of mass expressed in kilograms or metric tonnes, and base metal grades expressed in percent per tonne or in parts per million (ppm).

All UTM positions referenced in this report and on its accompanying figures are referenced to the North American Datum of 1927 (or NAD 27).

Table 2-1 Glossary

Term	Definition
Acid Soluble	The portion of the mineralization which can be extracted from the rock by the use of sulphuric acid
Assay	Analysis of a rock or soil sample metal content
Composite	Assay data weight-average over a larger, standardized length
Cut-off grade	The grade value of mineralization at which the deposit can be considered economic, or in the case of Inferred material to be considered probable for eventual extraction
Dip	The angle in degrees from horizontal that the surface is inclined perpendicular to strike
Domain	A segregation of the deposit into volumes which are interpreted to contain similar geologic characteristics
Fault	A structure within the earth displaying movement along the discontinuity
Grade	The concentration of metal within the assay, composite, or block expressed in %, ppm or ppb
Kriging	Interpolation of samples values that minimizes the estimation error
Lithology	Geologic term defining rock type
Mineral Resource	"a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction" (CIM, 2014)
Mineral/Mining Lease	An area of land for which mineral rights are held by a certain party
Mining Assets	Material properties
Mixed	Mineralization including both oxide and sulfide mineralization, also labelled Supergene zone
Nearest neighbor	Interpolation of samples to include only the closest value by polygonal estimation
Sulfide	Mineralization including significant sulfur bearing minerals
Zone	A segregation of the deposit into oxide, mixed, or sulfide based on the grade and acid solubility of the mineralization

Table 2-2 List of Abbreviations and Acronyms used in this Report

Abbreviation	Description
%	percent
^{o}C	Degrees Celsius
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
APP	Aquifer Protection Permit
AQL	Aquifer Quality Limit
ASLD	Arizona State Land Department
BLM	US Department of the Interior, Bureau of Land Management
Cu	Copper
TCu	Total Copper
CNCu	Cyanide Soluble copper (chalcocite)
ASCu	Acid Soluble copper (copper oxide)
TSCu	Total Soluble copper
lbs	pounds
masl	Metres above standard sea level
ppb	Parts per billion
ppm	Parts per million
RQD	Rock Quality Designation
sg	Specific gravity
t	Metric tonne
USEPA	United States Environmental Protection Agency
WQARF	Water Quality Revolving Fund

3 Reliance on Other Experts

In preparation of this report the authors have relied upon others for information pertaining to land status and historic exploration.

3.1 Land Status

The land status information summarized herein, including ownership, location and dimension of mineral estate and surface estate lands that comprise most of the Project, was the result of exhaustive research and compilation by independent land manager Mr. Daniel L. Mead of Cornerstone Lands/DLM/L.L.C., Tucson, Arizona. The legal descriptions for these mineral estate and surface estate lands were sourced from official Gila County documents located in Globe, Arizona. The information provided to the authors by Mr. Mead is relied upon.

Official legal descriptions of unpatented mineral claims that form the southern part of the Project area were collected from the federal Bureau of Land Management offices in Tucson, Arizona. This information is relied upon.

3.2 Historic Exploration

The geological and exploration data captured from earlier operators of the Van Dyke Copper Project and, to a lesser degree, from relevant publicly available reports, provide a sound technical foundation for the Project. The authors believe that the historical and technical information provided for the preparation of this report was accurate at the time it was written and is relied upon. The authors believe the current technical information provided by Copper Fox is accurate and is relied upon.

The interpretations and opinions expressed by these earlier workers, regarded to be competent, experienced explorationists, were based on a current understanding of the geological setting of the deposit and are reasonable. Their work is regarded to have been performed in accordance with high standards for the periods in which the work was completed and is relied upon. The current interpretations and opinions expressed are based on more comprehensive analytical data and understanding of evolution of the copper deposits in the Miami-Globe area and are reasonable.

4 Property Description and Location

4.1 Location

The Van Dyke Copper Project is situated within the Globe-Miami mining district, Gila County, east-central Arizona, approximately 110 kilometers (km) east of Phoenix (Figure 4-1). The core area of the Project is centered at 512000m E and 3695600m N (UTM; NAD27) and lies primarily within the town limits of Miami, Arizona. The Town of Miami lies about 10 km west of the City of Globe and 16 km west of the San Carlos Apache Indian Reservation. Miami, Globe, and a number of unincorporated communities nearby, including Inspiration, Claypool and Central-Heights-Midland City, are commonly called Globe-Miami.

The land survey coordinates for the Project include Sections 29, 30 and 33 of Township 1 North, Range 15 East, Gila and Salt River Baseline and Meridian (GSRBM) and Sections 25, 31, and 36 of Township 1 North, Range 14 East, GSRBM.

The Globe-Miami mining district is a major copper mining area located in the northern foothills of the Pinal Mountains and the Globe Hills, within the Arizona-New Mexico Basin and Range Province, and the broad Walker-Texas Lineament Zone. The mining district is almost entirely within the Inspiration and Globe quadrangles and comprises the Miami-Inspiration sub-district in its western side and the Globe Hills sub-district on its eastern side. The mining district includes a number of porphyry copper deposits that have been mined since the discovery of rich veins of chrysocolla in the Globe Hills in 1874. The history of the Globe-Miami mining district, with a focus on the Van Dyke Copper Project is provided in Section 6 of this report. A discussion of mineral deposit types found in the Globe-Miami mining district is provided in Section 8 of this report.

The productive mineral deposits of the Globe-Miami district, including the Van Dyke copper deposit, and the nearby Superior district, lie within a 10 km wide, generally northeast to easterly trending corridor (Peterson, 1962). This corridor marks a zone of Proterozoic structural weakness that parallels the contact between Pinal Schist and the Proterozoic granites to the north-west. The corridor is also parallel to the main foliation within the Pinal Schist, and it is also the locus of Mesozoic and Tertiary silicic intrusions, which are interpreted to be genetically associated with mineralization in the district (Hammer and Peterson, 1968). The main porphyry deposits are therefore centered on the main intrusive mass, while the vein deposits occur distally, but still within the mineralized corridor.

There are currently two producing mines in the Globe-Miami district: the Pinto Valley copper mine of Capstone Mining Corp. and Carlota (Cactus) copper mine of KGHM. The district also hosts the Miami Mine of BHP Billiton, presently on-care and maintenance, and the historic Copper Cities and Old Dominion copper deposits.

The Van Dyke Project shares a common claim boundary with the Miami-East and Miami-Inspiration mine sites. The Van Dyke copper deposit does not out crop, but resides beneath a thick blanket of Gila Conglomerate, which is capped locally by a thin veneer of alluvium. It is situated in the down dropped hangingwall block of the Miami fault, opposite the east end of the Miami-Inspiration orebody. The Van Dyke deposit is approximately 1,500 m long, 900 m wide, and ranges in thickness from 40 to over 230 m. The deposit is interpreted to be the extension of the porphyry copper mineralization mined in the open pits that border the northern edge of the property. The mineralization increases in thickness toward the center of the deposit.

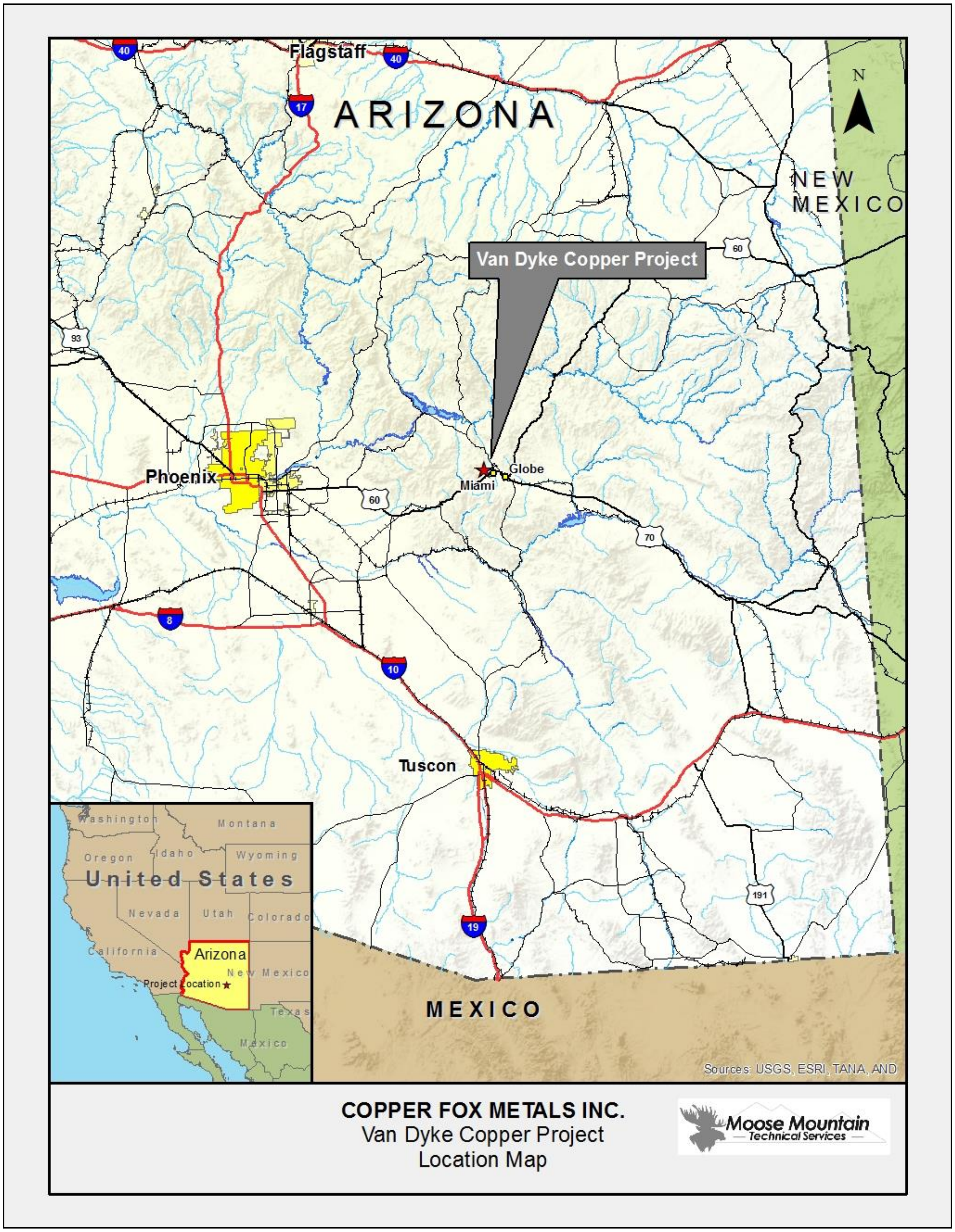


Figure 4-1 Location of the Van Dyke Copper Project

4.2 Tenure and Ownership

Tenure

The Van Dyke Copper Project consists of several varieties of patented lands, many of which occur within or near the city limits of the town of Miami (Figure 4-2). Additional patented lands owned by the company are contiguous with and lie south and east of the core area of the Project. A total of 26 patented parcels cover an aggregate area of 531.5 hectares (Table 4-1).

The company also owns 35 unpatented lode mining claims (MIA 1-35) that are contiguous with and located immediately south of the core area of the Project. The unpatented claims are located on Federal Land administered by the Bureau of Land Management (BLM). The unpatented claims cover 292.0 hectares (Table 4-2).

Desert Fox also owns the surface rights over the western part of the patented mining claim area (Figure 4-3).

Ownership

The ownership history of the patented lands covering the Van Dyke Copper Project is described in Section 6 of this report. The patents became available after taxes had not been maintained for many years. Bennu Properties, LLC, Albert W. Fritz Jr. and Edith Spencer Fritz (Bennu-Fritz) applied to Gila County and acquired clear title to surface and subsurface mineral rights (patents) that cover the Van Dyke property in April 2012, through a tax lien foreclosure process.

Bell Copper Corporation conducted initial negotiations and finalized terms for acquisition of the Van Dyke Copper Project with Bennu-Fritz through a “Letter of Intent”. However, before the deal could be completed Bell effectively sold its position to acquire 100% of the Van Dyke patented lands to Copper Fox. Ultimately, Bennu-Fritz sold the Van Dyke property directly to Desert Fox Van Dyke Company (a wholly owned subsidiary of Copper Fox) by way of a Special Warranty Deed signed by the two entities on April 5, 2013. Bennu-Fritz retains a 2.5% Net Smelter Return ("NSR") production royalty from the Van Dyke deposit. Copper Fox, in its' sole and absolute discretion, has the right to purchase up to 2% of the 2.5% NSR for a period of two years by the payment of US$1.5 million for each 1% NSR purchased.

Annual Costs to Maintain Ownership

There are no annual taxes for the Project’s mining patents (Mineral Estate). However, annual taxes are required for patented lands that include surface rights (real property) in addition to sub-surface (mineral) rights, and the taxes are for the surface rights only. The annual aggregate tax required to maintain the surface lands is $1,845.80, and payment has been made to Gila County, Arizona.

The 35 unpatented federal lode mining claims owned by Copper Fox require an annual maintenance fee of $165 per claim be paid to the United States Bureau of Land Management, and a fee of $10 per claim be provided to Gila County. A payment of $5,775 was made in respect of these claims in July 2019 for the filing year September 1, 2019 to August 31, 2020.

Table 4-1 List of Patented Lands, Van Dyke Copper Project

Patent Number	Legal Description	Type of Patent	Area (acres)	Area (Ha)
Township 1N, R 14E				
Patent-46574	T1N, R14E, Sec 36: Long shot, Solace #1 & Solace #2 claims	ME Patent	32.6	13.2
Patent-431029	T1N, R14E, Sec 25 & 36: Gray Copper claim	ME Patent	20.6	8.3
Patent-434949	T1N, R14E, Sec 36: Chief, Vesper, Cracker Jack, White Captive, Orphan, Snail, Red Cloud & Iron claims	ME Patent	63.0	25.5
Patent-546592	T1N, R14E, Sec 36: Dora fractional claim	ME Patent	0.4	0.2
Patent-590391	T1N, R14E, Sec 36: Sho Me No. 2, Copper Center, Sulphide No.1 claims	ME Patent	56.5	22.9
Patent-590392	T1N, R14E, Sec 36: Onward, Onward #2 & Onward #3 claims	ME Patent	38.0	15.4
Patent-612204	T1N, R14E, Sec 36: Blue Bell, Blue Bell #2, Blue Bell #3 & Sulphide claims	ME Patent	35.6	14.4
Patent-629135	T1N, R14E, Sec 36: Sulphide #2 claim	ME Patent	14.6	5.9
Township 1N, R 15E				
Patent-22128	T1N, R15E, Sec 30 Lot 4 Sec 30 & T1N, R14E Sec 25 Lot 12	HES Patent	40.0	16.2
Patent-91944	T1N, R15E, Sec 30: Sho Me claim	ME Patent	21.6	8.7
Patent-56345	T1N, R15E, Sec 30 Lot 5	HES Patent	38.3	15.5
Patent-159952	T1N, R15E, Sec 30 SE 1/4 of NE 1/4	HES Patent	40.0	16.2
Patent-219203	T1N, R15E, Sec 30: Myrtle Lode claim (MS 2583)	ME Patent	9.0	3.6
Patent-160508	T1N, R15E, Sec 30 W 1/2 of NE 1/4	HES Patent	21.2	8.6
Patent-160509	T1N, R15E, Sec 30 E1/2 of NW 1/4	HES Patent	18.4	7.4
Patent-163255	T1N, R15E, Sec 30 Lots 2, 3, & 8	HES Patent	0.4	0.1
Patent-181896	T1N, R15E, Sec 30 NE 1/4 of NE1/4	FLSDA	11.0	4.5
Patent-248767	T1N, R15E, Sec 30 SE 1/4	CE Patent	160.0	64.7
Patent-253612	T1N, R15E, Sec 30 SE 1/4 Of SW 1/4	CE Patent	40.0	16.2
Patent-302130	T1N, R15E, Sec 30 Lot 1	HES Patent	1.4	0.6
Patent-541188	T1N, R15E, Sec 29 SW 1/4	HES Patent	79.0	32.0
Patent-1106529	T1N, R15E, Sec 29 SE 1/4	CE Patent	160.0	64.7
Patent-1041095	T1N, R15E, Sec 33 SW 1/4	FLSDA	132.0	53.4
Patent-1041093	T1N, R15E, Sec 33 S1/2 SE1/4 & S1/2 SW 1/4	FLSDA	40.0	16.2
Patent-1041094	T1N, R15E, Sec 33 SW1/4 NE1/4 & N1/2 SE 1/4	FLSDA	80.0	32.4
Patent-1041093	T1N, R15E, Sec 33 SE 1/4	FLSDA	160.0	64.7
			1313.4	**531.5**

Brief definitions of the government patents listed above:

ME (Mineral Estate) Patent: The Federal Government transfers its ownership for both the mineral and surface estate of an unpatented mining claim or claims to the patentee.

CE (Cash Entry) Patent: The sale of public land to the highest bidder.

FLSDA: The sell, exchange or interchange of USFS land (both surface and mineral estate) by a quitclaim deed to a citizen or company by authority of the Secretary of the Department of Agriculture.

HES (Homestead Entry Survey) Patent: The sale of Federal Government land to the highest bidder to those that had pre-emption claim.

Table 4-2 List of Unpatented Lode Mining Claims, Van Dyke Copper Project

Claim Name	AMC #	County	Book	Fee Number	Area (acres)	Area (hectares)
MIA-1	405285	Gila	2010	12604	20.661	8.361
MIA-2	405286	Gila	2010	12605	20.661	8.361
MIA-3	405287	Gila	2010	12606	20.661	8.361
MIA-4	405288	Gila	2010	12607	20.661	8.361
MIA-5	405289	Gila	2010	12608	20.661	8.361
MIA-6	405290	Gila	2010	12609	20.661	8.361
MIA-7	405291	Gila	2010	12610	20.661	8.361
MIA-8	405292	Gila	2010	12611	20.661	8.361
MIA-9	405293	Gila	2010	12612	20.661	8.361
MIA-10	405294	Gila	2010	12613	20.661	8.361
MIA-11	405295	Gila	2010	12647	20.661	8.361
MIA-12	405296	Gila	2010	12648	20.661	8.361
MIA-13	405297	Gila	2010	12614	20.661	8.361
MIA-14	405298	Gila	2010	12615	20.661	8.361
MIA-15	405299	Gila	2010	12616	20.661	8.361
MIA-16	405300	Gila	2010	12649	20.661	8.361
MIA-17	405301	Gila	2010	12650	20.661	8.361
MIA-18	405302	Gila	2010	12617	20.661	8.361
MIA-19	405303	Gila	2010	12651	20.661	8.361
MIA-20	405304	Gila	2010	12652	20.661	8.361
MIA-21	405305	Gila	2010	12653	20.661	8.361
MIA-22	405306	Gila	2010	12654	20.661	8.361
MIA-23	405307	Gila	2010	12655	20.661	8.361
MIA-24	405308	Gila	2010	12656	20.661	8.361
MIA-25	405309	Gila	2010	12657	20.661	8.361
MIA-26	405310	Gila	2010	12658	20.661	8.361
MIA-27	405311	Gila	2010	12659	20.661	8.361
MIA-28	405312	Gila	2010	12660	20.661	8.361
MIA-29	405313	Gila	2010	12661	20.661	8.361
MIA-30	405314	Gila	2010	12662	20.661	8.361
MIA-31	405315	Gila	2010	12663	20.661	8.361
MIA-32	405316	Gila	2010	12664	20.661	8.361
MIA-33	405317	Gila	2010	12665	20.661	8.361
MIA-34	405318	Gila	2010	12666	20.661	8.361
MIA-35	405319	Gila	2010	12618	20.661	8.361

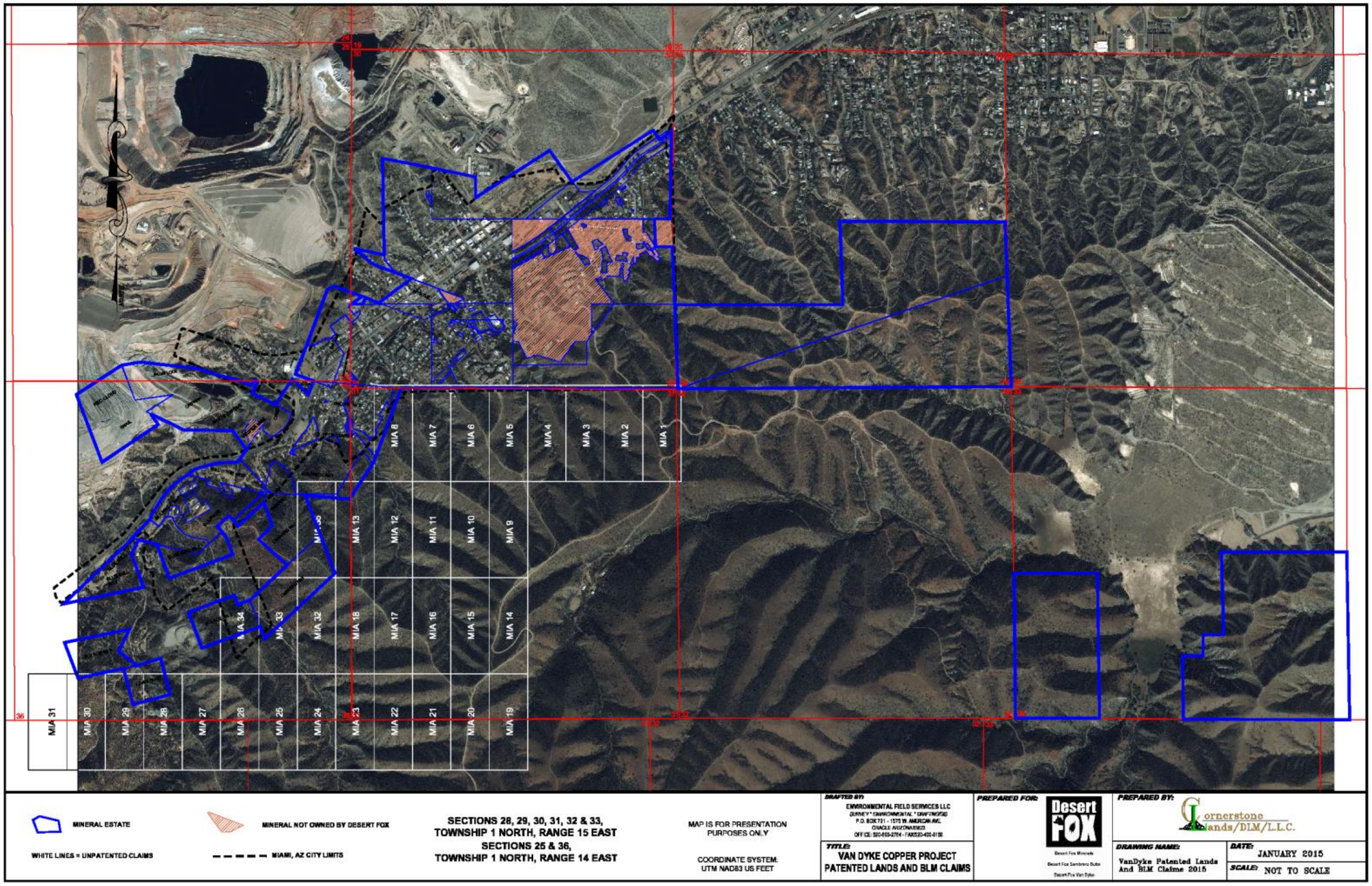


Figure 4-2 Distribution of Patented Lands and Unpatented Lode Mining Claims that Comprise the Van Dyke Copper Project

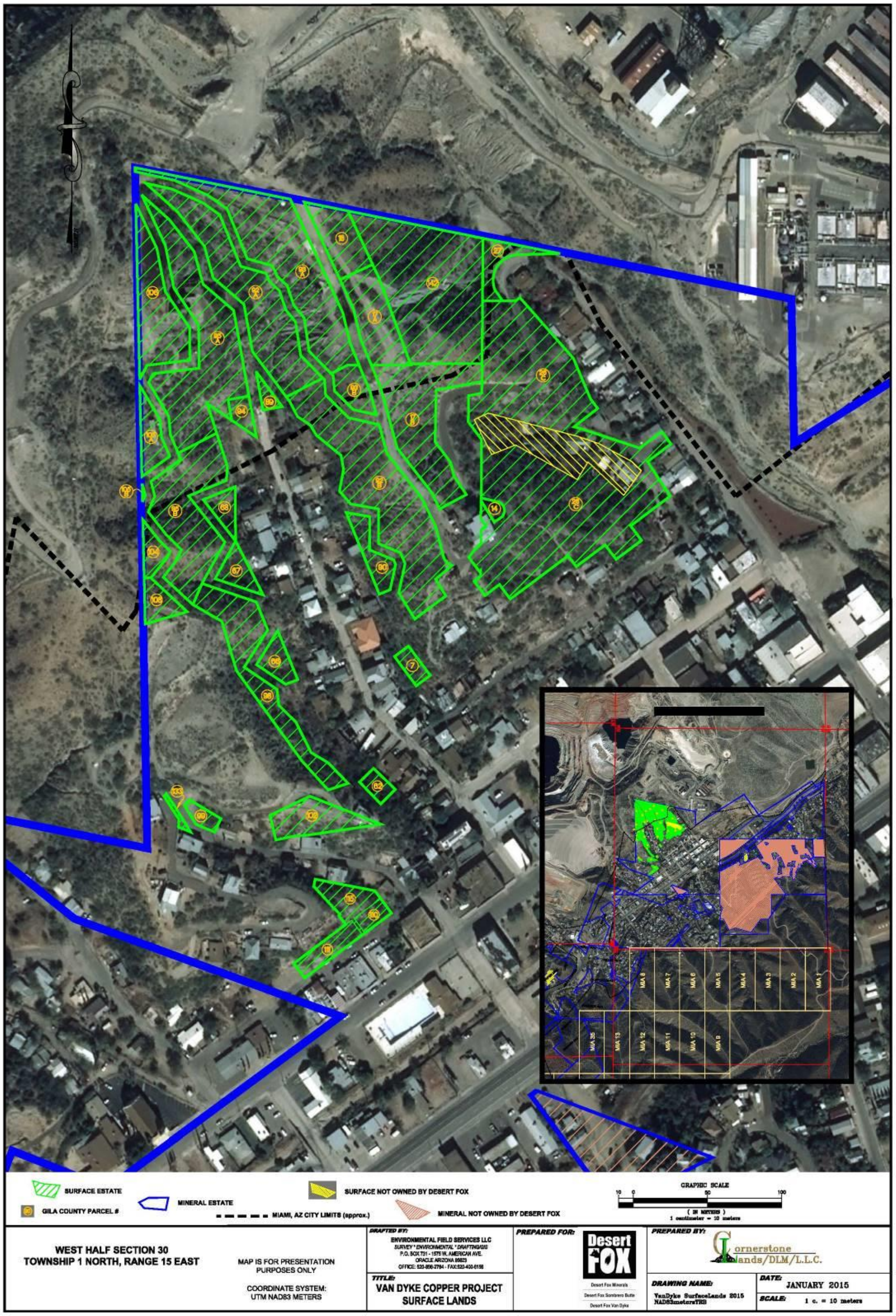


Figure 4-3 Distribution of Surface Rights owned by Copper Fox Van Dyke Company that Coincide with the Van Dyke Copper Project

4.3 Socio-Economic and Environmental Studies

The town of Miami is located on the northeastern slope of the Pinal Mountains, and is surrounded (except to the east) by the Tonto National Forest. The town is split by highway U.S. Route 60 and is served by the Arizona Eastern Railway.

The census of 2013-2017 determined that there were 2,238 people, 1,032 housing units and 773 families in Miami. The racial makeup of the town was 86.1% Caucasian, 1.5% American Indian and Alaska Native, 3.0% Black or African American, 0.7% Asian and 14.2% from other races. Fifty-six percent (56%) of the population were Hispanic or Latino of any race.

According to the 2019 Census reported for the town of Miami, 75% of the 1,032 housing units were occupied. The median income per household was US$28,984. For the population 25 years and over (1,366), educational attainment was 31% high school graduate, 26% with some college education (no post-secondary degree), 6% with a bachelor’s degree and 3% with a post-graduate degree.

In 1989, the Arizona Department of Environmental Quality (ADEQ) declared metal-bearing water in the Pinal Creek area a cleanup site under the state's Water Quality Revolving Fund (WQARF). A group of mining companies, consisting of BHP Copper (formerly Magma), Cyprus Miami Copper Corporation, and Inspiration Consolidated Copper Company, formed the Pinal Creek Group to conduct the cleanup activities under the direction and supervision of ADEQ. The Van Dyke mine is located within the Pinal Creek watershed, adjacent to the Pinal Creek Group mines.

The Florence Copper mine project of Taseko Mines Limited, located approximately 65 km southwest of the Globe-Miami area, has successfully completed its pilot-scale testing to demonstrate that the proposed in situ copper recovery process can be carried out in an environmentally safe manner that protects groundwater resources. In June 2019, Taseko Mines (news release dated June 20, 2019) reported that after six months of operating the test facility, the leach solution reached commercial grade levels and submitted the Aquifer Protection Permit (“APP”) amendment application to the Arizona Department of Environmental Quality (“ADEQ”) to proceed to commercial production.

4.4 Permits and Authorizations

On March 6, 2014; the Arizona Department of Water Resources (ADWR), an agency that oversees all drilling in the State of Arizona, granted Copper Fox permit 55-916587. The permit allowed for the drilling of up to 25 holes for mineral exploration purposes within Section 30, Township 1 North, Range 15 East, until March 6, 2015.

In 2014 Copper Fox completed a six-hole verification diamond drilling program on both patented mineral tenure and surface tenure owned by the company.

Access for the drilling of two holes in the northern part of the property, VD14-02 (a twin of drillhole OXY-6) and VD14-03 (a twin of drillhole OXY-8), both located on patented claims owned by the company, was granted by surface tenure holder BHP.

The town/city of Miami granted access to three sites within city limits including the site for drillhole VD14-06, which was drilled in a parking lot adjacent to the town's mayor and council office building. Agreements and social license for drilling of holes VD14-04 and VD14-05 located on private property within city limits, was also gained from local residents who might have been impacted by the temporary activities.

The permit for the drilling of up to 25 holes for mineral exploration purposes within Section 30, Township 1 North, Range 15 East, granted by ADWR, expired March 6, 2015.

Environmental Permitting Requirements for Advanced Exploration and Development
An Aquifer Protection Permit (APP) is required from ADEQ for the potential discharge of pollutant to an aquifer. The applicant must show that the Best Available Demonstrated Control Technology will be used by the facility and that Aquifer Water Quality Standards (AWQS) will not be exceeded as a result of discharge from the facility.

Underground Injection Control (UIC) permits for ISL injection wells are issued by USEPA, as well as aquifer exemptions, if injecting in an Underground Source of Drinking Water (USDW). Under the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Program, all facilities that discharge pollutants from any point source into waters of the United States (navigable waters) are required to obtain an AZPDES permit. Water rights, wells construction and groundwater withdrawal for mineral extraction (ISL recovery) and metallurgical processing are permitted by the Arizona Department of Water Resources (ADWR).

Other permits may be required from ADEQ (air quality, storm water) and USEPA (hazardous waste, historical preservation). The Arizona State Mine Inspector will authorize the Mined Land Reclamation Plan and the town of Miami and the Gila County will issue utilities and right-of-way permits.

Other permit requirements could be triggered by non-compliance with respect to the following acts:

- National Environmental Policy Act
- National Historic Preservation Act
- Endangered Species Act
- Resource Conservation and Recovery Act (solid and hazardous waste)
- Emergency Response and Community Right-to-Know Act
- Clean Water Act

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Access

The Van Dyke Copper Project is in the Globe-Miami mining district at the town of Miami, Gila County, Arizona. The project is approximately 110km east of Phoenix and is accessed via U.S. Route 60 (Figure 5-1) which runs easterly through Bloody Tanks Wash and connects the town of Miami with the city of Globe approximately 10km further to the east. The town of Miami is built up on both sides of the highway and areas of previous drilling occur throughout the town. Many of these drill sites are still accessible by a dense network of community paved and gravel roads. However, some historic drill sites are hidden beneath more recent town infrastructure such as asphalt parking lots or building construction.

Roads servicing the mining operations of BHP Copper and Freeport McMoRan, immediately north and west of Miami and of the Project are gated and require authorizations for use. Some of these roads access historic Van Dyke drill sites that now reside on surface rights owned by the mining companies. Access agreements were struck to secure legal access to these areas whose mineral rights are unequivocally owned by Desert Fox.

5.2 Climate

The National Oceanic and Atmospheric Administration's Climate Atlas of the United States and the Western Regional Climate Center records provide data from 1914 - 2005 from a station in Miami, Arizona.

The regional climate is semi-arid. The average amount of annual precipitation for the area is 58.4 cm. Most of the rainfall occurs during the winter and summer months. Precipitation during the winter months (December - March) usually occurs as long, steady storms. Snow may fall at higher elevations, but typically does not accumulate. Rain events during the summer months (July - early September) are typically short and violent in response to local thunderstorms. May and June are the driest months of the year and the period can reach drought conditions.

The average annual maximum temperature for the period of record at this station is 25°C. The warmest month is July with an average maximum temperature of 36°C. The coolest month is January, with an average minimum temperature of 1°C.

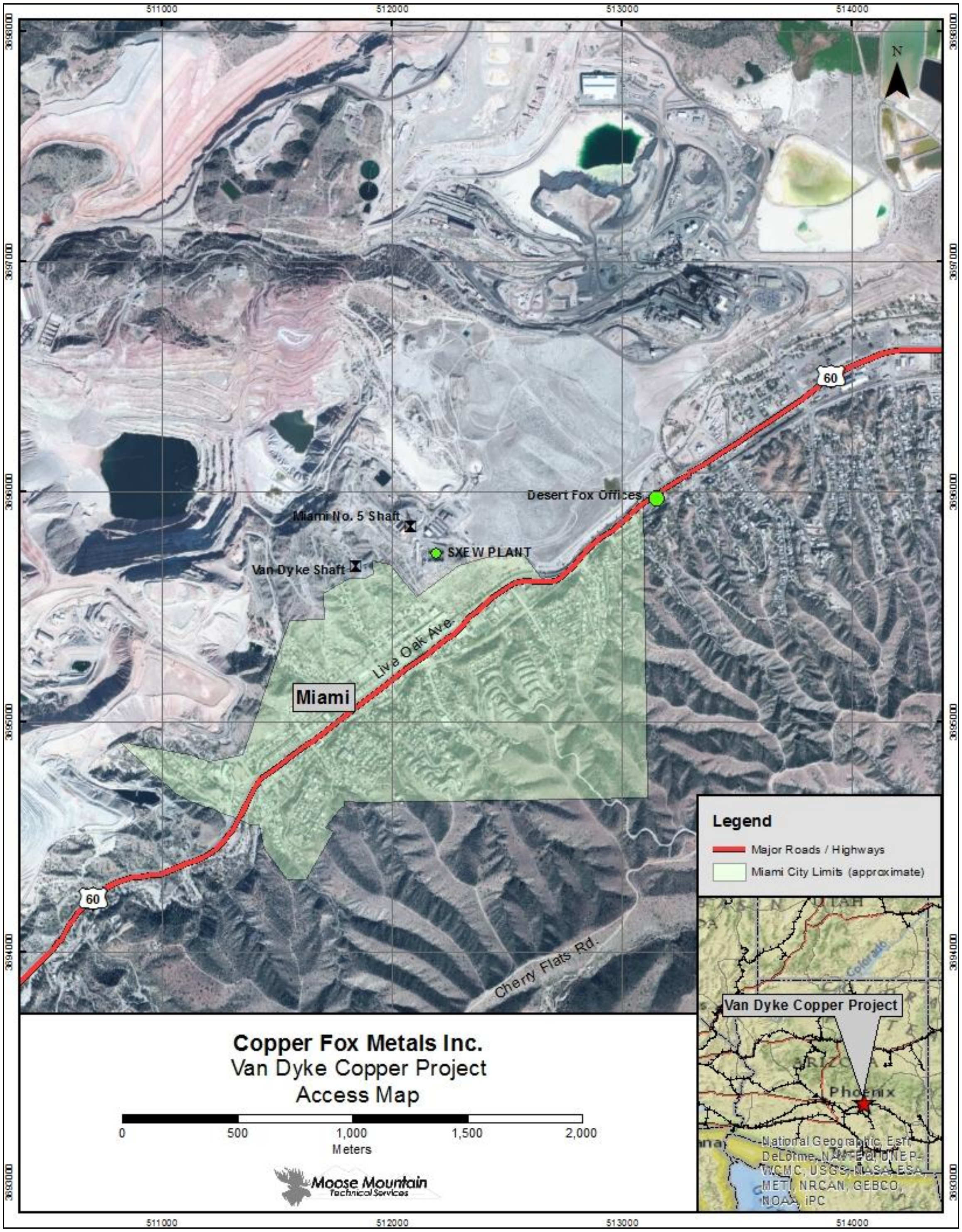


Figure 5-1 Van Dyke Copper Project – Access and Location

5.3 Local Resources

Existing facilities at the Project include a permanent office and core storage building and a series of steel "sea cans" that are used to store drill core and equipment, and a yard which serves as a suitable core layout and working area (Plate 5-1). The yard is not fenced, but core and supplies are never left out or unattended during daylight hours. All materials are put away and locked inside the office or sea cans during non-working hours. The office facility is in the town of Miami at the following address: 344 E. Highway 60, Lower Miami, AZ 85539-1353.

5.4 Infrastructure

There is a long-standing tradition of copper mining in the area, and the industry still provides the largest number of jobs for residents. Therefore, the local services already in place are sufficient to supply the Project's needs. The current level of community services is thought to be adequate for the requirements of the Project. Medical facilities are available at Miami's Cobre Valley Community Hospital. Fire, police, public works, transportation, and recreational facilities are in place and fully functioning. The two communities have an adequate supply of permanent housing and temporary housing to more than accommodate the projects exploration workforce.

Plate 5-1 Copper Fox's office, core logging and equipment storage facilities, Miami, Arizona

5.5 Physiography and Vegetation

The project is in the Basin and Range physiographic province of in east-central Arizona. The topography of the project area consists of a narrow, east-west alluvial corridor, where downtown Miami is situated and through which Highway 60 runs. The alluvial corridor, Bloody Tanks Wash, is flanked to the north and to the south by hills that rise to elevations of about 4,000 feet masl. Bloody Tanks Wash slopes gently eastward and during rain events channels water toward Miami Wash and the headwaters of Pinal Creek. The town of Miami is at an elevation of approximately 3,400 feet asl; prominent dumps, heap leach pads, tailings facilities and other mining infrastructure from other operations occupy large areas immediately north and northwest of the town and project area (Plate 5-2).

There are no natural surface water features in the area. Several large tailings ponds are located north of the Bloody Tanks Wash.

Plate 5-2 Looking northwest over the town of Miami with the Van Dyke shaft (center) and Miami No. 5 shaft (right) shown in the background

The hilly topography is dissected by steep-walled gulley's that direct seasonal storm waters toward Bloody Tanks Wash which runs easterly through town. The Van Dyke deposit is located primarily beneath the town of Miami.

6 History

6.1 Early Developments in the Globe-Miami District

The Globe-Miami mining district of south-central Arizona is one of the oldest and most productive in the United States. The first prospecting expeditions visited the Globe-Miami area in the 1860s during a time when the area was still being settled. The early prospecting activity led to the discovery of numerous small silver+/-gold vein occurrences, some of which later became producing mines. By 1883, at the peak of silver mining, there were 12 mills processing ore in the vicinity of Globe (Ransome, 1903). Through the 1880s the price of silver decreased, and the mines gradually became uneconomic; by 1887 almost all the silver mining activity had ceased. During the same period, the price of copper rose sufficiently to create interest in high-grade copper occurrences, some of which had previously been worked for silver.
The important Globe claim was staked in 1874 to cover impressive chrysocolla-bearing veins that later became part of the Old Globe mine (later renamed the Old Dominion mine). It did not garner significant attention until 1881 when mining infrastructure was moved from a small high-grade copper operation 10 km west of Globe to the Old Dominion site. Mining at the Old Dominion underground copper operation reached full production in 1884 and continued until 1931.

Toward the end of the century, reserves of higher-grade copper ore decreased while the demand for the metal increased, and the economics of extracting copper from lower grade deposits improved. Efficient bulk mining techniques and new recovery processes were developed to extract copper from porphyry deposits and contributed heavily to the future development of several large surface and underground mines in the Miami area.

During 1905 and 1906, prior to the establishment of the town of Miami, the predecessors of the Miami Copper Company (Miami Copper) began to procure options on many of the claims that eventually formed the bulk of the Miami mining operation (Miami Unit). In 1907, development of the Redrock shaft encountered abundant, rich copper oxide mineralization that compelled the company to develop the site. By 1911, Miami Copper had completed construction of a mill, power plant, and other infrastructure and produce copper concentrate from the Miami deposit (Ransome, 1919). From 1911 to 1959 block caving was used as the primary mining method. In 1943, in-situ leaching in an area of subsidence was initiated, and post-1959 this method of mining was used exclusively. Ownership and operatorship of the site changed hands numerous times throughout its development (Miami Copper was taken over by Magma Copper Company which became part of Newmont Mining, Inc. in 1969; Magma Copper was spun-off by Newmont in 1987) ultimately being purchased in 1996 by BHP Copper, Inc., which then merged with Billiton in 2001 to become BHP Billiton. In addition to mining, reclamation and reprocessing of old tailings to extract additional copper began in the 1989 and was completed in 2001 when mining operations were suspended. The site produced more than 2.7 billion pounds of copper during its 90 years of operation and is presently undergoing remediation and reclamation.

The early success of Miami Copper enhanced the prospectivity of the Miami area. Inspiration Mining Co. (IMC) acquired ground in the area and by 1911 had drilled more than 80 holes, sunk several shafts, and developed 27,000 ft of underground workings. In 1912, IMC merged with another local explorer, Live Oak Development Co., to form the Inspiration Consolidated Copper Company (Inspiration Consolidated) and, after a construction phase, began producing in 1915. Ultimately, multiple deposits were discovered and later developed by Miami Copper and Inspiration Consolidated over an irregular west-east corridor more than 4 km in length; the area is known as Miami-Inspiration. Mining of rich secondary copper mineralization took place from a complex of deposits distributed along the corridor including the Thornton, Live Oak, Red Hill, Blue Bird, Joe Bush and Oxhide pits and from underground block-caving of the Miami and Miami East ore bodies (Skillings, 1978; Creasey, 1980). Ownership and operatorship of the Inspiration Consolidated site also changed as several mergers and acquisitions took place. Inspiration Consolidated was purchased by Cyprus Minerals Company in 1988, which evolved into Cyprus Amax Minerals Company. Cyprus Amax was purchased by Phelps-Dodge in 1999 and which in turn was purchased in 2007 by present owner/operator Freeport McMoRan Copper & Gold Inc. (Freeport).

The Carlota (Cactus) property, located west of Miami-Inspiration, also began as a small underground copper-silver producer, being operated intermittently from 1929 to 1964. Copper carbonates and silicates occur in shattered diabase in the footwall of the Kelly fault zone. The property was re-evaluated in the early 1970s and late 1980s, and after changing ownership multiple times, was purchased in 2005 by Quadra Mining Ltd. Quadra developed a large open pit and heap leach/SX-EW operation that was commissioned in 2008. KGHM International purchased the mine in 2011.

The first bulk mining of porphyry-style copper mineralization in the Globe-Miami district began in 1943 when the Castle Dome deposit, located 3 km northeast of Carlota and approximately 8 km west of the town of Miami, transitioned from a high-grade low-tonnage operation. Mineralization at Castle Dome consisted of a chalcocite-enriched supergene blanket and was mined until 1953. In 1954, the Copper Cities disseminated copper deposit approximately 5 km north of Miami was exploited, followed later by the small Diamond H pit, located about 2 km southwest of Copper Cities (Peterson, 1954). The large Miami and Inspiration deposits transitioned to bulk mining techniques at about the same time. Stripping of the Pinto Valley deposit, which constituted the hypogene mineralization immediately northeast of the original Castle Dome supergene orebody, began in 1972. In 2013, Capstone Mining Corp. purchased the Pinto Valley copper mining operation from BHP Copper.

In 1969, Miami Copper discovered the Miami East deposit, a tabular ore body located 3 km east of the Miami-Inspiration workings and at a depth of approximately 1 km. Production began in 1974 utilizing a combination of conventional mining and in situ leaching techniques until reserves were exhausted. The mine site, known as the Miami Unit, has been on care-and-maintenance since 2002, but BHP has been conducting residual leaching of stockpiles with copper recovered from solution by the SX/EW process. The site's smelter processes concentrate primarily from Bagdad, Sierrita, Morenci and Chino.

Presently, mining in the Globe-Miami district is taking place at Freeport's Miami mine and Capstone's Pinto Valley mine. Freeport's operations include heap leaching of copper ore and recovery by solution extraction/electrowinning (SX/EW). The site also has a smelter and rod mill.

6.2 History of the Van Dyke Copper Project

In the early 1900s, as the demand for a local workforce increased, the need to provide miners with convenient housing, shopping and places of amusement led to the founding of the town of Miami.

Miami was founded in 1907 when the Miami Land and Improvement Company (MLIC) acquired a tract of land on the upper end of Miami Flats (present-day downtown Miami). In 1908, Mr. Cleve W. Van Dyke purchased the tract from the MLIC, purchased adjacent land, formed the Miami Townsite Company and began to sell surface building lots. The first train arrived in October 1909, and a federal census taken in 1910 determined that Miami had 1,390 residents.

Mr. Van Dyke shrewdly retained the mineral rights beneath the town, and in 1916 transferred these mineral rights to newly formed Van Dyke Copper Co. (VDCC). VDCC provided a vehicle for him to explore and potentially develop the ground that lay adjacent to mineral estates owned by Miami Copper Company (Miami Copper) and Inspiration Consolidated Copper Company (Inspiration Consolidated).

Later in 1916, VDCC drilled the initial hole into the Van Dyke deposit (Rice, 1921). The vertical rotary drillhole, V-1, was located on a ridge approximately 1000 feet southwest of the No. 5 Shaft of Miami Copper Company. It was drilled through post-mineral sedimentary rock (Gila Conglomerate) of uncertain thickness in the hope of intersecting a blind copper deposit. At a depth of 1169 feet the drill encountered a fault zone with abundant copper carbonate and copper silicate minerals that averaged 6.58% Cu (File note dated August 15, 1917). The hole was lost shortly thereafter in the footwall of the structure at a depth of 1219 feet. VDCC drilled a second vertical rotary hole 2,600 feet east-southeast of hole V-1. Hole V-2 reportedly intersected 41 feet of copper carbonate and copper silicate-bearing breccia averaging about 4% Cu (Peterson, 1962). VDCC also collared a third hole 6,700 feet farther to the southeast, but it was abandoned in Gila Conglomerate at a depth of 1,400 feet.

Exploration drilling was suspended early in 1918 because of the United States' participation in World War One but resumed in 1919 following an agreed upon armistice that ended the war and led to the signing of the Versailles Treaty. In the spring of that year, VDCC began to sink a vertical shaft located 200 feet south of drillhole V-1 (Rice, 1921; Peterson, 1962). By 1921 the shaft, which was designed for development and exploration purposes only, had been sunk to a total depth of 1,692 feet and had intersected mineralization like that cut by drillhole V-1 (Rice, 1921). Sinking of the shaft provided a significant cross-section of the geology and mineralization it encountered (Table 6-1 and Figure 6-1), including a fault zone that was interpreted to be the Miami fault, a southeast-dipping (60) normal fault that abruptly truncated the eastern extension of the Miami East deposit approximately 400m west of the Van Dyke shaft. This information enabled geologists to estimate with greater certainty the direction and amount of displacement on the Miami fault. Unfortunately, a sharp decline in the price of copper during the year led to the suspension of further underground development activities.

By 1928 copper prices had recovered. VDCC dewatered the shaft and resumed its exploration and development of the Van Dyke deposit. Underground drifts were developed on the 1212 Foot, 1312 Foot and 1412 Foot levels and the first shipments of ore were made in 1929. Ore shipments continued through to 1931 when copper prices again fell to levels that would not sustain profitable mining operations (Peterson, 1962).

In 1943 the Van Dyke mine was reopened as a National Defense project. It was found that most of the stopes and some of the drifts had caved (Kreis, 1974), but ore was available in parts of the mine. Despite exceptional average ore grades of approximately 5% Cu, the operation was not profitable because of the limited capacity of the small single hoist used to bring ore to surface from the 1212 Level.

The mine was closed in June 1945. Metal production for the two periods of operation (1929-1931 and 1943-1945) totaled 11,851,700 pounds of copper (Peterson, 1962).

The property was idle in 1946, but in 1947, AMICO Mining Corp. (a company formed and held equally by Anaconda Copper Co., Miami Copper Co. and Inspiration Consolidated Copper Co.) leased the Van Dyke property and drilled four holes to test for the southern extension of the deposit. The holes failed to intersect encouraging mineralization; and AMICO was dissolved in 1949 (Peterson, 1962).

The Van Dyke property remained inactive from 1948 to 1963. In 1964, Freeport Sulfur Company leased the Van Dyke property and drilled two holes that failed to intersect mineralization (Clary et al., 1981). The property was again dormant until 1968.

In April 1968, Occidental Minerals Corporation (Occidental) acquired the Van Dyke property through a lease and Option to Purchase agreement with VDCC. In the early 1970s Occidental optioned its interest to several other companies including AMAX and Utah International (Utah). The two companies conducted considerable amounts of drilling but neither completed its earn-in. AMAX terminated its option with Occidental late in 1973 and Utah terminated its option with Occidental in late 1975 or early 1976. By 1975, a total of 50 holes had been drilled throughout the project area, including many within the Town of Miami. The drilling covered a polygonal area with maximum dimensions of approximately 1300 m in an east-west direction by approximately 1000 m in a north-south direction.

Drilling completed to the end of 1975, determined that the Van Dyke deposit is covered by from 186m (in the northwest part of the deposit) to more than 627m of unmineralized Tertiary Gila Conglomerate. Below the Gila conglomerate, a layer of hematitic clay (up to 45m thick) occurs along the unconformity between the Gila Conglomerate and the Pinal Schist. Below the red hematitic clay layer, the Pinal Schist displays the characteristics of a "leach cap" formed by oxidization and leaching of a low-grade, low pyrite content porphyry copper deposit. The copper mineralization hosted in the Pinal Schist and porphyritic phases of the Schultz granite consists primarily of secondary copper minerals azurite, malachite and chrysocolla; underlain by a Supergene ("chalcocite") zone. The zones of secondary copper mineralization transition into Hypogene sulphide (chalcopyrite-molybdenite +/- bornite) mineralization at depth.

Table 6-1 Description of Geology encountered in the Van Dyke Shaft (after Rice, 1921)

From (ft)	To (ft)	Description
0	760	Gila Conglomerate
760	1183	Pinal Schist with traces of chalcotrichite (top of Oxide Zone)
1183	1218	Pinal Schist with copper silicates and carbonates
1218	1430	Pinal Schist with traces of chrysocolla, malachite, azurite, cuprite & native copper (bottom of Oxide Zone)
1430	1595	Pinal Schist with stringers and disseminations of chalcocite (Supergene Zone)
1595	1610	Pinal Schist with pyrite and chalcopyrite (top of Hypogene Mineralization)
1610	1662	Granite Dyke (Davis Canyon Fault: 1635-1662')
1662	1692	Pinal Schist

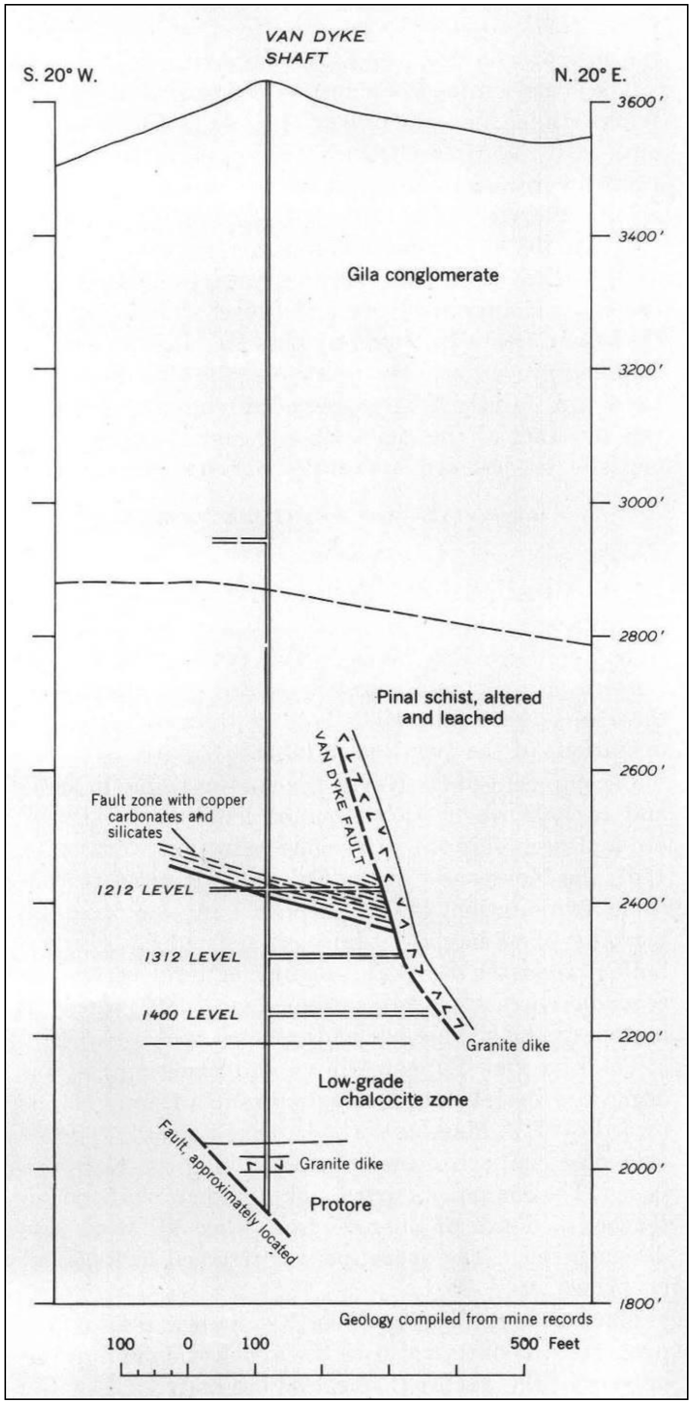


Figure 6-1 Geological Cross-section along 020° of the Van Dyke Shaft (reproduced from Peterson, 1962)

Modelling by Occidental of the Van Dyke deposit using information from the early underground workings and details from drilling completed between 1968-1975 determined that the Van Dyke deposit resides in the downthrown hangingwall block of the Miami fault, east of the truncated, elongate Miami-Inspiration system of deposits. In the Van Dyke shaft area and in nearby drillholes, copper mineralization was shown to be higher grade and vertically continuous and became the focus for later assessments (Table 6-2 and Figure 6-2).

In the 1970's, a total of 34 drillholes intersected sufficient widths and grade of copper mineralization to be used to calculate resource estimates for the Van Dyke deposit. Four different estimates were completed, all from 1973 to 1976, decades before implementation of National Instrument 43-101 (NI 43-101); the estimates are therefore historical and are not relied upon by the authors of this report or by Desert Fox. The historical estimates range from 103,000,000 tons averaging 0.53% Cu to 140,858,000 tons averaging 0.40% Cu. These estimates are outlined in Table 6-3 below. Resource estimates were also completed for a limited area in and adjacent to the Van Dyke underground workings and led to further test work (outlined below) in the immediate area of the mine (Kreis, 1974; Caviness, 1987).

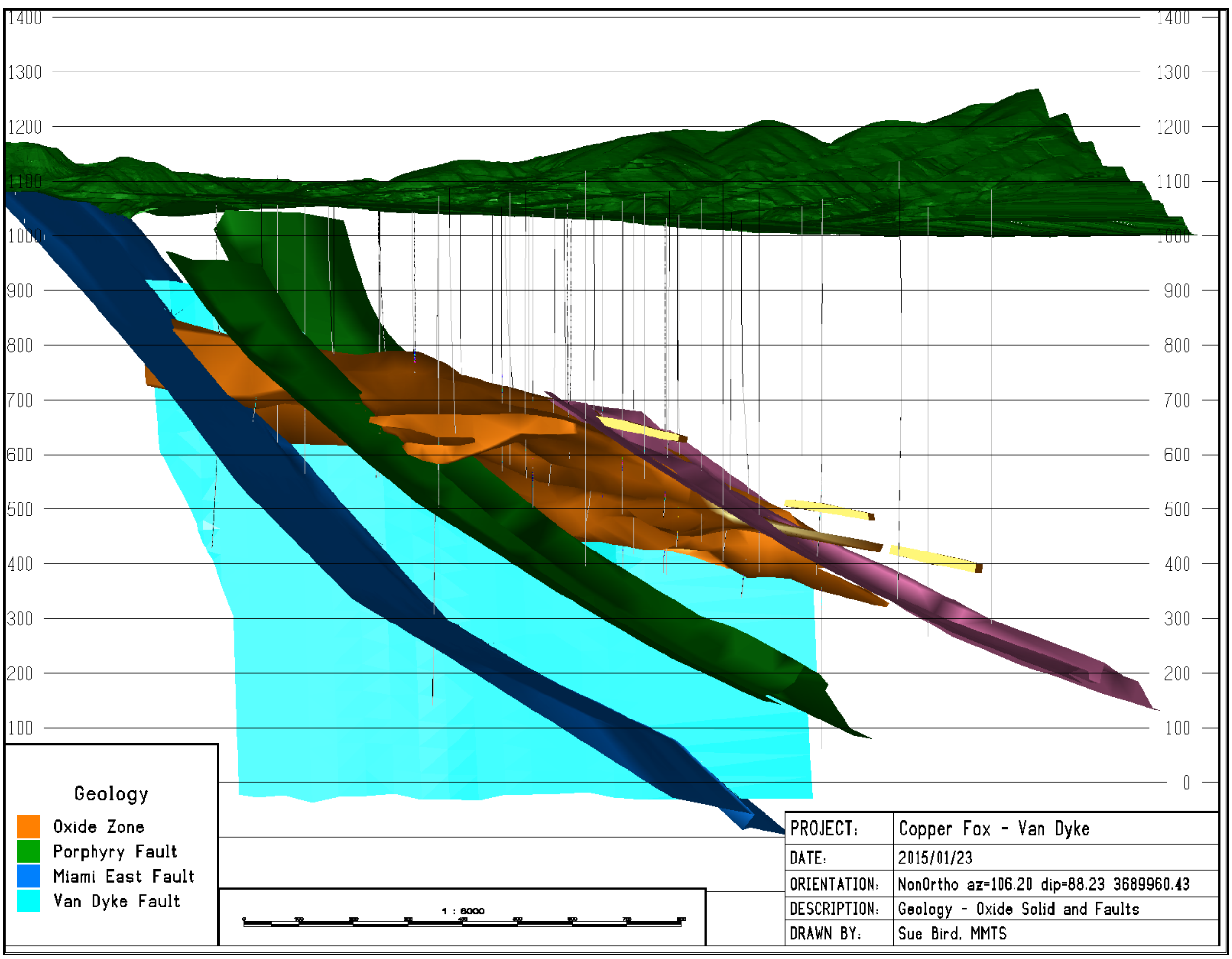


Figure 6-2 Historical Geological Model: Cross-section through Van Dyke Copper Deposit (Section 30N, 110 Azimuth)

Table 6-2 List of Selected Historical Drillhole Intersections, Van Dyke Copper Deposit (Acid Soluble Copper (ASCu) Intervals (Shoulder Cut-Off of 0.05% ASCu)

DDH ID	Zone (relative)	From (m)	To (m)	Interval (m)	ASCu (%)
OXY-6	upper	376.12	402.34	26.21	0.661
	mid	415.44	435.86	20.42	0.676
	lower	506.27	582.17	75.90	0.831
	total	376.12	582.17	206.05	0.481
OXY-7	upper	396.24	418.19	21.95	0.696
	lower	427.94	541.93	114.00	0.417
	total	396.24	541.93	145.69	0.429
OXY-8	upper	322.48	339.24	16.76	0.196
	lower	374.29	439.22	64.92	0.504
	total	322.48	439.22	116.74	0.322
OXY-10	upper	339.85	379.17	39.32	0.654
	mid	426.72	460.55	33.83	0.283
	lower	473.96	489.51	15.54	0.207
	total m+l	426.72	489.51	62.79	0.211
OXY-18	upper	408.74	442.57	33.83	0.719
	mid	477.32	521.21	43.89	0.162
	lower	576.07	584.91	8.84	0.310
	total U+M	408.74	521.21	112.47	0.291
OXY-20	upper	428.85	452.93	24.08	0.313
	mid	479.15	500.79	21.64	0.159
	lower	508.10	528.52	20.42	0.376
	u+m+l	428.85	528.52	99.67	0.217
VD-5	upper	417.27	432.51	15.24	0.871
	mid	438.61	450.80	12.19	0.293
	lower	530.66	579.42	48.77	0.371
	total	417.27	579.42	162.15	0.230
VD-6	upper	364.54	429.16	64.62	0.412
	mid	450.49	459.64	9.15	0.134
	lower	480.97	500.48	19.51	0.302
	total	364.54	500.48	135.94	0.273

Table 6-3 Comparison of Historical Resource Estimates, Van Dyke Copper Deposit

Company or Estimator	Year	Tonnage	Total Cu (%)	Oxide Cu (%)	Method	Cut-off Grade
Occidental	1973	115,700,000	0.51	0.34	polygonal	0.20 % Cu
AMAX	1973	117,000,000	0.49	0.31	polygonal	0.20 % Cu
Utah	1975	140,585,000	0.40	0.24	sections	0.15% Cu
C.R. Caviness	1976	119,202,494	0.52	0.32	sections	0.20 % Cu

In 1976, Occidental initiated an in-situ leaching pilot program in an area due west of the Van Dyke shaft on patented claims and surface estate lands owned by DFVD. The work consisted of drilling from surface one vertical injection well and one vertical recovery well, each 1,000 feet in length, spaced 75 feet apart. Water was then pumped down the injection well to hydraulically fracture rock containing acid soluble copper mineralization. A weak sulphuric acid solution was then pumped down the injection well and allowed to percolate through the fractured rock until being drawn up the recovery well. The pilot program as completed in 1977 and confirmed that in situ leaching was an efficient and effective method of extracting copper from the deposit. In 1978, Occidental initiated a second phase of in-situ testing by drilling five injection and recovery wells and eight monitoring wells. The testing continued until May 1980 and proved the feasibility of a surface in-situ leaching operation at Van Dyke (Huff et al, 1981). However, a surface operation at Van Dyke was not supported by the Town of Miami under which the deposit resides. Town ordinances and ongoing litigation discouraged Occidental sufficiently and later in 1980 the company relinquished its option on the Van Dyke property.

In 1986, Kocide Chemical Corporation (Kocide), a wholly-owned subsidiary of Griffin Corporation, negotiated a deal with the owners of the VDCC to develop an in-situ leaching and copper recovery operation in the area that Occidental had tested in the 1970s. Kocide applied for and received the necessary permits to drill a series of injection and recovery wells and to construct a copper cementation plant. Production was expected to total approximately 600,000 pounds of copper per month during the initial phases of operation and then increase to approximately 1.5 million pounds of copper per month within two years. Advancement of the Project was delayed through 1987, and production did not commence until December 1988 (Beard, 1990). Initially, Kocide injected a dilute sulfuric acid solution into the underground workings and recovered the pregnant solution from a production well. Cement copper was precipitated in 'Kennecott Cones' using shredded and de-tinned cans and the product was shipped to the company's Casa Grande plant for further refining to produce copper sulphate. A recorded 4 million pounds of copper cement was produced in 1988-89 and 1989-90. Kocide suspended its operations in 1990 due to iron build up in the recycled leach solution.

Later in 1990, Arimetco International Inc. acquired the Van Dyke property and the following year rehabilitated the Van Dyke shaft. In 1992, Arimetco was developing plans to leach the entire deposit using the Van Dyke shaft as an extraction well, but this work did not proceed past the planning stages. Following Arimetco's departure, the Van Dyke property lay dormant until 2012.

6.3 Recent Developments - Van Dyke Copper Project

In April 2012, Bennu Properties, LLC, Albert W. Fritz Jr. and Edith Spencer Fritz (Bennu-Fritz) concluded its acquisition of clear title to certain surface and subsurface mineral rights that comprise an estimated 90 - 95% of the known extent of the Van Dyke property through a tax lien foreclosure process. At about the same time, Bell Copper Corporation (Bell), through a wholly owned subsidiary, entered into a purchase and sale agreement with Bennu-Fritz to acquire the Van Dyke property. Bell also acquired 35 unpatented federal mineral lode claims (the MIA 1-35 claims) that cover approximately 600 acres of ground contiguous with the southern edge of the Van Dyke property.

In July 2012, Copper Fox Metals Inc. (Copper Fox) signed a purchase agreement with Bell to acquire 100% of Bell's interest in the Van Dyke property. Under the terms of the purchase agreement Copper Fox, through a wholly owned subsidiary Desert Fox Copper Inc., acquired 100% of the Van Dyke property, including the MIA claims, as well as the Sombrero Butte property, by paying to Bell CDN$500,000, by paying to Bennu-Fritz US$1.5 million and by assuming the continuing obligations with respect to the Van Dyke property, subject to certain amended terms and conditions. Bennu-Fritz retain a 2.5% Net Smelter Return ("NSR") production royalty from the Van Dyke deposit. Copper Fox, in its' sole and absolute discretion, has the right to purchase up to 2% of the 2.5% NSR for a period of two years by the payment of US$1.5 million for each 1% NSR purchased.

In 2013, Copper Fox completed a program to recover approximately 6,000 boxes of core, 3,500 of the original pulp samples and most of the geotechnical, hydrogeological and engineering studies as well as operating information and copper production statistics generated by the in-situ leach tests completed by Occidental Minerals Corporation and Kocide Chemicals on the Van Dyke deposit.

In 2014, Copper Fox completed a six-hole (3,211.7m) verification diamond drilling (PQ core diameter) program, In-Situ Pressure Leach testing (8 samples) of oxide copper mineralization, environmental baseline studies, hydrology studies, fluid mechanics, geochemical characterization of the lithologies surrounding the deposit, scoping level engineering studies, and a mineral resource estimate.

The resource estimate was prepared by Moose Mountain Technical Services ('MMTS') and the NI 43-101 technical report disclosing the resource estimate was filed on SEDAR on February 2, 2015. Sue Bird, P.Eng, and R. (Bob) Lane, P.Geo, as the Qualified Persons. The Inferred Resource (Base Case at 0.05% total copper cut-off) totalled 261.7 million tonnes grading 0.25% total copper containing 1.44 billion pounds copper. The modelling completed during the resource estimation, suggests that the copper mineralization is open to the west and southwest.

In 2015, Copper Fox completed a NI-43-101 Technical Report entitled "Preliminary Economic Assessment Technical Report for the Van Dyke Copper Project" dated November 18, 2015 prepared under the direction of Moose Mountain Technical Services, Jim Gray, P.Eng, et al as Qualified Persons. The PEA suggested that Van Dyke is a technically sound ISL copper project, utilizing underground access and conventional SX-EW recovery methods with low cash costs, strong cash flow, an after-tax NPV of US $149.5 million and IRR of 27.9%. The PEA was based on $US 3.00/lb copper and included an Inferred Resource of 183 million tonnes containing 1.33 billion pounds of copper at an average total copper grade of 0.33%. Mine life was estimated to be 11 years with annual copper production of 60 million pounds in years 1-6, declining thereafter. The acid soluble copper recovery used in the PEA was 68%. Direct operating costs were estimated to average $US 0.60 per pound over the life of mine. The PEA forecasted a Gross Revenue of $1.37 billion over the mine life with cumulative net free cash flow of $453.1 million (before tax) and $342.2 million (after tax). The Initial capital cost (on a new basis, including pre-production costs and $US 42.4 million in contingencies) totaling $204.4 million, were expected to be recovered within 2.9 years on an after-tax basis. The project economics were most sensitive to copper recovery and copper price.

The PEA recommended that a pre-feasibility study (estimated cost of $US 16.6 million) consisting of 10,000m of diamond drilling to upgrade and to expand the resource as well as a five-hole ISL pilot test program to investigate, among other things, soluble copper recoveries, hydraulic connectivity, hydrology and other geotechnical parameters related to In Situ Leaching be completed.

The results of the PEA were preliminary in nature as they include an Inferred Mineral Resource which is considered too speculative geologically to have the economic considerations that would enable them to be categorized as mineral reserves. There is no certainty that the PEA forecasts will be realized or that any of the resources will ever be upgraded to reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

In 2016, Copper Fox retained NV5, Inc. to estimate the cost of the compilation of the historical hydrogeological, water quality and information from three previous ISL test programs completed by Occidental Minerals and Kocide Chemicals. NV5 estimated the cost to complete this work to be approximately $US 425,000.

In 2017, Copper Fox commenced the process to obtain a Class III; Underground Injection Control ("**UIC**") and Aquifer Protection ("**AP**") permits which if acquired, are good for the life of the Project. NV5 compiled the information from the three historical ISL and production tests and information for geotechnical and hydrogeological wells completed around the Van Dyke project. Modeling of the Pollution Management Area, the Discharge Impact Area, the Cone of Depression and Points of Compliance as well as the abandonment plans for the proposed test site was completed to the draft stage when Copper Fox suspended the work on the permit applications due to its inability to obtain surface access to the proposed ISL pilot scale test site.

No work was done on the Van Dyke project in 2018.

In 2019 Copper Fox undertook a program to re-analyze all available historical sample pulps and where necessary/possible re-sample available drill core intervals for Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide-Soluble Copper (CNCu) concentrations. A total of 2,193 drill core chips, rejects and pulps from 38 historical diamond drillholes were submitted to Skyline Laboratories in Tucson Arizona for TCu, ASCu and CNCu analyses. Updating of the geological model for the Van Dyke deposit was also completed in 2019. Details of this work are set out in Sections 9 and 14 of this Report.

7 Geological Setting and Mineralization

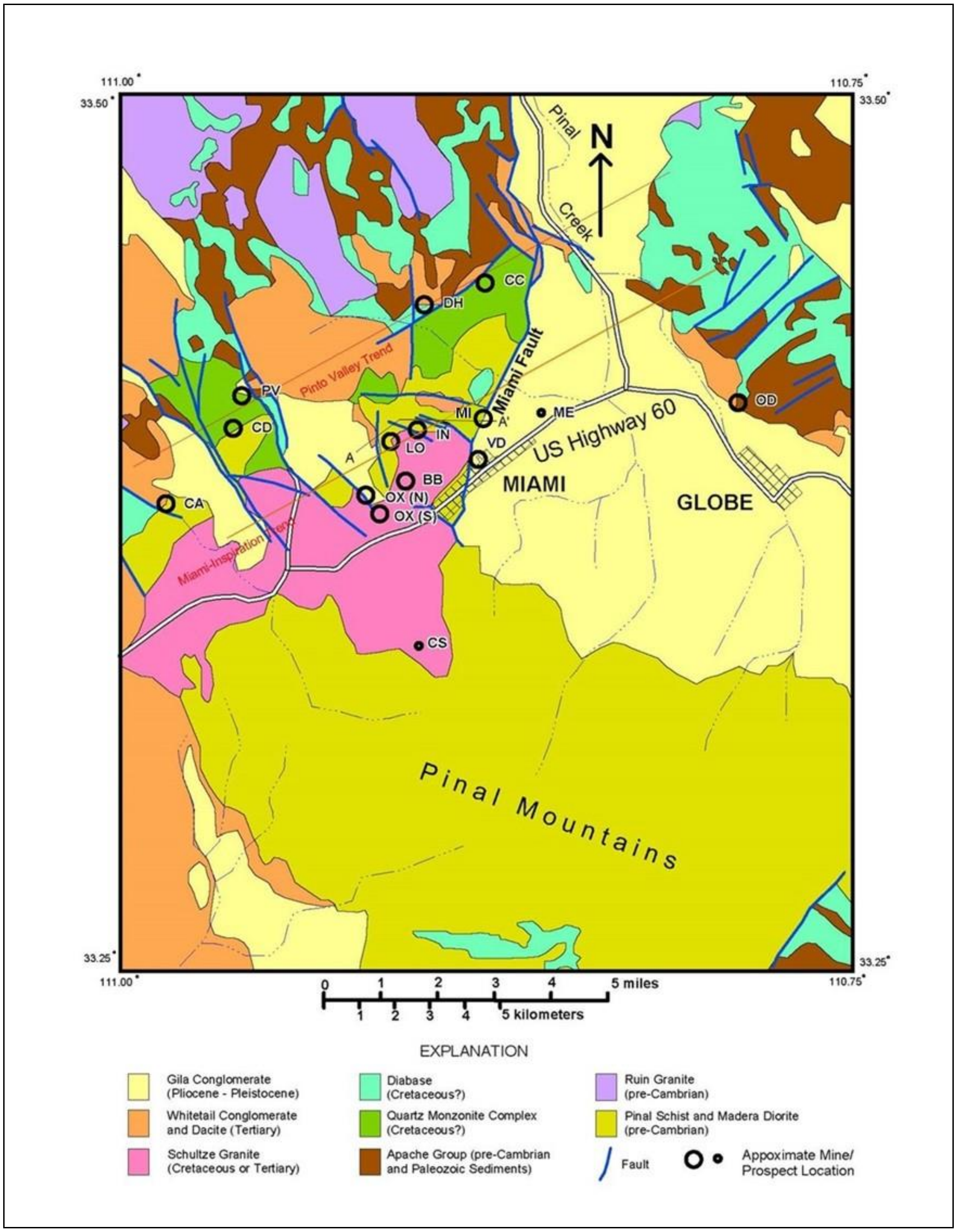
7.1 Geological Setting

The Van Dyke Copper Project is in the Basin and Range province of east-central Arizona, and centrally within the Globe quadrangle. The general geology of the Globe quadrangle was studied by F. L. Ransome in 1901 and 1902. The results of his work were published by the United States Geological Survey as Professional Paper 12 (Ransome, 1903) and as folio 111 of the Geologic Atlas (Ransome, 1904). In 1911, following the realization of the significance of low-grade disseminated copper deposits, Ransome returned to the district to conduct additional work, the results of which were included in Professional Paper 115 (Ransome, 1919). In the middle of the 20th Century, N.P. Peterson and others conducted fieldwork and produced a number of important reports, including United States Geological Survey Professional Paper 342, describing the geology and ore deposits of the district (Peterson, 1962), a publication that provides the geological framework for the area.

Southeast Arizona, including the Globe-Miami mining district, has undergone considerable structural deformation that began in the Paleoproterozoic and persisted through to the Tertiary. During the Late Cretaceous and Early Tertiary, the area endured basement-cored uplifts bounded by reverse faults, volcanism, intense compressive deformation, and plutonism that are all related to the development of the Laramide orogeny and magmatic-hydrothermal arc (Coney, 1978). A period of extensive erosion, including the unroofing of porphyry copper systems followed, and was in turn followed in the Late Tertiary by Basin and Range rifting (Maher et al., 2008).

The Globe-Miami mining district is underlain by igneous, sedimentary and metamorphic rocks of Precambrian, Paleozoic, Tertiary, and Quaternary age. Figure 7-1 shows a simplified geological map of the western half of the district. Table 7-1 lists the stratigraphy of the Miami-Inspiration area. Figure 7-2 shows a diagrammatic sketch that illustrates the age and spatial relationships of the major rock units.

The oldest exposed rocks in the district are Early Proterozoic (1.6-1.7 Ga) turbidites and felsic volcanic rocks of the Pinal Schist that were metamorphosed to greenschist facies. These rocks were intruded by granodioritic to dioritic rocks at ~1.6 Ga, including the Madera Diorite. Post-metamorphic, regionally extensive granitic plutons (~1.4 Ga) were emplaced into this sequence and developed andalusite-bearing contact aureoles. Subsequently, the Late Proterozoic Apache Group, a relatively thin (~1 km) succession of regionally extensive marine sedimentary rocks dominated by siliciclastic and minor carbonate rocks, was deposited across the region. It consists of, from oldest to youngest: the Pioneer Formation, including the basal Scanlan Conglomerate; the Dripping Spring Quartzite, including the Barnes Conglomerate; the Mescal Limestone; and, minor basalt closely associated with the Mescal.



Note: Deposit Abbreviations: BB=Bluebird; CA=Cactus/Carlota; CC=Copper Cities; CD=Castle Dome; CS=Copper Springs; DH=Diamond H; IN=Inspiration (Thornton); LO=Live Oak; ME=Miami East; MI=Miami Caved; OD=Old Dominion; OX(N)=Oxhide North; OX(S)=Oxhide South; PV=Pinto Valley; VD=Van Dyke

Figure 7-1 Simplified Geological Map of the Western Half of the Globe-Miami Mining District (modified by L. J. Bernard after Peterson, 1962; Creasey, 1980; Sillitoe, 2010)

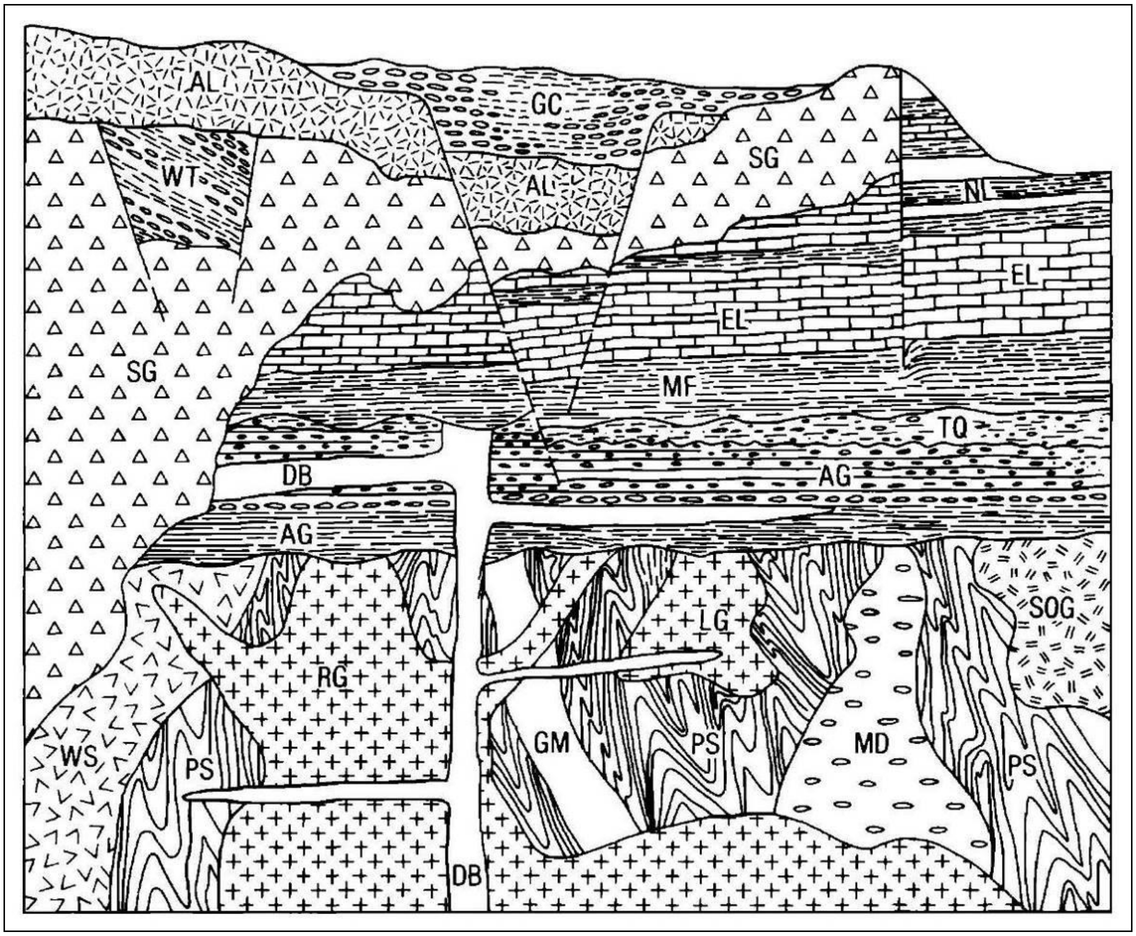
Paleozoic rocks in the district are the Cambrian Troy Quartzite, Devonian Martin Limestone, Mississippian Escabrosa Limestone, and Pennsylvanian to Permian Naco Formation.

During the latter stages or following deposition of the Apache Group, basaltic magmas were emplaced at about 1.1 Ga as sub-horizontal sheets (sills and sill-like bodies) of diabase with local, steeply dipping feeder dikes. These intrusions were emplaced predominantly at shallow depths, within the upper 2km of the crust, but locally breached the surface in the form of basalt flows. The masses of diabase locally are important hosts to mineralization and provide key markers used in reconstructing Laramide reverse and mid-Tertiary normal faults (Maher et al., 2008).

Table 7-1 Stratigraphy of the Miami-Inspiration Area (after Ransome, 1903 and 1919; Peterson, 1962; Creasey, 1980)

Rock or Formation	Age	Description
Alluvium	Upper Tertiary and Quaternary	Unconsolidated, poorly sorted poly-lithologic detritus
Gila Conglomerate	Upper Tertiary and Quaternary	poorly sorted, matrix-supported bouldery cobble conglomerate
Apache Leap Tuff	Miocene	dacitic ash flow tuff
Whitetail Conglomerate	Oligocene	well-bedded, hematite-rich matrix supported conglomerate
Naco Formation	Pennsylvanian - Permian	thin bedded calcareous sediment, marl and fossiliferous limestone
Escabrosa Limestone	Lower Mississippian	cliff forming limestone and dolostone
Martin Limestone	Upper Devonian	dolostone, minor shale and sandstone
Troy Quartzite	Cambrian	well-bedded, well-sorted quartzite with basal quartzite conglomerate
Apache Group		
Mescal Limestone	Precambrian (~1.2 Ga)	stromatolitic limestone, dolomitic limestone and chert
Dripping Spring Quartzite	Precambrian	upper quartzite beds and lower arenaceous shale
Pioneer Formation	Upper Precambrian	arkosic sandstone to arenaceous shale
Pinal Schist	Early Proterozoic (1.6-1.7 Ga)	regionally extensive meta-turbidites and minor felsic volcanic rocks metamorphosed to greenschist facies; locally andalusite-bearing

Several other Laramide age igneous intrusions, ranging from granodiorite to quartz monzonite, were emplaced during late Mesozoic and early Tertiary time. The most recent of these is the Schultz Granite, which underlies the southern part of the district, and was intruded into the Precambrian and Paleozoic country rock during the Paleocene. The Schultz Granite is a composite pluton consisting of at least three intrusive phases. The earliest phase is a granodiorite, the intermediate or main phase is a porphyritic quartz monzonite, and the youngest phase is a series of porphyritic intrusions that were not all emplaced at the same time (Creasy, 1980). Near the northern-most exposures at the Inspiration deposit, Schultz Granite has various textures and compositions that have been called granodiorite, quartz monzonite, and porphyritic quartz monzonite (Olmstead and Johnson, 1966). Creasey (1980) refers to this as the porphyry phase (i.e. granite porphyry) of the Schultz Granite. A separate body of granite porphyry has been mapped at the Pinto Valley, Copper Cities, Diamond H, and Miami East deposits, and is seen near the vein-controlled mineralization at Old Dominion.



Abbreviations: AG, Apache Group; AL, Apache Leap Tuff; DB, diabase EL, Escabrosa Limestone; GC, Gila Conglomerate; GM, granite of Manitou Hill; LG, Lost Gulch Monsonite; MD, Madera Diorite; MF, Martin Formation; NL, Naco Limestone; PS, Pinal Schist; RG, Ruin Granite; SG, Schultze Granite; SOG, Solitude Granite; TQ, Troy Quartzite; WS, Willow Spring Granodiorite; WT, Whitetail Conglomerate.

Figure 7-2 Diagrammatic Sketch Illustrating Geologic Relationships of Rock Units in the Globe-Miami Mining District (Creasey, 1980)

Tertiary sedimentary and volcanic rocks cover the mineralized units. The Whitetail Conglomerate was formed as a result of regional uplift approximately 32 Ma. Rocks of the Whitetail Conglomerate contain weathered clasts of older rocks in a red iron oxide-rich, very fine-grained matrix, and locally detrital to exotic copper mineralization. A Miocene ash-flow tuff, known as the Apache Leap Tuff, covered the area following the Whitetail Conglomerate (21 Ma). Further Basin and Range faulting and subsequent erosion produced the Tertiary to Quaternary Gila Conglomerate from the erosion of all older rocks.

The Gila Conglomerate fills a deep structural basin between the towns of Miami and Globe, a distance of more than 10km, and extends northward along Miami Wash and Pinal Creek. It was deposited as two alluvial fan complexes that washed down from the Apache Peaks to the north and from the Pinal Mountains to the south. Gila Conglomerate is covered by variably thick surficial deposits of alluvium and outwash. Figure 7-3 provides a cross-section of part of the Miami-Inspiration trend.

7.2 Mineralization in the Globe-Miami Mining District

The Globe-Miami mining district of east-central Arizona occupies part of the Laramide magmatic-hydrothermal arc of southwestern North America, one of the world's premier copper provinces (Titley, 1982b; Long, 1995). The district is known for a cluster of large disseminated or porphyry copper deposits, many of which have been or are actively being mined and copper-rich polymetallic vein deposits (Ransome, 1903). The vein deposits, based on their predominant metals, have been further divided by Peterson (1962) into copper veins, zinc-lead veins, zinc-lead-vanadium-molybdenum veins, manganese-zinc-lead-silver veins, gold-silver veins, and molybdenum veins. Many vein deposits were important producers during the early history of the district.

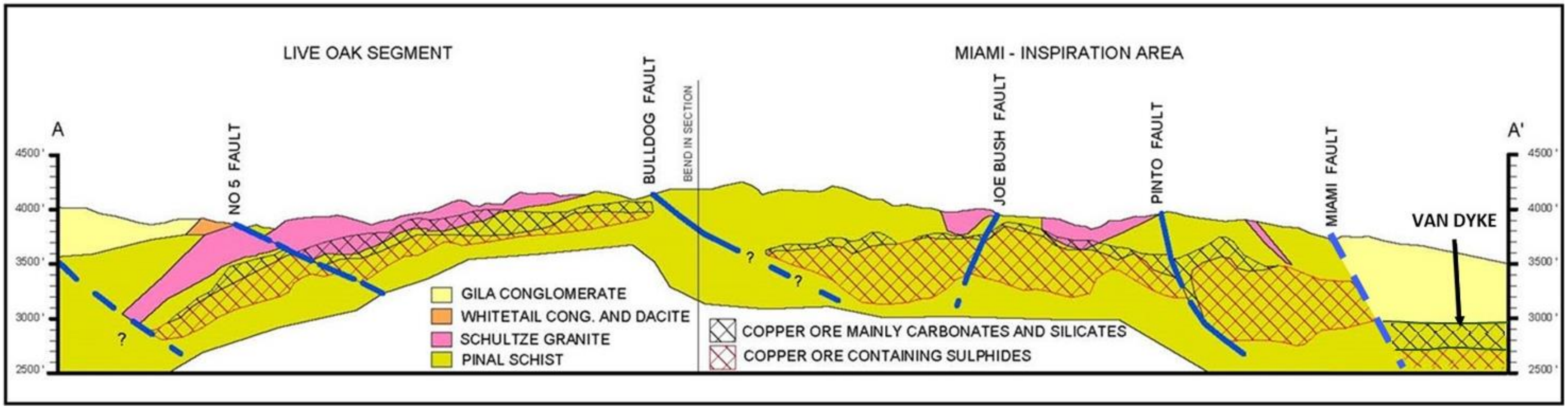


Figure 7-3 West to East Section of the Miami-Inspiration Trend (modified by L.J. Bernard after Peterson, 1962, modified by Stewart 2020)

The district's porphyry copper deposits include Miami-Inspiration, Miami East, Pinto Valley, Copper Cities, Castle Dome and Carlota. Potassic, argillic, sericitic and propylitic phases of alteration are associated with the deposits. Mineralization consists of hypogene (primary sulphide) (and secondary enrichment (oxide, silicate and sulphide) or supergene. Hypogene zones consist of the primary sulphide minerals pyrite and chalcopyrite with minor amounts of molybdenite, occasional sphalerite and galena; gold and silver may be recovered in small amounts as by-products. Supergene enrichment zones, and locally exotic copper deposits, are dominated by chrysocolla, malachite, azurite and tenorite as replacements of sulphide species or as infiltrations along late fracture systems. Chalcocite locally occurs as 'blankets' proximal to hypogene ore. The development of supergene mineralization was so extensive and the process of copper enrichment so thorough, that it led to the formation of numerous large, copper-rich ore bodies. Almost all of the ore mined in the Globe-Miami district came from supergene-enriched deposits.

The hydrothermal deposits are genetically and spatially related to the emplacement of Paleocene (59 to 64 Ma) calc-alkaline hypabyssal intrusions, specifically the younger porphyritic phases of the Schultz Granite (Pederson, 1962; Creasey, 1980; Titley, 1982b; Seedorff et al., 2008). The mean intrusive age of the main phase of the Schultz Granite is 61.2 +/ - 0.4 Ma. The isotopic age of the porphyry phase is uncertain because of extensive alteration and because of multiple periods of intrusion. The age of mineralization differs from place to place across the district and spans about 5m.y. From oldest to youngest, the known periods of mineralization are: Copper Cities orebody, 63.3 +/- 0.5 Ma; regional quartz-sericite veins, 61.1 +/- 0.3 Ma; Miami-Inspiration orebody, 59.5 +/- 0.3 Ma; and Pinto Valley orebody, 59.1 +/- 0.5 Ma (Creasey, 1980).

Following their formation, porphyry copper systems were affected by faulting, erosion and oxidation and, in the Oligocene-Miocene, by extensional tectonism that dismembered and variably tilted the upper crustal rocks in the area through the development of grabens and half-grabens (Creasey, 1980; Spencer and Reynolds, 1989; Wilkins and Heidrick, 1995; Seedorff et al., 2008; Mayer et al., 2008).

The Van Dyke copper deposit is located within the Inspiration-Miami trend of deposits that includes five principal orebodies; from west to east they are Live Oak, Thornton, Miami Caved, Miami East and Copper Cities (Ransome, 1919; Peterson, 1962; Olmstead and Johnson, 1966; Creasey, 1980).

7.3 Structural Setting, Geology and Mineralization of the Van Dyke Copper Deposit

7.3.1 Structural Setting and Deposit Geometry

The main structural element in the Miami area is the Miami fault; a district-scale north 020-trending, east-dipping (60 degrees) normal fault that outcrops approximately 400m west of the Van Dyke shaft and can be traced to the Copper Cities mine three miles to the north (Figure 7-1). The Van Dyke copper deposit lies to the east, and on the hangingwall side, of the Miami fault (Figure 7-3). The Miami fault developed during the Tertiary; forms the western edge of a graben that extends eastward to the city of Globe. The graben is filled with Late Miocene and younger Gila Conglomerate that thickens to the east and to the north.

East-side down displacement on the Miami fault is estimated to be approximately 200m, placing the Van Dyke deposit at deeper levels than the adjacent Miami Caved deposit. In the mid to late 1970's diamond drilling and deposit modeling identified the presence of at least two or more sympathetic normal faults in the hangingwall of the Miami fault. They include the Porphyry and Azurite faults which was interpreted to further dismember the Van Dyke deposit. Interpretive cross-sections produced by Occidental in the early 1970s illustrate a deposit that consists of two (or more) structural blocks or segments each bound by moderately east-dipping, east-side down normal faults. The deposit was originally interpreted as a continuous, sub-horizontal sheet-like body that dips eastward at 15-20°. The portion of the deposit bound by the Porphyry fault and the Azurite fault consisted of two crude, gently east-dipping panels separated by a barren to weakly mineralized core.

The work completed by Occidental indicated that the hangingwall of the mineralization was defined by a "leach cap" that underlies a layer of red hematitic clay. The hematitic clay layer marks the erosional unconformity between the Gila Conglomerate and the Pinal Schist. About 60m (200 feet) northeast of the Van Dyke shaft, mineralization is truncated by the Van Dyke fault, a post mineral structure coincident with the footwall of a granite porphyry dyke. The fault and dyke strike 110° and dip 70°NE. The localization of higher-grade secondary copper mineralization appears to have been controlled by the intersection of a low-angle (20 degree) fault zone with the Van Dyke fault (Figure 6-1). The greatest amount of brecciation and the highest copper grades occur near this intersection. The Van Dyke fault and its interpreted eastern extension (the "CW fault"), was interpreted to have formed barriers to the copper-bearing solutions that seeped into the low-angle fault zone. The amount of offset along these structures is uncertain.

The Van Dyke copper deposit has a drill-defined, north-easterly strike length of 1500m, a width of 1300m, and a thickness between 40m to over 230m. A three dimensional view of the deposit is illustrated in Figure 7-4, indicating the major faults, and the mineralized solid used in modelling, as well as the drillholes used. Additional plans and sections can be found in Section 14.

7.3.2 Geology

The Van Dyke deposit is not exposed at surface, therefore all known geological information for the deposit has been gained from exploration diamond drilling programs and from development of the Van Dyke shaft and related level workings. Based on diamond drilling, the deposit is covered by between 186 - 627m of alluvium and post-mineral Gila Conglomerate.

Almost all of the Van Dyke deposit is hosted by Lower Precambrian Pinal Schist; a minor amount of copper mineralization occurs in altered porphyritic dikes of the Paleocene Schultz Granite that intruded the Pinal Schist.

Stratified Rocks

Pinal Schist

Lower Precambrian (~1.7 - 1.6 Ga) Pinal Schist is typically pale to medium grey, strongly foliated meta-sedimentary rock consisting of up to 75-80% muscovite (or sericite) and quartz, and varying amounts of biotite, chlorite, k-feldspar and clay. It ranges from coarse-grained quartz-sericite schist to fine-grained quartz-sericite-chlorite schist. Evidence of early ductile deformation is provided by sections of schist that display tight (i.e. chevron) to isoclinal folds (Plate 7-1). More recent brittle deformation is demonstrated by extensive intervals of fractured to brecciated (and re-cemented) schist (Plate 7-2), quartz vein and fracture controlled copper mineralization. The interconnected open spaces created during brittle deformation served as conduits and depositional sites for secondary copper minerals. Late stage quartz ± sulphide veinlets and oxidized equivalents cut the foliation (Plate 7-5 and Plate 7-6).

Diabase, an important host to secondary copper mineralization at Miami East, has not been observed at Van Dyke.

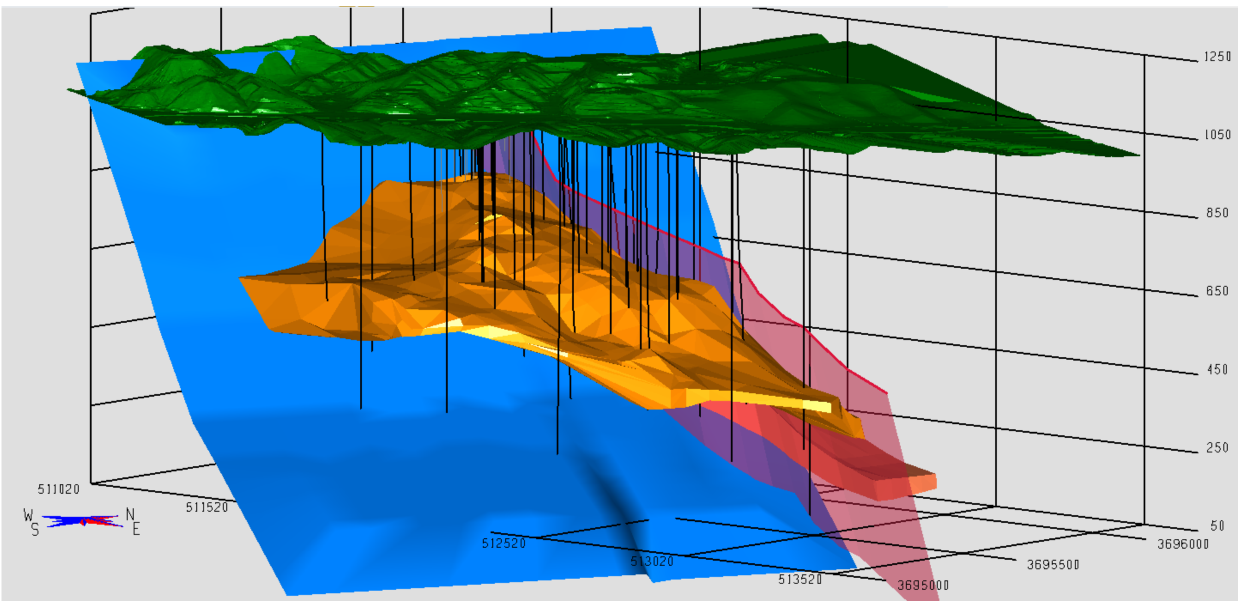


Figure 7-4 Three-Dimensional View of the Van Dyke Copper Deposit – Mineralized Solid (orange), Van Dyke Fault (red), Miami East Fault (blue), Topo and Drillholes

Plate 7-1 Chevron-folded Pinal Schist, Drillhole VD-14-05 at 439.7m

Plate 7-2 Brecciated Pinal Schist re-cemented in part by azurite and malachite, Drillhole VD-14-04 at 473.3m [the linear alignment of the mineralized structure suggest mineralized fracture]

Gila Conglomerate

The Tertiary and Quaternary Gila Conglomerate is the youngest of all sedimentary rock units on the Project. Its deposition was preceded by periods of faulting, uplift and extensive erosion. The base of the unit rests on a pronounced angular unconformity. In the Van Dyke area, Gila Conglomerate lies directly on weathered and leached Lower Precambrian Pinal Schist.

The composition of the conglomerate is highly variable, often representing the dominant local lithology. It is typically poorly sorted, but generally is moderately to well-stratified and is compositionally matrix-supported (Plate 7-3). Clasts range in size from pebbles to large cobbles and small boulders and are typically sub-rounded. This unit overlies and postdates mineralization, and therefore has little economic potential. Clasts of Pinal Schist containing secondary copper minerals have been observed at the base of the Gila Conglomerate in several drillholes within the deposit area.

Intrusive Rocks

Schultz Granite

The only intrusive rock identified to-date on the Project is Granite Porphyry of the Schultz Granite intrusion. The most continuous interval of intrusive rock encountered in drilling is a pale greenish grey, porphyritic biotite granodiorite. The rock is composed of up to 10% clear quartz phenocrysts, 2% zoned K-feldspar phenocrysts (Plate 7-4) set in a finer grained groundmass consisting mostly of plagioclase, K-feldspar, quartz, sericite, biotite and hornblende.

The granite is often moderately to intensely sericite-altered and ranges from being non or weakly mineralized to strongly mineralized, particularly where it is intensely fractured to shattered or brecciated. Copper Fox's first hole, VD14-01, located on the west side of the property passed through Pinal Schist and into Schultz Granite porphyry at a depth of 576.1m and stayed in intrusive to the end of the hole at 639.2m. Near the contact both units are weakly mineralized with pyrite±chalcopyrite and late quartz-molybdenite veinlets. The Pinal Schist exhibited phyllic-alteration, and Schultz Granite exhibited phyllic to potassic-alteration.

Re-modeling of the geological data for the Van Dyke deposit in 2019 identified a series of NNW trending porphyritic dikes cross the central and northern parts of the property. These dikes in places contain fragments of the Pinal Schist and are interpreted to have the same strike and dip orientation as the dike occupying the Van Dyke Fault.

Alluvium

Tertiary alluvium is composed primarily of reworked detritus derived from Gila Conglomerate. It contains appreciable brown clay and an assortment of pebbles, cobbles and boulders. It forms thin (<1m to ~ 20m) poorly sorted and poorly cemented deposits that are well-exposed in Bloody tanks Wash through the town of Miami. Recent erosion is dissecting these deposits and the underlying Gila Conglomerate.

Plate 7-3 Gila Conglomerate, Drillhole VD-14-01 at 45.7m

Plate 7-4 Schultz Granite, Drillhole VD-14-01 at 628.4m showing porphyritic biotite granodiorite with one zoned K-feldspar megacryst

7.3.3 Mineralization

Mineralization includes both hypogene (primary sulphide) and supergene (secondary oxidization/enrichment -oxide-silicate+/-sulphide) types, but the latter far outweighs the former in terms of abundance, grade and therefore economic potential.

Secondary copper mineralization comprises the majority of the Van Dyke deposit. Mineralization, consisting primarily of malachite, chrysocolla, azurite, cuprite and tenorite occurs over a 1,500m horizontal distance principally in tectonically fractured to brecciated panels of Pinal Schist. The secondary minerals in the vicinity of the Van Dyke shaft occur primarily as bands and crustifications, textures that suggest formation was by filling of open spaces, whereas in other parts of the deposit, the secondary copper minerals occur as staining on cleavage planes, in fractures and as in-situ replacement in quartz veins (Plate 7-5 and Plate 7-6). There are no relict sulphide grains in the upper part of the deposit. Beneath the secondary copper mineralization there exists a weakly developed Supergene zone; containing primarily chalcocite with sparse malachite, azurite and chrysocolla and is transitional down-section locally into weakly-developed zones of hypogene mineralization, primarily located in the central and western parts of the project area.

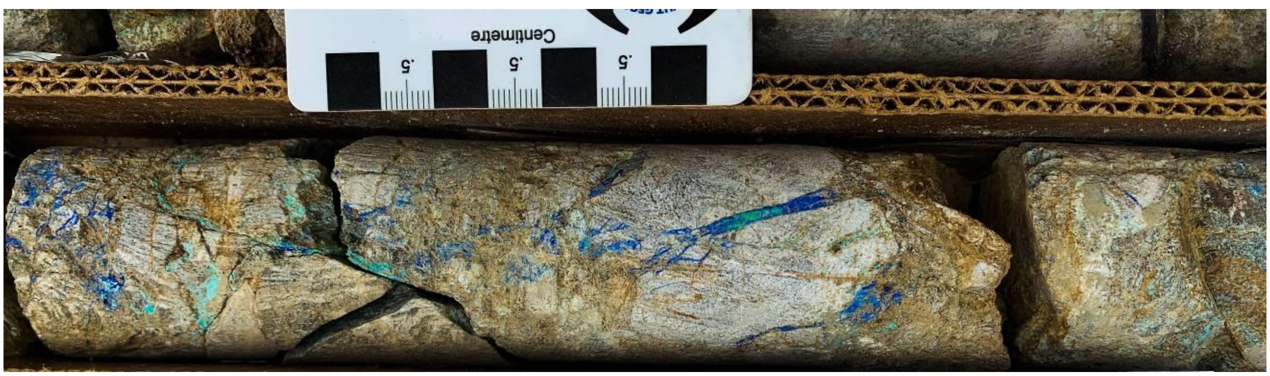


Plate 7-5 Malachite, azurite and chrysocolla in fractured Pinal Schist, 294.5m, Drillhole M-3

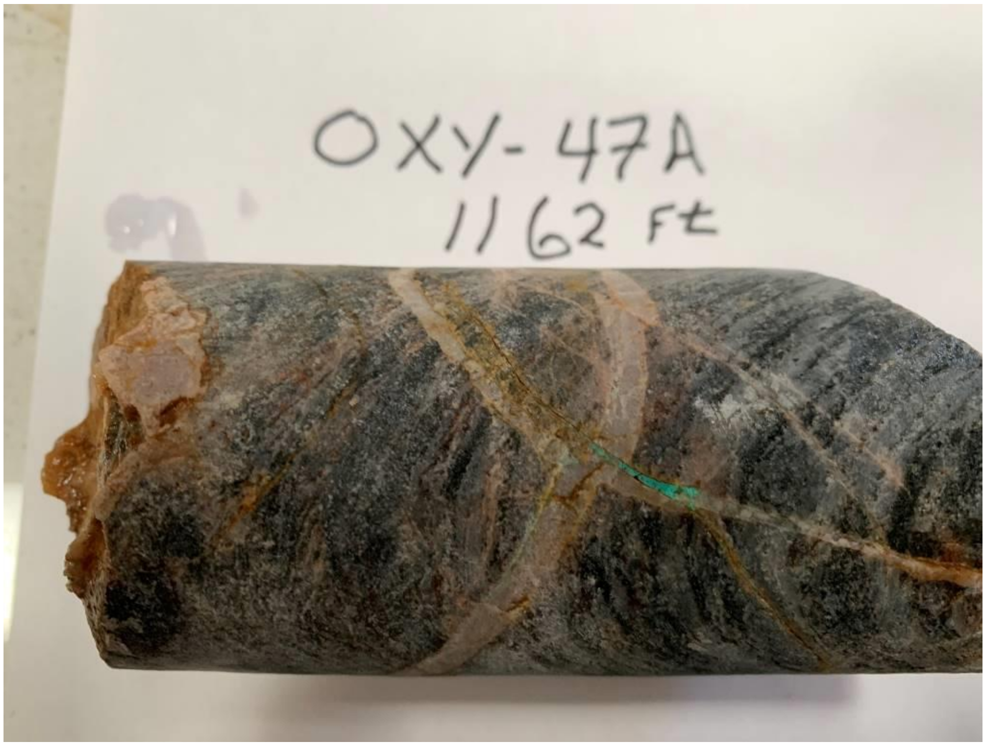


Plate 7-6 Malachite in cross-cutting quartz vein Pinal Schist, 354.3m, Drillhole OXY-47A

The secondary copper mineralization that comprises the majority of the Van Dyke copper deposit is believed to have formed from multiple weathering/oxidization/erosion cycles of primary hypogene copper mineralization. These oxidization/erosional cycles created copper laden solutions that over a significant period of time migrated laterally and vertically along interconnected fractures and zones of brecciation. In general, the grade of the secondary copper mineralization is a function of the number weathering/oxidization/erosions cycles ("enrichment factor") and the fracture/brecciated nature of the country rock prior to weathering/oxidization of primary sulphide copper mineralization.

Plate 7-7 Malachite, azurite and chrysocolla in fractured to brecciated Pinal Schist, 412.46 – 417.67m, Drillhole VD-14-0

8 Deposit Types

The Globe-Miami mining district in which the Van Dyke project occurs is known mainly for its large porphyry copper deposits, including the Miami-Inspiration, Miami East, Pinto Valley, Copper Cities and Castle Dome mines, and copper-bearing veins of the Old Dominion mine. The Miami-Inspiration operation consisted of a complex of ore bodies, including the main Live Oak and Thornton pits, and the underground Miami Caved deposit, that together covered an arcuate west-to-east strike length of about 4km (Creasey, 1980). The Miami East deposit is the eastern down-faulted extension of Miami-Inspiration (Peterson, 1962; Titley, 1989). About half of the Miami-Inspiration ore was mined from a porphyritic quartz monzonite phase of Paleocene Schultz Granite and about half came from the Proterozoic Pinal Schist. The deposits consisted of partly eroded leached caps, well-developed supergene enrichment zones, and underlying lower-grade hypogene zones. At the Miami East deposit, a chalcocite-bearing diabase sill was an important source of ore.

Porphyry copper deposits consist of disseminated copper minerals and copper minerals in veins, stockworks and breccias that are relatively evenly distributed throughout large volumes of rock. Porphyry copper deposits are typically high tonnage (greater than 100 million tons) and low to medium grade (0.3–2.0% Cu). They are the world's most important source of copper, accounting for more than 60% of the annual world copper production and about 65% of known copper resources. Porphyry copper deposits also are an important source of other metals, notably molybdenum, gold and silver.

The geometry and dimensions of porphyry copper deposits are diverse, in part because of post-ore intrusions, varied types of host rocks that influence deposit morphology, relative amounts of hypogene and supergene ore each of which has different configurations, and erosion and post-ore deformation including faulting and tilting. Porphyry copper deposits commonly are centered on small cylindrical porphyry stocks or swarms of dikes. A generalized model for a classic or calc-alkalic porphyry copper deposit is presented in Figure 8-1.

The vertical extent of hypogene mineralization in porphyry copper deposits is generally less than or equal to 1 to 1.5km. The predominant hypogene copper sulphide minerals are chalcopyrite, which occurs in nearly all deposits, and bornite, which occurs in about 75% of deposits. Molybdenite, the only molybdenum mineral of significance, occurs in about 70% of deposits. Gold and silver, as by-products, occur in about 30% of deposits.

Oxidization Processes in Porphyry Copper Deposits:
Supergene alteration and mineral assemblages are formed when copper and iron bearing sulphide minerals are exposed to near-surface groundwater as they are exhumed by erosion and exposed to weathering.

The distribution and percentage of mineral species within a porphyry copper deposit exert a pronounced effect on the resulting copper minerals and associated gangue. In porphyry copper deposits, the leached cap (minimal copper content) and enrichment blanket are features that form as a result of a number of weathering/oxidation cycles of sulfide-bearing minerals. As these rocks are exposed to weathering; during the oxidation process, the iron contained in minerals is transformed into red, reddish brown, orange and yellow colored iron oxides, while the sulfur combines with groundwater to produce a weak acid solution. The copper is dissolved from the copper bearing minerals (typically chalcopyrite and bornite) by these acidic solutions, which percolate downward to the water table, where they encounter reducing conditions that allow the copper to precipitate out as chalcocite (a copper-bearing sulfide). Over time this action can forms a thick, copper rich, blanket-shaped zone, known as an enrichment blanket.

The leached cap and the underlying enrichment blanket typically occur above the phyllic altered zone of a porphyry copper deposit due to copper sulfides and abundant amounts of pyrite (Figure 8-2). The enrichment process requires more pyrite than copper sulfides because pyrite is the primary source for the acidic solution required for enrichment blanket development. The leached cap and the enrichment blanket are generally thin or absent above the potassic and propylitic alteration zones due to the low pyrite content.

In rocks where the formation of acidic solutions does not occur due to either the absence of pyrite or in rocks with low pyrite content that generate weak acidic solutions, the copper-bearing sulfides are oxidized in place to form chrysocolla, malachite, azurite, atacamite and brochantite.

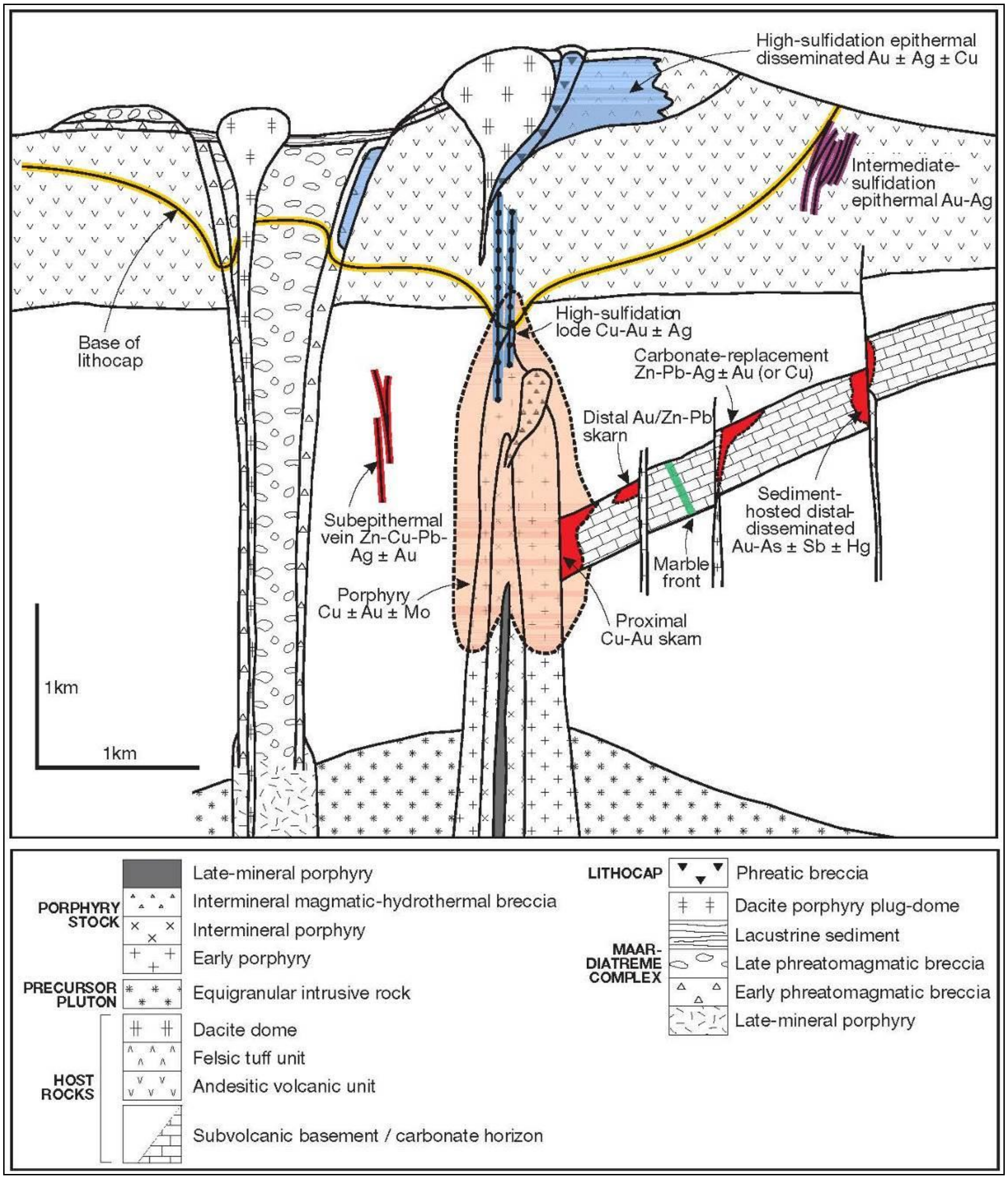


Figure 8-1 Generalized Model for a Telescoped Porphyry Copper System (After Sillitoe, 2010)

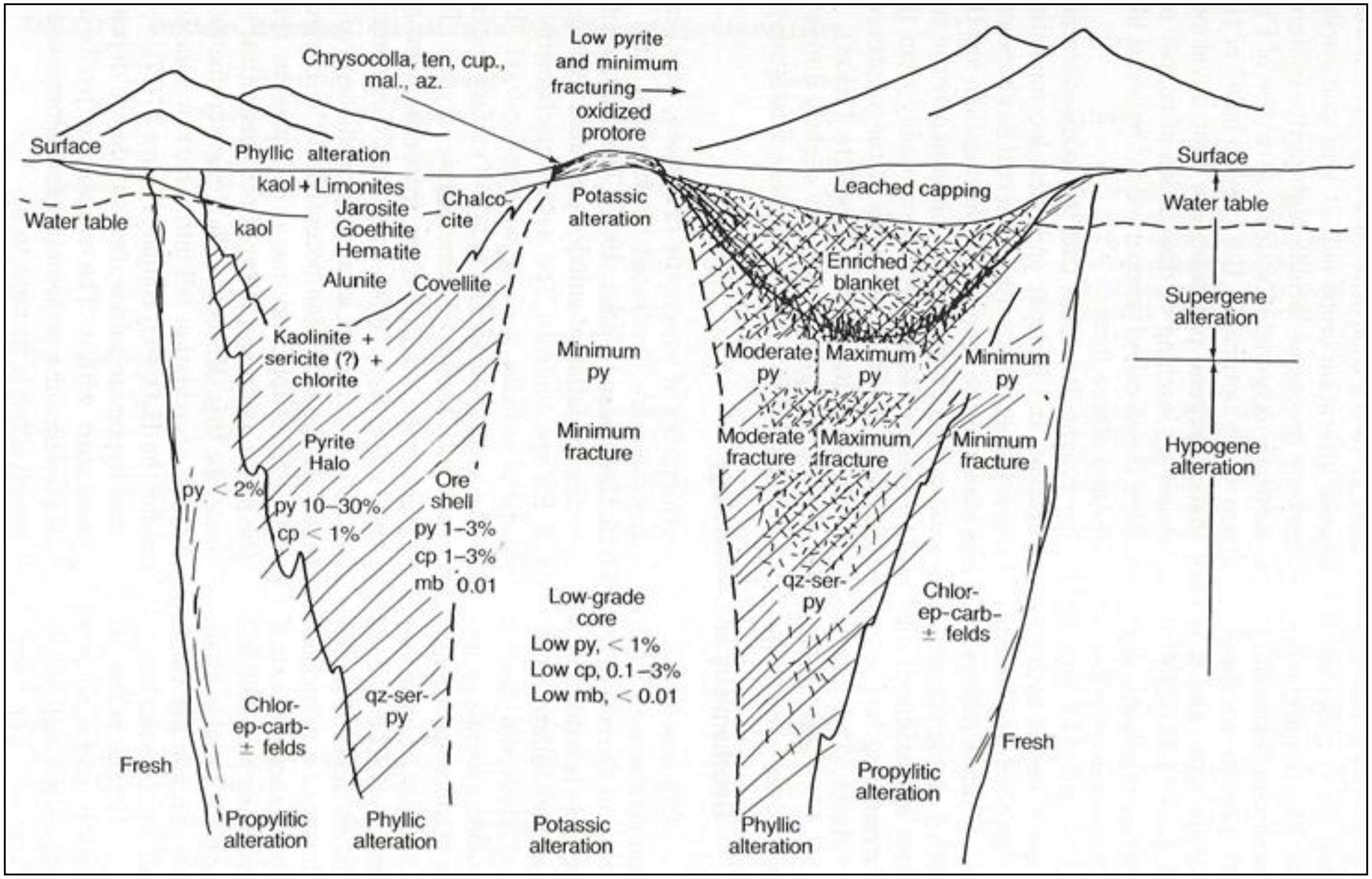


Figure 8-2 Idealized Results of the Interaction between Hypogene and Supergene Mineralization at an Exposed and Oxidizing Porphyry Copper Deposit (Guilbert And Park, 1986)

Van Dyke Oxide Copper Deposit:
The Van Dyke deposit is located immediately southwest of the Miami Caved deposit and east of the Miami East deposit. It is separated from the Miami Caved deposit and from the Miami East deposit by the Van Dyke fault. The Van Dyke deposit is interpreted to be the eastern extension of the porphyry copper deposit mined by the Miami-Inspiration operation and the southern extension of the Miami caved porphyry copper deposit. The deposit is covered by from 186m to 627m of alluvium and post-mineral Gila Conglomerate.

The Van Dyke deposit is hosted primarily in the Pinal Schist and to a lesser extent in porphyritic dykes of Schultz granite. Secondary copper mineralization comprises the majority of the Van Dyke deposit. The Oxide zone consists primarily of malachite, chrysocolla, azurite and cuprite. These copper minerals occur in fractures, in quartz veins and along cleavage planes but primarily in fractured to brecciated areas of Pinal Schist. Beneath the oxide copper mineralization there exists a weakly developed Supergene zone containing mainly chalcocite with sparse malachite, azurite and chrysocolla; it is transitional down-section into local, weakly-developed zones of hypogene chalcopyrite-pyrite-molybdenite mineralization particularly in the center and western parts of the project area. Hypogene copper-molybdenum mineralization is subordinate to the secondary copper mineralization that comprises the majority of the Van Dyke copper deposit.

The mineral zonation, secondary copper mineralogy, significant molybdenum concentrations within the Oxide zone (Table 8-1) combined with the features typical of a Leach Cap, supports the interpretation that the Van Dyke oxide deposit resulted from a number of weathering/oxidization/erosional cycles similar to that documented at the Lakeview and Morenci porphyry deposits in central and southern Arizona.

Table 8-1 Molybdenum concentrations from selected drillholes within the Oxide zone, Van Dyke deposit

DDH ID	From (m)	To (m)	Interval (m)	ASCu (%)	Mo (ppm) average	Mo (ppm) Min	Mo (ppm) Max
VD14-01	246.90	368.40	121.50	0.251	10	5.0	420
VD14-02	375.21	458.72	83.51	0.507	70	20.0	640
	481.58	593.14	111.56	0.230	30	3.0	150
VD14-03	315.47	434.64	119.17	0.391	80	6.0	250
VD14-04	452.32	616.18	163.86	0.287	40	50.0	1100
VD14-05	401.30	448.06	46.76	0.513	4	0.5	27
VD14-06	249.02	281.64	32.62	0.595	20	6.0	123
	310.29	318.82	8.53	0.326	10	5.0	40
	350.82	383.74	32.92	0.192	20	5.0	106
OXY-10A	338.57	379.17	40.60	0.709	50	20.0	110
OXY-11	309.37	379.17	69.80	0.162	70	20.0	290
OXY-15	407.52	457.50	49.98	0.427	30	10.0	50
OXY-17B	308.76	446.23	137.47	0.291	40	12.0	208
OXY-18	398.67	529.13	130.46	0.302	40	20.0	501

The above intervals do not represent true thickness of the mineralized interval. Min=minimum, Max = maximum

9 Exploration

9.1 Historical Exploration

Exploration on the Van Dyke property began in 1916 with the collaring of rotary drillhole V-1 by Van Dyke Copper Co. from a ridge top located 1000 feet southwest of the Miami Copper's No. 5 Shaft in the northwest corner of the patented claim area. The drillhole intersected abundant copper oxide and copper silicate mineralization within a fault zone at a depth of 1,182ft (Peterson, 1962). A second drillhole, V-2 collared 2,600ft east-southeast of V-1 also intersected mineralized breccia, and a third hole, V-3, collared 6,700ft farther to the southeast was abandoned at a depth of 1,400ft in Gila Conglomerate Gila.

The results of the drilling program led to the sinking of the Van Dyke shaft, located just 200ft south of drillhole V-1. The excavation of the 6' by 11' vertical shaft began in 1919 and was completed to a depth of 1,692ft in 1920 (Rice, 1921). The shafts' intended use was for exploration and development, but three levels of underground workings were advanced from it that supported two short periods of mining. The mine was closed in 1945.

Two small inconsequential exploration drilling programs were later completed. In 1947, AMICO Mining Corp., a consortium of three major copper producers, leased the property and drilled four deep churn holes to test the deposit. All four holes were collared in Gila Conglomerate and were spaced equally along a northeast-oriented line starting approximately 2500 feet south of the Van Dyke shaft near Cherry Flats Road. Three of four holes penetrated the base of the Gila conglomerate, beneath which only traces of copper oxide and iron oxide minerals were noted in generally fresh and unmineralized Pinal Schist (Clary et al., 1981). In 1964, Freeport Sulfur Company leased the property and drilled two holes that failed to intersect mineralization (Clary et al., 1981). Data does not exist for any of the six holes mentioned above.

In 1968, Occidental Minerals Corporation leased the property and began what became a systematic exploration diamond drilling program. Occidental optioned the property to other operators periodically during the ensuing 12 years that it held the lease, including Utah and AMAX, but those entities did not earn an interest in the property. By 1975, a total of 50 holes had been drilled throughout the project area covering a polygonal area with maximum dimensions of approximately 1300m east-west by approximately 1000m north-south.

From 1976-1980 Occidental's work focused on in situ leach pilot testing in an area west of the Van Dyke shaft, and area that was later leached in the late 1980s by Kocide and evaluated on a broader scale by Arimetco.

The historical exploration data base includes detailed logs for 45 holes drilled between 1968 and 1975 that describe lithology, alteration and mineralization. The logs also provide a complete total copper and acid soluble copper analytical results for each interval sampled. A number of the logs also list analytical results for silver, gold, sulphur and molybdenum. The recorded values for silver, gold and sulphur, where present, typically cover a series of sample intervals and may represent weighted averages. The recorded values for molybdenum are shown on a sample by sample basis, but only for a select number of the drillholes. The lack of a complete or near complete historic data set for silver, gold and molybdenum excludes these elements from further evaluation.

In 2019, total of 2,193 historical sample pulps, and core samples from 38 drillholes were re-analyzed for Total Copper, Acid Soluble Copper and Cyanide Soluble Copper. Re-analysis of the remaining historical drillholes was not possible due to the lack of drill core and sample pulps. The 2019 analytical results were compiled with the historical analytical results and reviewed in detail. However, there are no assay certificates for the any of the historical analytical data to back up the manually recorded analytical data. Core recovery data and any QA/QC procedures were not apparent from the drillhole logs or from any other historical documentation reviewed. All 2014 and 2019 analytical results have assay certificate and was subjected to a robust QA/QC program.

A review of drill logs, drill core and pulps by MMTS served as a means of verifying the authenticity and accuracy of the data recorded manually on the drill logs.

The historical data base also includes underground data for total copper.

MMTS Assessment of Exploration Data

Late in 2013, MMTS took part in the evaluation of the exploration materials which included: a detailed assessment of core, drillhole logs and pulps remaining from seven selected drillholes; a core box and drill footage determination of core remaining from drillholes OXY-1 through OXY-30, and; a general account of the pulps that remain from core sample analysis.

The six drillholes selected for detailed review (OXY-6, -7, -8, -15, -27 and VD-73-6) cover 800m of eastward strike length and up to 550m of width. They provide an accurate representation of the geology and mineralization of the copper deposit. However, most of the material remaining in the core boxes was not split (i.e. halved) core but consisted of ~3/8” minus material. The reason for this was that the core was so badly broken that it could not be halved with a splitter, so Occidental ran each sample through a jaw crusher, took a riffle-split of the material to send to the lab, and returned the remainder to the core box as the reference sample (Tim Marsh, personal communication, December, 2013). This procedure would likely have resulted in a more homogeneous and representative sample than using a conventional core splitter.

Drillhole Collar Locations – Conversion of Grid and Resurvey

All historical drillholes were originally surveyed in local mine grid coordinates; there is no record of where the mine grid originates nor which way it is oriented. Copper Fox undertook a search for historic drillhole collars using existing exploration plan maps of the project area and was able to positively identify numerous collars in the field. A Trimble GeoHX GPS with sub-metre accuracy was used to survey the located collars in North American Datum (NAD) 27, UTM zone 12 (metres). The locations of 15 exploration drillhole collars and 9 ISL test well collars have been confirmed and surveyed. Three old survey monuments that had old mine coordinates associated with them were also located and surveyed. The location information for the survey monuments and drillhole collars was then used to perform a regression that translated undiscovered collar locations from mine grid coordinates into NAD 27 UTM coordinates.

9.2 Assessment of Historic Exploration Data

Following acquisition of the Project in 2013, Copper Fox initiated compilation and detailed re-examination of all available historical information that existed for the Project. The information included public and private hard copy reports, underground level plan maps, surface drillhole plan maps and cross-sections, and drillhole logs. All of the information was scanned and organized into an electronic data base that was made available to MMTS. Hard copies were re-filed and safely stored in the company's corporate offices.

In addition to capturing project information from the paper files, Desert Fox was also able to locate historic drill core and pulps for most of the holes drilled between the years 1968 and 1976. Fortunately, careful storage and a dry climate preserved the majority of the materials. Core and pulps were removed from the basement of a storage building located within the town of Miami and paper files were retrieved from trailers located on patented claims near the Van Dyke shaft. All of the materials were relocated to Desert Fox's new office and storage facilities located in the town of Miami.

The Copper Fox 2019 drill core chip, reject, and pulp sampling program is described in Section 10-3.

10 Drilling

10.1 Historic Drilling

Prior to Copper Fox acquiring the Project, a total of 70 exploration holes and 17 ISL wells had been drilled on the property. Of the 70 historic exploration holes, 23 were drilled between 1916 and 1964; they were a combination of churn, rotary or reverse circulation (RC) and diamond drillholes that tested the breadth of the property, and for which only anecdotal information is known. The remaining 48 exploration holes were diamond drillholes completed from 1968-1975 to systematically assess the Van Dyke deposit area; near-complete technical data has been compiled for the majority of these holes. The 17 ISL wells were drilled in close proximity to one-another from 1976-1978 and in 1988 in an area immediately west of the Van Dyke shaft. At least seven were diamond drillholes for which limited core, but no written descriptions, has been recovered. Mineralized intervals for these wells were sampled, analyzed and later reported as weighted averages in Clary et al. (1981), but no other detail exists for the wells. Drilling campaigns completed prior to Copper Fox's acquisition of the Project, for which abundant exploration data exists, are believed to have been conducted using industry best management practices consistent with the era in which the work took place.

In 2013, BHP mistakenly drilled hole MU-13-2, located near historic drillhole OXY-6, on the north-central part of the Van Dyke project where it owns surface rights but not the mineral estate patent. BHP completed the RC hole to a depth of 1166.5m to assess the area's potential to host deeply buried porphyry copper mineralization. Once the trespass was realized, BHP provided all data collected for the drillhole to Copper Fox. The "quick log" for the drillhole prepared by BHP noted the presence of a significant clay component in the samples from 265m to 402.4m and chrysocolla and native copper (cuprite) in the interval from 402.44m to 591.10m; the interval of particular interest to Copper Fox. BHP only retained chip samples for the interval from 487.68 to 591.01 which Copper Fox analyzed for TCu, ASCu and CNCu. Unfortunately, the "quick log" provided by BHP reports that the strongest concentrations for chrysocolla and cuprite were observed in the interval 402.44 and 487.68 for which no samples were collected.

10.2 Drilling by Copper Fox

In 2014, from late-March to mid-June, Copper Fox completed six PQ diameter diamond drillholes with an aggregate length of 3,211.7m. The holes were drilled across the Van Dyke copper deposit, covering a west-to-east distance of approximately 825m and a north-south distance of approximately 500m. All six drillholes were completed to their desired depth and encountered geology, alteration and mineralization consistent with a secondary or enriched copper deposit. The first drillholes bottomed in Schultz granite. The other five drillholes penetrated the base of the post-mineral Gila Conglomerate, passed through broad intervals of secondary copper mineralization, through the oxide/sulphide contact and was terminated in unoxidized, weakly to non-mineralized Pinal Schist. Mineralization is hosted primarily by variably broken to shattered or brecciated Pinal Schist, and by intrusive breccia and granite porphyry of the Schultz Granite. The first hole was drilled to evaluate the area that had been the subject of an earlier ISL test program. It encountered minerals that are common by-products of ISL, but still returned important intervals of supergene and hypogene copper mineralization. The remaining five drillholes were twins of original holes. One of the five twin holes encountered the effects of incidental leaching which resulted in a marked reduction in its overall grade relative to the original hole. The four-remaining twin drillholes encountered intervals of copper mineralization consistent with those of their respective original holes. Drilling procedures were provided in detail in a NI 43-101 technical report by Bird and Lane (2015).

Table 10-1 lists exploration drillholes and ISL wells completed on the property by year and operator. Figure 10-1 shows the locations of all drillholes and wells completed within the property. Results for the 2014 Copper Fox drillholes are listed in Table 10-2.

Table 10-1 List of Drillholes, Van Dyke Project

Year	Hole Identification Range	Exploration Company	Drillhole Type	Number of Holes Drilled	Reported Meters Drilled
1916-1917	V-1 to V-3	Van Dyke Copper	unknown	3	unknown
1947	Amico-1 to Amico-4	AMICO	Churn	4	unknown
1964	Freeport-1 & Freeport-2	Freeport Sulphur	unknown	2	unknown
1967(?)	Sho-Me-1 & Sho-Me-2	Sho-Me Copper / Van Dyke Copper	unknown	2	unknown
1968-1974	OXY-1 to OXY-31, OXY-33	Occidental Copper	Core	34	19,825.0
1972-1973	VD-1 to VD-7, VD-9, VD-10, VD-16	AMAX	Core	9	5,367.8
1975	C-UOXY-24, UVD-8, UVD-11 to UVD-14, UCV-17, LC-UVD-1	Utah International	Core	8	4,184.9
1976-1978	OXY-41 & OXY-42	Occidental Copper	Core	2	832.1
1978	OXY-44 to OXY-48, M-1 to M-5	Occidental Copper	Core; ISL Monitoring Wells	10	3,384.3
1988	K-1 to K-5	Kocide Chemical	ISL Wells	5	unknown
2013	MU-13-2	BHP Copper	RC	1	1,166.5
2014	VD14-1 to VD14-6	Copper Fox Minerals	Core	6	3,211.7

Table 10-2 2014 Diamond Drill Intersections, Van Dyke Copper Project

Drillhole ID	From (m)	To (m)	Interval (m)	Total Copper (%)	Acid Soluble Copper (%)
VD14-01	246.9	368.4	121.5	0.357	0.249
VD14-02	375.2	591.6	216.4	0.444	0.359
incl	375.2	398.1	22.9	1.41	1.299
VD14-03	315.5	434.7	119.2	0.681	0.391
VD14-04	452.3	598.0	145.7	0.376	0.316
VD14-05	401.3	448.1	46.8	0.583	0.528
VD14-06	249.0	383.7	134.7	0.346	0.246
incl	249.0	281.6	32.6	0.749	0.631

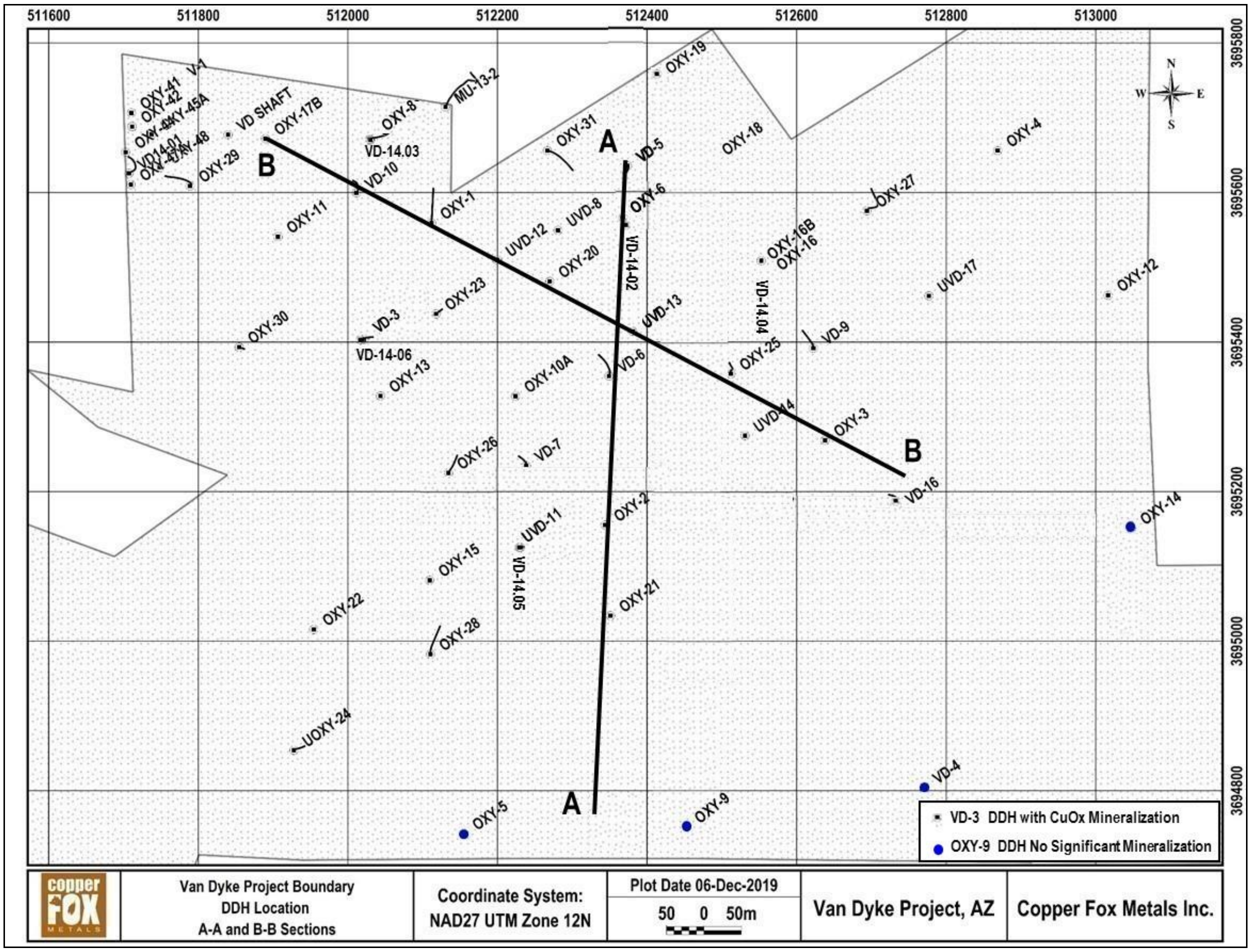


Figure 10-1 Exploration Drillhole and ISL Well Locations, Van Dyke Copper Project

10.3 2019 Re-analysis of Drill Core, Pulps and Rejects

A total of 2,465 samples (1,810 drill core pulp, 341 drill core chip, and 42 drill core reject samples), including 157 CRMs, 62 duplicates and 53 blanks, from the 2019 resampling program were submitted to Skyline.

MMTS is of the opinion that the 2019 Copper Fox re-sampling program,

1. generated analytical results that are suitable for use in resource estimation; and
2. where both historic data and 2019 data exist, the more recent data will be used for resource estimation.

A brief description of each of the mineral zones identified by the 2019 analytical program is given below.

Oxide Zone:

The Oxide zone is defined at that interval containing greater than 0.025% Total Soluble Copper. The Oxide zone typically occurs below and interval of hematitic and limonitic leached Pinal Schist. The leach cap above the Oxide zone typically contains between 10 and 100 parts per million copper. In places across the deposit, the Oxide zone is exposed at the erosional unconformity between the Gila Conglomerate and the Pinal Schist (Figure 10-1 and Figure 10-2). The weighted average grades for the mineralized intervals in the Oxide zone are shown in Table 10-3.

Table 10-3 2019 Drillhole Intersections for Total Copper (TCu), Acid Soluble Copper (ASCu), Cyanide Soluble Copper (CNCu) & Total Soluble Copper (TSCu) Van Dyke Copper Deposit (using a cut-off grade of 0.025% TSCu)

DDH ID	From (m)	To (m)	Interval (m)	TCu (%)	ASCu (%)	CNCu (%)	TSCu (%)
OXY-1	293.83	422.15	128.32	0.234	0.128	0.009	0.138
OXY-2	402.64	496.52	93.88	0.397	0.228	0.051	0.339
OXY-3	591.92	628.19	36.27	0.262	0.131	0.088	0.219
OXY-4	672.69	745.85	73.16	0.122	0.035	na	0.035
OXY-5	448.36	474.88	26.52	0.059	na	na	na
and	519.38	563.58	44.20	0.064	na	na	na
OXY-6	376.12	583.69	207.57	0.572	0.495	na	0.495
OXY-7	396.24	548.03	151.79	0.474	0.432	0.005	0.438
OXY-8	316.99	440.70	123.71	0.621	0.432	na	0.432
OXY-9	NO SIGNIFICANT MINERALIZATION						
OXY-10	336.80	512.06	175.26	0.383	0.294	0.045	0.339
OXY-11	303.28	393.80	90.52	0.316	0.138	0.109	0.247
OXY-12	647.70	680.01	32.31	0.341	0.307	0.004	0.311
OXY-13	304.19	373.38	69.19	0.183	0.108	0.005	0.113
and	387.71	437.69	49.98	0.304	0.183	0.019	0.202
OXY-14	NO SIGNIFICANT MINERALIZATION						
OXY-15	378.56	457.50	78.94	0.366	0.309	0.005	0.315
OXY16	DDH OXY-16 RE-DRILL OXY-16B						
OXY16B	411.48	612.04	200.56	0.247	0.160	na	0.178
OXY-17B	284.99	462.99	178.00	0.425	0.235	0.099	0.334
OXY-18	394.11	629.11	235.00	0.298	0.212	0.039	0.251
OXY-19	NO ANALYTICAL DATA IN OXIDE ZONE						
OXY-20	333.45	541.32	207.87	0.313	0.194	0.041	0.236
OXY-21	474.88	498.35	23.47	0.624	0.154	0.432	0.586
OXY-22	406.60	563.86	157.26	0.136	0.087	0.011	0.098
OXY-23	295.05	466.34	171.29	0.225	0.139	0.017	0.157
OXY-24	NO DATA						
OXY-25	435.86	600.46	164.60	0.506	0.424	0.014	0.438
OXY-26	321.62	481.58	159.96	0.156	0.092	0.021	0.114
OXY-27	522.12	660.50	138.38	0.345	0.279	0.008	0.287
OXY-28	403.25	503.22	99.97	0.177	0.111	0.008	0.129
OXY-29	265.18	437.39	172.21	0.440	0.286	0.025	0.311
OXY-30	NO DATA - HOLE DID NOT REACH GILA/PINAL SCHIST CONTACT						
OXY-31	515.11	560.83	45.72	0.198	0.078	0.009	0.087
OXY-32	676.66	799.19	122.53	0.066	0.020	na	0.038
OXY-41	256.64	375.51	118.87	0.273	0.170	0.010	0.180
OXY-42	250.85	336.19	85.34	0.334	0.241	0.013	0.255
OXY-44	265.48	354.48	89.00	0.265	0.191	0.001	0.192
OXY-45*	284.68	358.14	73.46	0.395	0.296	0.004	0.300
OXY-47A	267.71	359.05	91.34	0.295	0.202	0.003	0.205
OXY-48*	276.45	394.41	117.96	0.519	0.325	0.009	0.334

Table 10-3 continued…

V-1**	356.31	371.55	15.24	1.256	na	na	1.165
VD-1	553.52	592.53	39.01	0.552	0.319	0.219	0.537
VD-2	MISSING						
VD-3	249.94	392.48	142.54	0.331	0.212	na	0.231
VD-4	NO SIGNIFICANT MINERALIZATION						
VD-5	390.75	594.66	203.91	0.268	0.202	0.014	0.220
VD-6	361.49	511.45	149.96	0.318	0.277	0.007	0.284
and	544.98	557.48	12.50	0.157	0.131	0.015	0.146
VD-7	384.66	490.12	105.46	0.246	0.187	0.008	0.204
UVD-8	336.80	546.96	210.16	0.148	0.107	na	0.107
VD-9	547.12	576.99	29.87	0.334	0.154	0.145	0.299
VD-10	298.40	429.46	131.06	0.325	0.103	0.194	0.297
UVD-11	386.18	456.74	70.56	0.416	0.305	na	0.307
UVD-12	310.29	337.41	27.12	0.228	0.143	0.009	0.152
and	358.14	508.71	150.57	0.280	0.127	0.042	0.168
UVD-13#	355.09	515.87	160.78	0.434	0.377	0.003	0.387
UVD-14	521.06	597.10	76.04	0.440	0.274	0.118	0.393
VD-15	MISSING						
VD-16	527.30	578.21	50.91	0.121	0.090	0.002	0.092
and	603.50	630.94	27.44	0.087	0.059	0.001	0.061
VD-17	MISSING						
VD14-01	231.65	390.30	158.65	0.312	0.195	0.020	0.216
VD14-02	375.21	594.66	219.45	0.431	0.338	0.037	0.375
VD14-03	313.94	434.64	120.70	0.674	0.386	0.143	0.529
VD14-04	413.61	435.56	21.95	0.091	0.060	0.003	0.062
and	450.80	616.18	165.38	0.348	0.285	0.012	0.297
VD14-05	399.59	459.79	60.20	0.469	0.402	0.014	0.416
VD14-06	240.49	283.16	42.67	0.565	0.459	0.013	0.472
and	310.29	323.09	12.80	0.278	0.225	0.015	0.241
and	349.61	383.74	34.13	0.345	0.186	0.034	0.220
MU-13-02	490.73	591.01	100.28	0.185	0.125	0.025	0.150

Notes:
* = inserting historical average grade in intervals where pulp/core/reject not available
** = historical value, zero grade inserted in intervals where data is missing
# = ddh terminated in oxide copper mineralization (0.215% TCu, 0.180% ASCu)

Supergene Zone:
The Supergene zone is defined as CNCu concentrations in excess of 0.10% or where the CNCu concentrations exceed the ASCu concentrations. The mineralogy identified on the historical drill logs and the 2019 analytical results was used in determining the limits and extent of the Supergene zone.

The upper boundary of the Supergene zone is typically very sharp and occurs over a one sample interval. The lower boundary is typically gradational and is selected where the cyanide soluble copper concentration decreases to less than 0.10% and total copper content represents the copper concentration downhole.

The Supergene zone shows an irregular distribution within the Van Dyke deposit. In general, the higher chalcocite concentrations are located along the northern edge of the project area and in the southern portion of the project area. The thickness and weighted average grade of the chalcocite mineralization is shown in Table 10-4. Drillholes OXY-23 and VD-10 contain several intervals ("stacked") of chalcocite mineralization.

Table 10-4 2019 Mineralized Intersections for Cyanide Soluble Copper (CNCu) Van Dyke Copper Deposit (using a cut-off grade of 0.10% CNCu)

DDH	From (m)	To (m)	Interval (m)	CNCu (%)
OXY-2	481.58	494.69	13.11	0.323
OXY-3	623.32	628.19	4.87	0.250
OXY-10	461.16	474.88	13.72	0.481
OXY-11	352.35	379.17	26.82	0.371
OXY-13	434.95	439.12	4.17	0.164
OXY-17B	399.59	457.2	57.61	0.277
OXY-18	598.93	629.11	30.18	0.270
OXY-20	515.42	534.92	19.50	0.336
OXY-21	483.41	498.35	14.94	0.665
OXY-22	555.96	563.88	7.92	0.138
OXY-23	398.07	399.29	1.22	0.136
	408.43	409.65	1.22	0.136
OXY-25	589.79	595.56	5.77	0.131
OXY-26	463.30	470.92	7.62	0.233
OXY-28	476.40	479.45	3.05	0.100
OXY-29	381.00	398.07	17.07	0.163
VD-1	564.18	592.53	28.35	0.298
VD-5	577.9	582.47	4.57	0.383
VD-6	498.65	500.48	1.83	0.180
VD-9	562.36	576.99	14.63	0.290
VD-10	315.77	349.30	33.53	0.413
	369.42	395.63	26.21	0.268
	415.14	421.54	6.4	0.100
VD-12	488.29	504.44	16.15	0.290
UVD-14	562.05	592.99	30.94	0.278
VD14-02	552.33	591.62	39.29	0.173
VD14-03	335.58	384.8	49.22	0.315
VD14-04	614.23	616.18	1.95	0.491
VD14-06	382.68	383.74	1.06	0.268

The above intervals do not represent true thickness.

Hypogene Zone:

The 2019 modelling also mapped the distribution of the primary sulphide mineralization across the Van Dyke property based on historical analytical results for total copper and molybdenum. Unfortunately, most of the historical drillholes were not analyzed for molybdenum. Table 10-5 shows weighted average grades for total copper and molybdenum for selected drillholes in the Hypogene zone. Three areas of greater than 0.10% Hypogene copper mineralization occur within the Van Dyke deposit. Two of these areas are located on the northern border of the Project adjacent to the Miami caved area and the Thornton Pit. The third area is oriented in a north-south direction and is located approximately in the center of the property.

Table 10-5 Weighted average grades of total copper and molybdenum concentration in selected drillholes in the Hypogene zone of the Van Dyke deposit

DDH ID	From (m)	To (m)	Interval (m)	Cu (%)	Mo (%)
OXY-1	655.32	901.28	245.96	0.167	0.01
OXY-10	515.11	531.57	16.46	0.106	0.004
OXY16B	617.83	651.66	33.83	0.108	0.006
OXY-17B	496.21	520.60	24.39	0.234	0.005
OXY-18	636.12	644.35	8.23	0.217	0.004
OXY-19	716.89	785.16	68.27	0.136	0.019
OXY-29	437.39	501.09	63.70	0.200	na
OXY-32	676.66	708.96	32.30	0.105	na
VD-7	493.17	508.41	15.24	0.128	na
VD14-01	379.48	630.94	251.46	0.161	0.024
MU-13-2	710.18	786.38	76.20	0.145	0.020

The above mineralized intervals do not represent true thickness; na=not analyzed

Updated Geological Model:
In 2019, Copper Fox undertook a review of all (historical, 2014 drilling and DDHMU-13-02) drillholes information from the property to gain a better understanding of the geology and the controls on distribution of the secondary copper mineralization. The 2019 re-modelling demonstrated that the geology in more complex than previously depicted and that the distribution of the secondary mineralization and mineralogical zoning is consistent with multiple cycles of weather/ oxidization/erosion of a porphyry copper deposit.

The modelling demonstrated the presence of a thick layer of hematitic clay located at the erosional unconformity between the Gila Conglomerate and underlying Precambrian age Pinal Schist. The modelling shows that the Pinal Schist was intruded by a series of WNW trending porphyritic dike related to the Schultz granite that outcrop at the unconformity across the property.

The re-analysis of pulp and core samples from 38 drillholes in 2019 in conjunction with the drill log descriptions from the property allowed a more precise definition of the: leach cap and mineral zonation within the deposit. The review of available molybdenum concentrations indicated that all three mineralogical zones contain significant concentrations of molybdenum that supports the concept of weathering and oxidization of a porphyry copper deposit. The review of historical drillholes from the Van Dyke deposit that were not previously split for analytical purposes, show textures consistent with in situ oxidization of mineralized fractures, quartz veins and disseminated mineralization.

The copper mineralogy in the Oxide zone (malachite, chrysocolla and azurite) and vertically stacked zones of Supergene mineralization (chalcocite) within the deposit is consistent with oxidization of primary copper minerals in a low pyrite environment.

Figures 10-2 and 10-3 are schematic cross-sections that show the distribution of the Oxide, Supergene (chalcocite) and Hypogene (sulphide) zones as well as the location of the >0.025% Total Soluble Copper (TSCu) zone across the property. The locations of the schematic sections are shown in Figure 10-1. The cross-sections are for schematic purposes and do not represent the true thickness of the various mineral zones.

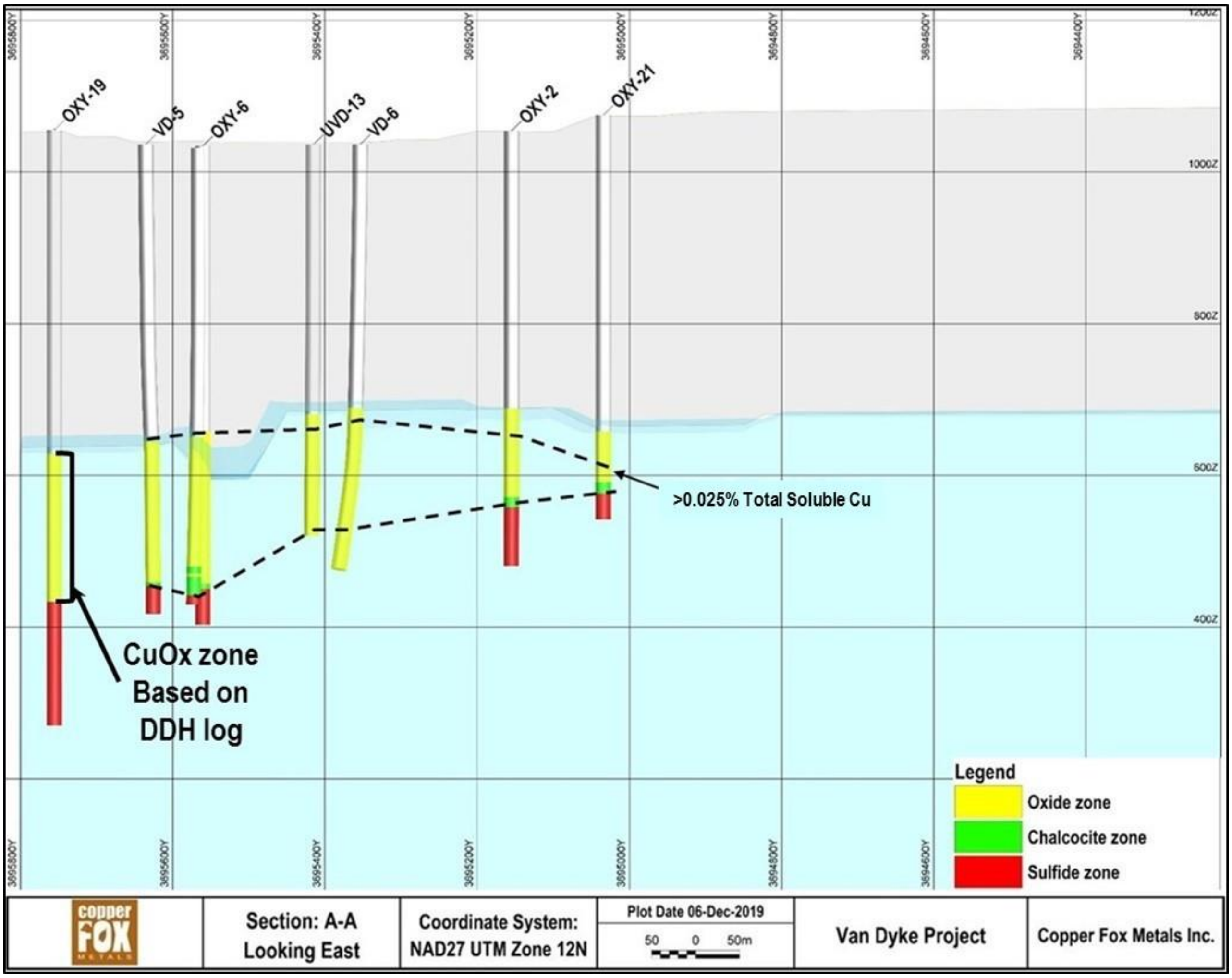


Figure 10-2 Schematic North-South Cross-Section (A-A' looking east) of Van Dyke Copper Deposit

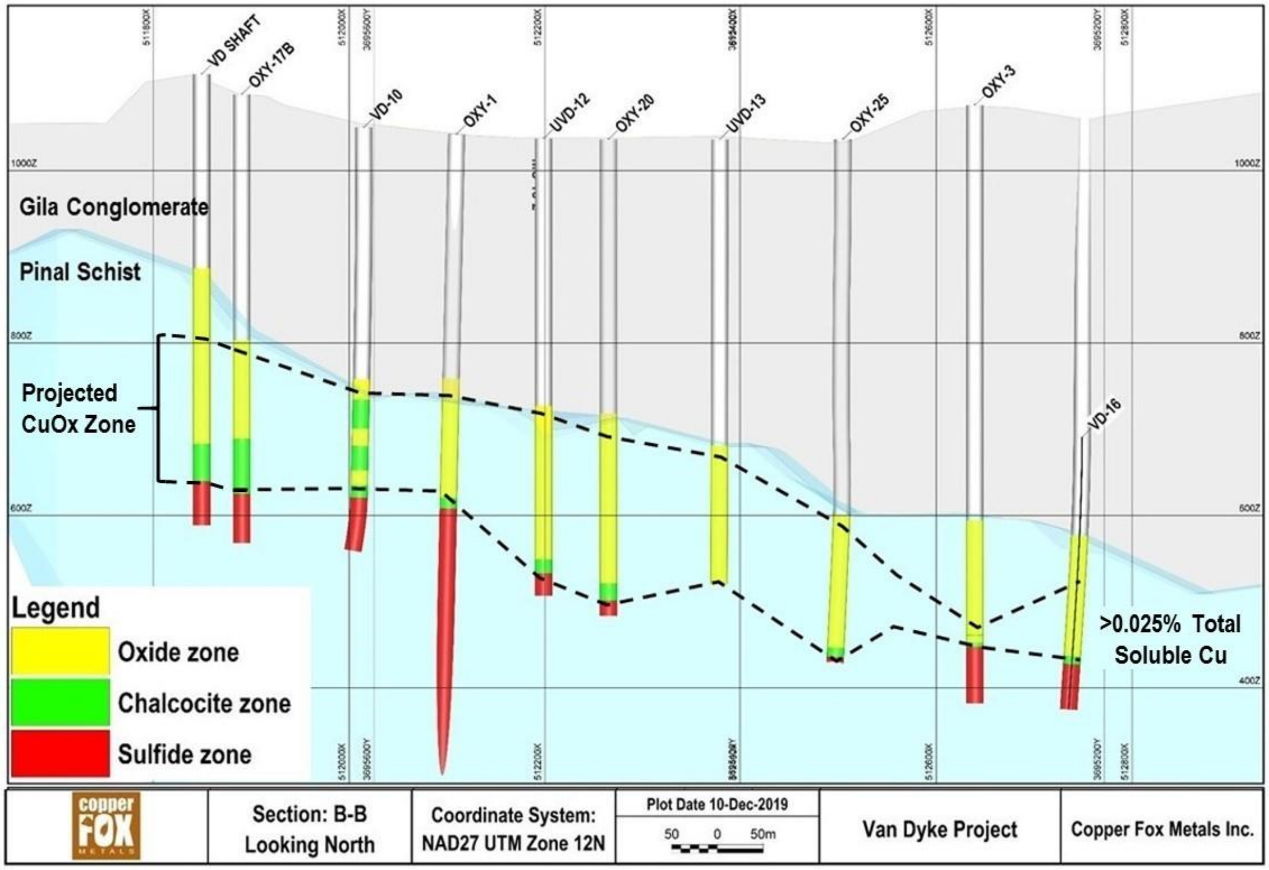


Figure 10-3 **Schematic West to East Cross-Section (B-B' looking North) of Van Dyke Copper Deposit**

Secondary Copper Distribution:
The distribution of total copper, total soluble copper and the mineral zonation within the Van Dyke deposit, based on the 2019 remodelling, are shown in Figures 10-4 and 10-5.

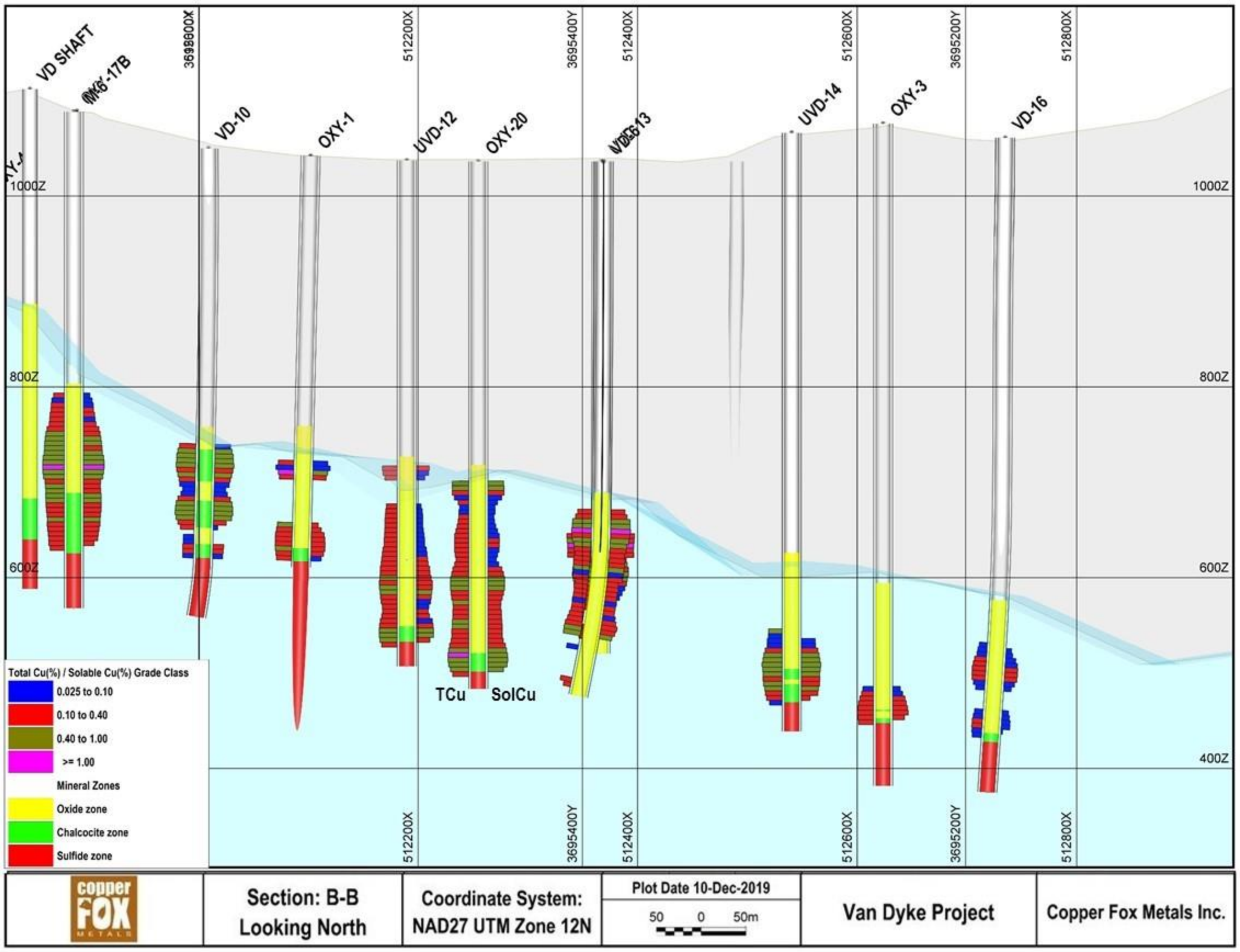


Figure 10-4 Total Copper (TCu), Total Soluble Copper (TSCu) and mineral zonation across Van Dyke deposit

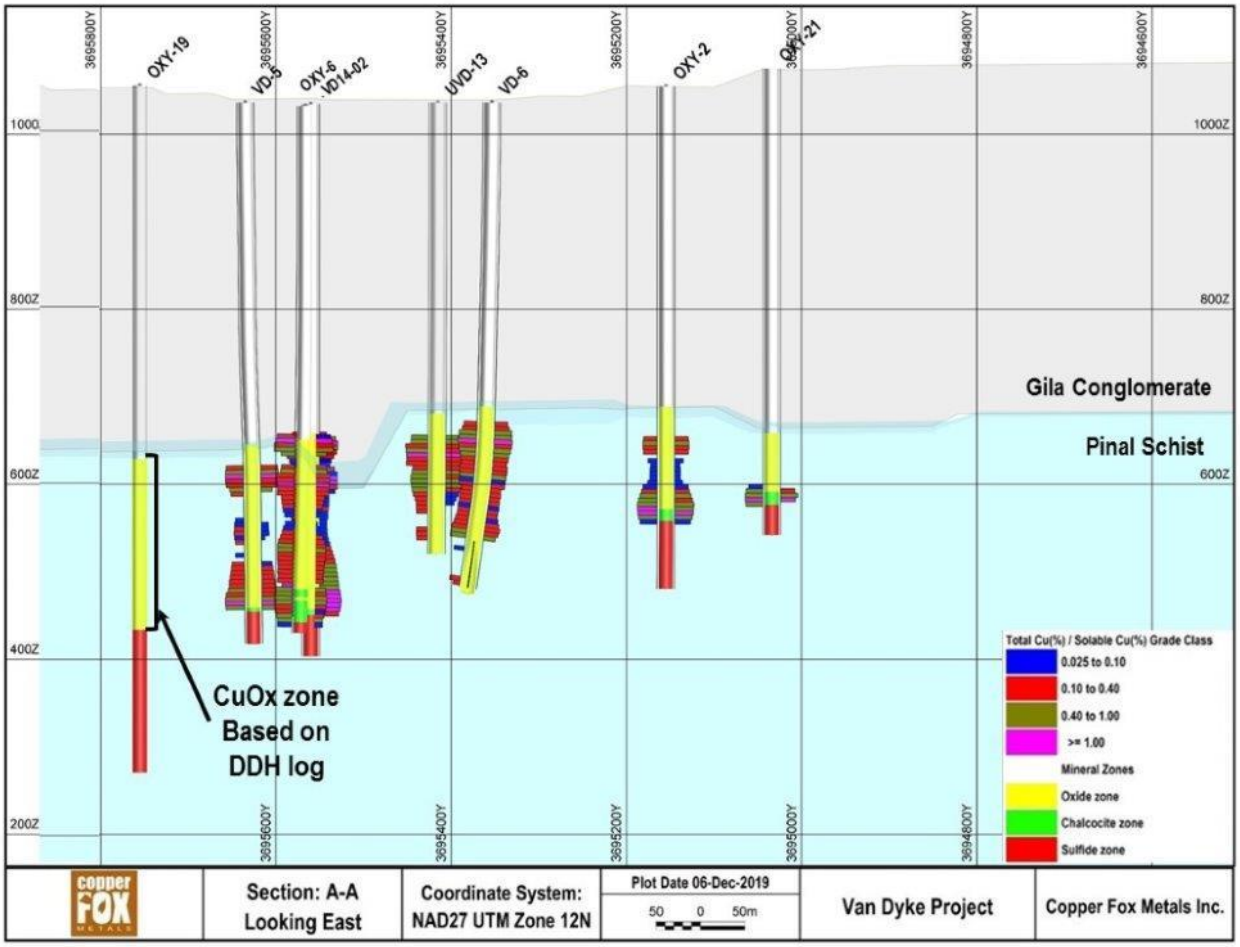


Figure 10-5 Total Copper (TCu), Total Soluble Copper (TSCu) and mineral zonation across Van Dyke deposit

11 Sample Preparation, Analyses and Security

All of the samples that were analyzed in 2019 were sourced from Copper Fox's secure storage facilities located at the company's office in Miami, Arizona. Sample security was provided by Copper Fox personnel who abided by rigorous chain of custody practices. The samples selected for analysis were transported to Skyline Laboratories in Tucson either by an employee of Copper Fox or picked up at site by Skyline personnel.

11.1 Sample Handling Procedures in 2019

Drill core chip, reject and pulp sampling procedures were as follows:

- Core boxes to be sampled were laid out in numerical order, and lids removed.
- All core looked at in 2019 was previously split or crushed; intervals selected for analysis were collected and bagged with the sample tag.
- Once sampling was complete, lids were placed back onto core boxes and return to Copper Fox's core storage facility in Miami, AZ.
- Drill core pulp and reject samples to be re-analyzed were identified, given a new unique sample number and submitted to the lab.
- Sample batches were assembled as per the Sample Record forms provided and completed by inserting the standards and blanks as prescribed.
- All samples were entered into Skylines' Laboratory Information Management System (LIMS) and the three-letter prefix BUR (reserved for samples from Copper Fox's Van Dyke Copper Project) was added to each unique sample number.
- Samples were then advanced for preparation and analysis.

11.2 Analytical Methods

Copper Fox used Skyline Laboratories for the analysis of all historic drill core pulp, chip, and reject samples collected in 2019. Check sampling of 2019 Skyline analysis was conducted by Activation Laboratories Ltd. (Actlabs) located in Ancastor, Ontario, Canada.

Skyline has ISO/IEC 17025:2005 certification for FA, AAS, ICP-OES and ICP-Mass Spectroscopy ("MS") and its quality management system has been certified as conforming to the requirements defined in the International Standard ISO 9001:2015. MMTS has no information regarding analytical laboratories used prior to Copper Fox's involvement in the Project. Actlabs has ISO 17025 accreditation with CAN-P-1579 (Mineral Lab) and CAN-P-1578 (forensic lab). In addition to ISO 17025 accreditation, Actlabs is accredited/certified to ISO 9001:2015.

The Quality Assurance/Quality Control ("QA/QC") program described in the following sections was designed to allow for verification of analytical results from historical exploration programs for which there were no laboratory analytical certificates.

11.2.1 Sample Preparation and Analysis – Skyline

A total of 2,465 samples (1,810 drill core pulp, 341 drill core chips, and 42 drill core reject samples), including 157 CRMs, 62 duplicates and 53 blanks, from the 2019 resampling program were submitted to Skyline.

Upon arrival at Skyline's Tucson lab, samples are arranged based on the sample identification supplied by Copper Fox. Extra samples, missing samples, damaged containers, illegible sample IDs, or possible cross contamination are noted and reported to the lab manager, who in turn will contact the client for instructions. If needed, samples are dried at 105˚C for 8-24 hours. Each batch of samples is assigned a Job Number consisting of 3 letters followed by a 3- or 4-digit number. The 3-letter prefix identifies the client (in the case of Copper Fox the 3-letter prefix was BUR) and the number is assigned sequentially to each batch of samples submitted by the client. Sample IDs are digitally recorded, and corresponding adhesive-backed labels and laboratory worksheets are generated for each Job. Each label and laboratory worksheet contains an Item Number (assigned sequentially to the samples based on the client's transmittal form) and the Sample Identity for each sample. Samples are labeled, checked for proper sample IDs, and then lined up for sample reduction.

Each drill core chip or reject sample is reduced in a jaw crusher to a nominal 75% minus 10 mesh. The crushed material is then transferred back into the original sample bag. The crushed product is then riffle split, re-blended and re-split three times. One half of the final split is further reduced (if needed) by the same process using a Jones riffle splitter until a final split of 200-300 grams is obtained. Any remaining minus 10 mesh material is poured back into the original labeled sample bag. The 200-300-gram split is then pulverized in a ring and puck mill to a nominal 95% minus 150 mesh product. The pulverized material is then placed in a manila envelope, to which a sample ID label has been affixed. The pulps for the entire job are then located on a numbered shelf in the pulp storage room, which is recorded on the job file cover sheet. Preparation equipment is cleaned between each batch of samples using river rock and silica sand. The preparation equipment is cleaned between samples using compressed air. The Sample Preparation supervisor randomly selects samples of the crushed material and pulverized product for a screen analysis to ensure that this protocol is observed.

The following laboratory procedures, used in 2019 to analyze historic drill core chips, pulps and rejects, were provided by Skyline.

Total Copper

Weigh 0.2000 to 0.2300 grams of sample into a 200 mL flask. Weigh samples in batches of twenty. At end of each rack, weigh the first and last sample as checks plus two standards. In the last rack of the entire job add the tenth sample of every previous rack. Add 10.0 mL HCl, 3.0 mL HNO_3 and 1.5 mL $HClO_4$ to each flask. Place on a medium hot plate (about 250°C). Digest to near dryness until the only remaining acid present is $HClO_4$. Remove from the hot plate and cool. Add about 30 to 40 mL DI water and 10.0 mL HCl. Bring to a rolling boil and remove from hot plate. Cool the flask and contents to room temperature, dilute to the mark (200 mL) with DI water, stopper and shake well to mix. Read the solutions for copper by Atomic Absorption (AA) using standards made up in 5% hydrochloric acid.

Sequential Leach

Acid Soluble Component

Weigh 0.2500 to 0.2600g of sample into a 50 mL centrifuge tube. Weigh samples in batches of sixteen. At end of each rack, weigh the first and last sample as checks plus two standards. In the last rack of the entire job add the tenth sample of every previous rack. Add 10mL 5% H_2SO_4, cap and shake for one hour at room temperature. Centrifuge and decant the supernatant solution into a 100mL flask. Wash the residue once by adding 40mL deionized water to centrifuge tube and shaking for 5 minutes. Centrifuge and decant the supernatant solution into the 100mL flask. Dilute the 100mL flask to the mark with deionized water, stopper and shake well to mix. Read samples on AA using 0.5% H_2SO_4 calibration standards.

Cyanide Soluble Component

Add 10mL of 10% NaCN solution to the residue. Cap and shake for thirty minutes at room temperature. Centrifuge and decant the supernatant solution into a 100mL flask. Wash the residue once by adding 40mL deionized water to centrifuge tube and shaking for five minutes. Centrifuge and decant the supernatant solution into the 100mL flask. Dilute the 100mL flask to the mark with deionized water, stopper and shake well to mix. Read samples on AA using 1% NaCN calibration standards.

11.2.2 Sample Preparation and Analysis – Actlabs

A total of 153 pulps, including 11 CRMs, 6 blanks and 1 duplicate, from the 2019 sampling program were submitted to Actlabs for check analysis. For all samples, splits weighing 1.0g were submitted for copper sequential leach analysis (Code 8). Procedures used for Total Copper (4 acid ICPOES), Acid Soluble Copper (5% H_2SO_4 leach/AA) and residual Cyanide Soluble Copper (10% NaCN leach of residue/AA) analyses were intended to mimic, as closely as possible, the procedures used by Skyline.

11.3 Quality Assurance/Quality Control Procedures

11.3.1 Quality Assurance/Quality Control Procedures - Skyline

Quality Assurance/Quality Control (QA/QC) samples used by Copper Fox include blanks, certified reference standards (CRS) and sample duplicates. Copper Fox used seven different CRMs for its 2019 sampling program. Five CRMs were purchased from Ore Research and Exploration P/L, Bayswater North, Australia (OREAS) and two CRMs were purchased from CDN Resource Laboratories, Ltd., Langley, B.C., Canada (CDN). Two commercially available blanks were used: CDN-BL-10 purchased from CDN and OREAS-21e purchased from OREAS.

Copper Fox inserted QA/QC samples into the sample stream on a per batch basis. Each batch of samples typically consisted of two CRMs (including low to medium value for total copper (TCu) and a low to medium value for Acid Soluble Copper (ASCu) along with values low to medium values for gold, silver and molybdenum), one blank, one duplicate and twelve core samples, or twelve pulp samples, as per the list shown below:

- #1: Standard (CDN-CM-26 or CDN-CM-27)
- #2: Standard (OREAS-901, OREAS-902, OREAS-903, OREAS-904 or OREAS-906)
- #3: Blank (CDN-CM-10 or OREAS-21e)
- #4 though N-1: unknown, drill samples

- N: Duplicate of N-1
- N=16, thus 12 unknowns and 4 controls per batch.
- Value of N (size of batch) depends on size of the sample tray used by the lab

Blanks Analysis

Copper Fox submitted 50 pulp blanks to Skyline to monitor sample preparation during the 2019 sampling program. All of the blanks returned total copper values of less than the detection limit (< 0.01% Cu) for the analytical method used; for plotting purposes they have been assigned a value of 0.005% Cu (Figure 11-1). All of the blanks returned Acid Soluble Copper values of 0.005% Cu or lower. Overall, the results indicate good sample preparation at Skyline.

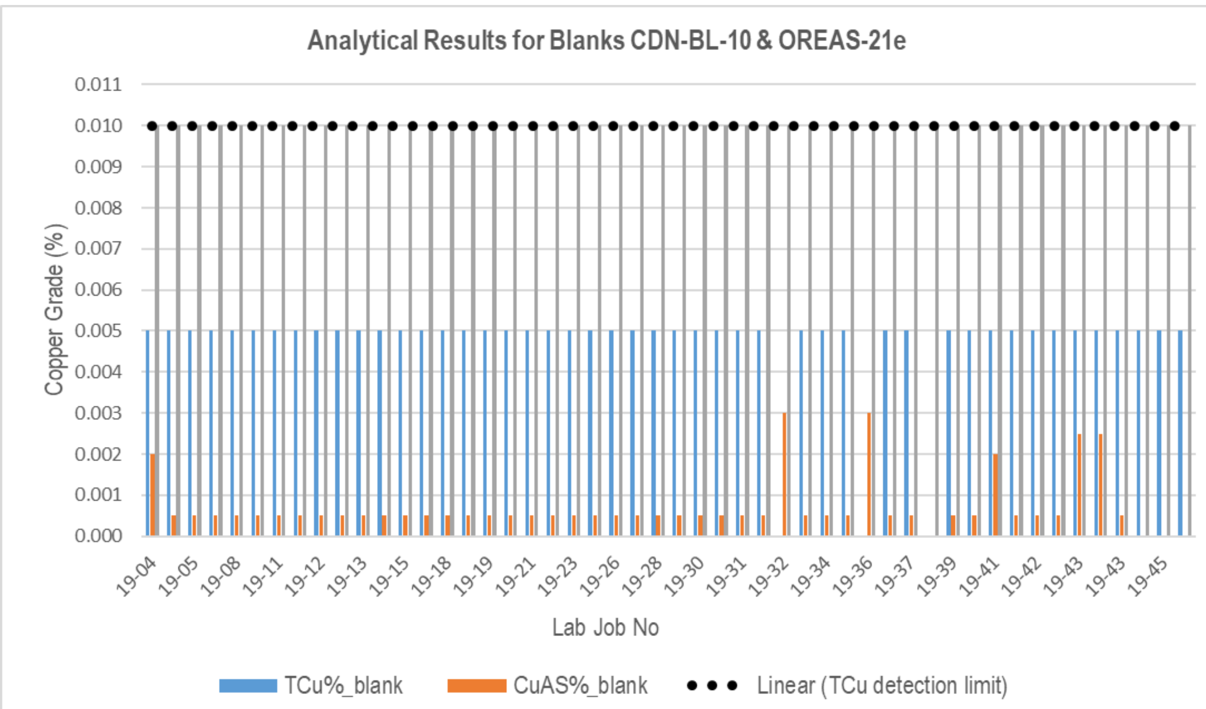


Figure 11-1 Analytical Results for Blank CDN-BL-10 & OREAS-21e

Standards Analysis

A total of 157 certified reference material (CRM) standards were submitted as part of the 45 lab batches that were processed and analyzed by Skyline. The CRMs in each batch included one of two porphyry copper-gold (+/-molybdenum+/-silver) sulphide standards and one of three transitional to oxide copper standards and covered a range of total copper and Acid Soluble Copper values.

On the following figures, the red horizontal lines represent the certified value for each CRM, green horizontal lines are +/-1 standard deviation (σ) from the certified value for each CRM, blue horizontal lines are +/-2 σ from the certified value for each CRM, and magenta horizontal lines +/-3 σ from the certified value for each CRM.

All of the TCu values for CRM OREAS-901 plot within +/- 1 σ of the certified value. All but three of the ASCu values for CRM OREAS-901 plot above the certified value with 9 of 34 samples plotting between +2 and +3 σ (Figure 11-2). A slightly positive bias is indicated by the acid soluble data for CRM OREAS-901.

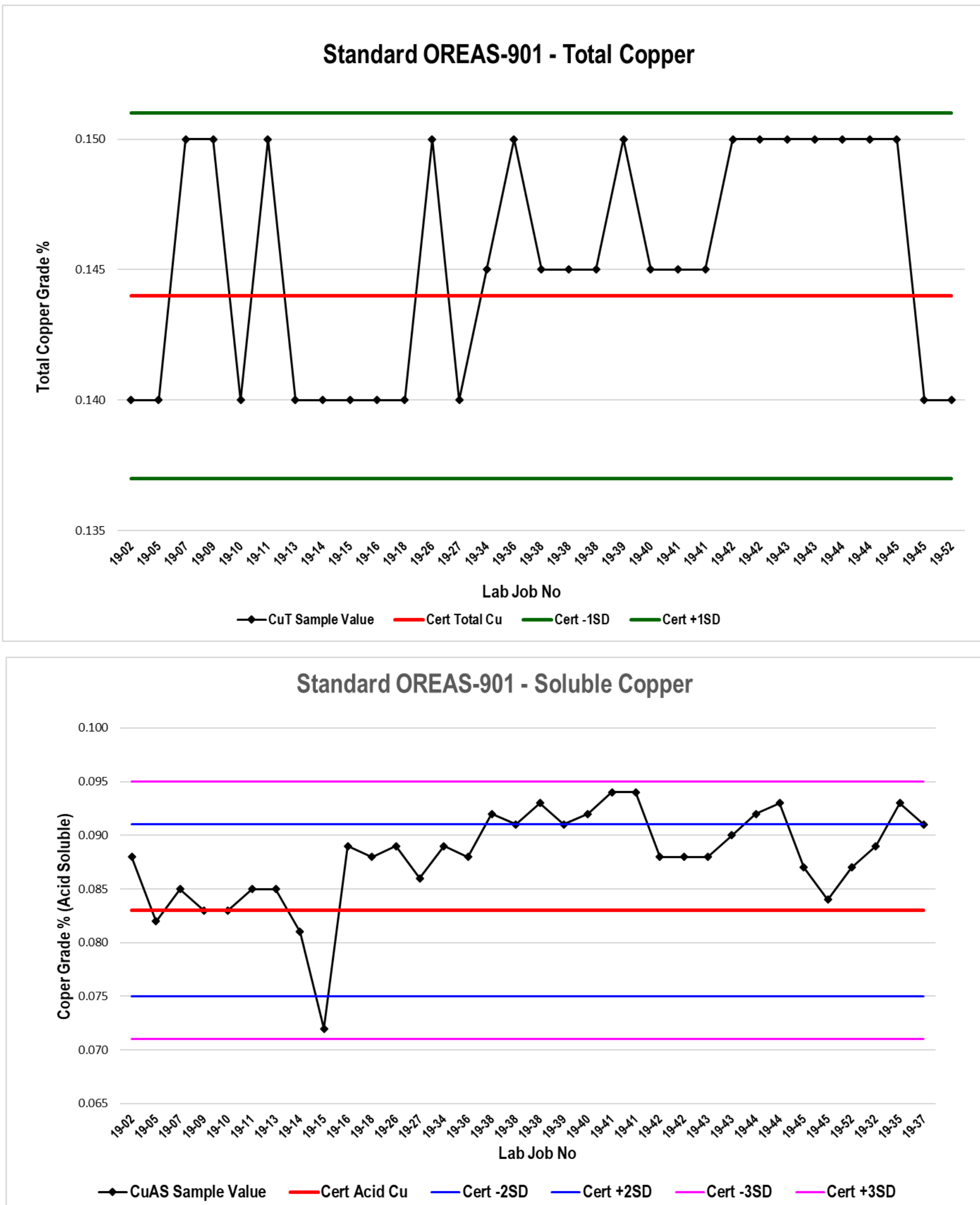


Figure 11-2 Total Copper (TCu) & Acid Soluble Copper (ASCu) Results for OREAS-901

The TCu values for CRM OREAS-902 are distributed at or within -1 σ of the certified value with the exception of two values which plot between -1 and -2 σ of the certified value (Figure 11-3); this distribution suggests a weak, but almost negligible negative bias. All but one of the ASCu values for CRM OREAS-902 plot above the certified and a total of 8 of the 27 ASCu values plot between +2 and +3 σ. A slightly positive bias is indicated by the acid soluble data for CRM OREAS-902.

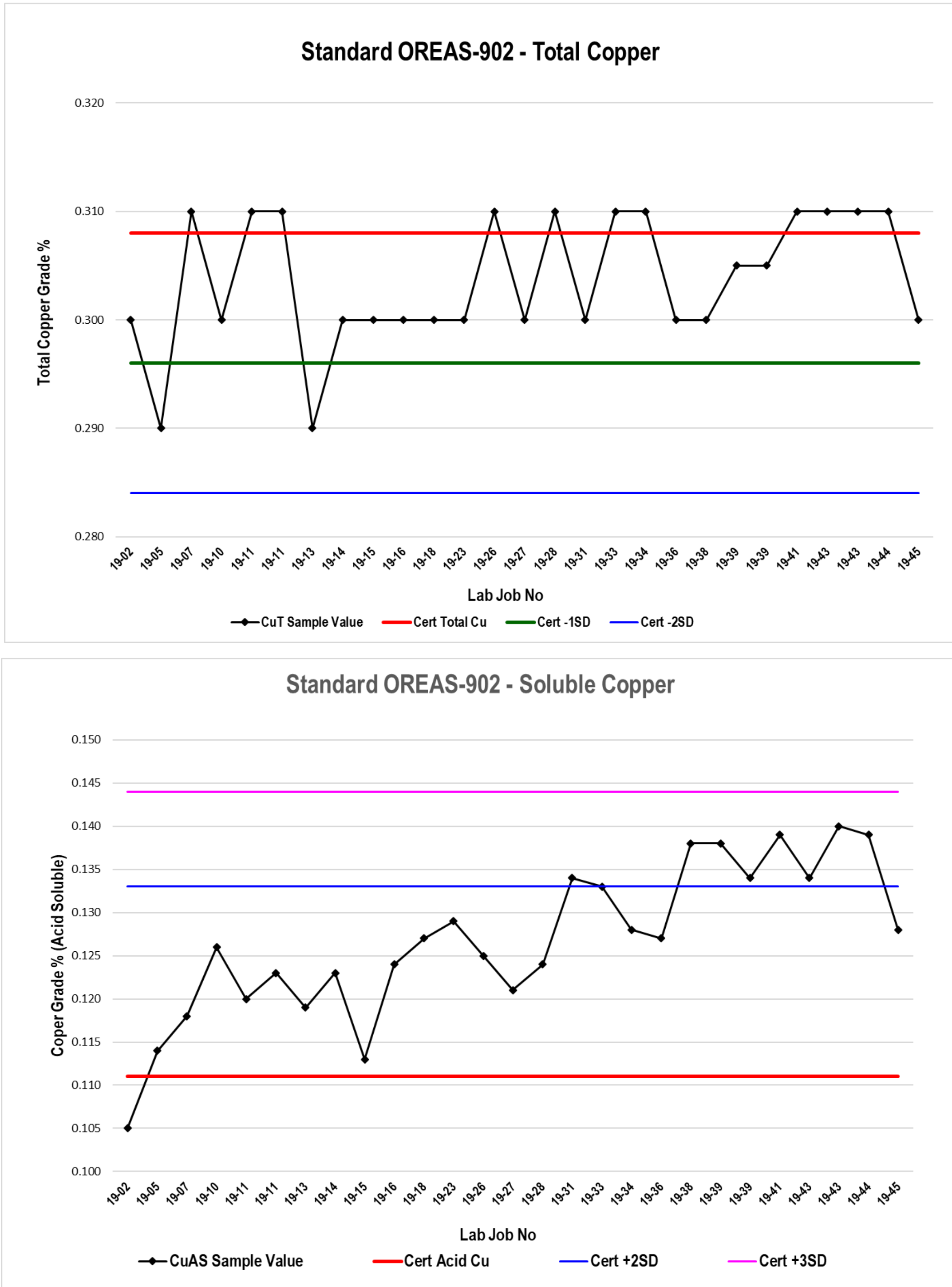


Figure 11-3 Total Copper (TCu) & Acid Soluble Copper (ASCu) Results for OREAS-902

The TCu values for CRM OREAS-903 are within + 1 σ of the certified value with perhaps a weak positive bias. The ASCu values for CRM OREAS-903 are distributed from +1 to +3 σ suggesting a weak positive bias (Figure 11-4).

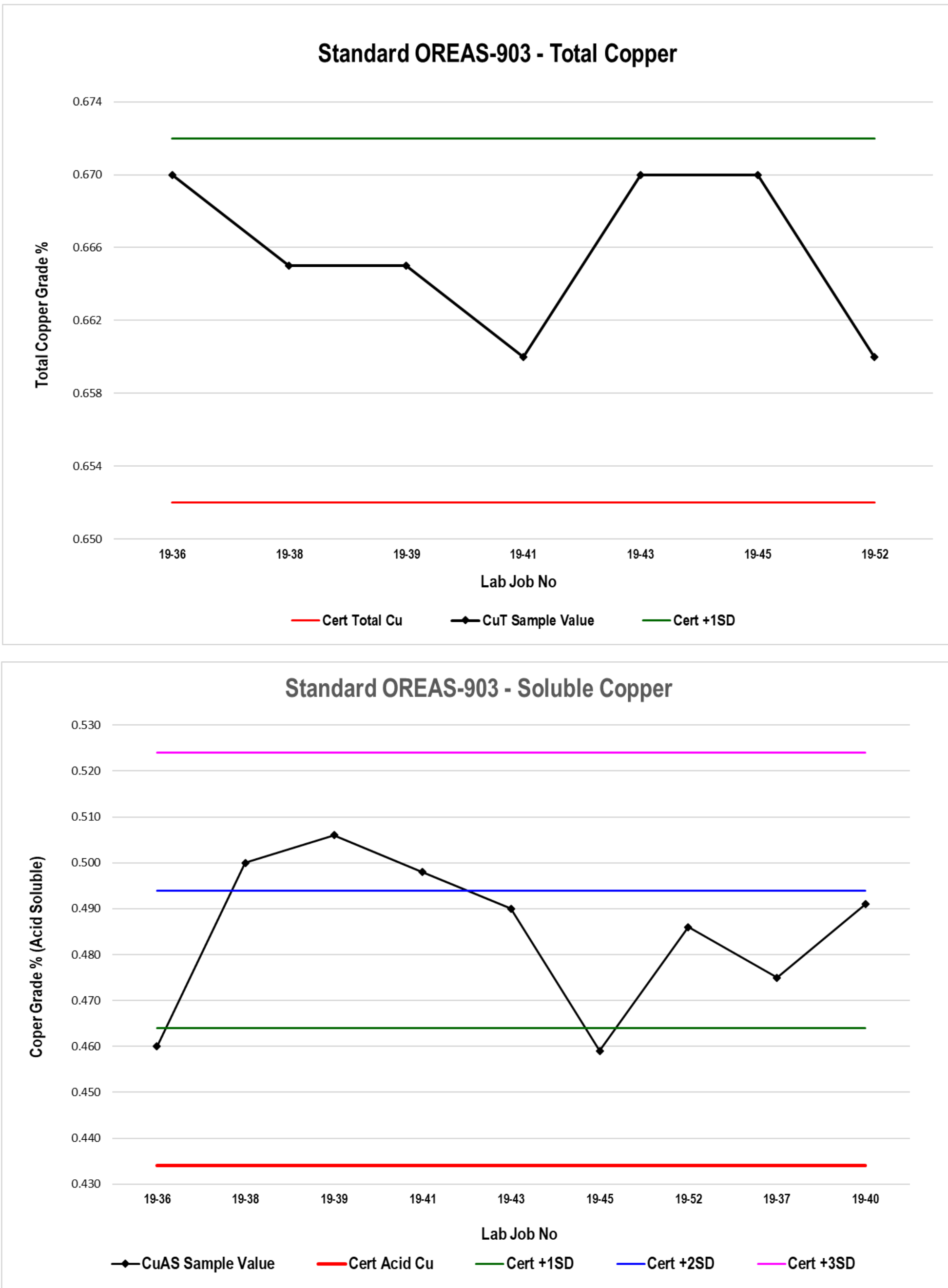
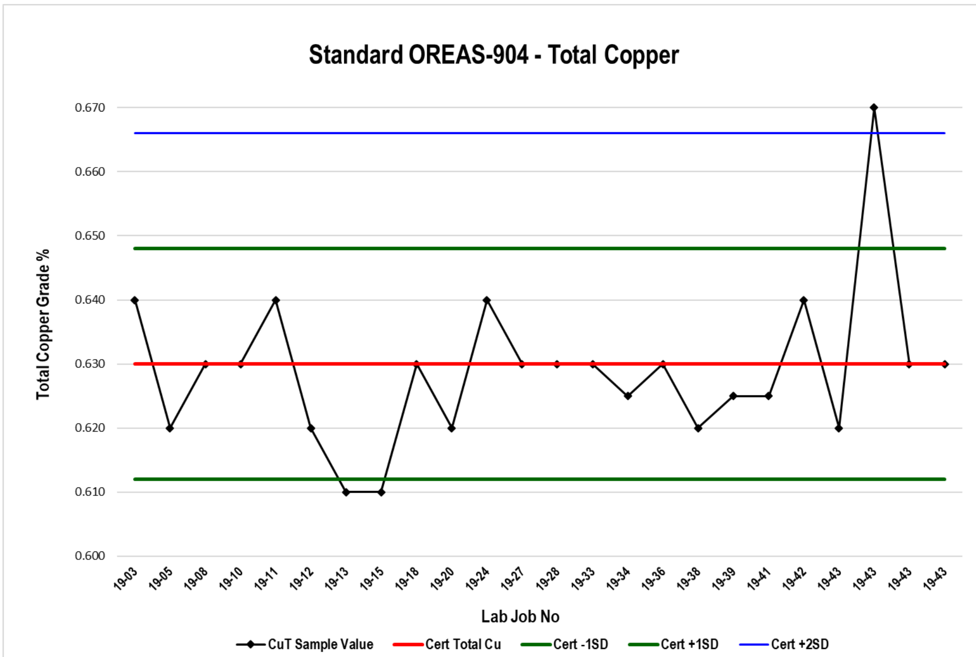


Figure 11-4 Total Copper (TCu) & Acid Soluble Copper (ASCu) Results for OREAS-903

The TCu values for CRM OREAS-904 are distributed approximately evenly about the certified value without any apparent bias and, with one exception, within the range of +/-2 σ (Figure 11-5). The ASCu values for CRM OREAS-904 are also distributed evenly about the certified value within the range of +/-2 σ (with one exception).



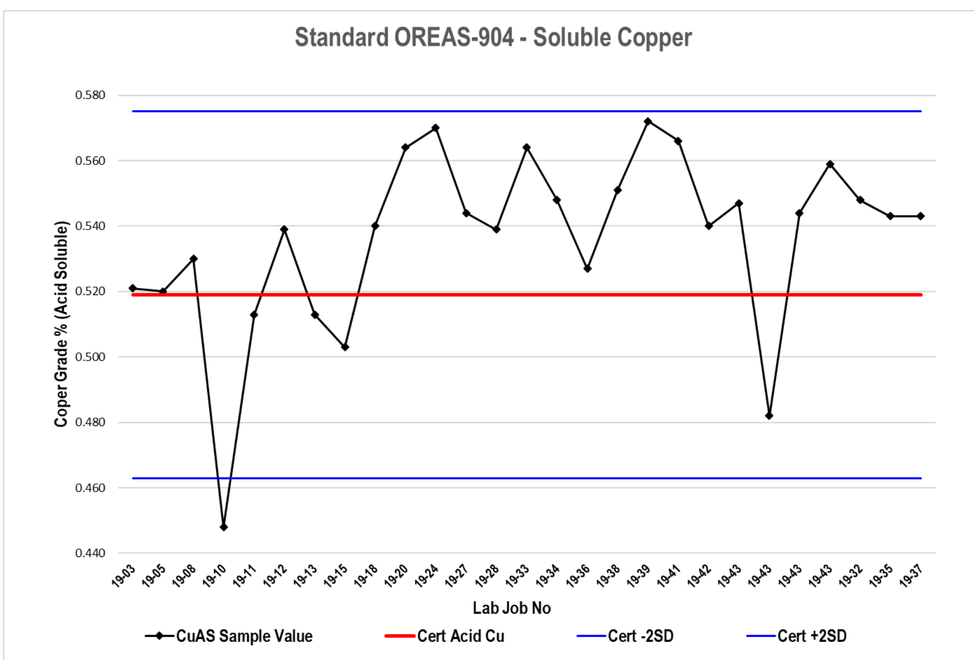
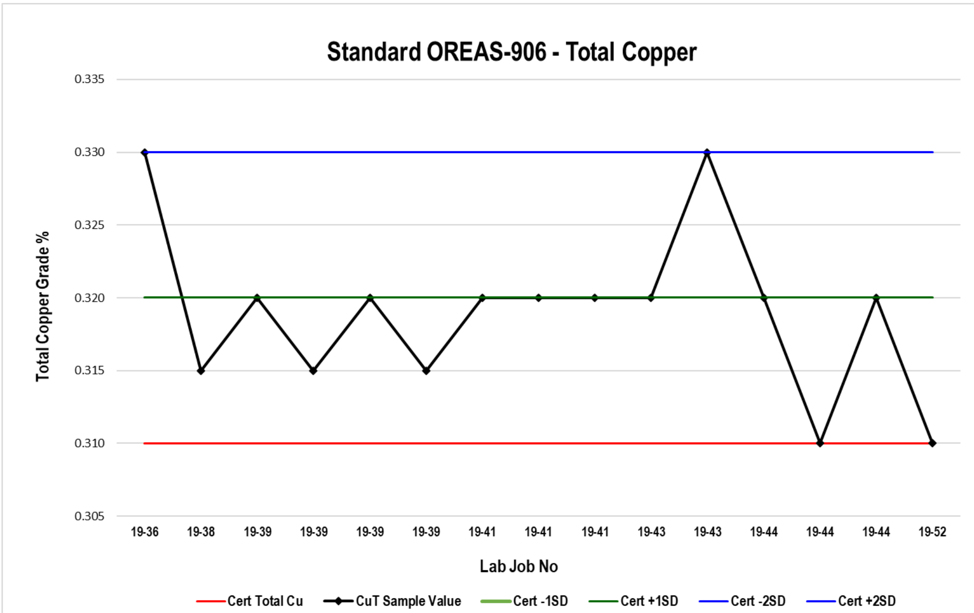


Figure 11-5 Total Copper (TCu) & Acid Soluble Copper (ASCu) Results for OREAS-904

The TCu values for CRM OREAS-906 are distributed between the certified value and +2 σ, showing an acceptable albeit slight positive bias (Figure 11-6). The ASCu values for CRM OREAS-906 are distributed between the certified value and +3 σ, showing a positive bias, but two ASCu values greater than +3 σ indicating a positive bias. Results are generally acceptable.



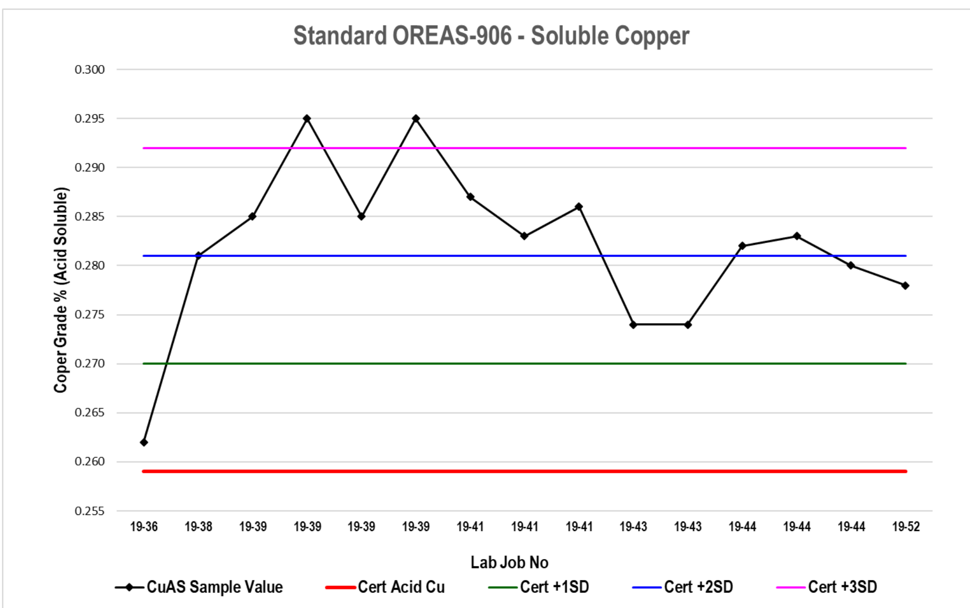
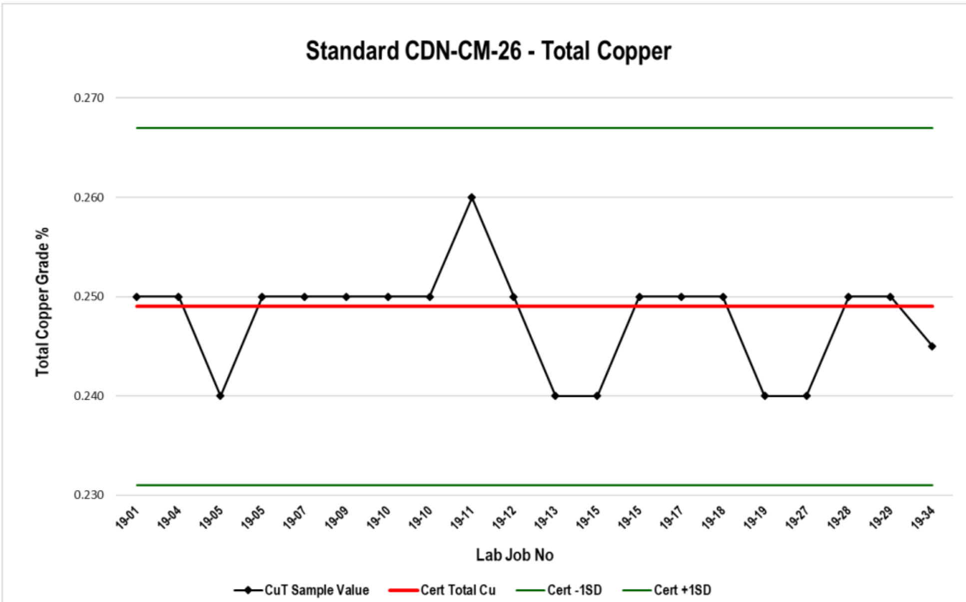


Figure 11-6 Total Copper (TCu) & Acid Soluble Copper (ASCu) Results for OREAS-906

The TCu values for CRM CDN-CM-26 plots within one 'between lab' standard deviation of the certified value (Figure 11-7) and TCu values for CRM CDN-CM-27 also plot within one 'between lab' standard deviations of the certified value.



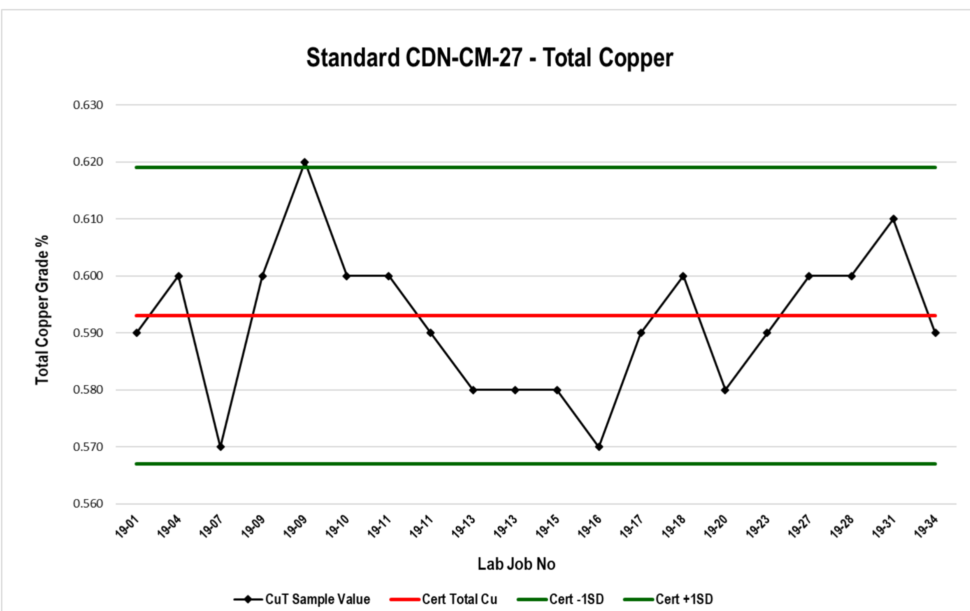
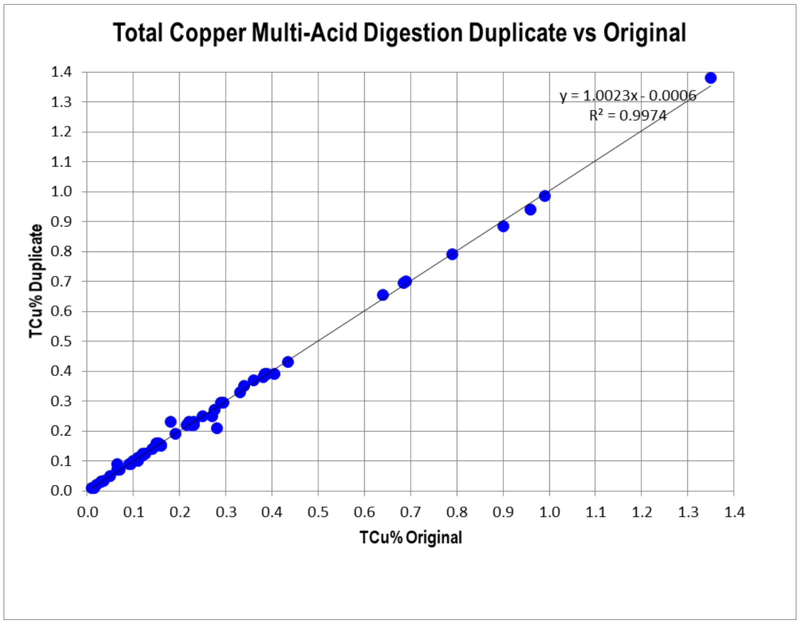


Figure 11-7 Total Copper (TCu) Values for Standards CDN-CM-26 & CDN-CM-27

The total copper (TCu) values for all CRMs are within +/- 2 σ and do not show any appreciable bias. The Soluble Copper (ASCu) values for four of the five CRMs from OREAS consistently plot above the certified value and occasionally beyond + 3 σ from it suggesting a slight positive bias.

Sample Duplicates

Drill core duplicates are used to monitor sample batches for switched samples, data variability due to laboratory error and homogeneity of sample preparation. Results for total copper in original sample versus duplicate sample and for Acid Soluble Copper in original sample versus duplicate sample are shown in Figure 11-8. The data presented on the figures plot close to a 45° slope as indicated by r values that are close to 1; results are acceptable.



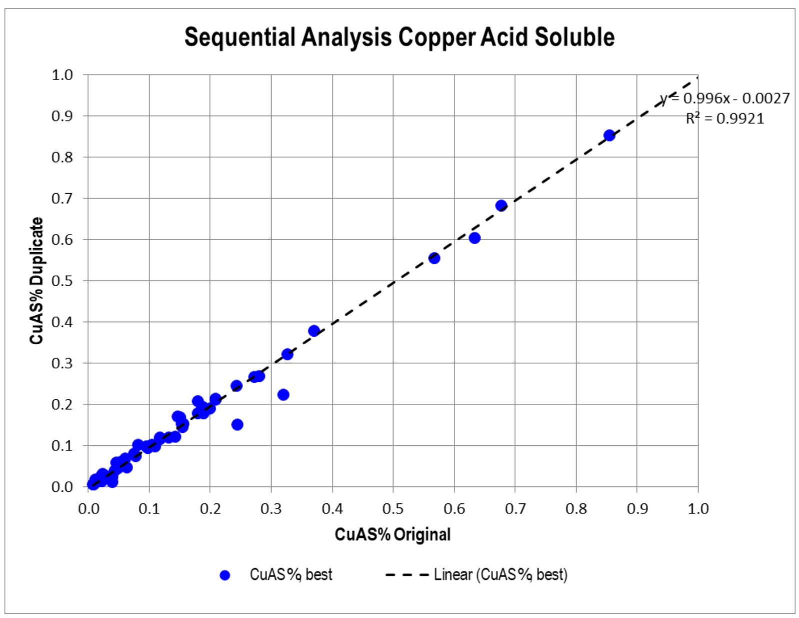


Figure 11-8 Total Copper (TCu) and Acid Soluble Copper (ASCu) Duplicate Analysis

11.3.2 Adequacy of Sample Preparation, Security and Analytical Procedures

MMTS concludes that the sample preparation, security, and analytical procedures utilized by Copper Fox meet or exceed current industry best management practices.

Continued use of a comprehensive QA/QC program is recommended to ensure that all analytical data can be confirmed to be reliable. The consistent, positive bias observed for Acid Soluble Copper results for CRMs OREAS-901 through OREAS-906 from Skyline in 2019 suggests that analytical procedures used were more aggressive in extracting Soluble Copper than those used to establish the certified values for each CRM. A review of commercially available Acid Soluble Copper CRMs should be conducted, and Copper Fox should consider developing one or more of its own Acid Soluble Copper CRM developed from local oxide copper mineralization.

Overall, the analytical data confirms that adequate care and proper procedures were used to obtain reliable Total Copper and Acid Soluble Copper results values for the Van Dyke Copper Project.

12 Data Verification

An audit of the historic exploration database obtained from Copper Fox was completed by MMTS by Bird and Lane (2015). This included a review of all available information provided in the form of electronic files and of full-size hard electronic and hard copy versions of the detailed historical drillhole logs and plan maps. The historic drillhole database was built from data and descriptive information recorded on copies of detailed and comprehensive, large format hard copy geological logs for 45 holes. These hand-written logs list analytical results for Total Copper and Acid Soluble Copper in percent (up to 3 significant figures), and sparse analytical data for molybdenum in parts per million (up to 3 significant figures), data that has been carefully compiled in Copper Fox's electronic files. Laboratory certificates for the historic drillholes have not been located. Verification of available historic data was conducted utilizing two principal methods. Firstly, boxed drill core and drill core pulps retained from drilling completed from 1968-1975 were examined to identify drillholes with complete or near complete physical records, and therefore suitable for sampling and re-analysis. Drill core pulp samples from seven holes and drill core samples from one hole, representing complete or near complete mineralized intervals, were collected and submitted for analysis. Secondly, a six-hole diamond drilling program was completed. It included twinning of five historical drillholes and drilling of one hole to assess an area west of the Van Dyke Shaft where ISL had been conducted in the late 1970s and late 1980s (Bird and Lane, 2015).

Copper Fox's 2019 sampling program of historic drillhole pulps, core (chips) and rejects was designed to provide a complete as possible modern data set to support the estimation of an updated resource estimate for the Van Dyke Copper Project. Lane visited the site while the 2019 sampling and shipping program was actively underway and verifies that sampling procedures employed by Copper Fox personnel was consistent with modern best exploration management practices, including use of a comprehensive QA/QC program.

A total of 2,465 historic drill core chip, reject, and pulp samples were collected and analyzed for copper using a sequential analysis to determine Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu).

12.1 2019 Check Analysis

A total of 153 pulps from the 2019 sampling program were submitted to Actlabs for check analysis. This total represents approximately 6% of the entire suite of samples analyzed earlier in the program by Skyline. Results of the check assay program are shown in a three-part Figure below. These results compare reasonably well with the initial analytical data for the 2019 samples and confirm the veracity of the Skyline data.

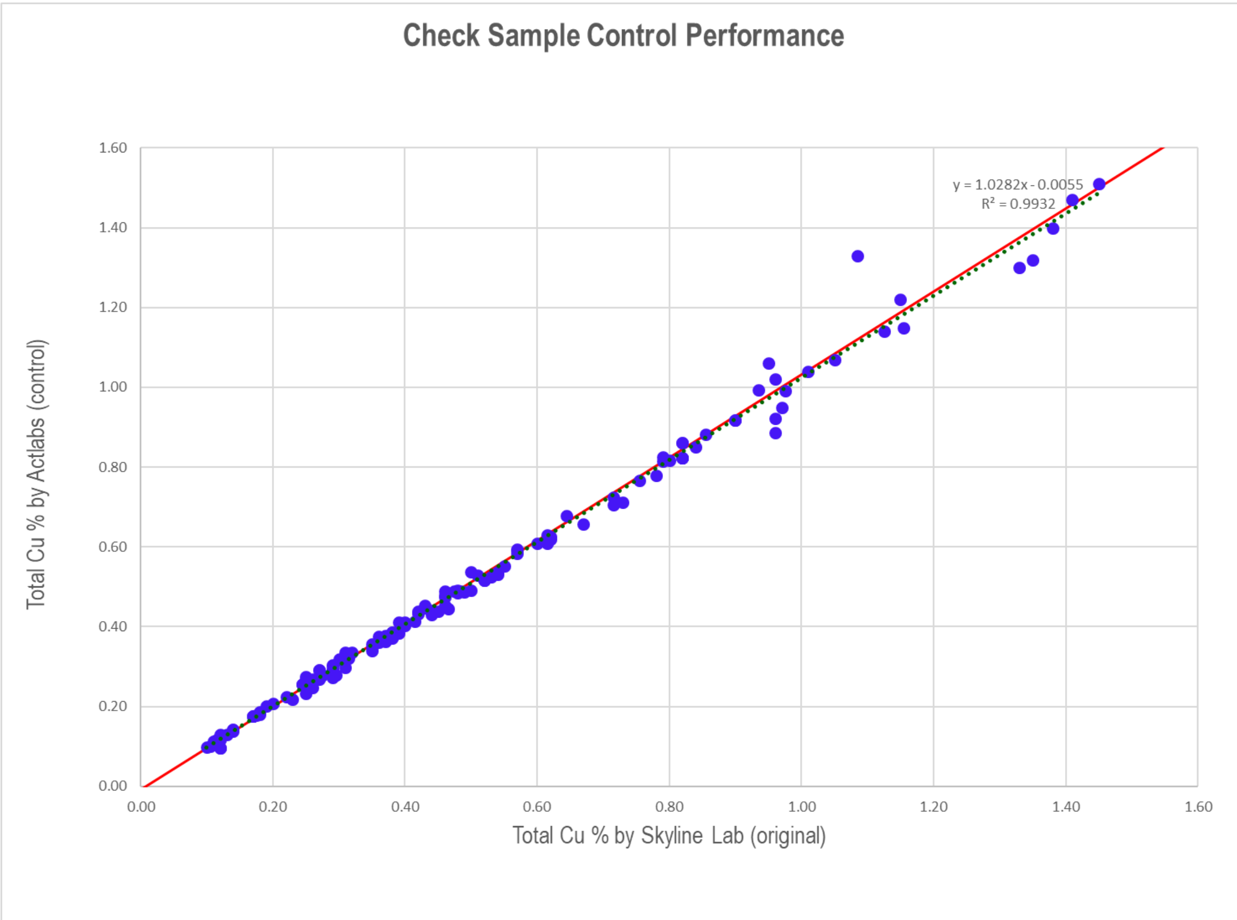


Figure 12-1 Check Assays vs. Original Assays for TCu (top), ASCu (mid) & CNCu (bottom)

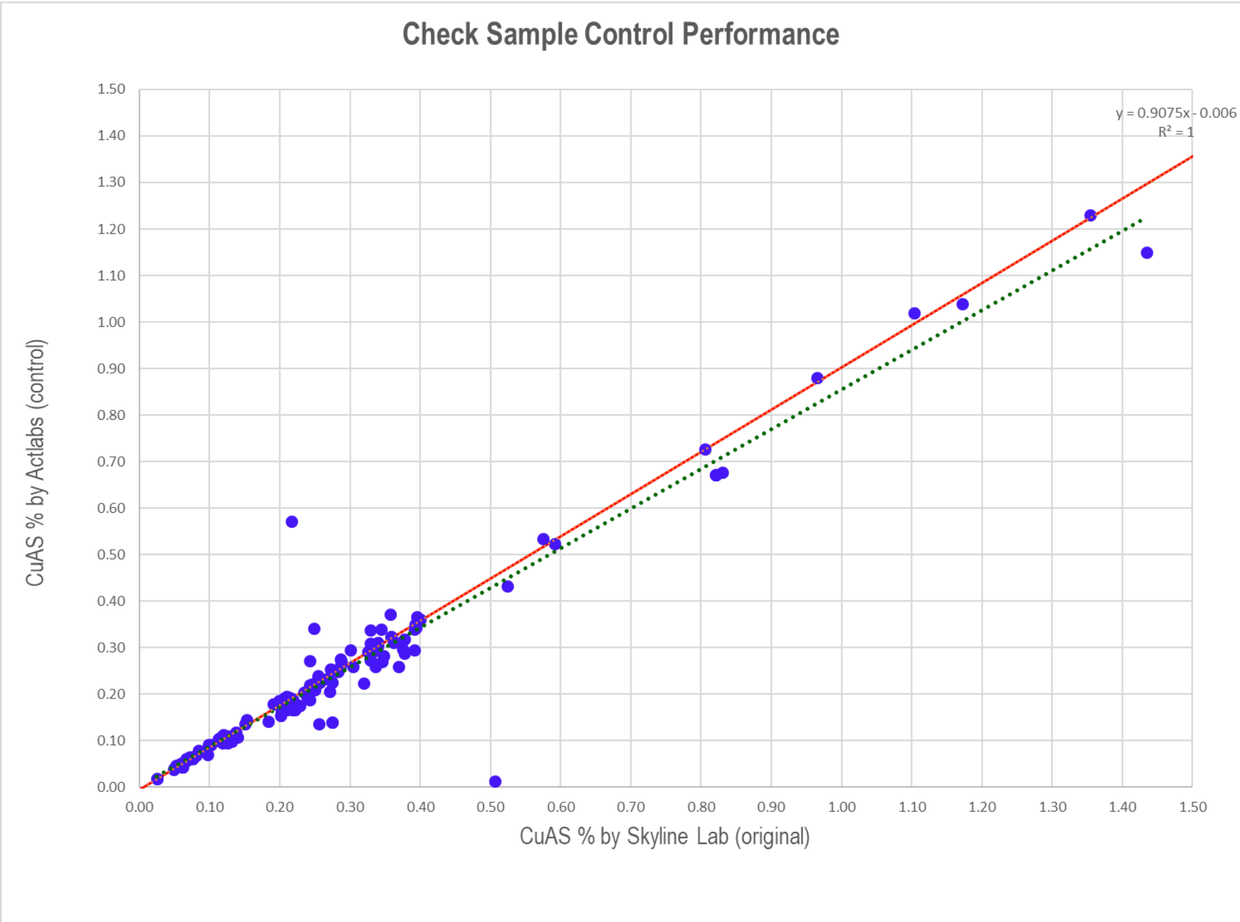


Figure 12-1b Check Assays vs. Original Assays for TCu (top), ASCu (mid) & CNCu (bottom)

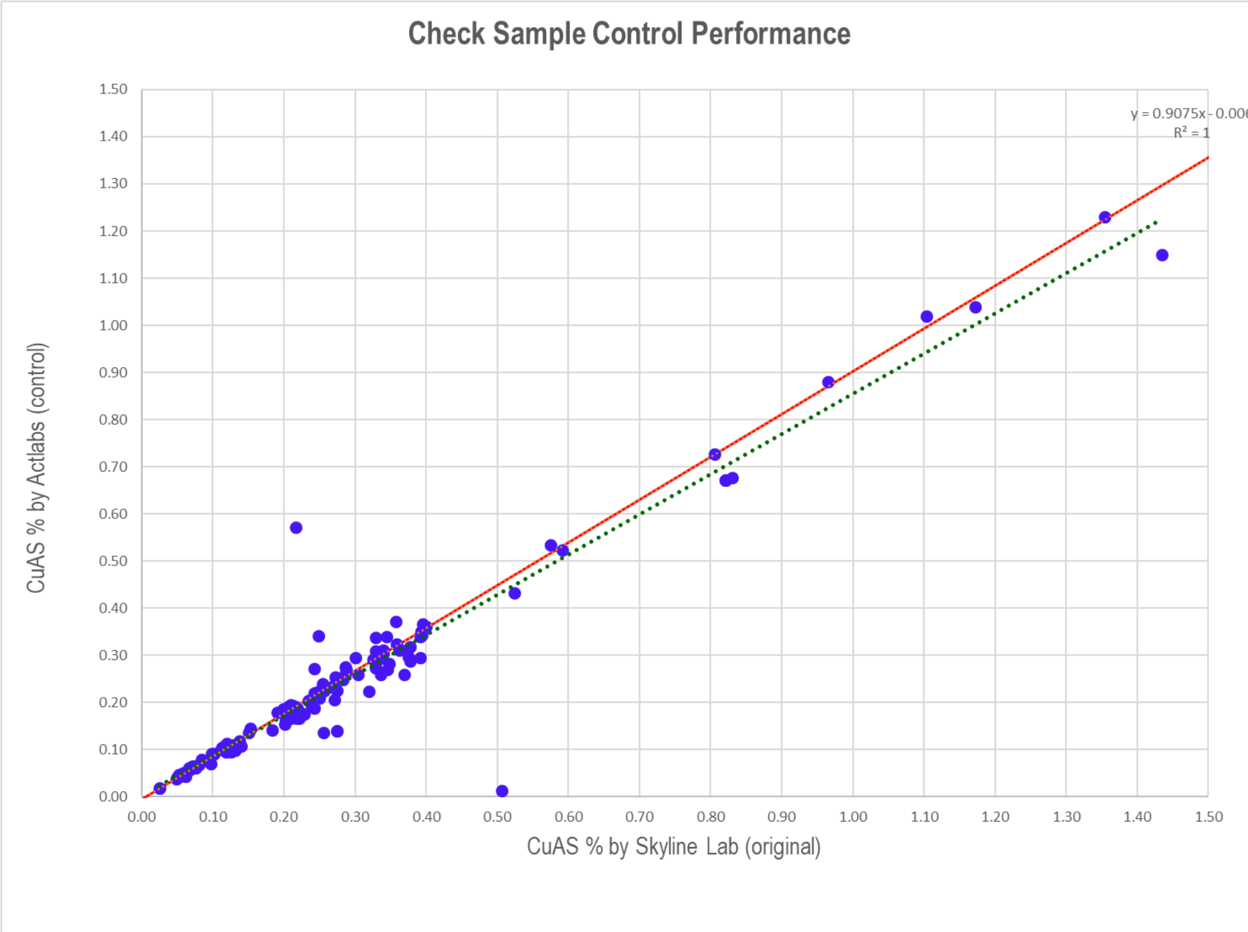


Figure 12-1c Check Assays vs. Original Assays for TCu (top), ASCu (mid) & CNCu (bottom)

12.2 Adequacy of Data

The verification program determined that the historical data captured from hard copy drillhole logs, cross-sections and maps, and unpublished private reports, are valid and generally representative of the Van Dyke Copper Project.

The data generated from the re-analysis of historic drill core chips, rejects and pulps generally correlated well with the historic data recorded on drillhole logs and compiled in electronically. Total copper content of the re-analyzed samples correlates very well with the original data. Acid Soluble Copper content of the re-analyzed historic drill core and drill core pulps is consistently higher than the original data. This may suggest that modern soluble copper analysis techniques are more thorough than techniques of the late 1960s and early 1970s. Overall, the re-analysis demonstrated that the historic data set is acceptable and representative of the Van Dyke Copper Project. All of the 2014 and 2019 drillhole data is suitable for use in the calculation of a resource estimate for the Van Dyke Copper Project.

13 Mineral Processing and Metallurgical Testing

13.1 Introduction

Copper has been extracted from copper oxide minerals in the Van Dyke Deposit periodically over the past 100 years using conventional copper oxide leach technology. Historical copper extraction has been carried out by underground extraction with surface leach operations, and in-situ leach (ISL).

ISL is a leach extraction process where barren leach reagent is injected into the orebody using injection wells allowing the leach reaction to occur in-situ. Pregnant solution (PLS) containing leached copper is extracted using recovery wells. Copper is produced onsite using conventional solvent extraction (SX) and Electrowinning (EW) processes.

The depth, grade and minerology of the Van Dyke Deposit make ISL the preferred option for economic extraction. This Section summarizes the results of metallurgical testing programs.

13.2 Historical Metallurgical Testing

The Van Dyke copper deposit has been subject to underground mining and numerous metallurgical testing and research work since approximately 1916. Historical data (see Table 13-1) indicates that approximately 150 samples have been submitted to various laboratories for acid leaching studies including: bottle roll leach tests, agitated leaching, pressure leaching, and column leach tests.

Table 13-1 Historical Metallurgical Work at the Van Dyke Deposit

Year			Company	Work Completed
1916	to	1945	Van Dyke Copper Co.	Underground mining
1968	to	1980	Occidental Minerals Co.	Drilling and ISL pilot program
1970	to	1971	Occidental Minerals Co.	Bottle rolls, agitation leach tests at Metcon Lab, Tucson, AZ
1971	to	1972	Occidental Minerals Co.	Column leach, pressure leach at New Mexico Tech Research Foundation, Socorro, NM
1971			Occidental Minerals Co.	Bottle rolls, agitation leach tests at Colorado School of Mines Research Institute, Golden, CO
1972			Occidental Minerals Co.	Pressure leach tests at Arizona Bureau of Mines, Tucson, AZ
1973	to	1976	Occidental Minerals Co.	Column leach test, agitation leach at Mountain States R&D, Tucson, AZ
1973	to	1975	Occidental Minerals Co.	Column tests, computer simulation at New Mexico Bureau of Mines & Mineral Resources, Socorro, NM
1974	to	1977	Occidental Minerals Co.	Pressure leach and others at Colorado School of Mines, Golden, CO
1975			Occidental Minerals Co.	Columns leach test at Utah International, Palo Alto, CA
1979			Occidental Minerals Co.	Core leaching test at Exoil Services, Golden CO
1979			Occidental Minerals Co.	Core leaching test at Science Application Inc., La Jolla, CA
1986	to	1989	Kocide Chemical Co.	Drilling and ISL pilot program
2014	to	2014	Desert Fox Van Dyke Co.	Drilling, sampling and metallurgical laboratory Pressure Leach testing, SGS, Tucson, AZ

13.2.1 Occidental Laboratory Metallurgical Tests

Column leach tests conducted by Occidental with varying particle size distributions and head grades ranging from 0.3% to 0.8% Acid Soluble Copper (ASCu) recovered approximately 90% or more of the ASCu in leach times ranging from three days to approximately fifteen days. Corresponding sulfuric acid consumption averaged approximately 2.7kg H_2SO_4/kg of Cu.

These positive metallurgical results are consistent with the highly soluble minerals contained in the Van Dyke deposit, i.e., Chrysocolla ($(Cu,Al)_2H_2Si_2O_5(OH)_4{\cdot}nH_2O$), Malachite ($Cu_2(CO_3)(OH)_2$), and Azurite ($Cu_3(CO_3)_2(OH)_2$), with presence of Cuprite (Cu_2O) and Chalcocite (Cu_2S).

Results from historical bottle rolls tests and column leaching tests confirm the highly soluble nature of the copper mineralization in the Van Dyke Deposit.

13.2.2 Pilot ISL Tests

Data from Occidental pilot ISL tests in 1979 and 1980 shows daily average concentration of PLS ranging from 0.5g/l to 3.5g/l. The pilot ISL test operations suffered significant mechanical problems and lacked proper process control. Future ISL operation using modern technologies could achieve significantly higher PLS concentrations than the historical pilot tests.

13.3 2014 Laboratory In Situ Pressure Leaching Test Results

In 2014, a total of eight fresh Van Dyke drill core samples were submitted to SGS E&S Engineering Solutions Inc. for simulated in situ pressure leach tests. The pressure leach tests were conducted using 26-inch-long, 4 inch diameter pressurized stainless steel vessels in locked cycle regime for 120 days. The purpose of pressure (nominal pressure of 120psi) inside the vessels was to simulate the underground hydraulic pressure in in situ leach process.

Mineralogical analysis of the samples sent to SGS is shown in Table 13-2. Copper oxide minerals account for most of the copper bearing minerals. Only one out of the six samples (VD14-03) contained primarily chalcocite, a copper sulphide mineral. It should be noted that this sample is outside of the Oxide Resource, and has been analyzed as an up-side potential in the material surrounding the oxide body which may contain soluble copper not accounted for in the leachable resource or cash flow.

Table 13-2 Overall Copper Distribution by Mineral

Sample ID	DH	From	To	Chrysocolla	Malachite Azurite	Copper	Chalcocite	Chalcopyrite	Total
		(m)	(m)	(%)	(%)	(%)	(%)	(%)	(%)
PRT#1	VD14-02	549.2	550.3	59.5	0.6	38.9	0.3	0.7	100
PRT#2	VD14-02	386.1	387.3	59.3	39.8	0.5	0.2	0.2	100
PRT#3	VD14-03	354.0	355.2	0.4	1.1	0	98	0.5	100
PRT#4	VD14-04	512.7	514.1	2.3	(1)96.4	0	1.2	0.2	100
PRT#5	VD14-05	438.0	439.1	0.6	75.3	23.7	0.1	0.3	100
PRT#6	VD14-06	273.1	274.5	99.3	0.4	0	0.2	0.1	100
PRT#7	VD14-06	311.2	312.6	66	33.7	0.2	0	0	100
PRT#8	VD14-06	375.2	376.3	99.4	0	0.6	0	0	100

Note: (1) PRT#4 and PRT#5 copper content in the form of Azurite is reported as Malachite

The 2014 metallurgical testwork supports previous data indicating that Chrysocolla, Malachite, and Azurite are the primary copper bearing minerals in Van Dyke deposit, with secondary minerals Chalcocite and native copper.

13.3.1 Copper Extraction and Acid Consumption

The SGS pressure leach test results are summarized in Table 13-3. Highest TCu extraction (and iron extraction) was achieved in test PRT#06 which also has the highest chrysocolla content. ASCu extraction ranged from 53% to 93%.

Table 13-3 Summary of the 2014 Pressure Leach Test Results

Test	Leach Cycle	Calculated Head Assay			Cumulative Extraction			Gangue Acid Consumption
No.	Days	TCu	ASCu	Fe	TCu	ASCu	Fe	
		(%)	(%)	(%)	(%)	(%)	(%)	(kg/kg Cu)
PRT#01	126	0.47	0.33	2.23	65.37	93%	6.23	8.64
PRT#02	125	2.03	1.99	0.46	53.88	55%	1.61	0.72
PRT#03(1)	124	0.35	0.11	2.20	23.93	76%	5.7	23.69
PRT#04	124	0.38	0.36	2.16	77.01	81%	2.88	5.13
PRT#05	124	0.42	0.35	2.88	45.09	53%	4.95	12.24
PRT#06	124	1.04	1.03	0.22	86.63	88%	20.32	1.12
PRT#07	124	0.69	0.66	0.33	73.37	77%	10.05	2.01
PRT#08	124	0.76	0.66	0.74	78.96	92%	14.36	4.2

Note (1): Sample PRT#03 is in the mixed zone and is outside of the area being considered for ISL

The lowest TCu extraction (and relatively low iron extraction) was 23.9% achieved in test PRT 03 that also has the lowest chrysocolla content (and the highest chalcocite content).

ASCu Recovery plotted against calculated ASCu head grade in Figure 13-1 shows variability in recovery at the various head grades. Leaching is strongly impacted by the leach conditions and the specific test procedure used has a high probability of solution channeling. In addition, samples PR#05 and PR#02 collected are thought to have been previously leached and or contain chalcocite. The variability in the results confirms the importance of the physical conditions required for effective leaching including ensuring adequate permeability, proper solution presentation to mineral surfaces, and the prevention of channeling.

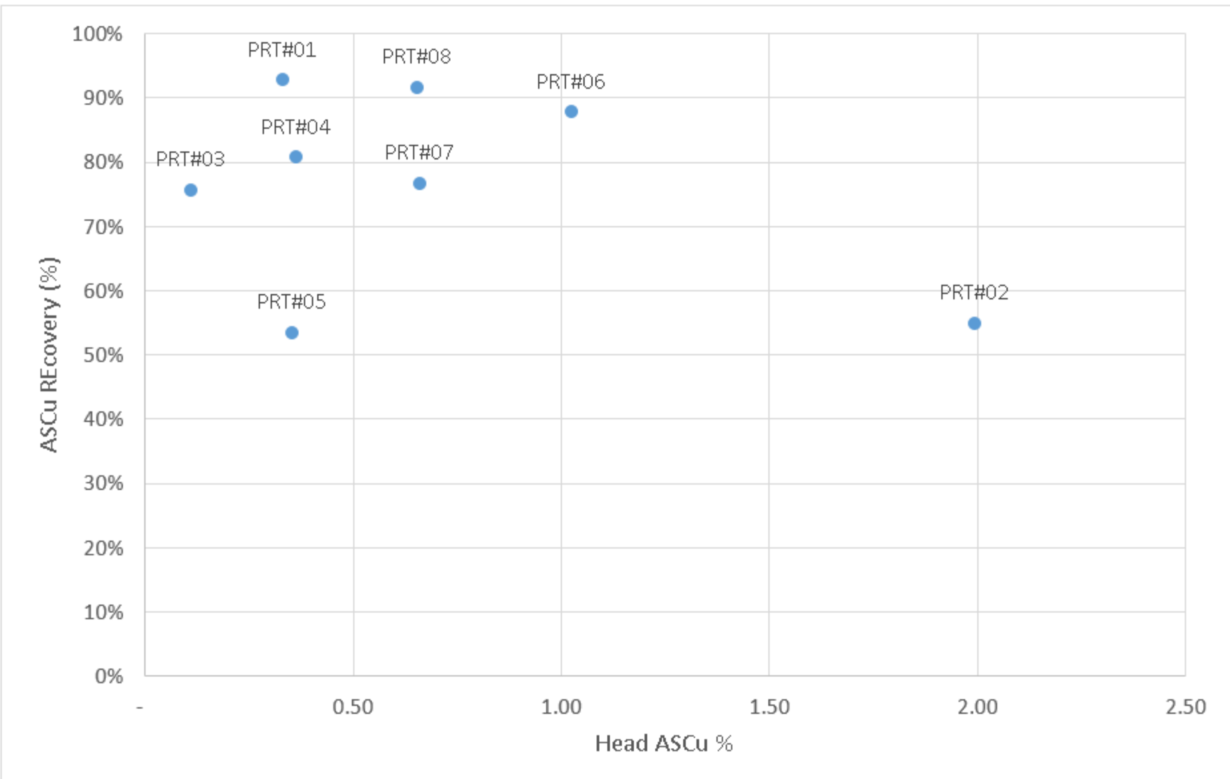


Figure 13-1 ASCu Recovery vs Head Grade

MMTS notes reconciliation between direct assays and calculated assays for head grades was poor for the 2014 testwork as shown in Figure 13-2, and consequently the copper extraction calculations are potentially subject to significant variation from the reported values in Table 13-3. The poor reconciliation could be due to the assay head sampling methodology not being a good representation of the sample tested, and potentially due to some samples collected within a leach zone.

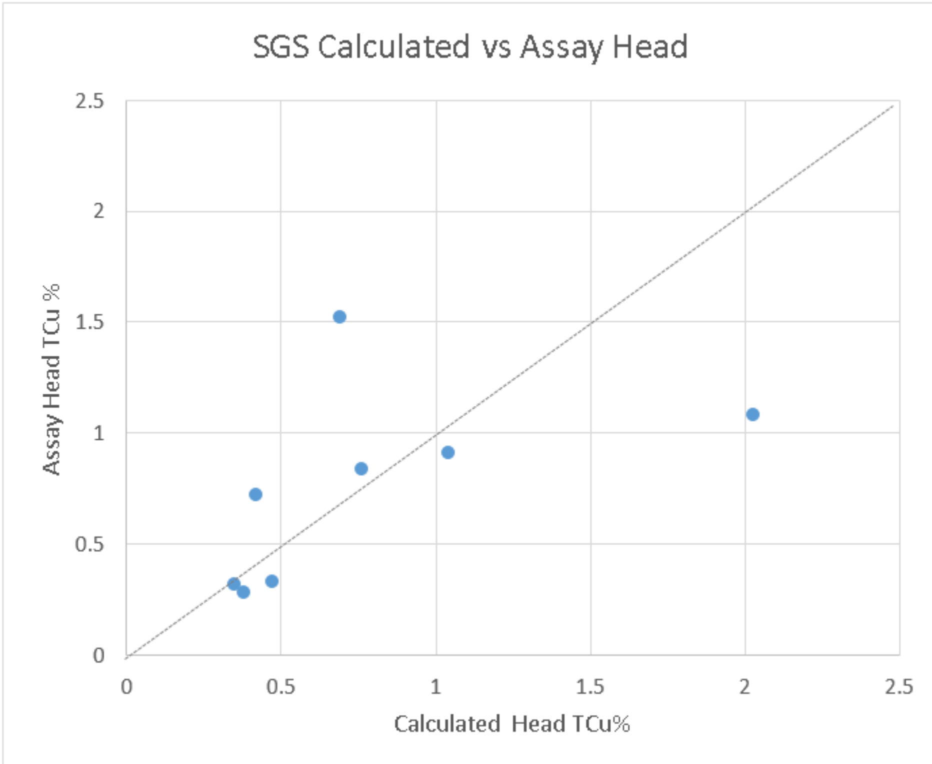


Figure 13-2 Calculated vs Assay Head Grades

Net acid consumption (kg/kg Cu) is presented in Figure 13-3 as a function of the iron head grade. Once sample VD14-03 (PRT#3), which is primarily chalcocite, is excluded the correlation coefficient reaches a value of R^2=0.9. Note that Van Dyke's average copper head grade of approximately 0.35% will be equivalent to approximately 1.5kg acid/kg Cu.

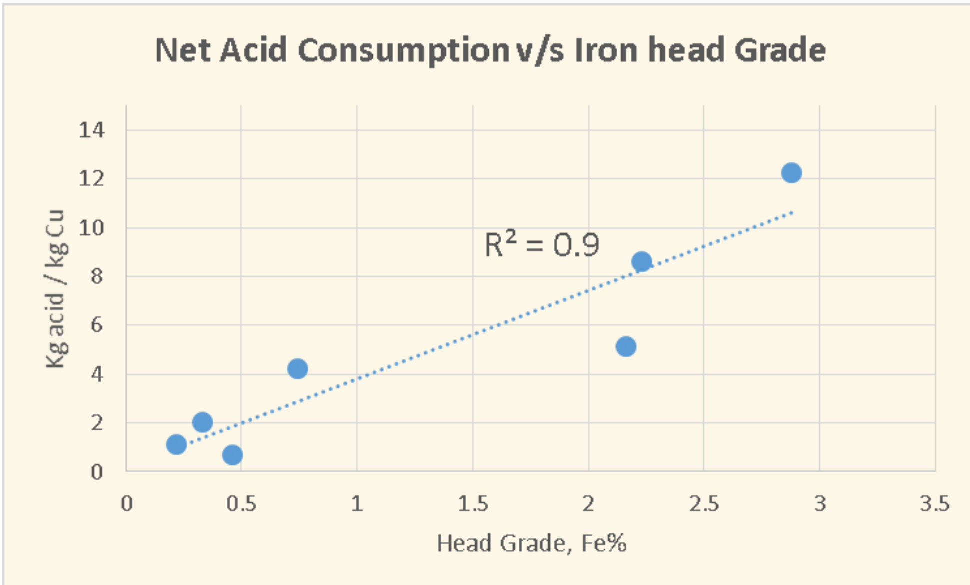


Figure 13-3 Net Sulfuric Acid Consumption

13.3.2 Leached Drill Core Preparation and Residue Assays

At the completion of rinse cycle, the pressure leach vessels were drained, unloaded and the leached drill core samples were unwrapped, weighed and dried in a laboratory oven at 100°C. The dried weight for each sample was recorded and the samples were stage crushed to 100% minus 10 mesh and a 1,000 gram sample was split, pulverized and a pulverized portion was submitted for total copper, total iron and sequential copper analysis (Table 13-4).

Table 13-4 Summary of Residue Assay Results

Test No.	Sample ID	Analysis		Sequential Copper Analysis[1]			(%) Soluble Copper[2]
		Cu (%)	Fe (%)	ASCu (%)	CNCu (%)	ResCu (%)	
PRT-01	VD14-02	0.163	2.11	0.024	0.002	0.137	15.95
PRT-02	VD14-02	0.95	0.46	0.9	0.017	0.025	97.35
PRT-03	VD14-03	0.269	2.1	0.027	0.17	0.067	74.62
PRT-04	VD14-04	0.088	2.11	0.07	0.002	0.015	82.76
PRT-05	VD14-05	0.248	2.92	0.165	0.006	0.078	68.67
PRT-06	VD14-06	0.148	0.19	0.125	0.002	0.02	86.39
PRT-07	VD14-06	0.186	0.3	0.154	0.003	0.025	86.26
PRT-08	VD14-06	0.169	0.67	0.055	0.002	0.106	34.97

*Remarks: [1] AsCu = acid soluble copper, CNCu = cyanide soluble copper, ResCu = residual total copper. [2] % Soluble Copper = [(ASCu + CNCu)/(ASCu + CNCu + ResCu)*100]*

The sequential copper analysis determined that copper in the leach residues was mostly soluble in sulfuric acid, indicating that the reduction or elimination of channeling or improved fracturing of the rock could significantly increase leach recoveries. The residual copper indicates copper mineralization that is associated with primary sulfide copper mineralization such as chalcopyrite, which is not soluble in sulfuric acid solution or cyanide solution.

ICP analyses conducted on the head samples of the eight drill core samples are summarized in Table 13-5.

Table 13-5 ICP Scan on Head Samples

Elements		VD14-02 (1801.9 - 1805.3)	VD14-02 (1266.6 - 1270.6)	VD14-03 (1161.5 - 1165.4)	VD14-04 (1682.0 - 1686.7)	VD14-05 (1437.0 - 1440.7)	VD14-06 (896.0 - 900.5)	VD14-06 (1021.0 - 1025.5)	VD14-06 (1231.0 - 1234.5)
Ag	ppm	<1	3	1	<1	<1	<1	<1	<1
Al	ppm	13,380	7,836	11,510	11,530	13,320	8,434	9,118	15,230
As	ppm	2	44	<1	<1	<1	<1	<1	<1
Ba	ppm	81	435	61	93	73	67	78	112
Bi	ppm	<1	<1	<1	<1	<1	<1	<1	<1
Ca	ppm	1,390	726	1,173	1,343	1,243	1,340	1,020	2,595
Cd	ppm	<1	<1	<1	<1	<1	<1	<1	<1
Co	ppm	9	<1	9	9	17	<1	<1	3
Cr	ppm	86	66	99	74	62	15	21	15
Cu	ppm	3,563	12,320	3,727	3,061	8,189	9,309	15,190	8,498
Fe	ppm	22,330	4,938	18,470	17,110	28,580	3,003	5,710	10,710
Hg	ppm	<1	<1	<1	<1	<1	<1	<1	<1
K	ppm	6,674	3,851	6,133	7,646	6,145	5,590	4,861	5,151
La	ppm	24	27	30	40	43	12	24	14
Mg	ppm	4,102	1,052	3,936	4,240	4,896	612	1,045	3,273
Mn	ppm	127	46	157	85	180	26	31	66
Mo	ppm	33	95	86	12	<1	<1	<1	<1
Na	ppm	2,722	2,494	2,433	2,508	3,084	3,499	3,777	3,913
Ni	ppm	98	79	95	101	77	5	6	17
P	ppm	356	179	250	470	133	130	125	212
Pb	ppm	6	29	18	15	19	2	2	<1
Sb	ppm	<1	<1	<1	<1	<1	<1	<1	<1
Sc	ppm	2	1	2	2	1	<1	<1	<1
Sr	ppm	12	102	34	4	24	54	105	106
Ti	ppm	740	124	763	659	1,135	59	114	333
Tl	ppm	<1	<1	<1	<1	<1	<1	<1	<1
V	ppm	25	8	24	25	30	2	4	10
W	ppm	<1	<1	<1	2	2	<1	<1	<1
Zn	ppm	69	37	55	90	118	25	22	45
Zr	ppm	8	8	7	7	8	<1	<1	<1

The ICP analysis indicates that copper, aluminum, iron, potassium, magnesium, and sodium are the most abundant elements in the samples. Mercury was not detected in the samples and low concentrations of arsenic were detected in the VD14-02 (1801.9 - 1805.3) and VD-14-02 (1266.6-1270.6) samples.

13.3.3 Pregnant Leach Solution Impurities and Deleterious Elements

Historical records identified anomalous concentrations of calcium, aluminum, magnesium, and iron. No deleterious elements in the PLS were identified during the laboratory testing at SGS. At this stage there are no concerns of deleterious elements in Van Dyke PLS that may negatively impact the performance of the SX plant and therefore the recovery of copper.

13.3.4 Representativeness of Samples and Testing

The location of the 2014 drilling and sampling, as well as the location of the historical pilot test site are all contained within the boundaries of the project area. Figure 14-1 illustrates the location of the 2014 DHs used in the metallurgical sampling. Of the eight metallurgical samples, only PRT#3 is within the mixed zone. This has been included in order to determine the potential for recovery of the less oxidized portion of the deposit.

Sample used for laboratory testing at SGS are generally representative of the Van Dyke deposit spatially. Samples covered a wide range of head grades but none of the samples are representative of the average grades in the resource estimate tabulated in Section 14.

13.4 QP Comments

Metallurgical test work confirms that the Van Dyke deposit is suitable for ISL extraction using sulphuric acid followed by an SX/EW process.

The metallurgical test work had:

- poor assay vs calculated head grade reconciliation;
- the samples were not representative of the average resource estimate head grade;
- and some of the test work showed clear indication of lack of fracturing and presence of channelling;

The next study phase of Van Dyke Project should incorporate an onsite modern pilot ISL operation to support the metallurgical parameters. The pilot ISL programs should include at least the following:

- Detailed monitoring of injected and PLS solutions including: flow rate, concentrations of copper, acid, iron, calcium, and base metals.
- Complete geochemistry on the core samples obtained from drilling the well holes.

Historical pilot ISL testing has been carried on the northwest end of the property in the vicinity of VD14-01. A future pilot test should be located in an undisturbed area of the deposit.

For the resource estimate purposes it is reasonable to assume an overall copper recovery of 90% from the Acid Soluble Copper portion of the deposit as well as a some recovery from the cyanide copper (CNCu) estimated to be (CNCu – 0.067)/ CNCu x 100%.

The metallurgical performance could vary significantly with the degree of fracturing and solution channeling.

14 Mineral Resource Estimates

The Mineral Resource estimate for the Van Dyke deposit has been prepared by Sue Bird, P. Eng. of Moose Mountain Technical Services (MMTS). Updated assays and re-interpretation of the geology model since the previous Resource Estimate have resulted in the need for an update.

The Resource Estimate of the Van Dyke deposit with an effective date of January 9, 2020 is listed in Table 14-1. Mineral resources are estimated within both a 0.025% Recovered Cu grade shell and within a "reasonable prospects for eventual economic extraction" shape, which includes internal dilution or all "must take" material within the confining shape.

The mineral resources are estimated using criteria consistent with the CIM Definition Standards (2014) and the "CIM Estimation of Mineral Resources and Reserves Best Practice Guidelines" (2019).

In order to account for 12.7 Mlbs of Cu removed during historic mining operations, it has been assumed that all previous mining occurred in the Oxide Zone. The tonnage has been reduced by the amount required to reduce the total resource by the mined amount, with the average grades remaining constant.

Table 14-1 Resource Estimate for the Van Dyke Deposit, effective date January 9, 2020

							Cu Metal (Mlbs)	
Class	**KTonnes (000)**	**Rec Cu (%)**	**TCu (%)**	**ASCu (%)**	**CNCu (%)**	**Recovery (%)**	**Soluble Cu**	**Total Cu**
Indicated	97,637	0.24	0.33	0.23	0.04	90	517	717
Inferred	168,026	0.19	0.27	0.17	0.04	90	699	1007

Notes:

1. *The "reasonable prospects for eventual economic extraction" shape has been created based on a copper price of US$2.80/lb, employment of in situ leach extraction methods, processing costs of US$0.60/lb copper, and all in operating and sustaining costs of $US 1.25/tonne, a recovery of 90% for total soluble copper and an average Specific Gravity of 2.6t/m3.*
2. *Approximate drill-hole spacing is 80m for Indicated Mineral Resources*
3. *The average dip of the deposit within the Indicated and Inferred Mineral Resource outlines is 20 degrees. Vertical thickness of the mineralized envelope ranges from 40m to over 200m.*
4. *Numbers may not add due to rounding.*

The author is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate for the Van Dyke deposit that have not been accounted for in the reporting.

14.1 Introduction

The Van Dyke deposit is a copper oxide deposit that includes both an Oxide and Supergene zone. The term Supergene in the context of this report is defined as a zone that typically occurs below the Oxide zone and that contains both acid soluble and cyanide soluble Cu bearing minerals. Chalcocite is the primary sulfide in the mixed zone. Total Copper (TCu), Acid Soluble Copper Oxide (ASCu) and Cyanide Soluble Copper (CNCU) grades are interpolated within geologic solids by ordinary kriging (OK). The geology has been interpreted in section and plan, with fault surfaces and solids of the domains used to restrict the interpolation volumes during ordinary kriging.

A three-dimensional geologic model has been created using both the historic dhs and underground samples. The updated geologic model includes interpretation of the Gila Conglomerate-Pinal Schist boundary, the Van Dyke Fault, and mineralized solids for interpolation. A block model of the deposit has been created with two zones per block and a percent of the block within each domain used to define the resource.

Statistical analysis (cumulative probability plots, histograms, and classic statistical values) of the assay data is used to confirm the domain selection and to determine if capping of metal grades for variography and interpolation is necessary. Assay data is then composited into 5m intervals, honoring the domain boundaries. Composite statistics have been compiled for comparison with assay data. The composites are used to create correlograms for TCu, ASCu and CNCu grades using the MSDA module of the MineSight® software, thus establishing rotation and search parameters for the block model interpolation, as well as kriging parameters.

Validation of the model is completed by comparison of the block values with de-clustered composite values (Nearest Neighbor values corrected for change of support). A volume-variance correction factor is applied to the de-clustered data to calibrate the model using Grade-Tonnage curves. Further model validation is completed through comparisons of Swath Plots, Cumulative Probability Plots (CPP), as well by a visual inspection of assay and modelled values in section and plan across the mineralization.

14.2 Data Set

14.2.1 Historic Drilling, Underground Sampling and 2014 Drilling

The following outlines the data available for use in the interpolation of copper grades. Assay data within the Van Dyke model bounds includes 35 historic drillholes, historic channel samples from underground workings on three levels, re-assayed historic drill core and core pulps, analytical results from recent metallurgical test work, and data from 6 drillholes completed in 2014. Five of the 2014 holes were twinned holes used to validate historic assay values. The total length of core within the block model bounds that has been sampled for TCu is 13,017m from drilling, with an additional 1,424m of underground sampling.

Figure 14-1 is a plan view of the drillhole collars (red is 2014 drillholes), the underground sampling area and the model boundary (in blue).

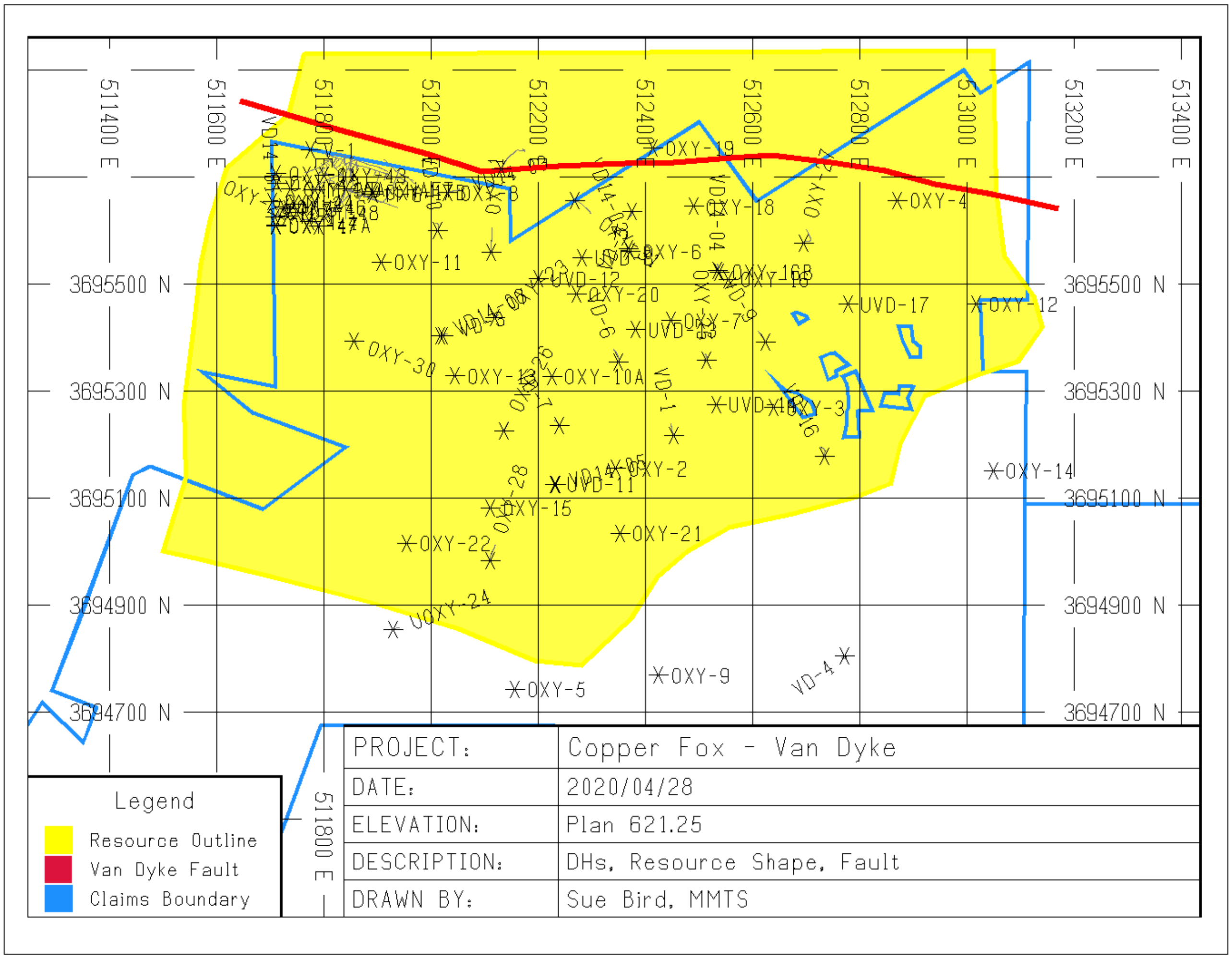


Figure 14-1 Drillholes within the Modelled Van Dyke Deposit

14.3 Geologic Model

The oxide and surrounding mixed oxide-sulphide copper mineralization has been interpreted in three dimensions. The Van Dyke fault at the northern end of the deposit has been re-interpreted as a steeply dipping E-W trending fault, with the mineralization to the north down-dropped. Mineralization remains open to the south and southwest. The Gila conglomerate surface in places defines the upper boundary to the mineralization. The majority of the mineralization occurs within the Pinal Schist at variable depths below the Gila/Pinal Schist contact or minor Porphyritic intrusions. An additional Domain has been created within the area of the previous underground workings, as higher-grade oxide/mixed zone.

Solids of total copper mineralization were created and used to code the assays, composites and the three-dimensional block model. The solids are based on a 0.025% TOTAL Soluble Cu (TSCU) cut-off. Surfaces of the faults have been used to create domain boundaries and also used to code the assays, composites and block model. The block model has been created to encompass all of the drillholes and channel samples available, within 30m x 30m x 10m (vertical) blocks.

A three-dimension view of the resulting fault surface and mineralized solids is illustrated in Figure 14-2, with domains defined as follows:

- Domain 1 – material within the mineralized solids and remote from underground channel sampling.
- Domain 2 – within the area of underground channel sampling.

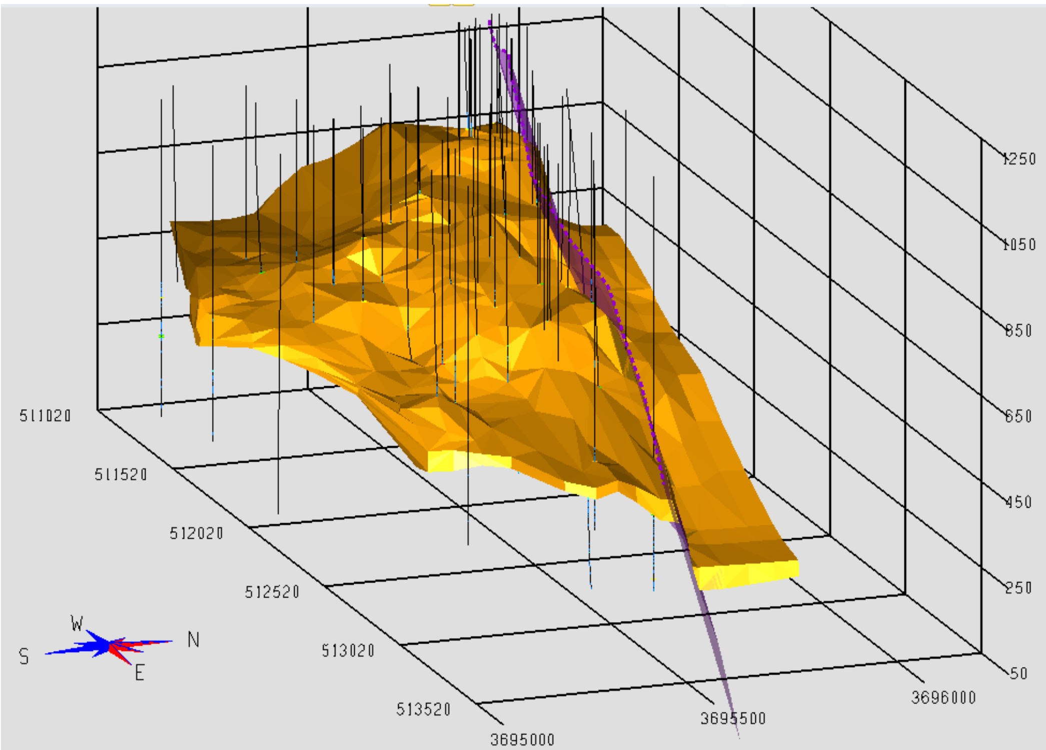


Figure 14-2 3D View of Geology Looking N75E, Dip of -20: Van Dyke Fault (purple) and Mineralized Solids (orange)

The mineralization is shallowly dipping to the east. The resulting modelled mineralization in the plane of mineralization (dipping 25degrees eastward) is illustrated in Figure 14-3 which illustrates the Total Soluble cu grades, the claim boundary and Van Dyke Fault.

14.4 Exploratory Data Analysis – Assay Data

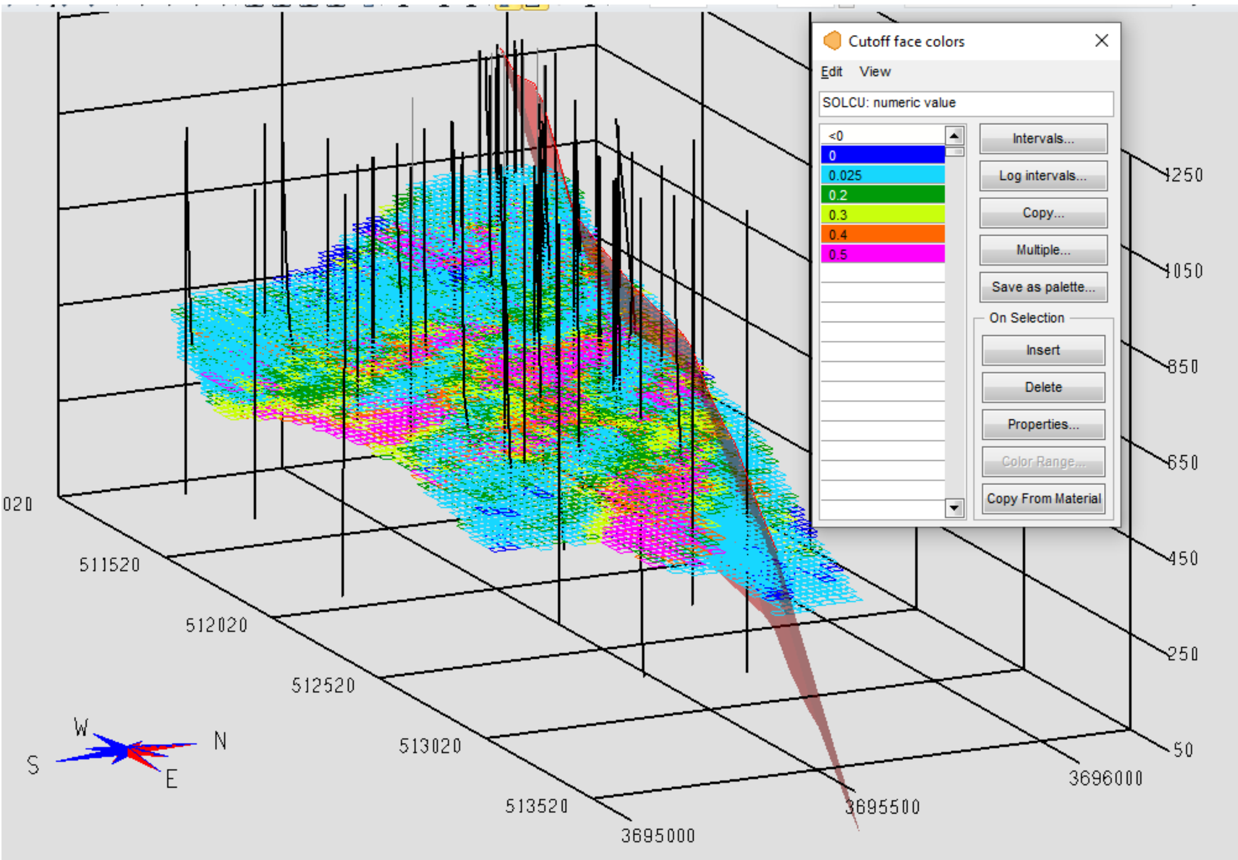


Figure 14-3 3D View of Soluble Copper Block Model Grades Looking N75E, Dip of -20

14.4.1 Assay Coding

The assay data has been tagged by domain for use in determining capping values, for compositing and eventually in block matching during interpolation. The section plots the mineralized boundaries, and the drillhole coding is illustrated in Figure 14-4 below.

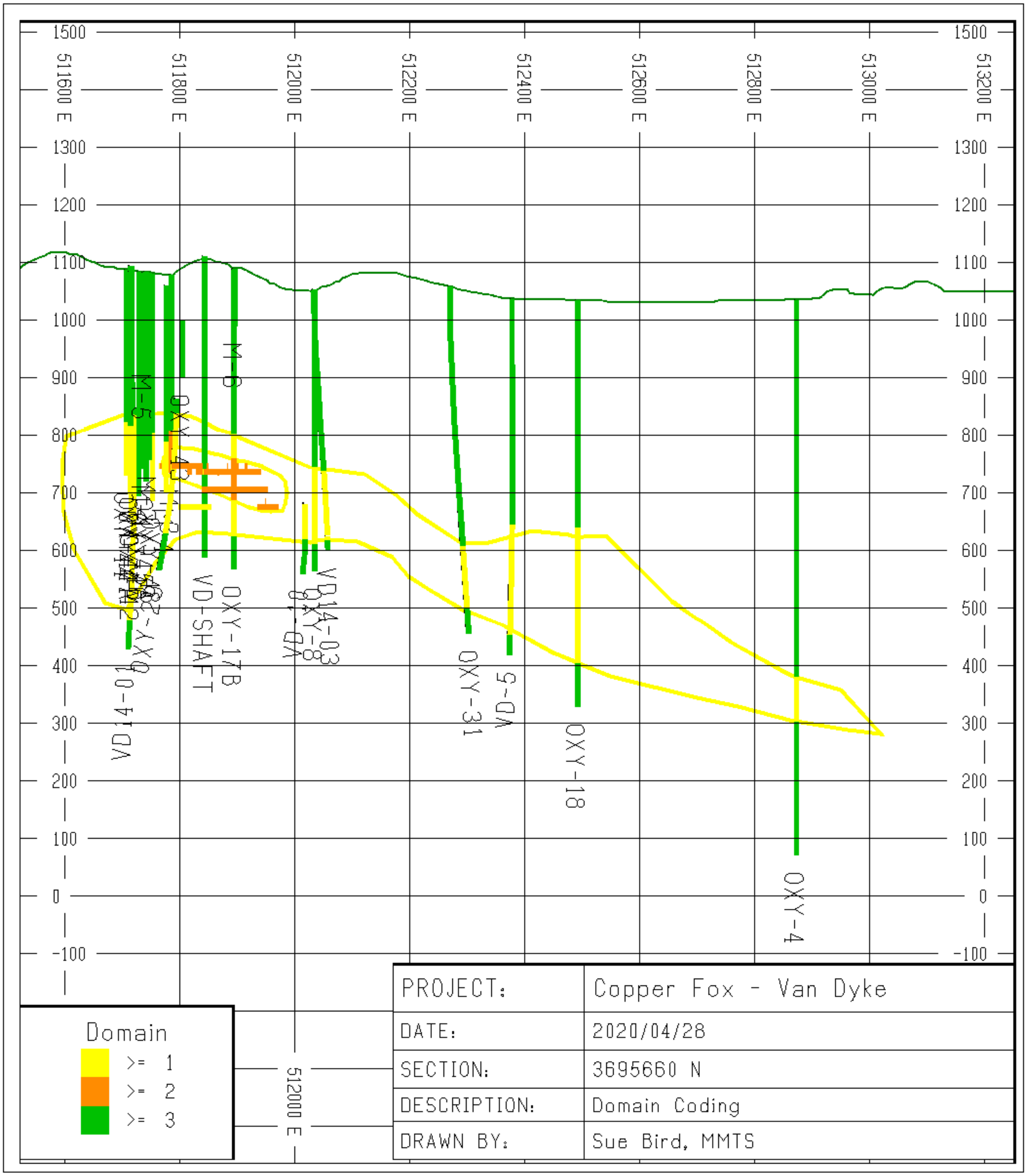


Figure 14-4 Cross-section Looking North – Domain Boundaries and Assay Coding

14.4.2 Assay Capping and Compositing

Cumulative probability plots are used to determine that the grades are lognormally distributed and to define the capping of high-grade outliers by domain and by sample type (drillhole or channel sample). The capped data is then composited for use in the interpolation. The capped values of assays and composites are compared to validate the compositing procedure used. Figure 14-5 and Figure 14-6 show the CPP plots for TCu in Domains 1 and 2 for Drillholes and Channel samples respectively.

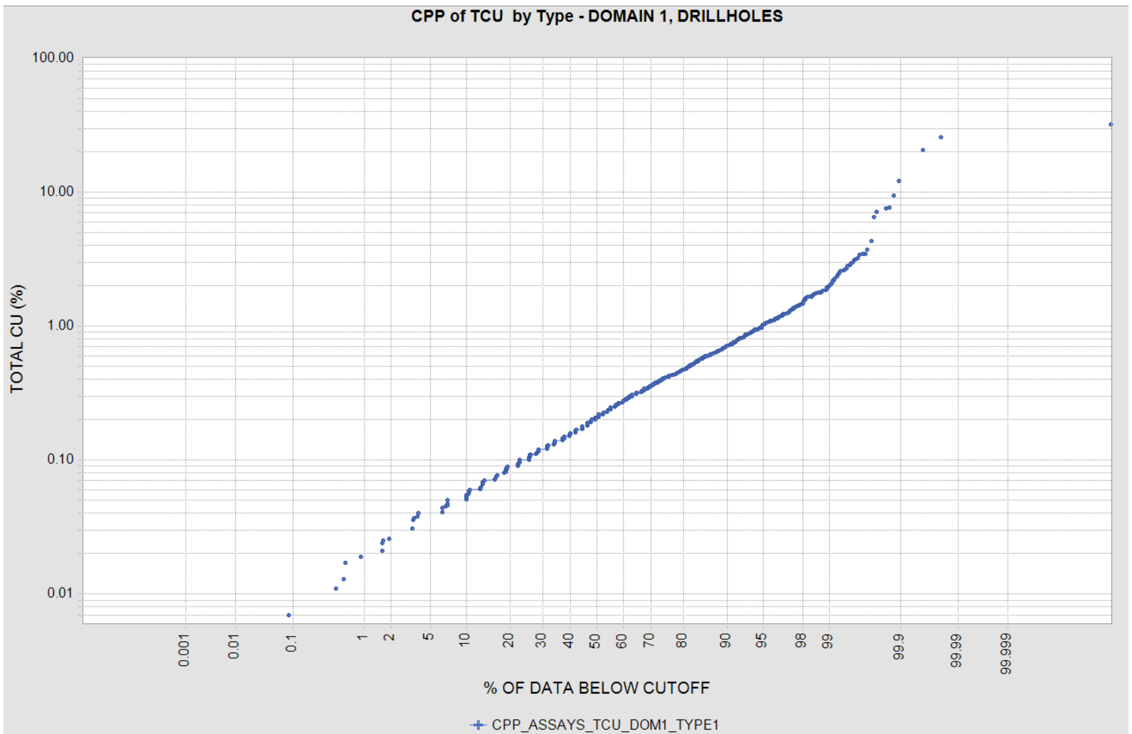


Figure 14-5 CPP Plot Assays – TCu for Domain 1 - Drillholes

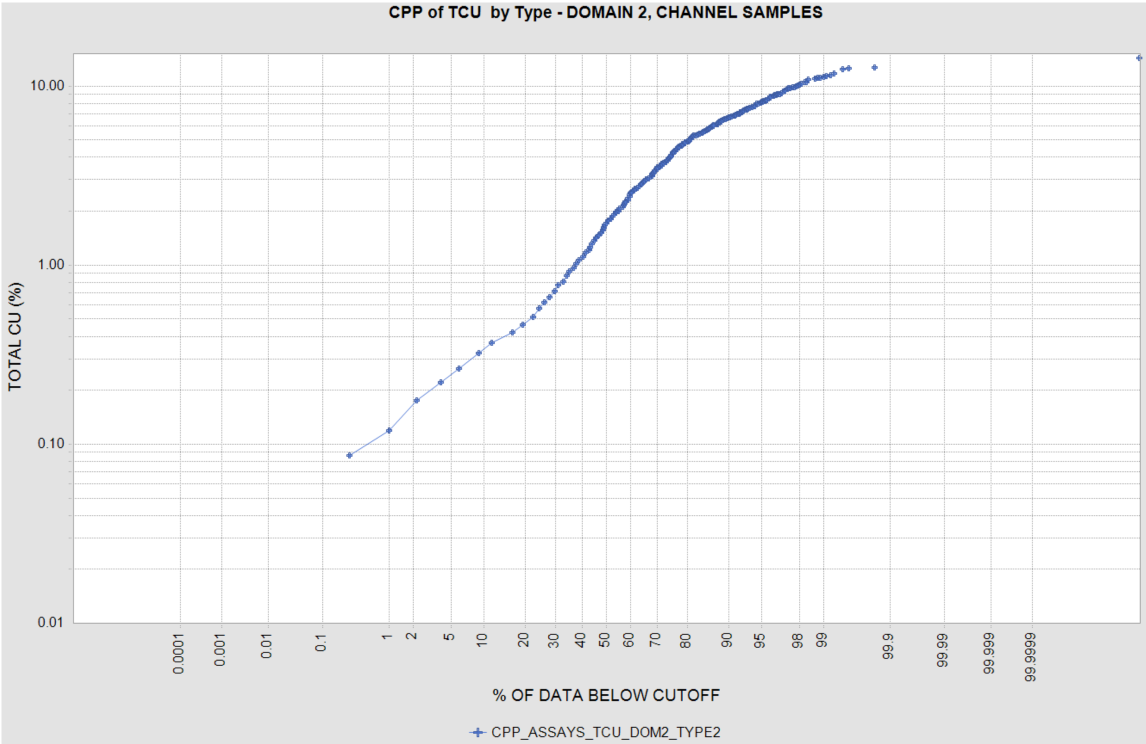


Figure 14-6 CPP Plot Assays – CuOx for the Oxide Zone

Based on the CPP plots, values at which to cap the assay grades have been defined for domains that illustrate a break in grades at the upper end of the distribution. The Table below summarizes the capping values by domain, metal and sample type. The capped, composited values are used for variography and interpolations.

Table 14-2 Capping Values of Assays during Compositing

	DOMAIN	TCU	ASCU	CNCU
Drillholes	1	10	-	1.2
	2	2	3	3
Channel Samples	1	1	na	na
	2	12	na	na

Specific Gravity Data

Specific gravity measurements have been done for the 2014 drillholes. Samples are measured by Copper Fox prior to shipment, and also by Skyline using ASTM Method C127-01. The friability of the Gila Conglomerate required kerosene-based immersion in order to limit expansion of the clay component. The Gila conglomerate samples were sent to Mountain States R&D for this process.

The average specific gravity below the Gila Conglomerate (within the Pinal Schist and porphyritic units) is 2.60. This is the value used for all mineralized and waste blocks in the reporting of the resource.

14.5 Compositing and Composite Statistics

Compositing of grades has been done as 5m fixed length composites and honoring the Domain boundaries. Table 14-3 summarized and compares the assay and composites statistics by Domain and metal. The small differences in weighed mean grades for each metal illustrate compositing is representative of the assay grades.

Table 14-3 Summary Statistics by Domain

	Parameter	TCu		ASCu		CNCu		TCu	ASCu	CNCu
		Dom1	Dom2	Dom1	Dom2	Dom1	Dom2	All	All	All
Assays	Num Samples	4833	1146	4524	52	3667	49	8258	5193	4001
	Num Missing	105	14	414	1108	1271	1111	1326	4391	5583
	Min	0.005	0.080	0.001	0.041	0.001	0.007	0.001	0.001	0.001
	Max	31.950	14.420	30.929	3.784	1.476	0.444	31.950	30.929	1.476
	Wtd mean	0.319	2.439	0.227	0.481	0.038	0.025	0.399	0.199	0.036
	Wtd CV	1.809	1.037	2.417	1.017	2.965	2.273	2.750	2.587	3.052
Composites	Num Samples	2411	470	2251	25	1817	25	5098	2711	2020
	Num Missing Samples	86	3	246	448	680	448	8664	11051	11742
	Min	0.006	0.124	0.001	0.076	0.001	0.007	0.001	0.001	0.001
	Max	9.642	11.359	8.976	1.784	0.876	0.444	11.359	8.976	0.876
	Weighted mean	0.320	2.443	0.226	0.481	0.038	0.025	0.395	0.195	0.035
	Weighted CV	1.385	0.985	1.833	0.773	2.705	1.941	2.614	1.997	2.789
Mean Grade Difference (%)		0.6%	0.2%	-0.4%	0.0%	-2.1%	-1.2%	-0.9%	-2.0%	-2.6%

14.6 Variography

Correlograms have been created within the oxide and mixed zone at 30-degree azimuth intervals and 15-degree plunges over the entire directional sphere. Due to lack of data in Domain 2, only Domain 1 has been used to define the variogram parameters for both domains. The major and minor axes for all domains followed the generally south-easterly down dip and north-easterly strike directions of the mineralization.

Downhole variograms of all DH data are used to define the nugget in each domain.

The resulting variogram parameters are given in Table 14-4 for TCu, ASCu and CNCu. Note that the Rotation is given as Z=Rotation of the azimuth from north of the major axis, X=Plunge of the major axis in the ROT direction, Y=Plunge of the minor axis as an east axis (down is negative).

Table 14-4 Variogram Parameters

Domain	Rotations (GSLIB-MS)		Axis	Total Range (ft)	Nugget	Sill1	Sill2	Sill3	Range 1 (m)	Range 2 (m)	Range 3 (m)
TCU	Z	115	Major	210	0.1	0.4	0.3	0.2	30	180	210
	X	-20	Minor	170					25	60	170
	Y	-10	Vert	70					20	50	70
ASCU	Z	115	Major	190	0.1	0.3	0.6		100	190	
	X	-5	Minor	150					50	150	
	Y	-10	Vert	60					8	60	
CNCU	Z	0	Major	210	0.2	0.3	0.1	0.4	30	140	210
	X	0	Minor	210					30	140	210
	Y	0	Vert	80					20	25	80

The major and minor axes of the variogram model for TCu are illustrated in Figure 14-7 and Figure 14-8 below.

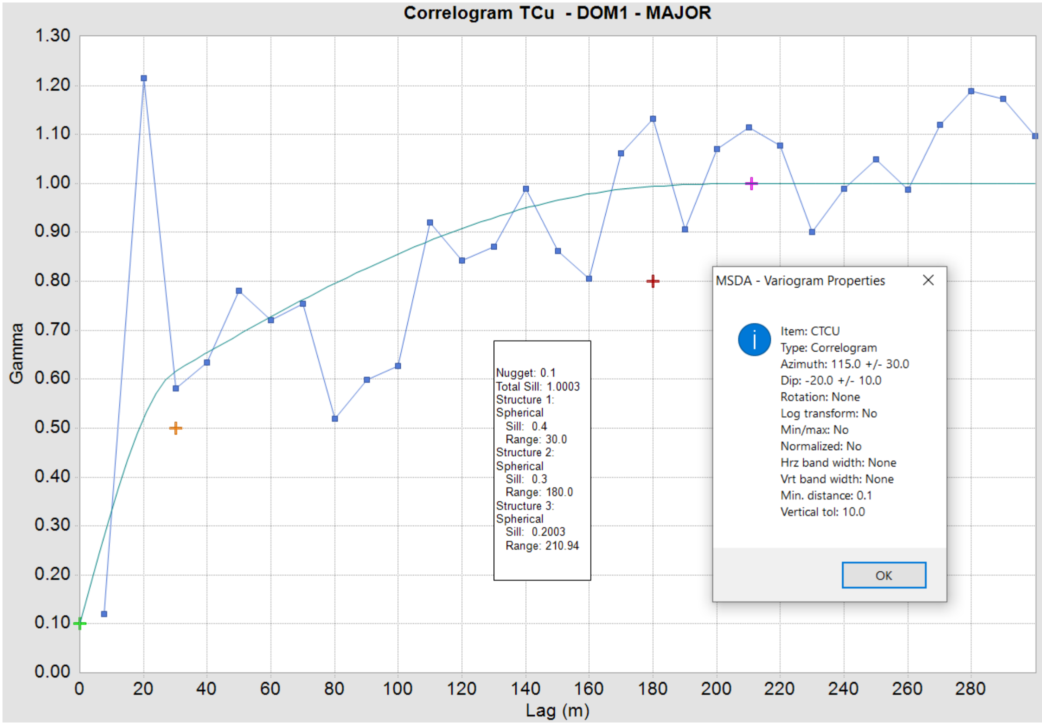


Figure 14-7 Variogram Model for TCu - Major Axis

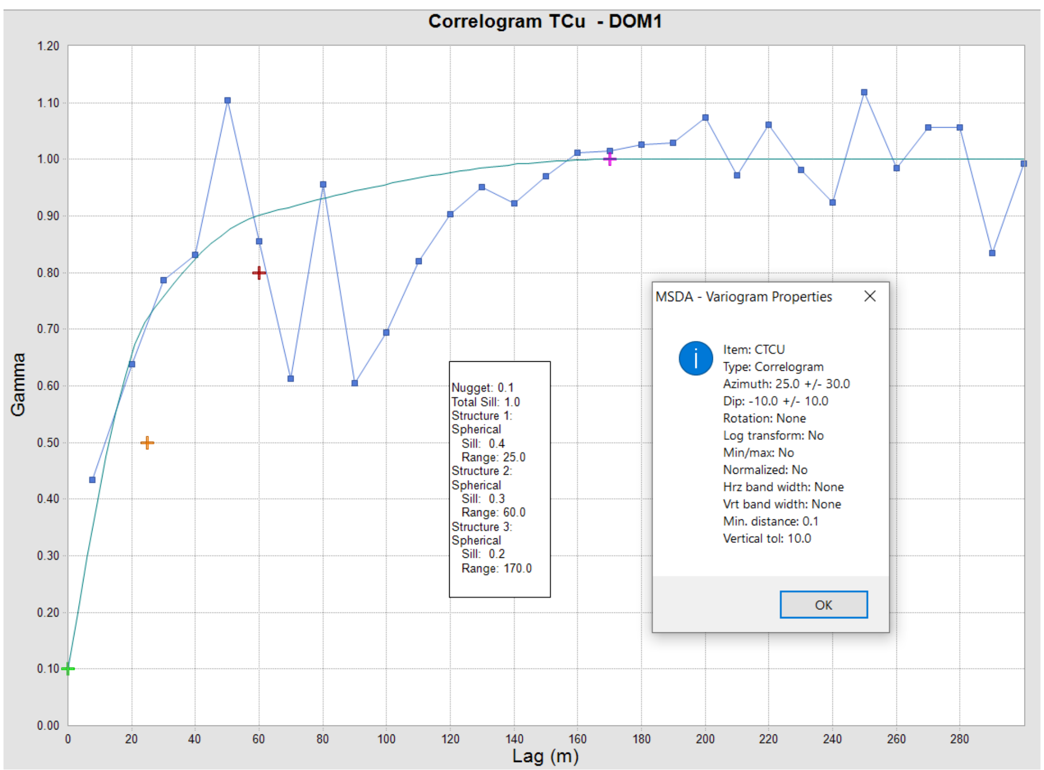


Figure 14-8 Variogram Model for TCu - Minor Axis

14.7 Block Model Interpolation

The coordinate system used for all Van Dyke project files is NAD27. The block model limits, and block size are as given in Table 14-5.

Table 14-5 Block Model Limits

Direction	Origin	Length (m)	Block Dimension (m)	# of Blocks
Easting	511400	513290	30	63
Northing	3694700	3695900	30	40
Elevation	200	1000	10	80

Interpolation of TCu, ASCu and CNCu is done by Ordinary Kriging (OK). Interpolation is restricted by the geologic boundaries, with composites and block codes required to match within each domain. The down-dropped mineralization north of the Van Dyke fault was effectively "moved up" to its position prior to fault movement by using a "relative elevation" during interpolation to calculated distances. The interpolation has been done for up to 2 different domains per block, with a block percent of each domain. The final grades used in the resource estimate are the weighted average grades of the block grades in each domain. The interpolation is done in five passes based on the variogram parameters. Search criteria for each pass for each item interpolated by domain are summarized in Table 14-6 and Table 14-7.

Outlier restriction has also been imposed on the composite values during interpolation. This is to limit the influence of high grades by constraining the distance of influence. Table 14-8 summarizes the Outlier Restrictions used. For distance greater than those in the table, a maximum of the outlier grade is used.

Table 14-6 Interpolation Search Distances by Domain

			Distance (m)				
Metal	**Rotation Axis**	**Rotation (degrees)**	**Pass 1**	**Pass 2**	**Pass 3**	**Pass 4**	**Pass 5**
TCU	Z	115	30	60	120	210	315
	X	-20	25	50	100	170	255
	Y	-10	18	35	53	70	105
ASCU	Z	115	48	95	143	190	285
	X	-5	38	75	113	150	225
	Y	-10	8	16	32	60	90
CNCU	Z	0	30	60	120	210	315
	X	0	30	60	120	210	315
	Y	0	20	40	60	80	120

Table 14-7 Composite Restriction during Interpolation

Parameter	Pass 1	Pass 2	Pass 3	Pass 4	Pass 5
Minimum # composites	4	6	6	6	2
Maximum # composites	8	18	18	18	8
Max / DH	2	3	3	3	2
Max / Split Quadrant	4	4	4	4	2

Table 14-8 Outlier Restriction during Interpolation

Domain	Item	Pass 1-4		Pass 5	
		Outlier Grade	Outlier Distance	Outlier Grade	Outlier Distance
1	TCu	5	10	5	10
	ASCu	5	10	5	10
	CNCu	0.7	10	0.7	10
2	TCu	9	10	5	10
	ASCu	---	---	5	10
	CNCu	---	---	0.7	10

14.8 Resource Classification

Classification has been updated to include Indicated blocks for Domain 1 only, in which the average distance to the nearest two drillholes for which ASCu has been assayed is equal to or less than 80m. This distance is based on the variography which indicates that the Range of the Correlogram at 80% of the sill (R80) is approximately 80m in the major and minor axis. Domain 2 and all other blocks are classified as Inferred. Domain 2 is excluded from Indicated Classification due to its dependence on channel sampling.

14.9 Block Model Validation

Validation of the model is completed by comparison of the Ordinary Kriged (OK) grades, with Nearest Neighbor (NN) interpolated block value, which has been corrected for the Volume-Variance effect due to the change in sample size from composite to block. Validation is completed through inspection and analysis of swath plots, grade tonnage curves, mean grade comparisons, and a visual inspection in section and plan across the property.

14.9.1 Comparison of Mean Grades to Composite Data

The mean grades in each Domain and by Class has been done to ensure that the OK interpolated grades of the Resource Estimate are no globally biased with respect to the data A Nearest Neighbour model has been created to serve as the de-clustered composites. Results of this comparison are presented in Tables 14-9 through 14-11. The results show the difference between the OK and NN grades is less than 4% for Indicated blocks and within 1% for the ASCu values. Inferred blocks show slightly greater difference for TCu with the interpolated grades 9% lower. The very small number of blocks influenced by the channel samples (Domain 2) means that the overall grade differences are essentially the same as for Domain 1, as illustrated in Table 14-11.

Table 14-9 Comparison of OK Grades to NN Grades – Domain 1

CLASS	Parameter	DOMAIN 1					
		TCu-OK	TCu-NN	ASCu -OK	ASCu-NN	CNCu-OK	CNCu-NN
Measured+Indicated	Num Samples	5,495	5,495	5,495	5,495	5,495	5,495
	Num Missing Samples	0	0	0	0	0	0
	Min	0.025	0.011	0.002	0.002	0.001	0.001
	Max	2.815	6.748	2.495	3.071	0.502	0.689
	Weighted mean	0.337	0.330	0.229	0.226	0.037	0.038
	Weighted CV	0.671	1.038	0.965	1.299	1.701	2.430
	Difference (%)		2%		1%		-4%
Measured+Indicated +Inferred	Num Samples	19,629	19,629	19,629	19,629	19,629	19,629
	Num Missing	0	0	0	0	0	0
	Min	0.000	0.000	0.002	0.000	0.000	0.000
	Max	5.000	7.326	2.495	3.071	0.627	0.689
	Wtd mean	0.311	0.339	0.183	0.175	0.042	0.042
	Wtd CV	0.937	2.180	0.946	1.289	1.612	2.477
	Difference (%)		-9%		4%		-2%

Table 14-10 Comparison of OK Grades to NN Grades – Domain 2

CLASS	Parameter	DOMAIN 2					
		TCu-OK	TCu-NN	ASCu -OK	ASCu-NN	CNCu-OK	CNCu-NN
Measured+Indicated +Inferred	Num Samples	181	181	181	181	181	181
	Num Missing	0	0	0	0	0	0
	Min	0.223	0.246	0.124	0.087	0.008	0.010
	Max	5.978	10.197	1.150	1.122	0.310	0.311
	Wtd mean	1.635	1.800	0.474	0.466	0.058	0.058
	Wtd CV	0.756	1.118	0.447	0.593	1.344	1.316
	Difference (%)		-10%		2%		1%

Table 14-11 Comparison of OK Grades to NN Grades – Domain 2

CLASS	Parameter	ALL DOMAINS					
		TCu-OK	TCu-NN	ASCu -OK	ASCu-NN	CNCu-OK	CNCu-NN
Measured+Indicated	Num Samples	5495	5495	5495	5495	5495	5495
	Num Missing Samples	0	0	0	0	0	0
	Min	0.025	0.011	0.002	0.002	0.001	0.001
	Max	2.815	6.748	2.495	3.071	0.502	0.689
	Weighted mean	0.337	0.330	0.229	0.226	0.037	0.038
	Weighted CV	0.671	1.038	0.965	1.299	1.701	2.430
	Difference (%)		2%		1%		-4%
Measured+Indicated +Inferred	Num Samples	19810	19810	19810	19810	19810	19810
	Num Missing	0	0	0	0	0	0
	Min	0.000	0.000	0.002	0.000	0.000	0.000
	Max	5.978	10.197	2.495	3.071	0.627	0.689
	Wtd mean	0.326	0.355	0.186	0.179	0.042	0.043
	Wtd CV	1.063	2.195	0.947	1.281	1.609	2.461
	Difference (%)		-9%		4%		-2%

14.9.2 Volume-Variance Correction

Grade-Tonnage curves have been constructed for each metal to check the validity of the change of support in the grade estimations. The Nearest Neighbour (NN) grade estimates are first corrected by the Indirect Lognormal (ILC) method using the Block Variance, the weighted mean and Coefficient of Variation (C.V.) values of the NN model for each grade item. The corrected values for grades in each domain have been plotted and compared to the kriged (OK) value. See Figure 14-9 for an example of the ASCu Grade-tonnage curve comparisons.

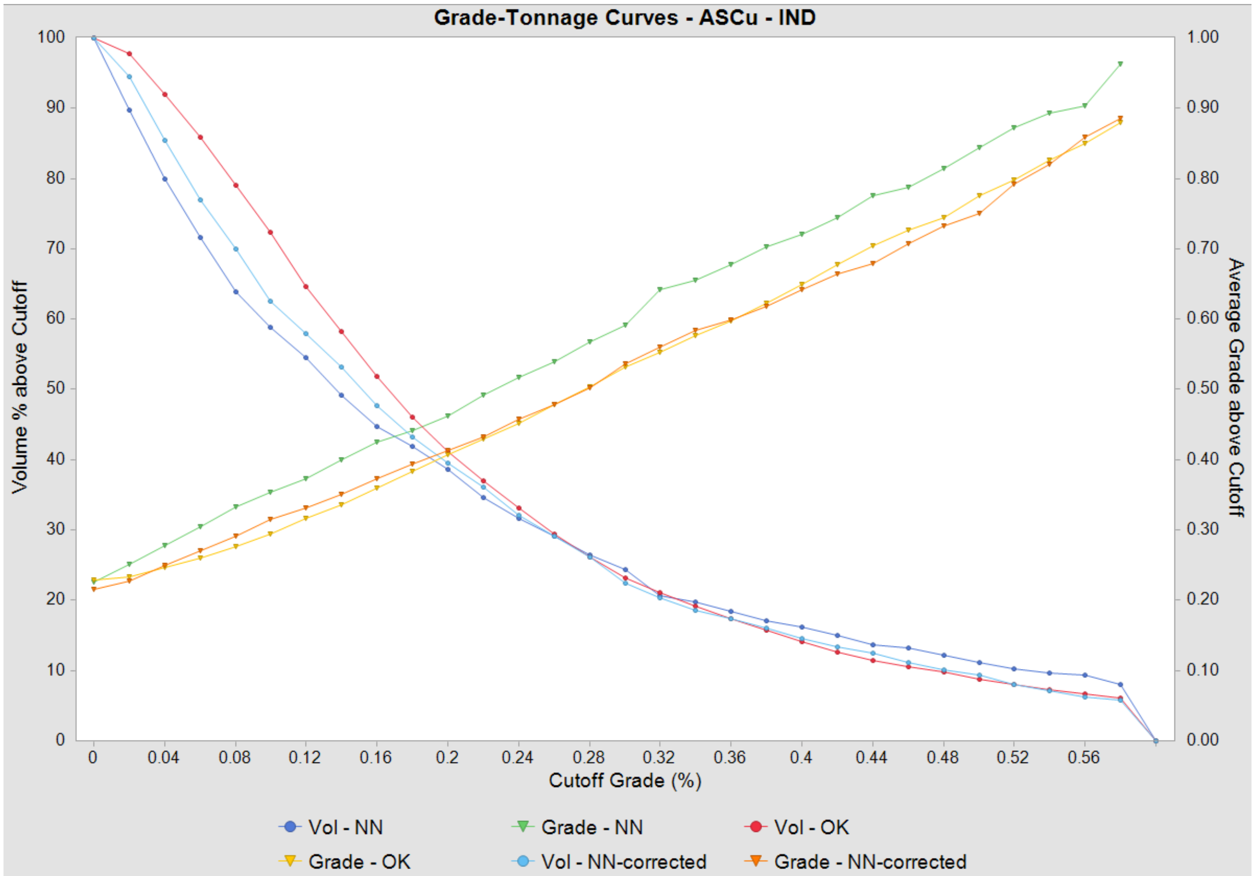


Figure 14-9 Tonnage-Grade Curves for ASCu

14.9.3 Swath Plots

Swath plots by domain have been created in northing, easting and vertical directions to compare the OK grades, the Nearest Neighbour (NN), and Nearest Neighbor-correct (NNC) grades. Acid Soluble Copper oxide grades (ASCu) are illustrated in Figure 14-10 through Figure 14-12, with total copper (TCu) in the mixed zone plotted in Figure 14-9 through Figure 14-11. The bar graph in each plot indicates the volume of blocks used for the swath plot averaging.

The swath plots indicate no global bias in the kriged values, and good correlation in the main body of the data.

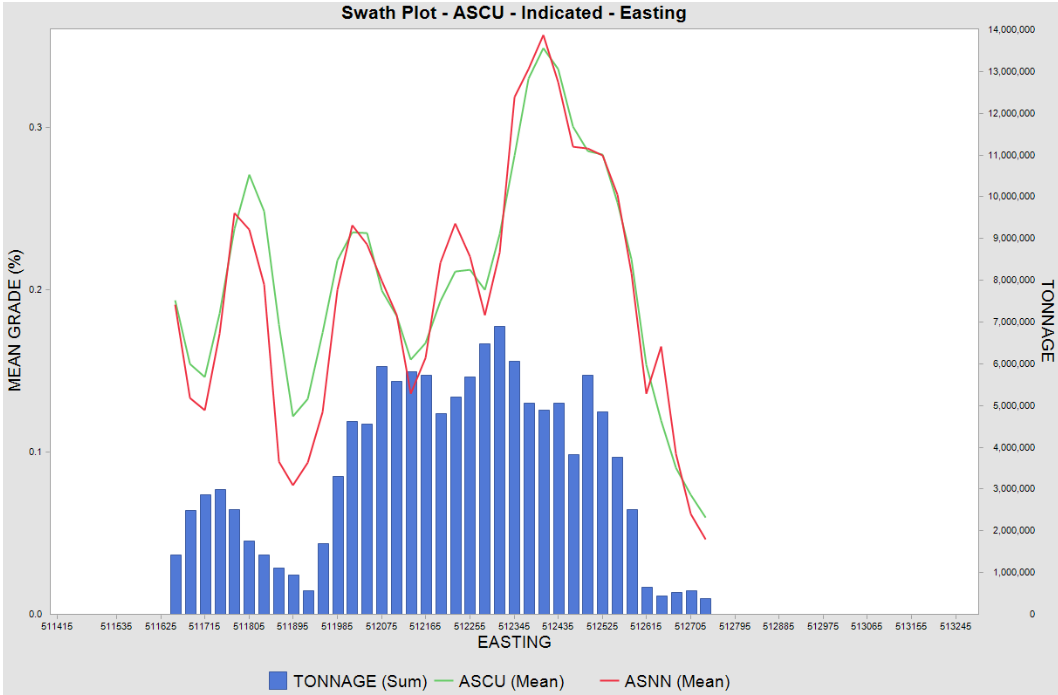


Figure 14-10 Swath Plot by Easting of ASCu

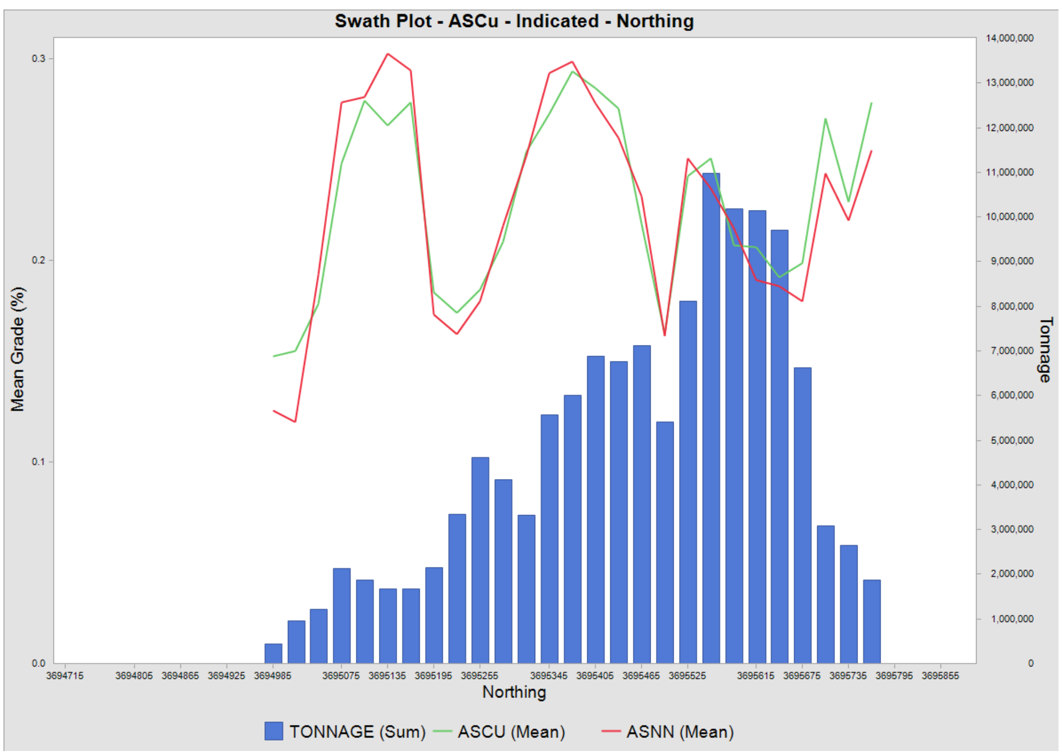


Figure 14-11 Swath Plot by Northing of ASCu

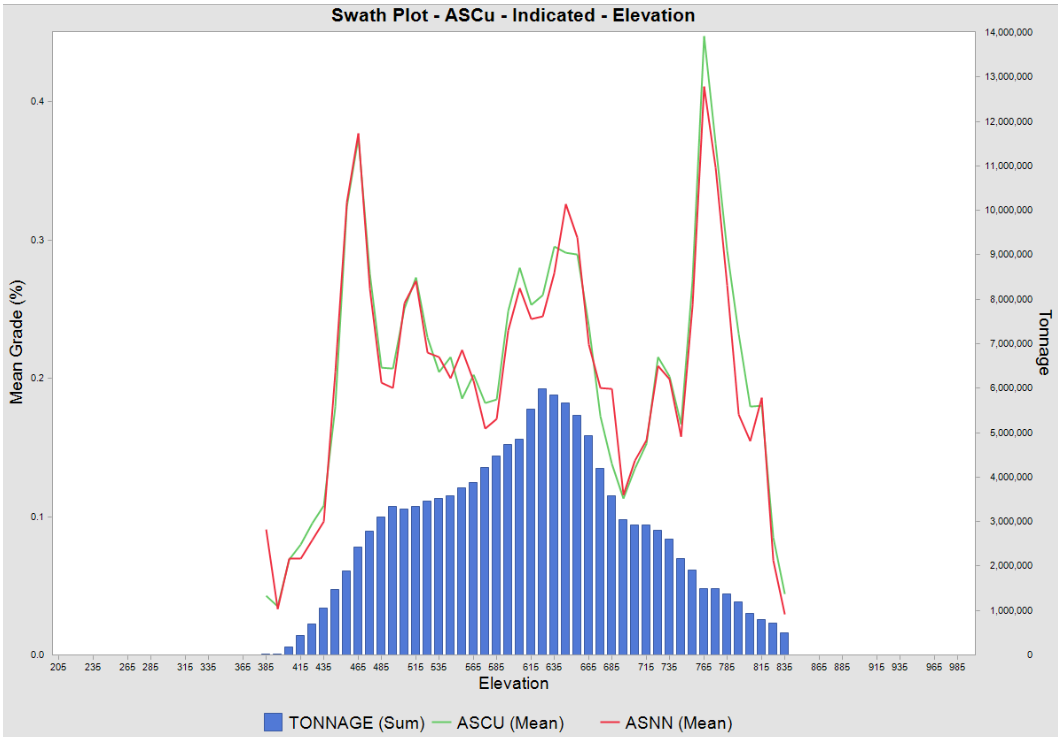


Figure 14-12 Swath Plot by Elevation of ASCu

Visual Validation

A series of E-W, N-S sections (every 30m) and plans (every 10m) corresponding to the block dimensions have been inspected to ensure that the OK interpolation is representative of the original assay data throughout the model. Figure 14-13 through Figure 14-15 are E-W and N-S sections illustrating the block model TSCu grades and assay grades, as well as the mineralized domain solids and Van Dyke fault.

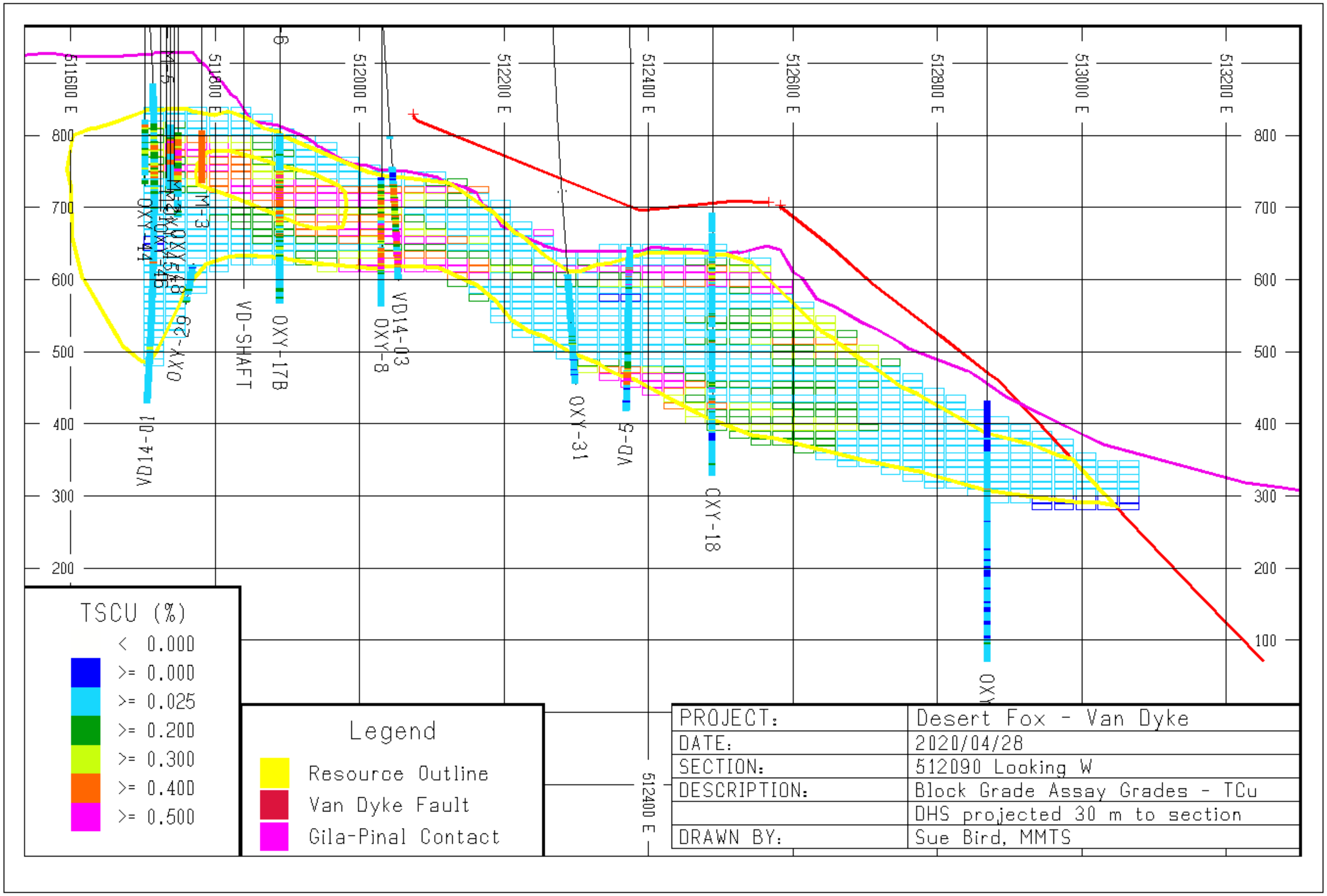


Figure 14-13 **Cross-section at 3695650N, Looking North - Model and Assay Grades- TSCu**

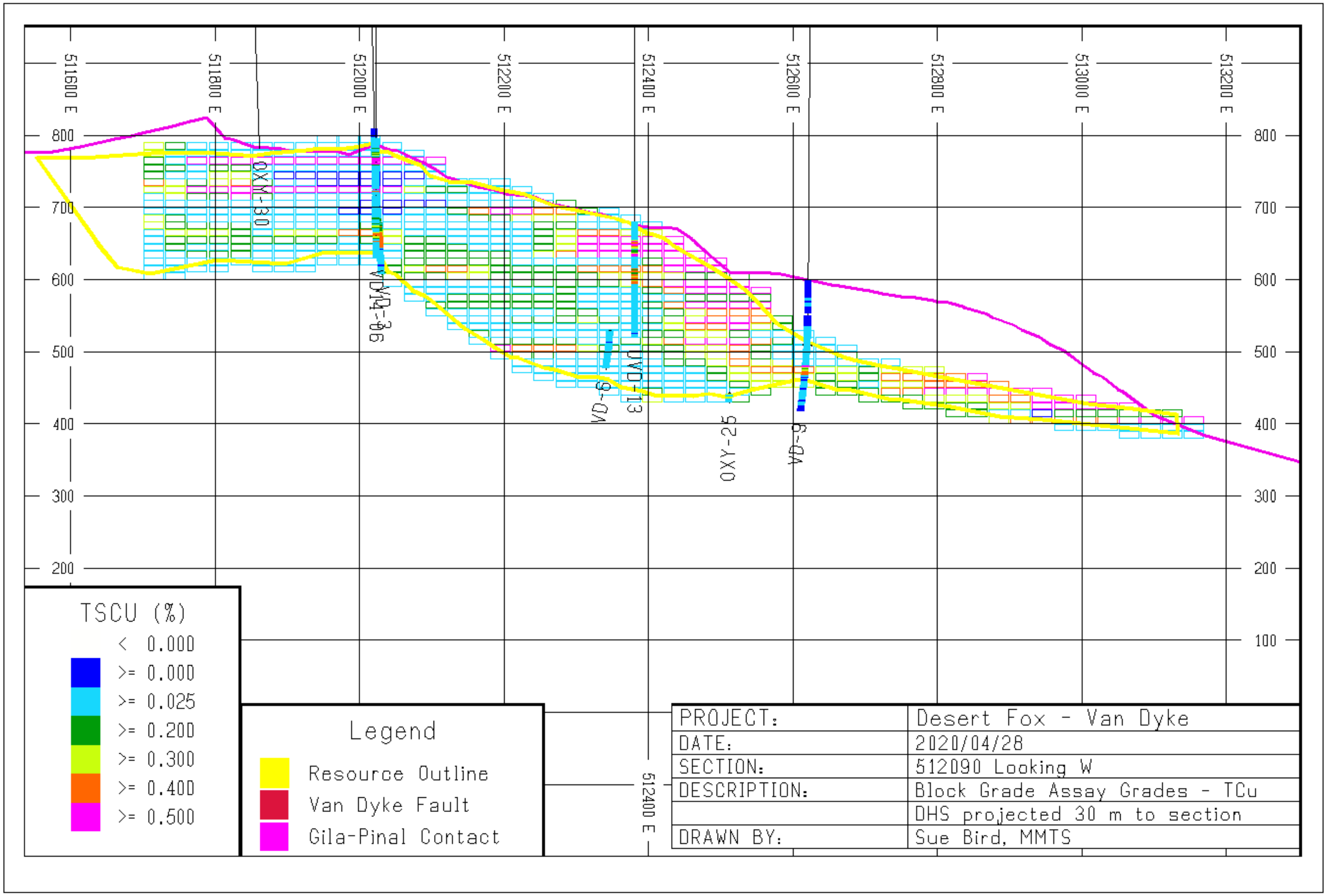


Figure 14-14 Cross-section at 3695400N, Looking North - Model and Assay Grades- TSCu

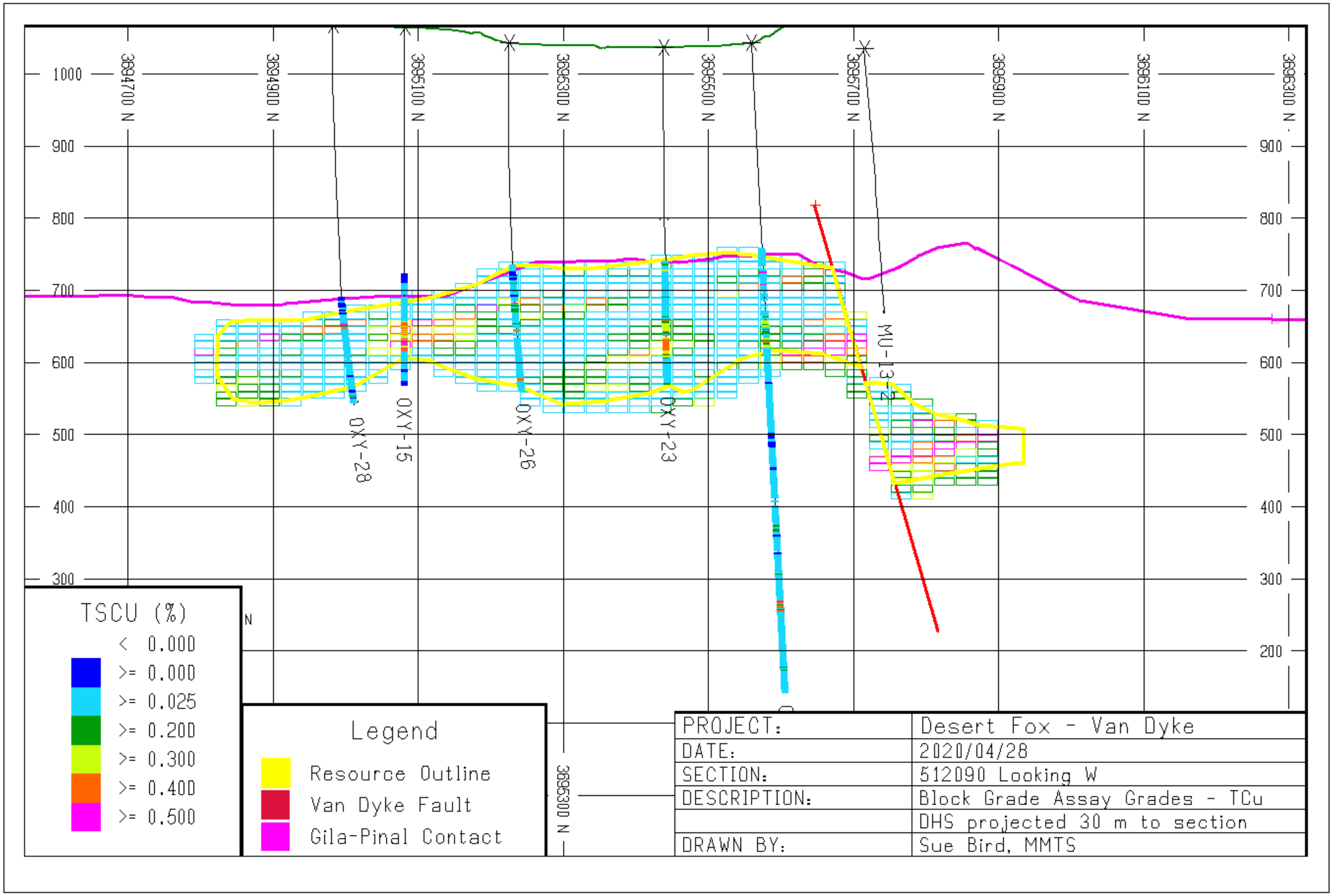


Figure 14-15 **Cross-section at 512090E, Looking West - Model and Assay Grades- TSCu**

14.9.4 Resource Estimate Confining Shape and Adjustments

For determination of a resource cut-off grade to create the mineralized solid shapes for Van Dyke, MMTS conducted a very preliminary [high level/conceptual] analysis including a review of cost information from similar projects. The following assumptions were used:

- copper price of US$2.80/lb
- employment of in situ leach extraction methods
- processing costs of US$0.60/lb copper
- an all in operating and sustaining costs of $US 1.25/tonne
- a recovery of 90% for ASCu and variable for CNCu as described below
- an average Specific Gravity of 2.6t/m3.

The metallurgical recovery of 90% is based on the updated metallurgical analyses in Chapter 13 of this report with ASCu recovery of 90% and CNCu estimated to be (CNCu – 0.067)/ CNCu x 100%. To determine the volume of rock within the mineralized solid shapes that is amenable to potential in-situ leach, a series of Lerchs-Grossman "pit" shapes have been created, varying the costs. The Total Recovered Cu was used to calculate the value of the blocks, using the bottom of the Gila Conglomerate as the upper surface, and vertical "pit walls" with the price and cost assumptions listed above.

It was found that the "reasonable prospects of eventual economic extraction" shape was not sensitive to mining costs, and the base case cost of $US 1.25/tonne recovered the large majority of the modelled resource. This is illustrated by the 3D image of the mineralized solid compared to the Lerchs-Grossman shape at the base case assumptions in the Figure 14-16 below.

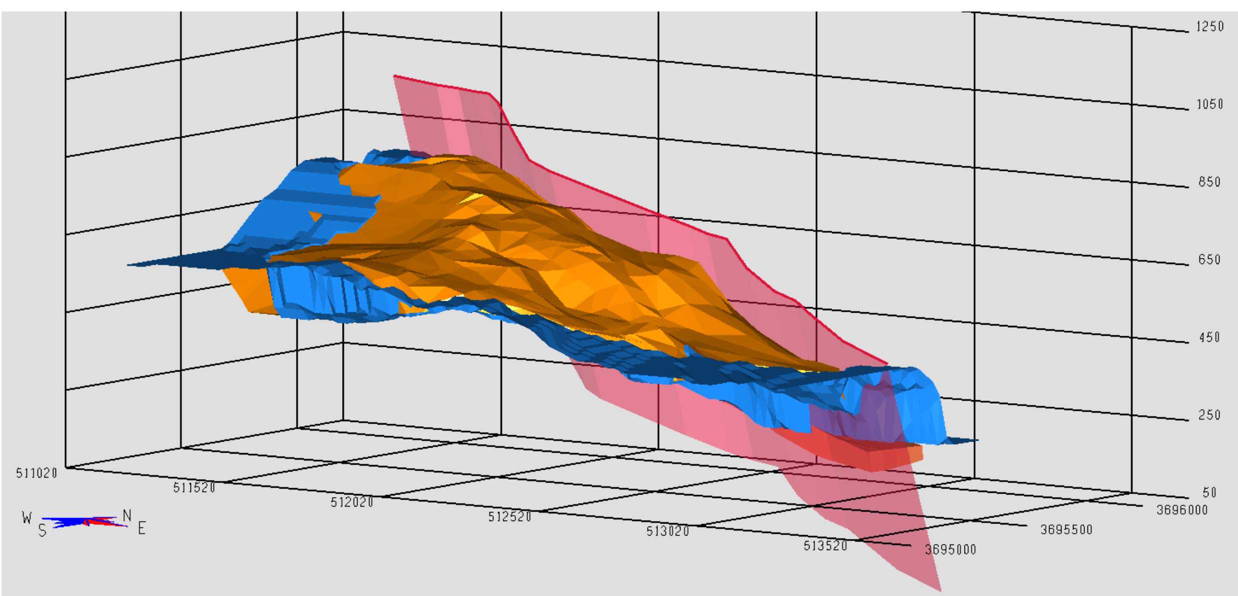


Figure 14-16 "Reasonable prospects of eventual economic extraction" shape (blue) compared to mineralized solid (orange) with Van Dyke Fault (red)

In order to account for 12.7 Mlbs of Cu removed during historic mining operations, it has been assumed that all previous mining occurred in the Oxide Zone. The tonnage has been reduced by the amount required to reduce the total resource by the mined amount, with the average grades remaining constant.

A further adjustment to the resource has been made to account for the volume of mineralized material within the Quiet Title area of the deposit. Through research on past titles and claims, it has been determined by Desert Fox that 62% of the material within the Quiet Title boundary may not be recoverable by Desert Fox. Therefore, the resource tonnage within this boundary has been reduced by 38% to give the final tonnage used in the Resource Estimate.

15 Mineral Reserve Estimates

Not Applicable.

16 Mining Method

Not Applicable.

17 Recovery Methods

Not Applicable.

18 Project Infrastructure

Not Applicable.

19 Market Studies and Contracts

Not Applicable.

20 Environmental Studies, Permitting and Social or Community Impact

Not Applicable.

21 Capital and Operating Costs

Not Applicable.

22 Economic Analysis

Not Applicable.

23 Adjacent Properties

The Van Dyke project is situated in the Globe-Miami mining district, a historically prominent and current copper producing region in southeastern Arizona. The Van Dyke copper deposit occupies a position within the Miami-Inspiration trend of porphyry copper deposits, two of which are adjacent to the Van Dyke project. The Van Dyke copper deposit is separated from the two adjacent copper deposits by faults which are believed to be predominantly extensional. The structural deformation dismembered what was once a contiguous zone of mineralization.

The Miami Unit property of BHP Copper, Inc. (BHP) lies north and northeast of the Van Dyke property. It was a leaching-only facility since underground mining was completed in 1959; producing copper through in-situ leaching of the former block caved underground mine. Additionally, copper was produced by hydraulic mining and reprocessing of historical tailings. Full-scale operations were discontinued in July 2001; while the site has been primarily on care-and-maintenance since that time, limited production has occurred, but has been included in the company's annual summaries for the Pinto Valley Unit.

The Inspiration mine of Freeport McMoRan Copper & Gold Inc. (Freeport) is located immediately west and northwest of the Van Dyke property. Freeport is mining towards closure at Inspiration. Current operations include leaching by solution extraction/electrowinning (SX/EW), and a smelter and rod mill that also treat cathodes shipped to Inspiration from several of Freeport's other Arizona copper mines.

The principal orebodies of the Miami-Inspiration trend formed along the intrusive contact equally within fractured to brecciated Proterozoic Pinal Schist and Early Tertiary Schultz Granite. The deposits at Inspiration and Miami Unit consisted of irregular, elongate zones of disseminated supergene copper mineralization in which chalcocite was by far the most important ore mineral until later development of lower grade copper oxide zones became economically attractive.

Mineralization on adjacent properties is not necessarily indicative of the mineralization on the Van Dyke project.

24 Other Relevant Data and Information

24.1 In-Situ Leaching in Arizona

Arizona has nine historical and current copper ISL projects. ISL recovery methods were employed at the Pinto Valley and Miami-East mines in the Globe-Miami mining district. The large San Manuel copper mine, Pinal County, Arizona, was a successful operation that integrated ISL methods with open pit and underground mining methods.

The Florence Copper project of Taseko Mines Ltd., located approximately 65km southwest of the Globe-Miami area, has commenced Phase 1 of operations, known as the Production Test Facility with 24 injection, recovery, monitoring and observation wells on site and SX/EW plant completed. The intent of the Florence Copper pilot-scale facility is to demonstrate that the proposed in situ copper recovery process can be carried out in an environmentally safe manner that protects the groundwater resources of the area.

At the Van Dyke Copper Project, detailed descriptions of the Phase 1 and Phase 2 ISL tests conducted by Occidental are presented in Huff et al. (1981) and Huff et al. (1988). The later ISL performed at Van Dyke by Kocide is summarized by Beard (1990).

24.2 Liabilities and Risks

24.2.1 Environmental Liabilities

The Van Dyke Copper Project, and the town of Miami under which it occurs, are encompassed to the west and north by large mining developments including pits, leach pads, dumps and other mining infrastructure.

The Project itself has been the subject of underground development and in-situ leaching in the northwest corner of the Project, and widespread surface exploration drilling. The infrastructure remaining from those activities, all of which occurred prior to 1990, includes access roads, equipment laydown areas, drill sites and steel drillhole collars, a copper cementation plant and ancillary facilities, and the Van Dyke Shaft. Most of the historic drill sites occur within the town of Miami and many are encumbered by town infrastructure.

In 2014, Copper Fox installed a locked gate to prevent road access to the northwest corner of the Project where past activity was concentrated; and access to the Van Dyke Shaft was padlocked. During its 2014 exploration drilling program, the company also upgraded or constructed new access and drill sites. No changes were made to the site in 2019.

The status of the Project with respect to environmental liabilities is not yet known.

24.2.2 Information Risk

This Technical Report was prepared by MMTS who, in the preparation of the report, reviewed historical geological data and laboratory results to develop an understanding of the Project. In 2019, a comprehensive re-sampling program of drill core chips, rejects, and pulps from 36 historic drillholes added 2193 new analyses for Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu). This data, coupled with the use of a robust Quality Assurance/Quality Control program, adequately verified the historical data base.

The results of the work are believed to adequately characterize the deposit at an early stage in its assessment, but the geometry, length, width, depth, and continuity of the mineralized body may change with additional exploration.

A revised database that includes data generated in 2019 was used to develop a geologic model and to calculate Indicated and Inferred Mineral Resources for the Van Dyke copper deposit which complies with the requirements of NI 43-101.

24.2.3 Operational Risk

The business of mineral exploration, development and production by their nature contain significant operational risks. The business depends upon, amongst other things, successful prospecting programs and competent management. Profitability and asset values can be affected by unforeseen technical issues and operational circumstances.

24.2.4 Political and Economic Risk

Factors such as political and industrial disruption, currency fluctuations and interest rates could have an impact on future operations; these risks are beyond the control of the company.

25 Interpretation and Conclusions

The Mineral Resource Estimate for the Van Dyke deposit has been updated with the following Conclusions:

1. Modelled grades have been validated and compared to the de-clustered composite data, suggesting that there is no global bias and the overall tonnage and grade of the deposit is reasonable.
2. The exploration potential for additional resources is extensive to the south, and at depth.
3. The grades of the legacy assay data are generally lower than the re-assayed values suggesting that modern analytical procedures are more aggressive in extracting soluble copper than those used in the past.
4. Sample preparation, analysis, and security is acceptable for all drilling used in the Resource. Legacy drilling has been verified by twinning of holes in 2014 and by re-assaying of core and coarse rejects in both 2014 and 2019.
5. Recent metallurgical test work indicates that the deposit is amenable to recovery using in-situ leaching (ISL) with a metallurgical recovery of 90%.

Further details on the Interpretation of the deposit during this study include:

1. The Van Dyke Copper Project hosts a copper deposit of significance within the prolific Miami-Inspiration trend of porphyry copper and related deposits. The Van Dyke copper deposit lies at a depth of between 185 and 625m, a portion of which occurs under the town of Miami, Arizona.
2. The Van Dyke Copper Project has been the subject of limited historic underground development, widespread surface exploration drilling and localized in-situ leaching. The activities have contributed immensely to the understanding of the Project and generated a valuable data set that forms the basis for advancing the Project.
3. A 2019 resampling program completed by Desert Fox Van Dyke Co., a wholly owned subsidiary of Copper Fox Metals, Inc., included sampling and analysis of drill core chips, rejects and pulps from 38 historic drillholes added 2193 new analyses for Total Copper (TCu), Acid Soluble Copper (ASCu) and Cyanide Soluble Copper (CNCu). This data, together with data collected from the company's 2014 drill program and other historic drillhole data, was used to remodel the deposit using a 0.025% TSCu cut-off. This data, coupled with the use of a robust Quality Assurance/Quality Control program, adequately verified the historical data base.
4. The overall geometry of the Van Dyke copper deposit is that of a fault-bounded gently east-dipping tabular like body. The tabular like body is situated in the hanging wall of the Miami East fault, a northerly trending, moderately east-dipping normal fault that truncates the Miami Caved deposit to the northeast. The Miami fault forms the western limit of the Van Dyke deposit. To the north the Van Dyke copper deposit is constrained by the Van Dyke fault and the northern property boundary.
5. The Van Dyke deposit exhibits features of a primary low pyrite, low grade porphyry copper system that has been subjected to a number of weathering/oxidization/erosion cycles. The unconformity between the Gila Conglomerate and the Pinal Schist is marked by a red hematitic clay layer interpreted to be the upper weathering zone of a Leach Cap. Below the Leach Cap, the Van Dyke deposit exhibits copper mineralogy characteristic of Oxide, Supergene and Hypogene zones of mineralization. The secondary copper mineralization is hosted primarily by

variably quartz-sericite-chlorite altered, shattered to brecciated Proterozoic Pinal Schist, and minor, equally structurally prepared, porphyritic granodiorite of the Tertiary Schultz Granite. The secondary copper minerals also occur in quartz veins, fractures and along cleavage planes in the Pinal Schist.

6. The principal copper minerals in the deposit, in order of importance, are malachite, azurite, chrysocolla, tenorite, cuprite, native copper and chalcocite. There are no relict sulphide grains in the upper part of the deposit. The upper Oxide zone is dominated by malachite, azurite and chrysocolla, secondary copper minerals that characterize in situ oxidization of primary copper minerals in a low pyrite environment. Beneath the Oxide zone, there exists a Supergene zone. Several drillholes exhibit "stacked" chalcocite zones. The Supergene zone consists primarily of chalcocite and sparse malachite, azurite and chrysocolla; it is transitional down-section locally into weakly-developed zones of low grade hypogene mineralization, primarily in the western and central part of the project area.
7. The secondary copper mineralization in the Van Dyke copper deposit is believed to have formed from the weathering and oxidization of primary copper sulphides in a low pyrite environment. The grade of the secondary copper mineralization is in part a function of pyrite content and how well the country rock was structurally prepared prior to the mobilization and deposition of the secondary copper minerals.

26 Recommendations

The following recommendations are based upon the review of all data available for the Van Dyke Copper Project.

26.1 Recommendation for Exploration Work

Future drill programs should utilize robust QA/QC procedures similar to those implemented in 2014 and used in 2019. The use of drillhole logs that allow for detailed geological descriptions is encouraged, as is the collection of geotechnical data and metallurgical samples.

The recommended exploration program includes the following elements:

1. Diamond Drilling & Analysis: an 8-hole, 4500-metre program is recommended to test the possible extension of the deposit westwards towards the property boundary and to the southwest and to collect core for metallurgical test work.
2. Down-Hole Geophysics (acoustic televiewer)
3. Metallurgical Test Work: 6-8 pressure leach tests on whole core from select areas of the deposit
4. Hydrogeology: Installation of piezometers to measure water levels

The recommended program has an estimated cost of $US 2.130 million (Table 26-1).

Table 26-1 Summary of Recommended Expenditures

Item	Estimated Cost ($CDN)
Drilling	$1,475,000
Assaying	$30,000
Geological Labour	$125,000
Metallurgical Test Work	$220,000
Downhole Geophysics	$25,000
Accommodation & Meals	$80,000
Field Supplies	$25,000
Transportation & Travel	$45,000
Hydrogeology	$50,000
Community Relations	$20,000
Permitting & Legal	$15,000
Data Compilation & Reporting	$20,000
Total	**$2,130,000**

26.2 Recommendations for Ongoing Engineering Studies

Recommendation for ongoing engineering studies include; run a Pilot ISL test, update the Cost Estimate, Geotechnical and Water Management Studies and then revise the Van Dyke ISL PEA project dated December 18, 2015 using the updated Resource Estimate.

The estimated cost for this work is $US 10 million.

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