

STUKEY MINE
Post Office Box 1274
Bagdad, Arizona 86321
(602) 633-2324

21 November 1986

Mr. Charles C. Brown
Swallow Mine
11067 Pleasant Valley Road
Sun City, Arizona 85351

Dear Sir:

Please find enclosed the report on your property. I collected all of the information you provided me along with the data from my previous examination in addition to reports that were acquired in Tucson, and compiled them in a complete bibliography at the end of the report. The assay data available is in the bibliography, and I have compiled a listing off all assays to date. These assays are for the most informative, but as no sample widths or exact locations are known, and the manner of sampling inconsistent, the assays cannot be used for ore reserve estimates except in a few cases.

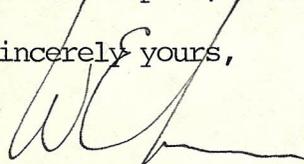
The previous mine engineering reports are for the most part negative, including my report of 1975. The property needs a good topographic base map tied to the underground development, and a geologist to map the property. Only then can a comprehensive sampling program be initiated that will determine if the mine is potentially a producing property. That will require a mine geologist/engineer.

Bulk metallurgical sampling needs to be done. The old reports and reported metallurgical recoveries leave something to be desired. The problem of the specular hematite can only be addressed in a laboratory by a qualified extractive metallurgist.

I personally feel that the property has merit, and strongly recommend it to a company that will conduct a responsible exploration program. Under no circumstances should the property be leased in its present condition without a performance bond. A well managed exploration program has the potential to find and quantify a mineable ore deposit, as the bulk of the mining to date was in the high grade oxidized near surface vein exposures. Previous production records are impressive, when the poor recoveries are taken into account.

Thank you for the opportunity to be of service, if I may assist you in the future, please contact me at the Stukey Mine. Excuse the delay in the completion of this report, I was out of the state for a week on personal business.

Sincerely yours,



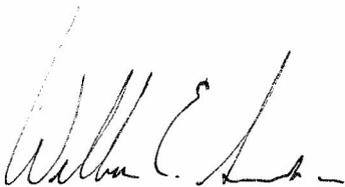
Wilbur E. Sweet, Jr.
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REPORT
ON THE
SWALLOW MINE
YAVAPAI COUNTY, ARIZONA



Wilbur E. Sweet, Jr.
Mine Engineer
Stukey Mine
Bagdad, Arizona

November 21, 1986

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SWALLOW MINE

YAVAPAI COUNTY, ARIZONA

INTRODUCTION & SUMMARY

The author of this report was retained to review the potential of the Swallow Mine by the owners, C. C. Brown, and S. F. Wagner. The report is based on all information and reports pertinent to the property as provided by the owners and the author's personal files on the mine. The author conducted a preliminary examination of the mine in November, 1975 for Cyprus Bagdad Copper Company, and again in October, 1986 for the owners.

The Swallow Mine produced approximately 8,300 tons of ore containing 2,640 ounces of gold and 3,800,000 pounds of copper between 1890-1900, 1915-1916, and 1937-1939. This ore came from the Golden Wonder, Swallow, and Moonlight mines, collectively known as the Swallow Mine.

Field examination of the property and adjacent claims indicates that detailed surface and underground mapping and sampling is required to determine the extent and delineation of the ore zones and structural relationships. This should be combined with a limited metallurgical testing program. The property has merit, and it is strongly recommended to a company that will conduct a responsible exploration program. Previous production records are impressive in light of the poor recoveries reported, and there is a strong likelihood that a formal property examination will define a mineable deposit.

GEOGRAPHY

The Swallow Mine and 41 unpatented lode claims are located in Sections 5, 6, 7 Township 8 North, Range 2 West, and Section 1 Township 8 North, Range 3 West, Gila & Salt River Base & Meridian, Castle Creek Mining District, Yavapai County, Arizona. The mine is located 17 miles east of Wickenburg, Arizona and is accessed by 2 miles of paved road, 11.5 miles of poorly maintained county roads, and 3.5 miles of mine road. All of these roads are subject to flash flooding and washout. The Atchison Topeka & Santa Fe Railroad serves Wickenburg, which is 49 miles northwest of Phoenix, Arizona on a main all weather highway.

The mine site is at an elevation of 3,400 feet (1,036 meters) with topographic relief of about 600 feet (183 meters) northwest along the strike of the main mineralized structure from the wash running east into the southeastward flowing Castle Creek. Elevation ranges from 4,000 to 2,500 feet in the area of the claims, which is extremely rugged terrain. No timber exists locally, and vegetation is characterized by mesquite (catclaw), cactus, and willow and cottonwood in the stream bottoms, and near springs. The climate is hot and dry in the summer and winters are mild with occasional hard freezes. Occasional snow falls are of short duration.

There appears to be sufficient water for domestic use all year round. The mine tunnel (Crosscut Tunnel, Elevation 3,400 feet) drainage ditch flows about 10 gallons per minute, and there is a small spring above the mine that is piped to the mine house that produces 6 gallons a minute. It is suspected that sufficient water could be developed for mining and milling by drilling wells in the drainage. The shaft reportedly made 38 gallons a minute when it was dewatered.

HISTORY

The Swallow Mine was reportedly located as 32 lode claims by Gideon Roberts about 1890, and subsequently sold to a Denver, Colorado investment group who operated the property between 1916-1918. The ore was milled in a ten-stamp mill on Castle Creek, and this mill was evidently relocated to the mine prior to 1925 and 5 stamps placed into operation. Production estimates range upward of \$150,000 to \$200,000 for the period 1916-1918, and it is reported that the first 100 tons of ore plated \$ 60.00 to the ton (\$20.66 oz gold). Values reportedly decreased with depth. Discussions with the owner indicates that the Swallow and the Golden Wonder were operated during this period as independent mines.

The property was reportedly examined in 1918 by Berlingame, M.E., and was subsequently leased to a Mr. Large who shipped ore from the Moonlight Mine, a south extension of the Swallow Mine vein system that reportedly ran high in copper and \$22.00 in gold. Prior to 1925, a long cross cut tunnel (Swallow Lower Adit) was driven to intersect the Swallow Shaft, and the ten stamp mill was relocated to the mine, and five of the stamps put into operation, and operated on water piped from the Swallow Lower Adit. John Doubler took over the property, and reportedly milled ore from the several veins at the mine.

In 1925 the property was examined for State Copper Company by H. M. Lancaster, M.E., who mapped 470 feet of shaft and 3,548 feet of tunnel development. Mine development continued through 1929, when the mine was abandoned due to the depression. The property was subsequently relocated by J. N. Brown, who operated the property through 1942 as the Pay Dirt Mining Company, shipping ore from the Moonlight and doing development work on the Swallow Lower Adit. The property was re-examined in 1935 by H. D. Phelps, M.E., and again in 1937 by G. L. Thompson, M.E. No geological work was done during these examinations. In 1942, the mine was inactive.

After the death of J. N. Brown, his son, C. C. Brown, and an associate S. F. Wagner started an exploration and development program in 1957, when F. C. Ramsing, E.M., examined the property. During 1957 through 1959 the road was improved to the property, and the Swallow Lower Adit and underground shaft station were cleaned out, retimbered, and placed into operation. In 1958 two AX holes were cored, one 40 feet, the other 150 feet and a third 210 (170 on map) feet. Two of these holes encountered mineralization. In 1959, F. C. Ramsing

re-surveyed the Swallow Lower Adit and attempted to correlate vein outcrops and underground workings. The author examined the property in 1975 for Cyprus Mines and conducted a limited geochemical sampling program. The property was subsequently examined by Energy Resources in 1984, and in 1986 the author was retained to consolidate all of the data and reports to date.

In summary, the Swallow Mine is 41 unpatented lode claims currently held by C. C. Brown and S. F. Wagner. The claims have been recorded with the Bureau of Land Management and all assessment work on the group appears to be up to date. No claim conflicts or litigations are known, however, the claims should be surveyed and plotted during a formal examination. Water rights are reportedly held by C. C. Brown. The property was apparently mined between 1890-1900, 1916-1918, and 1920-1929, and 1935-1939. Production was from high grade oxidized free milling gold-copper ore zones, and from the Swallow, Golden Wonder, and Moonlight mines along the vein system, with limited production from adjacent veins.

MANAGEMENT

No current management structure exists, however, the property was evidently profitable enough prior to 1925 to extensively develop the deposit with over 600 feet of shaft and 4,000 feet of tunnel. An additional 1500-2000 feet of exploration pits and tunnels are associated with this mining. There are no complete mine or geology maps available, and it appears that at no time in the history of the property that the management or leasers retained a geologist. Limited metallurgical evaluation was conducted by examining engineers, and no bulk sampling appears to have been conducted except in one case. Lack of geologic maps and assay maps appears to be a major contributing factor in a poor appreciation of the property potential by all examining engineers.

A formal examination of the property needs to address 90 years of undocumented mining and development mismanagement. This will require the services of a mine engineer, geologist, and an extractive metallurgist to adequately provide future management the necessary data to assess the potential of the mine.

GEOLOGY

District: The Castle Creek district in southern Yavapai County is in the vicinity of upper Castle Creek. This region is made up mainly of pre-Cambrian Yavapai Schist and Bradshaw Granite, locally intruded by dikes of diorite and rhyolite porphyry, and mantled on the south by volcanic rocks. It has been deeply and intricately dissected by the southwestward flowing drainage system of Castle Creek. As the elevation ranges from about 2,500 feet to generally less than 4,000 feet, the streams carry water only occasionally and desert vegetation prevails.

The ore deposits which occur only in the pre-Cambrian rocks, were grouped by Lindgren (1926) as follows: Pre-Cambrian gold quartz veins represented by the Golden Aster or Lehman deposit; post-Tertiary gold-copper veins, exemplified by the Swallow, Whipsaw, Jone, and Copperopolis properties, and lead veins. In 1926, Lindgren stated that the total production of the district, including rich ore shipped, and ore treated in the Lehman and Whipsaw mills, amounted to less than \$ 500,000.

Swallow Mine: The Swallow Mine is a series of surface cuts and underground workings along a major mineralized fault striking N60W Magnetic and dipping 70-80 degrees to the east. The fault lies along a contact zone between the the Bradshaw granites to the north and granite gneiss with Yavapai Schist xenoliths to the south and east. At least 4 mappable mineralized structures occur parallel to the Swallow vein, south of Swallow Mountain. The gold-copper values in the Swallow vein appear to be as the result of secondary brecciation followed by quartz-chalcopyrite mineralization. The vein is transected by at least seven complementary normal strike slip faults that displace the vein.

Primary mineralization may have been magnetite with regional metamorphism and oxidation altering the magnetite to specular hematite. The secondary post Tertiary brecciation and mineralization (quartz-chalcopyrite) was subsequently oxidized to depth and further displaced during regional Quaternary volcanic activity. The oxidized high grade portions of the vein contained 1 to 2 ounces of gold to the ton. This oxidized ore averages 3 to 15 feet in

width and is primarily specular hematite, limonite, and chrysocolla with quartz, calcite, and minor fluorite and barite with free gold. Mineralization is confined to the vein structures, and the high gold values occurred principally in the oxidized zone as residual enrichment. There is a good possibility that a secondary chalcocite mineralized zone exists at depth. Additional similar veins occur to the northeast of the Swallow vein, and six of these veins were developed by tunnels or shallow shafts.

Moonlight Mine: The Moonlight vein outcrops 1600 feet to the southeast of the Swallow Lower Adit portal. The tunnel intersected barite mineralization and an extensive brecciated zone with pronounced hydrothermal alteration. The ore stoped in 1935-1939 averaged 0.32 ounces gold, 4.8% copper, 51% silica, and 10% iron. All of the workings are in the oxidized zone, although specimens of fine grained chalcopyrite were picked up in the dump possibly from winzes. The stope appears to be a major fault intersection with residual siliceous oxide copper mineralization. The outcropping material is very similar to a massive sulphide deposit at the Copper Queen Mine near Bagdad, Arizona.

Mapping and Sampling: Mine maps have not been updated since 1959 when F. Ramsing extended H. Lancaster's mapping of 1925. No field records exist of either survey, and the 1:25,000 topographic base maps available from the U. S. Geological Survey are not accurate for mine and geologic mapping. No geologic maps are available due to the remote nature of the area, and the three drill holes were not logged although boxes of untagged core remain underground. Sampling in 1925 was keyed to the mine map, and the assay data on 17 samples was recovered by the author in Tucson in 1976. The 39 assays of 1935 were keyed to a map which is not available, although the report indicated the general location of the samples. The 1937 sample locations were noted in the report and 7 assays can be plotted. These assays are important as most of the upper workings are now caved or inaccessible. Mine sampling between 1935 and 1979 was uncontrolled, assay widths and locations were not usually noted, and the data is relatively unreliable. Compiled records contain 63 assays for the period 1925-1975, and 11 assays for 1976 - 1979, not including geochemical sampling.

Ore Bodies: Previous mining was confined to the highly oxidized, residually enriched portions of the Swallow vein that had been displaced by transverse faulting into at least seven segments. These faulted, oxidized portions of the vein and the potential supergene copper zones at the base of the oxidized zone are the two principal types of ore bodies at the Swallow Mine. No information or data exists on the primary mineralization, however it is expected that these will be magnetite, chalcopyrite, and pyrite. Similarities of the ore bodies at the Swallow Mine and the Copper Queen and Copper King Mines near Bagdad, Arizona should be evaluated. The massive hematite-specularite veins of the Swallow, and apparently higher structure of the Moonlight mines may be indicative of a pre-Cambrian massive sulphide vent system. Several segments of the Swallow vein have not been mined, and could be developed by extending the Swallow Lower Adit tunnel.

ORE RESERVES

In 1935, H. M. Phelps, M.E., estimated that the Swallow Mine contained approximately 10,781 tons of ore that was partly developed in the area of the shaft that averaged \$ 1.05 per ton. This ore averaged 0.04 ounces gold per ton. Approximately 10,000 tons of ore had been mined and either shipped or milled at that time. No ore reserve estimates were made for either the Moonlight or Golden Wonder mines.

In 1925, H. M. Lancaster had recommended that the Swallow Lower Adit crosscut tunnel be extended to the northwest of the main Swallow shaft to intersect the vein near the "Whim" shaft and then to continue to the north along the vein structure. In 1975 the author recommended a similar program once the underground and surface geology and fault structures were correlated. No tonnage or accurate grade estimate can be made for this area, but it is highly possible that this exploration will define an ore body of about 53,000 tons containing about 6,480 ounces of gold, and 9,300,000 pounds of copper, that could be developed by adit entry and raises to the surface. As this is a speculative estimate, based on geologic inference and previous ore production and grade, it cannot be used other than to define the size of the exploration target for economic evaluation of the property potential.

Due to the high iron content of the Swallow vein, a tonnage factor of 11 cubic feet per ton was used by previous engineers. This high iron may have affected assay recoveries and tonnage estimates. Future ore reserve estimates need to be evaluated using a calculated ore tonnage factor and check samples.

The Moonlight mine has unknown reserve potential, but geologic mapping could delineate a exploration target in the area of widespread mineralization and brecciation. Other veins near the Swallow mine have unknown tonnage potential.

The Swallow and Moonlight Mines have been inactive since 1939, and the condition of the underground workings is such that the property reserve potential is speculative. Without detailed surface and underground mapping and sampling, any gold-copper reserve potential can only be inferred at this time.

METHODS AND COSTS

Exploration: An aerial topographic survey, tied to control stations needs to be done on a scale of 1 inch to 50 feet or 1 Cm : 20m. This should be tied to an accurate underground control survey and all geologic formations, structures, and mineralization mapped to detail. Initial mapping should be done on the Moonlight-Swallow-Golden Wonder trend and the mapping expanded should initial results be positive. An extensive sampling program is necessary due to the over 7,000 feet of unmapped and unsampled underground workings alone. Bulk samples need to be taken of typical ore zones for initial extractive metallurgical studies. The mining claims need to be plotted during the control survey. At the conclusion of the initial surveying and mapping program, with assaying, the main tunnel will have to be repaired before any other work can be done. Minor repairs will be required during the mapping program, to include installation of drift sets in the portal and along the drift to and including the shaft station. The drainage ditch needs to be cleaned out and areas of the tunnel cleared of debris. Ladders will be required to examine levels above the Swallow Lower Adit. Should the decision be made to continue the exploration program, approximately 300 feet of new drift will have to be driven to intersect the vein system at depth below the "Whim" shaft.

Mining: All initial exploration mining should be contracted, preferably out to a mining company which is involved in underground operations and narrow vein mining. Previous mining was done by open stull stoping and waste back-fill from development or caved areas. Mining recovery was probably about 60 percent, although the assay cutoff was probably 0.05 ounces per ton, which is typical for other mines in the area. Waste fill raises from the surface will probably be required for actual mining operations, unless shrinkage stoping is used with sublevel drifts. Development of the 3400 level should initially consist of a crosscut tunnel from the existing Swallow Lower Adit to intersect the vein below the "Whim" shaft and then continue along strike under the Golden Wonder Shaft and the faulted segments of the vein. A production/ventilation raise will be required to the surface to the "Whim" shaft initially. A second raise to the surface near the Golden Wonder Shaft would be the next major mine development activity. Current underground mining costs at similar mines is averaging \$ 40- \$ 60 per foot for drifting and raising, and \$ 15 per ton for mining. The Swallow Mine could be developed to support a 100 ton per day production factor.

Milling: Crushing, grinding, and amalgamation historically recovered 60-70% of the gold present in the ore. Pre-leaching the copper and pH reversal or caustic leach would have to be done in order to remove cyanicides and condition the ore for cyanide leach or flotation. The copper oxides could be beneficiated by flotation, and it is possible that the gold could also be recovered. Tests conducted in 1935 of Moonlight ore by gravity and flotation indicated a 66.3% recovery of gold at 48 mesh, and 81.4% of the gold at 65 mesh, with less than 15% copper recovery. This ore contained little specularite, and this will effect recovery and increase sliming. No milling costs or flow sheets are known, and bulk metallurgical sampling and testing will be needed to determine economics and costs. Water is available to support a 50-100 ton per day circuit in the area of the mine, once wells are developed. Tailings would have to be disposed of near a new millsite, and a tailings pond constructed. Topographic mapping would be necessary for site selection.

MARKETING

Sales of ore are restricted to local copper smelters, and current energy costs and environmental controls have made this an expensive proposition. The ore does not contain enough silica to sell as flux. Transportation economics will control concentrate marketing. The ore and concentrate high iron content will probably be penalized, and smelter contracts will have to be negotiated. Leaching and precipitation of the gold and copper would similarly require a refining contract. Metallurgical testing needs to be completed to determine potential concentrate products for marketing analysis.

Possible by-products from the Swallow Mine would be hematite for the cement industry, and barite and fluorite which could be marketed on the non-metallic market. Local markets exist for the hematite within 100 miles of the Swallow Mine.

PLANT AND EQUIPMENT

Underground: No workings other than the Swallow Lower Adit, and the Moonlight Adit are currently in good enough condition for safe entry other than the several prospect tunnels near the mine. The Swallow Shaft is apparently caved above the station on the 3400 level, and the raise from the 3400 level to the next level, that formerly provided ventilation is caved above as is evidenced by the ground fall that has destroyed the chute. The track from the portal to the shaft station in the Swallow Lower Adit appears to be useable, although it is encrusted with lime and limonite. All of the ties will have to be replaced for 1250' of drift and the rail will have to be respiked and bolted with new fish plates. The portal area will have to be leveled and new dump track installed. An estimated 350 feet of tunnel will have to be retimbered, and the shaft station bearing timbers replaced and the caps reblocked. All of the old stopes are caved or inaccessible, and several sections of drift past the shaft need to be mucked out and timbered. The Moonlight is in excellent condition and dry.

The 3 phase 440V hoist and controller in the shaft station underground is in surprisingly good condition. The old air line may have to be replaced, but the underground receiver is in good condition. The 3Ø 440V power line from the portal to the shaft station appears to be useable, but will have to be rehung and the splices repaired. There are 4 ore cars in the tunnel, and an old Sullivan mucking machine is outside. Rail is 16 and 18 lb in the Swallow Lower Adit; and, 8 lb rail is in the Moonlight Adit. The shaft is flooded to the collar at the 3400 level and is making about 10 gallons per minute. The condition of the lower level and shaft is unknown. A small Mancha motor will be needed to do any development work, and it is probable that a new 3-4" air line will be required from the portal to the working headings, unless an underground electric compressor is installed near the shaft station. A portable compressor will be required at the Moonlight, but the air line appears to be useable. A set of underground drills will have to be procured along with drill steel and bits. As much as 1600 feet of vent line (12") may be required with fans.

Surface: There are no surface facilities at the Moonlight Adit. The Swallow Lower Adit has an outside shop and numerous items of mining and shop equipment. This shop will have to be torn down and a new shop constructed a safe distance from the portal. All old equipment and foundations need to be removed from the area of the portal. Most of this equipment is obsolete and inoperable.

The old ten stamp mill is in the process of being disassembled by the owners, only five stamps could be placed into service. Most of the timbers and bearing structures are present, and could be dimensioned for steel fabrication, as the stamp batteries are complete. These types of mills are applicable for amalgamation in remote portions of the world and tend to work fairly well even today where sliming is a problem. The owner's currently are using a trailer in the site the old caretaker's house used to stand. There are two older buildings on the property, but both are over 50 years old, and not useable. There are at least three operating 5 kW generator sets on the property that provide a source of utility power. The owner's have a road grader and a bulldozer on the property that are used for road repair on an infrequent basis.

Development and exploration will require the construction of a new surface plant, shop, and change house. New waste dump facilities and surface track will have to be installed for the underground phase of the initial exploration mapping and surveying program. Ore handling facilities will be required for bulk sampling or shipping. A generating plant will be necessary for both development and production operations. Local power is not available. All of the roads in the area of the mine and surface facilities will have to be upgraded during development. Due to the remoteness of the property, it is recommended that consideration be given to the installation of crew trailers for housing during the week.

MISCELLANEOUS

Timber will have to be procured in Prescott, Arizona or from local sawmills. The current cost of mine and construction grade timber (pine and fir) is between \$375-\$475 per thousand board feet. Explosives are purchaseable only from either Flagstaff, Arizona or Phoenix, Arizona due to local restrictions. All magazines will have to be constructed to current codes, unless portable magazines are purchased or rented. As there is no local power at the minesite, and no telephone service, both power and communications will have to be internally established. Water is sufficient only for limited domestic use at this time, and wells will have to be drilled for mill or mine use.

Labor is available locally in Wickenburg, Arizona, but will have to be put in the miner training programs for use. Unions are restricted by the "right to work" provisions of the State of Arizona. Wages for miners and laborers average \$5.00-\$8.00 per hour locally. Workman's Compensation is required for all mining and milling operations in the State of Arizona, and the mining properties are closely monitored by both the federal agencies and state offices. Safety inspections are common and frequent, permits required for land use and operations.

The attitude of the local government is favorable to mining in most cases. The federal agencies controlling land use require notification and will require compliance with environmental protection provisions for surface use. Waste discharge permits are required for all operations-notwithstanding no wastes are to be generated by the mining or milling operation proposed. Environmental Impact Assessments are required prior to the commencement of production operations and could be required should surface disturbance be excessive. Most of the area of the Swallow Mine and claims is extensively pitted, trenched, etc. and would not fall into this category. There will be limited liability for surface subsidence due to the remote nature of the property, unless the subsidence degrades the surface waters of the state through leachates migrating into the local ground water.

ECONOMIC SITUATION

Metals prices for gold are historically at a high, and is currently averaging \$ 400 per ounce on the open market. Copper is averaging \$0.60 per pound and due to world economic pressures may stay there for some time. As most of the production of the Swallow mine was these two metals, they will control the economics of any valuation or production operation. Local markets exist for dore bullion or copper concentrates.

There has been no production from the mine since 1939 that has resulted in income. No records exist as to the profitability of past operations, and future prospects are unknown. An estimate of the future earning power of the Swallow Mine has to be based on the author's estimate of 6,480 ounces gold, 9,300,000 pounds copper, and 53,000 tons of ore milled through a 100 ton a day mill. If a potential gross operating mill revenue of about \$ 15,400 per day will return both the exploration, development, and capital expense cost, along with the cost of mining and milling, and return a profit to the investors, then the mine can be considered as having future earning power as a production unit for at least two years for ore that could be developed above the 3400 level in the Swallow Mine.

ASSAY REPORTS

There are no permanent office records of sampling and assays for the Swallow Mine or adjacent properties. The following is a compiled listing of all known assays to date for which records or documentation exists, and should not be considered either complete or representative. Sample numbers assigned reflect the date of the sampling or analysis, and locations are as noted on records or as marked by the sampler.

<u>SAMPLE-NO</u>	<u>MARK/LOCATION</u>	<u>ASSAY WIDTH</u>	<u>GOLD</u>	<u>% CU</u>
750204	Face		0.54	1.50
750204	Dump		0.38	1.25
520331	#1 Tunnel		0.08	2.20
520331	#2 Station		0.14	4.00
520331	#3 Moonlight Dump		0.10	1.90
520322	10 Ft Whim Shaft	3.0' Vein	0.26	
520322	100 Ft South Whim Shaft, surface	2.0' Vein	0.16	
520322	Golden Wonder Shaft Dump		0.15	
520322	Golden Wonder Shaft, 30 Ft	5.0' Vein	0.23	
520322	Golden Wonder Shaft, 15 Ft	5.0' Vein	0.29	
520322	100 Ft North Golden Wonder Shaft	2.0' Vein	0.12	
520322	Swallow Vein Blowout, North End	3.0' Vein	0.42	
520322	Swallow Vein Blowout, South End	2.5' Vein	0.35	
520322	Swallow Tunnel	0.3' Vein	0.09	
251022	L1-Moonlight Tunnel		0.06	0.52
251022	L2-67 Level, West Drift	3.0' Vein	0.04	n
251022	L3-67 Level, Stope	5.0' Vein	0.02	0.81
251022	L4-194 Level Drift	5.0' Vein	tr	n
251022	L5-Near Sample 12	5.0' Vein	tr	n
251022	L6-Near Sample 9	5.0' Vein	0.10	5.33
251022	L7-Between 12 & 13	12.0' Vein	0.10	0.40
251022	L8-By Shaft	2.0' Vein	0.04	0.99
251022	L9-Swallow		0.02	n
251022	L10-153 Level picked sample, west	2.5' Vein	1.56	n
251022	L11-153 Level, west	3.0' Vein	0.17	0.75
251022	L12-153 Level, west		0.14	0.29

<u>SAMPLE-NO</u>	<u>MARK/LOCATION</u>	<u>ASSAY WIDTH</u>	<u>GOLD</u>	<u>% CU</u>
251022	L13-153 Level, west		0.54	n
251022	L14-Tunnel Level, picked		0.20	18.11
251022	L15-Drift at Shaft Bottom, sorted		0.08	14.03
740906	No Mark		2.75	
521015	Large		0.32	10.30
521015	Small		0.92	32.85
350624	Moonlight Concentrate		0.84	
350624	Swallow Concentrate		0.31	
661108	#1		0.42	
581128	#1 Swallow Mines 11/12		0.02	2.10
581128	#2 Swallow Mines Shaft		0.02	2.15
590223	No Mark		0.10	3.10
391002	Lot 1646/1 #1		1.16	2.46
391002	Lot 1646/1 #2		1.14	2.46
360831	No Mark		0.10	18.10
670104	Across Roof		0.02	tr
670104	Picked Sample, quartz vein	0.3' Vein	0.60	
660824	No Mark		0.16	2.86
441127	No Mark		tr	tr
441007	#1		0.02	
441007	#2		tr	
450125	No Mark, 44 at Wash		0.01	
671130		2.0' Vein	0.24	3.07
671130	Good Ore Shoot		0.16	0.17
680410	Top above road		0.05	
680410	Road above engine house		0.01	tr
510803	No Mark		0.01	
590506	No Mark (Rock)		0.10	2.25
560327	#1 Moonlight Mine		0.02	6.80
590224	No Mark		0.10	3.10
661108	#1		0.42	
510803	No Mark		0.01	
381126	Heads		0.10	
381126	C-1		1.00	
381126	C-2		1.08	
381126	T-1		0.03	

<u>SAMPLE-NO</u>	<u>MARK/LOCATION</u>	<u>ASSAY WIDTH</u>	<u>GOLD</u>	<u>% CU</u>
370329	Smelter Lot # 841	27.2 Tons	0.49	7.65
371008	Smelter Lot # 412	54.8 Tons	0.32	2.95
371030	Smelter Lot # 489	55.7 Tons	0.18	3.72
390218	Smelter Lot # 386	12.5 Tons	0.57	12.10
390519	Smelter Lot # 1371	32.5 Tons	0.81	8.46
390928	Concentrate	0.3 Tons	2.35	3.00
750423	# 1 Ledge, North end		0.66	
750423	# 2 Ledge, Bottom		0.26	
790527	Top Road, 1st run		0.12	
790527	Top Hole, 1st run		0.10	
790527	East Pile, 1st run		0.12	
790527	West Pile, 1st run		0.14	
790527	Top Road, Special run		0.17	
790527	Top Hole, Special run		0.16	
790527	East Pile, Special run		0.61	
790527	West Pile, Special run		0.57	