

MINERAL RESOURCE ESTIMATE,
SUTTER GOLD PROJECT,
AMADOR COUNTY, CALIFORNIA

Prepared For:

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1.0 SUMMARY

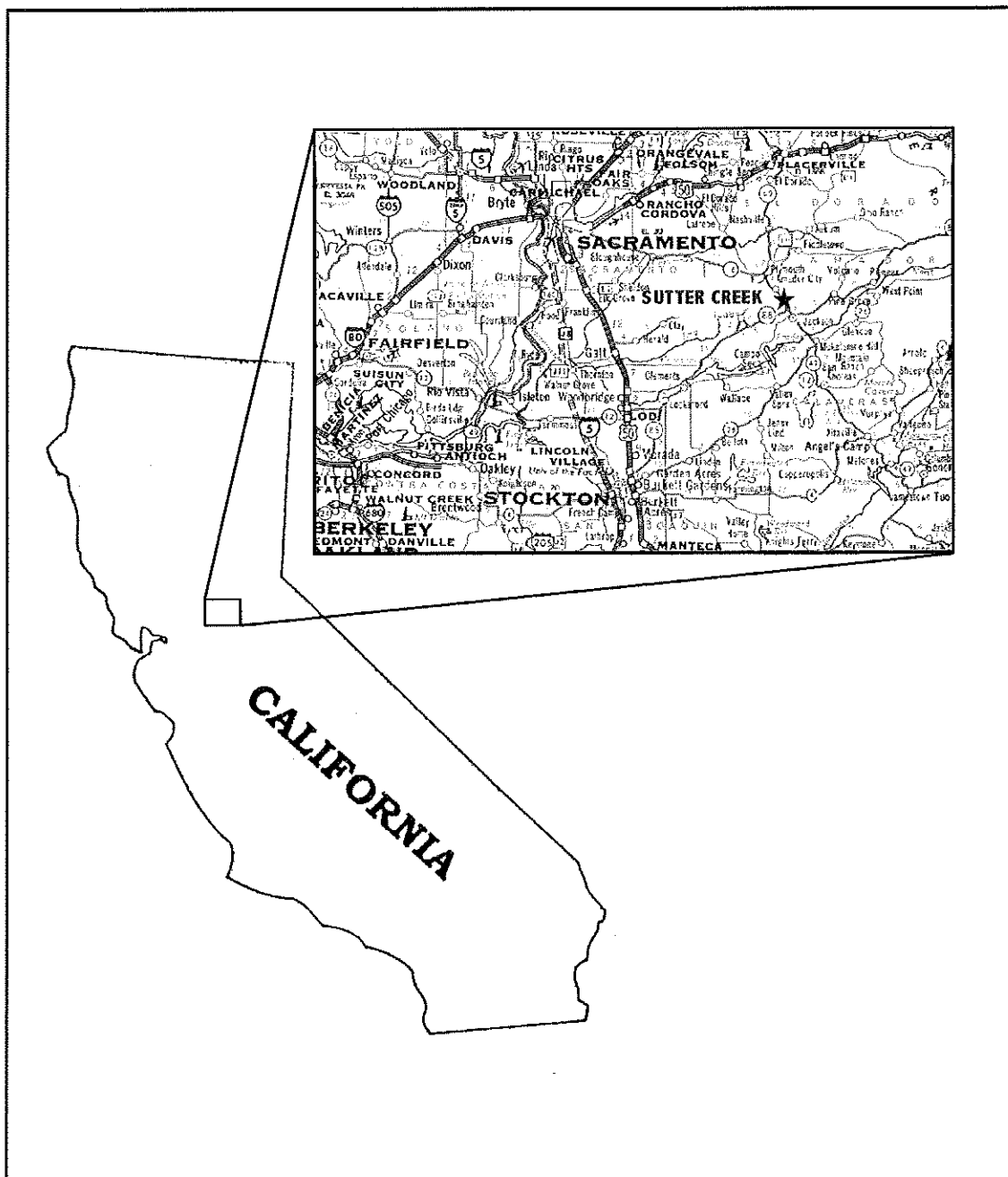
The Sutter Gold Project is located in northern California, 45 miles southeast of Sacramento, in Amador County, California (Fig. 1-1). The project encompasses a 3.2 mile long segment along the Mother Lode Gold Belt in Amador County, California. The Sutter Gold Project property includes eight historic past-producing mines with documented historic gold production from 1852 to 1952 totaling 2,343,000 ounces. Seven of eight historic mines on the property had documented, unmined resources in-place at the time of their closure. Gold-quartz vein mineralization on the property is of orogenic (mesothermal) type, hosted within a regional-scale deformation corridor cutting Late Jurassic meta-sediments and lesser mafic to intermediate meta-volcanics of the Mariposa Formation.

This study updates prior Sutter Gold Project Mineral Resource estimates, the exploration model, and the geological and grade continuity models, following a program of underground and surface drilling totaling 19,502 feet in 2006-2007. The 2008 Mineral Resource estimate is undiluted, uncut, and conforms with CIM definitions for mineral resources and National Instrument 43-101, Standards of Disclosure for Mineral Projects. Inferred Mineral Resources estimated from modern exploration work versus historical data are identified separately in the Sutter Gold Project Mineral Resources Summary (Table 1-1).

Table 1-1
Summary 2007 Mineral Resources Estimate
Sutter Gold Project, All Categories

	Tons	Uncut Grade (oz/ton)	Au (oz)	horiz. width (feet)
<i>Indicated Mineral Resources</i>				
Lincoln-Comet area	511,700	0.37	188,481	4.4
Keystone area	161,900	0.21	34,563	8.5
Total Indicated Resources	673,600	0.33	223,044	5.4
<i>Inferred Mineral Resources A (estimated from modern exploration drilling)</i>				
Lincoln-Comet area	194,100	0.28	53,986	4.3
Keystone area	559,800	0.20	110,778	26.6
<i>Inferred Mineral Resources B (estimated from pre-1980s historical data)</i>				
Keystone area	1,013,000	0.18	183,950	27.1
Central Eureka area	217,000	0.18	39,100	26.5
Lincoln-Wildman-Mahoney	394,000	0.18	71,100	66.8
Total Inferred Resources	2,377,900	0.19	458,914	31.6

Several considerations were applied in the estimation of mineral resources for this study. Resources defined by modern drilling and underground development were estimated by manual methods from vertical longitudinal projections



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Fig. 1-1 Sutter Gold Project Location Map

prepared for each vein structure. The data points from large areas within a vein structure were composited, and hard geological boundaries were applied to create the resource blocks. Vein widths were corrected to horizontal widths, and a three-foot undiluted minimum thickness was applied to the individual resource blocks. The resource is reported with uncut grades, and a 0.14 oz/ton cut-off grade was applied to individual blocks.

1.1 Significant Findings

The 2006-2007 drilling programs added new underground resources in the gap between the Lincoln and Comet areas, and converted a substantial quantity of historic Inferred B Resources to the Indicated and Inferred A categories in the Keystone 5 vein. In 2007, work continued on the structural geology and exploration model for the Sutter Gold Project. Fourteen exploration targets were identified throughout the property and suggests there is good potential for discovery-resource-reserve conversion as the project matures.

1.2 Recommendations for Future Exploration and Development

A six-part, \$3,000,000 program is recommended, and includes purchasing 3-D modeling capability, completing computer models for pre-production development areas and areas targeted for exploration drilling, and core drilling programs to convert Inferred to Indicated Resources, find new Inferred Resources, and test a deep conceptual target. The author suggests that a minimum of two "greenfields" exploration targets should be tested annually, to ensure an uninterrupted chain of new discoveries as the project proceeds.

2.0 INTRODUCTION AND TERMS OF REFERENCE

Introduction

Upon completion of the 2006-2007 surface and underground drilling programs at the Sutter Gold Project, Sutter Gold Mining Inc. engaged the author to prepare a technical report updating the mineral resource estimates in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects. The scope of this report includes a review of 2007 drill program findings and update of geological and exploration models for the entire Sutter Gold Project. The author has acted as consulting geologist and Independent Qualified Person for the Sutter Gold Project from February 2005 through the present, and has been responsible for design, performance, and verification of all exploration, sampling, QA/QC, and resource estimation work during that period. The author has worked at the Sutter Gold Project site extensively and has directed re-sampling of

existing underground mineralized exposures in 2005-2006 and sampled the second halves of selected core intervals from historic drill holes in 2007 to verify that the mineralization seen in underground developments is consistent with that described in this report and pre-NI 43-101 historic reports for the project.

2.1 Geographic Reference System

Sutter Gold Project surface and underground maps are labeled with the California State Plane grid in feet. The first two digits of the Easting and the first digit of the Northing are not shown on project maps. For example, the Calif. State Plane grid coordinates representing the origin point of the local mine grid for the Sutter Gold Project is actually 2,342,520E; 269,397N but is shown on project maps as 42,520E; 69,397N.

In the 1980s, a local mine grid was implemented for the Sutter Gold Project with its origin at the center of the historic Lincoln Shaft, along the general strike of mineralized zones North 30 degrees West and South 30 degrees East from the origin point at 42,520E; 69,397N. All drill hole cross-section sets are drawn perpendicular to this local geographic reference line, and vein longitudinal section sets are drawn parallel to it.

Underground development cross-cuts and raises from the Stringbean Alley Decline are measured distances down the inclined ramp in a S30E direction from the decline portal. The 1670 Cross-cut is located 1,670 feet southeastward down the decline from the portal. All surface and underground elevations are given in relation to mean sea level, as measured in feet.

2.2 Units of Measure

Throughout this report, the units of measure are those commonly used in the United States for mineral exploration and engineering work. The units of measure are those established for the project at its inception, and are in feet, miles, acres, pounds, short tons, troy ounces per short ton, and Tyler mesh sizes. The metric system is not used. Tables should be consulted for converting units of measure into metric system measurements.

3.0 DISCLAIMER

All of the mineral resource estimates, the interpretive data used in the preparation of those estimates, and geological models for the Sutter Gold Project were developed by the author for Sutter Gold Mining Inc. The basic determinations of geological continuity and grade continuity within the

mineralized zones were derived from historic maps, reports, core logs, and core photographs made by many geological professionals working at the Sutter Gold Project over many years, and the author's practical experience exploring similar gold-quartz vein systems and preparing mineral resource estimates at similar projects in the region. Best industry practices were adhered to in the compilation of this estimate.

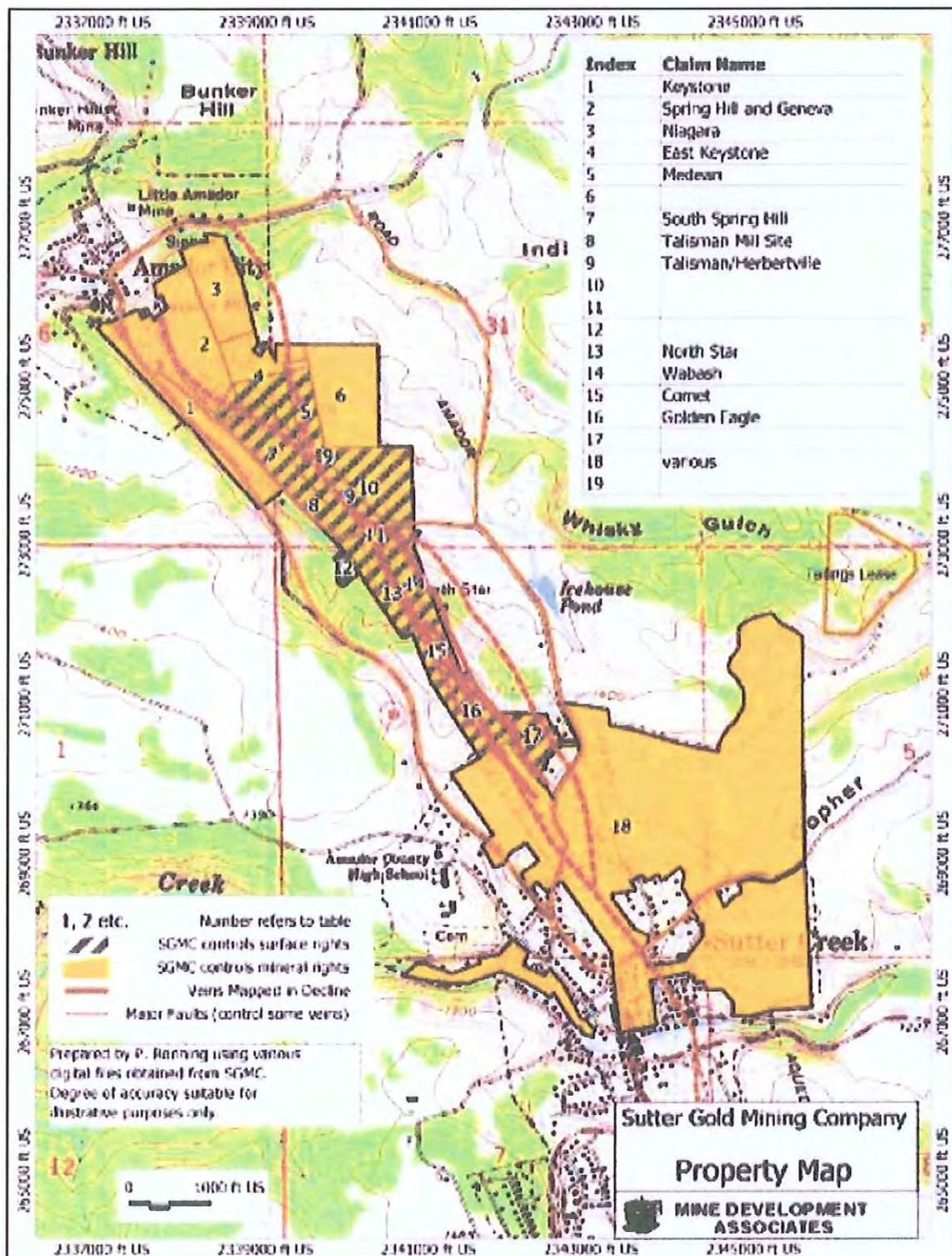
4.0 PROPERTY DESCRIPTION AND LOCATION

The Sutter Gold Project is located in western Amador County, California, approximately 45 miles east-southeast of Sacramento, within the central portion of the Mother Lode Gold Belt (Fig 4-1). Sutter Gold Mining Inc. owns or leases 545 acres of contiguous mineral rights elongated in a north-northwest/south-southeast direction along an approximately 3.2 mile strike length of the Mother Lode geological trend. The Company owns or leases 125 acres of surface rights within the project area. The property is located in portions of section 36 of Township 7 North, Range 10 East, section 31 of T7N, R11E, and sections 6, 7, and 8 of T6N, R11E.

5.0 ACCESSIBILITY, CLIMATE, AND PHYSIOGRAPHY

The property is located in the western foothills of the Sierra Nevada Range. Elevations on the property range between 1,000 and 1,500 feet above mean sea level. Topography is gently rolling grass and oak woodland. The climate is hot and dry in the summer months with mild, rainy winters. Annual rainfall averages 22 inches and the average temperature is 55°F (Pincock Allen Holt, 1993).

The Sutter Gold Project extends from the southern edge of the town of Sutter Creek (pop. 2,000), northward beneath Sutter Creek to the town of Amador City (pop. 200). A network of paved county-maintained roads provide access through the project area. State Highway 49 parallels the 3.2 mile length of the property, lying adjacent to the western property boundary. The mine portal and office are located one mile north of Sutter Creek at an elevation of 1,150 feet. A well-marked paved access road connects the State Highway with the project office and mine portal. The project lies in close proximity to established electrical and water supplies.



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Fig. 4-1 Location and Property Map, Sutter Gold Mining Inc., Amador County, California
(from Mine Development Associates Technical Report, 2004)

6.0 HISTORY

The gold-quartz veins of the Mother Lode Belt were discovered in 1851 following exhaustion of the rich gold placer deposits discovered in 1848 (Irwin, 2003). The first discovery of lode gold in Amador County was made by a Baptist preacher named Davidson in February 1851 (Richards, 2004, p. 9) on the site of what would become the Burke Shaft of the Keystone Mine, at the northernmost extremity of the Sutter Gold Property.

The Mother Lode Gold Belt is a one mile wide, 120 mile long band of northwesterly- trending gold deposits along a regional-scale crustal break. Of the 13.6 million ounces of gold produced from the 120 mile length of the Mother Lode, 7.8 million ounces or 57 percent of the total production occurred in the 10 mile section between the towns of Jackson and Plymouth in Amador County. The Sutter Gold Project with its 2,343,000 ounces of recorded past production has accounted for nearly 20 percent of the entire output of the Mother Lode Belt, and is located in the center of this most productive ten mile segment (Fig. 6-1). Listed below are the eight significant past-producing gold mines lying within the project boundaries, and their documented historic gold production (Payne, 2005).

<u>Central and Old Eureka Mines</u>	1,274,081 oz	1859-1942, and 1946-1952
<u>Keystone Consolidated Mines</u>		
Keystone Mine	730,183 oz	1852-1919, and 1936-1942
South Spring Hill Mine	58,000 oz	1876-1902
Talisman Mine	9,000 oz	1854-1902
Medean Mine	7,000 oz	1852-1899
<u>Lincoln Consolidated Mines</u>		
Old Lincoln Mine	98,000 oz	1851-1912
Wildman & Mahoney Mines	158,644 oz	1851-1901
<u>Wabash Mine</u>	8,000 oz	-----
Total Historic Production	2,342,908 oz	1851-1952

The Central Eureka and Keystone Mines operated until World War II when they were closed by U.S. Government order L-208 in 1942. The Wildman & Mahoney, South Spring Hill, Medean, and Talisman mines ceased operation as early as 1902 because of equipment limitations due to paying out excessive dividends to stockholders and lack of reinvestment into the mines, increased operating costs, space limitations for disposal of mill sands or other problems. The Central Eureka Mine was the last operating large gold mine on the Mother Lode in Amador

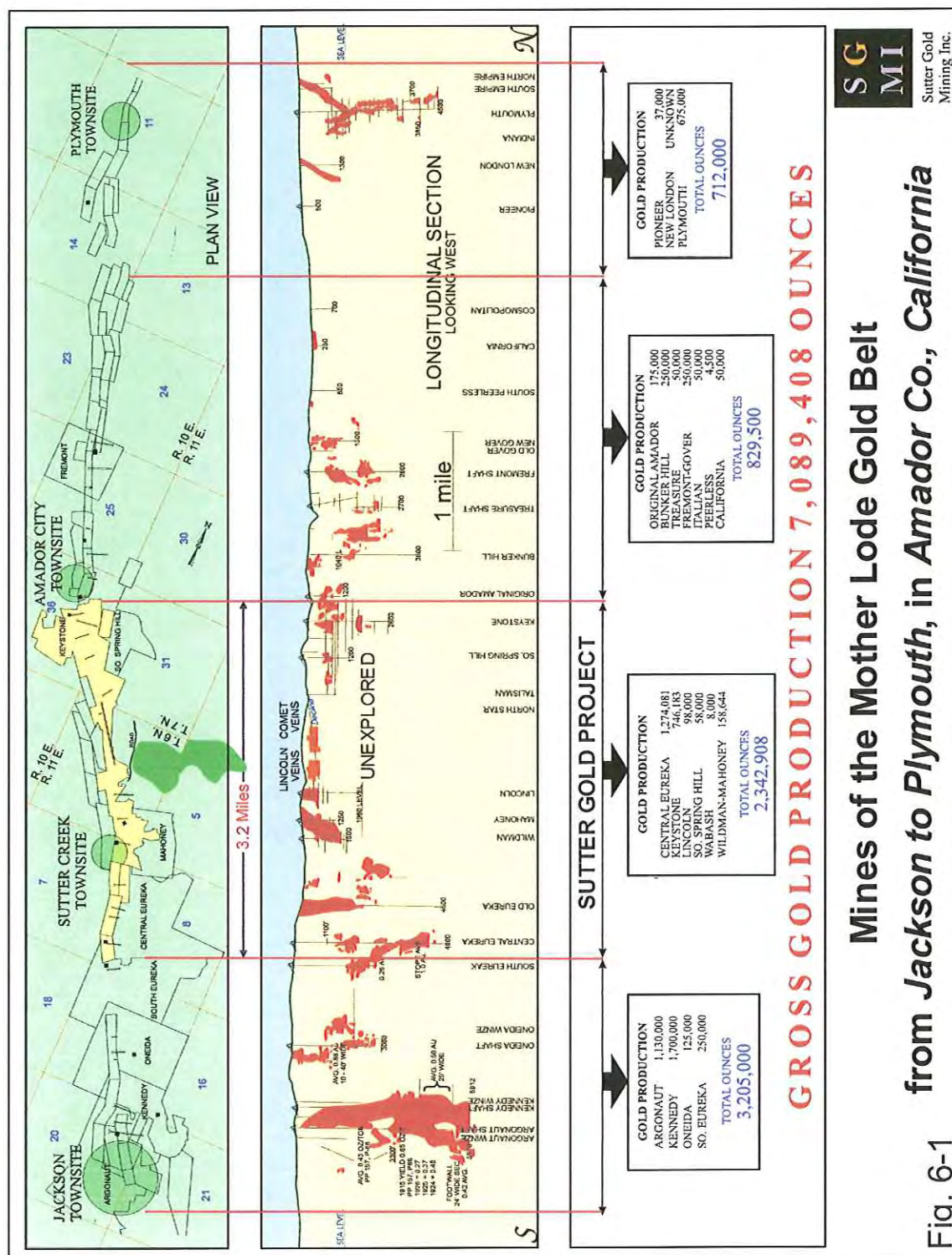


Fig. 6-1

County, closing in 1952, while mining 150 tons per day of 0.40 oz/ton rock at 4,000 feet depth. The escalating cost of labor and materials coupled with the price of gold locked at \$35.00 per ounce ensured the mines would remain closed. The Central Eureka mine was the premier high-grade gold producer of the entire Mother Lode Belt, boasting the single largest high-grade oreshoot (Old Eureka shoot, 800,000 tons @ 0.75 oz/ton).

None of the mines in this part of the Mother Lode Belt were reported to be depleted of mineral resources when closed. The Central Eureka (1952), Wildman & Mahoney (1901), South Spring Hill (1902), and Keystone (1942) mines all had large resources reported in-place at their times of closure (Carlson & Clark, 1954). The Central Eureka mine allowed the deep workings of the Central Shaft to flood in 1930, abandoning three developed bodies at the 4850 Level, including a wedge-shaped sulfide replacement zone with a maximum width of 60 feet grading 0.36 oz/ton gold (Logan, 1934). In 1952, a large zone averaging 0.40 oz/ton remained open to depth below the 4150 Level in the Old Eureka Shaft workings when the mine closed. Farish (1901) reported two million tons of low grade mineralization at an undisclosed grade remained in place above the 1400 Level of the Wildman & Mahoney workings, while a cross cut on the 1400 Level exposed a 100 foot width grading 0.16 oz/ton in a zone that is open to depth. Several million tons of developed and undeveloped resources in the Keystone 5 Vein were reported to be in place when the Keystone Mine closed in 1920 (Meiklejohn, 1935). Keystone operations were resumed from 1936-1942 with the extraction of approximately 200,000 tons of ore from the K5 Vein above the 1000 Level. Large developed resources remain in place below the 1000 Level.

6.1 Modern Exploration 1983-2007

Modern exploration activity on the Sutter Gold Property was initiated with two RCR drill holes by Callahan Mining Corp in 1983, to test a strong arsenic-in-soil anomaly north of the historic Lincoln Consolidated Mines. Concurrently in 1983, Callahan conducted initial exploration along the eastern contact vein (Medean Structure or K13 Vein) of the Keystone Mine, drilling seven RCR holes and two core holes from 1983-1987. At the Lincoln property thirteen core holes were drilled by Callahan in 1984-1985 to follow up on the strong initial results. A joint venture of Callahan and Pancana Minerals continued definition drilling at Lincoln with fifteen core holes in 1986.

The initial thirty-one Lincoln drill holes defined a resource in the Lincoln Zone. The blind discovery and subsequent definition of the Lincoln-Comet Resource is the first significant new gold discovery made along the Mother Lode Gold Belt since the 1940s. The Lincoln-Comet vein system did not outcrop and was a blind discovery. It was found within a one mile long unproductive area which was bracketed by large historic gold producers.

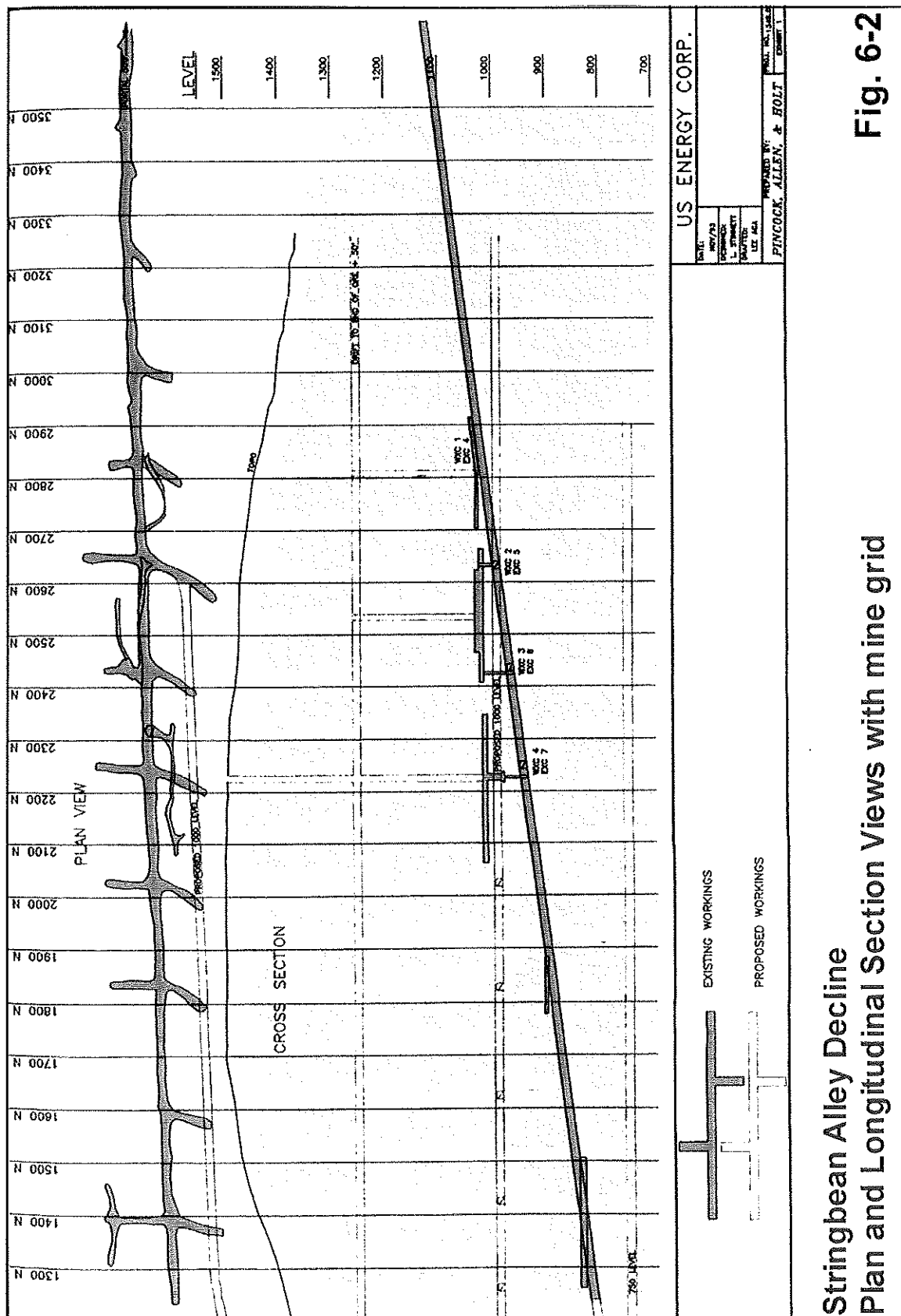
Meridian Gold Company assumed ownership of the Lincoln Project in 1987, and continued drilling northward from 1987-1990. Meridian's initial fifty-nine core holes continued to define the Lincoln resource and discovered the Comet Zone and a deeper zone in the Keystone 5 Vein beneath the Comet. Meridian acquired ownership of the Keystone property in 1988 and drilled eleven additional core holes to delineate Indicated and Inferred resources along the eastern contact vein of the Keystone. In 1989-1990 Meridian commenced underground development, driving 2,800 feet of 12 foot high by 15 foot wide declined ramp at minus 12 percent grade plus 2,400 feet of cross-cuts to access and develop the Comet Zones (fig. 6-2). During 1989-1990, Meridian drilled 74 core holes from underground stations in the cross-cuts to further delineate Indicated and Inferred resources in the Comet Zone. In 1991, Meridian drove four development raises and 900 feet of sublevel drift in the Lincoln 40, 41, 42, 43, and 50 Veins of the Comet Zone. An 8,000 ton bulk sample was collected from several small test stopes and was milled at Meridian Gold's nearby Royal-Mountain King mine and mill.

FMC Gold Company acquired the properties when it purchased Meridian Gold Company in 1990. Seine River Resources Inc., through US Energy Corp, acquired the Lincoln Project from FMC in 1990 and continued the mine permitting process while conducting additional exploration and test work underground (Irwin, 2003). A mineral resource estimate (non-NI 43-101 compliant) for the Lincoln Project and preliminary scoping study was prepared for the project by Russell and Hazlitt in January, 1992. A pre-feasibility study (non-NI 43-101 compliant) for the Lincoln Project was completed by Pincock, Allen, & Holt in December, 1993 for US Energy Corp.

U.S. Energy Corp. acquired 100 percent interest in the Sutter Gold Project from Seine River Resources in May, 1994. Sutter Gold Mining Inc. was incorporated in 1994 to operate the Sutter Gold Project. In 1998, the Sutter Gold Project obtained all permits necessary for mining and milling at a rate of up to 1,000 tons per day.

In 2004, the Central Eureka mine property was leased, adding a significant extension to known mineralized zones at the south end of the property. The Central Eureka mine hosts large, partially documented resources. Mine Development Associates of Reno was engaged to prepare a technical report summarizing the results of all previous work on the project in compliance with NI 43-101 policy.

In 2005, company activities focused on obtaining an amended water discharge permit, reviewing all previous geologic and engineering data, updating geologic/grade continuity models and exploration models, and developing a property-wide mineral resource estimate compliant with NI 43-101, Standards of Disclosure for Mineral Projects. An amended water discharge permit was obtained in September 2005.



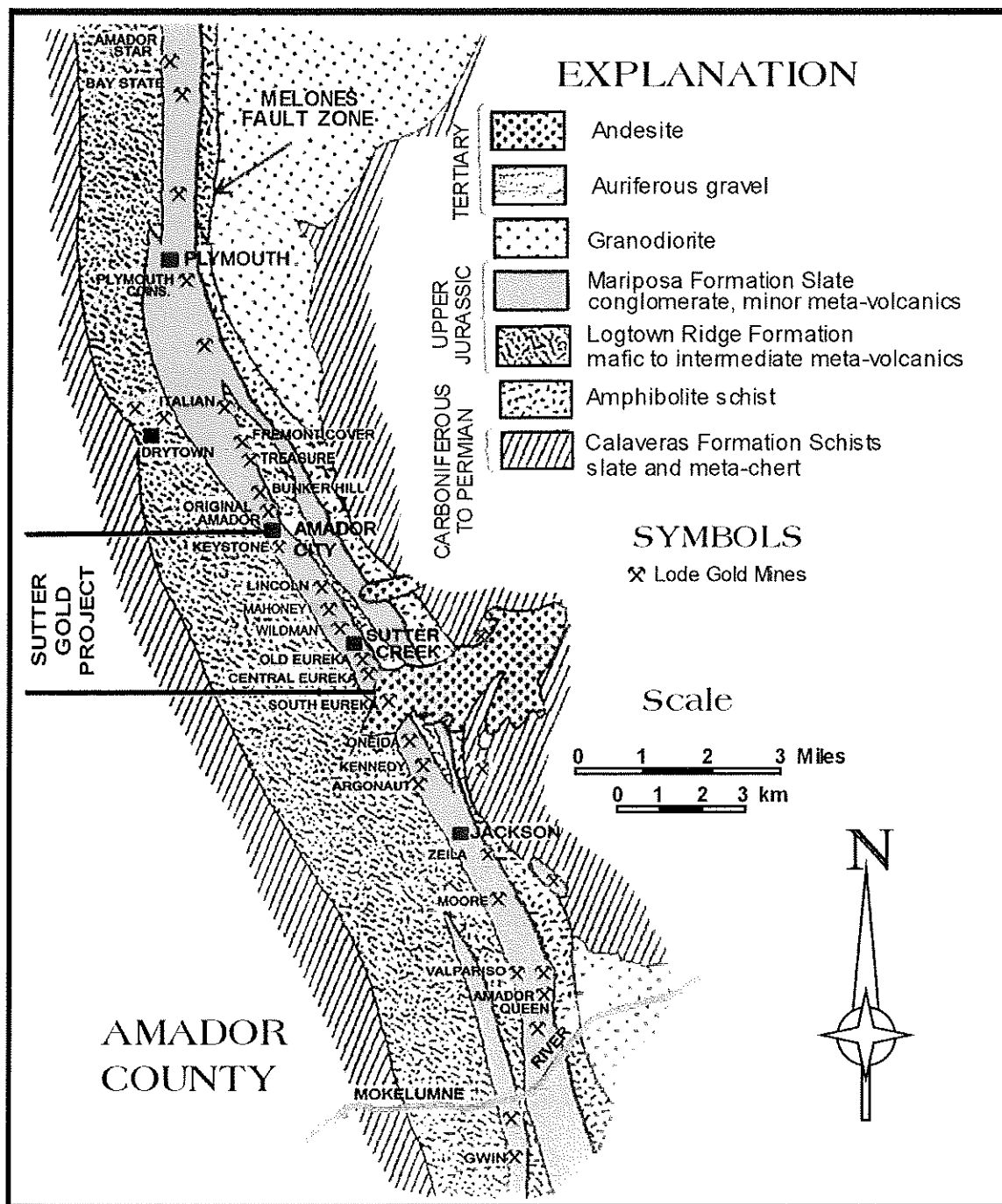
In 2006, an updated NI 43-101 compliant mineral resource for the entire Sutter Gold Project was published in March (Payne & Grunwald, 2006). A two phase 17,149 foot drilling program was initiated in July to test Inferred Resource areas in the Comet and historic Inferred Resources in the South Spring Hill area of the Keystone mine, with the goal of converting Inferred Resources to the Indicated category. The 2006 underground drilling in the gap area between the Lincoln and Comet Resources totaled 9,067 feet and identified modest additions to the Indicated Resource inventory and new Inferred Resources in several new structures. The 2006 surface drilling of the historic Keystone Inferred Resource totaled 8,082 feet and was designed to upgrade mineralization into the Indicated Resource category. Significant drill hole deviations created a wider hole spacing than was anticipated, and resulted in the estimation of mixed drill-Indicated and Inferred Resources. It was significant to note that seven of the eight intercepts in the Keystone 5 Vein encountered 3 to 31 feet of mineralization grading between 0.08 and 0.28 oz/ton gold, with an arithmetic average of 11.2 feet @ 0.19 oz/ton.

In 2007, the 2006 drilling programs were completed, a pre-feasibility study for the Lincoln-Comet was commissioned, and an updated property-wide mineral resource estimate was completed for the Sutter Gold Project. A six hole surface core drilling program was commenced in July to step southward from the historic Inferred Resource in the Keystone 5 Vein, to identify new Inferred Resources southward toward the Lincoln-Comet area. Fragmented detailed historic records from the Keystone mine (assay ledgers, monthly development reports) are presently being assembled to begin reconstructing assay plans for a portion of the 1914-1919 drift and raise developments that delineated the historic unmined resources remaining in the Keystone 5 Vein.

7.0 GEOLOGICAL SETTING

7.1 Regional Geology

From a regional perspective, the Sutter Gold Project is located in the western foothills of California's Sierra Nevada Range, which is commonly referred to as the Sierra Foothills Metamorphic Belt. The major structural feature of this region is the Melones Fault Zone, a deep crustal break which separates Paleozoic marine meta-sedimentary rocks (Calaveras Complex) on the east from Jurassic age submarine meta-volcanic and meta-sedimentary rocks on the west (Fig. 7-1). The Melones Fault Zone is a first-order regional scale structure, located approximately one half mile east of, and paralleling, the Sutter Gold property.



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Fig. 7-1 Regional geologic map of the Mother Lode Gold Belt in Amador County, California and area of the Sutter Gold Project.

The Mother Lode Gold Belt, which consists of an eastern and western gold belt, parallels the Melones Fault Zone for approximately 120 miles. The total recorded lode gold production from the entire length of the belt is approximately 13.6 million ounces of gold. The Amador County section of the Mother Lode Belt (i.e. the segment between the towns of Jackson and Plymouth) has had the greatest productivity of any area along the belt, with a recorded production of approximately 7.8 million ounces of gold from a 10 mile long section. Production in some of the Amador County mines extended to vertical depths of nearly 6,000 feet.

Along the Amador County section of the Mother Lode, the Gold Fault Zone is the dominant structural feature in the area of the mines. Very little historic gold production was hosted within the Melones Fault Zone directly. The Gold Fault Zone, a second-order structure, is a braided corridor of high strain, which is a branch from the Melones. The Gold Fault Zone hosts all of the large productive mines in the Amador portion of the Mother Lode Belt (Fig 7-1). It appears as a footwall cymoid loop structure which extends along an arcuate path for 10 miles, joining at both ends with the Melones structure at the towns of Jackson and Plymouth. Fluid channels for gold mineralization developed as the result of a mid-Cretaceous flattening event, which effectively developed district- and mine-scale boudinage features between rock units of contrasting competency. At the district-scale, and in detail, the gold mineralization is localized in and adjacent to faults developed along the contacts and within boudinaged meta-volcanic units.

7.2 Property Geology

In brief, the geology of the Sutter Gold Project is typical of the Mother Lode Gold Belt. It is characterized by a steeply eastward dipping to vertical sequence of Late Jurassic marine meta-sediments, volcanoclastics, and lesser mafic to intermediate meta-volcanic rocks (Mariposa Formation) cut by zones of high strain hosting gold-quartz veins (Fig. 7-2). These veins typically contain free gold and 1-2% accessory sulfides. The entire project area is underlain by N20-40W striking rocks of the Mariposa Formation.

7.3 Property Stratigraphy

The Late Jurassic Mariposa Formation exposed at the Sutter Gold Project consists of three N20-40W striking lithologic units. Starting at the western margin of the property, a basal slate/greywacke unit is overlain to the east by a thin meta-volcanic unit and an upper meta-volcaniclastic and sedimentary sequence.

7.3.1 "Western Slate Unit"

The basal slate/greywacke sequence (Mariposa Slate) is referred to in this report as the "western slate unit". It comprises a monotonous sequence of laminated black graphitic slates and thin, fine-grained, dark gray meta-greywacke beds.

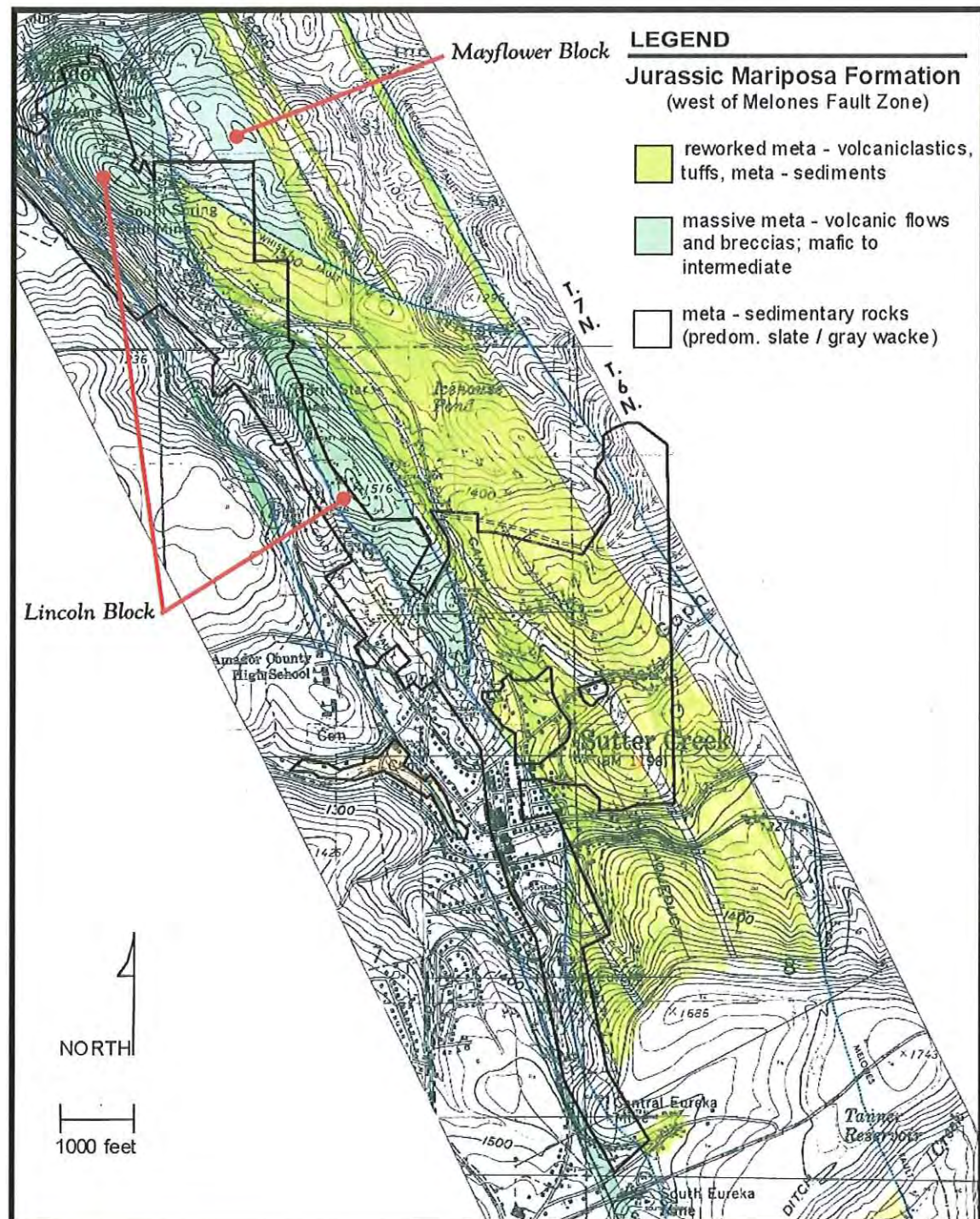


Figure 7.2 Geology of the Sutter Gold Property
simplified after Zimmerman (1983)

Thin meta-basaltic flow and tuff beds are uncommon but observed within the "western slate unit". The "western slate" is a relatively incompetent unit which has accommodated much strain where cut by the Gold Fault. The contact between the "western slate unit" and an overlying meta-volcanic flow and tuff unit is typically observed to be sub-vertical to steeply westward dipping, frozen and conformable with the meta-volcanics. The conformable contact is curiously punctuated by intervening areas where the contact is strongly faulted, locally accompanied by heavy gouge, and locally dipping moderately eastward. The faulted portions of the contact are discussed in the structural geology section.

7.3.2 Brower Creek Member (meta-volcanics)

The spine of the Sutter Gold Project is underlain by a meta-volcanic flow, and tuff sequence of basaltic to andesitic composition, and is the host rock for the majority of the current Lincoln-Comet Resource and portions of the Keystone Resource. The meta-volcanics contain subordinate inter-flow meta-sediments, and the unit is correlative with the Brower Creek Member of the Mariposa Formation. The meta-volcanics range from massive unstrained flows, fragmental flows, amygdaloidal pillowed flows, and agglomerates, to well-foliated ash tuffs and lapilli tuffs. Vesicular structures in the pillowed flows indicate the stratigraphic tops of the flows are facing to the east. The fragmental tuff units commonly contain flattened lapilli, and where they are highly strained in close association with the mineralized zones, can acquire a very pronounced stretch elongation lineation fabric overprint. The tuffaceous units tend to accommodate strain and provide the favorable pathways for alteration and gold mineralization. In plan view the massive flow units appear as resistant wedges and lenses with intervening foliated tuffs occurring in a somewhat braided pattern between them. This slight contrast in rock competency exerts important controls on the morphology of the Lincoln-Comet vein system.

This relatively narrow, competent meta-volcanic unit forms a chain of ridges which can be traced for over 2 miles axially along the center of the property from the Keystone mine southward to the area of the Mahoney Shaft. In this report, it is referred to as the "Lincoln Meta-Basaltic Block" or "Lincoln Block". From the Mahoney Shaft southward through the Central Eureka mine, the meta-volcanic unit was observed to continue through the property as a discontinuous chain of blind, boudin-like bodies which did not outcrop. The chain of meta-volcanic bodies are important in the structural and exploration context of the Sutter Gold Project and are not referred to in stratigraphic or lithologic terms, but are named as structural units or "blocks" in this report. The eastern contact of the meta-volcanic unit is everywhere observed to be a vertical to steeply westward dipping faulted contact with local bench-like, moderately eastward and westward dipping sections.

7.3.3 “Eastern Volcaniclastic and Epiclastic Unit”

The upper meta-volcaniclastic and epiclastic unit underlies the eastern side of the property. The southeastern portion of the Lincoln-Comet Resource and the eastern portion of the Keystone Resource are hosted within the “eastern volcaniclastic unit”. It is a thick, featureless sequence of thin to medium bedded, sedimentary-reworked mafic tuffs, fragmental tuffs, graphitic tuffaceous slates and graywackes, with local mafic to intermediate flow units. Soft sediment deformation features are commonly seen in drill cores and can be very hard to differentiate from the highly-strained phyllonitized zones associated with the gold-quartz veins. There are very few recognizable stratigraphic marker beds within this unit. Previous workers state scour marks, rip-up clasts, and graded bedding indicate stratigraphic top is to the east. The eastern volcaniclastic and epiclastic unit forms the eastern half of the “Lincoln Block”.

7.4 Property Structural Geology

The Gold Fault Zone is the dominant structural feature at the Sutter Gold Project (Fig. 7-2). Subordinate structural features (in order of importance) include resistant lensoid masses of meta-volcanics, specific deformational features imposed upon those lensoid structural blocks, and extensional fault arrays developed (a) between lensoid structural blocks, and (b) developed between the Gold Fault and Melones Fault Zones.

7.4.1 Gold Fault Zone

The Gold Fault Zone (Zimmerman, 1983) extends longitudinally through the entire property along a N20-40W trend, dipping moderately to steeply eastward. This deformation corridor developed preferentially within the bedded meta-sedimentary units and becomes a favorable host for gold mineralization where local meta-volcanic units create rock competency contrasts and focus strain and promote ground preparation. The fault zone contains at least two chains of lensoid meta-volcanic blocks. In close proximity to the Gold Fault Zone, normal stratigraphic relations are disrupted and the resistant meta-volcanic interbeds within the Mariposa Formation show evidence of attenuation, and boudinage development, followed by brittle relaxation. Lack of obvious marker beds render it difficult to determine if the two volcanic horizons within the Gold Fault Zone are a single horizon repeated by isoclinal folding.

7.4.2 Deformed Lensoid Meta-Volcanic Blocks

Nearly all significant gold mineralization on the property is related to pronounced deformations or dislocations along meta-sediment/meta-volcanic contacts. The favorable bends in the contacts are smaller-scale manifestations resulting from large-scale deformation and boudinage affecting the meta-volcanic units within the Gold Fault Zone. The contact between meta-sedimentary and meta-volcanic

units is tight and conformable, whereas, near gold production areas the contact is marked by faulting, which has overprinted the contact and created fluid pathways. The faulted segments of the contact are related to brittle boudinage features developed within and exterior to the meta-volcanic "blocks" during a regional-scale Cretaceous flattening event. Individual meta-volcanic "blocks" show a pinching-swelling character in response to compressional flattening and subsequent brittle relaxation, which has resulted in a recurring brittle boudinage fracturing pattern within the "blocks" (Fig. 7-3, SSH X-sec). Much of the 2.3 million ounces of historic gold production from the Sutter Gold Property are attributable to recurring brittle boudinage fracture patterns localized within, alongside, and exterior to the competent meta-volcanic "blocks".

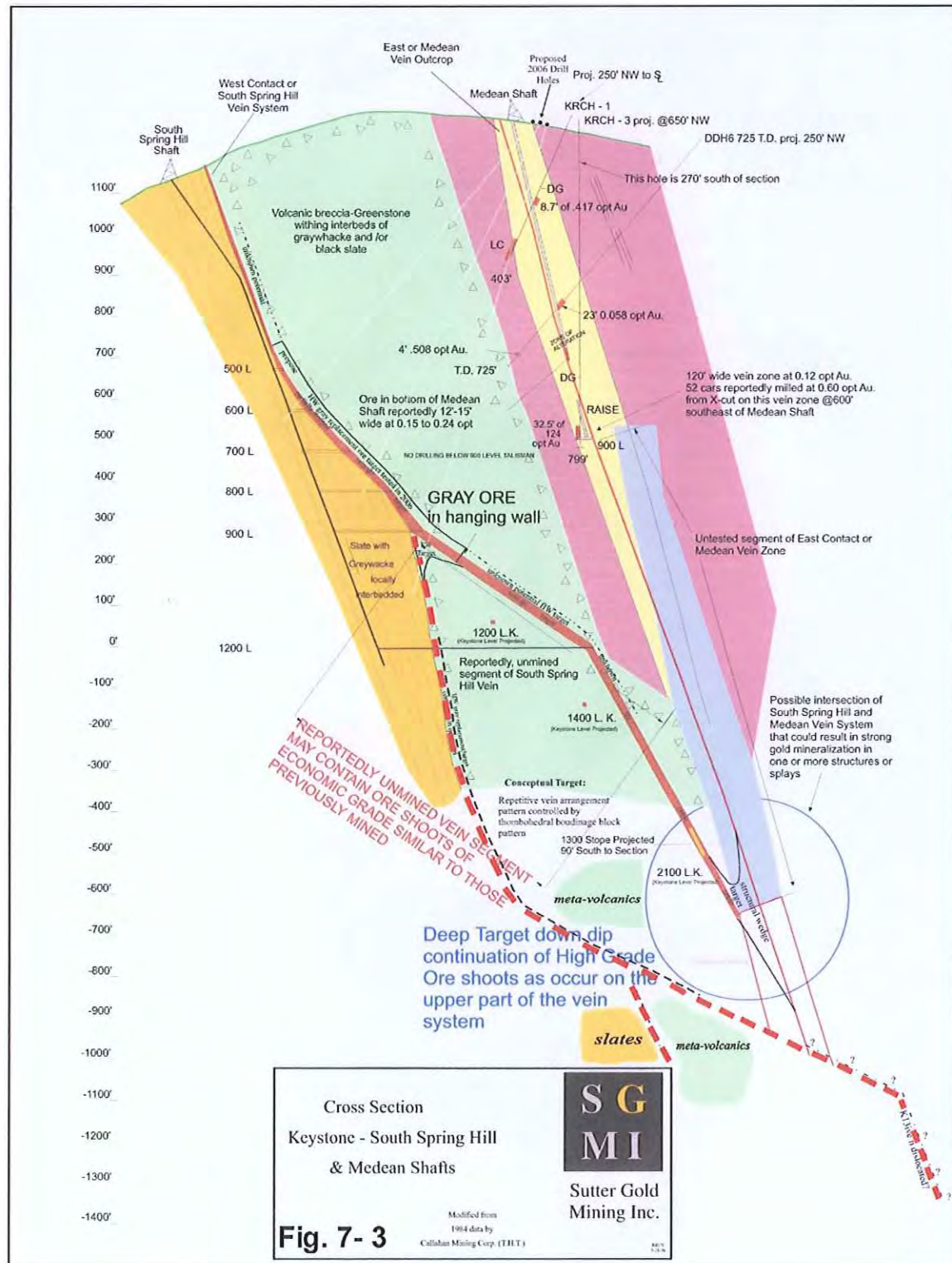
At the property-scale, three structural trap types associated with lensoid meta-volcanic blocks localize high-grade shoots at the Sutter Gold Project. They include (1) strain shadows around lensoid boudin blocks, (2) east-dipping brittle faults which have segmented the boudin blocks, and (3) favorable tuffaceous stratigraphy within the lensoid boudin blocks, which accommodate strain and host mineralization (*Lincoln-Comet vein system*).

7.4.2a Strain Shadows Associated With Meta-Volcanic "Blocks"

Steeply to moderately plunging strain shadows at the leading and trailing ends of meta-volcanic boudin blocks have localized the high-grade Old Eureka and Wildman-Mahoney shoots. The pointed southern end of the "Lincoln Block" hosts the current historic Inferred Resource at the 1400 Level of the Wildman & Mahoney, which has a maximum width of 100 feet grading 0.16 oz/ton gold.

7.4.2b Brittle Faults Dissecting Meta-Volcanic "Blocks"

Brittle faults dissecting the lensoid meta-volcanic "blocks" into trains of offset, segmented boudins have been an important structural trap at locations along the entire length of the property (Fig. 7-3). A system of moderately eastward dipping bench-like dislocations or irregularities along the western meta-sediment/meta-volcanic contact, extend down dip into and through the meta-volcanics. It is assumed that a similar moderately eastward dipping bench-like dislocation would appear at the eastern contact of the "block" at depth. At least three bench-like dislocations, with shallow southerly rakes, have been identified along the western contact of the "Lincoln Block" to date. This is a recurrent faulting pattern (brittle boudinage) that should continue to repeat itself to depth, producing a system of widely-spaced east dipping mineralized zones. These brittle fault type targets have the potential to host moderate to steeply eastward dipping vein quartz and sulfide replacement mineralization with the potential to host large deposits.



7.4.2c Oblique-Extensional Vein Sets Within Meta-Volcanic “Blocks”

Vein sets such as the Lincoln-Comet vein system were localized in response to the heterogeneous composition of the volcanic sequences, and their behavior under conditions of compressional flattening. The isolated meta-volcanic members occurring within the Mariposa Formation are complex sequences of tuffs, fragmental tuffs, massive flows, pillowed flows, and massive flow breccias showing rapid facies changes and little internal stratigraphic order. The massive flows have dimensions of 10 to 100 feet thick and 100 to 200 feet long in plan view, and are elongated steeply to depth. They can have a thick lensoid or a wedge shape in plan view. The shape of these chimney-like flow units may have been controlled by deposition in paleo-channels. The individual oblique-extensional veins generally cut the volcanic stratigraphy at an acute angle in both their strike and their dip. The veins are best developed within the tuffaceous units, and typically the veins will split or veer around the massive units when are encountered. The branching morphology of the vein system is controlled by the volcanic stratigraphy. Where the massive flow units show blunt ends, as seen in plan view, there is potential for flat tensional vein arrays to develop in these strain shadows. Such rock competency contrasts exert important local controls for ore shoots at the stope-scale. Within the “Lincoln Block”, projections of volcanic stratigraphic features into new areas can provide clues for new drill targets.

7.4.3 “Lincoln Block”

The “Lincoln Block” is a narrow, elongated body striking N20-40W, dipping sub-vertically, and extending axially through the Sutter Gold Project from north of the Mahoney Shaft through to the Burke Shaft at the Keystone mine, which is at the northern boundary of the property. It is comprised of mafic to intermediate meta-volcanics in the western half and interbedded reworked meta-basaltic tuffs, tuffaceous sediments, and minor meta-basaltic flow units in the eastern half.

The “Lincoln Block” bifurcates the Gold Fault Zone into western and eastern branches north of the Mahoney Shaft. The fault zone splits around the wedge-shaped southern end the “Lincoln Block”. The southern tip of the “Lincoln Block” plunges steeply southward, through to the south end of the Wildman 1400 Level workings.

7.4.3a Other “Blocks”

Smaller meta-volcanic structural “blocks” within the property are predominantly mafic tuffs with subordinate massive flow units. They include the “Eureka”, “Mayflower” and “Emerson Blocks”. The “Mayflower Block” outcrops northeast of the decline portal, and projects to plunge moderately southward into the area of the decline portal. The “Mayflower Block” has the potential to host similar ore

deposits types as the "Lincoln Block". The other "blocks" are located well to the south of the Lincoln-Comet area. All represent excellent exploration targets.

7.4.4 Extensional Features Linking Between Major Faults

The author has recognized a weak system of N45E trending extensional faults dissecting the "Lincoln Block", which have not been systematically explored. The Niagara Fault, located at the Keystone mine in the area of the Patton Shaft, is a sub-vertical extensional fault dissecting the "Lincoln Block" and linking between the east and west branches of the Gold Fault Zone. A similar swarm of faults is associated with the pronounced pinch-out of the "Lincoln Block" at the surface, in the area of the Talisman Shaft and the Stringbean Alley Decline portal ("Talisman Neck"). Both areas were prospected at the surface by a linear series of shallow prospect pits.

7.4.5 Faults Linking Between Meta-Volcanic Blocks

The importance of faults linking between meta-volcanic "blocks" has not previously been recognized, or systematically explored. The large, high-grade oroshoot of the Keystone 1 vein was localized along the Highway Fault, a N20W-trending Reidel shear developed in the slate/graywacke sequence between two meta-volcanic "blocks". The southern strike extension of the Highway Fault remains untested southward from the Keystone 1 vein stope. At depth beneath the Whiskey Fault, in the area of the decline portal, there is blind potential for similar link faults in the slate/graywacke sequence between the "Lincoln Block" and the "Mayflower Block".

8.0 DEPOSIT TYPES

The gold deposits of the Mother Lode Gold Belt and the Sutter Gold Project are classified as orogenic or mesothermal gold deposits. This class of deposit is spatially-associated with deep crustal faults and are hosted in metamorphosed submarine volcanic-sedimentary terranes and in the intrusive rocks which cut them. The gold mineralization is structurally controlled, hosted along and adjacent to regional-scale deep crustal breaks, most commonly as vein quartz filling dilatancies and as sulfidized replacements in altered wallrocks. A detailed description for this class of gold deposits is available at the website http://minerals.cr.usgs.gov/projects/ore_forming_processes/task3.html.

Orogenic type gold deposits are locally of high grade, commonly containing coarse particulate gold, and may yield large quantities of the metal. A large

percentage of global gold production has been derived from this class of deposit. While the host faults can be traced with relative ease, the oreshoots within the host structure are much less continuous. Coarse particulate gold content within this deposit type can make grade estimation within oreshoots difficult, requiring closely-spaced drilling and underground development to demonstrate the existence of resources with economic potential (Ronning and Prenn, 2004).

9.0 MINERALIZATION

The gold-quartz veins branch and anastomose along the 3.2 mile length of the Sutter Gold Property, both macroscopically and microscopically. The gold mineralization was emplaced along through-going, geologically continuous faults or corridors of high strain. Nearly all gold-quartz veins in the project area have an approximate northerly strike, and dip steeply to moderately eastward. The lone exceptions are the northward striking, steeply westward dipping vein system of the Lincoln-Comet Resource, the moderately southwestward dipping Keystone 14 and 15 Veins hosted along the Whiskey Fault, and the westward dipping Belmont Vein, located along the west contact of the "Emerson Block".

9.1 Mineral Deposit Types

Gold mineralization at the Sutter Gold Project occurs in complexly branching zones of high strain (phyllonites) hosting oreshoots within (1) vein quartz, (2) sulfidized phyllonites, and (3) adjacent sulfidized wallrocks, known locally as "gray ore". Typical gold-quartz veins are hosted within laterally continuous high strain phyllonite zones, which commonly jacket one or both walls of the veins. Often, the gold-quartz veins are enveloped by a tensional fracture pattern on one or both walls. Where tensional fractures are filled with ore-stage vein quartz, the phyllonitized wallrock can constitute minable ore in addition to the vein.

9.1.1 Quartz Vein Type Mineralization

The veins consist of variably tectonized quartz and ankerite, containing 1-2 percent fine-grained accessory pyrite, arsenopyrite, chalcopyrite, sphalerite, and galena (in order of importance). Tabular to lensoid vein quartz was and is the dominant ore type at the Sutter Gold Project. The vein quartz averages 4 feet at Lincoln-Comet (max. 15 ft), 20 feet at Keystone (max. 70 ft), and 10 feet at the Central Eureka mine (max. 40 ft). At areas of local vein splits, the two veins plus intervening stockwork veined wallrock can exceed widths of 100 feet (Lincoln Consolidated mine, Keystone mine, Wolverine mine). Quartz oreshoots hosted within dilational jog type structural traps, as at Central Eureka and Keystone, can

increase to extreme widths within 10 to 20 foot distances (Knopf, 1929; Logan, 1934).

9.1.2 Phyllonite Type Mineralization

The phyllonite hosted mineralization (sulfidized schist) is uncommon, and constitutes highly-strained meta-tuffs with a very strong deformational overprint that can be braided to laminar in appearance, with strong development of sericitic alteration. It contains 2 to 5 percent fine to coarse grained porphyroblastic euhedral overgrowths of pyrite and arsenopyrite, and is typically cut by weak tensional quartz veinlet arrays. Phyllonite type mineralization, accompanied by little or no vein quartz, typically occurs where the zone of high strain bends along strike or dip into an alignment which is unfavorable for dilatancy and vein quartz deposition. In a development drift along the Lincoln 40 Vein, one can see a continuous gradation where the walls of the vein flatten 10 degrees updip and bend to the left a few degrees on strike, turning out of favorable alignment. The high grade vein quartz lenses out and a high grade mineralized phyllonite lens continues southward (1000L drift, near 1670 Raise). Mineralized phyllonites range in grade from 0.10 to 1.80 oz/ton gold and occur in zones 3 to 11 feet wide at Lincoln-Comet, and have been noted at all of the historic producers on the property. In the historic operations, the phyllonite type mineralization was referred to as "mineralized schist ore" (Knopf, 1929).

9.1.3 Sulfide Replacement Type Mineralization

The sulfide replacement mineralization consists of strongly carbonate-sericite-albite-pyrite altered (C-S-A-P altered) andesitic to basaltic meta-volcanics, which characteristically are undeformed and show clear relict volcanic textures. The typical greenish colored meta-volcanics are altered to a characteristic gray color, and were referred to as "gray ores" in the Mother Lode Belt mines (Knopf, 1929). In the Canadian mines, these ore types are referred to as "flow ores". The replacement type ores are cut by varying quantities of thin quartz veinlets (0 to 10 percent). The sulfide replacement deposits contain 2 to 5 percent fine to coarse grained porphyro-blastic overgrowths of pyrite, arsenopyrite, and trace chalcopyrite.

The replacement type deposits are universally found at the Sutter Gold property where vein structures bend, propagating vein splits. The auriferous replacement deposits occur within the intervening wedge of rock between the two veins and can constitute large-tonnage, bulk-minable deposits with maximum widths of 17 feet at Lincoln-Comet, 45 feet at Keystone, 60 feet at the Central Eureka, and 100 feet at the Lincoln Consolidated mine.

9.1.4 Fault Gouge Type Mineralization

Fault gouge type mineralization is developed at the shoulders of, and extending distally away from gold-quartz lenses hosted within dilational jog type structural traps. Rarely in the Lincoln-Comet area, and more commonly in the Keystone and Central Eureka deposits, post-mineral re-activation of the syn-mineral faults can reduce gold-quartz shoots into narrower zones (1 to 8 feet) of breccia and fault gouge containing various proportions of dismembered auriferous vein quartz fragments or disrupted vein filaments. This fault gouge type of mineralization was generally narrower but could still be of minable grade. For example, at the Keystone mine, wide gold-quartz veins locally steepened up dip, and post-mineral reverse faulting sheared off the upper ends of the quartz shoots against the hanging wall, producing heavy gouge and a train of auriferous vein fragments which gradually diminished up dip. The large oreshoots of the Keystone and Central Eureka mines were comprised of relatively thick gold-quartz lenses linked together by a continuous zone of disrupted auriferous phyllonite and sections of fault gouge type mineralization (Porter, 1920).

10.0 EXPLORATION

Modern surface core drilling since 1983 has delineated resources in an extensive gold-quartz vein system in the Lincoln-Comet area, and has disclosed many good drill targets that remain untested. Modern surface core drilling in the Keystone mine area has partially tested vein systems developed along both contacts of the "Lincoln Block" in the areas of the historic South Spring Hill, Talisman, and Medean Shafts. Core drilling has been a cost-effective method to test the vein systems. Underground development and closer-spaced underground core drilling has further defined and demonstrated continuity of the mineralized zones in the Comet area. The underground development work was terminated when FMC Gold acquired Meridian in 1990. Chip sampling of underground exposures within the development workings has added further definition and demonstrated good continuity of the gold-quartz vein shoots in the Comet area.

The 2006 underground core drilling program tested the gap area between the Lincoln and Comet resources and extended resources into that area and demonstrated geological continuity of the vein structures from Lincoln into the Comet area. A database including over 6,800 fire assays have been obtained from analyses of drill cores and underground development samples. The quality and spacing of drill hole penetrations have been sufficient for demonstrating geological and grade continuity of the mineralized zones and support the estimation of Indicated and Inferred Resources. Exploration and definition drilling

of 9 RCR and 217 core holes from 1983-2007 has totaled approximately 99,000 feet.

10.1 Exploration Potential

There is excellent potential for expanding resources through exploration drilling at the Sutter Gold Project, through the implementation of an exploration plan utilizing the structural geological model updated in 2007. The gold production from this portion of the Mother Lode Belt is well documented, with historic mines on the property accounting for 17 percent of the entire output from the belt. On the Sutter Gold property, there were areas of large historic gold production at both the northern and southern ends, bracketing a one mile long segment with no historic gold production. This previously unmined area hosts the Lincoln-Comet vein system. The Lincoln-Comet mineralization did not outcrop and was a blind discovery, which represents the first significant new gold discovery, unrelated to past-producing mines, made along the Mother Lode Belt since the 1950s. The examination of historic geologic maps and reports has identified common denominators in the arrangement and occurrence of historic ore zones. The majority of historic production from the Sutter Gold property was extracted from nine distinct and continuous oreshoots ranging in size from 50,000 to 600,000 contained ounces, with the median size shoot hosting 100,000 ounces, listed as follows:

<u>Old Eureka Shoot, Ce1 Vein</u>	800,000 tons	0.75 oz/ton	600,000 oz
(blind discovery, apex at 200 feet vertical depth, mined out at 1,600 feet depth)			
<u>Keystone 1 Vein (West Vn) Shoot</u>	650,000 tons	0.75	487,000 oz
(outcropped at surface, mined out to 800 feet vertical depth)			
<u>Central Eureka 4 Vein Shoot</u>	420,000 tons	0.60	250,000 oz
(blind discovery, apex at 3,100 feet vertical depth, open down plunge below 3900 feet vertical depth)			
<u>Keystone 5 Vein (Contact) Shoot</u>	1,250,000 tons	0.20	250,000 oz
(blind discovery, apex at 400 feet vertical depth, open down plunge below 800 feet vertical depth – large resource remains in place)			
<u>Central Eureka Shoot, Ce1 Vein</u>	300,000 tons	0.35	104,000 oz
(blind discovery, apex at 1,000 feet vertical depth, large low-grade resource remains in place)			
<u>Wildman-Mahoney Gray Ore</u>	750,000 tons	0.12	91,000 oz
(blind discovery, apex at 400 feet vertical depth, large low-grade resource in place above 1,200 feet vertical depth, open down plunge below 1,200 feet vertical depth)			
<u>Old Lincoln Shoot</u>	(est) 160,000 tons	0.50	80,000 oz
(outcropped at surface, mined out at 300 feet vertical depth)			
<u>Wildman-Mahoney Contact Vein</u>	150,000 tons	0.45	67,000 oz
(outcropped at surface, mined out at 400 feet vertical depth)			
<u>Central Eureka 9 Vein Shoot</u>	140,000 tons	0.35	50,000 oz
(blind discovery, apex at 2,100 feet vertical depth, mined out)			

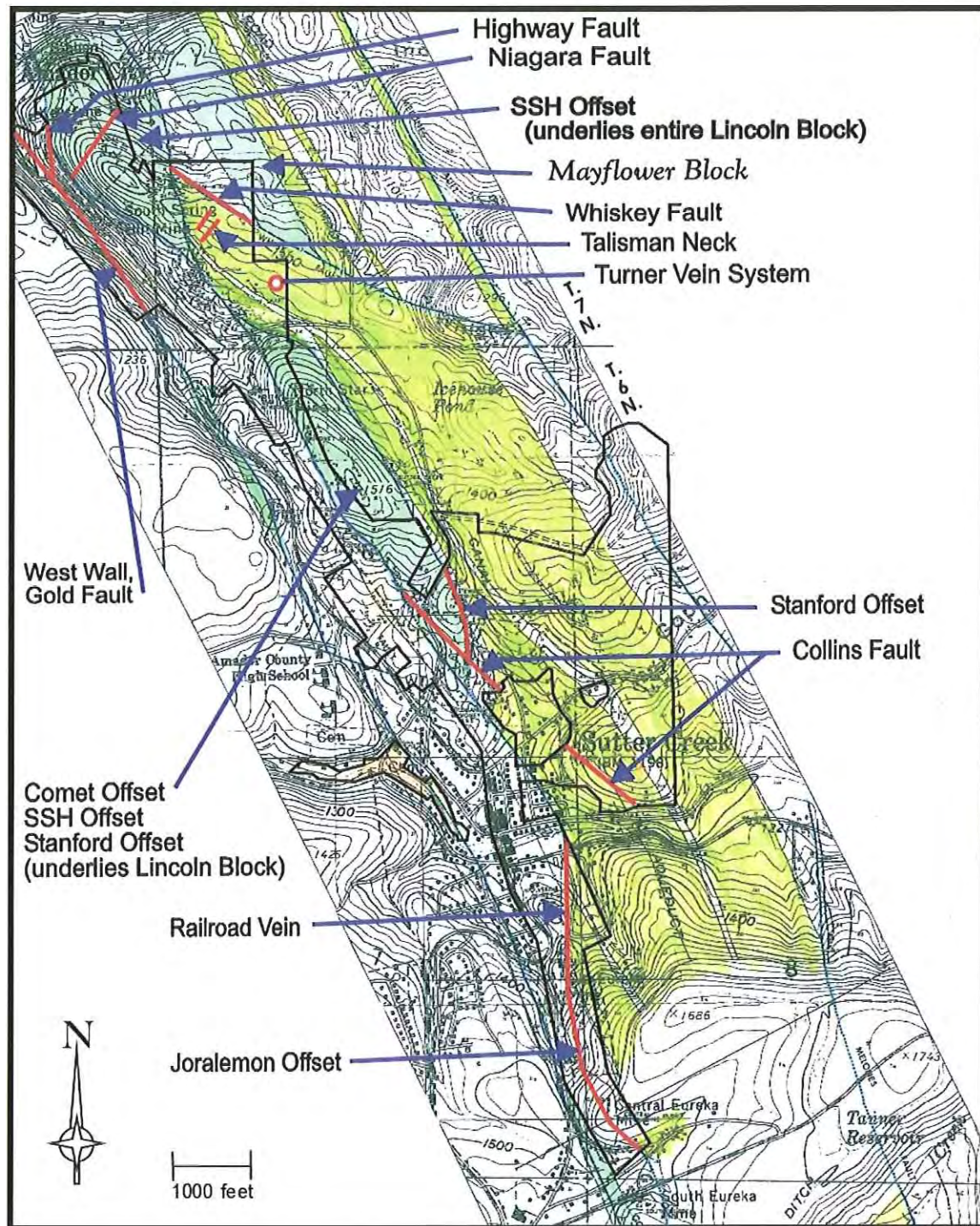
Common traits were noted between the ore controls for these historic examples and those controlling the vein system in the Lincoln-Comet area. The boudinage model accounts for the recurring structural patterns which localize the various gold deposits on the property and control their pattern of arrangement along the Gold Fault Zone. The historical record supports the contention that gold mineralization is commonly localized into large shoots with good continuity.

10.2 Exploration Model

The exploration model includes drill testing the down-plunge depth extensions of documented historic ore zones, and systematic testing of all areas exhibiting structural geologic conditions known to localize high-grade mineralization. The model is predicated upon property-scale boudinage-related structural features developed around and within competent lensoid meta-volcanic units within the Gold Fault Zone and enclosed within less-competent meta-sediments. The boudinage features are a common denominator coincident with known oreshoots throughout the Mother Lode Belt. A comprehensive exploration program has been designed and exploration drill targets have been identified along the entire length and breadth of the project area, at all elevations.

Four basic structural controls have been identified in the current exploration model for the Sutter Gold Property, including (1) strain shadows along the contacts and at the leading or trailing ends of steeply plunging boudin-like meta-volcanic lenses, (2) in shallow to moderately plunging boudin neck (pinched) areas along the contact of meta-volcanic lenses, (3) in shallow to moderately plunging strain shadows developed at bench-like fault offsets along the contact of meta-volcanic masses where the faults extend into, through, and out the other side of lensoid volcanic masses (Figs. 7-3, 10-1), and (4) related to linking faults developed between the Gold Fault Zone and Melones Fault Zone, and linking faults connecting between meta-volcanic lenses.

Nearly all significant gold mineralization on the property is associated with pronounced deformation or dislocations along meta-sediment/meta-volcanic contacts, regardless of mineralization type (i.e., vein quartz, sulfide replacement, phyllonite, stockwork vein). Favorable bends along the contacts are smaller-scale manifestations resulting from large-scale deformation affecting the meta-volcanic units within the Gold Fault Zone. The structural geological model will steer the identification of new exploration drilling targets in untested areas throughout the extent of the property. The capacity for the project to continue making new discoveries is considered reasonable, and is supported by the exploration model and the history of mining operations on the property.



SG
MI

Figure 10-1 Exploration Targets, Sutter Gold Property
simplified after Zimmerman (1983)

10.3 Exploration Target Inventory

An inventory of exploration targets have been identified during 2007 and implies that further significant resources should be discovered in many areas as the project matures. The current inventory of exploration targets includes: (1) targets in the Lincoln-Comet development area, (2) targets north of the Lincoln-Comet area, and (3) targets south of the Lincoln-Comet area. Specific targets are listed by area, then by order of their magnitude. The targets occur at all elevations and along the entire length of the project area.

10.3.1 Targets In the Lincoln-Comet Area

Five significant targets are identified in the proposed Lincoln-Comet production area, in order of greatest magnitude and ease of access.

10.3.1a "SSH Offset" Target

The "SSH Offset" is the fault hosting the Keystone 5 Vein, which may host a large vein target at the Sutter Gold Project. The "SSH Offset" is an east dipping bench-like fault dislocation along the western contact of the "Lincoln Block". It extends downward through the block, segmenting it. This target does not outcrop. It plunges southward through the "Lincoln Block" at a shallow angle, and may underlie a 2 mile long section of the property. The Keystone 5 Vein was developed and partially mined along a length of 3,100 feet in the Keystone and South Spring Hill mine workings. Exploratory core drilling in 1989-1990 intersected 8.5 feet grading 0.22 oz/ton gold at 800 feet vertical depth in the K5 vein, approximately 1,300 feet south of the Keystone workings. The Keystone 5 Vein appears to have an average length, measured down the dip, of 1,000 feet within the "Lincoln Block". It remains untested for an additional 7,000 feet southward along strike from the 1989-1990 drill holes to the southern end of the "Lincoln Block", south of the Wildman Shaft. This target may extend as a moderately to steeply eastward dipping plane beneath the entire length of the Lincoln-Comet vein system.

10.3.1b "Comet Offset" Targets

The "Comet Offset" fault hosts significant vein targets related to a network of moderate to steep east dipping fault/veins which tangentially extend through the "Lincoln Block" from bench-like offsets along its contacts. The "Comet Offset" is manifested as one of several shallowly southward plunging structural dislocations along both sides of the "Lincoln Block". The "Comet Offset" can be traced for 2,500 feet along the western contact of the block, sub-parallel to the Stringbean Alley Decline. It lies structurally lower than the "Stanford Offset" and structurally higher than the "SSH Offset". The exploration potential of the Lincoln 9, 20, 23, and 61 veins and their effects upon west-dipping Lincoln-Comet veins at depth

are considered significant. The Lincoln 20 and 61 vein targets are structurally analogous to the large Keystone 5 Vein target. Both veins remain untested along strike to the southeast for 2,000 feet and approximately 500 feet down dip.

The Lincoln 20 Vein currently hosts an Indicated Resource coincident within a pronounced dome-like convex bend in the Comet area. It has been traced through the Comet area for a strike length of 2,500 feet, and remains open for extension an additional 2,000 feet to the southeast. The moderate to steep east dipping Ln 20 Vein lies sub-parallel to, and in a structurally higher position than the Lincoln 61, and Keystone 5 Veins. The Ln 20 Vein may have developed tangentially upward through the "Lincoln Block", from a hypothesized east-dipping bench-like offset along the eastern contact of the "Lincoln Block". The sinuous Ln 20 Vein cuts the steeply west dipping Lincoln-Comet veins, creating a structural trap which controls the up dip termination for many of the shoots in the Lincoln-Comet vein set. Several convex curves (structural domes) have been identified within the vein and should be targeted. Areas of convex bends in the Ln 20 Vein may provide favorable dome-like traps which could localize shoots in undiscovered west-dipping veins which may be found in the eastern side of the "Lincoln Block" at depth. The Ln 20 vein appears to weaken and die out up dip before reaching the west contact of the "Lincoln Block", and is not associated with a bench-like dislocation on the west contact of the "block".

The Lincoln 61 Vein is localized along the "Comet Offset", and is structurally analogous to the Keystone 5 Vein. The Ln 61 vein extends downward through the "Lincoln Block" from an east-dipping bench-like fault feature on the west side of the "block". Two separate shoots have been identified within the eastward dipping Ln 61 Vein, sub-parallel to, and 1,300 feet vertically above the projection of the Keystone 5 Vein, within the Lincoln-Comet Resource area. Early Meridian core drilling intersected a high-grade gold-quartz vein localized along an eastward dipping bench-like offset in the western contact of the "Lincoln Block". A single core hole from the 2006 program may have intersected the apex of a new shoot in this vein, located just beneath the current face of the Stringbean Alley Decline. At this location, the Lincoln 61 Vein has extended into the "Lincoln Block", where DDH-0184 intersected 9.6 feet grading 0.11 oz/ton gold, including 3.0 feet grading 0.23 oz/ton in mineralized phyllonite cut by an oblique-extensional vein array. This mineralization type is indicative for distal ends of shoots and implies the Ln61 Vein has turned into a more favorable alignment and could host ribboned vein quartz in close proximity down the dip. Structural domes within the Ln 61 Vein could host similar targets as described for the Ln 20 Vein.

10.3.1c "Stanford Offset" Target

This target comprises an area within the historic Lincoln Consolidated workings, which have been intensively developed and mined. A large, vaguely documented low-grade resource remains in place above the Wildman 1400 Level / Mahoney 1200 Level. The intensive mining occurred along the western strand of the Gold

Fault Zone. The "Stanford Offset" trends NNW, dipping moderately eastward into the southern tip of the "Lincoln Block", hosting wide, low-grade gold deposits. The fault comprising the "Stanford Offset" lies sub-parallel to, and structurally above the "Comet Offset". Historical information is lacking concerning exploration and development on the eastern strand of the Gold Fault Zone, where the "Stanford Offset" projects to intersect it at depth. The up dip end of the "Stanford Offset" has been eroded away north of the historic Lincoln Shaft, but there is good potential for new shoots where it joins the eastern strand of the Gold Fault, which should rake upward toward the north, along the east side of the "Lincoln Block". This target is situated to the east of the Lincoln-Comet Resource and could be tested from an existing underground drill station.

10.3.1d South Extensions of Known Lincoln-Comet Shoots

A number of west-dipping Lincoln-Comet veins currently host Indicated and Inferred Resources at the far southeast end of the Lincoln-Comet area, and remain open for expansion down plunge southward to depth. The potential to expand resources in known shoots southward into the area of, and beneath the historic Lincoln Consolidated mine is considered good with a magnitude equal to or less than the current resource at the far south end of Lincoln-Comet. The projected shallow plunges of these zones are less than 45 degrees from horizontal within the steeply west dipping structures. The southern strike extension of the Lincoln-Comet veins may be limited to the southeast against the Collins Fault. The Collins Fault may be a Reidel type shear, extending from the Central Eureka Mine in a N40W direction, and considered to have faulted-off the rich vein mined from the surface to 350 feet depth in the historic Lincoln Shaft. Additional rich shoots in the Lincoln-Comet veins may be localized against the Collins Fault.

10.3.1e Shoots Developed In Strain Shadows of Massive Flow Units

Strain shadows localized at the north and south ends of chimney-like, plunging, massive flow units within the "Lincoln Block" have not been systematically tested for their potential to host bulk-tonnage tensional vein arrays. This target type was discussed in section 7.4.2c, and represents "next generation" drill targets within and adjacent to the Lincoln-Comet development area. Specific 3-D computer modeling of these massive, un-strained units observed underground and in drill cores will further refine the exploration model throughout the "Lincoln Block". This target type is exposed in two areas underground at the 1085 East and 2505 East cross-cuts.

10.3.2 Targets North of Lincoln-Comet Area

Six substantial exploration targets were identified in the area extending north from the Talisman Shaft to the northern property boundary, and include the Keystone Ranch area west of the Keystone mine. These targets are located well

to the north of the Lincoln-Comet underground workings. Three of these targets would have to be explored from underground drill stations due to an Amador City ordinance prohibiting exploration drilling from surface.

10.3.2a Whisky Fault Target

The Whisky Fault is a N40W striking, southwest dipping fault which currently is documented to host a small historic Inferred Resource in the Keystone 14 and 15 veins. The fault may have propagated tangentially from a bend in the Melones Fault Zone, diagonally linking between the Melones and Gold Fault Zones. It is coincident with a prominent bend in the eastern branch of the Gold Fault Zone, along the eastern contact of the "Lincoln Block", near the Medean Shaft. The Whisky Fault may be a Reidel type shear, structurally analogous to the Collins Fault of the Central Eureka mine. The fault may host a significant shoot localized along and up dip from its trough-like intersection with the east branch of the Gold Fault Zone. The Whisky Fault could potentially have localized shattering in adjacent wallrocks, including drag fold-related dilatancies as N-S striking oblique-extensional vein sets, and E-W striking arrays of stacked tensional flat veins. Bends along the Whisky Fault would likely create the locus for such vein sets. The exploration potential for this target is considered to be of a blind nature and significant.

10.3.2b Turner Vein System Target

The Turner Vein System is a theoretical target developed at the blunt southern termination of the N30W striking "Mayflower meta-volcanic block" against the footwall of the Whisky Fault. The target would be for a northerly-striking Lincoln-Comet type vein system developed within the "Mayflower Block" in response to shattering along the Whisky Fault. The target should occur blindly at depth beneath the Whisky Fault, coincident with convex bending (structural doming) features in the plane of the Whisky Fault. At 1,000 to 1,500 feet depth, this target projects to be in fairly close proximity to the Stringbean Alley Decline portal. This target type would be somewhat similar to that of the Collins Fault Target at the south end of the Lincoln-Comet vein system. A similar structural control localized the 1.2 million ounce Brunswick vein set in the Idaho-Maryland Mine at Grass Valley, California. The exploration potential may be of similar magnitude to that of the Lincoln-Comet vein system. The depth of locus is presently undetermined.

10.3.2c Highway Link Fault Target

The Highway Fault is a N20W striking, moderate east dipping fault which hosted the high-grade Keystone 1 Vein stope. The K1 Vein shoot outcropped at the surface, hosting a large vein of granulated crushed quartz up to 50 feet in width. It was one of the most profitable large shoots mined on the Mother Lode Belt. It is a very strongly mineralized fault which links the westernmost fault strand of the Gold Fault Zone with the western contact of the "Lincoln Block". The northern half

of this structure has been thoroughly prospected and developed. The target area would be along the southern half of the fault. Due to the past importance of the Highway Fault, the area warrants exploration work, but potential for a new discovery is considered speculative.

10.3.2d West Wall, Gold Fault Zone Target

The west wall of the Gold Fault Zone, in the area due west from the Keystone workings, has potential for discovery of new shoots. The structure follows a contact between footwall meta-volcanics and hanging wall graphitic slates. The targets would be blind and localized at brittle fault offsets and bends along the contact. Additional targets might be found at irregularities or dislocations northward along the meta-volcanic contact defining the west wall of the Gold Fault, toward Amador City. The targets are hosted in a structure with little or no recorded gold production. Potential for a new discovery is considered speculative, but the target area is large. Testing would be from underground due to a surface drilling moratorium imposed within the city limits of Amador City.

10.3.2e Niagara Fault Target

The Niagara Fault strikes N45E, diagonally traversing the "Lincoln Block" from the vicinity of the Geneva Shaft toward the area of the El Dorado Shaft. There is a poorly exposed system of north-south striking, steeply west dipping gash veins arrayed along both walls of the Niagara Fault. The fault may be of extensional type, capable of hosting deposit types not previously exploited in the Keystone mine. A shaft was sunk 150 feet east of the Patton Shaft by leasers in 1951-1952, on the north side of the Niagara Fault, along one of these structures. This was found to be a west-dipping conjugate vein, which intersected the hanging wall of the east-dipping Keystone 5 vein at 70 feet depth. A shoot of high-grade quartz was stoped to the surface along a 100 foot strike length. A shallow adit of similar vintage developed a system of stacked flat tensional veins up to 3 feet thick, cutting sulfide replacement mineralization in the obtuse angle between the west-dipping stope and the Niagara Fault. There is potential for a chimney shaped bulk-tonnage deposit in this shattered area on the north side of the Niagara Fault and unknown potential to develop multiple small shoots in gash vein arrays along the trace of the Niagara Fault. This is a new target type with moderate potential for new discoveries along a 1,000 foot strike length. This target would have to be tested with angled drill holes from adjacent lands due to the surface drilling moratorium imposed within the city limits of Amador City.

10.3.2f Talisman Boudinage Neck Target

The meta-volcanic outcropping of the "Lincoln Block" is interrupted at the topographically low area coinciding with Stringbean Alley and the Talisman Shaft of the Keystone mine. Outcrops of the meta-volcanic unit resume north of the Talisman Shaft. There is a 75 meter (250 ft) gap in the surface outcroppings of

the meta-volcanic unit, but Meridian core drilling in the vicinity of Stringbean Alley has demonstrated that this gap is an apparent feature and the "Lincoln Block" is continuous from the Lincoln-Comet area into the Keystone mine area at depth. The "Lincoln Block" has been disrupted by multiple N45E striking brittle faults to create a necking or pinching feature in the block. The structural narrowing of the block (1) allows the east and west contacts of the "Lincoln Block" to come into close proximity with one another and (2) creates pronounced bends along both contacts. The propagation of N45E trending brittle tensional faults eastward from the "Lincoln Block" could produce a new type of structural target developed in the wedge shaped area between the east contact of the "Lincoln Block" (Keystone 13 Vein) and the Whiskey Fault (Keystone 14 and 15 Veins). There would be potential for steeply dipping tensional quartz veins within the brittle faults and arrays of stacked flat veins developed adjacent to the faults (see Niagara Fault target). This is a new target type, not previously known, which may have small potential but is situated in close proximity to the Stringbean Alley Decline and Lincoln-Comet development area.

10.3.3 Targets South of Lincoln-Comet Area

Three exploration targets located south of the old Lincoln Shaft are included in this section. Some of these targets are in close proximity to culture, but could be tested from surface with a large, but quiet electric core drill powered from the local utility grid.

10.3.3a Collins Fault Target

The Collins Fault strikes N40-60W, dipping sub-vertical to steeply southwest and was known to have segmented and disrupted vein structures in the Central Eureka and Lincoln Consolidated Mines. It may be structurally analogous to the Whiskey Fault Target of the Keystone mine area and perhaps propagated tangentially as a Reidel type diagonal link from a bend in the Melones Fault Zone. The Collins Fault comprises a thick zone of incompetent fault gouge, is not known to host ore, but is spatially related to drag folded oreshoots developed in N20W striking veins cut by the fault. The northward projection of the Collins Fault was thought to have drag-folded and terminated the original high-grade shoot developed in the old Lincoln Shaft workings. The fault projects northward into the area of a known bench-like dislocation ("Stanford Offset") near the surface, identified in Meridian/Callahan drill holes, north of the old Lincoln Shaft. The fault could potentially have localized shattering and drag fold related dilatancies at the southern ends of all west-dipping Lincoln-Comet veins which extend into that area (Lincoln 2, 6, 10, 26, 42, and 50 Veins). The Collins Fault dissects the "Lincoln Block" and may create a favorable boudinage neck feature. The fault may function more as an oreshoot "generator" in the adjacent wallrocks, rather than hosting shoots. This fault projects to strike through the Central Eureka and Lincoln Consolidated mines for several thousand feet, toward the Melones Fault Zone. It should be investigated at all elevations. The interaction at depth between

the Collins Fault and the east branch of the Gold Fault Zone is unknown but may be significant for localizing mineralization along both strands of the Gold Fault.

10.3.3b “Joralemon Offset” Target

The CE 1 vein of the Central Eureka mine produced approximately 700,000 ounces of gold from two large oreshoots above 3,000 feet depth, where its steep eastward dip rapidly shallowed and the mineralization became low-grade. The “Joralemon Offset” target includes the shallower dipping section of the structure. Significant mineralization may be hosted in oblique-extensional vein arrays developed adjacent to the fault, and at the point where it projects to join the Melones Fault Zone. This target could extend along a 5,000 foot strike length, from the south property boundary northward to the area of the Wildman Shaft. Preliminary observations suggest that the “Joralemon Offset” fault would gradually shallow northward toward the Wildman Shaft. The structural analog for this target type is the “Number Five Break” of the Kirkland Lake District, which was a shallower-dipping branch from the Kirkland Main Break, and it served as a structural trap for underlying high-grade oreshoots. The CE 1 vein hosts an historic Inferred Resource block at 2,200 feet vertical depth south of the Wildman Shaft and the Collins Fault. The “Joralemon Offset” target would lie at an unknown depth below 2,200 feet in that area.

10.3.3c Railroad Vein Target

The vertically-dipping Railroad vein structure is situated approximately 500 feet east of the CE 1 Vein and was prospected by a shaft to 700 feet depth on the Wolverine Q.M. claim, yielding sporadic small high-grade shoots. The target in the Railroad Vein would be at depth where it projects to intersect the “Joralemon Offset” target. There is potential for significant continuous dilation and high-grade vein quartz deposition in this structure, extending upward from the junction an unknown distance, and along a 2,000 foot strike length.

11.0 DRILLING

A total of 19,502 feet of surface and underground core drilling was conducted in 2006 and 2007 with the goal of converting Lincoln-Comet Inferred Resources and Keystone historic Inferred Resources to the Indicated category. Refer to Appendix 1 for specific location and assay information for the recent drill holes.

Table 11-1
Historic and Recent Drilling Totals

Callahan	5 holes	surface	RCR	2,494 feet	Jul-Aug 1983	Keystone
Callahan	2	surface	RCR	466	Aug-Sep 1983	Linc-Comet
Callahan	2	surface	RCR	1,698	Nov 1983	Keystone
Callahan	2	surface	NQ core	1,467	Nov-Dec 1983	Keystone
Callahan	8	surface	NQ core	4,469	Apr-Jul 1984	Linc-Comet
Callahan	5	surface	NQ core	2,256	Nov-Dec 1984, Aug-Sep 1985	Linc-Comet
Callahan-Pancana	7	surface	NQ core	5,651	Mar-Aug 1986	Linc-Comet
Callahan-Pancana	8	surface	NQ core	4,163.5	Sep-Dec 1986	Linc-Comet
Meridian Gold Co.	2	surface	HQ core	1,201	Aug 1987	Linc-Comet
Meridian Gold Co.	41	surface	HQ core	18,509	Feb-Aug 1988	Linc-Comet
Meridian Gold Co.	9	surface	HQ core	6,914	Jul-Nov 1988	Keystone
Meridian Gold Co.	15	surface	HQ core	9,586.5	Jan-Sep 1989	Linc-Comet
Meridian Gold Co.	2	surface	HQ core	2,267	Sep-Oct 1989	Keystone
Meridian Gold Co.	15	undg	BW44 core	3,281.5	Jan-Feb 1990	Linc-Comet
Meridian Gold Co.	1	Surface	HQ core	215	Mar 1990	Linc-Comet
Meridian Gold Co.	13	undg	BW44 core	3,923	Mar-Apr 1990	Linc-Comet
Meridian Gold Co.	46	undg	NQ core	11,069	Apr-Jul 1990	Linc-Comet
Sutter Gold Mining	33	undg	NQ2 core	9,070	Jun-Dec 2006	Linc-Comet
Sutter Gold Mining	8	surface	HQ core	8,082	Jul 2006-Apr 2007	Keystone
Sutter Gold Mining	2	surface	HQ core	2,350	Aug-Dec 2007	Keystone
Total Drilling	226 holes			99,132.5 feet	1983 – 2007	All Areas

11.1 2006 Underground Drilling Program

The underground NQ core drilling in the Lincoln-Comet area included thirty-three holes aggregating 9,070 feet. Areas of Inferred Resources within the Ln40, Ln42, and Ln50 veins were targeted with the goal of upgrading these into the Indicated category. Twenty-three underground holes (70%) were intended to convert Inferred Resources to the Indicated category, while ten holes (30%) targeted known veins outside of the Inferred Resources to identify new Inferred or Indicated Resources. Overall, the shoots tested in the Ln20, Ln31, and Ln50 veins remain open for extension, and the extensions tested in the Ln40 and Ln42 veins were closed off, but other areas not tested in the Ln42 vein remain open for resource expansion.

11.1.1 Underground Drilling To Convert Inferred to Indicated Resources

The 2006 underground drilling was moderately successful in converting resources from Inferred to Indicated. Twenty-three holes were intended to convert Inferred Resources in the Ln40, Ln42, and Ln50 veins to the Indicated category, with four (17%) of those holes being unsuccessful due to drilling problems. Of the nineteen holes which successfully reached the Inferred Resources, twelve of those successfully converted Inferred Resources to the Indicated category for a 63% success rate in resource conversion.

11.1.2 Underground Drilling To Identify New Resources

The 2006 underground drilling was moderately successful in discovering new Inferred and Indicated Resources. Ten holes were intended to step out well-beyond the Inferred Resources along known vein structures to test for new

resources, with one of the holes being abandoned due to drilling problems, and another having veered away from the intended target. Eight of the nine holes (89%) reached their intended targets (Ln26, Ln42, Ln50 veins) but did not encounter significant extensions to known mineralization in them. Five of the nine holes (55%) succeeded in finding new Inferred and Indicated Resources in new zones (Ln10, Ln21, Ln31 veins) that were not targeted.

11.2 2006-2007 Surface Drilling Program

The surface HQ core drilling program was conducted in the South Spring Hill portion of the Keystone mine area, and consisted of ten holes totaling 10,432 feet. This grid pattern of holes was intended to convert a portion of the Keystone 5 Vein historic Inferred Resources to the Indicated category. Excessive drill hole deviations resulted in a drill hole spacing which only allowed for estimation of mixed drill-indicated and drill-inferred resources. Seven of the holes encountered significant gold values in the Keystone 5 Vein structure, two holes encountered large stopes in the position of the K5 Vein, and one hole was abandoned due to drilling problems before reaching the target. This grid pattern of holes has partially tested an approximate 1,000 foot long by 500 foot high block of the Keystone 5 Vein, which represents an area occupying 65 percent of the footprint in the historic Inferred Resource of the South Spring Hill mine workings. The drill-inferred resources in the Keystone 5 vein remain open to expansion in all directions, particularly down-plunge to the southeast.

The 2006-2007 surface drilling has identified resources in the Keystone 5 Vein which are comprised of large, relatively thick gold-quartz lenses linked together by a continuous zone of high-strain auriferous phyllonites and auriferous fault gouge. The K5 Vein intercepts were visually consistent with historic descriptions of shoots within the Keystone mine (Ross, 1899).

11.2.1 Surface Drilling to Convert Historic Keystone Inferred Resources

The 2006-2007 surface drilling program was very successful in converting a portion of the historic Keystone Inferred Resources to drill-Indicated and drill-Inferred Resources. Seven of the nine holes (78%) penetrating the K5 structure encountered gold values exceeding 0.16 oz/ton gold. Three small blocks of drill Indicated Resource were estimated, within a large area of drill Inferred Resource. Two holes encountered wide stopes in the position of the K5 Vein. In one case, the rods were extended 20 feet into an open void before the hole was abandoned. In the second case, rods were advanced through 45 feet of caved stope and the hole was abandoned before reaching the other side due to binding of the rods by shifting slabs. A 70 foot wide stope in the K5 Vein was projected to occur approximately 80 feet up dip from that caved stope.

11.2.2 Surface Drilling Identifying New Resources in Known Veins

The 2006-2007 surface drilling program was marginally successful in identifying new resources in other known vein structures (K13 Vein). Four of ten drill holes (40%) encountered significant gold values in one small area of the Keystone 13 Vein, outside of the existing Inferred and Indicated Resources.

11.2.3 Surface Drilling Identifying New Resources in New Veins

The 2006-2007 surface drilling program was marginally successful in discovering new Inferred Resources within new vein structures (K23, K25, K26 veins). Three of ten drill holes (30%) encountered gold values greater than 0.14 oz/ton within several previously unknown structures.

Results of the 2006-2007 surface and underground drill programs continued validating the quality of historic exploration and development work, and exploration models used at the Sutter Gold Project. The geological observations and gold values obtained from the 2006-2007 drill cores were consistent with results obtained from available underground exposures, past Meridian drilling, and historic maps and reports. Prior to the 2006 program, core drilling had not been performed at the Sutter Gold Project since 1990. All drill cores derived from exploration and infill of the Lincoln-Comet Resources prior to 2006 are not in existence due to a failure of successive project operators to properly store and maintain the core. The majority of the Keystone drill cores from thirteen historic holes are intact in the core storage facility, and available for further verification work.

12.0 SAMPLING METHOD AND APPROACH

Sutter Gold Mining Inc. has a core handling and core sampling protocol designed by the author for use in sampling drill cores from coarse gold-bearing vein systems. The Company has implemented a quality assurance / quality control program to ensure sampling and analyses of all drill cores is conducted in accordance with the best possible exploration industry practices.

12.1 Core Logging & Photo Documentation

All core logging is conducted at the Sutter Gold Project site. The Company maintains a core storage facility at the site. An open box inspection of the core is made by the duty geologist and a rapid log is made which identifies the obvious altered and mineralized intervals. The duty geologist rapidly inspects the highly

mineralized sections of the core for visible free gold. Sections of core bearing visible gold are documented with digital photos. This information can be made available for daily or weekly reports to the Chief Geologist as needed. Then, the geological consultant orients the north orientation marking facing up, rolls and matches the drill cores through the hole box from row to row and box to box. The geologist measures core recoveries in feet and tenths of feet, then logs the core.

The Sutter Gold Project utilizes a standardized core logging procedure designed by the Chief Geologist specifically for exploration of mesothermal lode gold deposits. The geologist describes the core on a paper core log sheet. Most of the descriptive observations are logged as written integer code numbers on paper copy of a data spreadsheet. The same data sheet has a designated column for hand-written notes regarding structural, deformational, and interpretive observations intrinsic to our exploration program, which cannot be adequately described with codes. Identification of all phyllonites (vein shears) as unique lithologic units (lithologic code 31) is important to our success in demonstrating geological continuity along vein structures, and allows the phyllonite units to be recognized as mappable units in the Gemcom 3-D modeling. Each box of unsampled core is photo-documented with a high-quality digital camera, with hole number, box number, and footage interval visible in the photo. A written log of the photographs is maintained at the core storage facility. The digital camera is down-loaded to the computer as jpg files at the project office. The jpg files are stored in the network server and backed-up daily onto an external hard drive.

12.2 Determination of Sample Size

The moderate coarse gold particle frequency and the choice to use screened metallics fire assay analysis has determined the minimum sample sizes to be selected from the drill cores. Sample intervals for mineralized core will be in the range of approximately 3.0 to 3.3 feet where practical, with the minimum being 2.9 feet. This is designed to ensure an adequate sample size is available for multiple 500 gram or 1000 gram screened metallics fire assays. Typical core sample weights for half cores are 2.8 lbs/ft for HQ cores, 1.8 lbs/ft for NQ2, 1.6 lbs/ft for NQ, 1.4 lbs/ft for BW44, and 0.9 lbs/ft for BQ cores (Dominy et al, 1999, p. A60-A61; Dominy et al, 2000, p. 22, 25). Collection of HQ core samples is best and NQ2 and NQ core sample sizes are at the minimum range for adequacy. Adequate sample size is critical to our success in addressing assay variance.

12.3 Core Handling and Sampling Methodology

The logged core is marked with flagging at the start and end of the interval to be sampled, and an aluminum tag is attached to the box at the start of the sample interval, labeled with sample number, and footage interval. The typical vein structure noted from drill holes and underground exposures is 3 to 5 feet in width. For vein structures or sulfide replacement type mineralization intervals greater than one meter in width, it is permissible to make the sample interval up to 4.5

feet long for a single sample of vein quartz, in order to maintain sample size and not introduce undue wall rock dilution or create two small samples. For quartz intervals greater than 4.5 feet, break the interval into two equal parts of 3.0 feet each and include minor dilution from FW and HW. A 5.0 foot quartz interval would be divided in half and each of the samples would include 0.5 feet of wall rock and 2.5 feet of quartz. Try to include one to three inches of wall rock where the vein wall is marked by faulting or gouge as the highest gold values will probably be associated with the late fault overprint. The mineralization strength of quartz veins are relative to the strength of the faulting overprint. Vein quartz with both walls frozen and no internal fault planes are generally low in grade. This is similar for quartz stringers, quartz stringer zones, and phyllonites.

The logged core with marked sample intervals is wetted with a spray bottle and digitally photographed by the technician. After photographing, a line of dots or short dashes with occasional arrow heads pointing down-the-hole are drawn with permanent marker along the north orientation markings on the core by the technician. This reduces misplacement of the core by technicians during wrapping and sawing. Fractured mineralized core, quartz veined intervals, and zones of fault gouge can be mummy-wrapped with low quality mildly adhesive masking or duct tape to minimize core loss and fragmentation during sawing. The wrapping tape must be of a type which does not leave an adhesive residue on the core as it may be flammable and could create problems during the fire assaying process. Masking tape may work best for this purpose. The technician saws the intervals of the core into halves with a wet-type tile or masonry block saw, placing it carefully back into place in the box. Reduce core fragmentation by using full face type diamond saw blades instead of slotted face blades. The technician will saw the altered and/or mineralized core intervals which were marked by the geologist for sampling. Care is taken by the geologist to ensure proper order of the core pieces is maintained. The core saw water and blade are kept clean of any potential gold contamination. The saw should be set up to operate with a steady inflow of fresh water and continuous drainage of water out of the water tray. Otherwise, if saw is set up for re-circulating water from the water tray, saw water is changed once a sediment buildup is detected on the floor of the water tray and the saw blade re-dressed with brick on an hourly basis when sawing mineralized or altered portions of drill holes.

In highly mineralized intervals the protocol remains the same for maintaining the saw water. Every piece of highly-mineralized core will be examined for visible free gold on the saw cut by the duty geologist once it is sawn, and notes added to core log as necessary. Geologist can quickly determine relative size of gold masses with comparison to the (one fortieth of an inch or 40-mesh) the shaft width of a typical sewing pin, and count the particles. The saw blade will be re-dressed with brick after the sawing of each highly-mineralized interval. The saw blade will be re-dressed immediately after the sawing of any piece of core containing visible free gold.

The completed core log pages are color scanned or xerox copied daily by the duty geologist. The original core logs are stored at the core storage facility, with a copy filed at the project office and one copy to each staff geologist for internal quality checking purposes. The duty geologist then samples the mineralized portions of the core. Sample intervals are documented with sample number on the original drill log. The core should be carefully broken into shorter one to four inch pieces and the sharp ends chipped off into the bag. Longer pieces of core with sharp ends pierce the sample bag and after lab personnel put coarse reject into the bag it will leak material and portions of the coarse reject may be lost during shipment to the second lab for replicate assay.

Small sample books with numbered pages and identically numbered tear-off tags are used. As sample is taken, the drill hole number, footage interval, length of sample interval, and whether sample is 1 AT Fire (1ATF) or screened metallica fire (SMF) is noted on the numbered sample page in the sample book and the numbered tag is removed and put into the sample bag with the drill core. That numbered tag will travel with the sample throughout the entire sample prep, assaying, and replicate assaying process.

Samples of core containing (1) visible gold, (2) significant arsenopyrite, or (3) fault-bounded ribboned or banded vein quartz, and (4) strong sulfide replacement type mineralization ($>1.5\%$ py + aspy) should be analyzed by screened metallica fire assay. All other pyritic mineralized rock, phyllonite, altered rock should be analyzed by 1 AT Fire assay. The duty geologist samples the mineralized portions of the boxed core. The same half of the core is sampled throughout the length of the hole, to negate bias and sampler tendencies to select core with visible gold showing. One half of the sawn core is placed in a new, clean sample bag marked with the sample number on the bag. The duty geologist records all samples taken on a Daily Samplers Log, and identifies samples as drill core, standards, blanks, or coarse reject replicates. A redundant log of all standards and blanks, including their sample numbers, tracking history of standard pulps and rejects as they are reused, and whether a sample is shipped as raw material, pulp, or reject, samplers name, and date are recorded in the sample book. Standard sample description books are used to record all samples for shipment, and tear-off tags are inserted into the sample bag with the sample. The sample description cards and Daily Samplers Logs are collected each day, xerox copied, and original logs are returned to the core storage facility while original sample description cards are stored at the project office. Sample intervals, with the sample number are recorded on the drill core log by the duty geologist. Once a sample is taken by the duty geologists, samples are collected at the end of the day by the duty geologist and stored in a locked closet until samples are shipped to the primary assay lab. The duty geologist ensures all samples are present and accounted for, and loads them into large shipping bags of 55-60 pounds, which are then wired shut. The shipping bags are marked with company name, bag 1 of 5, plus all sample numbers contained within. Samples are picked up at

the site by the assay lab or samples are transported directly to the lab by a trained Sutter technician.

12.4 “Skeletonizing” and Archiving Core

At a later date, the drill cores will need to be “skeletonized” to make space for additional drill core storage. The “skeletonizing” protocol is implemented by the Chief Geologist. All core boxes containing any altered and mineralized core, or fault zones will be preserved in their context and the entire box of core containing it will be preserved. The unaltered, un-mineralized, and un-faulted boxes of drill core are identified by the Chief Geologist, and a check is made to confirm adequate digital photographs and data are available for the core boxes before they are to be removed. Any additional photographs are taken as necessary. A single segment of core of sufficient length to represent each lithologic type is removed from each box, labeled with drill hole number and depth interval, and is placed in order by depth into one of the emptied wood core boxes, and the box information is sanded off and re-labeled with the start and end depths of the “skeletonized” hole interval represented within that box. Experience has shown that an average of 40 to 50 percent of all Sutter drill core can be safely discarded in this fashion without diminishing the geologic documentation.

13.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The Sutter Gold Project exploration program is planned and supervised by Chief Geologist for Sutter Gold Mining Inc, and Qualified Person Mark Payne, P.Geo., 7067 Calif. Data compilation for the Company's surface and underground core drilling programs is performed by the Company's geological staff, with review and verification by Qualified Person Mark Payne. All sample preparation and analysis is performed offsite at an accredited analytical laboratory.

13.1 Fire Assay Analysis

Half of the sawn core is shipped to American Assay Labs in Sparks, Nevada for prep and analysis. The other half of the core is stored at the Company core storage facility for future inspection and assay verification. All replicate fire assaying is also conducted by American Assay Labs of Sparks, Nevada utilizing an approved method of blind re-submission. American Assay Labs was found to outperform all other certified analytical labs in the western US, specifically for sample prep and screened metallics fire assay analyses, in direct comparison tests conducted by the Chief Geologist. American Assay is an ISO 17025 certified laboratory.

All gold analyses of strongly mineralized samples utilize the screened metallica fire assay method with a gravimetric finish (Fig 13-1). At the laboratory, the entire sample is crushed to 90 percent minus ten-mesh. A rotary splitter is used to obtain a 500 gram sample for pulverizing. A separate 60-100 gram rotary split of the coarse reject is made and that small sample is pulverized with closed bowl-type grinder, put in an envelope, and shipped directly back to the Company. The lab utilizes a closed bowl-type pulverizer, which can be cleaned after every usage. The screened metallica are collected as the plus fraction from a 150-mesh screen at the lab. The plus 150-mesh fraction is fire assayed in its entirety. Two separate one-assay ton fire analyses of the minus 150-mesh fraction are performed and arithmetically averaged. The minus and plus 150-mesh results are then combined for a total screened metallica fire assay.

All gold analyses of altered and weakly mineralized samples utilize 1 assay ton fire assays (30 gram) with a gravimetric finish (Fig. 13-2).

13.2 Chain of Custody

Once the drilling contractors release custody of the drill core, access to the cores is restricted to the project geological consultants of the Company. At the drill site, the cores are placed into wooden core boxes by the drilling contractors. The core box remains open until filled, then, a wood lid is secured with wood screws and the box is staged at the drill site, within clear view of the drillers. The onsite duty geologist is responsible for all aspects of work from drilling decisions through core logging and sampling. Only the designated duty geologist is authorized by the drilling contractors to examine or take custody of the boxed cores. The boxed core is transported directly to a secure core storage facility located at the mine site. The core storage / logging facility is a fully enclosed and lockable building. Access to the core storage facility is restricted to geological consultants and designated trained technicians.

The Company maintains the shortest chain of custody for samples from the drill site to the assay lab as possible. Samples of the mineralized core are placed in a locked room by the sampler, daily, at the end of the work shift. Prior to shipping samples to the analytical lab, all samples being shipped are accounted for by the duty geologist and compared against the submittal form. Samples are placed into larger synthetic shipping bags and secured with wire. Generally, samples are transported by designated Company personnel directly to the lab, and the coarse rejects and pulps are returned directly to the project site. Larger sample shipments are picked up at the project site by analytical lab personnel. Coarse rejects and pulps are stored in a locked room

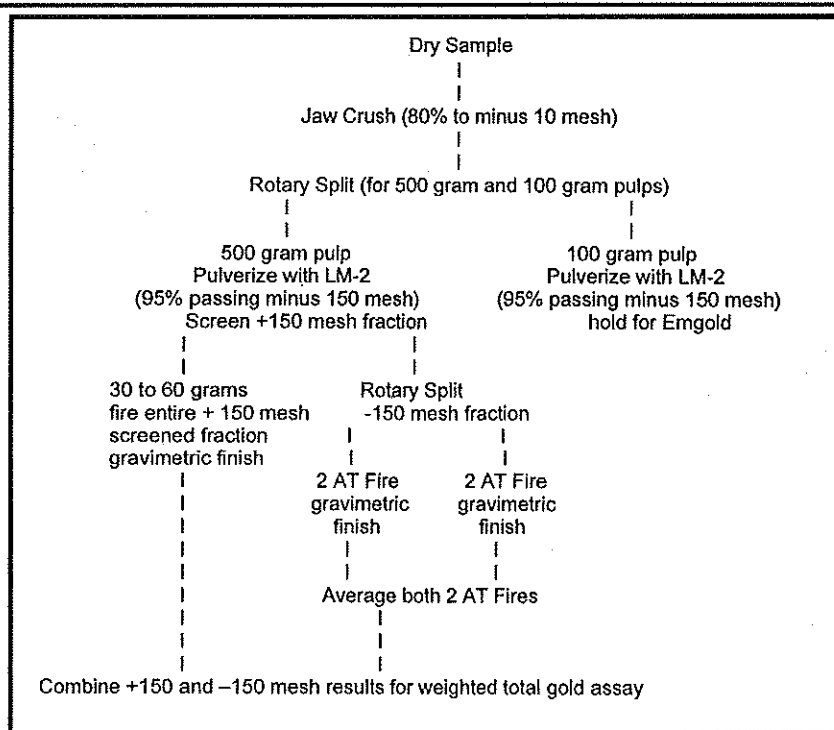


Fig. 13-1 Sample Preparation and Assay Procedure
Screened Fire Assays

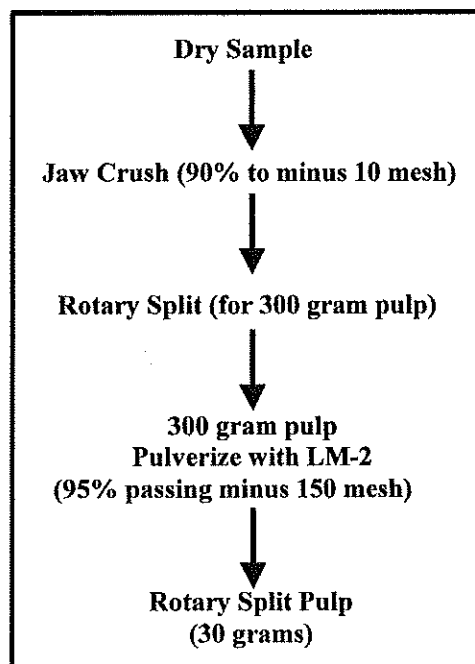


Fig. 13-2 Sample Preparation and Assay Procedure
1 AT Fire Assays

13.3 Lab QA/QC

The assay laboratory internally re-assays at least ten percent of all samples. Each batch of fifty samples to be fire assayed includes at least five percent lab standards and blanks.

The author considers the sample preparation at the primary laboratory for screened metallics fire assays to be at the top end of the performance range for analytical labs in the western US. The author considers the internal QA/QC program at the laboratory to be adequate.

Analytical problems encountered during 2007 were minor and consisted of a few poor bead fusions for some very high grade gold samples, and minor contaminations of gold were incorporated into abrasive blank material prepped directly after a few high grade samples. The poor bead fusions were readily rectified by automatic tripling of the silver inquart for all samples submitted from the Sutter Gold Project. The poor fusions were minor annoyances resulting in the use of extra 500 gram splits of coarse reject, and reduction in the amount of coarse reject available for replicate assays. The minor gold contamination of thirteen blank samples, which directly followed high grade samples, was either the result of gold smearing in the LM-1 pulverizer, or particulate gold not removed from the 150-mesh screen being introduced into the following blank. Assays for blank samples are considered acceptable if less than or equal to twice the lower detection limit for gold (0.006 oz/ton gold). Nineteen blanks exceeded 0.006 oz/ton gold, including eight blanks exceeding 0.009 oz/ton. Assay blanks were used liberally, following every sample containing greater than 25 percent vein quartz, for a total of 504 blanks used.

13.4 Sutter QA/QC

The Company's geological staff conducts a rigorous quality assurance / quality control program. This includes routine insertion of a specific type of hard abrasive blank sample, three different certified reference standards, and a thorough replicate assaying scheme. A 60-100 gram sample is rotary split from the coarse reject (90% passing 10-mesh) at the laboratory, pulverized to 90% passing 150-mesh, put in an envelope, and shipped to Sutter. The 60-100 gram split prepared at the lab is gold panned and used for rough comparisons to lab analytical results, and in past years has served as an effective visual referee in cases of suspected sample switching. From the panned concentrates, information regarding gold particle size and frequencies for the samples can be documented for later use.

Each sample shipment includes at least ten percent inserted standards and blanks. The duplicate assaying scheme incorporates a minimum ten percent of all samples to be submitted as coarse rejects for replicate screened metallics fire

assay. To eliminate bias, four different criteria are used in combination to select the samples to be shipped for assay replication.

- (1) All mineralized samples identified as exhibiting specific characteristics known to occur in the historic oreshoots of the Sutter Gold property are automatically submitted for duplication regardless of their assay values. Favorable characteristics include visible free gold, trace quantities of galena, multi-phase banded and/or ribboned vein quartz, any vein quartz hosted by intensely-deformed wallrocks, and veins subjected to strong post-mineral deformation.
- (2) All samples with gold assays greater than or equal to 0.01 oz/ton are submitted automatically.
- (3) All samples which panned significant gold when assays indicate otherwise are included in the replicate sample shipment. This third criteria is enacted only when screened metallics fire assays indicate the majority of gold resides in the coarse fraction, which increases the potential for assay variance. As part of the same sub-set, any samples containing high percentages of gold in the plus fraction of a screened fire assay shall be submitted for replication regardless of the assay value.
- (4) In the event that criterion 1, 2, and 3, plus standards and blanks, total less than a straight twenty percent of the total number of samples from the original sample shipment, the remainder of the replicate shipment are randomly selected samples until the shipment totals 20 percent of the primary assay lab sample shipment, regardless of their assay values.

Coarse rejects and pulps are stored in a locked room at the site for future use. Coarse rejects are utilized for replicate assays. Coarse rejects with the requisite color and abrasive characteristics are stored for use as blank material in replicate assay shipments. Pulps derived from screened fire assays have had the coarse gold removed and results of two 1AT fire assays to demonstrate assay reproducibility. Those pulps are selected from specific grade ranges, and blended in 25 pound batches to make standard reference materials at Sutter.

13.5 Using Second Half of Cores

The Chief Geologist can authorize the sampling and shipment of the second half of the sawn core for the following special circumstances. The second half of the core that has been identified for sampling shall be digitally photographed with the sample locations marked in the core box. Appropriate aluminum tags with the additional new sample numbers shall be affixed. When the quantity of coarse reject is insufficient for completing the primary or replicate screened metallics fire assay analyses, the second half of the core can be utilized. The utilization of 500 gram screened fires versus the typical 1,000 gram screened fires was implemented and mitigates that problem. On rare occasions, the laboratory has elected to run more than one analysis, which can create a shortage of coarse reject available for replication. Where significant visible gold was noted on the drill core but primary and replicate fire assay analyses do not reflect that, it may

be necessary to analyze the second half of the core. For the Sutter Gold Project, quartering of the core will not be done in these instances to preserve the sample size integrity. Later in the project life, composite samples derived from the second half of the core can be made available for engineering and metallurgical testing.

14.0 DATA VERIFICATION

Data verification for the historic Callahan and Meridian drilling and underground data was conducted in 2005-2006 as documented in the March, 2006 Sutter Mineral Resource Estimate (Payne & Grunwald, 2006). Subsequently in 2006-2007, the historic drilling data has undergone further examination and verification by the author, and has been found to be sufficiently free of error to be adequate for mineral resource estimation. All maps and supporting database elements necessary for estimation of a mineral resource for the Sutter Gold Project exist in physical and electronic format. The author has verified all historic data relied upon for the mineral resource estimation. Past sampling at the Sutter Gold Project was conducted in accordance with best industry practices at the time, by professionals known to the author. Statistical results of the QA/QC work are summarized in Table 14-1.

14.1 2006-2007 Sutter QA/QC

Sutter has conducted a rigorous QA/QC program, developed from extensive work experience with coarse gold-bearing vein systems in the Mother Lode Belt. The author has (1) verified the 2006-2007 core logs against the drill cores, core photographs and drill hole cross-sections, (2) verified the sample intervals against core logs, sample cards, and assay certificates, (3) verified assay certificates against the assay database, and (4) established protocols for identifying questionable laboratory results.

Assay results from both the primary and umpire labs are received at the project office in the form of electronic files addressed to the Chief Geologist's e-mail box. A hard copy of the final assay report is mailed to the Chief Geologist at the project office. Assays are verified against the original sample description cards prior to any other company personnel viewing the results. The accurate transfer of assay information into digital format is controlled by limiting this task to designated individuals, in order to maintain consistency and familiarity. All assay database construction and maintenance is handled by a specialized database contractor. The database contractor creates an assay database to track all assay results, which is generated by cutting and pasting from original

electronic files e-mailed to the project office directly from the assay labs. The database contractor created a redundant data file to track all assay results by sample number or drill hole number and footage interval, plus redundant tracking of all standards and blank results. The same designated technician logs all descriptive codes from drill logs into a drill hole data file, which can be relationally-loaded into the Company's Gemcom software and used to generate the 3-D computer modeling of the drill results. The only checking of the electronic data is made at this stage, where the geologist in-charge of computer modeling verifies the computer modeled assay results for each and every drill hole against printouts of the assay/sample number database and the assay/drill hole + interval database, comparing them against the ascii files used in Gemcom.

14.1.1 Blank Samples and Their Usage

Blank material is always inserted following each and every sample that exceeds 25 percent vein quartz by volume. All blank materials are inserted by the project Qualified Person. Routine insertion of visually distinctive, abrasive blanks following vein quartz samples has identified many sample switches during prep and has directly identified the labs with the best screened fire assay sample prep scheme. Questionable laboratory results could include screened fire assay results with gold in the +150-mesh coarse fraction and little or no gold detected in the -150 fraction. Gold values in the +150 coarse fraction for blank materials could be indicative of gold smearing during prep or gold caught in the screen from a previous vein quartz sample. This problem arose 19 times during the drill program and would have shed gold into the following mineralized sample and gone undetected unless blanks were always inserted after vein quartz. It is worthy of note that the remaining 499 blank samples performed well, with many having followed samples containing significant free gold. Gold values in both the +150 fraction and -150 fraction of a blank sample could be indicative of typographical errors during data compilation at the lab or a sample switch. A sample switch can be identified when examining the sample for color differences. Six sample switches at the lab were identified during the drilling, and were corrected in the core logs and assay database.

14.1.2 Standard Reference Materials

The statistical results for the two SRMs used are summarized in Table 14-1. The raw rock SRMs collected from the South Spring Hill mine waste dump performed poorly. The quantity of coarse gold contained within the sulfide replacement type mineralization from the mine was underestimated, and contributed to variations outside of the acceptable range for SRMs. Suitable materials for future raw rock SRMs have been identified in El Dorado and Calaveras Counties, within 20 miles of the project site. These raw rock SRMs would grade approximately 0.09 oz/ton gold, and are comprised of auriferous igneous dike materials. The in-house prepared pulp SRMs performed superbly. Low-grade assay results from highly mineralized core intervals displaying visible gold on the core are checked by

panning the 100 gram pulp split for free gold, and might indicate need for 1000 gram screened fire assay checks. Spurious high-grade values in both +150 and -150 fractions for multiple samples in a lab job could be indicative of gram/tonne values transposed with oz/ton values.

Table 14-1
QA/QC Statistics

Material	Number Samples	Mean oz/ton	Min. / Max. Assay oz/ton	Standard Deviation	Sample Variance
Blanks	518	0.0007	- 0.003 / 0.067	0.005	0.00002
Standard 1 Raw Waste Dump Rock (SSH, 0.050 oz/ton)	165	0.051	0.011 / 0.178	0.017	0.0003
Standard 2 Screened Fire Pulps (0.030 oz/ton)	59	0.030	0.026 / 0.037	0.000000000003	0.000006

14.2 2006-2007 Replicate Assay Comparisons

Replicate fire assays were considered far superior to a duplicate assaying scheme, and were adopted for the QA/QC protocol at Sutter for several reasons. The preparation of a check sample from the coarse reject material tests the entire sample prep scheme at the lab. They help minimize the “nugget effect” and its degree of severity in coarse gold-bearing deposits by determining the total coarse gold content in each 500 gram sample split. Replicate screened metallics fire assay analyses provide dual 1AT fire assays from the minus fraction of each sample, testing the lab accuracy, while the replicate screened fire assays check the assay variance and lab precision.

The 2006-2007 drill hole samples have been divided into two populations, representing the Keystone and Lincoln-Comet areas, to examine the replication of fire assays and degree of assay variability. A total of 2,196 samples of drill core were fire assayed during 2006-2007 drilling, including 729 samples from the Keystone area, and 1467 samples from the Lincoln-Comet area. Nineteen percent of the samples were selected for replicate check assays from the coarse reject materials.

The replicate assays for the Keystone and Lincoln-Comet samples show good correlation with the primary assays for this type of coarse gold-bearing deposit, and are within acceptable ranges (Table 14-2). The composited total of all assays for 129 replicate Keystone samples were 3 percent lower overall as compared to the composited primary assays. Similarly, the composited total

assays for 291 replicated Lincoln-Comet samples was 4 percent higher overall as compared to the primary assays. Additionally, only 1 percent of the Keystone sample population and 2 percent of the Lincoln-Comet samples yielded screened fire assays containing 65 percent of the gold, or greater, residing in the coarse fraction. The majority of mineralized samples contain a significant quantity of fine-grained gold, which tempers the assay variance for individual samples. The "nugget effect" is considered to be of moderate severity at the Sutter Gold Project.

Table 14-2
Replicate Assay Statistics

	Lincoln- Comet		Keystone	
	Primary Assays	Replicate Assays	Primary Assays	Replicate Assays
Mean	0.056 oz/ton	0.055 oz/ton	0.059 oz/ton	0.062 oz/ton
Median	0.018 oz/ton	0.016 oz/ton	0.025 oz/ton	0.027 oz/ton
Standard Deviation	0.158	0.149	0.103	0.122
Sample Variance	0.025	0.022	0.011	0.015
Min. Assay	- 0.003 oz/ton	- 0.003 oz/ton	- 0.003 oz/ton	- 0.003 oz/ton
Max. Assay	1.484 oz/ton	1.350 oz/ton	0.741 oz/ton	1.059 oz/ton
% Difference				
Sum of Assays		- 3.0 %		+ 4.0%

14.3 Historic Lincoln-Comet Drill Hole Assay Comparisons

During the 2006 underground drilling program, four Lincoln-Comet drill holes intersected vein structures in close proximity to historic drill intercepts, allowing for a direct comparison. The 2006 holes were drilled from different angles, but happened to pass through a particular vein in close proximity to a historic intercept. The historic 30 gram (1AT) fire assay results were directly compared with the 2006 screened metallics fire assays. Visual comparison was made between 2006 drill core and historic Lincoln-Comet core photographs.

All four cases where historic assays from Lincoln-Comet drill holes (1 AT fire assays) could be compared with recent drilling results (screened fire assays), the 2006 assays ranged from being significantly lower to significantly higher, with one intercept matching very closely, as should be expected in a coarse gold-bearing deposit. The results indicate historic drill hole assays are adequate for use in resource estimation in a coarse gold-bearing deposit.

Case 1

Historic hole DDH-63 intersected 3.0 feet @ -0.005 oz/ton gold (1AT fire) in the Lincoln 5 vein. In 2006, DDH-183 intersected 3.0 feet @ 0.08 oz/ton (screened fire) approximately 20 feet north from DDH-63. Both intercepts showed nearly identical thin ribboned quartz veins overprinted by late faulting. Both intercepts are situated just outside of the Lincoln 5 vein Indicated Resource. Both share the visual characteristics associated with the Lincoln 5 shoot, and are probably within

the Ln5 shoot, though fire assays suggest otherwise. This finding reinforces the four criteria used by Sutter for selection of samples for assay replication. The screened fire assay showed 21 percent of the gold in the +150-mesh coarse fraction.

Case 2

Historic hole DDH-39 intersected 3.0 feet @ 0.50 oz/ton (1 AT fire) in the Lincoln 5 vein. In 2006, DDH-190 intersected 3.0 feet @ 0.17 oz/ton (screened fire) approximately 25 feet down dip from DDH-39. Both drill holes encountered identical ribboned vein quartz overprinted by late faulting. Both intercepts are located in the center of the Lincoln 5 shoot and are surrounded by higher grade intercepts. Sample size and erratic distribution of particulate gold are an issue in this case. DDH-39 core showed visible gold at three locations in the Lincoln 5 vein, while DDH-190 logs reported no visible gold on the core. The 500 gram screened fire assay showed 74 percent of the gold in the +150 coarse fraction of the assay.

Case 3

Historic hole DDH-37 intersected 5.7 feet @ 0.18 oz/ton (1AT fire) in the Lincoln 50 Vein. Another historic hole DDH-29 intersected 4.1 feet @ 0.18 oz/ton (1AT fire), approximately 14 feet north from DDH-37. In 2006, DDH-177 intersected 3.4 feet @ 0.01 oz/ton (screened fire), approximately 10 feet down dip from DDH-29. All three holes are situated within the Lincoln 50 vein shoot and intersected identical ribboned vein quartz overprinted by late faulting. Despite the low assays from DDH-177, it could be visually discerned this hole had intersected a shoot in the Ln50 vein, and it reiterates that low-grade ribboned vein intercepts with late faulting overprint would warrant further drilling in that area. Approximately 20 percent of all face sampling within oreshoots grade less than 0.10 oz/ton gold, according to assay plans from the Sutter Gold Project and several Mother Lode Belt Mines, proving the continuity of grade can be more accurately assessed visually than from assays.

Case 4

Historic hole DDH-18 cut 3.3 feet @ 0.14 oz/ton (1AT fire) in the Lincoln 50 vein. In 2006, DDH-180 intersected 3.0 feet @ 0.13 oz/ton (screened fire), approximately 13 feet south from DDH-18. Both holes cut identical sulfide replacement mineralization in association with strong faulting. Both intercepts are situated within the Lincoln 50 vein shoot. The screened fire assay determined that negligible gold resided in the +150 coarse fraction of the assay.

14.4 Historic Keystone Drill Hole Assay Comparisons

During 2006 surface drilling program, selected intervals of sawn historic Keystone halved core was subjected to 500 gram screened metallics fire assay analysis. The comparisons between the two halves of Keystone core from two holes showed the historic assays being 17 percent lower for one composited vein

intercept and 30 percent higher in the other. The half cores were compared with the core photographs and core logs, and the identical sample intervals were used.

Second halves of the sawn core, from two historic Keystone drill holes, were assayed in 2006 to verify historic results. The historic 30 gram (1AT) fire assay results were directly compared with the recent 500 gram screened fire assays. The two sets of assay data were not identical, but within a normal expected range of variance for a gold deposit with a moderate "nugget effect". Additional half cores from historic Keystone drill holes should be analyzed in similar fashion as work programs continue at Sutter.

Case 1

Historic hole KDH-16 intersected 60.0 feet @ 0.030 oz/ton gold in the Keystone 13 vein, including 3.5 feet @ 0.059 oz/ton at the footwall contact. In 2006, the second half of the core was sampled in identical intervals yielding 60.0 feet @ 0.035 oz/ton, including 3.5 feet @ 0.096 oz/ton. The 60.0 foot mineralized interval yielded a 17 percent higher composited assay and the vein quartz against the footwall showed a 63 percent increase with the screened fire assay.

Case 2

Historic hole KDH-13 intersected 36.0 feet @ 0.095 oz/ton gold in the Keystone 5 vein, including 8.5 feet @ 0.274 oz/ton at the footwall contact. In 2006, the second half of the core was sampled in identical intervals yielding 36.0 feet @ 0.067 oz/ton, including 8.5 feet @ 0.159 oz/ton. The 36.0 foot mineralized interval yielded a 30 percent lower composited assay and the phyllonite against the footwall showed a 42 percent decrease in grade compared with the screened fire assay.

The author considers historic drill hole assays and underground development sampling (1983-1990) adequate for estimation of Indicated and Inferred Mineral Resources at the Sutter Gold Project.

15.0 ADJACENT PROPERTIES

No mineral exploration or extraction work is being conducted on any properties adjacent to or in the area of the Sutter Gold Project. As the Sutter Gold Project lies within the central portion of the Mother Lode Gold Belt in Amador County, it is understood that mineralized structures extend from the Sutter Gold property into adjacent properties.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

This section does not pertain to the scope of this present study.

17.0 MINERAL RESOURCE ESTIMATES

The Mineral Resources for the Sutter Gold Project were estimated manually by Mark Payne (P.Geo., Calif. 7076), Chief Geologist, and Qualified Person for Sutter Gold Mining Inc., using traditional longitudinal sections and polygonal composited assay-geology domains. The Sutter Gold Project Mineral Resource estimates adhere to the CIM Definitions for Indicated and Inferred Mineral Resources.

17.1 CIM Definitions of Mineral Resource Categories

Indicated Mineral Resource Definition

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.

Inferred Mineral Resource Definition

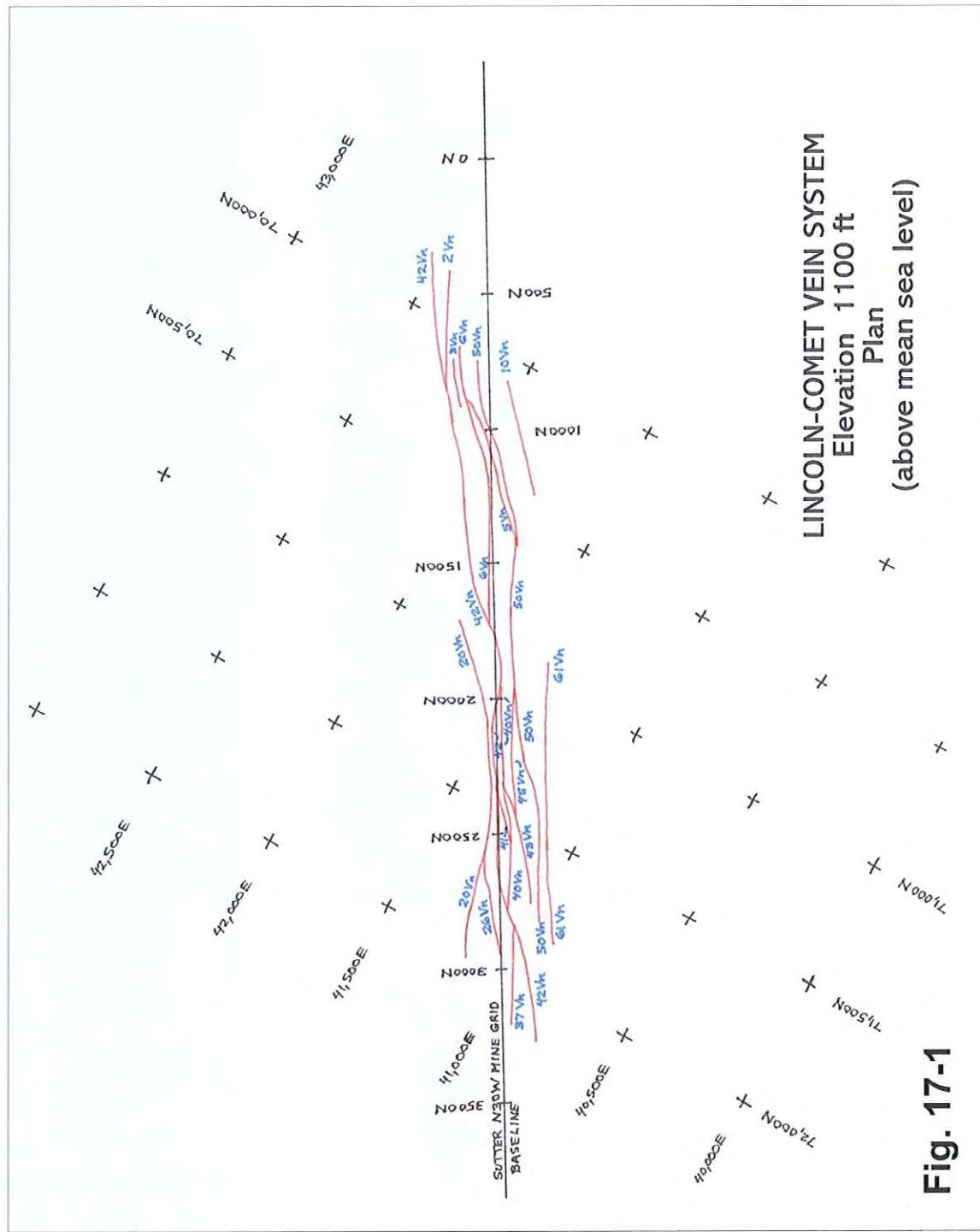
An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

17.2 List of Assumptions Used In Mineral Resource Estimate

Determination of Geological Continuity

Payne and Grunwald (2006) developed a detailed, three-part methodology for determination of geologic continuity for the Keystone and Lincoln-Comet veins. Initially, a fault framework was developed by correlating fault structures and restricted zones of high strain, termed phyllonites, intersected by drill holes and underground developments. The phyllonite zones and faults typically show excellent geological continuity through the Sutter property, with many individual structures being traceable for several thousand feet along strike (Lincoln 20, 42, 50 veins, Keystone 5, 13 veins, Central Eureka 1 vein). The mineralized shoots of vein quartz are discontinuous features localized along the zones of phyllonite and faulting, and typically bounded by sub-parallel fault walls. The angular relationship, location, and arrangement of the vein quartz is considered within the context of the fault framework. Finally, the gold fire assays are considered within the context of the fault structures and the vein quartz. In 2007, the author has further refined the geological continuity model with additional info from the 2006-2007 drilling (Fig. 17-1). The geological continuity of the vein structures, determined from drill cores, has a high degree of confidence and is supported by the underground developments.



Determination of Grade Continuity

The 2007 Mineral Resource estimate combined the manual polygonal estimate and structural geological parameters, to define resource blocks with hard boundaries, and a higher level of confidence than typical computer-generated grade shells. Most of the resource blocks in this study were estimated with hard boundaries, meaning assay information outside of the resource block has no bearing on the composited grade of the block. Fault features recognizable in drill cores and underground developments, and identification of local structural controls, has resulted in definition of hard boundaries for many of the resource blocks. The grade continuity within 1800 feet of development drifts and raises in the Lincoln 40, 41, 42, 43, and 50 veins is considered excellent, with 277 total face samples and only 59 of those samples grade less than 0.10 oz/ton gold (21 percent). The late fault overprint, ubiquitous within mineralized shoots, is visible irregardless of the face cut sample assays. Gold values decrease drastically as the late faulting overprint becomes discontinuous. Underground developments show that the mineralization abruptly disappears where vein quartz becomes entirely frozen against the wallrock. Outside of an oreshoot, the structure will remain unfavorable. Likewise, grade continuity is consistent within shoots. In some cases, low grade drill intercepts exhibiting fault features indicative of oreshoots were included within a resource block to maintain shoot continuity and define polygons more consistent with a typical stope panel. This has reduced the overall grade within some individual resource blocks in comparison to the 2006 resource estimate.

Manual determination of grade continuity "variograms". The manual determination of continuity considered the envelope shape surrounding the ore grade data points in a particular vein long section, with the further shaping of the envelope considering geologic parameters which visually define the grade continuity within a vein and control its direction of elongation (plunge). This methodology is superior to the determination of variograms from grade/width data points in a vein by computer software. Geological information can be incorporated into the manual "variogram", including known or projected vein junctions at vein bends (controlled by locations of competent versus incompetent lithologic units), and visually recognizable mineralization types and overprinting faults within the vein structure. In general, the horizontal grade continuity is greater than the vertical continuity unless local geological conditions override and exert local control.

Grade continuity information was estimated to extend up to 100 feet both ways from data points along the plunge of ore zones and up to 50 feet both ways normal to the plunge, where geologically supported. The grade continuity determined by fire assays, and by structural features visually identified along 1,800 feet of development drifts and raises in seven of the Comet ore zones, are consistent and support this assumption. Approximately 80 percent of all cut face sampling within the oreshoots yields a three foot minimum horizontal width

grading 0.10 oz/ton or greater, which is very typical of Mother Lode Belt mines. Historic core drilling in most areas of the Lincoln-Comet, on 100 foot centers, have demonstrated good grade continuities coincident with the visual structural features known to define the ore zones. Later underground development drifts in the Comet area have proven the horizontal grade continuity for distances of 114 feet (Ln50 Vn South), 123 feet (Ln43 Vn South), 125 feet (Ln 42 Vn North), 200 feet (Ln42 Vn Central), and 352 feet (Ln 40 Vn). This finding was consistent with the historic core drilling results and confirms an adequate drill hole spacing was used for determination of grade continuity. Examination of geology within underground developments, and photographs of all historic mineralized drill intercepts supports this assertion. Where geological information indicates a high level of confidence in grade continuity, the boundaries of a shoot can be extended to a known or projected structural boundary.

Observation of development and drill hole sampling results and geology have resulted in a manually-derived ellipsoid shape which fits within the developed Sutter mineralized zones. At the Sutter Gold Project, underground developments have shown the shoots to have strong internal grade continuity parallel to the direction of stretch elongation fabric, and the rake of vein / fault junctions. An ellipse extending 100 feet each way along the direction of favorable elongation / plunge from a sample point and 50 feet each way perpendicular to the favorable elongation, within the plane of a vein, easily fits within development workings defining shoots in the Lincoln 40, 42, and 43 Veins. The use of an ellipsoid with maximum dimensions of 200 feet by 100 feet to represent continuity within shoots is supported.

Widths of mineralized drill hole intercepts were corrected to horizontal widths, oriented perpendicular to the N30W oriented vein longitudinal sections. Manual trigonometric calculations were used to determine corrected horizontal widths. The dip of the Lincoln-Comet vein structures were determined from computerized geologic cross-sections oriented perpendicular to the vein long sections, generated at 100 foot intervals through the Lincoln-Comet area using Gemcom software. This eliminated the need to repeatedly determine the dip or apparent dip of the veins within each drill hole. This was construed as being a major factor in the over-estimation of vein widths in the 1993 Pincock Allen & Holt study. For the Keystone area resources, the dip of vein structures were determined from manually drafted geologic cross-sections drawn along the plane of the drill holes.

A composited tonnage factor has been determined for each resource block. Each data point (drill intercept) within a resource block has a composited tonnage factor representing the various mineralization types present at that data point (drill intercept). The bulk density was measured from drill cores by consulting engineers for several typical mineralization types found at both Lincoln-Comet and Keystone. The composite tonnage factor for each resource block was estimated by arithmetic average for the composited bulk densities at each data

point, divided by the number of data points in the block. This method was arrived at due to the significant variation in mineralization types and their proportions at each data point. The 2007 measured bulk densities are listed below, converted into units of cubic feet per ton.

15.0	Fault gouge, fault rubble
12.7	Oxidized, 50% vein quartz, 50% C-S-P altered meta-basalt
12.0	Vein quartz (>50% vein qtz)
11.8	Quartz Stringer Zones & tensional veinlet arrays (>50% vn qtz) in meta-basalt, meta-graywacke, slate
11.7	S-C altered slate
11.5	Weak Quartz Stringer Zones (10-30% vn qtz) in C-S-P altered meta-basaltic tuffs,
11.5	Phyllonitized meta-basaltic tuff, meta-graywacke (<10% vn qtz)
11.5	C-S-P altered meta-graywacke
11.2	C-S-P altered meta-basalt
11.0	Sulfide Replacement Mineralization (gray ore/flow ores) in C-S-P altered meta-basalt (0-20% vn qtz)

In the 2006 Resource estimate, measured rock densities for comparable mineralization types utilized at similar projects elsewhere in northern California had been used. The measurements utilized in 2006 to estimate tonnage factor were nearly identical to the 2007 measurements for Lincoln-Comet and Keystone rocks, with two exceptions. The 2007 tonnage factor for sulfide replacement mineralization increased to 11.0 cubic feet per ton from 11.2. The tonnage factor of 13.0 cubic feet per ton for unaltered meta-sediments used in 2006 was replaced with 11.7 for s-c altered slate and 11.5 for c-s-p altered greywacke. The increased density was a result of decreased porosity due to interstitial alteration minerals.

Resources were estimated both with uncut assays, and with high assays cut at 2,400 oz/ton gold. The cut and uncut grade estimates were utilized to determine the general assay variance (nugget effect), which is moderate for mineralized zones at the Sutter Gold Project. The uncut grade for the 2007 Indicated and Inferred Resources at the Sutter Project are the announced grades. Capping high assays should be unnecessary, considering the conservative approach using larger composited resource blocks to decrease the influence of high grade assays, and assigning hard, geologically-supported boundaries for the blocks. Assignment of a grade cap has been suspended until production is commenced and a grade cap can be determined through reconciliation against mill recoveries. Grade capping was calculated manually using the Comparison of Assay Decile Composites Method (Parrish, 1996), which demonstrated that extremely high assays at the 99.5th percentile, in a population of 5,531 fire assays, diverted out of a straight-line arithmetic progression at 2,400 ounces per ton gold. This low-tech method of estimating the grade capping level has

compared closely with computer-generated cumulative probability plots for large assay databases at other gold deposits in the region.

Individual high assays greater than 2.400 oz/ton were cut to 2.400 oz/ton prior to being composited. This procedure was observed prior to creating weighted average assay composites for drill intercepts and weighted average assay composites for ore zones in development workings.

Minimum horizontal widths for individual data points and for resource blocks is 3.0 feet. Examination of assay results for historic and 2006 drill cores has disclosed that the majority of gold values in many vein intercepts are contained within a 2 to 3 foot length of core (uncorrected to horizontal). The same relationship was observed when examining the development face chip samples. It appears prudent to report the results as accurately as possible prior to feasibility studies, without the geological staff adding any undue dilution. The option should remain open to easily identify those areas within the resource which could require mining at the narrowest possible width, to maximize profitability. One test stope within the Ln43 Vein had maintained a developed width of 3.0 feet using a 28 inch wide slusher.

Resource estimates are undiluted.

Equal weighting of development versus drill hole assays was observed within individual resource blocks. A weighted average width and grade from the 1990 development sampling was estimated in parallel with a weighted average width/grade for all drill hole intercepts within a resource block. The composited development and drill hole width/grades were then composited together giving equal weighting to both. In most resource blocks, the composited drill hole assays compared fairly closely with composited development sampling assays.

A minimum cutoff grade of 0.14 oz/ton gold was observed for all composited resource blocks. The 0.14 oz/ton cutoff grade was imposed as a measure to maintain average uncut, undiluted resource grades for the deposit in the 0.35 to 0.40 oz/ton range. Individual data points within a resource block may be much lower than 0.14 oz/ton. The actual cutoff grade for the deposit would be determined if production commences, and would include a fully diluted resource grade with economic parameters applied.

All core hole collars were surveyed and down hole surveys were conducted with a Reflex EZ Shot tool at 100 foot intervals along all drill holes. A ball-mark type ACE tool was used to provide core orientation information in some of the 2006-2007 diamond drill holes.

17.3 Mineral Resource Estimation Methodology

The determination of geologic and grade continuity of mineralization is the cornerstone in a successful resource estimation for gold-quartz vein deposits. The structured methodology for recording diagnostic geological features which define the geologic and grade continuity at the Sutter Project was maintained and adhered to in 2007. For each drill hole, the fault and phyllonite (high strain) zones were noted first, and their geological continuities were recorded on cross sections. Locations of vein quartz and sulfidized intervals were noted next, considered in context with the fault framework defined in the first step, and their geological continuities recorded. Late overprinting faults associated with the mineralized zones were recorded on the cross sections, as they are important in defining grade continuity. The assay information was considered last, allowing a look at the grade continuities in context with detailed geologic descriptions of the mineralized zones and association with late faults (do values jump from hanging wall to footwall?, etc).

A conservative approach to manual polygonal resource estimation was adopted for this study. Larger resource blocks were estimated using width/grade data spread over greater areas to reduce the influence of anomalously wide or high grade data points.

A set of 20 foot-scale geologic cross sections were drawn along the plane of the 2006 drill holes. The projections of lithologic unit contacts, faults, and veins were digitized from the cross sections for incorporation into a Gemcom 3-D model. Notes pertaining to exploration targets are recorded on these cross sections. A set of 50 foot-scale computer generated cross sections are drawn at 50 foot intervals through the Lincoln-Comet resource area.

The traces of the drill holes were projected onto composite 20 foot scale geologic plans.

Geological information was projected to the set of 20 foot-scale geologic cross sections on 100 foot spacing, oriented N60E, perpendicular to the N30W local mine grid, which were developed in 2006 to plot fault and vein correlations.

A set of 100 foot-scale vertical longitudinal sections, oriented along the N30W mine grid, was drawn for each vein structure for plotting all drill hole intercepts and projections for all resource blocks. For 2007, the addition of notes pertaining to mineralization type/geology was recorded on long sections for all drill intercepts, to document geological and grade continuity information used in constructing hard boundaries for many of the resource blocks.

17.4 Mineral Resource Estimates

The geology and assay data from the 2006-2007 surface and underground drilling was incorporated into the geologic and grade continuity models for the Lincoln-Comet and Keystone vein systems (Fig. 17-2). Though some of the eastward directed underground core holes (ddh-173, 186-189) failed to trace ore zones southward in the Ln19, 26, 31, and 42 Veins, they did identify several coarse gold bearing intercepts in those veins which showed marginal to poor assays and a tendency for the veins hosted by the reworked tuff unit in this area to contain less fine gold and to show an increased "nugget effect".

The 2006-2007 underground drilling in the gap area between the Lincoln and Comet resources have demonstrated excellent geological continuity of vein structures through that area. The drilling supplied important information regarding the geological continuity of vein structures passing from the Lincoln meta-basalt unit southeastward into the reworked tuff / meta-sediment unit. The Ln 14 and Ln 13 vein resources (Payne & Grunwald, 2006) were incorporated into the Ln 42 and Ln 02 vein resources, respectively. The Ln 06 vein was correlated with the Ln 48 vein of the Comet area. The Ln 05 and Ln 50 vein Indicated Resources were extended northward through the gap area. New resources were extended southward into the gap area along the Ln 31 and Ln 34 veins. New Inferred Resources and the apex of a new shoot were identified in the gap area within the Ln 21 vein, and the Ln 21 vein was correlated with the Ln 47 and Ln 61 veins ("Comet Offset" Fault) of the Comet area.

The 2007 resource update incorporated the results of thirty-three underground core holes in the Lincoln-Comet area and ten surface core holes in the South Spring Hill area of the Keystone Mine. Further study of the historic drilling data during 2007, coupled with new geologic information obtained from the 2006 underground drilling supplied a better understanding of Lincoln-Comet vein continuity and identified new resources in several new veins, including the Ln10, Ln20, Ln28, Ln31, Ln34, K23, K25, and K26 Veins.

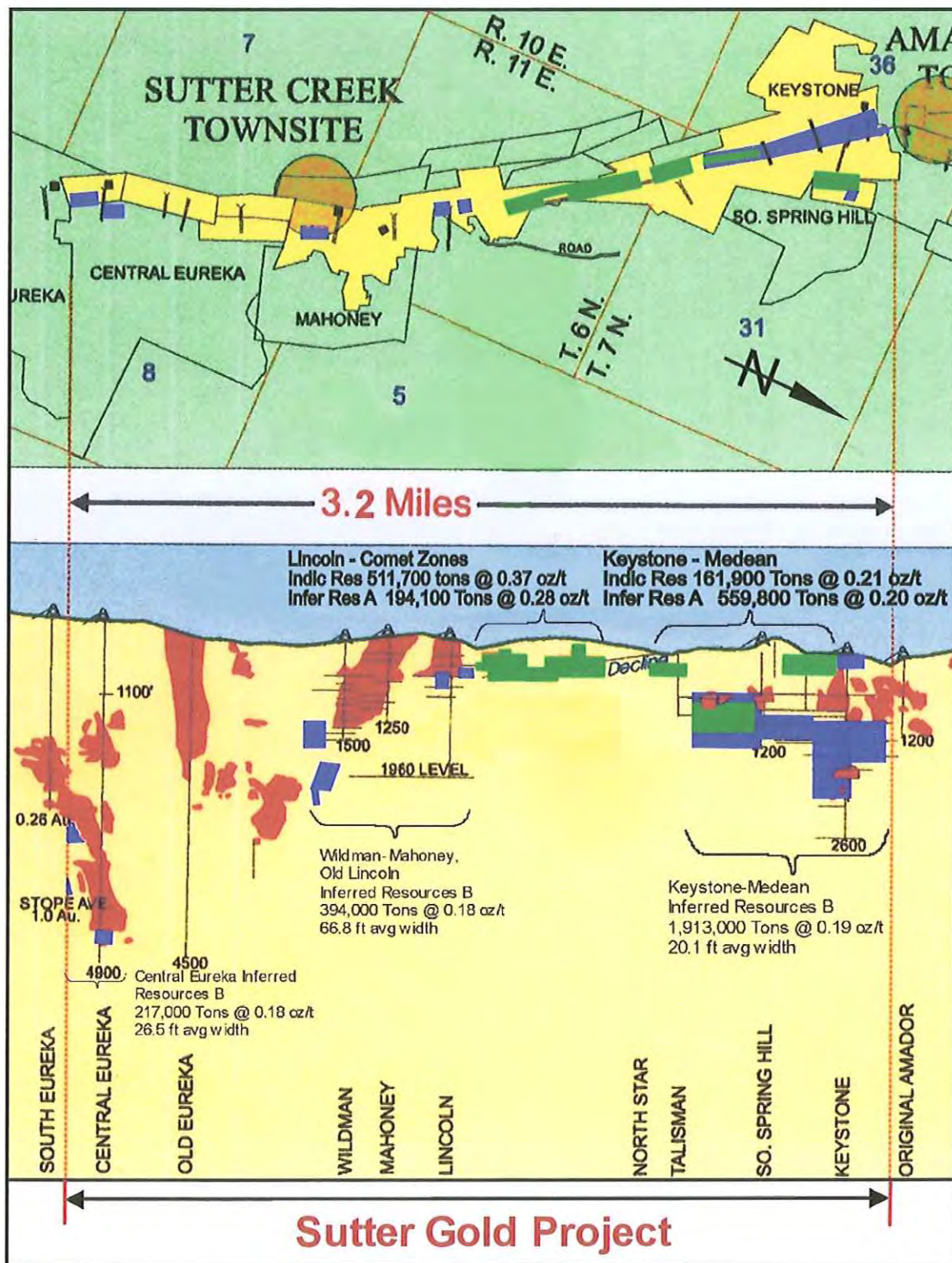


Fig. 17-2 Sutter Gold Project Resources
Longitudinal Section

Table 17-1
Summary 2007 Mineral Resources Estimate
Sutter Gold Project, All Categories

	Tons	Uncut Grade (oz/ton)	Au (oz)	horiz. width (feet)
<i>Indicated Mineral Resources</i>				
Lincoln-Comet area	511,700	0.37	188,481	4.4
Keystone area	161,900	0.21	34,563	8.5
Total Indicated Resources	673,600	0.33	223,044	5.4
<i>Inferred Mineral Resources A (estimated from modern exploration drilling)</i>				
Lincoln-Comet area	194,100	0.28	53,986	4.3
Keystone area	559,800	0.20	110,778	26.6
<i>Inferred Mineral Resources B (estimated from pre-1980s historical data)</i>				
Keystone area	1,013,000	0.18	183,950	27.1
Central Eureka area	217,000	0.18	39,100	26.5
Lincoln-Wildman-Mahoney	394,000	0.18	71,100	66.8
Total Inferred Resources	2,377,900	0.19	458,914	31.6

Table 17-2
2007 Indicated Mineral Resources Estimate
By Vein Structure
Lincoln-Comet Area

		Uncut Grade		Cut to 2.40 opt Grade		undil
		Tons	oz/ton	Oz Gold	Oz Gold	horiz width
Vein						(ft)
Ln 2	Total	22,200	0.20	4,440	0.20	4,440
Ln 3	Total	12,800	0.37	4,736	0.37	4,736
Ln 5	Total	17,000	0.29	4,930	0.29	4,930
Ln 6	Total	20,100	0.65	13,002	0.51	10,350
Ln 9	Total	25,100	0.29	7,279	0.29	7,279
Ln 10	Total	4,600	0.15	690	0.15	690
Ln 20	Total	23,800	0.25	5,831	0.25	5,831
Ln 26	Total	10,000	0.35	3,500	0.29	2,900
Ln 28	Total	11,300	0.50	5,650	0.50	5,650
Ln 31	Total	41,400	0.15	6,035	0.15	6,035
Ln 34	Total	3,300	0.19	627	0.19	627
Ln 36	Total	1,500	0.28	420	0.28	420
Ln 37	Total	6,900	0.20	1,380	0.20	1,380
Ln 40	Total	49,400	0.65	32,330	0.50	24,554
Ln 41	Total	10,000	0.46	4,600	0.39	3,900

Ln 42	Total	103,000	0.35	35,968	0.34	34,690	4.8
Ln 43	Total	23,800	0.80	19,056	0.40	9,542	3.3
Ln 44	Total	3,300	0.16	528	0.16	528	3.0
Ln 45	Total	11,100	0.15	1,665	0.15	1,665	3.0
Ln 50	Total	99,400	0.26	25,752	0.26	25,752	4.0
Ln 61	Total	13,600	0.77	10,461	0.49	6,600	3.0
L-C Indicated		511,700	0.37	188,481	0.32	162,100	4.4

Table 17-3

2007 Inferred Mineral Resources A

Estimate By Vein Structure

Lincoln-Comet Area

(A = estimated from modern exploration drilling)

			Uncut Grade		Cut to Grade	2.40 opt	undil horiz width
Vein	Panel	Tons	oz/ton	Oz Gold	Oz/ton	Oz Gold	(ft)
Ln 2	Total	21,900	0.20	4,380	0.20	4,380	4.3
Ln 5	Total	4,700	0.29	1,363	0.29	1,363	3.0
Ln 6	Total	7,100	0.52	3,670	0.42	2,990	3.6
Ln 20	Total	7,700	0.17	1,342	0.17	1,342	3.4
Ln 26	Total	2,000	0.78	1,560	0.49	980	3.3
Ln 28	Total	4,800	0.50	2,400	0.50	2,400	4.0
Ln31	Total	26,600	0.14	3,829	0.14	3,829	6.7
Ln 34	Total	4,600	0.19	874	0.19	874	3.4
Ln 37	Total	3,900	0.20	780	0.20	780	3.2
Ln 40	Total	4,000	0.33	1,316	0.28	1,127	3.0
Ln 42	Total	26,900	0.27	7,215	0.27	7,215	4.2
Ln 43	Total	19,000	0.45	8,472	0.28	5,318	3.4
Ln 45	Total	6,800	0.15	1,020	0.15	1,020	3.1
Ln 50	Total	48,900	0.30	14,853	0.30	14,853	4.3
Ln 61	Total	5,200	0.18	912	0.18	912	3.0
L-Comet Inferred		194,100	0.28	53,986	0.25	49,383	4.3

Table 17-4
2007 Indicated Mineral Resources
Estimate By Vein Structure
Keystone Area

Vein	Panel	Tons	Uncut Grade oz/ton	Oz Gold	Cut to Grade Oz/ton	2.40 opt Oz Gold	undil horiz width (ft)
K 5	Total	99,900	0.22	21,773	0.22	21,773	11.3
K 13	Total	25,000	0.18	4,390	0.18	4,390	4.5
K 18	Total	12,600	0.28	3,528	0.28	3,528	3.6
K 19	Total	11,200	0.27	3,024	0.27	3,024	3.0
K 23	Total	13,200	0.14	1,848	0.14	1,848	4.2
Keystone Indicated		161,900	0.21	34,563	0.21	34,563	8.5

Table 17-5
2007 Inferred Mineral Resources A
Estimate By Vein Structure
Keystone Area

(A = estimated from modern exploration drilling)

Vein	Panel	Tons	Uncut Grade oz/ton	Oz Gold	Cut to Grade Oz/ton	2.40 opt Oz Gold	undil horiz width (ft)
K 5	Total	465,500	0.20	93,784	0.20	93,784	31.0
K 13	Total	6,100	0.17	1,037	0.17	1,037	6.1
K 17	Total	7,100	0.17	1,207	0.17	1,207	3.0
K 19	Total	17,000	0.27	4,590	0.27	4,590	3.0
K 23	Total	50,100	0.16	7,780	0.16	7,780	3.9
K 25	Total	14,000	0.17	2,380	0.17	2,380	9.1
Keystone Inferred		559,800	0.20	110,778	0.20	110,778	26.6

Table 17-6
2007 Inferred Mineral Resources B
Estimate By Vein Structure
Lincoln-Comet Area (B = estimated from pre-1980s historical data)

Vein	Panel	Tons	Uncut Grade oz/ton	Oz Gold	undil horiz width (ft)
K 2 Vn		140,000	0.16	22,120	18.0
K 5 Vn		824,000	0.19	153,000	28.9
K 14 Vn		12,000	0.15	1,800	5.0
K 15 Vn		37,000	0.19	7,030	29.0
<i>Keystone Inferred Res B</i>	<i>Total</i>	<i>1,013,000</i>	<i>0.18</i>	<i>183,950</i>	<i>27.1</i>
Ce 4 Vn		110,000	0.11	11,550	45.9
Ce 6 Vn		107,000	0.25	26,750	30.0
<i>Central Eureka Inferred Res B</i>	<i>Total</i>	<i>217,000</i>	<i>0.18</i>	<i>38,300</i>	<i>38.1</i>
<i>Lincoln Consol Inferred Res B</i>	<i>Total</i>	<i>394,000</i>	<i>0.18</i>	<i>71,100</i>	<i>66.8</i>
<i>Total Inferred Resources B</i>	<i>Inferred</i>	<i>1,624,000</i>	<i>0.18</i>	<i>293,350</i>	<i>38.2</i>

18.0 OTHER RELEVANT DATA AND INFORMATION

This section does not pertain to the scope of this present study.

19.0 INTERPRETATION AND CONCLUSIONS

19.1 Grade Continuity and Drill Hole Spacings

Grade continuity is a visually recognizable feature within the underground developments at the Sutter Gold Project. Four different mineralization types are documented at the Sutter Gold Project, and their common link is the ubiquitous presence of a pervasive fault overprint. These faults were syn-mineral, and overprinted the early vein quartz and carbonate + sericite altered wallrocks, which provided the fluid pathways for the later gold-bearing solutions. Within ore shoots, the typical gold-quartz vein in the Lincoln-Comet area is bounded by strong, overprinting fault slip planes generally defining one or both walls. Locally, both margins of the quartz shoot can be frozen to the wallrock with an axial fault

plane running along the center of the vein. Outside of oreshoots, vein quartz may or may not be present, and the fault overprint has diminished into an unorganized array of fault planes exhibiting poor connectivity. Within a shoot, it is internally consistent within its structural boundaries, though high-grade gold distribution is erratic within the shoot. Once outside of a shoot, the structures tend to remain consistently unfavorable as ore hosts until the structure returns to a favorable alignment for dilatancy. With few exceptions, ribboned vein quartz exceeding 1 foot in width and cut by a strong fault overprint occurs within oreshoots.

The cost to grid drill a vein structure on tight centers is prohibitive for many narrow vein mines, forcing many mines to carry forward small ore reserves ahead of production at any one time. In some cases, intensive core drilling can be avoided if visual links to grade continuity can be identified in drill cores. The drill hole spacing necessary to prove reasonable grade continuity is dictated by the ability of the geologist to predict the geology to be encountered in the hole. Adequate drill hole spacing is driven by the degree that visual consistency of mineralization, presence of structural features associated with oreshoots, and predictable vein position can be verified from hole-to-hole.

19.2 Underestimation of Grade

Core drilling of most orogenic gold-quartz vein systems generally defines the geological and grade continuity of these deposits, but can underestimate the overall grade in many cases. Results from several studies comparing gold production reconciliation with drill indicated, grade-capped resources suggest drilling can (1) understate grade in mesothermal gold-quartz vein deposits (Dominy et al, 2000; Rogers, 1982), or (2) can approximately estimate grade but understate tonnage (D. McDonald, 2005, personal comm.), depending upon the degree of mining dilution.

Approximately 20 percent of the Comet underground drifting/raising has disclosed significantly higher gold grades than were indicated in nearby core holes. This is not unusual for orogenic gold deposits and is a consequence of small sample size from drill cores and erratic distribution of coarse particulate gold.

Case 1: Lincoln 34 Vein

The Lincoln 34 vein is a footwall branch propagated from a bend in the 42 Vein structure, located in 2265 East cross-cut. Twenty-four feet of raise development and fifty-two feet of drift averaged 3.4 feet grading 0.18 oz/ton in a sulfidized phyllonite zone cut by a weak tensional veinlet array. Hole DDH-171 intersected 3.0 feet grading 0.06 oz/ton in similar phyllonite with a late fault overprint, located approximately 40 feet directly down dip from the drift. The drill hole was not included in the Ln 34 vein Indicated Resource but it probably occurs within the 34 vein shoot. This zone might have been overlooked, based purely upon drill hole assays unless minor development along the structure had been undertaken.

Case 2: Lincoln 40 Vein

Near the southern end of the Lincoln 40 vein shoot, on the 1000 Level north drift, north of 1855 Raise, a short drift along the vein exposed a much wider than average width of vein quartz and a strong array of flat veins in its footwall. The footwall flat vein array is localized within the wedge between the 40 and 42 veins. Forty-two feet of drifting along the vein averages 12.5 feet grading 0.87 oz/ton. Core holes DDH-164 and 131 have intersected this same structural wedge 25 feet and 20 feet updip intersecting 5.7 feet @ 0.20 oz/ton and 5.3 feet @ 0.17 oz/ton respectively. Both holes detected gold mineralization in the broad vein of quartz. The adjacent footwall flat vein array has a significantly different "nugget effect" than the main vein quartz and did not show significant gold values in either hole. During the development stage, as access is made into this area, ring drilling with a jackleg drill should be undertaken to determine if a larger target may occur here. Core drilling has significantly under-estimated both tonnage and grade in this area.

Case 3: Lincoln 42 Vein

A mineralized shoot in the Lincoln 42 vein exposed in the 1285 East cross-cut, 1285 Raise, and 1000 Level drift is developed along 178 feet of workings averaging 3.3 feet wide grading 0.30 oz/ton gold. This area of the 42 vein was tested on close centers by six core holes. The six holes intersected a weighted average of 3.0 feet grading 0.09 oz/ton, showing consistent, narrow, ribboned vein quartz. There was nothing to indicate a viable mineralized shoot was present here, based solely upon the core drilling results. In the 1285 East cross-cut, near the drill station, a 0.2 foot width of narrow ribboned vein quartz assayed over 5 oz/ton gold in a rib sample, showing abundant free gold. A short raise was driven, the 1000 Level drift was established, and a 125 foot long shoot was developed within an area where intensive drilling had indicated the presence of thin, low-grade vein quartz.

19.3 Underestimation of Width and Tonnage

It is the author's opinion that core drilling has identified the minimum width of oreshoots in the Lincoln-Comet and Keystone veins, and there is potential to add tonnage as mining takes place. The tensional veined wallrocks are difficult to assess with core holes due to "geological bias" and a more severe "nugget effect" than compared to the adjacent quartz shoot. Drill holes are typically designed to intersect veins at favorable angles of incidence. The typical steeply dipping oreshoot is enclosed within a "fracture jacket" of variable intensity comprising an array of shallowly dipping tensional quartz veinlets. When mineralized tensional vein arrays in one or both walls of the vein are oriented sub-parallel to the drill hole, the wallrock mineralization remains untested. These tensional quartz veinlet arrays are common, and at some locations are known to be of minable grade. Potentially, large tonnages of minable material may be present (1) in one or both walls of some veins, (2) in the wedge-shaped areas at

the junctions of veins, and (3) in pressure shadow areas developed around the north and south ends of individual undeformed meta-basaltic flow units within the foliated tuff sequence of the "Lincoln Block".

In the oblique-extensional vein system of the Lincoln-Comet area, the wallrock mineralization can exhibit a greater "nugget effect" than the central trunk vein, rendering it difficult to assess the actual minable width of the Lincoln-Comet veins purely from drill hole information. The gold values can be found in the tensional vein quartz, which comprises 10 to 30 percent of the wallrock volume. Screened metallica fire assay analyses have shown that 20 to 50 percent of the gold particles in the tensional vein arrays can be greater than 150-mesh in size, though the overall assay for the wall rock is 0.01 to 0.10 oz/ton gold. During production, the wall rock mineralization would probably be assessed by sampling cuttings from angled percussion long holes on 10 to 15 foot centers, directed into both walls.

19.4 Discovery-Resource-Reserve Conversion

The considerable list of exploration targets, the documented continuities of historic oreshoots, a greater understanding of ore controls, and large past gold production suggest that the discovery-resource-reserve conversion could be sustainable for an extended period. A well-planned, systematic exploration program for the Sutter Gold Property should yield new gold discoveries at a rate which might be able to keep pace with resource depletion, as is supported by the historical record. With 2,343,000 ounces of past gold production from the historic producers within the Sutter Gold Property, a direct comparison of the quantity of gold recovered from outcropping oreshoots with the amount of production derived from blind, non-outcropping shoots could determine the historical discovery rate for the property. There are approximately 650,000 ounces of recorded gold production from the historic oreshoots which outcropped on the Sutter Gold property. The remaining 1,693,000 ounces of historic gold production were derived from shoots which were found later in the development or production cycles of these mines. When the sum of daily historic production is considered, the historic mines on the property were operating within a range of approximately 200 to 500 tons per day through an extended period from 1865-1942.

20.0 RECOMMENDATIONS

A six part, \$3,000,000 work program is recommended to obtain 3-D modeling capability for the project, complete all vein and geology wire-frame modeling, fine-tune the underground geologic mapping, and conduct core drilling programs to convert Inferred Resources to Indicated, identify new resources, and test one deep conceptual target.

\$ 60,000	Purchase (2) licenses, 3-D computer modeling software & training classes for selected staff.
\$ 50,000	Complete build-out of wire-frame models for Lincoln-Comet vein system, Keystone vein system, Keystone and Lincoln Consolidated mine workings, load historic assay data for deep Keystone historic resource, build wire-frames for massive flow units in "Lincoln Block" and "next generation" drill targets.
\$ 20,000	Fine tune underground geologic mapping in pre-production areas; spot map some surface geology in area of exploration targets.
\$ 450,000	22,000 feet of core drilling to convert Inferred to Indic. Res. (20) underground core holes total 6,000 feet, to convert Lincoln-Comet Inferred A Resources to Indicated
\$ 1,200,000	(16) surface core holes total 16,000 feet, to convert Keystone Inferred A and historic Inferred B Resources to Indicated
\$ 220,000	7,000 feet of core drilling to identify new resources (10) underground core holes total 3,000 feet, to follow-up on drill targets outside of the estimated resource, and further test targets near proposed production area which looked good in prior drill holes but yielded marginal assays.
\$ 675,000	(8) surface core holes total 9,000 feet, to identify new Inferred Resources stepping-out southward from South Spring Hill mine workings toward decline portal.
\$ 125,000	2,000 feet of core drilling to test conceptual deep target. (1) underground core hole collared at 400 feet below surface, and testing the conceptual Keystone 5 vein target directly beneath the Comet workings to 2,400 feet depth, approximately 1,600 feet south of the decline portal.

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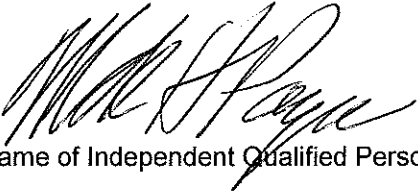
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**AUTHOR'S CERTIFICATE and
STATEMENT OF QUALIFICATIONS**

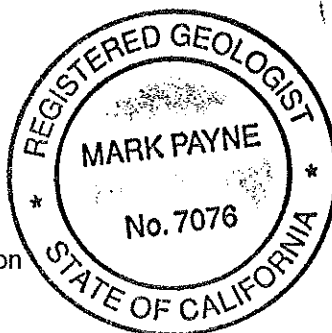
I, Mark Payne, P.Geo. do certify that:

1. I am a Consulting Geologist with residence and business address at 14099 Sugar Loaf Road, Grass Valley, California 95949
2. I attended California State University, Sacramento. I have rendered services as a Consulting Geologist since April, 1985.
3. I am a Registered Geologist (P.Geo.) #7076 in the State of California, presently in good standing.
4. I have practiced my profession as a geologist in the mineral exploration and extraction industry for a total of 30 years, with much of that experience exploring and estimating resources in lode gold deposits in the Sierra Nevada Foothills and Mother Lode Belt.
5. I have acted as Consulting Geologist for the Sutter Gold Project since February 10, 2005, and am responsible for the estimation of Mineral Resources, and preparation of this technical report dated February 5, 2008.
6. As of the date of this certificate, I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the technical report, the omission to disclose which makes the technical report misleading.
7. I am independent of the issuer, Sutter Gold Mining Inc. and its affiliates when applying all of the tests in section 1.5 of NI 43-101.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I hereby authorize Sutter Gold Mining Inc. to make use of this report in whatever way deemed necessary providing all statements are taken in context and not misconstrued in any manner.
10. I consent to the filing of the Technical Report with any securities regulatory authority, 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 5th day of February, 2008


Name of Independent Qualified Person

Mark Payne
Printed Name of Independent Qualified Person



APPENDIX 1

Summary 2006-2007 Core Drilling, Sutter Gold Project

APPENDIX 1 Summary 2006-2007 Core Drilling, Sutter Gold Project

11-1

hole #	easting	northing	elevation	depth	azimuth	dip
ddh-0163	41,441.80	71,328.0	945.6	249.00	208.2	79
ddh-0164	41,439.70	71,328.2	945.6	365.00	302.7	64
ddh-0165	41,374.80	71,320.0	950.7	274.00	59.5	76
ddh-0166	41,374.50	71,324.0	942.5	110.00	6.6	-29
ddh-0167	41,523.00	70,945.0	883.4	75.00	30	-38
ddh-0168	41,519.00	70,942.5	885.0	105.00	25	-45
ddh-0169	41,521.50	70,945.0	888.0	45.00	26.7	-2
ddh-0170	41,521.50	70,945.0	887.0	192.00	27.5	-9
ddh-0171	41,527.80	70,933.7	888.0	266.00	98.9	-17
ddh-0172	41,525.20	70,932.3	885.0	350.00	97.4	-47
ddh-0173	41,529.10	70,934.4	887.0	441.00	131.5	-23
ddh-0174	41,520.20	70,937.8	895.0	195.00	68.5	77
ddh-0175	41,521.20	70,939.5	895.0	166.00	352.1	65
ddh-0176	41,518.80	70,936.3	895.0	301.00	10.6	64
ddh-0177	41,837.40	70,596.8	837.9	341.00	234.3	63
ddh-0178	41,825.00	70,602.0	841.3	341.00	279.3	36
ddh-0179	41,843.00	70,599.4	840.1	342.00	285.6	79
ddh-0180	41,832.50	70,590.2	835.0	203.00	231	25
ddh-0181	41,837.00	70,589.0	834.5	257.00	206.5	25
ddh-0182	41,836.50	70,588.8	828.6	331.00	207.3	-21
ddh-0183	41,840.80	70,597.8	837.5	305.00	207	69
ddh-0184	41,836.90	70,591.8	826.0	405.00	205.8	-46
ddh-0185	41,824.40	70,601.0	829.3	341.00	289	-10
ddh-0186	41,840.50	70,601.5	826.0	351.00	50	-46
ddh-0187	41,842.00	70,605.0	830.5	231.00	42.3	-3
ddh-0188	41,848.50	70,594.8	826.0	279.00	106.4	-45
ddh-0189	41,849.80	70,594.0	834.5	461.00	106	20
ddh-0190	41,845.50	70,592.8	834.7	671.00	166.7	45
ddh-0191	41,838.10	70,593.0	837.7	331.00	234.5	45
ddh-0192	41,592.00	70,973.0	890.0	51.0	318	-65
ddh-0193	41,594.00	70,970.0	901.0	201.00	314.8	62
ddh-0194	41,596.80	70,972.7	901.0	243.00	194.7	80
ddh-0195	41,258.60	71,476.8	977.0	251.00	203.1	83

hole #	Depth (ft)	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
DDH-0163	249	16.5-19.5	3.0	0.02		Ln 26
		71.0-74.0	3.0	0.03		Ln 31
		116.0-125.0	9.0	1.42	Au	Ln 42
		including				
		122.0-125.0	3.0	4.16	Au	Ln 42
		183.0-186.0	3.0	0.05		Ln 40
DDH-0164	365	21.0-27.0	6.0	0.05		Ln 26
		82.0-85.0	3.0	0.08	Au	Ln 42

hole #	Depth (ft)	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
		96.0-111.0	15.0	0.18		Ln 40
		120.0-123.0	3.0	0.11		wedge
		135.9-139.2	3.3	0.12	Au	Ln 45
		240.0-264.0	24.0	0.21	Au	Ln 20
		including				
		240.0-243.0	3.0	0.20	Au	Ln 20
		and				
		261.0-264.0	3.0	1.43	Au	Ln 20
DDH-0165	274	36.0-45.0	9.0	0.99	Au	Ln 42
		48.0-51.0	3.0	0.11		
		66.0-73.0	7.0	0.23		Ln 42
		87.0-90.0	3.0	0.32		Ln 44
		111.0-154.0	43.0	0.42	Au	Ln 42
		including				
		111.0-114.0	3.0	0.19	Au	Ln 42
		and				
		132.0-141.3	9.3	1.26	Au	Ln 42
		and				
		147.9-154.0	6.1	0.87	Au	Ln 42
		198.0-201.0	3.0	1.29		Ln 20
		235.0-238.0	3.0	0.10		
DDH-0166	110	85.0-88.0	3.0	0.11		Ln 26
DDH-0167	75	62.0-65.0	3.0	0.24		Ln 42
DDH-0168	105	38.8-41.8	3.0	0.26		Ln 6
DDH-0169	45	hole veered from target				
DDH-0170	192	126.0-129.0	3.0	0.08		Ln 33
DDH-0171	266	107.5-110.5	3.0	0.08	Au	Ln 42
		128.0-131.0	3.0	0.13		Ln 34
		172.0-187.0	15.0	0.18		Ln 31
		including				
		172.0-175.0	3.0	0.44		Ln 31
		254.0-257.0	3.0	0.06	Au	Ln 20
DDH-0172	350	178.0-181.0	3.0	0.05		Ln 30

hole #	Depth (ft)	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
DDH-0173	441	327.7-340.8	13.1	0.06	Ln 42/21 wdg	
		344.0-347.3	3.3	0.12	Ln 21/31 wdg	
		370.0-375.0	5.0	0.09		Ln 31
		407.0-410.0	3.0	0.13		Ln 26
DDH-0174	195	3.0-6.0	3.0	0.03		Ln 49
DDH-0175	166	133.7-137.0	3.3	0.54		Ln 50
DDH-0176	301	hole veered from target				
DDH-0177	341	280.2-283.5	3.3	0.10	Au	Ln 5
DDH-0178	341	232.8-239.0	6.2	0.19	Au	Ln 50
DDH-0179	342	no significant values				
DDH-0180	203	161.0-164.0	3.0	0.13		Ln 50
DDH-0181	257	209.0-215.0	6.0	0.17		Ln 50
DDH-0182	331	318.9-322.0	3.1	0.06		
		328.2-335.0	6.8	0.05		Ln 60
DDH-0183	305	268.0-271.0	3.0	0.16		Ln 5
DDH-0184	405	103.4-113.0	9.6	0.11		Ln 21
		Including				
		110.0-113.0	3.0	0.23		Ln 21
		193.0-196.3	3.3	0.03		Ln 6
		372.7-375.7	3.0	0.06		Ln 53
		390.0-397.7	7.7	0.10		Ln 60
DDH00185	341	268.5-274.8	6.3	0.03		Ln 60
DDH-0186	351	35.0-38.2	3.2	0.12	Au	Ln 42
		146.5-152.5	6.0	0.08		Ln 31
		including				
		149.5-152.5	3.0	0.12		Ln 31
		226.9-230.1	3.2	0.11		Ln 26

hole #	Depth (ft)	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
DDH-0187	231	83.0-86.0	3.0	0.03		Ln 42
		106.0-109.3	3.3	0.04		Ln 31
DDH-0188	279	119.5-125.5	6.0	0.10	Au	Ln 31
		including 119.5-122.5	3.0	0.12		Ln 31
DDH-0189	461	111.0-129.0	18.0	0.08	Au	Ln 31
		including 111.0-114.0	3.0	0.12		Ln 31
		and 123.0-126.0	3.0	0.14	Au	Ln 31
		412.0-418.0	6.0	0.05	Au	Ln 20
		448.0-457.0	9.0	0.03		
DDH-0190	671	219.0-224.0	5.0	0.03		Ln 6
		248.1-260.8	12.7	0.14		Ln 5
		including 248.1-254.5	6.4	0.20		Ln 5
		279.0-291.0	12.0	0.09	Au	Ln 50
		including 282.0-285.0	3.0	0.22	Au	Ln 50
		539.8-549.0	9.2	0.11		Ln 10
		including 543.0-546.0	3.0	0.16		Ln 10
DDH-0191	331	220.8-226.8	6.0	0.19		Ln 50
DDH-0192	51	42.2-47.0	4.8	0.02		Ln 42
DDH-0193	201	77.2-80.5	3.3	0.05		Ln 50
DDH-0194	243	mislatch through target zone-lost core				
DDH-0195	251	82.0-91.2	9.2	1.63	Au	Ln 41
		166.5-200.5	34.0	0.14	Au	Ln 40
		including 166.5-174.5	8.0	0.14	Au	Ln 40
		and 187.4-200.5	13.1	0.26	Au	Ln 40
		203.8-210.0	6.2	0.23	Au	Ln 20

9,070 ft Underground Total

2006-2007 KEYSTONE SURFACE DRILL HOLES

hole #	easting	northing	elevation	depth	azimuth	dip
kdh-0021	39,331.0	74,663.0	1306.0	1,105.0	261	-75
kdh-0022	39,324.7	74,658.0	1306.0	826.0	249	-60
kdh-0023	39,092.0	74,823.7	1294.0	1,700.0	349	-81
kdh-0024	39,337.7	74,663.8	1306.0	792.0	206	-65
kdh-0025	39,103.4	74,822.0	1294.0	998.0	240	-82
kdh-0026	39,323.0	74,669.5	1306.0	1,225.0	314	-87
kdh-0027	39,353.8	74,672.9	1306.0	218.0	200	-85
kdh-0028	39,709.5	74,548.4	1300.0	1,203.0	201	-84
kdh-0029	39,507.0	74,680.0	1300.0	1,109.0	200	-70
kdh-0030	39,709.3	74,547.6	1279.0	1,241.0	215	-83

hole #	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
KDH-0021	345.0-348.0	3.0	0.04		
	902.0-905.0	3.0	0.12		
	976.0-1008.3	32.3	0.02		
hole #	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
	1015.3-1034.5	19.2	0.30	Au	K5/25vn
		including			
	1015.3-1021.5	6.2	0.76	Au	K5vn
	1049.5-1052.5	3.0	0.04		
	1058.8-1078.0	19.2	0.08		K26vn
		including			
	1062.1-1065.4	3.3	0.26		K26vn
	1099.0-1105.0	6.0	0.05		

hole #	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
KDH-0022	41.0-71.0	30.0	0.09		K27/13vn
		including			
	47.0-56.0	9.0	0.19		K13vn
		and			
	64.9-68.0	3.1	0.13		K13vn
	630.6-634.0	3.4	0.03		
	644.5-662.2	17.7	0.06		K23vn
		including			
KDH-0023	647.7-651.0	3.3	0.19		K23vn
	719.4-729.0	9.6	0.08		K5vn
		including			
	722.6-725.8	3.2	0.16		K5vn
KDH-0023	1139.8-1201.4	61.6	0.11		K5vn
		including			
	1170.2-1201.4	31.2	0.18		K5vn
KDH-0024		including			
	1185.5-1201.4	15.9	0.28		K5vn
KDH-0024	10.4-32.6	22.2	0.07		K27vn
		including			
	17.2-20.5	3.3	0.16		K27vn
	72.0-90.0	18.0	0.02		K13vn
		including			
	72.0-75.0	3.0	0.05		K13vn
	710.9-724.9	14.0	0.07		K5vn
		including			
KDH-0025	718.5-724.9	6.4	0.14		K5vn
KDH-0025	925.3-965.5	40.2	0.06		K5vn
		including			
	935.2-941.8	6.6	0.09		K5vn
KDH-0026		and			
	959.5-965.5	6.0	0.13		K5vn
KDH-0026	105.5-120.5	15.0	0.11		K13vn
		including			
	114.5-120.5	6.0	0.22		K13vn
	445.5-449.0	3.5	0.03		
	1164.0-1172.7	8.7	0.03		K23vn

hole #	Interval (ft)	Length	Au (oz/ton)	Vis. Au	Vein #
KDH-0027	12.5-45.5	33.0	0.03		
	50.5-55.5	5.0	0.03		
	79.5-97.5	18.0	0.05		
	181.0-184.0	3.0	0.03		
	205.0-214.8	9.8	0.03		
KDH-0028	270.0-274.1	4.1	0.05		
	448.0-466.0	18.0	0.03		
	481.0-484.0	3.0	0.04		
	1105.0-1117.0	12.0	0.07	Au	K5vn
	1111.0-1114.0	3.0	0.16	Au	K5vn
KDH-0029	209.5-215.5	6.0	0.04		
	314.0-318.0	4.0	0.05		
	374.0-438.1	64.1	0.04		
	including				
	374.0-384.0	10.0	0.03		
	and				
	387.3-393.9	6.6	0.04		
	and				
	402.0-412.5	10.5	0.08		K13vnHW
	and				
	416.7-420.0	3.3	0.15		K13vnFW
	464.8-468.0	3.2	0.05		
	974.5-980.7	6.2	0.11		
	including				
	974.5-977.7	3.2	0.19		K5vn
	992.3-995.6	3.3	0.04		