



**MINE DEVELOPMENT ASSOCIATES**  
**MINE ENGINEERING SERVICES**

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**Updated Technical Report and Estimated Mineral Resources for the Kinsley Project  
Elko and White Pine Counties, Nevada, U.S.A.**



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#### **APPENDICES**

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Appendix A: Kinsley Mountain Project Federal Unpatented Lode Mining Claims and Patented Claims

Appendix B: Historical Unmined Gold Intercepts

Appendix C: Pilot Gold Drill Holes and Significant Results by Year



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### 1.0 SUMMARY

Mine Development Associates (“MDA”) has prepared this Technical Report on the Kinsley project (or “Kinsley”), located in Elko and White Pine counties, Nevada, for Pilot Gold Inc., which is listed on the Toronto Stock Exchange (PLG-T), and Nevada Sunrise Gold Corp., which is listed on the TSX Venture Exchange (NEV). The purpose of this report is to provide an updated technical summary for the Kinsley project, including updates of the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgy. This report was written in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1, as well as with the Canadian Institute of Mining, Metallurgy and Petroleum’s “CIM Definition Standards - For Mineral Resources and Reserves, Definitions and Guidelines” (“CIM Standards”) adopted by the CIM Council on May 10, 2014.

The Kinsley project is held by Kinsley Gold LLC (“KGLLC”), a limited liability company owned 79.06% by Pilot Gold (USA) Inc. and 20.94% by Intor Resources Corporation (“Intor”). Pilot Gold (USA) Inc. is wholly owned by Pilot Gold Inc. Intor is wholly owned by Nevada Sunrise Gold Corp. (“NSGC”). For the purposes of this report, Pilot Gold Inc., Pilot Gold (USA) Inc., and Kinsley Gold LLC are referred to interchangeably as “Pilot Gold.” Pilot Gold’s interest in the Kinsley project is derived from the purchase of a Mining Option Agreement from Animas Resources Ltd. (“Animas”) in September 2011.

### 1.1 Location and Ownership

The Kinsley project is located in the Kinsley Mountains in Elko and White Pine counties, northeastern Nevada, approximately 150 kilometres northeast of Ely, Nevada, and 83 kilometres southwest of West Wendover, Nevada. Access is via paved U.S. Highway Alternate 93 to approximately 65 kilometres southwest of the town of West Wendover, Nevada, and then south for 18 kilometres on an improved gravel road, known as the Kinsley Mountain mine road, to the project site.

Mineral tenure consists primarily of unpatented federal lode mining claims in portions of Townships 26 and 27 North, Ranges 67 and 68 East. Pilot Gold has paid the annual federal unpatented claim fees through August 31, 2016. Thirty-eight additional claims were staked subsequent to the September 1 deadline for filing claims maintenance and filed on October 22, 2015, bringing the total number of claims to 513. The Kinsley project also includes five patented claims leased from Marvil Investments LLC. The patented claims total 26.6 hectares in Section 13, Township 26 North, Range 67 East, and Sections 7 and 18, Township 26 North, Range 68 East. As of October 15, 2015 the Kinsley Property encompasses 4,187 ha (10,347 acres).

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KGLLC is required to make advance royalty payments to Nevada Sunrise LLC (“Sunrise LLC”), a private holding company unrelated to NSGC, in accordance with an underlying lease agreement, beginning with a payment of \$50,000 per year through 2016, and increasing incrementally thereafter up to a maximum of \$200,000 per year in 2020 and beyond. If future production of gold occurs at Kinsley, KGLLC is subject to a 2% Net Smelter Return royalty (“NSR”) payable to Sunrise LLC. The leased patented claims are subject to a 2% NSR and annual advanced royalty payments of \$10,000, escalating to \$20,000 on the fifth anniversary of the agreement, payable by KGLLC to Marvil Investments LLC.

From October 20, 2011, through October 9, 2013, Pilot Gold operated the project under U.S. Bureau of Land Management (“BLM”) Notice of Intent NVN-090386, which authorized disturbance of up to 4.77 acres (1.93 hectares). On August 30, 2013, The BLM approved a Plan of Operations (NVN-091528) (“PoO”) submitted by Pilot Gold that authorized the disturbance of up to 71.5 acres (28.9 hectares). An amendment to the PoO to permit an additional 20.47 acres (8.28 hectares) of disturbance in selected areas in the northern portion of the project area was approved on October 28, 2014, bringing the total permitted disturbance to 91.97 acres (37.22 hectares).

Environmental liabilities at the Kinsley project are limited to the reclamation of disturbed areas resulting from exploration work conducted by Pilot Gold since acquisition of the property in 2011.

There is no surface water at the Kinsley property. In September 2012, Pilot Gold applied for 1,080 acre-feet-annually of water from the Nevada Division of Water Resources (NDWR). The appropriations were approved in May 2013, and in October 2013, water well PKW-1 was constructed at a site on the main access road. A total of 1.72 acre-feet (2.12 million litres) of water was pumped for drilling and dust control in 2013. Total water use for 2014 (through December 4) was 21.43 acre-feet (26.44 million litres). Total water use as through 2015 was 2.30 acre feet (2.84 million liters).

## **1.2 Exploration and Mining History**

The south end of the Kinsley Mountains was the site of sporadic base and precious metal exploration and production that began as early as 1862 and continued into the 1960s. U.S. Minerals Exploration Co. discovered sediment-hosted gold mineralization at the Kinsley property in 1984 through rock-chip sampling of jasperoid in Cambrian strata in an area with no historical workings.

Subsequently, Cominco American Resources, Inc. (“Cominco”) and Hecla Mining Company (“Hecla”) explored the property and completed a number of drilling programs. Alta Gold Company (“Alta”) purchased the property in 1994 and commenced open-pit mining in 1995, producing about 135,000 to 138,000 ounces of gold through 1999. The mine exploited oxidized, disseminated mineralization from eight shallow open pits and processed the ore by cyanide heap-leach extraction. The mine closed when Alta declared bankruptcy during a period of depressed gold prices.

Sunrise LLC staked the property in 2000 and, over the next decade, undertook rock-chip sampling and review of the existing drill-hole database. Lateegra Resources Corp. optioned the property in 2002, carried out geophysical studies, produced a technical report, and dropped the project in 2003. In 2004, Pan American Gold Corp. drilled three relatively deep holes around the margins of the deposit and completed several geophysical surveys.



Intor leased the Kinsley property from Sunrise LLC effective June 21, 2007. The lease is for an initial term of ten years and can be extended thereafter. Pursuant to the lease, advance royalty payments are payable to Sunrise LLC as described at Section 4.3.3 Lease Agreement in this Report.

Animas optioned the property in 2010 and carried out geologic mapping, geochemical sampling, and a gravity survey.

Pilot Gold acquired the option agreement from Animas in September 2011. Pilot Gold has undertaken extensive compilation and verification of historical data, constructed a 3D geological model for the property, conducted regional mapping and sampling programs, and has drilled approximately 54,453 metres in 209 core and reverse-circulation rotary (“RC”) holes.

### **1.2.1 Past Production**

Production from the Kinsley open-pit heap-leach mine is reported to have been about 4.7 million tons averaging 0.039 oz Au/ton (4.3 million tonnes @ 1.34 g Au/t), for a total of 134,777 ounces of gold produced, although a total production of 138,151 ounces has also been reported. The mine produced more tonnes and ounces than had been originally planned, but at a lower grade, with a reported realized gold recovery (73.3%) that is close to what was estimated prior to mining.

In 1999 when production ceased, Alta estimated that remaining “drill indicated resources” included 785,808 tons (712,869 million tonnes) of oxidized mineralization in the mine area averaging 0.037 oz Au/ton (1.27 g Au/t), for a total of 28,799 ounces, and an additional 590,022 tons (535,256 million tonnes) of oxidized mineralization averaging 0.024 oz Au/ton (0.82 g Au/t), for a total of 14,227 ounces, from locations mostly to the southwest of the mine area. Unoxidized/refractory mineralization within the mine area was estimated at 994,162 tons averaging 0.072 oz Au/ton (901,884 million tonnes @ 2.47 g Au/t), for a total of 71,904 ounces.

### **1.3 Geology and Mineralization**

The Kinsley Mountains are underlain primarily by limestone, dolostone, and shale ranging from Middle Cambrian to Late Ordovician in age. These include Middle Cambrian limestone, tentatively assigned to the Geddes, Secret Canyon Shale and Hamburg formations; the Upper Cambrian Dunderberg Shale, Notch Peak Limestone, and Notch Peak Dolomite; and the Ordovician Pogonip Group limestone and shale. These units are gently folded into an open, north-plunging anticline, which exposes progressively younger strata to the north. A moderate-angle, west-dipping fault along the west side of the range locally juxtaposes this sequence with overlying quartzite and dolostone suspected to be correlative with the Upper Ordovician Eureka Quartzite and Fish Haven Dolomite. The south end of the range is intruded by a small, late-Eocene age felsic stock with a hornfelsed aureole. Strata were subjected to ductile contractional deformation in mid-Mesozoic time and Cenozoic low- and high-angle extensional faulting. Low-angle faults bound most major lithologic units, and locally cut out entire formations. North- to northeast-striking faults intersect northwest-trending structures; relative ages are uncertain. Basin and Range normal faults bound both sides of the range.

Gold mineralization exploited in the 1990s at Kinsley is hosted primarily in a thin limestone horizon overlying the Hamburg Dolostone (formerly Big Horse Limestone), the Dunderberg Shale (formerly



Candland Shale), and the Notch Peak Limestone. Gold is associated with very fine-grained disseminations of arsenical pyrite, or oxidized equivalents, in variably silicified or jasperoidal shale, limestone, and dissolution-cavity fill. Mineralization appears to have both stratigraphic and structural controls. Gold correlates with arsenic, antimony, and thallium.

In 2013, gold mineralization was recognized on the west side of the Kinsley project in limestone and shale beds within the Hamburg Formation and Secret Canyon Shale, units that had not previously been recognized as potential hosts of gold mineralization. Subsequent drilling in 2014 returned a number of high-grade gold intercepts within the Secret Canyon Shale at the Western Flank target, including 10 holes with intercepts ranging from 6 to 20 g Au/t over core lengths of 15 to 50 metres (the core lengths are considered to be close to true widths). Drilling in 2015 extended portions of the Western Flank mineralization to the east. The gold at Western Flank occurs within thinly bedded units that are replaced by fine-grained pyrite and arsenical pyrite.

The styles of alteration, mineralization, and geochemistry at the Kinsley project are similar to those of sediment-hosted gold deposits located in the Carlin and Cortez trends of Nevada, approximately 150 to 200 kilometres to the west of the project. The geological setting of mineralization at Kinsley is similar to the Long Canyon deposit, located 90 kilometres to the north of Kinsley.

#### **1.4 Drilling, Sampling, Sample Preparation, Analysis, and Security**

Available records indicate that from 1984 to 2011 an estimated 1,158 holes were drilled by four historical operators; over 90% of these holes were drilled by Cominco and Alta. Approximately 94% of the historical holes were drilled with RC methods, and the majority of the holes were drilled within and along the northwest-trending Mine trend. Pilot Gold's project database includes 1,082 historical holes within the current property boundary. Much of the drilling targeted shallow oxidized zones and the average depth of the drill holes is less than 67 metres. Approximately 244 of the historical holes have potentially significant, unmined gold intercepts. These holes include both oxidized and unoxidized intervals.

During the period 1986 through 1988, Cominco drilled approximately 60% of their RC drill holes dry and 40% with water injection. Alta drilled more than 80% of their RC holes dry. Sampling was done by both companies on five-foot (1.524-metre) intervals. No information is available for the Hecla and Pan American drilling.

The majority of the historical drill collars at Kinsley were surveyed in the Nevada State Plane Coordinate system. No survey records are available, other than drill logs that have the X, Y, and Z coordinates hand-written on them.

No down-hole directional survey data exist from the historical drilling at Kinsley. Most of the historical drilling was relatively shallow, and the majority of the drill holes were vertical, so any effects of hole deviation are not considered to be material.

From 2011 through 2015, Pilot Gold drilled 148 RC holes and 74 core holes for a total of 58,851.7 metres. RC drilling was carried out wet, with samples collected at five-foot (1.524-metre) intervals. Core was mainly HQ-size, with smaller quantities of NQ-size core.



The Pilot Gold 2011 core-drilling program was designed to begin the process of verifying historical RC drill data near the margins of the open pits, as well as to obtain subsurface geologic information. In combination with the historical data, this drilling indicated that significant oxidized and unoxidized gold mineralization remains at Kinsley. Pilot Gold's 2012 core and RC drilling was directed toward step-out drilling along the northern and eastern margins of the historical pits, as well as preliminary follow-up of historical drill holes to the northwest of the pits on the western flank of the range.

In 2013, Pilot Gold drilled a water well, as well as 14,223 metres in 15 core and 43 RC holes that were focused primarily on the Western Flank target. During 2014, Pilot Gold continued to test the Western Flank target, as well as the Right Spot, Secret Spot, and Racetrack areas, with a total of 26,943.7 metres drilled in 38 core holes and 45 RC holes. In 2015, Pilot Gold drilled 13 RC holes, stepping out on Western Flank mineralization, testing satellite targets, and providing access for a downhole IP survey. Significant gold mineralization was encountered in the area immediately east of the Western Flank.

Drilling has demonstrated that gold is widespread in the Secret Canyon Shale along the western side of the Kinsley Mountains, with gold encountered in four target areas along a north-northeast, south-southwest extent of over 3.5 kilometres. Additional drilling will be needed to ascertain whether any of these targets drilled to date, outside of the Western Flank zone, contain potentially economic mineralization.

The majority of all holes drilled at Kinsley have vertical or subvertical orientations, which cross the predominant, generally shallow-dipping mineralized zones at relatively high angles. A significant number of angle holes were also completed, primarily by Pilot Gold, in attempts to either cut the mineralization at high angles or to take advantage of a single pad as a site for multiple holes. The predominant sample length for the drill intervals is 1.524 metres (five feet), with a relatively small percentage of shorter or longer intervals derived largely from Pilot Gold core holes. MDA believes the drill-hole sample intervals are appropriate for the style of mineralization at the Kinsley project. Furthermore, MDA is unaware of any sampling or sample recovery factors that may materially impact the accuracy and reliability of the results and believes that the drill samples are of sufficient quality for use in this report.

While documentation is not complete, all of the historical operators were reputable, well-known mining/exploration companies, and there is ample evidence that these companies and their chosen commercial laboratories followed accepted industry practices with respect to sample preparation, analytical procedures, and security. Most of the Alta drill samples, which comprise approximately half of the Kinsley database, were analyzed at their in-house laboratory, and it is possible that some of Cominco's drill samples were analyzed at Cominco's in-house laboratory. It is also possible that some of the Alta analytical results in the project database may have been derived from cyanide-leach analyses, which often yield partial gold determinations, as opposed to fire-assaying methods, which are assumed to be total-gold analyses.

The sample preparation, analysis, and security protocols of Pilot Gold at Kinsley meet current industry standards.



## **1.5 Data Verification and Quality Assurance-Quality Control**

The major contributors to the current Kinsley project database include Cominco, Alta, and Pilot Gold. Records indicate that Cominco and Alta instituted quality assurance/quality control (“QA/QC”) programs, but little useable data are available. No information is available on QA/QC programs that may have been used by Hecla and Pan American. Pilot Gold’s QA/QC programs meet current industry standards, and no significant issues have been identified.

MDA carried out two site visits, performed independent sampling of mineralized drill core, conducted audits of Pilot Gold’s collar, survey, and assay database, and reviewed the available information from the Cominco and Alta QA/QC programs.

The Alta and Cominco analytical data were used to support a successful mining operation, and subsequent drilling by Pilot Gold is generally consistent with the results generated by these companies. In consideration of this, as well as other information reviewed in this report, MDA believes the Kinsley data as a whole are acceptable as used in this Technical Report.

## **1.6 Metallurgical Testing**

Cominco and Alta completed metallurgical work in the 1980s and 1990s, including bottle roll, column leach, and “preg-robbing” testing on samples from the Main, Upper, Ridge, Access, and Emancipation zones. Alta concluded that the Kinsley mineralization was generally readily amenable to recovery of gold by cyanidation, with rapid recovery rates, and commenced heap leaching. Gold recovery during production at the Kinsley mine from 1995 through 1997 was estimated to be 73%.

Pilot Gold noted that high-grade, Secret Canyon Shale-hosted mineralization in the Western Flank area is hosted in unusually coarse and euhedral pyrite grains and displays high Au:S ratios (>10). Compositing samples of this material underwent flotation testing at Hazen Laboratory in Denver, Colorado, to determine if high-grade gold concentrates could be produced. Flotation testing of four composite samples, with calculated head grades ranging from 4.23 to 20.3 g Au/t, achieved gold extractions ranging from 76.0% to 89.6%, with the concentrate grades ranging from 98.6 to 312.0 g Au/t. Overall gold extraction ranged from 89.0% to 95.0% after cyanidation of the tails. This testing resulted in a process flowsheet for potential production of gold concentrate that may be potentially sold to commercial smelters or to Nevada mine owners of refractory processing facilities.

Following the success of the Secret Canyon Shale sulphide concentrate testing, samples of Dunderberg Shale-hosted sulphide mineralization were also subjected to metallurgical testing. Dunderberg-hosted gold also occurs within relatively coarse pyrite grains, but the margins of the grains are ragged and the Au:S ratios and gold grades, on average, are lower than those of the Secret Canyon Shale mineralization. Testing of composites with 2.81 g Au/t and 4.81 g Au/t head grades and using the same laboratory and flow sheet as described above resulted in concentrates with 42.0 and 56 g Au/t gold grades and recoveries of 82.6 and 83.0%, respectively.



## 1.7 Mineral Resource Estimate

The gold resources at the Kinsley project were modeled and estimated by evaluating the drill data statistically, utilizing the geologic interpretations and drill data provided by Pilot Gold to interpret mineral domains on east-west cross sections spaced at 25-metre intervals, rectifying the mineral-domain interpretations on north-south long sections spaced at five-metre intervals, analyzing the modeled mineralization geostatistically to aid in the establishment of estimation parameters, and interpolating grades into a three-dimensional block model.

The Kinsley project resources are presented in Table 1.1.

**Table 1.1 Kinsley Project Gold Resources**

Indicated Resources			Inferred Resources		
Tonnes	g Au/t	oz Au	Tonnes	g Au/t	oz Au
5,529,000	2.27	405,000	3,362,000	1.13	122,000

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Mineral Resources are reported at a 0.2 g Au/t cutoff for oxidized mineralization potentially available to open-pit mining and heap-leach processing; a 1.0 g Au/t cutoff is applied to Secret Canyon Shale mineralization potentially available to open-pit mining, milling, flotation, and shipping to a third-party roaster/autoclave; all other unoxidized and mixed mineralization potentially available to open-pit mining and similar processing as the Secret Canyon Shale mineralization is reported at a cutoff of 1.3 g Au/t.
3. Rounding may result in apparent discrepancies between tonnes, grade, and contained metal content.
4. The Effective Date of the mineral resource estimate is October 15, 2015.

## 1.8 Summary and Conclusions

MDA has reviewed the project data and has visited the project site. MDA believes that the data provided to MDA by Pilot Gold are generally accurate and a reasonable representation of the Kinsley project.

Significant gold mineralization has been discovered by drilling in the Secret Canyon Shale at the Western Flank target, as well as in four other target areas that lie over a north-northeast-south-southwest extent of over 3.5 kilometres. Additional drilling will be needed in order to ascertain whether any of the targets drilled to date outside of the Western Flank zone contain potentially economic mineralization.

Based on results to date, MDA believes significant additional drill testing is warranted in 2016. Given the high grades and indications of positive metallurgical characteristics of the Secret Canyon Shale-hosted mineralization in the Western Flank zone, an effort should be made to identify other zones of mineralization along similar structural settings across the property. Further drilling of the Western Flank target is also needed to fully define its extents, with an emphasis on possible extensions of the mineralization to the east.

MDA proposes a Phase 1 US \$4,200,000 program for 2016 that includes 4,000 metres of core drilling and 16,000 metres of RC drilling to test Secret Canyon Shale-hosted targets throughout the Kinsley





Mine trend, south of the Mine trend to the LBFJ target, to the north and south of the Western Flank deposit, and at the Racetrack and Secret Spot targets.

Contingent upon positive results from the Phase 1 program, a US \$6,300,000 Phase 2 program is recommended that includes follow-up definition and exploration drilling, further metallurgical testing, an updated resource estimation, and the completion of a preliminary economic assessment.



## 2.0 INTRODUCTION

Mine Development Associates (“MDA”) has prepared this Technical Report on the Kinsley project (or “Kinsley”), located in Elko and White Pine counties, Nevada, for Pilot Gold Inc., which is listed on the Toronto Stock Exchange (PLG-T), and Nevada Sunrise Gold Corp., which is listed on the TSX Venture Exchange (NEV). Pilot Gold Inc. holds its interest in the Kinsley project through its wholly owned subsidiary, Pilot Gold (USA) Inc., a Delaware corporation, and in turn through Kinsley Gold LLC (“KGLLC”), a limited liability company owned 79.06% by Pilot Gold (USA) Inc. and 20.94% by Intor Resources Corporation (“Intor”), a subsidiary of Nevada Sunrise Gold Corp. (“Nevada Sunrise”). For the purposes of this report, Pilot Gold Inc., Pilot Gold (USA) Inc., and Kinsley Gold LLC are referred to interchangeably as “Pilot Gold.”

This report has been prepared in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (“NI 43-101”).

Pilot Gold obtained its interest in the Kinsley project in 2011 through the purchase of a Mining Option Agreement from Animas Resources Ltd. (“Animas”). The Kinsley project was previously described in NI 43-101 Technical Reports prepared for Lateegra Resources Corporation (Cowdery, 2003), Intor Resources Corporation (Cowdery, 2007), and for Pilot Gold by MDA (Gustin *et al.*, 2012; Gustin *et al.*, 2015).

### 2.1 Project Scope and Terms of Reference

The purpose of this report is to provide an updated technical summary and mineral resource estimate for the Kinsley project. The scope of this report includes updates of the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgy, as well as the first resource estimate since the Kinsley mine closed in 1999. MDA previously prepared two technical reports for Pilot Gold on the Kinsley project (Gustin *et al.*, 2012; Gustin *et al.*, 2015). References are cited in the text and listed in Section 20.0.

The Kinsley project is centred on a large, sediment-hosted gold deposit and the past-producing Kinsley gold mine, and includes significant exploration potential within a large land position. Under the Mining Option Agreement purchased in 2011, Pilot Gold obtained access to a substantial technical archive on the property, including data derived from more than 1,100 drill holes that average 65 metres in depth and extensive geophysical and geochemical surveys. Prior to Pilot Gold’s drilling that commenced in late 2011, no significant drilling had been completed at Kinsley in more than 13 years. Pilot Gold’s drilling confirmed the presence of gold mineralization lateral to and under the existing open pits and led to the discovery of significant high-grade mineralization in a previously untested stratigraphic unit on the western flank of the Kinsley Mountains, 500 metres northwest of the Kinsley mine.

This report has been prepared under the supervision of Michael M. Gustin, Senior Geologist for MDA. Mr. Gustin is a Qualified Person under NI 43-101 and has no affiliation with Pilot Gold except that of independent consultant/client relationship. Portions of the report were written by Dr. Moira Smith and Gary Simmons, both of whom are Qualified Persons under NI 43-101. Dr. Smith has worked



extensively at Kinsley and provided most of the detailed geologic descriptions, as well as the geological model, described in the report. Dr. Smith is an employee of Pilot Gold and is not independent under NI 43-101. Mr. Simmons is a consulting metallurgist who is independent of Pilot Gold under NI 43-101 and has been contracted by Pilot Gold to conduct various metallurgical and geochemical studies of mineralized and unmineralized materials at Kinsley.

Mr. Gustin visited the Pilot Gold field office, core storage facility, and the Kinsley project on February 10, 2012 and October 27 and 28, 2014. See Section 12.3 for further details.

The Effective Date of this Technical Report is October 15, 2015.

## 2.2 Definitions and frequently used acronyms and abbreviations

Measurements are generally reported in metric units in this report. Where information was originally reported in English units, conversions have often been made according to the formulas shown below; discrepancies may result in slight variations from the original data in some cases.

### Frequently used acronyms and abbreviations, as well as unit conversions

AA	atomic absorption spectrometry
acre	acre = 0.405 hectares
Ag	silver
Au	gold
As	arsenic
Bi	bismuth
BLM	United States Department of the Interior, Bureau of Land Management
°C	centigrade degrees
Cd	cadmium
CIL	carbon-in-leach method of metallurgical testing
cm	centimetre = 0.3937 inch
core	diamond drill core
CSAMT	controlled-source audio-frequency magneto-telluric geophysical surveying
DEM	digital elevation models created from terrain elevation data
g/t	grams per tonne (1 g/t = 1 ppm = 0.029167 oz/ton)
GIS	geographic information system
GPS	global positioning system, a satellite-based navigation system
ha	hectare = 2.471 acres
Hg	mercury
ICP/MS	inductively coupled plasma mass spectrometry analytical technique
In	indium
IP	induced-polarization geophysical surveying
kg	kilogram = 2.205 pounds
km	kilometre = 0.6214 mile
Kv	kilovolt = 1000 volts
l	litre = 1.057 US quart
Ma	million years old



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µm	micron = one millionth of a metre
m	metre = 3.2808 feet (1,000 metres = 1 kilometre)
Mg	magnesium
mGal	milligal; unit of acceleration used in gravimetry. 1 m/square second = 100,000 milligal
Mo	molybdenum
NV	Nevada
oz	troy ounce (1 troy ounce = 34.2857 g Au)
Pb	lead
ppm	parts per million (1 ppm = 1 g/t)
ppb	parts per billion (1,000 ppb = 1 ppm)
RC	reverse-circulation drilling method
SEM	scanning electron microscope
Sb	antimony
t	metric ton = 1.1023 short tons
Te	tellurium
Tl	thallium
ton	short ton
U.S.	United States
USGS	United States Geologic Survey
VLF	very low frequency geophysical surveying
W	tungsten
Zn	zinc
3D	three-dimensional

**Currency** Unless otherwise indicated, all references to dollars (\$) in this report refer to currency of the United States.



### **3.0 RELIANCE ON OTHER EXPERTS**

Mr. Gustin is not an expert in legal matters, such as the assessment of the legal validity of mining claims, mineral rights, and property agreements in the United States. Mr. Gustin did not conduct any investigations of the environmental or social-economic aspects associated with the Kinsley project, and he is not an expert with respect to these issues. Mr. Gustin has relied upon information and opinions provided by Pilot Gold and its consultants with regard to the legal, social, and environmental aspects of the Kinsley project. The sources of information that relate to these topics and the applicable subsections of this report are provided below:

- Section 4.0, which pertains to land tenure, was prepared in part by Gerald Heston, a Pilot Gold employee responsible for maintaining the tenure database. The legal firm of Erwin and Thompson LLP provided a Mineral Status Report on the ACE, SOZA, and Trust claims for Animas (Erwin and Thompson LLP, 2010); as well as updates to include the KN, ACE, and KCE claims for Pilot Gold (Erwin and Thompson LLP (2012 and 2014)).
- Section 4.3, which pertains to agreements and encumbrances related to the Kinsley project, was prepared by Pilot Gold.
- Section 4.4, which pertains to environmental permits and licences, was prepared by Pilot Gold in consultation with Gerald Heston, a Pilot Gold employee responsible for coordinating permitting activities at Kinsley.

Section 4.5, which pertains to environmental liability, was summarized by Pilot Gold from a document by Delong (2010) prepared for Animas by EnvirosScientists Inc., an environmental consulting firm that specializes in the mining industry and is located in Reno and Elko, Nevada.

Mr. Gustin has relied on Pilot Gold to provide full information concerning the legal status of Pilot Gold and its affiliates, as well as current legal title, material terms of all agreements, and material environmental and permitting information that pertain to the Kinsley project.



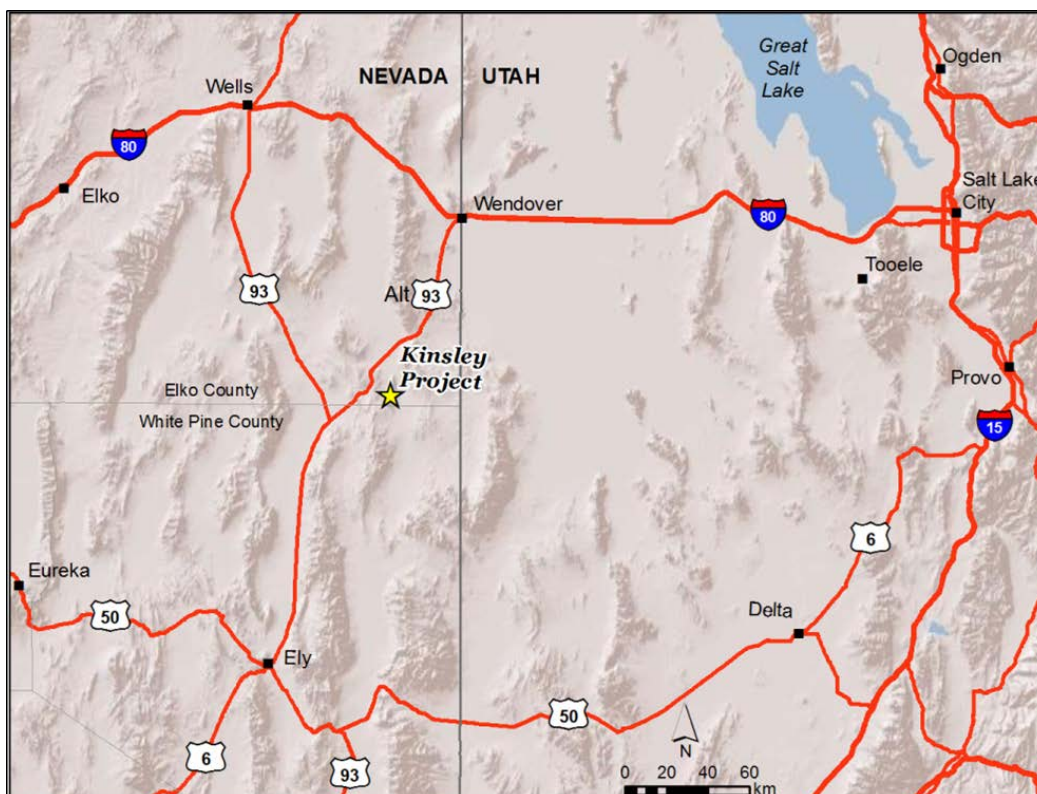
## 4.0 PROPERTY DESCRIPTION AND LOCATION

Mr. Gustin is not an expert in land, legal, environmental, and permitting matters and expresses no opinion regarding these topics as they pertain to the Kinsley project. Sections 0, 4.3, 4.4, and 4.5 are based entirely on information provided to MDA by Pilot Gold and its consultants. Pilot Gold warrants that, to the best of their knowledge, there are no other risks that may affect access, title or ability to perform work on the project, other than those disclosed below.

### 4.1 Property Location

The Kinsley project is located in the Kinsley Mountains in Elko and White Pine counties, northeastern Nevada, approximately 150 kilometres north-northeast of Ely, Nevada, and 83 kilometres south-southwest of West Wendover, Nevada (Figure 4.1). The approximate geographic centre of the Kinsley project is 40° 09' N latitude and 114° 20' W longitude.

Figure 4.1 Location of the Kinsley Project





## **4.2 Land Area**

Mineral tenure for the Kinsley project consists primarily of 513 unpatented federal lode mining claims, totaling approximately 4,187 hectares, in portions of Townships 26 and 27 North, Ranges 67 and 68 East (Figure 4.2 and Appendix A). These claims include a southern, core claim block that encompasses the Kinsley mine area and consists of 137 ACE claims, three SOZA claims, and four Trust claims. These 144 claims were located by Pan American and Nevada Sunrise LLC (“Sunrise LLC”; currently the owner of record and unrelated to Nevada Sunrise Gold Corp.). All other claims were located by Pilot Gold or an agent of Pilot Gold, and are held by Kinsley Gold LLC.

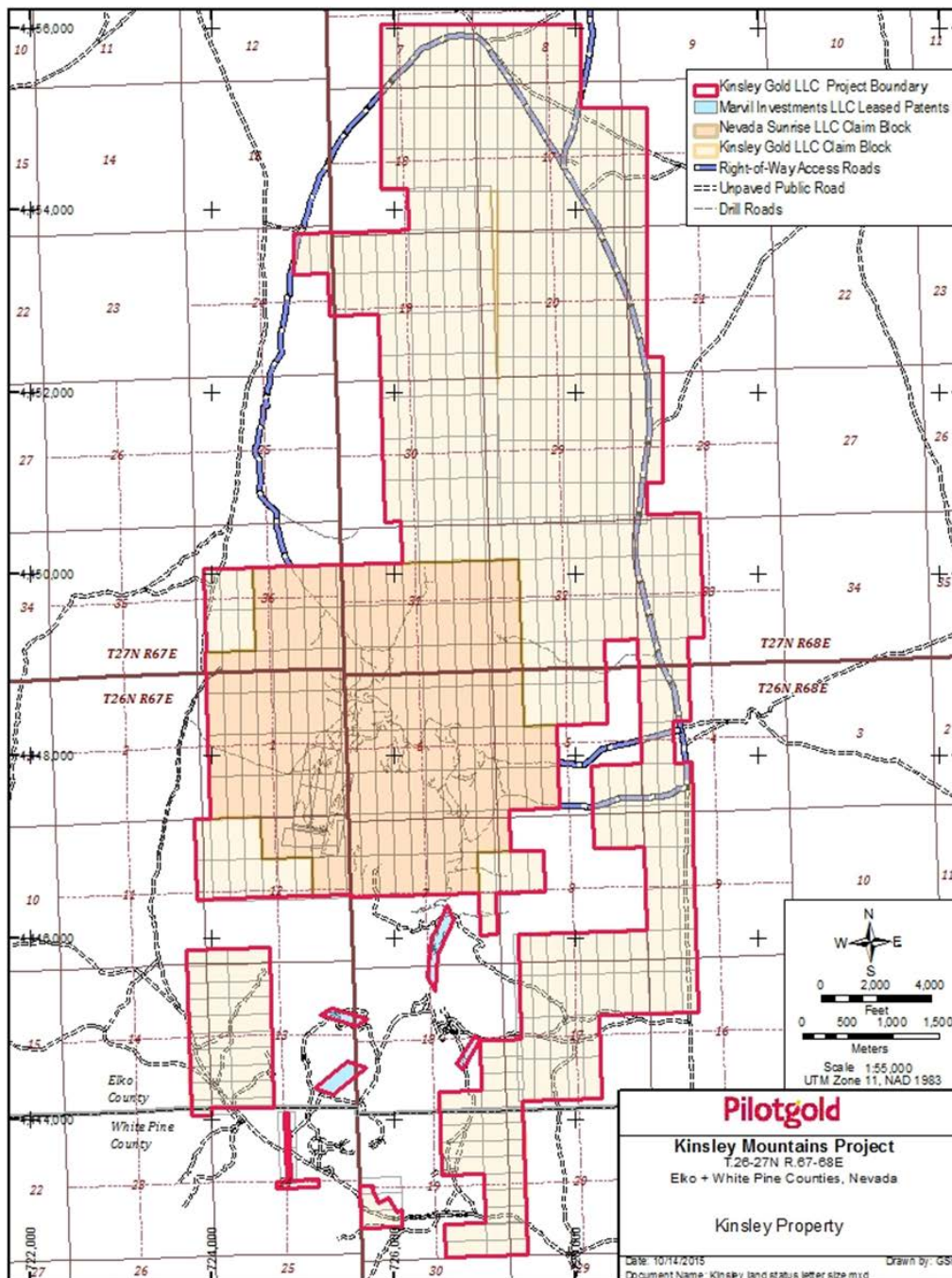
The unpatented claims within the project area are located in the field with wooden 5- by 5-centimetre posts and metal tags that meet Nevada regulations. Pilot Gold represents that the list of unpatented claims in Appendix A is complete and accurate as of the Effective Date of this report, and that all claims are valid through August 31, 2016. Pilot Gold did not seek a legal opinion regarding claim status and instead relied upon a mineral status report that Animas contracted with Erwin and Thompson LLC (2010) that addressed all claims current as of May 2010, including the original ACE, Trust, and SOZA claims that comprise the southern claim block. Pilot Gold contracted with Erwin and Thompson LLC (2012 and 2014) to produce updated Mineral Status Reports for all claims current as of October 2012 and March 2014. These updates include the KN, ACE, and KCE claims located by Pilot Gold. In the State of Nevada, as in many jurisdictions, other parties may, from time to time, overstate claims and seek to register them as their own. Certain claims in the northwest part of the Kinsley project have, as of the date of this Report, had such overstating occur. Pilot Gold believes that it is the lawful claim holder and is pursuing action to protect their interest.

Ownership of unpatented mining claims is in the name of the holder (locator), subject to the paramount title of the United States of America, under the administration of the U.S. Bureau of Land Management (“BLM”). Under the Mining Law of 1872, which governs the location of unpatented mining claims on Federal lands, the locator has the right to explore, develop, and mine minerals on unpatented mining claims without payments of production royalties to the U.S. government, subject to the surface management regulation of the BLM. In recent years, there have been efforts in the U.S. Congress to change the 1872 Mining Law to include, among other items, a provision of production royalties to the U.S. government. Currently, annual claim maintenance fees are the only federal payments related to unpatented mining claims; Pilot Gold has paid these fees through August 31, 2016. Nevada BLM records of mining claims can be searched on-line at [www.nv.blm.gov/lr2000/](http://www.nv.blm.gov/lr2000/). Holding costs of the unpatented mining claims comprising the Kinsley property in 2016 are estimated at approximately \$88,105.50 (Table 4.1).

In addition to the unpatented claims, the Kinsley project includes five patented claims held by Marvil Investments LLC (Appendix A). These claims are located in Section 13, Township 26 North, Range 67 East, and Sections 7 and 18, Township 26 North, Range 68 East, Mt. Diablo Meridian, and are subject to a lease agreement giving Pilot Gold the right to explore, develop and mine on the property, subject to annual lease payments and a 2% Net Smelter Return royalty. The patented claims total 26.6 hectares and the annual property taxes have been paid to Elko County through June 30, 2016.



Figure 4.2 Claim Map of the Kinsley Property







**Table 4.1 2015 Annual Claim Holding Costs for Kinsley Property**

BLM Maintenance Fee, existing claims	\$73,625.00
Elko/White Pine County Filing Fee, existing claims	\$4,995.50
New Filings, BLM	8,056.00
New Filings, County	1,429.00
<i>Total Filing and Holding Cost</i>	<i>\$88,105.50</i>

### **4.3 Agreements and Encumbrances**

#### **4.3.1 Nevada State Tax**

Production from Kinsley would be subject to the State of Nevada Net Proceeds of Mine Tax, which is limited to 5% of the production net proceeds (similar to a 5% net profits tax). This tax is levied by the State of Nevada on all mine production in the state.

#### **4.3.2 Pilot - NSCG Option Agreement**

On September 20, 2011, Pilot Gold purchased a Mining Option Agreement (“Option Agreement”) for the Kinsley property from Animas. The Option Agreement was formerly among Intor, NSGC, and Animas. The agreement covered the SOZA and Trust claims, as well as the original 134 ACE claims staked between 2000 and 2004, which together comprise the southern claim block. All claims staked subsequent to signing of the agreement and falling within a one-mile (1.61 kilometres) Area of Interest are subject to the royalty provisions outlined below. All claims staked subsequent to the signing of the agreement and falling within a five-kilometre Area of Interest around the southern claim block become subject to the terms of the Option Agreement. All but 13 of the KN claims in the northern claim block are within the Area of Interest; the 13 that lie outside the Area of Interest are located at the far northern end of the northern claim block. However, they were included in the Option Agreement and are subject to the same terms as claims located within it.

In consideration for the purchase of the Option Agreement by Pilot Gold, Animas received the following:

- (i) \$350,000 cash and 50,000 common shares of Pilot Gold (“Common Shares”) on the date of signing (the “Purchase Effective Date” of September 20, 2011);
- (ii) 25,000 Common Shares on the first anniversary of the Purchase Effective Date;
- (iii) 25,000 Common Shares on the second anniversary of the Purchase Effective Date; and
- (iv) 50,000 Common Shares upon Pilot Gold earning and vesting a 51% interest in the property (Completed September 30, 2013).

Pursuant to the terms of the Option Agreement, Pilot Gold had the exclusive right to earn from Intor, a subsidiary of NSGC:



- (i) a 51% undivided interest in the Kinsley property by incurring \$1.18 million in exploration expenditures by March 30, 2013; and
- (ii) an additional undivided 14% interest in the Kinsley property by electing to incur a further \$3.0 million in exploration expenditures within five years of meeting the initial earn-in (completed in February 2013).

In October 2013, upon satisfying the earn-in requirements, a joint venture agreement was made amongst Pilot Gold and Intor, retroactive to January 1, 2013, with Pilot Gold as operator. Pilot Gold and Intor's respective property interests were conveyed to an operating company, KGLLC.

To maintain their (then) 65%-35% interests in the joint venture, Pilot Gold and Intor were required to pay a pro rata share of exploration expenses. On August 14, 2013 Intor elected not to participate in the 2013 exploration program. Commensurate with these elections, Pilot Gold's interest in Kinsley increased initially to approximately 78%, and subsequently to approximately 79.1%, where it stands as of the Effective Date of this report.

### **4.3.3 Lease Agreement**

KGLLC is required to make advance royalty payments to Sunrise LLC in accordance with an underlying lease agreement, beginning with a payment of \$50,000 per year through 2016, and increasing incrementally thereafter up to a maximum of \$200,000 per year in 2020 and beyond. A sum of \$50,000 was paid to Intor in two equal tranches (2011 and 2012) as consideration to change certain terms of the lease. At Pilot Gold's election, an NSR royalty payable by KGLLC to Sunrise LLC was reduced from 4% to 2% on May 23, 2013, for consideration of \$200,000.

On May 2, 2014, KGLLC entered into an agreement with Marvil Investments LLC ("Marvil") to lease five patented claims located south of the contiguous Kinsley property. The lease agreement is for an initial term of ten years, and may be extended. The lease is subject to a 2% net smelter return royalty and annual advanced royalty payments of \$10,000, escalating to \$20,000 on the fifth anniversary of the agreement.

### **4.4 Environmental Permits and Licences**

Pilot Gold operated under BLM Notice of Intent ("NOI") NVN-090386 (Table 4.2) from October 20, 2011, through October 9, 2013. The NOI authorized disturbance of up to 4.77 acres (1.93 hectares).

In June 2012, Pilot Gold submitted a Plan of Operations (NVN-091528) ("PoO") to the BLM Wells Field Office. The Environmental Assessment (EA) was completed and approved in August 2013. The BLM approved the PoO on August 30, 2013. The Nevada Division of Environmental Protection ("NDEP") Bureau of Mining Regulation and Reclamation ("BMRR") issued reclamation permit 0345 on October 9, 2013, giving Pilot Gold full authorization to operate. The NOI permit was closed and the 4.77 acres of authorized disturbance was assimilated into the PoO.



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Under the PoO, Pilot Gold was authorized to disturb up to 71.5 acres (28.9 hectares). This includes:

- 60 acres (24.3 hectares) of roads and drill pads within the PoO boundary (the southern claim block comprising the original 141 Sunrise LLC claims), with the exception of five cultural resources buffer areas;
- 1.5 acres (0.6 hectares) on three proposed well sites (one inside and two outside the PoO boundary); and
- 10 acres (4.0 hectares) at a gravel pit in T.27N R.68E section 17.

A number of other permits from the Nevada Department of Environmental Protection were also obtained, and are tabulated below.

An amendment to the Plan of Operations to permit an additional 20.47 acres (8.28 hectares) of disturbance in selected areas in the northern portion of the project area (KN claims) was submitted to the BLM in January 2014 and approved on October 28, 2014, bringing the total permitted disturbance to 91.97 acres (37.22 hectares) (Table 4.3). KGLLC has posted a total of \$748,822 in reclamation bonding with the BLM.



**Table 4.2 Permits Governing Disturbance at Kinsley**

Permit Number	Permit Name	Dates	Status
DOI-BLM-NV-E030-2012-0525-EA	Environmental Assessment	Submitted 9/11/2012 Final Draft 8/6/2013 Approved 8/30/2013	Approved
NVN-090386	Notice of Intent	Approved 10/20/2011; Amendment 1 approved 3/16/2012; Amendment 2 approved 6/28/2012; unbuilt disturbance released 10/15/2012; amendment 3 approved 5/31/2013	Closed; disturbance wrapped into approved POO, 8/30/2013.
NVN-091007	Mineral Materials Sale	Amendment submitted 5/31/2013; approved 7/15/2013	Expired; can be renewed
NVN-091528 NDEP 0345	Plan of Operations	Submitted 6/7/2012; revision 9/18/2012; approved 10/9/2013	Approved
NVN-091528 NDEP 0345	POO Amendment	submitted 1/17/2014 approved 10/28/2014	Approved
NVN-091618 Well Sites NVN-091619 Roads	Right-of-Way Grant for roads and wells	Submitted 11/15/2012; approved 9/9/2013	Approved
AP1041-3343	NDEP Bureau of Air Pollution Control Surface Air Disturbance Permit	Submitted 3/25/2013; Change of operator approved 11/6/2013	Approved
82145, 82146, 82147	Division of Water Resources permits	Various; last extension approved 6/01/2015; Well 1 (82145) Proof of Completion filed 5/27/2014	Approved
85506T	Division of Water Resources temporary change of use permit for stock water	Approved 10/07/2015	Approved
CSW-36262	NDEP Bureau of Water Pollution Control Storm Water Construction Permit under NVR100000	Approved 8/7/2013; annual renewals Last renewal 3/04/2015	Approved



**Table 4.3 Proposed, Authorized and Actual Disturbance, November 1, 2015**  
(all values are in acres)

Disturbance Component	Originally Authorized	As Amended	Total	As-built, through 2015, minus reclaimed
<b>Drill Sites &amp; Roads Within Amended Plan Boundary</b>				
Constructed Road, Drill Sites, and Sumps	59.67	12.49	72.16	13.5
Overland Travel	0.33	7.98	8.31	2.91
<b>Subtotal</b>	<b>60.00</b>	<b>20.47</b>	<b>80.44</b>	<b>16.41</b>
<b>Activities Outside Original Plan Boundary (no change), Incorporated into the Amended Plan Boundary</b>				
Potential Well Sites (2)	1.50	-	1.50	0.40
Gravel Pit Expansion	10.00	-	10.00	2.20
<b>Subtotal</b>	<b>11.50</b>	<b>-</b>	<b>11.50</b>	<b>2.60</b>
<b>Subtotal of Authorized and Proposed Activities within the Amended Plan Boundary</b>				
Total Disturbance				
<b>Total</b>			<b>91.97</b>	<b>19.1</b>

Note: 1 acre = 0.405 hectares

#### 4.5 Environmental Liabilities

Environmental liabilities at the Kinsley project are limited to the reclamation of disturbed areas resulting from exploration work conducted by Pilot Gold since acquisition of the property in 2011.

Evidence of extensive previous mineral exploration and mining activities persists. Alta Gold Company (“Alta”) developed and operated the Kinsley mine from 1994 to 1999. The mine produced oxidized disseminated gold ore for heap-leach recovery from seven pits. From topographically lowest to highest, and from east to west, these pits include the Access, Lower Main, Emancipation, Main, Upper Main, Ridge, and Upper pits (Figure 7.8). A crushing plant, heap-leach pad, and recovery facility were located at the base of the eastern slope of the Kinsley Mountains, below the mining facilities and immediately east of the project claims. A haul road connected the operations.

Animas contracted with Enviroscientists, Inc. (“Enviroscientists”) of Reno, Nevada, to prepare an environmental review of the Kinsley property in order to assess the extent of potential liabilities related to previous mining activities by Alta (DeLong, 2010). Alta did not carry out any reclamation on the property and forfeited their bond. The BLM reclaimed the site using the Alta reclamation bond as well as federal monies. Reclamation included partial backfilling of a number of the open pits, re-contouring of other mining and exploration disturbances such as exploration drill roads, haul roads, and waste dumps, and re-vegetation of these reclaimed areas. The large heap-leach pad at the base of the range on the eastern slope was also decommissioned, re-contoured, and re-vegetated. Enviroscientists believes that the surface disturbance and reclamation liability that are related to the Alta operations are not transferable; thus there are no outstanding reclamation liabilities that could, or would, be tied to successor companies as a result of holding the mining claims associated with the property (DeLong, 2010).



Meetings with Pilot Gold and the Elko office of the BLM have indicated no immediate concerns regarding historical or prehistoric cultural sites. No wildlife concerns have been identified, possibly due to a general lack of surface water in the immediate area. Wild horses are commonly seen in the lower elevation areas on both sides of the Kinsley Mountains.

Several stipulations have been attached to the Decision Record regarding Pilot Gold's PoO. Most notable is a request that Pilot Gold avoid activities that would lead to noxious weed infestations. Pilot Gold must also conduct bird nesting surveys prior to commencing exploration activities, as well as on a periodic basis during the nesting season (April 1 to July 31). Pilot Gold is to report any observation of an active nest by a sensitive raptor and/or migratory bird of concern to the BLM Wells Field Office so that BLM can advise Pilot Gold of measures to mitigate potential adverse effects.

#### **4.6 Water Rights Appropriation**

Water utilized in the drilling programs completed in 2011, 2012, and the first half of 2013, under the NOI, was taken from a local small reservoir under an agreement with a local rancher. In 2013, water was also hauled from West Wendover.

In September 2012, Pilot Gold applied for 1,080 acre-feet-annually (AFA) at three sites from the Nevada Division of Water Resources (NDWR). The appropriations were approved in May 2013. In October 2013, well PKW-1 was constructed at a site on the main access road north of the reclaimed heap leach pad. A total of 1.72 acre-feet (2.12 million litres) of water was pumped for drilling and dust control in 2013.

Proof of Completion was filed for well PKW-1 in May, 2014. Water is pumped to an elevated tank, and gravity fed into water trucks for transport. A meter was installed in January 2014, and monthly well - readings are recorded. An annual report of water used was filed in January 2015. Total water use for 2014 (through December 4) was 6.985 million gallons (26.44 million litres) or 21.43 acre-feet. Total water use for 2015 was 748,400 gallons (2,84 million litres) or 2.30 acre-feet.

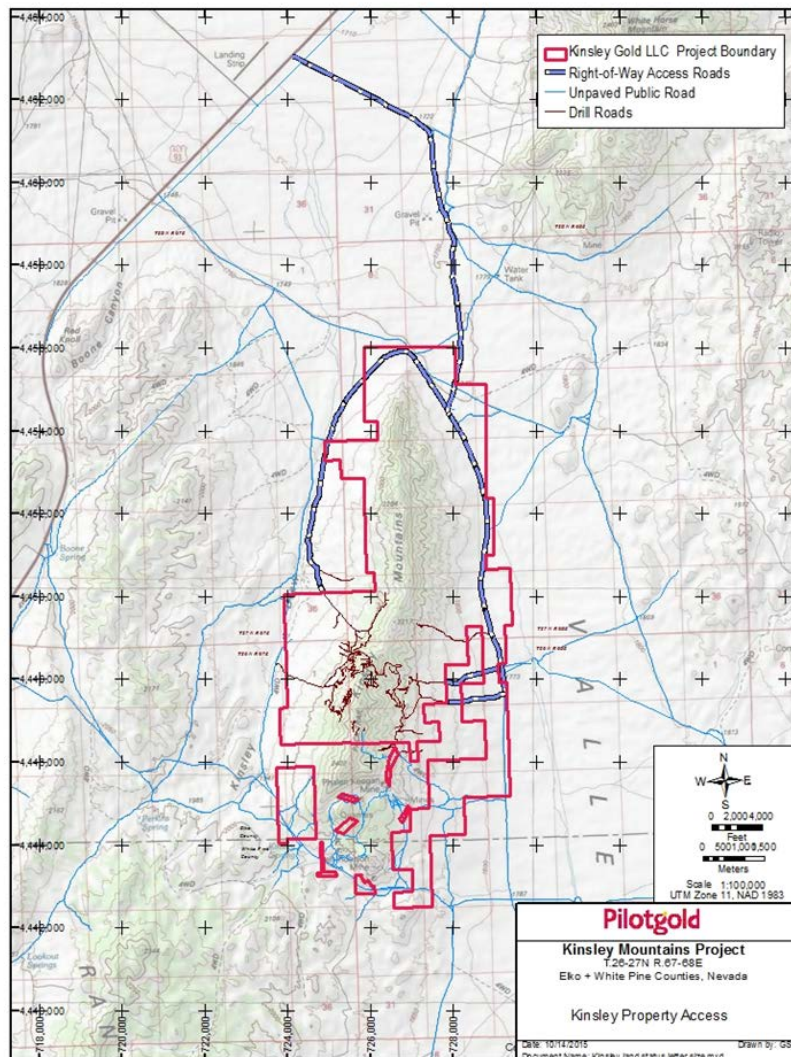


## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

### 5.1 Access to Property

Access to the Kinsley project is via paved U.S. Highway Alternate 93 to approximately 65 kilometres southwest of the town of West Wendover, Nevada, or approximately 135 kilometres on the same highway north-northeast of the town of Ely, Nevada. From that point one proceeds south on an improved gravel road, known as the Kinsley Mountain mine road, 18 kilometres through Antelope Valley on the east side of the Kinsley Mountains to the project site (Figure 5.1). Pilot Gold is responsible for maintaining this road under BLM Right of Way permit NVN-91619.

Figure 5.1 Access to the Kinsley Property



Vehicle access to the west side of the Kinsley Mountains is from the north via a two-track dirt road that has been armored with gravel from a small quarry located immediately north of the property. Road access to the western portion of the property is now possible via a newly constructed road over the crest



of the range, utilizing the old mine haul road for most of its length. The mine access road continues past the mine turn-off to the southern end of the Kinsley Mountains, allowing access to the southern claim blocks and patented claims.

With the exception of the main haul road, historical drill access roads on the property were largely reclaimed after Alta's mining operation closed. Some of these roads have been reopened, and a large number of new drill roads have been constructed.

## **5.2 Climate**

Climate at the Kinsley project is typical for the high-desert regions of northeastern Nevada, with hot, dry summers and cold, snowy winters. Summer high temperatures range from 30° to 38°C, with winter low temperatures typically -20° to -10°C and winter high temperatures of 0° to 5°C. Most of the precipitation in the region falls as snow in the winter months, with lesser precipitation as rain in the spring and thunderstorms during the late summer. Winter storms can deposit up to a metre of snow at higher elevations at Kinsley, which are typically snow-covered from late November through March.

In the absence of all-weather road access to drill sites, a typical exploration operating season for the Kinsley project is from mid-April through early December. Improved road access and road maintenance with snow removal equipment can extend the exploration operating season through the winter months, subject to recommended winter operating procedures issued by the BLM.

## **5.3 Physiography**

The Kinsley project lies in the Basin and Range physiographic province of Nevada and western Utah. The project site is located in moderate to steep terrain in the central and northern portions of the Kinsley Mountains (Figure 5.2). The Kinsley Mountains are a 12-kilometre-long, north-northeast-trending ridge that extends north from the Antelope Range. Elevations range from 1,750 metres in valley bottoms to 2,400 metres at Antelope Mountain south of the project.

The lower slopes of the project area are covered by grasses and sagebrush that progress up-slope to piñon and juniper woodlands typical of the high-desert mountains in northeast Nevada. Until late 2013, exploration activities at Kinsley were conducted primarily in disturbed areas at the former mine site on the eastern slope of the range. The previously explored and mined areas, as well as most of the current exploration targets, lie on moderate to steep slopes that require road construction to develop drill sites and access.

## **5.4 Local Resources and Infrastructure**

Drilling contractors, heavy-equipment contractors, and field technical personnel to support continued exploration activities are all available from service companies and contractors in Elko, Ely, and West Wendover, Nevada, and Salt Lake City, Utah. Should an economic gold deposit be delineated on the Kinsley project, experienced mining personnel and equipment suppliers are available in Salt Lake City and Elko, as well as elsewhere in Nevada.



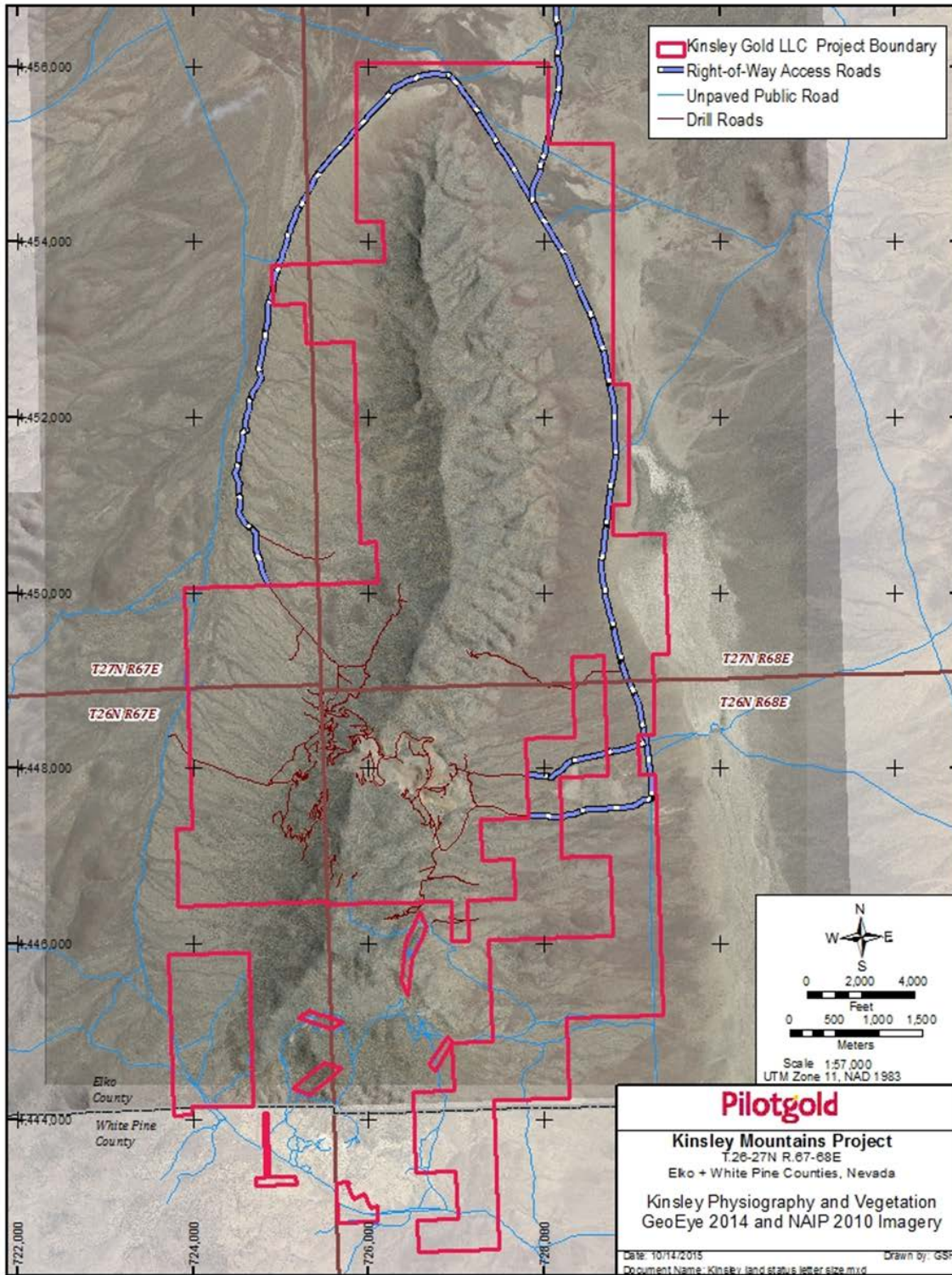


The nearest major electrical power source is a 25-kilovolt distribution line located approximately 8.5 kilometres west-northwest of the Kinsley project near Boone Spring on Alternate Highway 93. This power line ultimately delivers electric power to the no longer active Victoria mine in the Dolly Varden Mountains, approximately 27 kilometres northwest of Kinsley. The Griggs substation, a higher-voltage 69-kilovolt substation and line, is located near Lages Station, approximately 26 kilometres southwest of Kinsley. Power to the general area is provided by Mt. Wheeler Power, a local electric power co-op headquartered in Ely, Nevada. There is currently no power at the site.

There is no surface water on the Kinsley property. From 2011 to 2013, water for drilling was purchased through a local rancher from a reservoir located approximately 18 kilometres south of the project. For a portion of 2013, when this water source proved inadequate, water was trucked from Lages Junction. Commencing in December 2013, water has been sourced from a well drilled at the project site for this purpose by Pilot Gold.



Figure 5.2 Physiographic and Vegetation Map of the Kinsley Property





## 6.0 HISTORY

Silver-bearing lead-copper veins were discovered in 1862 at the southern tip of the Kinsley Mountains, which led to the organization of the Antelope mining district. After a lapse of several years, mining of the veins resumed in 1865 by George Kingsley, and the district was thereafter known as the Kinsley mining district (the “g” was dropped at some point). Mining activity took place within the district in 1886-87, 1909-14, 1917, and 1930. A small amount of tungsten was mined on the east side of the Kinsley Mountains in the period from 1940 to 1945. In 1966, a marble quarry was developed and operated on the southwest slopes of the range.

Gold mineralization was discovered at the Kinsley property in 1984. Subsequent exploration activity is summarized below.

### 6.1 History of Exploration and Gold Production

#### 6.1.1 USMX – 1984

In 1984, a geologist with U.S. Minerals Exploration Co. (“USMX”) collected two samples from a large jasperoid outcrop in the area now known as the Main Zone. One of the samples returned 1.75 g Au/t. USMX staked 29 unpatented lode mining claims based upon their field observations and this anomalous rock geochemistry. In May of the same year, Cominco American Resources, Inc. (“Cominco”) was invited by USMX to review and evaluate the area. Cominco’s confirmation samples from the same area reportedly contained up to 1 g Au/t. In January 1985, Cominco entered into a joint venture agreement with USMX to explore the Kinsley property.

#### 6.1.2 Cominco – 1985-1991

Cominco embarked on an extensive exploration program at Kinsley in 1985. During August and September 1985, Cominco undertook reconnaissance rock sampling and mapped all of the Kinsley Mountains at a scale of 1:24,000, with detailed geologic mapping at 1:4,800 feet carried out in the area where the first anomalous samples had been collected. In addition, soil samples were collected over the range. As a result of this work, Cominco staked all available land along the range later that year (Monroe *et al.*, 1988).

Cominco conducted extensive geochemical sampling on the Kinsley project, including gold and trace element geochemistry from: 421 rock-chip outcrop and road-cut samples; 1,186 claim corner, contour, and in-fill soil samples; and 151 dry stream-channel silt samples from the entire range. In addition, whole-rock geochemistry was completed on several mineralized and non-mineralized samples. Detailed sub-sampling studies were also conducted on multiple size fractions of mineralized material to determine whether a sufficient sample size was being collected to constitute a representative sample for analysis (Monroe *et al.*, 1988). These studies showed the variance in gold analyses at various size fractions to be remarkably low.

Cominco also completed X-ray diffraction, thin-section, and polished-section studies of Kinsley mineralized material (Monroe *et al.*, 1988). The results showed that gold in oxidized and silicified samples occurs as native particles from less than one micron up to 80 microns in size, with most



particles in the three- to five-micron range. In general, gold occurs in close association with limonite, often along fractures or grain boundaries. Some native gold particles are contained in quartz. Several gold-bearing samples contained finely disseminated pyrite in addition to limonite. Cinnabar and stibnite were also identified (McLeod, 1987; Monroe *et al.*, 1988).

Cominco conducted induced polarization (“IP”)/resistivity, ground magnetics, VLF, and CSAMT geophysical surveys for the purpose of exploring for large-scale, deep unoxidized mineralization (see Section 6.2.1). Cominco also examined the available aeromagnetic data for the area. The 1990 IP/resistivity survey proved to be the most useful, effectively outlining both the Access and Main zones, while VLF and ground magnetic surveys were for the most part unproductive (Monroe *et al.*, 1988).

Based on data presently available, Cominco drilled approximately 432 reverse circulation (“RC”), conventional rotary, and core holes from 1986 through 1991.

### 6.1.3 Hecla – 1992

In 1992, Hecla Mining Company (“Hecla”) optioned the property from Cominco, drilled approximately 64 RC exploration holes totaling 3,335 metres, and elected not to exercise the option agreement. Cominco then decreased the size of their original property position to encompass only the area containing their defined mineralization, with a sufficient buffer for operations.

### 6.1.4 Alta – 1994-1999

Alta optioned the property in 1993, drilled 25 holes, and purchased the Kinsley property in April 1994. Following a positive feasibility study by Kilborn Pacific Engineering Ltd. (“Kilborn”), Alta put the property into production in 1995. Prior to ceasing operations in 1999, Alta produced approximately 138,000 ounces of gold from oxidized material that was mined from various open pits and processed by cyanide heap leaching. Processing in 1996 involved crushing 1.75 million tons of ore prior to placing it on the heap-leach pads (King *et al.*, 1997). MDA has no information on the crush size, or if crushing was performed in other years during Alta’s operation.

The large Cominco database initially formed the basis for Alta’s exploration program, and production took precedence over exploration. A great deal of Alta’s exploration, outside of drilling, was focused south of the pit areas and included geologic mapping and a soil-sampling program that targeted the Dunderberg Shale. The soil samples were collected on 30-metre by 30-metre grids over a two-year period. Soil anomalies were tested by drilling to determine the depth and areal extent of gold mineralization. Alta also conducted some rock-chip sampling, but put less emphasis on this type of work due to low-grade results and the general lack of exposure of the Dunderberg Shale.

Alta drilled a total of 652 RC and 7 core holes at Kinsley. Alta filed for bankruptcy in 1999, and the claims subsequently lapsed (Cowdery, 2007).

### 6.1.5 Sunrise LLC – 2000-2012

Sunrise LLC staked the open Kinsley property in 2000. A consulting geologist for Sunrise LLC completed a geological interpretation of the property in 2003, which the authors have not seen, to



identify exploration targets. Using proprietary procedures involving compilation of available public information and structural interpretation from digital topography, the consultant prepared a suite of maps with exploration target areas for Sunrise LLC. Sunrise LLC undertook property examination, rock-chip sampling, and a review of the existing drill-hole database over the next decade, including a compilation of records of unmined drill intercepts and deep drill intercepts of refractory mineralization. Sunrise LLC has not drilled at the property.

#### **6.1.6 Lateegra – 2002-2003**

In late 2002, Lateegra Resources Corporation (“Lateegra”) optioned the property from Sunrise LLC. Lateegra recovered the Cominco IP/resistivity data from the survey completed in 1990, and had it reinterpreted by Dennis Woods (2002). The most important conclusion presented by Woods is that the oxide gold zones of the district are directly underlain by zones of anomalously high IP phase response. Model results for the survey are described as very broad and of low resolution because of the wide electrode and station arrays. Woods interpreted these modelled deep chargeable zones as likely due to unoxidized mineralization. The unoxidized anomalies were modelled to be broader and more extensive than the surface oxide gold deposits. Woods recommended deep drilling beneath the main gold zones, examination of an IP anomaly located at surface along the eastern range front about one mile north of the leach pad, and the completion of a more extensive and higher resolution IP/resistivity survey to investigate the existing anomalous zones in greater detail. Based on the review of the technical data, Lateegra decided to continue its exploration into 2003 and contracted for the completion of a technical report (Cowdery, 2003). Lateegra abandoned the project in 2003 before performing any drilling.

#### **6.1.7 Pan American – 2004**

In 2004, Pan American Gold Corp. (“Pan American”) optioned the property from Sunrise LLC, staked additional claims, completed magnetic and VLF surveys over the property, and drilled a fence of three RC holes totaling 863 metres to test for deep unoxidized gold mineralization. Although the location of this drilling is known, the results, as well as the results of the geophysical work, are currently not available to Pilot Gold.

At the end of 2004, Pan American withdrew from all of their optioned properties in the U.S., including the Kinsley property.

#### **6.1.8 Intor Resources Corporation – 2007-2010**

Intor leased the Kinsley property from Sunrise LLC effective June 21, 2007. The lease is for an initial term of ten years and can be extended thereafter.

Pursuant to the lease, advance royalty payments are due to Sunrise LLC as described in Section 4.3.3 Lease Agreement in this Report. Sunrise LLC will quitclaim the underlying claims that comprise the Kinsley property upon delivery by the lessor (at the time, Intor and now KGLLC) of a positive feasibility study. The lease included a minimum work obligation and includes a prescribed one-mile area of interest encompassing newly acquired or staked claims to the royalty payment obligation. The minimum work obligation was subsequently satisfied by Animas and Pilot Gold.



### 6.1.9 Animas – 2010-2011

Animas optioned the property from NSCG and Intor in 2010 and conducted a surface exploration program that included geologic mapping, a soil-sample grid across the entire property, select rock-chip sampling, a gravity survey, drainage-sediment sampling in the mine area and other portions of the range, acquisition of data from an earlier aeromagnetic survey, and compilation of a geologic database from previous exploration and production programs (Christiansen and MacFarlane, 2010). Animas contracted geologists Bryan MacFarlane and Adam Gorecki to remap the property in 2010 (MacFarlane, 2010).

### 6.1.10 Pilot Gold – 2011-2015

Pilot Gold acquired the Kinsley property in September 2011. The results of their exploration program are described in Section 9.0.

## 6.2 Discussion of Historical Exploration Results

### 6.2.1 Geophysical Surveys

Several geophysical surveys have been carried out over the property and surrounding areas during the last three decades, including IP/Resistivity, CSAMT, aeromagnetic, and gravity surveys. These surveys are described briefly below.

*IP/resistivity (1990)* - Cominco contracted with Zonge Engineering to perform an IP/resistivity survey on the Kinsley property. In general, this and other Cominco geophysical programs were configured to test for large-scale, deep sulphide mineralization. Two large chargeability zones were identified by the IP survey. The Kinsley mine area is characterized by relatively high resistivity and low IP response (Figure 6.1), possibly due to oxidation of sulphides. The area of high IP response to the northeast may indicate an area of sulphide mineralization. In 2002, Lateegra reinterpreted the IP data, which suggested the presence of a deep zone of sulphide mineralization below the Main pit (see Figure 7.8 for location of Main pit).

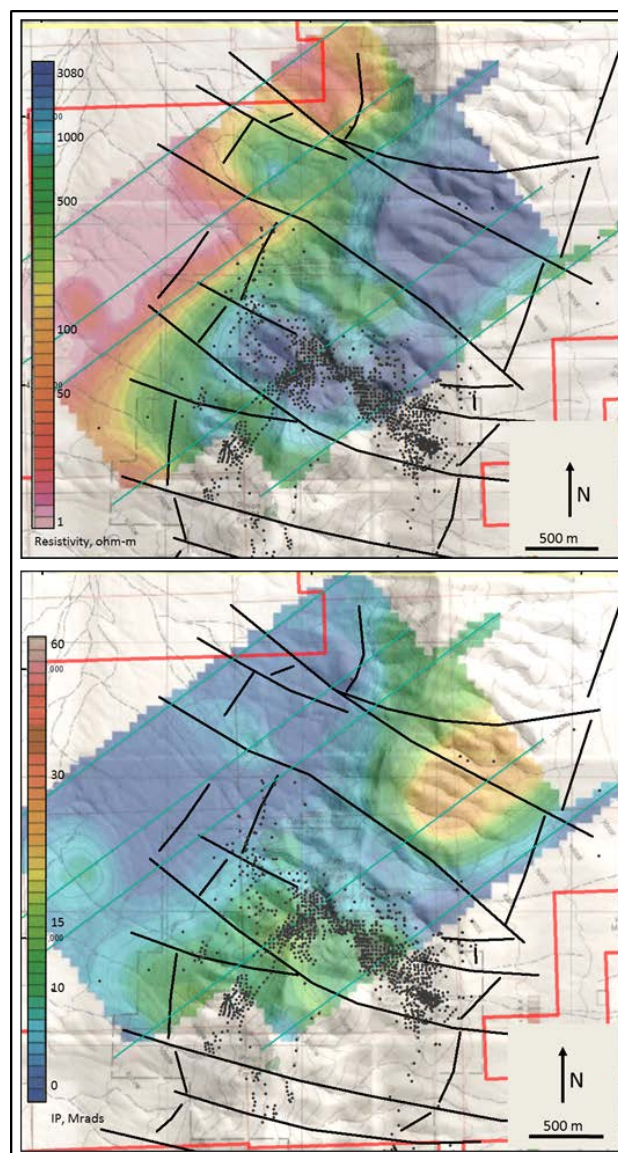
*CSAMT (1990)* – Cominco conducted an in-house CSAMT survey using 500-foot (150-metre) spacing between soundings. Five 8,000-foot (2,400-metre) lines and one 4,000-foot (1,200-metre) line were completed. The southeastern-most line was located along the ridge to cross the upper mineral zones; parallel lines to the northwest mainly crossed the western pediment of the range and the covered area of Kinsley Draw. Two “high-quality, moderate-conductors” were interpreted. One of two deep holes drilled by Cominco (hole K-425) was designed to test a coincident IP/CSAMT anomaly. Two zones of anomalous gold were intersected in this hole (Monroe, 1990). The depth to bedrock along the four northwestern-most lines was modelled to be in excess of 600 metres, effectively excluding the central Kinsley Draw from exploration consideration at that time.

*Gravity (2010)* – Animas contracted with Magee Geophysical Services to complete a gravity survey across the project area to identify new structures or areas of significant carbonate dissolution that could contain gold deposits similar to the Ridge and Upper deposits (Figure 6.2).



Gravity measurements were acquired at 389 locations on a 200-metre grid over the property, augmented by an additional 25 regional stations. Relative gravity measurements were made with LaCoste and Romberg Model-G gravity metres with a resolution of 0.01 mGal. Station coordinates and elevations were surveyed with a Trimble RTK GPS system with an XYZ accuracy of  $\pm 10$  centimetres relative to existing control. The topographic survey was tied to the existing National Geodetic Survey horizontal and vertical geodetic control points. Near-term terrain was estimated for a 10-metre radius around each station using clinometers. Additional terrain corrections to a distance of 167 kilometres were calculated using the 10-metre Digital Elevation Models (“DEMs”) for the first 2,000 metres and 90-metre DEMs for more distant areas.

**Figure 6.1 Cominco IP Survey, Inverted, Showing “600-Foot to 1400-Foot” Elevation**  
(from Woods, 2002)

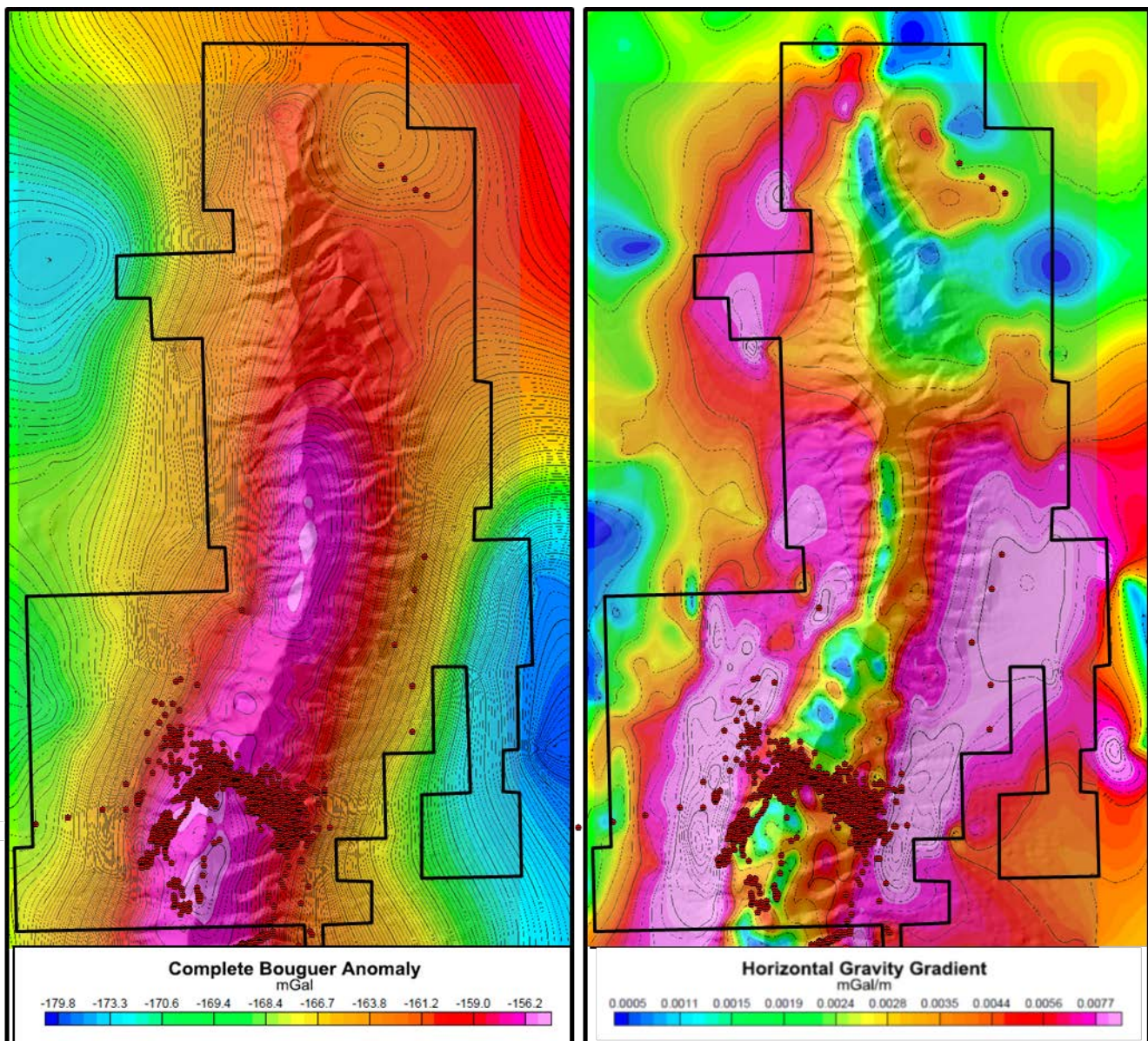


Drill holes shown with black dots. Top: Resistivity. Bottom: IP.



The products delivered to Animas included the original field data and reduced data, as well as colour-contoured, spatially registered map presentations of the Complete Bouguer Anomaly, first vertical derivative, and horizontal gravity gradient. As shown in Figure 6.2, high-gradient areas may reflect faults. The northwest-trending “Kinsley trend” through the mine area is visible.

**Figure 6.2 Animas Gravity Survey**  
(from Magee, 2010)



Claim boundaries as of 2010 shown with black lines; drill holes shown with red dots.  
Left: total Bouguer gravity. Right: horizontal gradient gravity.

The gravity survey largely confirmed what was known from geological mapping – that the Kinsley Mountains are underlain by a thick sequence of dominantly carbonate strata flanked by two, deep down-





dropped basins containing thick accumulations of volcanic rock and alluvium. As summarized in Christensen and MacFarlane (2010), the gravity survey did not highlight significant deep structures or areas of carbonate dissolution. However, Pilot Gold believes that the horizontal gradient gravity map may be illustrating a number of important structures that require follow-up prospecting for gold mineralization.

*Aeromagnetic Data (2010)* – Animas purchased proprietary regional aeromagnetic data for the region surrounding Kinsley Mountain from GETECH of Denver, Colorado. This consists of 1,000-foot (305-metre) draped data acquired by PRJ Inc. of Lakewood, Colorado (now called EDCON-PRJ, Inc.) in 1987-1988 with a 1.5 by 1.5-mile (2.4 by 2.4-kilometre) traverse interval. The digital data were entered into the Animas GIS database and integrated with other datasets.

No new information was gathered from the 2010 aeromagnetic dataset. The Kinsley Mountains are underlain by Paleozoic carbonate units with low magnetic susceptibility. The range is flanked by Cenozoic mafic volcanic extrusive rocks, and the adjacent basins are filled with Quaternary sediments, including tuffaceous material, all of which have higher magnetic susceptibility. Late Eocene quartz monzonite at the south end of the range is not characterized by a magnetic anomaly. The survey provides no evidence for magnetic intrusive rock at depth within the district, or for widespread magnetite destructive alteration outboard from the district.

## **6.2.2 Geologic Mapping**

Cominco, Alta, and Animas produced geologic maps of the project area. The geologic map and sections compiled by Animas in 2010 were the most complete for the claim block prior to Pilot Gold's efforts in 2011. Historical mapping has been superseded by maps produced by Pilot Gold.

## **6.2.3 Surface Geochemical Surveys**

Both Cominco and Alta carried out extensive rock-chip and soil geochemical surveys on the southern claim block of the Kinsley property. These data were later updated to a digital format where sample locations were known. The 2010 sampling program by Animas provided the most complete and accurate digital dataset prior to sampling programs carried out by Pilot Gold.

## **6.2.4 Soil Sampling**

Animas contracted with North American Exploration of Kaysville, Utah to complete soil geochemical sampling over the Kinsley property in May 2010. Sample lines were oriented east-west at 100-metre spacing, with samples at 50-metre and 100-metre intervals. Soil samples were not collected where the surface was disturbed by mining activities. A total of 1,610 samples were collected. Animas geologists did spot checks in the field to confirm that soil pits were properly dug and located. Sample locations were determined using a hand-held GPS unit.

### **6.2.4.1 Dry Stream-Channel Sampling**

Animas completed a program of dry stream-channel sediment geochemistry covering the Kinsley Mountains in 2010. Samples were collected from all significant dry stream beds along the range



margins at the approximate limits of outcrop. At each sample location, fine-grained sediment was collected from at least six sub-sites within the dry stream bed. A total of 76 samples were collected and submitted to ALS Minerals (“ALS”) for preparation and analysis. Sample spacing was approximately 500 metres. Samples were not collected from the disturbed and mine-contaminated dry streams in the area of past operations.

#### 6.2.4.2 Rock-Chip Sampling

While mapping the geology of the property, Animas geologists collected a suite of 68 rock-chip samples to chemically characterize lithologic type, alteration, and structures within the district. All samples were described in detail. Sample locations were determined with hand-held GPS and are considered by Pilot Gold to be accurate to less than  $\pm 4$  metres. The rock samples were all selectively collected to test a specific field occurrence.

### 6.3 Historical Mineral Resource and Reserve Estimates

Cominco and Alta both completed various estimates of the mineralized material at Kinsley. The estimates reported below are historical in nature and were prepared prior to the adoption of NI 43-101 reporting standards. Many of the estimates include material that was subsequently mined by Alta. This information is provided as part of the historical record. These historical estimates are not considered to be current and should not be relied upon. A qualified person has not done sufficient work to classify these historical estimates as current resources, and Pilot Gold is not treating these historical estimates as current mineral resources or mineral reserves. Terms in quotation marks in the following text are as used by the original source and may not reflect current NI 43-101-compliant classifications. MDA has no information regarding how any of the historical estimates were categorized, and therefore can make no judgment as to the applicability of such categorizations to current NI 43-101 classification. There are currently no mineral resources or reserves estimated for the Kinsley project.

Cominco made estimates of “geologic resources” and “ore reserves” in 1988 (Table 6.1), the former using the section/polygonal method and the latter by computer using Mintech MedSystem® mining software (“MedSystem”). These estimations were directed at delineating “reserves” for a “feasibility study” and early mining of the Kinsley deposits (Monroe *et al.*, 1988). Each of the two estimates was completed independently so as to serve as a check on the accuracy of the other method. An earlier, preliminary “ore reserve” estimate was undertaken in the fall of 1987 to establish the potential size and grade of the Kinsley deposits based on drilling completed at spacings greater than 60 metres and is not included on Table 6.1 (Monroe *et al.*, 1988).

Cominco’s 1988 sectional/polygonal estimate was made for the Main, Upper, and Ridge zones. Mineral horizons were interpreted as blocks on cross sections drawn at 100-foot (31-metre) intervals, with north-south sections used for the Upper and Ridge zones, and east-west sections for the Main Zone. Each mineralized block was estimated using the following parameters:

- Rock density factor of 13 ft<sup>3</sup>/ton (equivalent to a specific gravity of 2.46);
- 50-foot (15-metre) extrapolation of the zones forward and backward from the section;



- Areas for “indicated reserves” constrained to one-half the distance between holes, up to a maximum of 100 feet (30 metres), along the line of the section;
- Areas for “inferred reserves” were extrapolated to “reasonable geologic limits”; and
- Grade estimates for “inferred reserves” were based on the grades of the nearest drill holes.

Cominco’s 1988 computer estimate included the Main, Upper, and Ridge zones. Economic variables were applied to a block model in order to delineate the most profitable pit (MedSystem dipper pits). The model used 20 x 20 x 20-foot (6.1-metre) blocks that were coded to geology and topography. Bench composites of the drill-hole gold assays were coded to the block geology and were used to interpolate block grades by inverse-distance to the third power. The grade of each model block was estimated using only those composites that matched the geologic coding of that block. The geologic units coded to the model blocks were used to constrain the composites. The “dipper ore reserve” shown in Table 6.1 is considered a first-order estimate on the MedSystem program, in contrast to more detailed estimates called “stripper ore reserves” (Jones, 1994). The “dipper ore reserve” shown in Table 6.1 is taken from Cominco’s report (Monroe *et al.*, 1988).

A third Cominco estimate – a “minable stripper ore reserve” – did not appear in the Cominco report by Monroe *et al.* (1988), but it was discussed in Alta’s in-house “feasibility” report (Jones, 1994) and is shown in Table 6.1. Jones (1994) provided no further details on how this estimate was determined by Cominco, but indicated Cominco’s mining plan was based on use of contract miners, which involved a high unit cost per ton mined.

Alta calculated a “stripper mineable reserve” for the Kinsley deposits after completing the drilling during their option period from October 1993 to April 1994 (Jones, 1994). A total of 100 holes drilled by Hecla and Alta were used in this estimate that were additional to the holes used in the Cominco estimates. The new data better delineated the West Ridge deposit, and allowed for the expansion of “reserves” on the margins of the Upper and Main deposits. Based on metallurgical testing by both Cominco and Alta, Alta used an overall recovery of 74% for this estimate. A density factor of 13 ft<sup>3</sup>/ton (equivalent to a specific gravity of 2.46) was used for the estimate, although density measurements had indicated an average density of 12.5 ft<sup>3</sup>/ton (equivalent to a specific gravity of 2.56). Some voids had been encountered in the limestones, so a lower value of 13 ft<sup>3</sup>/ton (equivalent to a specific gravity of 2.46) value was deemed reasonable. Jones (1994) reported that Alta applied mining and extraction costs derived from their Easy Junior gold mine in White Pine County, Nevada, which were considerably lower than those used in the Cominco estimates.

MDA reviewed what appears to be a draft due diligence technical audit dated December 1994 that apparently was produced by Rothchild Denver Inc. This audit cited the June 1994 “stripper minable reserve” listed in Table 6.1 but indicated, “*Kilborn reviewed the reserve evaluation alternatives at varying gold prices and found the final selection to be optimum based on the current data.*” The “*actual figures used*” for this “reserve” estimate are included in Table 6.1 as the Kilborn/Rothchild December 1994 estimate. There is no indication as to why this estimate is lower than Alta’s June 1994 estimate that they also cite. Cowdery (2007) reported that Alta’s estimate had been reviewed by Kilborn and Rothchild Denver Inc., and that both engineering companies had reduced Alta’s estimate; this appears to refer to the draft due diligence technical audit.



**Table 6.1 List of Historical “Ore Reserve” Estimates**

Estimate	Type	Cutoff Grade		Short Tons	Tonnes	Average Grade		oz Au	Est. Recovery	Strip Ratio
		oz Au/ton	g Au/t			oz Au/ton	g Au/t			
1988 Cominco cross sectional (polygonal) <sup>1</sup>	“geologic resource”	0.02	0.69	5,000,000	4,535,900	0.048	1.65			
1988 Cominco MedSystem <sup>1</sup>	“dipper ore reserve”	0.02	0.69	3,020,000	2,739,684	0.042	1.44			1.5:1
1988(?) Cominco <sup>2</sup>	“mineable stripper ore reserve”			2,100,000	1,905,078	0.048	1.65	100,800	70%	1.76:1
6/1/1994 Alta <sup>2</sup>	“stripper mineable reserve”			3,504,031	3,178,787	0.045	1.54	157,681	74%	2.75:1
12/1/1994 Kilborn - Rothchild <sup>3</sup>	“reserve”			3,488,748	3,164,922	0.044	1.51	125,078	74%	2.75:1
7/1/1994 Alta <sup>4</sup>	“geologic reserves”	0.015	0.51	5,604,317	5,084,124	0.039	1.34	218,568		
3/1/1996 Alta <sup>5</sup>	“reserve estimate for designed ultimate pit”	0.014	0.48	3,383,000	3,068,990	0.033	1.13	110,966		1.4:1
3/1/1997 Alta <sup>6</sup>	“reserve estimate for designed ultimate pit”	0.012	0.41	1,914,000	1,736,343	0.033	1.13	63,200		1.8:1

All terminology in quotes, as well as tons and Au oz/ton values, are as originally reported

Note: estimates shown in the table above are included for historical completeness and should not be relied upon. A qualified person has not done sufficient work to classify the historical estimates as current mineral resources or reserves and the Company is not treating the historical estimates as current mineral resources or reserves.

Sources: <sup>1</sup>Monroe *et al.* (1988); <sup>2</sup>Jones (1994); <sup>3</sup>Draft December 1994 due diligence technical audit, apparently by Rothchild Denver Inc.; <sup>4</sup>Alta Gold (1994); <sup>5</sup>Chlumsky *et al.* (1996, for remaining reserves after production had begun); and <sup>6</sup>King *et al.* (1997, for remaining reserves after production had begun).

A “geologic reserve” dated July 15, 1994 was included in the copy of the Alta (1994) report reviewed by the authors and is also included in Table 6.1. No further details are known as to how this estimate was determined.

In March 1996, following the initiation of production, Pincock Allen & Holt (“PAH”) conducted a reserve audit of Alta’s properties, including Kinsley (Chlumsky *et al.*, 1996). PAH accepted Alta’s



“reserve” estimate, which was based on the designed ultimate pit that included access, but noted PAH’s own estimate exceeded Alta’s somewhat in ounces, and total tons. PAH accepted the Alta estimate because PAH’s own estimate was “comparable to the Alta reserve”. PAH conducted a similar reserve audit a year later in March 1997 after production had continued to proceed at Kinsley (King *et al.*, 1997). PAH again accepted Alta’s reserve estimate, which was based on the designed ultimate pit, including access, but again noted that PAH’s own estimate exceeded Alta’s in tonnage and ounces.

At the end of production in 1999, an Alta mine geologist at Kinsley, who now works with Pilot Gold, carried out a hand-calculated estimate of approximate “drill indicated resources” at Kinsley, including exploration targets (J. Robinson, written communication, 2012). The estimate included 785,808 tons averaging 0.037 oz Au/ton (712,869 million tonnes @ 1.27 g Au/t) for a total of 28,799 ounces from oxide mineralization on the main (northwest) trend and 590,022 tons averaging 0.024 oz Au/ton (535,256 million tonnes @ 0.82 g Au/t) for a total of 14,227 ounces from oxide mineralization in “off-trend” targets, mostly to the southwest. Unoxidized/refractory mineralization on the main trend was estimated at 994,162 tons averaging 0.072 oz Au/ton (901,884 million tonnes @ 2.47 g Au/t) for a total of 71,904 ounces. These estimates are not included in Table 6.1.

#### 6.4 Past Production

Based on Alta’s annual U.S. Securities and Exchange Commission 10-K reports, Cowdery (2007) estimated that the Kinsley mine produced 134,777 ounces of gold from 1995 through 1999. However, he also noted that a 2004 Pan American press release said that the total past gold production was 138,151 ounces of gold (August 2, 2004 news release).

The mine produced oxidized disseminated gold ore from eight shallow open pits and treated the ore on heap-leach pads (see Figure 7.8 for pit locations). From topographically lowest to highest and from southeast to northwest, these pits are the Access, Lower Main, Emancipation, Main, Upper Main, Ridge, West Ridge, and Upper Pit. The mine closed when Alta declared bankruptcy during a period of very low gold prices.

Table 6.2, taken from Cowdery (2007), compares Alta’s planned production with actual production. The mine produced more tons and ounces than planned, but at a lower average grade. Estimated average recovery was close to that forecasted.



**Table 6.2 Comparison of Planned and Actual Production from the Kinsley Mine**  
(after Cowdery, 2007)

Year	Planned <sup>1</sup>						Actual <sup>2</sup>					
	Material to Pad		oz Au/ton	g Au/t	Au Rec.	Au oz	Material To Pad		oz Au/ton	g Au/t	Au Rec.	oz Au
	Tons	Tonnes					Tons	Tonnes				
1994	193,753	175,769				2,949						
1995	1,344,599	1,219,793				51,502	1,267,660	1,149,996	0.0517	1.77	62.1%	40,667
1996	1,419,299	1,287,560				43,650	1,853,196	1,681,182	0.0322	1.10	74.6%	44,552
1997	705,871	640,352				23,910	1,588,000	1,440,602	0.037	1.27	65.5%	38,472
1998							9	8	0.03	1.03		9,543
1999												1,543
Total	3,663,522	3,323,474	0.045	1.54	74%	122,011	4,708,865	4,271,788	0.0391	1.34	73.3%	134,777 <sup>3</sup>

<sup>1</sup>Planned data are taken from reports by Alta, Kilborn, and Rothchild.

<sup>2</sup>Actual data are taken from Alta's annual 10-K reports for 1996, 1997, and 1998.

<sup>3</sup>A 2004 Pan American press release noted that the total past gold production was 138,151 ounces.

Actual production from the property is reported to have been about 4.7 million tons averaging 0.039 oz Au/ton (4.3 million tonnes @ 1.34 g Au/t), with 134,777 ounces of gold produced, but a total production of 138,151 ounces has also been reported. The Kinsley mine produced more tons and ounces than had been originally planned, but at a lower grade, with a reported realized gold recovery (73.3%) being close to what was estimated.



## 7.0 GEOLOGIC SETTING AND MINERALIZATION

### 7.1 Geologic Setting

#### 7.1.1 Regional Geologic History

Most of northeastern Nevada is underlain by carbonate and siliciclastic marine sedimentary rocks that record a passive continental margin setting throughout most of Early Paleozoic time. From Late Proterozoic through Late Devonian time, a dozen eustatic sea level cycles occurred, corresponding with easterly retrograding and westerly prograding of the carbonate platform (Cook and Corboy, 2004). During sea level lowstands, debris flows and turbidites accumulated in slope and basinal environments west of the shelf edge. These lowstands resulted in karst formation in platform interior shelf lagoons and supratidal flats. During much of this time, the shelf edge was located near the Carlin gold trend.

At the end of the Devonian Period, the continental margin was affected by the Antler Orogeny, during which deeper-water siliciclastic rocks of the Roberts Mountains allochthon were emplaced over coeval slope-facies rocks along the Roberts Mountains thrust fault. To the east of the allochthon, the Antler Orogeny is manifested by thick accumulations of foreland-basin sediments of latest Devonian through Mississippian age that were shed eastward off the Roberts Mountains allochthon. Pennsylvanian and Permian strata in the eastern Great Basin reflect the formation of several shallow basins between the Antler highland to the west and the continental margin to the east in Utah.

In Jurassic time, rocks throughout northeastern Nevada and westernmost Utah were affected by the Elko Orogeny (Thorman, 1970; Thorman *et al.*, 1991). The Elko Orogeny resulted in metamorphism and plastic deformation of primarily Lower Paleozoic strata over a large area. Manifestations include weak to strong, near-bedding-parallel foliation, northeast-trending folds, east-southeast-trending stretching lineations, and older-over-younger and younger-over-older layer-parallel faults (attenuation faults). The Elko Orogeny is presumed to be approximately coeval with Jurassic plutonism in eastern Nevada (Thorman *et al.*, 1991). Some of the ductile contractional deformation described above may be attributable to the Cretaceous Sevier orogeny (Camilleri and Chamberlain, 1997) and/or the Late Cretaceous-Paleocene Laramide orogeny.

A number of episodes of extension and magmatic activity took place in the Great Basin during the Cenozoic Era, including Eocene volcanism and normal faulting and mid-Cenozoic low-angle listric normal faulting. The latter includes periods of “hyperextension” from approximately 33 to 14 Ma, including the formation and unroofing of the Ruby Mountains core complex, located approximately 110 kilometres to the west-northwest of Kinsley (Colgan, 2006). Rocks as young as 7 Ma in the eastern Great Basin are tilted up to 50° to the east, suggesting that low-angle normal faulting continued until fairly recently (Mueller *et al.*, 1999). High-angle basin and range faulting, resulting in the familiar pattern of alternating mountain ranges and valleys, has continued to the present. Most ranges, including the Kinsley Mountains, are bounded by steep faults on one or both sides.

Gold deposits and prospects in the eastern Great Basin are widely spaced and generally small to moderate in size; many are of the sediment-hosted type that is more prolific and well documented in the Carlin and Cortez trends to the west. The mineralizing events took place approximately 30 to 40 million years ago throughout the region, with ages progressively younger to the south, and more or less coeval



with several pulses of felsic to intermediate volcanism. Gold is also associated with mid-Jurassic intrusions in the region, including some or all of the mineralization at Bald Mountain, located approximately 100 kilometres west of Kinsley.

### **7.1.2 Property Geology**

The Kinsley property encompasses most of the Kinsley Mountains, an isolated, north-south-trending ridge surrounded by large alluvial valleys. The Kinsley Mountains are underlain primarily by platformal limestone, dolostone, and shale ranging from Middle Cambrian to Middle Ordovician in age. On a property scale, strata become younger to the north. A west-dipping, moderate- to low- angle fault locally juxtaposes this sequence with overlying quartzite and dolostone suspected to be Late Ordovician to Silurian in age (Figure 7.1). At the southern end of the range, and locally along the western flank of the range, Cambrian strata are in fault contact with strata believed to be Pennsylvanian to Permian in age.

A quartz monzonite stock, dated ~40 Ma by U-Pb methods on zircon (Tyler Hill, written communication, 2015), intrudes Cambrian strata in the southern portion of the Kinsley Mountains. Local zones of skarn, marble, and hornfels occur along the contact of the stock. Historical production of silver, lead, and tungsten occurred from small mines located at or near these contact zones. Felsic dikes and sills are common in the vicinity of the stock, and radiate northward into the mine area, particularly along the flanks of the range.

A volcanic sequence that includes andesite, latite, ignimbrites, and pumice crops out in the southeastern end of the Kinsley Mountains. These rocks are interpreted to be part of an extensive Late Oligocene volcanic sequence that is exposed in the northern Antelope Range. Scattered andesite outcrops also occur in valleys and low elevations near the slope-breaks along both the east and west sides of the Kinsley Mountains.

Strata were subject to ductile contractional deformation in mid-Mesozoic time, as well as Cenozoic low- and high-angle normal and strike-slip faulting. There are low-angle faults bounding most major lithologic breaks, in some cases cutting out entire formations. High-angle faults trend north to northeast and are cut by northwest-trending faults.

#### **7.1.2.1 Stratigraphy and Lithologic Descriptions**

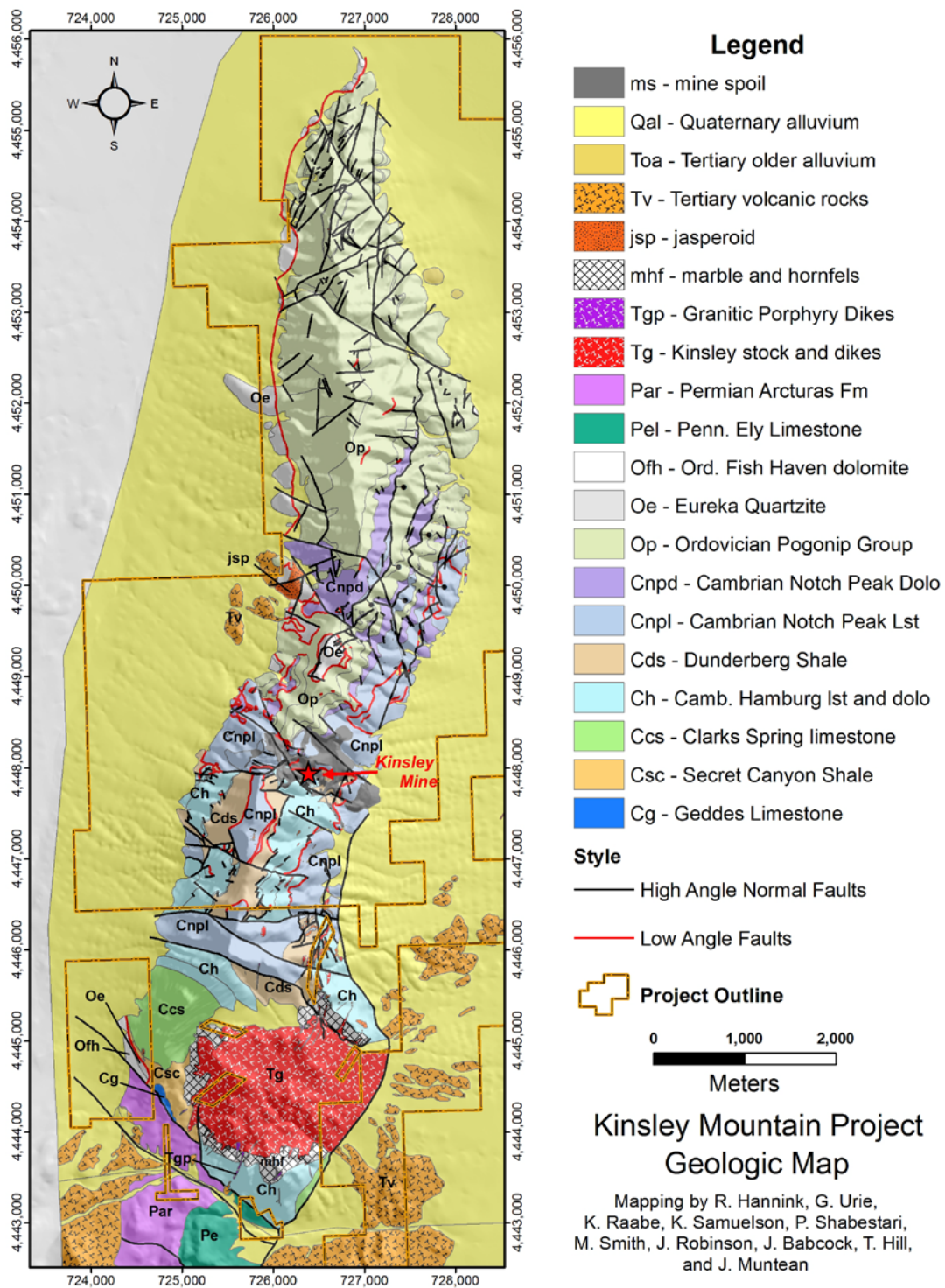
Alta, Animas, and Cominco all produced maps of varying detail and quality prior to detailed mapping and drill hole logging by Pilot Gold. No formal study of the stratigraphy of the Kinsley Mountains has been done since the 1960s, so there are some inconsistencies in the stratigraphic nomenclature used in exploration reports. In addition, this portion of the eastern Great Basin has not been mapped in detail by a government survey or other publically available sources. The following is summarized primarily from unpublished geological mapping and core logging by Pilot Gold staff.

With the exception of Permo-Pennsylvanian strata in the extreme southern part of the range, and Late Ordovician to Pennsylvanian strata exposed in the hanging wall of a fault along the west side of the range, the stratigraphic sequence in the Kinsley Mountains dips gently northward, becomes younger from south to north, and ranges from Middle Cambrian to Ordovician in age (Figure 7.1 and Figure 7.2).



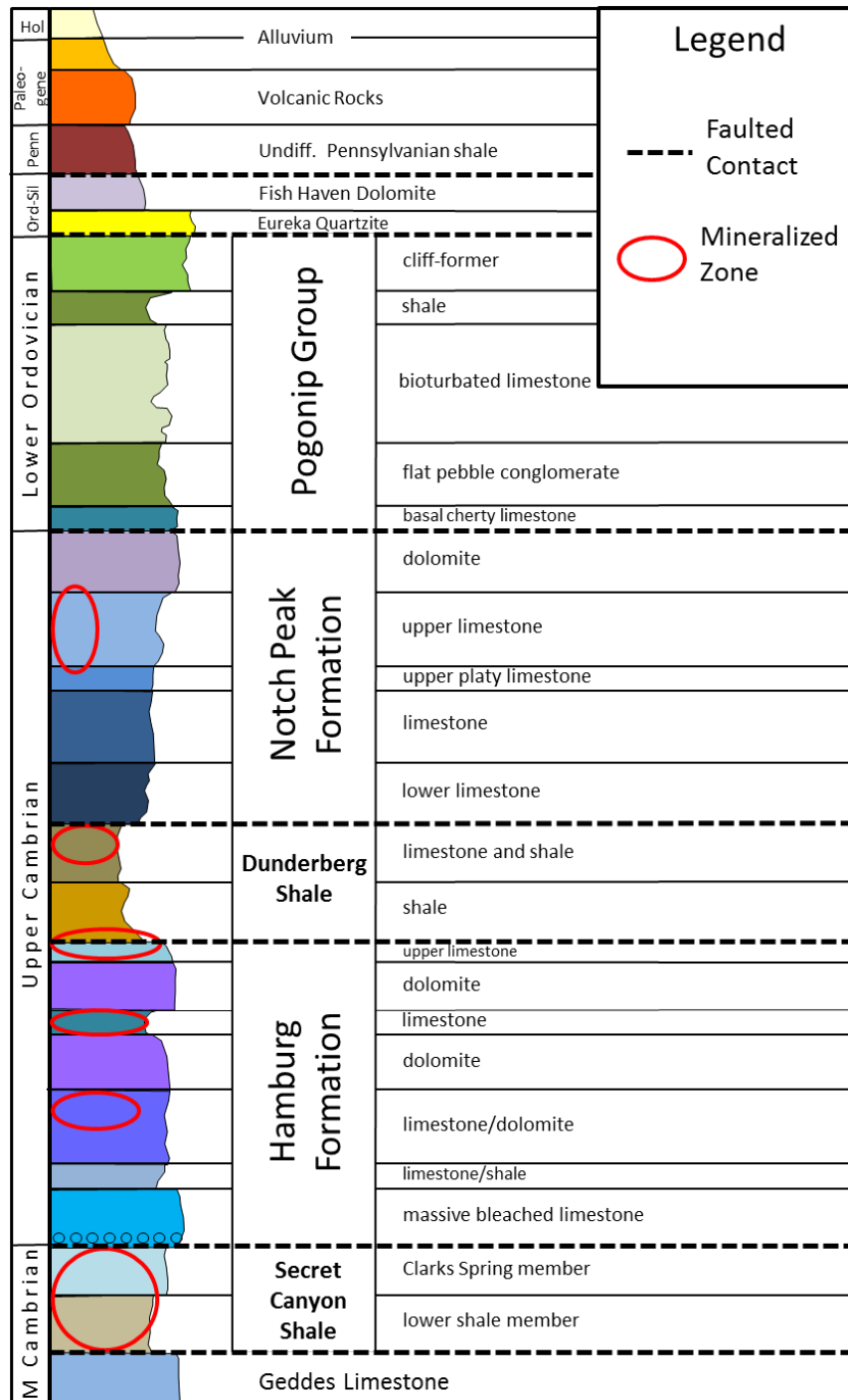


Figure 7.1 Simplified Geology of the Kinsley Mountains





**Figure 7.2 Stratigraphy of the Kinsley Mountains**  
 (compiled from Pilot Gold mapping and core logging)



Note: Significant formation-bounding faults are shown in black dashed lines and cut out substantial portions of the stratigraphy in some locations. Documented stratigraphic hosts for gold mineralization are circled in red and labeled with locations of mineralization.



The stratigraphic units described below and shown in Figure 7.2 are representative of formations that reflect global changes in sea level and extend over wide areas of eastern Nevada and western Utah. As a result, different formation names have been applied historically in different locations to units that are age and/or facies equivalents, leading to confusion and incorrect correlations in areas between type localities. Pilot Gold undertook a field and literature review and retained the services of consulting stratigrapher Harry Cook to place the stratigraphy at Kinsley into a regional context with appropriate correlations.

Low-angle faults form the contacts bounding most major stratigraphic units. While thick, massive limestone and dolomite units are largely unaffected, shale units are strongly deformed, with locally extreme changes in thickness and no consistent internal stratigraphy.

Geological units used in surface mapping and drilling are described below:

**MS** - Mine spoil.

**Qal** - Alluvium, colluvium. Unconsolidated gravel.

**Toa** - Older alluvium. Boulders and cobbles of quartzite and dolomite mixed with limestone gravels. Forms slightly elevated benches along the east side of the range.

**Tv** - Volcanic rocks. Maroon coloured, fine-grained ash fall tuff and possible flows. Animas reported that the rocks are andesitic crystal and lapilli tuffs, dominated by a fine ash matrix, with white feldspar crystals and biotite crystals each up to 3 millimetres. Volcanic rocks form low hills along the western and eastern range fronts.

**Ti** - Intermediate intrusive rocks. Tan to olive-grey, very weakly altered, generally east-northeast-elongate outcrops of porphyritic intrusive rocks composed of 50% coarse crystals and 50% matrix. Crystals consist of (40%) white feldspar, (30%) clear feldspar generally 0.5 – 1.0 centimetres, (25%) biotite and hornblende, 0.1-0.5 centimetres, and (5%) quartz, up to 0.5 centimetres (Animas, 2010). These intrusive rocks are probably related to the large quartz monzonite Kinsley stock located at the south end of the range (34.1 Ma K-Ar age).

Dykes and sills are generally elongated parallel to the strike of enclosing limestones, especially proximal to thrust faults and/or subunit contacts. They appear to be mostly sill-like. No significant contact metamorphic effects were observed other than minor recrystallization and local addition of silica to the host limestones and dolomites. Intrusive rocks are rare in the northern part of the ACE claims and are predominately located along the eastern foothills. Intrusive rocks are more common to the southeast of the mined area, increasing in frequency toward the Kinsley stock.

**Par** - Permian Limestone and Sandstone. South of the Kinsley stock, Permian strata are exposed in a low-elevation valley. These strata include sandstone, dolostone and fusilinid-bearing limestone. These strata are likely correlative with unnamed Permian strata mapped in the adjacent Goshute Range (Silberling and Nichols, 2002) and may be correlative with the Arcturus Formation.



**Pel - Unnamed Pennsylvanian Shale.** This unit is present only in a few drill holes in the Western Flank area. It represents a low-angle, fault-bounded sliver, with no other contact relationships preserved. It consists of dark grey to black, fissile shale, with a few calcareous intervals. Palynology and a single conodont recovered from three samples restrict the age of the shale unit to Pennsylvanian (Zippi, 2014). Given the age, this unit is likely a deeper-water facies of the Ely Limestone, which is exposed south and east of the Kinsley Mountains.

**Ofh - Fish Haven Dolomite.** Dark grey to black, finely crystalline dolostone with black chert stringers lying parallel to bedding and local fine laminations. Individual beds, where visible, range from 2-10 centimetres. The lower contact with the Eureka Quartzite is conformable with interbeds of sandy black dolostone and cross-bedded, clean, white non-calcareous quartzite. Fish Haven Dolomite caps the ridge top in the northeast quarter of the ACE claims where it rests on Eureka Quartzite and crops out in several locations along the western range front. The total thickness of Fish Haven Dolomite, exposed along the ridge top, is approximately 15 metres. This unit was identified as the Hansen Creek Dolomite in earlier reports, but the use of the name “Fish Haven” reflects the predominant use of this term in nearby areas.

**Oe - Eureka Quartzite.** White, medium-grained, well-sorted, massively-bedded to cross-bedded quartzite. It is mapped in a klippe at the top of the range north of the mine and along the west side of the range, where it underlies the Fish Haven Dolomite and overlies Pogonip Group limestones along a low- to moderate-angle, west-dipping fault. At the top of the range, the Eureka Quartzite forms high vertical cliffs along the west and northeast sides of the klippe at the top of the ridge, but is almost completely faulted out along the southwest edge of the klippe and along the northwest margin of the range where it is locally absent. The Eureka Quartzite forms a dip slope on the western slope of the range with scabs of quartzite resting on Pogonip Group rocks on a faulted contact along low ridges and along the range front. The Fish Haven-Eureka contact is marked by a brown, dolomitic, sandy limestone.

**Op - Pogonip Group.** The Pogonip Group is a diverse assemblage consisting primarily of limestone and silty limestone. It was formerly mapped as a single unit in the Kinsley Mountains, but has been subdivided by Pilot into five units as described below. On the basis of comparison with the Pogonip Group in the Long Canyon area, it is possible that only the lower two-thirds of the Pogonip Group is present in the Kinsley Mountains, with the upper portion removed along a low- to moderate-angle, west-dipping fault.

**Opcf - Pogonip Cliff- Former Limestone.** A thick-bedded to massive, light grey to bluish grey packstone with wispy bioturbated silt laminae. This unit commonly forms cliffs and is the uppermost unit of the Pogonip Group exposed at Kinsley Mountain. A direct stratigraphic contact between the Opcf and the Eureka Quartzite was not observed. The Cliff Former is approximately 70 metres thick and may be equivalent to the regionally recognized Ordovician Antelope Valley Formation.

**Opsh - Pogonip Calcareous Shale.** A narrow band of yellow-brown, limy shale, less than 15 metres thick, forms a recessive slope between the base of the Opcf and the uppermost portion of unit Opbt (described below). Outcrops of this unit are rarely exposed. Contacts with underlying and overlying units are gradational. This unit may be equivalent to the Kanosh Shale in the Pequop Range.



**Opbt** - **Pogonip Bioturbated Limestone**. A heterogeneous limestone assemblage consisting primarily of packstone beds grading upward from thick to medium to thin-bedded in a repeating cycle over numerous intervals. The beds are bioturbated and frequently contain brown sandy or silty irregular pods and lenses. Brown chert pods and lenses are locally common and usually irregular in shape. Several fossiliferous zones were noted, containing trilobite, brachiopod, gastropod and bryozoan fragments, oncolites and stromatolites. Outcrop patterns include steep, massive cliffs, stepped cliffs alternating with short recessive slopes, and long recessive slopes and dip slopes. This unit comprises a majority of the Pogonip Group exposed in the northern area. Faulting renders determination of the thickness difficult, but it is suspected to be at least 200 metres thick and possibly much thicker. The Bioturbated unit may be equivalent to the regionally recognized Ninemile Formation.

**Opfpc** - **Pogonip Flat Pebble Conglomerate**. This unit consists of thin- to medium-bedded packstone to wackestone with numerous beds containing flat pebble conglomerate. There are a few wavy beds of grainstone inter-bedded as well as some thicker beds containing chert pods or sandy pods and lenses. Worm tracks and mud cracks were observed on some bed surfaces. The contact with the overlying Bioturbated unit appears to be depositional and somewhat gradational. The thickness of the unit is approximately 150 metres and may be correlative to the regionally recognized Goodwin Limestone.

**Opcb** - **Pogonip Cherty Basal Limestone**. This unit comprises thin- to medium-bedded, medium- to light-grey, fine-grained, fossiliferous limestone with bedded chert and elongate chert nodules. It forms massive, resistant, cliffy exposures. The lower contact is gradational over a few metres into the Notch Peak Dolomite, which possesses the same characteristics but is dolomitized. Thickness is approximately 30 metres. In some locations, this unit rests on the Notch Peak Dolomite along a low-angle fault.

**Cnp** - **Notch Peak Formation**. The Upper Cambrian Notch Peak Formation consists mainly of dolostone overlying massive to burrowed or laminated limestone. It is divided into four map units in the Kinsley Mountain area as described below. This unit is partly equivalent to the Windfall Formation in the Eureka area, but the name Notch Peak Formation is more in agreement with unit assignments in adjacent mountain ranges such as the Pequop Range.

**Cnpd** - **Notch Peak Dolomite**. This unit consists of medium to dark grey, massive, medium grained dolostone with intervals of dark grey to black wispy-textured dolomite. Local chert stringers parallel bedding. The lower contact is often not exposed but appears to grade out of dolomite into limestone very similar in appearance to the basal portion of the Pogonip Group. Hydrothermal zebra dolomite is well-developed locally. The Cnpd forms cliffs on the upper, east-facing portion of the range in the north part of the ACE claims and dip slopes along the western slope. The unit varies in thickness from approximately 0 to 100 metres, probably due to boudinage or thinning along low angle faults.

**Cnpu** - **Upper Limestone**. This unit is a poorly-exposed unit composed of thin- to medium-bedded fine grained limestone with abundant chert bands, occasional oncolites and stromatolites, interbedded with medium- to coarsely crystalline fossiliferous limestone intervals.



The unit is represented by scattered outcrops of a light grey, grainy limestone with moderate amounts of chert in stringers and nodules with a pronounced burrowed texture and lensoidal concentrations of calcareous sand and fossil hash. The limestone is often recrystallized with a stockwork of white calcite veinlets. Cross sectional interpretation suggests the unit varies from approximately 50-100 metres in thickness.

**Cnpup** - **Upper Platy Limestone**. A dark grey to almost black, thin-bedded silty limestone is exposed in the low foothills and gullies immediately northeast of the mine area. It is not burrowed and contains locally abundant black trilobite fragments. Only a very limited thickness is exposed due to lack of topography and dip slopes. Similar strata were observed in the upper high wall on the south side of the “Ridge” pit, near the base of the Cnpu.

**Cnpb** - **Burrowed Limestone**. This unit consists of dark grey, medium- to massively-bedded, silty micritic limestone with distinctive, intensely burrowed structure. Wavy bedding with pink silty laminae defines the abundant burrows. The lower contact of the Cnpb with the Cnpl is gradational. The upper contact of the Cnpb is usually a low angle fault putting this unit in contact with overlying units of Op or Cnpu. Cross-sectional interpretation suggests that the unit approaches 150 metres in thickness.

**Cnpl** - **Lower Limestone**. The base of this unit is comprised of a light grey, coarsely recrystallized limestone, which grades upward to thin-bedded silty, trilobite-bearing limestone, passing into thick-bedded to massive fine- to medium-grained limestone with locally abundant chert nodules and stringers. Above this sequence, the limestone becomes more silty with well-developed flat, planar silty partings, and consists of medium- to dark grey, thin-bedded, cherty micrite with occasional trilobite fragments. Argillaceous partings along flat, planar beds, locally banded with dark grey to black chertier beds and lighter grey argillaceous interbeds produce a “barber pole” striping noted in core. The lower contact with the Dunderberg shale is usually faulted. Cross sectional analysis indicates the unit is at least 100 metres thick.

**Cds** - **Dunderberg Shale**. This unit is comprised of grey to brownish tan, thinly bedded, moderately to strongly fissile siltstone (subunit **CDSsh**), that ranges from weakly to strongly calcareous with interbeds of medium to dark grey to black, fossiliferous limestone beds ranging from 2 centimetres to 3 metres thick (subunit **CDSli**), as well as beds of siltstone with limestone nodules (subunit **CDSnod**). The Cds has gradational upper and lower contacts. The upper portion of the unit contains more abundant limestone interbeds and the upper contact is placed at the top of the uppermost shale bed just beneath the lowermost massive- to thick-bedded limestone bed of the Cnpl unit. Bedding-parallel shearing within the shale produces boudins of limestone and dolomite enclosed in shale. The unit ranges from 0 to over 100 metres thick depending on degree of internal deformation. The upper, limier portion of the Dunderberg shale may be equivalent to the Windfall Formation in the Eureka area. The lower, siltier portion is likely equivalent to the Dunderberg shale, a name in wide use in eastern Nevada and western Utah. Examination of the Candland Shale in the type locality in the House Range suggests that the siltier portion has a stronger resemblance to the Dunderberg Shale.

**Ch** - **Hamburg Formation**. Strata beneath the Dunderberg Shale were originally subdivided by Cominco into the Big Horse Limestone and Hamburg Dolomite, with an undifferentiated, Cambrian “lower limestone” lying beneath the Hamburg Dolomite. These assignments were evidently based on a



resemblance of these units to the same formations in the type locality in the House Range, 125 kilometres to the southeast. However, further study of the “lower limestone” and correlation of various units with other formations in the region necessitated a revision to the nomenclature. Based on observations of this part of the stratigraphic section in the well-studied Eureka and House Ranges, the following nomenclature was adopted.

**Chul** - **Hamburg Upper Limestone**. The Hamburg Upper Limestone (formerly Big Horse limestone) consists of relatively massive, grey to brownish-grey, thin-bedded, fossiliferous, silty limestone varying from 0 to 10 metres in thickness. The discontinuous nature and thickness variations are due to bedding-parallel faulting. Individual beds are 1-3 centimetres thick, locally with thin, wavy, undulating shaly partings. This limestone is commonly replaced by silica to form jasperoid (**CHj**).

**Chd** - **Hamburg Dolomite**. The Hamburg Dolomite consists of medium- to dark grey, occasionally oolitic, medium to coarse grained dolostone. It is medium to thick-bedded to massive and forms prominent cliffy outcrops on both sides of the range. According to MacFarlane (2011) the unit locally contains fossil hash up to 40% and minor black chert stringers and nodules. The uppermost 3 metres is commonly silicified. The CHD becomes calcareous and more silty towards its base. It is approximately 75 metres thick, but is thinner or absent in some locations due to faulting or boudinage. It contains a persistent interbed of silty limestone (subunit **CHDls**) up to a few tens of metres thick.

**Chl** - **Hamburg Lower Limestone**. The section immediately below the Hamburg dolomite is assigned to the lower portion of the Hamburg Formation. It was originally identified in core, and subsequently mapped on surface in the southern part of the property. The lower contact of the Hamburg Dolomite is gradational into a sequence of thick to massive beds of limestone with shaly, stylolitic partings, alternating with thinly interbedded dark grey shale/siltstone and medium grey limestone. The massive beds are variably dolomitized in the upper portion of the unit under the Hamburg dolomite. Massive beds contain variable amounts of fossil hash, including trilobites and brachiopods.

**Ccsc** - **Secret Canyon Shale**. Like the Hamburg Formation, the Secret Canyon Shale has not been described previously in the Kinsley Range. Nomenclature is adopted from studies in the Eureka district as summarized by Roberts *et al* (1967). The Clarks Spring Limestone and a lower shale unit are considered members of the Secret Canyon Shale, a formation defined in the Eureka area (Nolan, 1962). However, the “member” designation has been dropped for unit identification by Pilot Gold. The Clarks Spring Limestone also bears a strong resemblance to the Weeks Limestone in the House Range, a lateral facies equivalent of the Hamburg Dolomite in the Wah Wah Range.

**Ccs** - **Clarks Spring Limestone**. The Clarks Spring Limestone consists of a massive limestone unit overlying and gradational into thinly interbedded shale and limestone. The Clarks Spring Limestone is approximately 100 metres thick in most areas. The massive unit consists dominantly of massive, variably stylolitic limestone with minor thin silt beds. It is medium to light grey in colour, locally taking on a “bleached” appearance. The base of the unit is marked by a distinctive oncolitic limestone bed. The massive unit is gradational through a sequence of massive limestone beds interlayered with thinly interbedded limestone and shale into a lower unit composed primarily



of thinly interbedded, pale to medium grey limestone and dark grey shale. The lower contact with the underlying lower shale member of the Secret Canyon Shale is marked by a gradual decrease of limestone beds.

**Csc - Secret Canyon Shale (lower shale member)**. The lower shale member of the Secret Canyon Shale consists of relatively massive, medium to dark grey argillite or mudstone with 4-8 centimetres long, 2-3 centimetres thick, medium to light grey limestone “nodules”, which may represent large burrows or possibly boudinaged limestone beds. Some areas of thinly interbedded limestone and shale are also present within this unit. This unit is variable in thickness from 20 to over 100 metres. It is often in fault contact with the Geddes Limestone. Where a fault is lacking, there is interbedding of shale with thick, massive bioclastic limestone beds characteristic of the Geddes Limestone.

**Cg - Geddes Limestone**. The Geddes Limestone is recognized only from drill core and from a possible exposure at the extreme south end of the Kinsley Mountains. It marks the deepest drilling as of the Effective Date of this report, and as a result, the total thickness is unknown. The Geddes Limestone consists primarily of thin to medium bedded, medium to light grey limestone with argillaceous partings and stylolites, alternating with massive beds consisting of bioclastic material including oncal balls and oolites. It is so named as it resembles the Geddes Limestone in the Eureka area, where it lies immediately beneath the Secret Canyon Shale. It also bears a strong resemblance to the Marjum Formation (dolomite) in the House Range in western Utah.

### 7.1.2.2 Structural Geology

The structural history of the Kinsley area is complex and has been elucidated primarily through geological mapping, examination of drill core, and application of regional studies. There is evidence for at least three deformational events in the project area, including: contractional ductile deformation believed to be related to the mid-Jurassic Elko and/or Cretaceous Sevier Orogeny; early to mid-Cenozoic extension, manifested primarily by low-angle and high-angle normal faults; and late Cenozoic high-angle basin and range faulting.

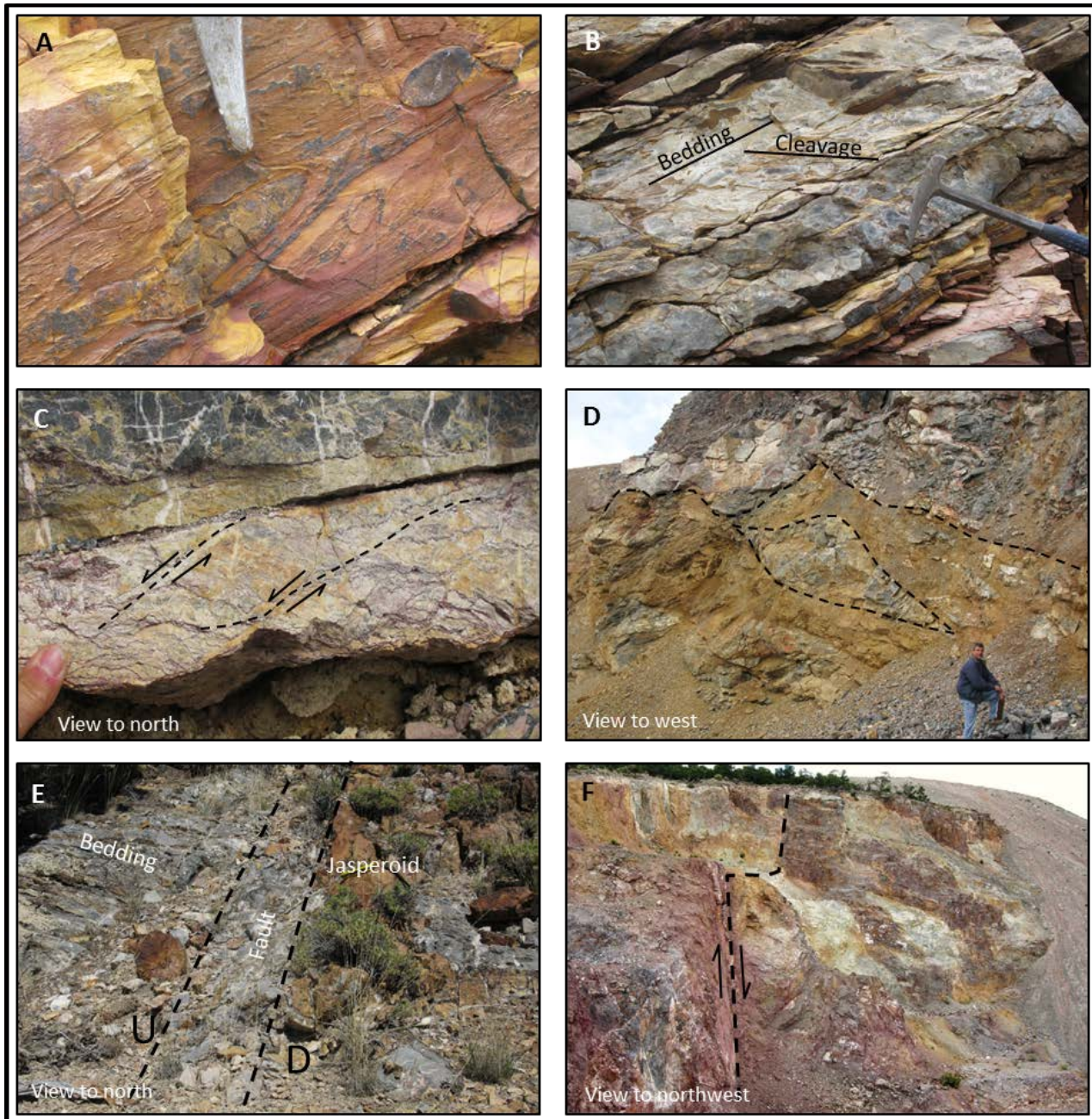
**Mesozoic contractional deformation** Evidence of Mesozoic ductile deformation is present on a macroscopic and regional scale. It includes: 1) local evidence of a layer-parallel foliation and boudinage of limestone beds, particularly in the Dunderberg Shale; 2) a second phase crenulation cleavage locally in shalier units; 3) low angle attenuation faults (may be inverted in the Cenozoic); and 4) evidence for boudinage on a regional scale. At least some of the early deformation is likely Jurassic in age (Elko Orogeny), as evidenced by folded and faulted rocks intruded by a middle Jurassic pluton in the White Horse Pass area to the northeast of the Kinsley Range (Silberling and Nichols, 2002a, 2002b).

Silty and shaly strata throughout the project area, including shalier portions of the Pogonip Group and Dunderberg Shale, are locally strongly sheared, stretched, and foliated, with foliation roughly parallel to bedding (bedding may be transposed). Boudinage is present on a centimetre scale, particularly in silicified limestone beds enclosed in shale (Figure 7.3A). Flattening of sand-filled burrows and limestone nodules in the Dunderberg Shale is also present. Rare isoclinal folds of limestone beds with associated bedding-parallel foliation in the Dunderberg Shale are seen in core.





Figure 7.3 Examples of Deformation Styles



A. First phase ductile deformation manifested by layer-parallel foliation and boudinage of competent limestone bed in the Dunderberg shale. B. Second phase ductile deformation manifested by spaced cleavage discordant to bedding in the Dunderberg shale. C. Rare top to the west mylonitic fabric in Dunderberg shale at the contact with the Notch Peak Formation; largely overprinted by brittle fabrics. Mylonite may be a relic of Mesozoic attenuation faulting. D. Shear zone in Dunderberg Shale at the base of the Notch Peak Formation, including large phacoid of limestone. E. Tertiary north-northeast-striking normal fault in the basal Pogonip Group, with associated jasperoid lenses. F. Tertiary "Kinsley Zone" northwest-striking normal fault in the Main pit.



A second foliation, consisting of a slaty to phyllitic cleavage at moderate angles to bedding and the first foliation, is locally present in the Dunderberg Shale (Figure 7.3B). A faint cleavage defined by phyllosilicate minerals is also present in shaly beds in the Clarks Spring Limestone. The cleavage has formed at low angles to bedding and refracts around limestone boudins. The Secret Canyon Shale also displays evidence of boudinage of limestone beds throughout.

On a more regional scale, low-angle attenuation faulting is known, or suspected, along most contacts between units with distinct contrasts in rheological characteristics, such as massive limestone and shale (Figure 7.3C). Low angle faults are present intermittently along the base of the massive limestone unit at the top of the Secret Canyon Shale, at the top of the Hamburg Upper Limestone, at the top of the Dunderberg Shale, and the base of the Pogonip Group. Most of these faults have the effect of thinning various units, but do not cut markedly up or down section.

In the Main Pit, a mylonitic fabric with top-to-the-west kinematic indicators is developed locally along the Dunderberg Shale-Notch Peak Limestone contact. This fabric may be related to Mesozoic deformation, as it differs from the brittle fabrics associated with Cenozoic normal faulting. It is largely overprinted by Cenozoic brittle deformation (Figure 7.3D). Boudinage of two-metre-thick limestone beds is in evidence over a significant thickness of sheared rock below the contact. The entire Dunderberg Shale appears to be a regional “glide plane”, with intense deformation over the entire unit where thinned.

Of particular interest at Kinsley is whether boudinage is present on a large scale, as is seen at Long Canyon, a gold deposit located about 90 kilometres north of Kinsley. At Long Canyon, boudinage of the 80-metre-thick Notch Peak Dolomite exerts a first-order control on distribution of normal faults and subsequent gold mineralization, with mineralization focused in boudin necks and cracks in the dolomite (Smith *et al.*, 2010). The Notch Peak Dolomite and Hamburg Dolomite represent a similar environment for boudinage on a large scale. To date, some evidence suggests that boudinage is present in both units on a regional scale. The Notch Peak Dolomite is thinned or absent over much of the mine area, but is up to 100 metres thick a short distance to the north. No clear-cut evidence for boudinage has been observed in the Hamburg Dolomite to date.

Two large, west-dipping faults of unknown age are present on the west side of the range. The faults pre-date northwest-striking faults of suspected Cenozoic age and may post-date layer-parallel attenuation faults described above. The uppermost fault places a dramatically thinned section of Eureka Quartzite (thickness varies from 0 to 100 metres) and Fish Creek Dolomite over several members of the Pogonip Group. The fault is moderately to shallowly west dipping. It bounds much of the west side of the Kinsley Mountains, and forms a patchy dip-slope in many places. In the southern part of its mapped extent, the fault overlies the Flat Pebble Conglomerate member of the Pogonip Group; at the north end of the range, it overlies the highest strata present in the Pogonip Group at Kinsley. At the top of the range, a nearly flat-lying klippe of Pogonip Group rocks is present just north of the mine.

A similar low angle fault places a thinned section of the Dunderberg Shale and overlying strata over the Hamburg Dolomite. To the west, the fault cuts down-section, removing the Hamburg dolomite and placing the Dunderberg Shale directly over the Hamburg Limestone.



Particularly in the second example, the fault appears to ramp up through a large part of the Hamburg Limestone before assuming a position roughly parallel to strata in both the hanging wall and footwall. This pattern is consistent with faults representing an east-verging thrust fault system, as has been documented in the Confusion Range to the southeast (Greene and Herring, 2013). The faults in the Confusion Range are thin-skinned, do not involve metamorphism, and are correlated in time and space with the hinterland of the Cretaceous Sevier orogenic belt. Faults in the Confusion range also use the Dunderberg Shale as a glide plane, as well as the base of the Eureka Quartzite.

In the northern extent of the Western Flank target area, Pennsylvanian shale is emplaced over the Notch Peak Formation on a low-angle fault. This may represent a third west-dipping fault similar to the two described above.

**Cenozoic extensional deformation** – Several episodes of Cenozoic high- and low-angle normal faulting and local wrench faulting followed contractional deformation. Major faults are shown in Figure 7.4.

**Low angle faults.** As noted previously, low-angle normal faults are located along contacts between most major stratigraphic units, most notably at the bases of the Eureka Quartzite, Pogonip Group, and Notch Peak Limestone. The extent to which these faults may be mid-Mesozoic attenuation faults, or late Mesozoic thrust faults, that have been reactivated as normal faults is not known. These faults appear to divide the stratigraphic sequence into four distinct domains, as shown in the cross-sections in Figure 7.5. The domains include a lower plate (stratigraphy up to and including the Dunderberg Shale) overlain by a middle plate consisting of the Notch Peak Formation (Figure 7.3D), and an upper plate consisting of the Pogonip Group. Stratigraphic intervals such as the Dunderberg Shale and lower units of the Pogonip Group pinch, swell, and disappear along these faults. The Kinsley Mountains appear to form the core of a broad, gently north-plunging anticline on a kilometre scale. The low-angle fault between the Notch Peak Formation and the underlying units appears to thin the Dunderberg Shale over the crest of this anticline. Low-angle normal faults are characterized by zones of sheared rock up to 10 or more metres thick and are best developed in silty rocks. Within the sheared zones, lenses of limestone are often present (Figure 7.3D).

**High angle faults.** High-angle faults generally strike north to north-northeast and northwest-southeast (Figure 7.4).

Faults that strike northwest appear to be spaced at regular intervals along the Kinsley Mountains and are exposed in the Main pit (Figure 7.3F). The timing of these faults relative to other Tertiary age faults and their role in mineralization are unclear at this time, although there is a clear spatial correlation between the most prominent northwest-trending fault system and mineralization at Kinsley. Robinson (2005) interpreted this fault, called the Kinsley trend, as an oblique, down to the north, right-lateral wrench fault zone up to a few hundred metres wide with significant displacement, and that it was integral to localizing mineralization in this northwest-trending corridor. However, mapping and three-dimensional modelling undertaken by Pilot Gold, while confirming the existence of northwest-trending faults, has not been able to clearly establish a direct link between the faults and mineralization, other than an obvious spatial one.

A second, parallel wrench fault was identified approximately 1.5 kilometres south of the Kinsley zone. This fault has apparent left lateral movement with an estimated displacement of 500 metres. Additional



northwest-trending faults have been mapped at one to two kilometre intervals from the Kinsley zone north to the end of the Kinsley Mountains.

North- to northeast-striking faults are numerous and present on all scales throughout the Kinsley Mountains (Figure 7.3E). Timing of faulting is uncertain. Some east-dipping, high-angle faults mapped in the Notch Peak Formation on the east side of the range appear to exhibit listric geometry and sole eastward into lower-angle structures in the Dunderberg Shale, producing a series of west-dipping rotated blocks. Other faults cut the low-angle faults, suggesting a protracted history of high-angle faulting. Most faults exhibit less than 10 metres of vertical displacement, although several along the east side of the Kinsley Range juxtapose the Notch Peak Dolomite against the flat pebble conglomerate unit in the Pogonip Group with an estimated several tens of metres of down-to-the-east vertical displacement.

Surface work has identified hundreds of geochemically-anomalous jasperoid bodies located along north-northeast- and northwest-trending faults.

The Kinsley Mountains are bounded on both sides by younger high-angle faults related to Basin and Range tectonic activity. One of these faults on the east side of the range appears to have been active fairly recently, based on the interpretation of offset of alluvial terraces.

**Figure 7.4 Fault Map of the Kinsley Mine Area**

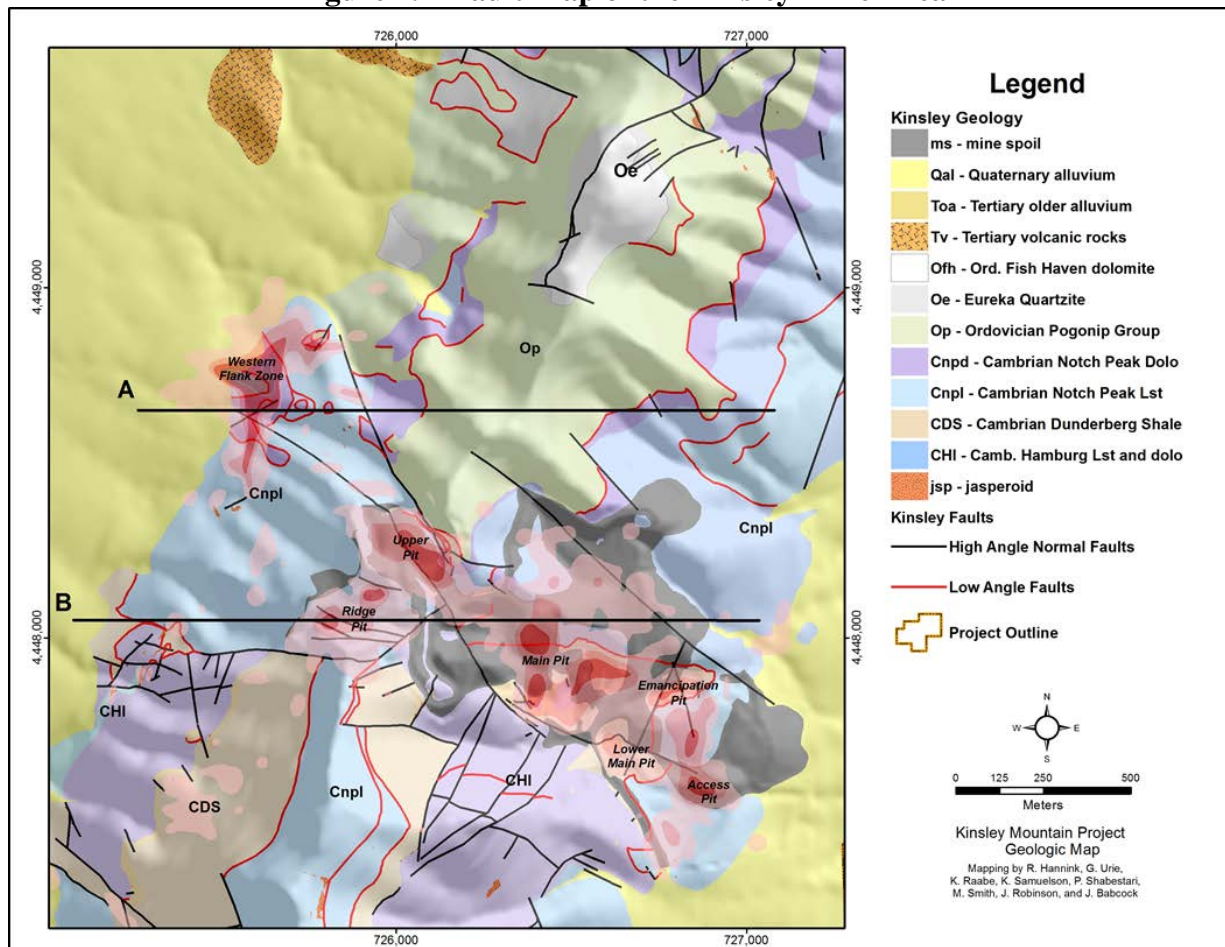
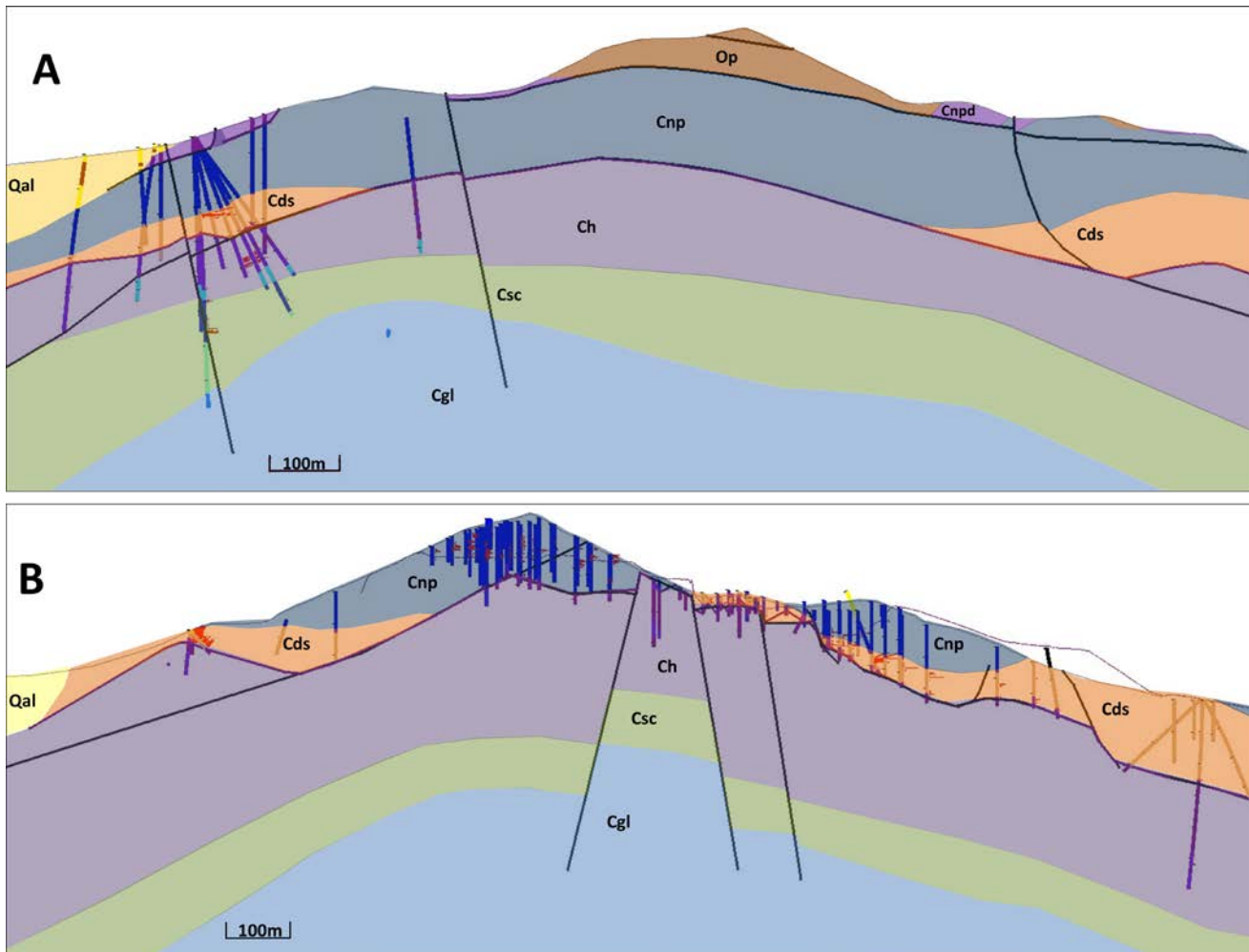




Figure 7.5 Diagrammatic District Cross-Sections Looking North



Cross-sections correspond to section lines on the map in Figure 7.4. Cgl=Geddes limestone; Csc=Secret Canyon Shale; Ch=Hamburg limestone and dolomite; Cds=Dunderberg Shale; Cnp=Notch Peak Limestone; Cnpd=Notch Peak Dolomite; Op=Pogonip Limestone; Qal=alluvium. Faults are shown in black.

### 7.1.2.3 Breccias

Breccias at Kinsley are associated with brittle faults and dissolution cavity collapse. Examples of the latter are well developed within the relatively massive Notch Peak Limestone in the Upper and Ridge pit areas and comprise a significant host of mineralization in this area. Cavities are irregular in form and filled with angular clasts derived from ceiling collapse, as well as finer-grained laminated cave-fill sediments (Figure 7.6). Cement consists of calcite and/or silica.



**Figure 7.6 Mineralized Breccia Textures**



Left: Silicified cave fill breccia in Upper Pit. Note laminated geopetal fill draped over large limestone clasts in centre of photo. Right: Collapse breccia in high-grade interval, core hole PK91CA. Matrix/cement includes pyrite, silica and late calcite.

Silicified and mineralized dissolution breccias in the Upper pit area appear to be localized along steep, north- to northwest-trending fractures or faults. However, the mineralized zone as a whole appears to be relatively flat and tabular overall, based on the distribution of pre-mining drill intercepts.

Small zones of solution collapse breccia are also present in association with high-grade zones of gold mineralization in the Clarks Spring member of the Secret Canyon Shale.

#### **7.1.2.4 Alteration**

Alteration types observed to date at Kinsley are typical of those observed elsewhere in northeast Nevada in association with Carlin-type sediment-hosted gold deposits and include: early (pre-mineralization?) dolomitization; early- to syn-mineralization silicification and jasperoid development, pyritization (discussed in the mineralization section below), decalcification, calcite veining; and post-mineralization oxidation (limonite and hematite).

Dolomitization – Dolomitization is evident locally, primarily in association with dolomite units including the Hamburg Dolomite and the Notch Peak Dolomite. Dolomitization is recognized by distinctive dark grey and medium grey bands or blebs of coarse dolomite (zebra dolomite) on a 0.5- to 1-centimetre scale. It appears to pre-date mineralization. Dolomitized rocks contain ferroan dolomite and increased porosity and elsewhere in the region constitute a host for gold mineralization. Dolomitized rocks do not appear to host significant mineralization at Kinsley.



Silicification – Silicification is manifested by the variable replacement of carbonate rocks by silica or quartz. Several distinct styles are in evidence at Kinsley: a) complete, texture-destructive replacement of the rock mass along fault zones by red-brown jasperoid; b) non-texture-destructive passive replacement of beds by jasperoid, primarily in the Hamburg Upper Limestone; c) silicification of the matrix of karst breccia and cave-fill sediments, primarily in the Notch Peak Limestone; and d) weak to moderate patchy silicification associated with strong pyrite alteration in gold mineralized zones.

In the field, jasperoid occurs in zones or lenses up to a few metres wide and up to tens of metres long, consisting of massive or “net-textured” silica replacements in limestone, and ranges from pale- to medium-grey and very fine grained to dark-reddish brown and grainy (Figure 7.7). The latter locally contains vugs with linings of white drusy quartz, as well as unoxidized pods with very fine-grained disseminated pyrite. Structurally-hosted jasperoids are common throughout the property along north- and northeast-trending and northwest-trending fault zones. Most contain variable brecciation and are strongly anomalous with respect to As, Sb, Tl and Hg, and some contain gold. Many occurrences of this type are flanked by zones of non-texture destructive, passively emplaced jasperoid along beds.

In drill holes, in the pit area, the Hamburg Upper Limestone is usually replaced by jasperoid as described above, and it constitutes one of the main ore hosts.

Solution collapse breccias hosted in the Notch Peak Formation are the main ore host in the Upper Pit. The breccias are variably silicified, ranging from silica cementation of the matrix to complete replacement of both matrix and clasts.

Weak to moderate patchy silicification is present to some degree in all drill holes with gold mineralization. It is non-texture-destructive and, when unoxidized, can be difficult to recognize.

Decalcification – Decalcification, defined as removal of calcite from limestone or limy siltstones or shales, is common in the Dunderberg Shale, rendering it relatively weak and porous. Decalcification can either be primary (related to weakly acidic mineralizing fluids) or secondary (related to surface weathering). Decalcification with oxidation imparts a buff colour and soft, chalky appearance to the rock.

Subtle signs of decalcification were noted in the Secret Canyon Shale associated with gold mineralization. Decalcification in this environment is manifested by 1) thinning of shale beds (volume loss); darker colour to shale beds; and less “fizz” when tested with HCl. Volume loss may have given rise to the small areas of collapse breccia also observed in association with higher-grade intervals.

Rare “sanding” observed in dolomite may represent decalcification of limy matrix, leaving disaggregated dolomite grains.

Calcite veins – Calcite veins are ubiquitous in the mine area, particularly in association with massive limestone units. Veins are typically white and coarse grained and may form dense stockworks in some areas. Calcite veins may be related to decalcification. Coarse white calcite is also commonly seen as breccia cement near the tops of collapse cavities.



**Argillization** – Clay alteration is not well documented at Kinsley. Clay alteration is present in oxidized and decalcified parts of the Dunderberg Shale. Constituent clay is suspected to be illite, based on similarities to other sediment-hosted deposits and limited X-ray diffraction testing by Cominco (Monroe *et al.*, 1988). Felsic dikes are also clay altered. Additional study of clay alteration and clay alteration zoning through hyperspectral analysis may be useful in providing a vector for mineralization.

**Oxidation** – Oxidation is interpreted to be entirely supergene and not hydrothermal. Oxidation ranges from fracture-hosted to pervasive and consists primarily of goethite and limonite, with minor hematite and rare scorodite. Jarosite has also been noted by Cominco geologists (Monroe *et al.*, 1988). The depth of oxidation varies locally with topography, permeability, and rock type, and appears to range from less than 100 metres to locally over 400 metres. Oxidation in deeper drill holes is associated with gougy, late fault zones, particularly where there is abundant disseminated pyrite in the rock.

**Figure 7.7 Jasperoid outcrop in the Upper Hamburg Limestone**



## 7.2 Mineralization

### 7.2.1 Location of Mineralization

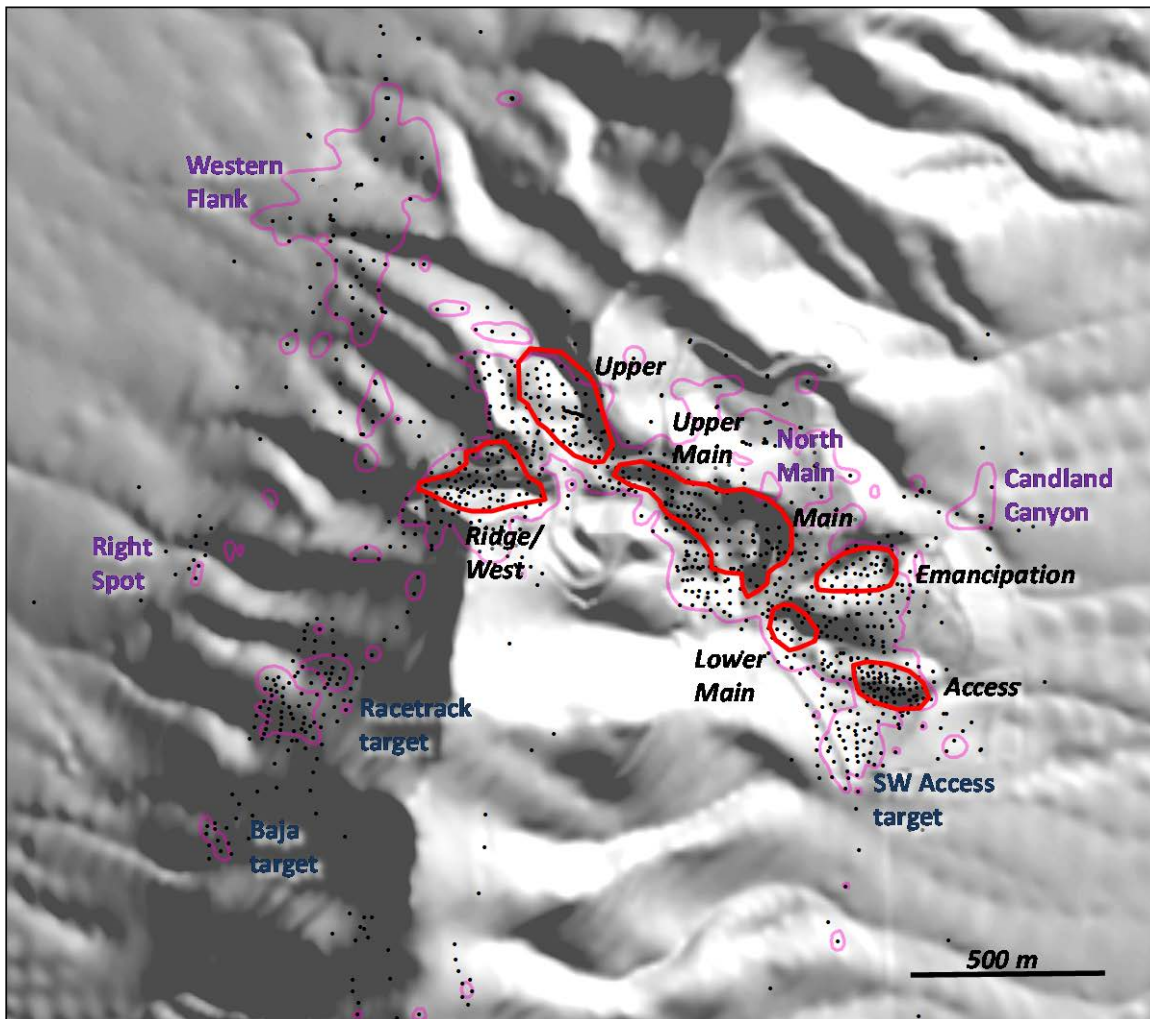
The gold mineralization identified and/or exploited by Cominco and Alta Gold is located primarily along a northwest-trending corridor near the centre of the ACE (southern) claim block and in a north-trending corridor in the southwestern portion of the ACE claim block (Figure 7.7). This mineralization is located primarily in areas where the Dunderberg Shale and Hamburg Upper Limestone, the primary hosts of mineralization exploited in Alta's mining operation, are exposed on the surface. Figure 7.8 illustrates the approximate outlines of pits developed on the main deposits at Kinsley, including the Access, Emancipation, Lower Main, Main, Upper Main, Upper, Ridge, and West Ridge pits, as well as the extent of historical drilling. The gold endowment in each drill hole was summed to produce a gridded map showing areas with significant clusters of gold intercepts in drill holes that fall outside of the





existing pits. A number of these clusters are present around the margins of the Access, Emancipation, Lower Main, and Main pits.

**Figure 7.8 Map Showing the Locations and Names of Mined Deposits**



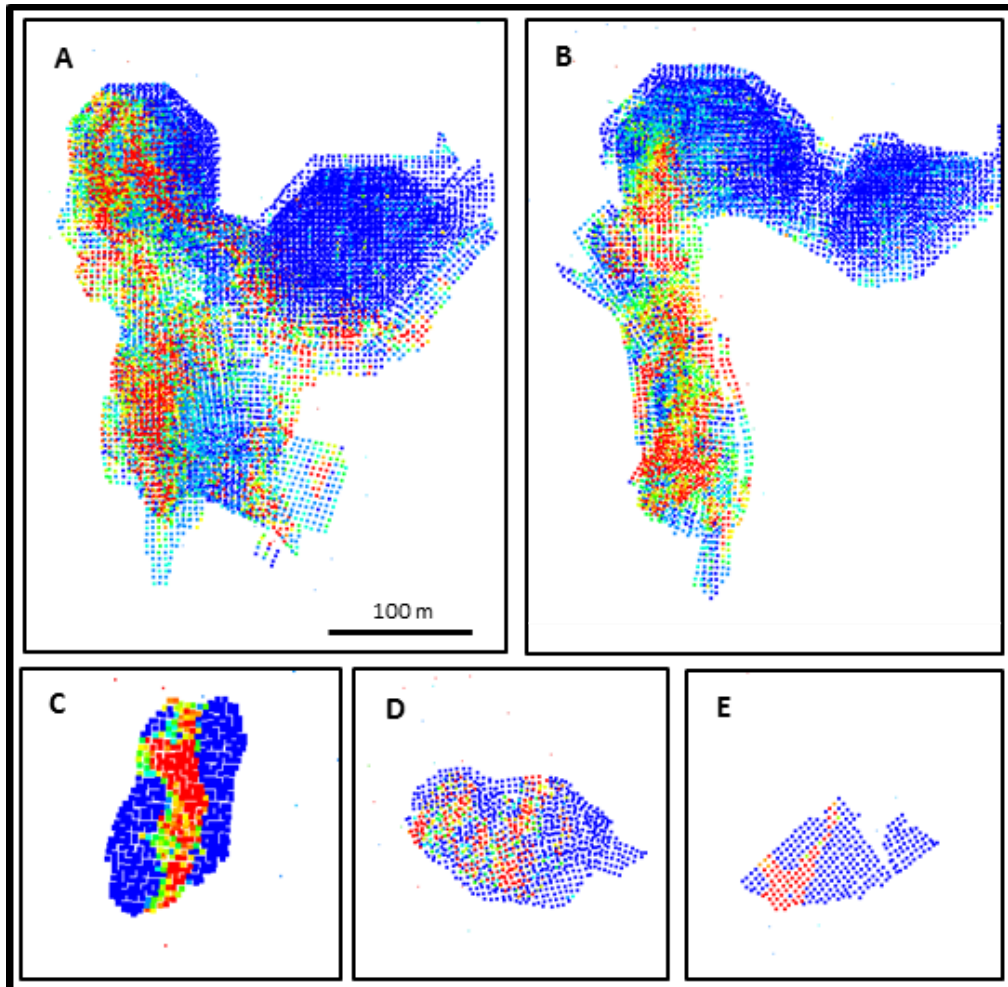
Pit outlines are in red. Pink polygons enclose drill holes with at least 0.2 g Au/t in at least one sample. Pit names are in italics. Historical target names are in blue text. Targets developed by Pilot Gold are labeled in purple.

Gold in the historical pits is controlled both stratigraphically (hosted primarily in the Hamburg Upper Limestone and Dunderberg Shale, where present), and structurally, along a wide, northwest-trending corridor of small faults named the “Kinsley trend”. Third-order control in the pits appears to be along relatively cryptic, steep, northeast- to north-northeast-striking faults visible in the pit walls (Figure 7.3F) and in trends discerned from blast-hole data (Figure 7.9).

Subsequent drilling by Pilot Gold, using a model derived from surface mapping and knowledge of structural hosts at Long Canyon, has identified north-northeast-striking, north-northeast-plunging zones of mineralization along small folds and faults.



**Figure 7.9 Controls on Mineralization in the Historical Alta Pits from Blast-Hole Data**

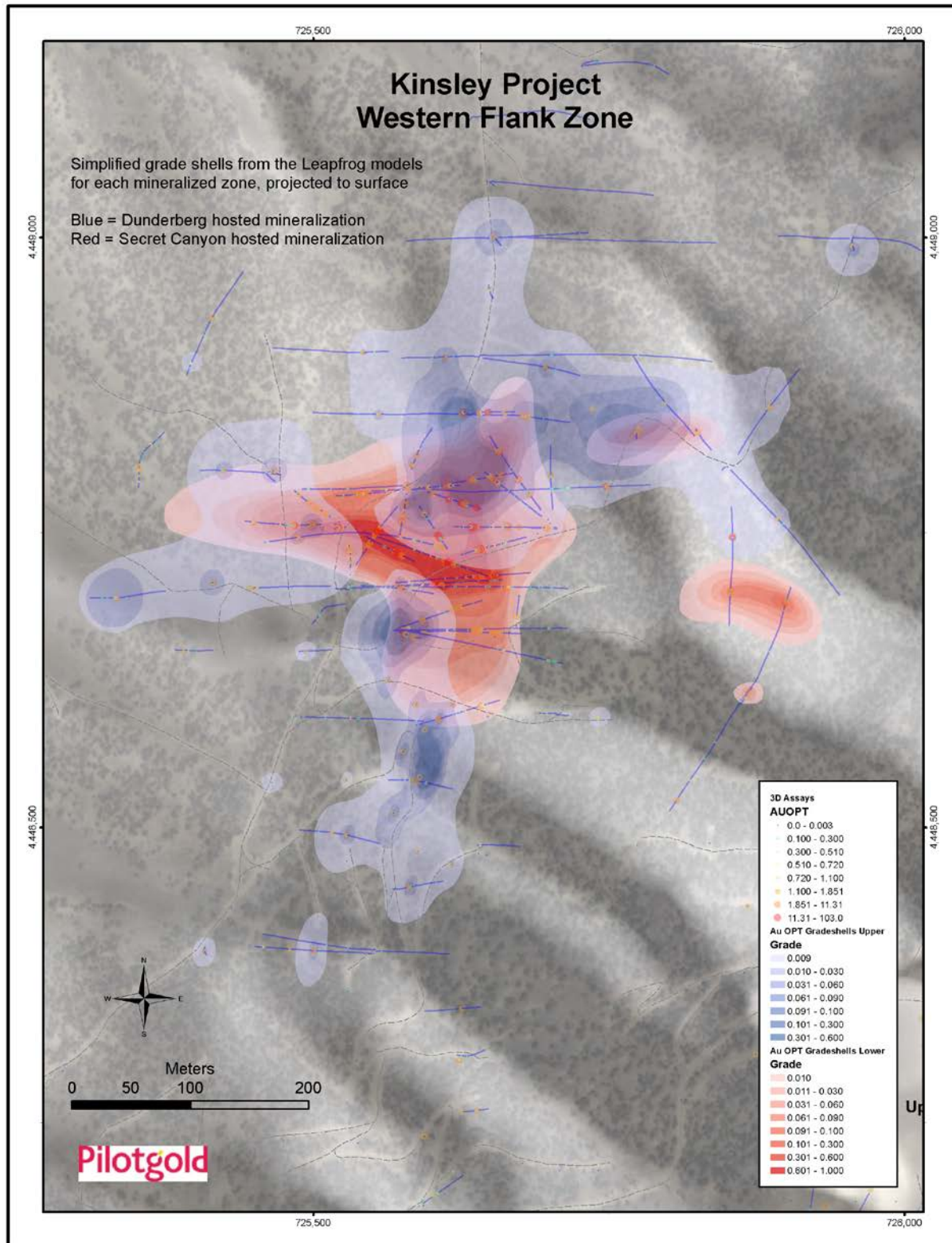


Plan maps of blast hole data for four of the historical pits. Red shows gold grades > 1 g Au/t; royal blue represents grades below the lower limit of detection. While the principal control is stratigraphic, note north- to northeast-trending linears, as well as northwest-trending linears. A. Main Pit, lower elevation. B. Main Pit, upper elevation. C. Lower Main Pit. D. Access Pit. E. Emancipation Pit.

Drilling in 2012 through 2014 led to the discovery of mineralization in the Western Flank and Right Spot areas, located to the northwest of the historic pits (Figure 7.10, Figure 7.11, and Figure 7.12). In this area, as in the pits, the primary control is stratigraphic, with gold mineralization predominately hosted in the Dunderberg Shale and Clarks Spring Limestone. Gold mineralization has also been documented in a limestone lens within the Hamburg Dolomite, the Hamburg Limestone, and the Secret Canyon Shale. Gold mineralization in the Dunderberg Shale appears to lie along a gently north- to northeast-plunging, linear zone defined, at least locally, by a small fold and fault system. Gold mineralization in the deeper stratigraphic horizons is influenced by the northeast-striking structure, but is more strongly influenced by a west-northwest-striking, steeply north-dipping structure that is likely a continuation of the northwest-trending Kinsley Trend.



**Figure 7.10 Drilling and Mineralization Trends in the Western Flank Area**  
(gold grades in ounces per ton)





Mineralization in the Dunderberg Shale appears to be controlled by a small, north to northeast-plunging fold/fault system that daylights at the Right Spot target. Mineralization in the lower stratigraphic units may be controlled by a northwest-trending structure that links with the Kinsley trend in the historical pits.

**Figure 7.11 Cross Section through the Western Flank Deep Target Looking West**

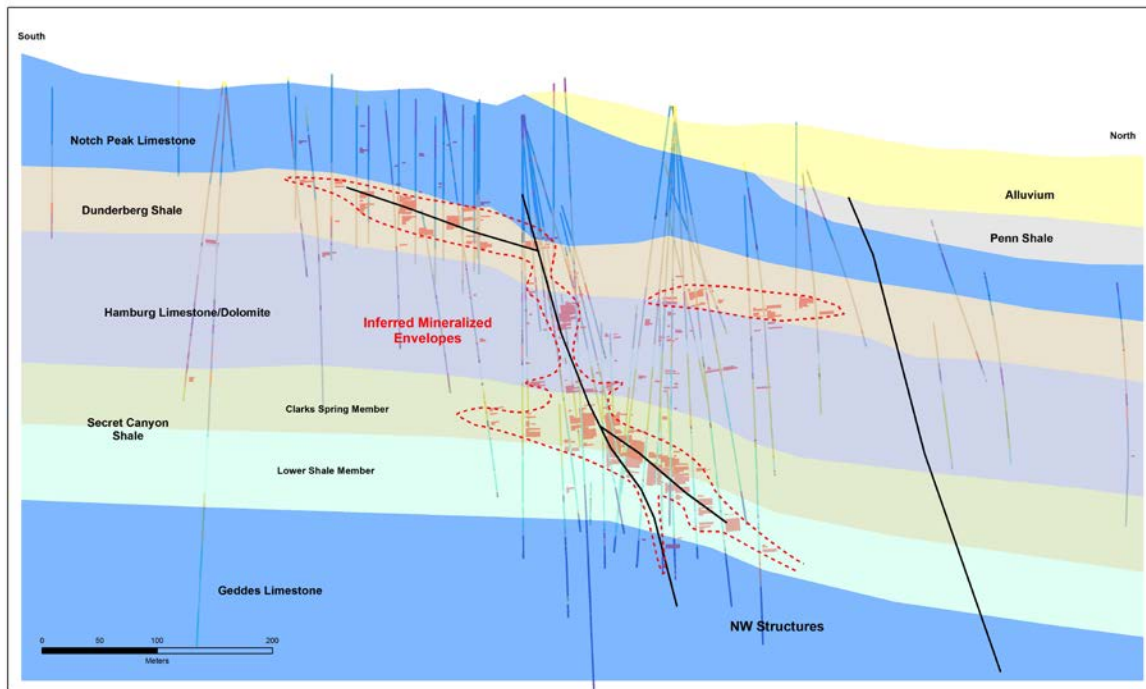
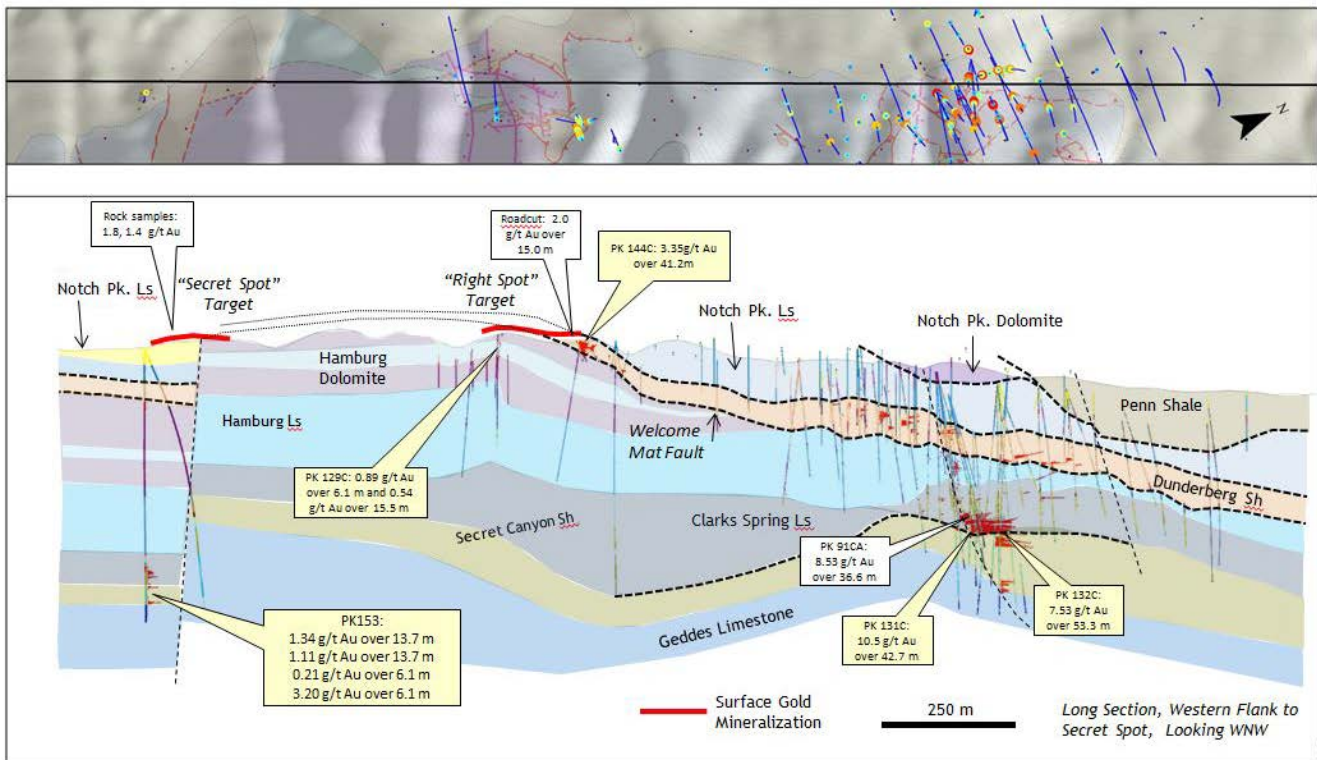




Figure 7.12 Long Section through the Western Flank/Right Spot Area



Diagrammatic section illustrating the location of mineralization. Significant mineralization has been documented in drilling in the Dunderberg Shale, an unnamed limestone unit within the Hamburg Dolomite, the Hamburg Limestone, and the Secret Canyon Shale.

## 7.2.2 Description

Gold mineralization at Kinsley is present in both unoxidized and oxidized forms. Monroe *et al.* (1988) report that gold in unoxidized rocks is present as micron-sized or smaller particles associated with silica, calcite, and pyrite, with lesser arsenopyrite, sphalerite, and cinnabar, based on petrographic studies. Gold in oxidized rocks is associated with silica, calcite, and iron oxides including goethite, limonite, jarosite, hematite, and scorodite. Unoxidized mineralization is found only in drill holes. The various styles of mineralization at Kinsley are illustrated in Figure 7.13.

Unoxidized mineralization in the Dunderberg Shale is associated with very fine grained, brownish-grey disseminated pyrite. Orpiment and realgar have been noted locally within the Dunderberg Shale in the Western Flank area. Petrographic work by Tyler Hill at the University of Nevada, Reno, has revealed the presence of relatively large pyrite grains with ragged edges (Figure 7.14). Scanning electron microscopy (“SEM”) further revealed the presence of several generations of arsenical pyrite rims surrounding very small, rounded, arsenic-poor cores. Gold is hosted within the arsenic-rich rims.

Within unoxidized intervals in the Clarks Spring member in the Western Flank area, several drill holes cut high-grade mineralization. It is characterized by:

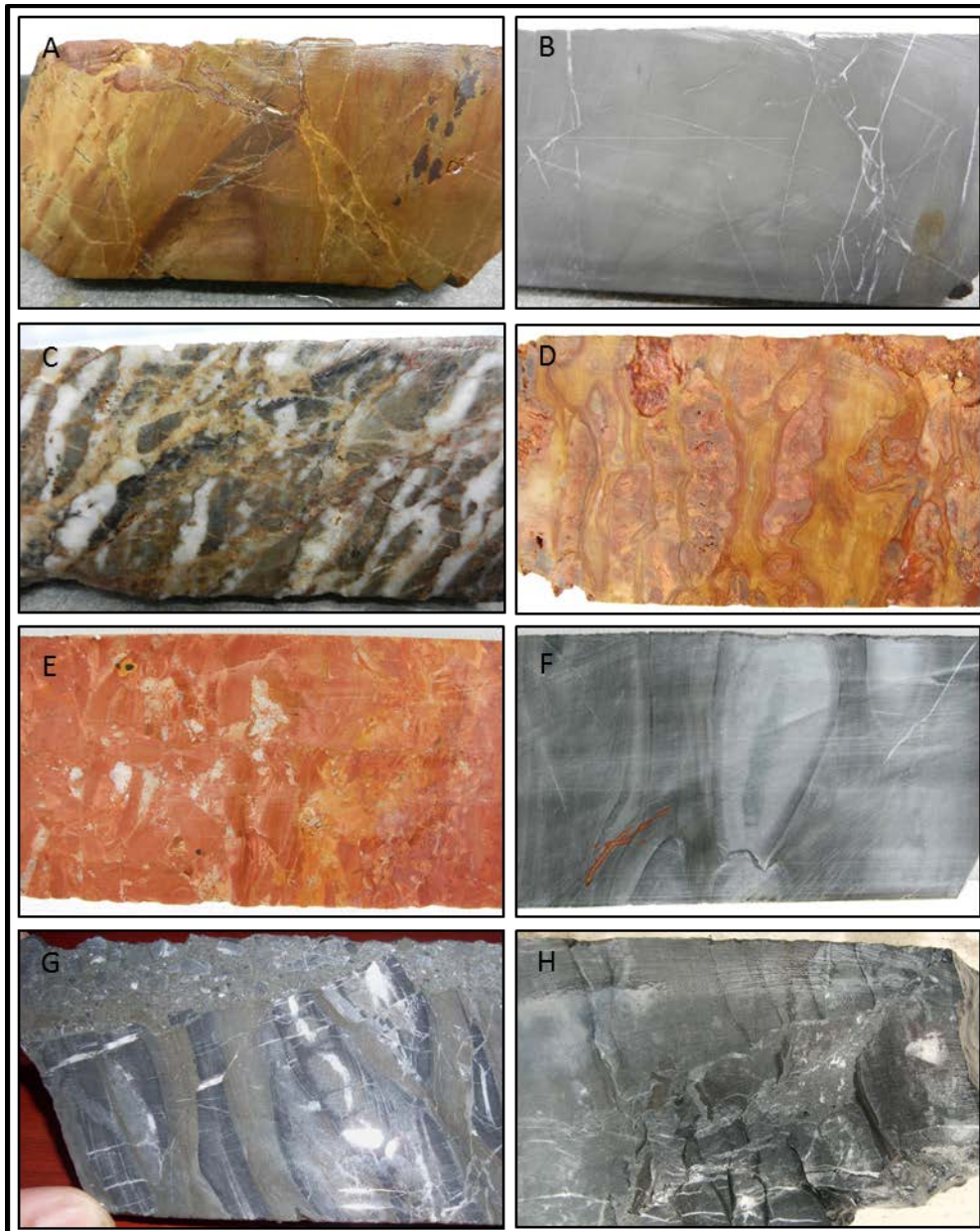


1. Replacement of shale beds by very fine grained, relatively brassy pyrite and silica. Some of the pyrite is likely arsenical, as deduced from the relatively high (500-1,500 ppm) arsenic content of the samples, although the distinction is not visible. Some shears are also pyritized, with pyrite stringers parallel to the shears.
2. Coarse stibnite clots along fractures.
3. Very minor, fine-grained, disseminated, pale orange-red mineral suspected to be realgar.
4. Small, coarse, white calcite veins and breccia fillings.
5. Small zones of collapse breccia with sulphidized clasts.

From visual examination of drill core, decalcification was likely early, followed by pyrite, gold and silica, followed by fracture-controlled stibnite and later calcite. Stibnite is locally present in calcite veins. Petrographic analysis of this material by Tyler Hill at University of Nevada, Reno, reveals that ore-stage pyrite grains in the Secret Canyon Shale are unusually large and euhedral compared with pyrite in other Carlin gold systems (Figure 7.14b), some with open-space internal rims. Further analysis by SEM reveals the presence of several generations of gold-bearing arsenical pyrite rims around very small, rounded, arsenic-poor cores. One generation of internal rim is filled either with stibnite or tetrahedrite-tennantite, or open space. One one-micron diameter gold grain was noted stuck to the rim of a pyrite grain. Most gold is sub-microscopic and associated with the outermost rim.



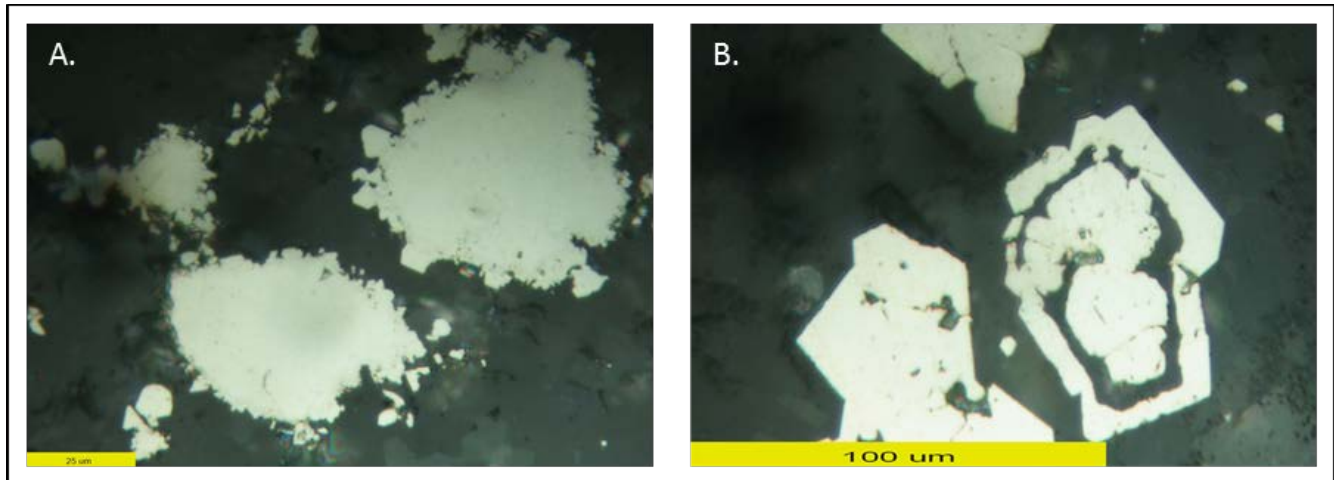
Figure 7.13 Core Photos Illustrating Mineralization Types at Kinsley



A: Oxidized mineralization in the Dunderberg Shale (~7 g Au/t). B: Unoxidized Dunderberg Shale with silicification and very fine-grained pyrite (~20 g Au/t). D: Silicified, quartz veined and oxidized interval in the upper Hamburg Limestone. E: Oxidized mineralization in the Clarks Spring member of the Secret Canyon Shale (~42 g Au/t). F: Oxidized solution collapse breccia in the Clarks Spring member (~4 g Au/t). G: Unoxidized mineralization in the lower shale member (~20 g Au/t). H: unoxidized, stratabound mineralization cut by tectonic breccia with stibnite matrix in the Clarks Spring member (~69 g Au/t). All photos HQ core, 4.2 cm diameter.



**Figure 7.14 Photomicrographs of Pyrite in the Secret Canyon and Dunderberg Shales**



A: Gold-stage pyrite overgrowths on authigenic pyrite in the Dunderberg shale. This style of mineralization is typical of most Carlin systems, but is very well developed at Kinsley, where overgrowths result in relatively large pyrite grains. B. Pyrite in a high-grade gold mineralized portion of the Clarks Spring Limestone. Pyrite grains are relatively large and euhedral, with distinct cores. Photos courtesy of Tyler Hill, University of Nevada, Reno.

### 7.2.3 Distribution

To date, gold mineralization has been noted in the following locations and environments:

- stratabound and low-angle fault-hosted mineralization in the Dunderberg Shale (oxidized and unoxidized);
- jasperoid-hosted mineralization in the Hamburg Upper Limestone (mainly oxidized);
- solution breccia-hosted mineralization in the Notch Peak Limestone (mainly oxidized);
- Within north-northeast-trending structural jasperoids (Ken's Jasperoid, Right Spot) (oxidized);
- Within the limestone internal to the Hamburg Dolomite (oxide and unoxidized); and
- Within the base of the Clarks Spring Limestone and Secret Canyon Shale (mainly unoxidized).

Historically, and in terms of ounces mined, stratabound disseminated gold in calcareous siltstones of the Dunderberg Shale comprised the most important mineralized zones at Kinsley, followed by mineralized jasperoids in the Hamburg Upper Limestone and silicified dissolution breccias in the Notch Peak Formation. These deposits commonly display relatively uniform distribution of gold values between 0.7 and 1.7 g Au/t and are tabular in shape and variable in thickness, depending on the thickness of the favorable host rock. All of the mined deposits were oxidized, with low to moderate amounts of limonite after pyrite.

In the Emancipation deposit, mineralized zones occur in siltstone members of a limestone, siltstone, and a bedded clay sequence of the Dunderberg Shale. Gold grades and continuity of mineralization are more erratic in the Emancipation deposit than in the other Dunderberg-hosted deposits to the northwest. Local high-grade intercepts are common in the Emancipation deposit, with grades as high as 12 g Au/t. This





deposit appears to occur higher in the Dunderberg section than the other deposits. The Dunderberg Shale is approximately 110 metres to 130 metres thick in the Emancipation area, and the underlying Hamburg Dolomite is approximately 70 metres thick, as seen in Pilot Gold drill hole PK005C. This contrasts with the thickness of the Dunderberg Shale in the Main deposit, which is commonly between 60 and 75 metres thick.

Stratabound disseminated gold mineralization is also present in the Notch Peak Formation, although the distribution is less uniform in the siltstone and tends to be concentrated along bedding planes and fractures. Oxidized disseminated gold also occurs in zones of karst development in the Notch Peak Formation, forming most of the mineralization mined in the Ridge and Upper deposits. Gold mineralization in these deposits is hosted by karst breccia and cave-fill sediments with introduced silica and disseminated pyrite that was subsequently oxidized. These deposits form irregular mineralized zones that are commonly associated with high-angle northwest-striking faults.

Gold-bearing jasperoid zones up to 15 metres thick occur in the Hamburg Upper Limestone throughout the property. Outcrops of these jasperoids led to the discovery of the Kinsley deposit, although they represent a small percentage of the total ore mined.

Some members of the Dunderberg Shale were recognized to contain unoxidized disseminated gold mineralization referred to as carbonaceous or refractory mineralization in Alta reports. Limited metallurgical analyses on drill cuttings from one of these zones in the Emancipation deposit suggest that gold is bound by sulphide minerals, as indicated by the inability to remove gold with thiosulfate leaching (McClelland, 1997). These areas of sulphide mineralization were first identified by Cominco and occur throughout the main trend, notably northwest of the Ridge deposit, north and east of the Main deposit, and south of the Access deposit. As with the zones of oxide mineralization, unoxidized mineralization occurs in stratabound pods with inconsistent lateral continuity and variable thickness of up to 27 metres. Dark grey siltstone with variable, very fine-grained disseminated pyrite is the most common host rock for these deposits. Several drill holes in the Emancipation deposit include an upper oxide mineralized zone and lower carbonaceous mineralized zone. In drill cuttings, this transition is defined by colour changes caused by the oxidation of pyrite but little to no noticeable change in the host-rock type. In general, the unoxidized mineralized zones contain higher gold grades than the oxide zones. A rough estimate for average grade for the unoxidized mineralized zones is 2.4 g Au/t, although local intercepts with grades greater than 3.4 g Au/t are common. Alta did not pursue these deposits because they were not amenable to heap leaching (MacFarlane, 2010).

Drilling by Pilot Gold in 2011 through 2014 discovered additional stratigraphic units at greater depth hosting gold mineralization, including: 1) a limestone member within the Hamburg Dolomite; 2) the Hamburg Limestone; 3) the Clarks Spring Limestone; and 4) the Secret Canyon Shale.

Pilot Gold's late 2011 drill program included three drill holes (PK001C, PK003C, and PK005C) in and around the historic pits that penetrated the Hamburg Dolomite-Hamburg Limestone contact. Anomalous gold values coupled with moderate to strong silica alteration were present in all three holes at this contact. In addition, intervals grading 0.41 g Au/t over 13.7 metres in PK011 and 0.29 g Au/t over 16.8 metres in PK024 were returned from a limestone unit internal to the Hamburg Dolomite. Both of these holes are located well to the north of the northwest-trending Kinsley structural zone.



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Drilling in late 2013 and 2014 discovered additional mineralization below the established stratigraphic hosts.

Drill hole PK129C returned 0.89 g Au/t over 6.1 metres and 0.58 g Au/t over 15.5 metres from a limestone bed internal to the Hamburg Dolomite in the Right Spot area, southwest of the Ridge Pit. Mineralization consists primarily of gold-bearing jasperoid.

A number of drill holes in late 2013 through 2015 in the Western Flank area tested the Hamburg, Clarks Spring, and lower shale member of the Secret Canyon Shale, returning both stratabound unoxidized and oxide intervals. Results of this drilling are summarized in Section 10.0. The distribution of mineralization is discussed in Section 7.2.1 and in Section 14.0.



## **8.0 DEPOSIT TYPE**

The gold mineralization at Kinsley is, at present, best described as sediment-hosted, Carlin-type gold mineralization. Carlin-type gold deposits are a class of deposits that are not unique to Nevada, but they exist in far greater numbers and total resource size in northern Nevada than anywhere else in the world. They are characterized by concentrations of very finely disseminated gold in silty, carbonaceous, and calcareous rocks. The gold is present as micron-size to sub-micron-size disseminated grains, often internal to iron-sulphide minerals (arsenical pyrite is most common) or with carbonaceous material in the host rock. Free particulate gold, and particularly visible free gold, is not a common characteristic of these deposits; significant placer alluvial concentrations of gold are therefore not commonly associated with eroded Carlin-type gold deposits. Due to the lack of free particulate gold, Carlin-type deposits generally do not have a coarse-gold assay problem common in many other types of gold deposits.

All Carlin-type deposits in Nevada have some general characteristics in common, although there is a wide spectrum of variants. Anomalous concentrations of arsenic, antimony, and mercury are typically associated with the gold mineralization; thallium, tungsten, and molybdenum may also be present in trace amounts. Alteration of the gold-bearing host rocks of Carlin-type deposits is typically manifested by decalcification, often with the addition of silica, addition of fine-grained disseminated sulphide minerals, remobilization and/or the addition of carbon, and late-stage barite and/or calcite veining. Small amounts of white clays (illite) can also be present. Decalcification of the host produces volume loss, with incipient collapse brecciation that enhances the fluid channel ways of the mineralizing fluids.

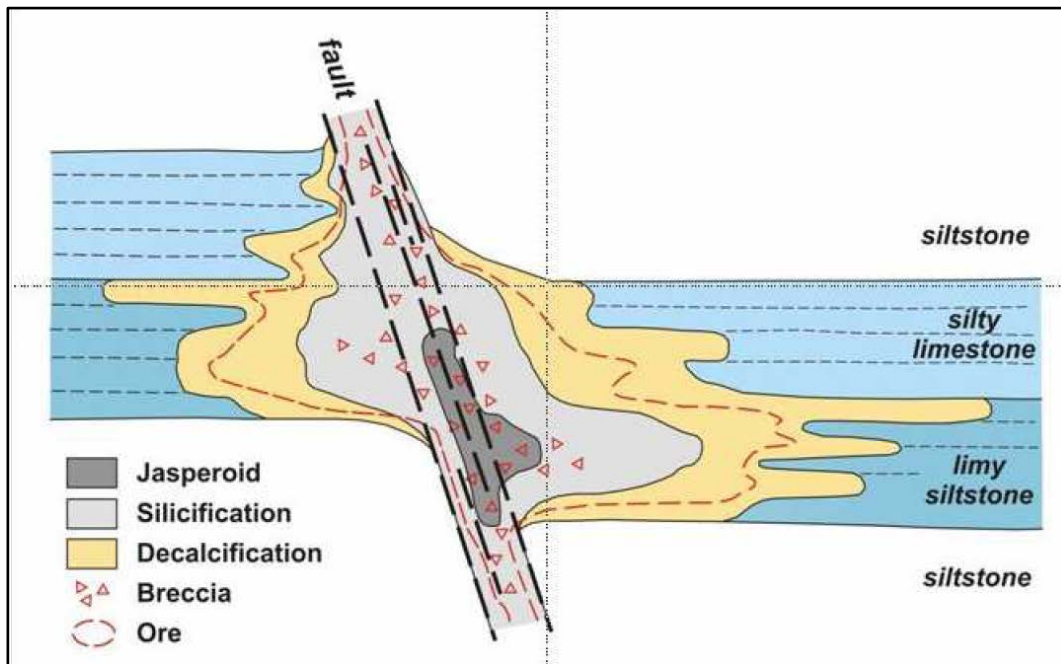
Deposit configurations and shapes are quite variable. Carlin-type deposits are typically at least somewhat stratiform in nature, with mineralization localized within specific, favorable stratigraphic units. Fault and solution breccias can also be primary hosts to mineralization (Figure 8.1).

The mineralization identified at Kinsley shares many of the characteristics of Carlin-type gold mineralization, including:

- Stratigraphic control: mineralization is hosted primarily in limestone, particularly in silty, thin-bedded units.
- Structural control: mineralization occurs in karst cavities, collapse breccias, high-angle faults, and anticlinal fold hinges.
- Geochemical association: elevated arsenic, mercury, antimony, and thallium accompany the gold mineralization. Silver and base-metal concentrations are generally low.
- Alteration: mineralization is associated with decalcification, silicification including jasperoid, and clay, pyrite, arsenical pyrite, and arsenopyrite and their oxidized variants.



**Figure 8.1 Cross-Section of a Hypothetical Carlin-Type Sediment-Hosted Gold Deposit**  
(from Robert *et al.*, 2007)



Mineralization at the Kinsley project also displays some characteristics that are unlike typical Carlin-type gold deposits. The general location of the project is outside the known major gold deposit trends in Nevada. Host rocks at Kinsley are Cambrian-Ordovician platform to platform margin, silty or shaly carbonates, whereas the majority of Nevada Carlin-type deposits are in Ordovician-Devonian slope or toe of slope facies rocks. Pyrite associated with mineralization in the Clarks Spring Limestone and Secret Canyon Shale is relatively coarse, brassy and pyritohedral in nature, a feature not generally seen in Carlin-type deposits. As well, tetrahedrite-tennantite and other minerals not normally associated with Carlin gold systems have been observed as inclusions within mineralized pyrite grains.

The geological setting of mineralization at Kinsley is similar to that of Newmont Mining Corp.'s Long Canyon gold deposit, located 90 kilometres to the north. The stratigraphy at Kinsley is similar in nature and rock type to the main hosts of mineralization at Long Canyon, which hosts gold mineralization immediately above and below a dolomite horizon of similar nature and thickness to the Hamburg Dolomite. The sedimentary rocks at Kinsley were ductilely deformed during a Mesozoic orogenic event and were subjected to protracted early to mid-Cenozoic extensional deformation, a history similar to that recorded at Long Canyon, where mineralization is controlled by boudinage of the dolomite horizon during the Mesozoic event and northeast-trending high- and low-angle normal faults developed during Cenozoic extension. Of particular interest at Kinsley is whether boudinage is present on a large scale as is seen at Long Canyon. At Long Canyon, boudinage of an 80-metre-thick dolomite horizon exerts a first-order control on locations of Cenozoic normal faults, and in turn gold mineralization, with mineralization focused in and around boudin necks and cracks in the dolomite, and in strata lying immediately above and below it (Smith *et al.*, 2013). Drilling to date in the Western Flank zone has established that mineralization is present in stratigraphic units below the Hamburg Dolomite, and has identified areas where the Hamburg Dolomite has been removed on a fault.



## 9.0 EXPLORATION BY PILOT GOLD

A number of companies have conducted exploration on the Kinsley property since its discovery in 1984. A large data set has been recovered from these past programs, although not all of the data have been found. Programs by prior operators are discussed in Section 6.0, while exploration by Pilot Gold is discussed below.

Pilot Gold has actively explored the property since September 2011 and has conducted the following exploration activities to date:

- Claim staking (claims described in Section 4.2);
- Permitting (Section 4.4);
- Detailed geological pit mapping;
- Detailed regional geological mapping;
- Surface soil and rock sampling;
- Compilation of drill and blast hole data, including assay and geological data, into a comprehensive database;
- Construction of 65 geological cross sections that have been digitized into GEMS® mining software to create a three-dimensional (“3D”) model of the property; and
- Drilling of 222 core and RC holes (described in Section 10.0); and
- Implementation of an IP survey within and surrounding the known mineralized zones.

Summary statistics of the work completed by Pilot Gold are summarized below in Table 9.1

**Table 9.1 Exploration Activity by Pilot Gold**

Year	2011	2012	2013	2014	2015	Total
Soil Sampling	0	1,386	800	269	0	2,455
Rock Sampling	200	295	261	412	15	1,183
RC Drilling (m)	0.0	9,941	10,476.0	13,051.5	5,399	38,867.5
RC (#holes)	0	47	43	45	13	148
Core Drilling (m)	1,267.0	2,078.0	3,747.0	13,892.2	0	20,984.2
Core (#holes)	6	15	15	38	0	74
Total Drilling (m)	1,267.0	12,019	14,223.0	26,943.7	5,399	59,851.7
Total (#holes)	6	62	58	83	13	222



### 9.1.1 Geologic Mapping

Although several generations of surface geological mapping have been carried out over the past three decades, including mapping by Cominco and Animas, most of that mapping has been superseded by geological mapping completed by Pilot Gold from 2011 through 2015, as well as mapping by Tyler Hill and John Muntean, University of Nevada, Reno Centre for Research in Economic Geology, in the southern part of the Kinsley Range.

Randy Hannink of Pilot Gold conducted detailed geological pit mapping from October to December 2011. Structural measurements, including bedding, foliation, joints and lineations were collected. This work confirmed the major geological and structural interpretations of previous operators, including the presence of low-angle faults at geological contacts, as well as the presence of one or more northwest-trending high-angle faults in the mine area. Features not well documented by previous operators but recognized during this effort include the presence of at least two ductile fabrics in the Dunderberg Shale, and a number of north- to northeast-trending high-angle faults and shear zones. This mapping has been incorporated into the regional map.

Detailed mapping of the areas outside of the pits was undertaken by Pilot Gold geologist Ken Raabe and consultant Gene Urie beginning in mid-March 2012. This effort resulted in refinements to the stratigraphic column that were subsequently incorporated into the drilling effort. A number of north-northeast-trending, east-southeast-dipping normal faults were mapped along the east side of the range, north of the pits, as well as northwest-trending faults with down to the northeast motion. A west-dipping fault was mapped along the west and north sides of the range. The mapping effort resulted in a much clearer and more detailed understanding of the stratigraphy and structural controls in the Kinsley Mountains.

In 2014, consultants Jason Babcock, Jamie Robinson, and other Pilot Gold staff mapped the area south of the mine in more detail, resulting in the identification of stratigraphic units from the Hamburg Dolomite through the Secret Canyon Shale at surface to the south.

Surface work in 2015 included mapping by Randy Hannink, Pete Shabestari, Moira Smith, and Ken Raabe. The 2015 mapping focused on the areas south of the mine area, and was in conjunction with the geologic model updates. John Muntean and Tyler Hill also mapped areas in the southern part of the Kinsley Mountains (Muntean *et al*, 2015).

### 9.1.2 Soil Sampling

A soil sampling program consisting of 1,386 samples on a 75 x 75 metre grid was carried out in 2012 in the northern portion of the property. Samples were collected by Rangefront Geological Consulting of Elko, Nevada. Sites were located using a handheld GPS with pre-loaded coordinates and waypoints. A and B horizon soil development is patchy to nonexistent in many areas, so samples targeted “C” horizon “mineral” soil. Samples were sieved in the field into Hubco bags. Samples were analyzed by ALS Laboratories for gold by fire assay with atomic absorption spectrometry (“AAS”) finish, and for 41-element geochemistry by inductively-coupled plasma-emission and mass spectrometry (“ICP-MS”) on a 0.5 gram sample aliquot.



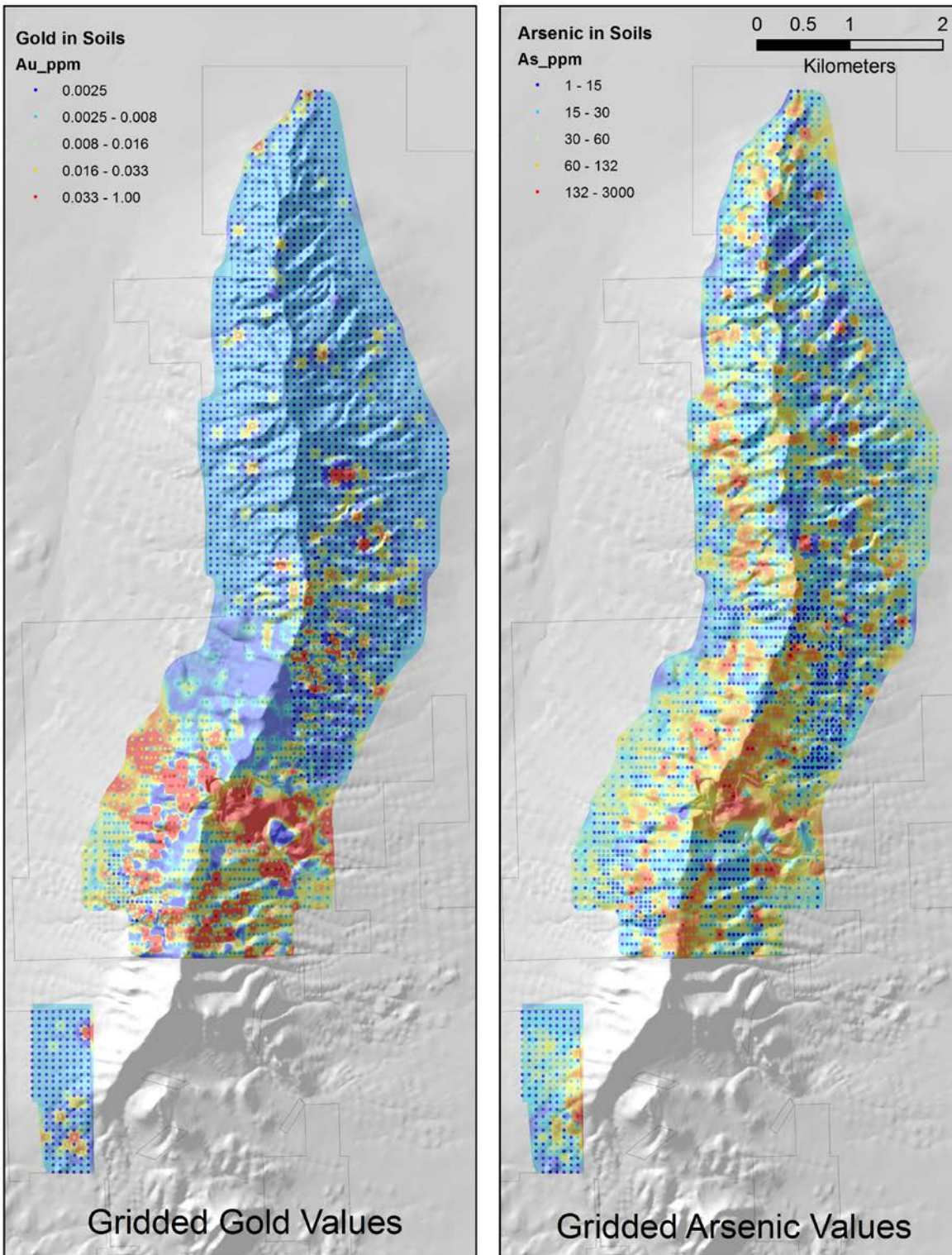
In April 2013, 800 soil samples were collected on a 75 x 75 metre grid by North American Exploration of Salt Lake City, Utah on newly-staked claims on the west side of the Kinsley Mountains. Sampling and analysis followed the same procedures as described above. In 2014, Pilot Gold staff collected 269 soil samples from the Secret Spot target area in the southwestern portion of the property and on two new blocks of claims staked to the south of the contiguous Kinsley claim block.

All of the soil sampling data were merged with data from previous programs by Animas and gridded to produce the images in Figure 9.1.

Gold in soil is clearly elevated in association with outcropping Dunderberg Shale in the vicinity of the historical pits and areas to the southwest. Weakly anomalous soils were also recorded to the north, particularly in association with the basal portion of the Pogonip Group. Arsenic is more widely dispersed, and is elevated throughout the Pogonip Group. In the southwest claim block, gold is associated with altered Secret Canyon Shale outcrops.



Figure 9.1 Gridded Gold and Arsenic from Soil Samples







### **9.1.3 Rock Chip Sampling**

Pilot Gold collected a total of 200 rock-chip samples in 2011, 295 in 2012, 261 in 2013, 412 in 2014, and 14 in 2015. Most consisted of selective grab samples, primarily targeting jasperoid outcrops, and were collected by Pilot Gold geologists or consultants during regional mapping as well as mapping of specific drill targets, including the Right Spot, Ken's Jasperoid, and Western Flank areas. Sample information was either entered directly into a hand-held ArcPad/GPS unit for direct upload into ArcMap, or by use of a GPS unit with handwritten descriptions later entered into a spreadsheet.

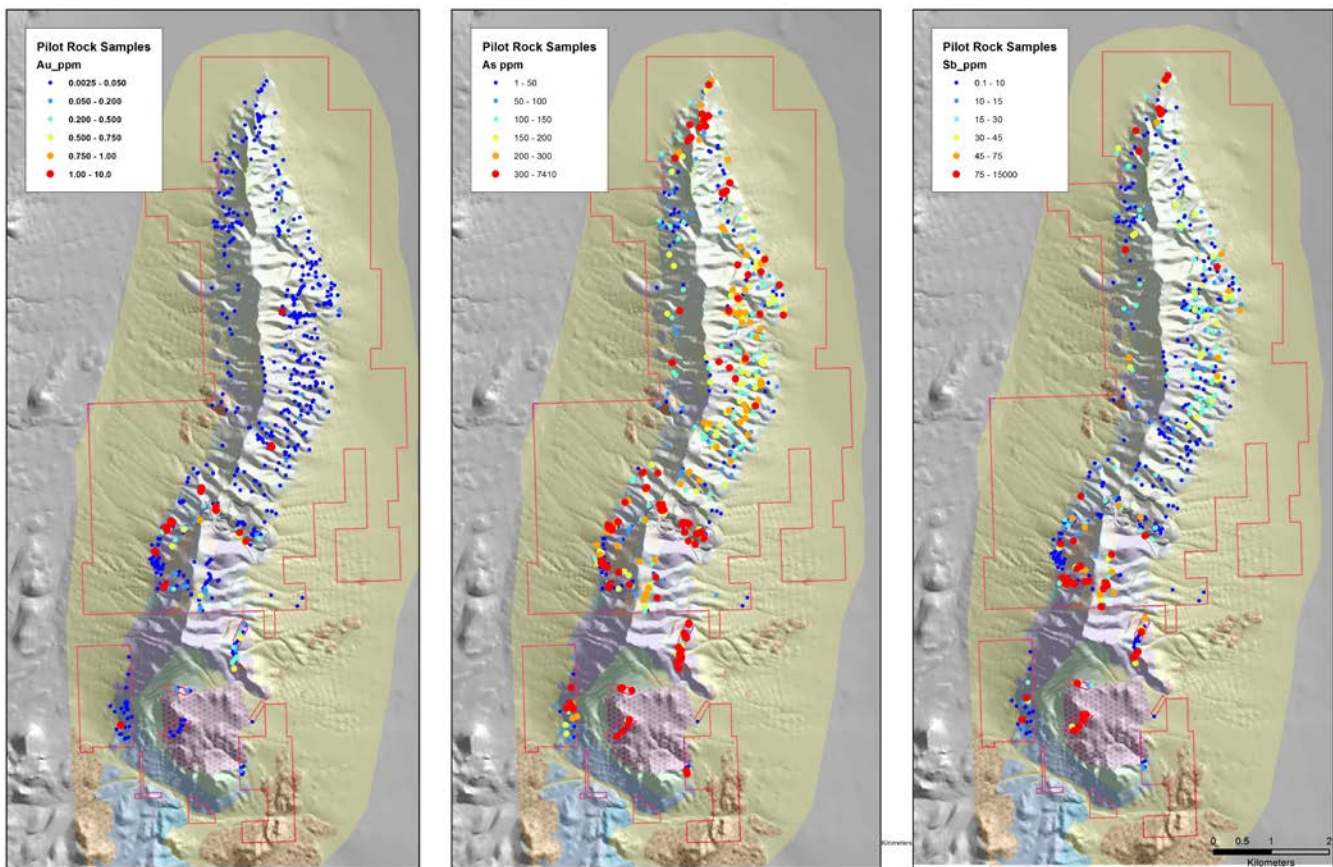
In addition to selective grab samples, a series of chip and channel samples were collected from new exposures along drill access roads in the Right Spot target and in the Secret Spot area. The channel samples were taken on 3 metre intervals, except where contacts or faults were exposed. In these cases, sample length was changed to distinguish geochemistry on each side of the contacts or faults.

Samples were delivered directly to the ALS Elko preparation laboratory for standard sample preparation, with the sample pulps analyzed by fire assay with AAS finish at ALS in Reno, Nevada, and by 51-element ICP-MS at ALS in North Vancouver, B.C.

Results for gold, arsenic, and antimony are summarized below in Figure 9.2. Gold is elevated in samples taken from the historic pits, outcropping silicified portions of the Dunderberg shale, and in jasperoid from the Right Spot target. North of the historic pits, gold is elevated only locally in jasperoid samples hosted in the basal portion of the Pogonip Group. However, Carlin-type gold pathfinder elements arsenic and antimony are moderately to highly anomalous in jasperoid samples from throughout the property. The geochemically anomalous nature of the jasperoids suggests that they could possibly be related to gold mineralization at depth within stratigraphic units that host gold to the south.



Figure 9.2 Summary of Pilot Gold Rock-Chip Sample Results



#### 9.1.4 Geophysical Compilation and Interpretation

Pre-existing geophysical data covering the Kinsley property (summarized in Section 6.2.1) and adjacent areas (including regional gravity and magnetics) was compiled and interpreted by Jim Wright of J.L. Wright Geophysics, Inc. (Wright, 2012). The objective of this review of existing data was to: 1) assess the quality of the data and to examine it with reference to surface geology and geochemistry, as well as areas of known gold mineralization; 2) generate potential targets in undrilled areas; and 3) provide some insights that might assist in geological interpretations.

A possible intrusion is interpreted off the immediate east side of the property, beneath basin-fill cover, from the Reduced to Pole (RTP) magnetics. Surface rocks in this area consist mainly of Cenozoic andesite. All of the surveys support the existence of numerous northwest-trending structures at both the property and larger scales, and these interpreted structures are also supported by mapped geology in most cases. Northwest-trending structures are known to control mineralization at the Kinsley mine. High resistivity correlates with known mineralization, and phase anomalies are observed at depth beneath the known mineralization. The interpretation is that sulphide feeders to the near surface mineralization are detected at depth by the IP survey.



Several locations of interest for exploration have been identified through this effort. These include: 1) the interpreted intrusion east of the property; 2) structural complexity near the “resistive”, structurally bounded block of high-resistivity material protruding into the basin north of the pits; 3) four northwest-trending structures on the north KN claim block; and 4) IP anomalies beneath the known mineralization and to the northeast. In addition, extensions of northwest-trending structures into the basin on either side of the range would also be areas of interest. Few of the aforementioned areas have been drill tested.

In 2013, Jim Wright was contracted to review the gravity data in the Western Flank target area and apply more aggressive processing to extract more information regarding structures that could aid in drill targeting. The succession of data products included complete Bouguer gravity, the residual, and the first vertical derivative of the residual. The structural interpretation agrees with previous studies, with north-northeast striking structures apparently offset by northwest-trending structures on the west side of the range. The finer detail generated by this study, combined with mapped geology, drilling, and soil geochemistry, yielded several drill targets. The drill targets are located where northwest-striking structures truncate and/or offset north-northeast structures that appear to be range-bounding on the west side of the range. The interpreted northwest-striking structures somewhat coincide with soil sample anomalies and historic drill patterns. The proposed drill targets agree with more recently developed drill targets and drilled mineralization, namely the Wrong Spot, Secret Spot, and the Western Flank high grade zone (Figure 9.3).

In 2015, Pilot Gold conducted an IP program consisting of three downhole gradient array surveys and one dipole-dipole line on the west side of the range over the Western Flank Zone. Consulting geophysicist James Wright provided guidance on survey design, QA-QC and interpretation (Wright, 2015). Figure 9.4 shows the location of these points and the locations of two 1990 Cominco IP lines that were reprocessed in 2015 along with the Pilot Gold survey. The downhole arrays consisted of eight 1km-long lines radiating from the drill hole, with stations at 100 metre intervals along the lines. The downhole electrode was located at or near the final depth of an RC drill hole, between 350 and 550 metres from surface. A remote electrode was located in the valley 2.5 kilometres east of the mine area. The Line 1 dipole-dipole line used an  $a=300\text{m}$  dipole length and recorded data for  $n=1-6$ .



Figure 9.3 Reinterpreted First Vertical Derivative Gravity Map

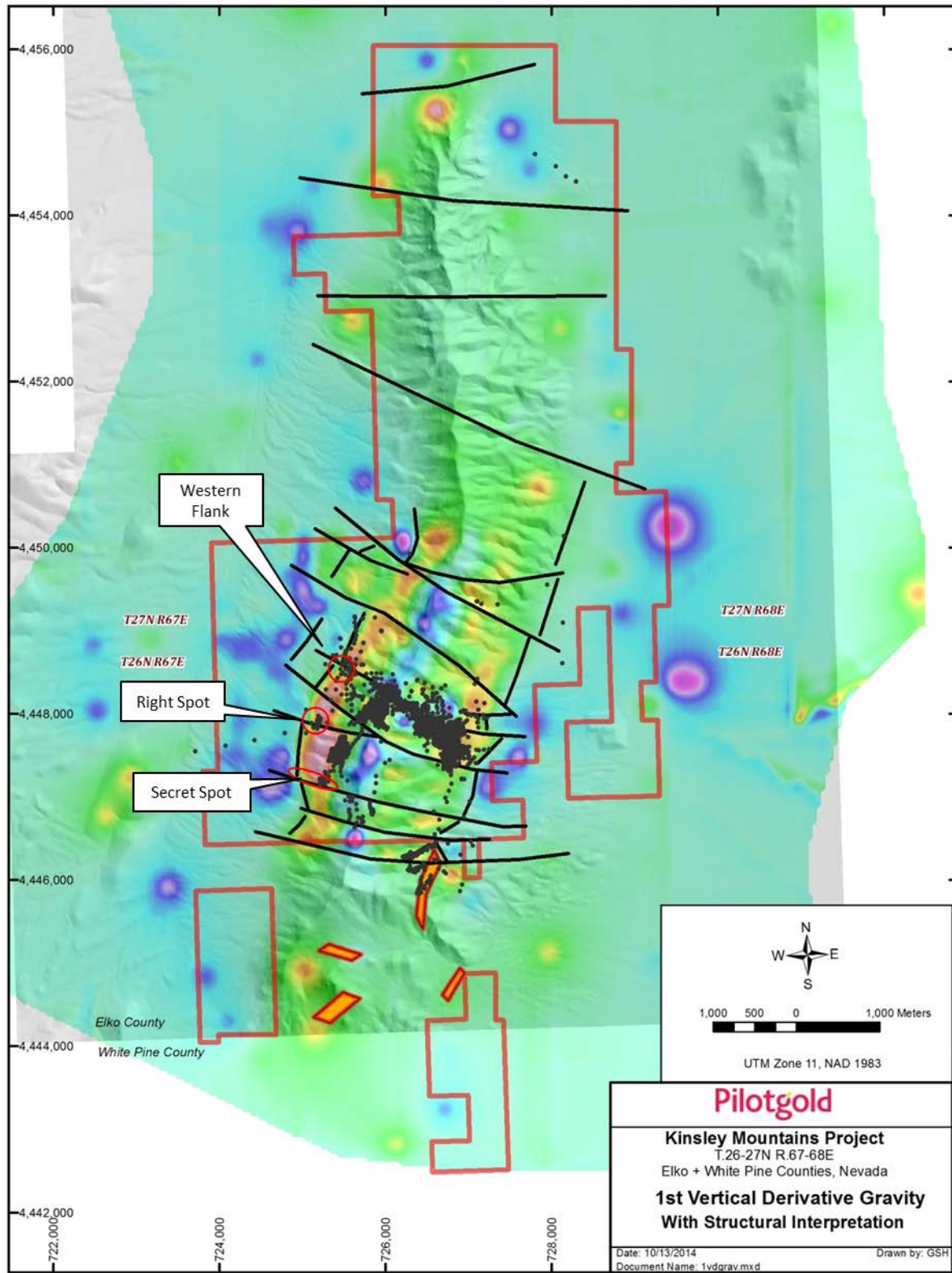
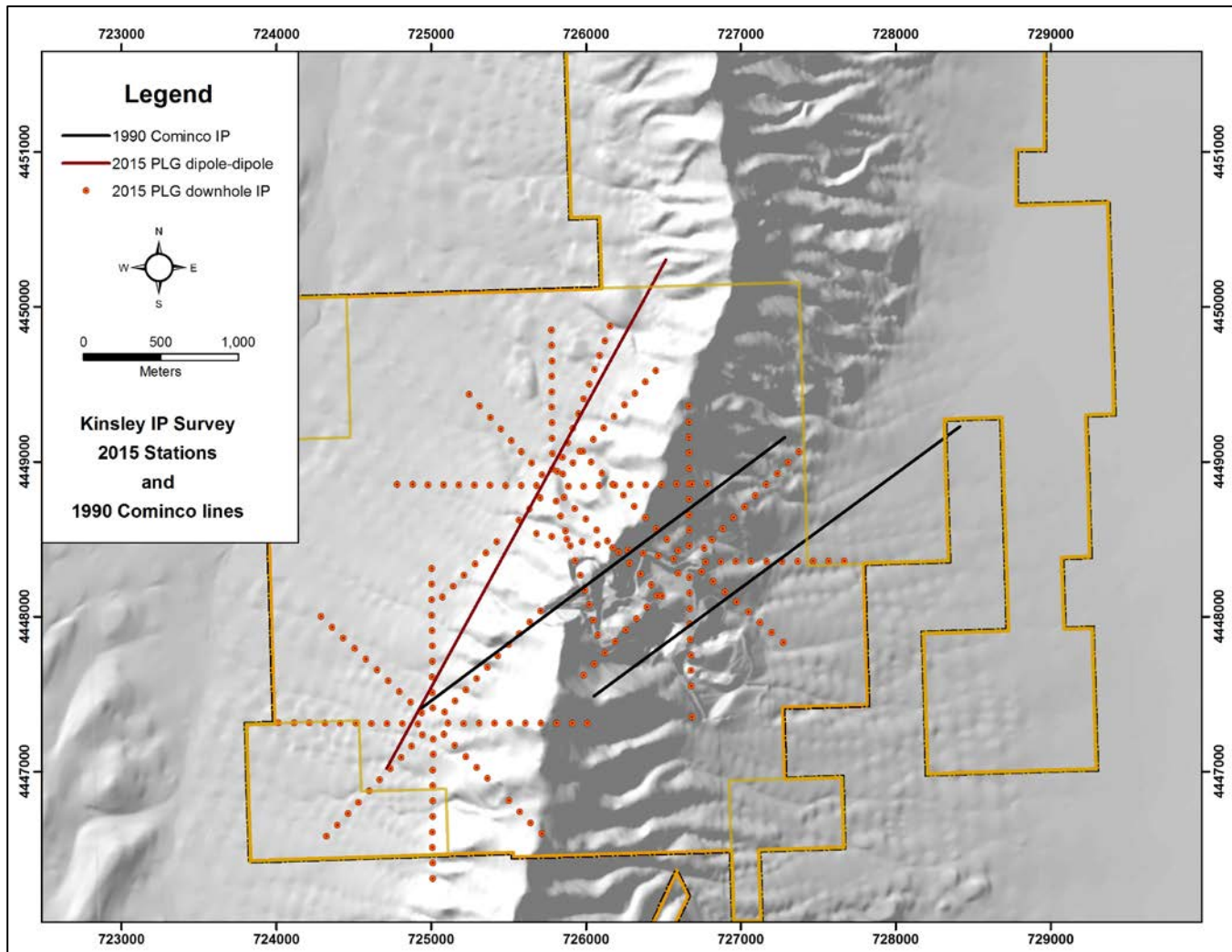




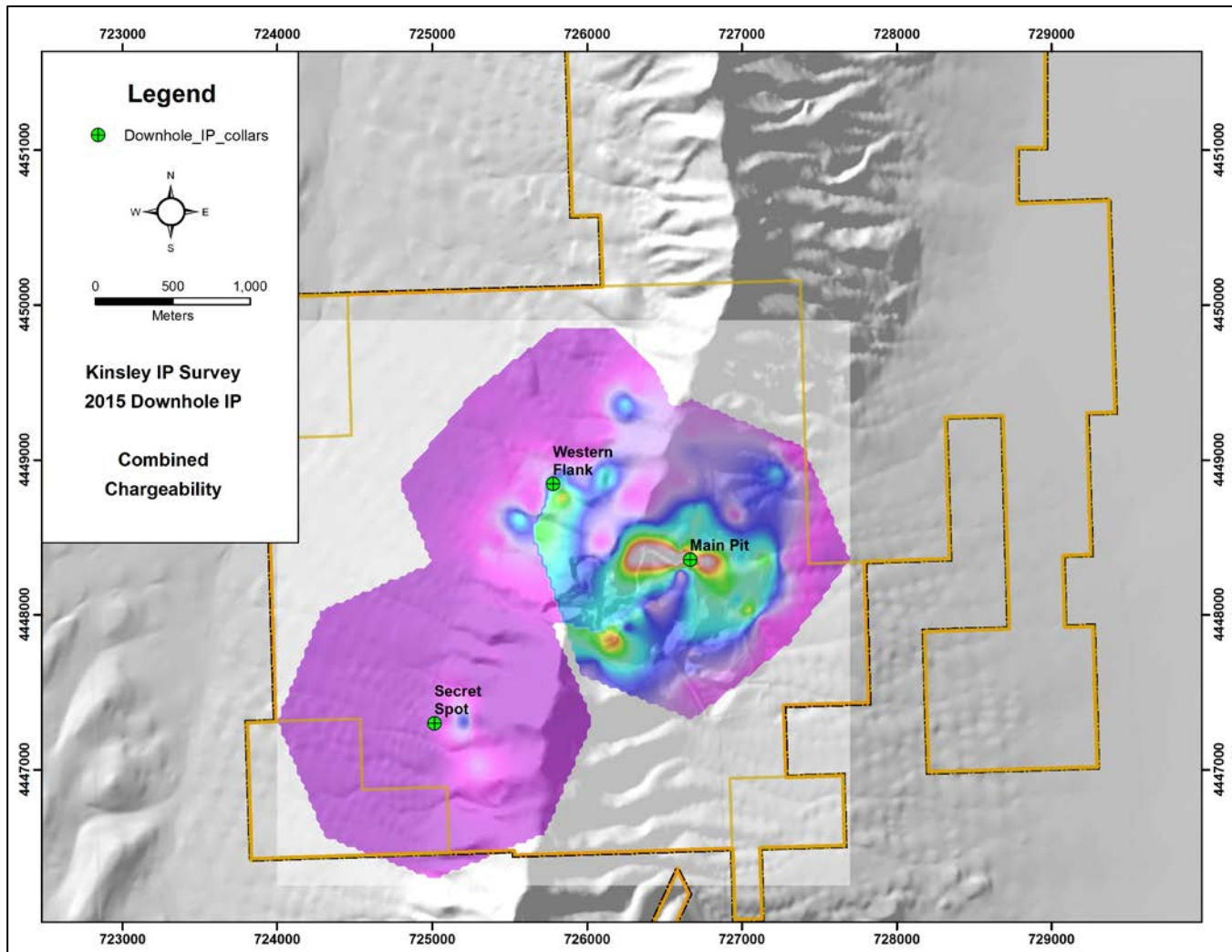
Figure 9.4 2015 IP Survey Stations and 1990 Cominco Lines



The downhole survey had mixed results, with the strongest chargeability anomalies being “collar effects” near the collars, possibly due to hole casing, which was hung approximately 150 m above the downhole electrode. Resistivity readings were strongly affected by topography. Figure 9.5 shows the combined chargeability for the three downhole arrays. The collar effect is apparent in all three surveys. The strongest distal anomaly in the survey is located southwest of the Main Pit collar, with the anomaly stretching towards the Western Flank area. Very little drilling has been done in the area of the anomaly, and no tests of the deeper Secret Canyon Shale. The chargeability high near the Western Flank collar possibly results from the sulphide-rich Western Flank high grade zone, or a collar effect similar to that seen in the other downhole surveys.



Figure 9.5 2015 Downhole Radial IP Survey, Combined Chargeability Map



The west side dipole-dipole line was somewhat more successful than the downhole survey, in that it displayed a chargeability high at the Western Flank Zone. Figure 9.6 shows the Pilot Gold and Cominco lines. The chargeability high at the Western Flank zone is readily apparent. Other, untested chargeability highs are located south of the mine area as indicated by the reprocessed Cominco IP lines. This anomaly is also coincident with the chargeability high indicated by the Main Pit downhole array survey.



Figure 9.6 Perspective View of Cominco and Pilot Gold IP lines at Kinsley

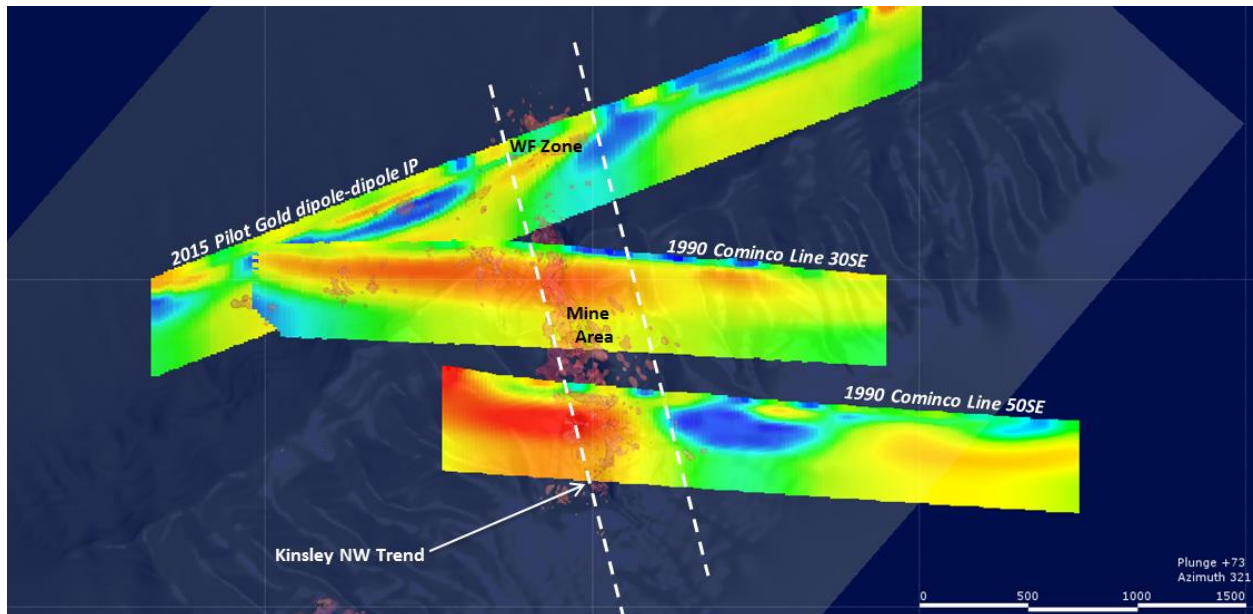


Image includes the reprocessed 1990 Cominco lines and the 2015 Pilot Gold line on the west side of the range. The locations of the mine area and the Western Flank zone are also shown. Note the strong IP anomaly south of the mine area in line 50SE.

### 9.1.5 Topographic and Air Photo Control

Accurate topographic information is critical to determining the extent of mined and unmined mineralization. For the mine area, Pilot Gold obtained a digital topographic map with two-foot (0.61-metre) contours produced by the BLM during reclamation efforts at the mine. This map was stitched to a less-precise digital topographic map produced from contouring a DEM database for topographic control property-wide. The very accurate BLM map is not adequate for determination of mined and unmined material, however, as some of the pits have been partially backfilled. For this purpose, it was necessary to digitize contour intervals from a paper map of the final pits. Pilot Gold also purchased air photos from the BLM that were used to produce a detailed orthophotograph for most of the southern claim block. Survey control for creation of the orthophotograph was established in the field by All Points North Surveying and Mapping of Elko, Nevada. Pilot Gold purchased a GeoEye satellite image from Mapmart.com in July 2014, with an image date of June 10, 2014. The image was ortho-rectified to a 5 metre DEM, also from Mapmart.com. Horizontal accuracy of the image is  $\pm 2$  metres, vertical accuracy  $\pm 1$  metre. Pixel size is 0.5 metre. The Pilot Gold GPS-surveyed road layer was also used to increase the accuracy of the rectification.

### 9.1.6 Database - Historical

In 2011, Pilot Gold received a digital database of drill-hole collar locations and gold assays for most of the historical holes. Some of the collar locations were validated by Pilot Gold in the field, although most are no longer visible due to subsequent mining and reclamation. General lithologic data are available for Cominco and Hecla drill holes that is based on a numbering system corresponding to lithologic type. Adding geological data for the Alta drill holes required hand-entering data from



summary logs and assigning a number based on comparison with the Cominco numbering system. Geological data for all historic drill holes are now in the digital database, with the exception of the three Pan American holes, for which no data are available.

In 2012, historical drill chips, core and additional hard copy data from two storage facilities in Ely and Yerington, Nevada were recovered and integrated into the database and the modelling effort. These data included a number of blast-hole maps with assay information, which was digitized (over 72,000 data points) and integrated into the 3D model. Other information, including assay type (cyanide-soluble gold vs. AA) was also added to the database. Also in 2012, Pilot Gold undertook a database audit whereby Pilot Gold validated all available hard copy data against the digital compilation including assays, drill-hole collar survey locations and historic QA/QC efforts.

As of the Effective Date of this report, all current and historical drill and surface data are currently stored in a web-based relational SQL database system residing on servers located in Chicago, Illinois.

### **9.1.7 Three-Dimensional Modelling**

In 2011, Pilot Gold compiled a 3D geological model for the ACE claim block to aid in drill targeting and future resource estimation. Sixty-five east-west geological sections were created on 50-metre spacing, using surface geological mapping and down-hole geology. Sections were scanned and digitized in GEMS© to create 3D surfaces of stratigraphic and structural contacts. This effort formed the basis for a geological model, which is continuously updated with data provided by new drilling and relogging of historical drill holes. The 3D model is also used in Leapfrog to generate new drill targets.





## 10.0 DRILLING

A total of 131,949 metres of drilling has been performed at the Kinsley project since 1986 (Table 10.1). Reverse-circulation rotary (“RC”) methods were used for approximately 83 percent of the metres, and 94 percent of the 1,380 holes drilled by the previous and current operators. Drill sample intervals are predominantly five feet (1.524 metres) in length, or less.

**Table 10.1 Summary of Kinsley Project Drilling 1986 – 2015**

	RC Holes	RC Metres	Core Holes	Core Metres	Rotary Holes	Rotary Metres	Total Holes	Total Metres
Previous Operators 1986 – 2004	1,147	75,950	9	312	2	835	1,158	77,097
Pilot Gold 2011 - 2015	148	38,867.5	74	20,984.2	0	0	222	59,851.7
<b>Total</b>	<b>1,295</b>	<b>114,817.5</b>	<b>83</b>	<b>21,296</b>	<b>2</b>	<b>835</b>	<b>1,380</b>	<b>136,949</b>

### 10.1 Historical Drilling

The following discussion regarding the various historical drilling programs undertaken at Kinsley is based on company reports and other data acquired by Pilot Gold. These records are incomplete and sometimes conflicting. The authors are confident that the following information is largely accurate and little additional data are likely to be found.

Available records indicate that an estimated 1,158 holes were drilled between 1984 and 2011 (Table 10.2). The Pilot Gold project database includes 1,143 of these holes, of which 1,082 are located within the current property boundary. The data in Table 10.2 were compiled by Pilot Gold from a digital collar file of unknown origin and completeness, with additional data sourced from historical drill logs and assay certificates. Pilot Gold’s working project database includes only those holes that appear to have reasonable location information and data. It should be noted that there are minor discrepancies between Table 10.2 and the 2007 technical report (Cowdery, 2007) with respect to the number of Cominco and Hecla holes; these differences have not been resolved but are not considered to be significant.

**Table 10.2 Summary of Historical Drilling at Kinsley**

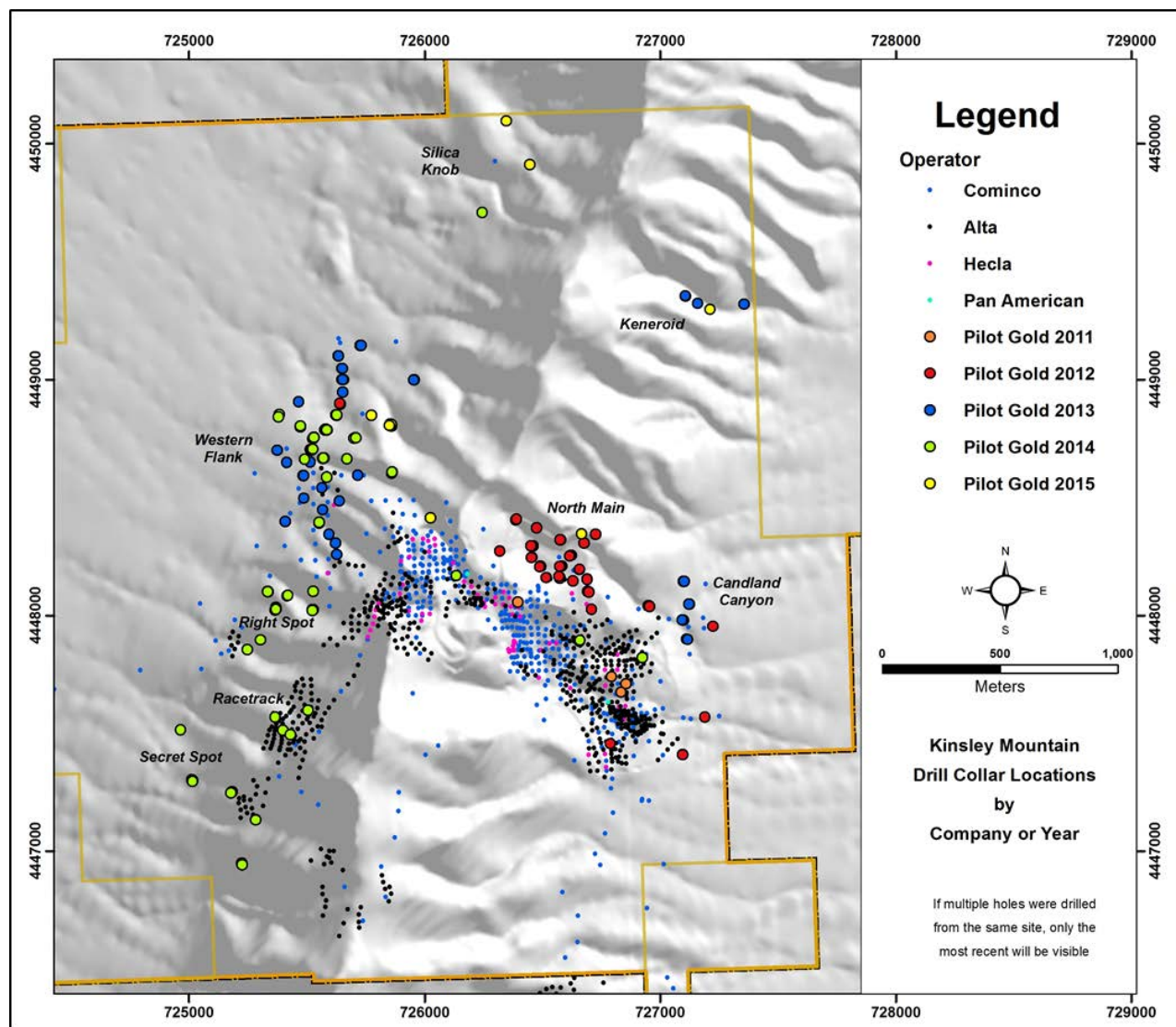
Company	Years	RC Holes	RC Metres	Core Holes	Core Metres	Rotary Holes	Rotary Metres	Total DH's	Total Metres
Cominco	1986-1991	428	32,147	2	9	2	835	432	32,991
Hecla	1992	64	3,335	0	0			64	3,335
Alta	1993-1997	652	39,605	7	303			659	39,908
Pan American	2004	3	863	0	0			3	863
<b>Totals</b>		<b>1,147</b>	<b>75,950</b>	<b>9</b>	<b>312</b>	<b>2</b>	<b>835</b>	<b>1,158</b>	<b>77,097</b>



Figure 10.1 shows the location of holes drilled by previous operators, as well as those drilled by Pilot Gold. Figure 10.2, shows the historical holes drilled in the vicinity of the mined pits.

The vast majority of the historical drill holes are located along the Kinsley trend, which includes the historical open pits (Figure 10.1 and Figure 10.2). Based on limited field checking of unreclaimed drill collars and the relationship of the location of the holes with respect to (largely reclaimed) access roads, most of these holes appear to have accurate collar locations. Since much of the drilling was designed to test shallow, oxidized target zones, the average length of the historic drill holes is less than 67 metres. Thirty historical holes from the historical project database were drilled to down-hole depths of greater than 150 metres, of which two penetrated to depths greater than 300 metres.

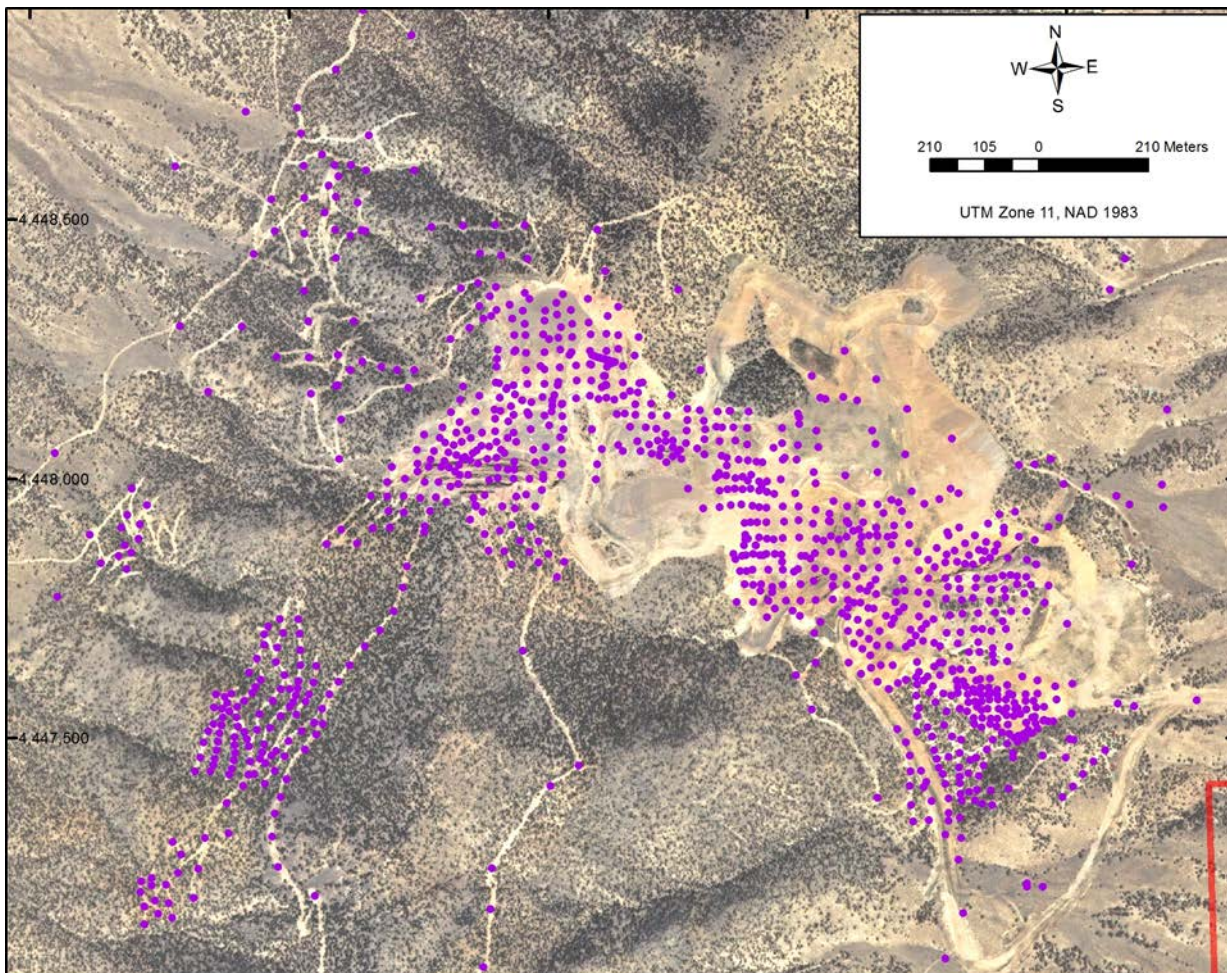
**Figure 10.1 Historical and Pilot Gold Drill Hole Map**



For clarity, this map does not show outlying drill holes to the south of the main property boundary.



Figure 10.2 Historical Drill-Hole Locations in the Kinsley Mine Area



While most of the gold intersected by the historical holes at Kinsley was subsequently mined, a total of 261 intercepts from 238 drill holes fall outside of the pit limits using a cut-off grade of 0.3 g Au/t that incorporates up to four metres of internal waste; these intercepts are listed in Appendix B. Within this set of intercepts, there are several Alta holes with gold endowments that range from a high of 89.7 to a low of 3.44, as measured by g Au/t multiplied by the length of the intercept in metres. The average for the entire historical-intercept dataset is 8.0 metres with an average grade of 1.48 g Au/t, starting at an average depth of 49.75 metres. The median grade and intercept length are 1.20 g Au/t and 6.1 metres.

### 10.1.1 Historical Drill-Hole Collar Surveys

The majority of the historical drill collars at Kinsley were surveyed in the Nevada State Plane Coordinate system. Surveying of Alta drill holes was carried out by Alta staff. No survey records are available other than drill logs that have the X, Y, and Z coordinates hand entered on them.



Holes drilled by previous operators are very difficult to locate in the field due to subsequent mining, other disturbance, and reclamation, as well as the fact that most previous holes were drilled by small track rigs without the use of a pad or sump. Alta's drill holes were marked with small aluminum tags on a wooden stake, most of which are no longer affixed to the collars, such that small piles of cuttings are the only evidence remaining for most drill holes.

With the exception of holes in the pit areas, most drill-hole collars project with little vertical error onto a very detailed topographic base generated by the BLM during reclamation activities, suggesting that they were surveyed, and down-hole geology generally agrees with adjacent holes. However, a number of holes have collars that project well above the original topography. These suspect collar locations are flagged in the project database so that decisions regarding their use can be made at the appropriate time.

### 10.1.2 Historical Down-Hole Surveys

No down-hole directional survey data exist from the previous historical drilling programs at Kinsley. There were no down-hole surveys completed on any Alta drill holes (J. Robinson, written communication, 2012). Most of the historical drilling at Kinsley was relatively shallow, and the majority of the drill holes were vertical, so it is unlikely that significant deviation occurred in all but the deepest drill holes.

Only nine of the historical holes are known to have been drilled at an angle. Since the gold mineralization generally dips at shallow angles, vertically orientated holes are adequate for defining the mineralized zones and yield intersections that are likely to be close to true widths.

### 10.1.3 Cominco Drilling 1986 - 1991

Cominco appears to have drilled a total of 432 holes, for 32,991 metres, between 1986 and 1991. The 2007 technical report (Cowdery, 2007) cited three different totals (435, 433, and 350 holes) for Cominco's drilling based on various reports. MDA has identified 428 Cominco holes based on currently available reports, as described below, and the current MDA project database includes 425 holes drilled by Cominco.

Monroe *et al.* (1988) indicate that from 1986 to 1988, Cominco's contract drilling was all completed using RC rigs, but in a December 2, 1986 memorandum about metallurgical testing, Monroe indicates that conventional rotary drilling was conducted in 1986. This discrepancy cannot be resolved at present.

Monroe *et al.* (1988) provide the following summary of the 1986 to 1988 drilling programs completed at Kinsley. Drilling began in the spring of 1986. A total of 67 holes were drilled in four drilling programs in 1986. Cominco owned and operated at least one Simco drill at Kinsley and drilled 30 holes during this period. In addition, 37 holes were drilled by drilling contractors (Monroe *et al.*, 1988). The Main Zone was discovered by drill hole K-1, the Upper Zone by hole K-21, and the Access Zone by Simco hole KS-214 (the 40<sup>th</sup> hole drilled at Kinsley). In 1987, 85 holes were drilled by contractors and 49 by Cominco, with another 201 holes completed in 1988. The 1987 and 1988 programs concentrated on infill drilling of the Main and Upper zones at 100-foot (30-metre) centres and step-out drilling along the Kinsley trend. The 402 holes completed through 1988 totalled 92,000 feet (28,042 metres) of drilling.



All contractor holes were drilled using RC rigs. Eklund Drilling of Carlin, Nevada, performed most of the contract drilling during this period. Both track-mounted and truck-mounted drills were used. In addition to this drilling, two core holes (SC-1 and SC-2) were drilled with the Simco drill for a total of about 9 metres. SC-1 was drilled at the Main Zone, while SC-2 was drilled as an offset of K-40 at the Upper Zone.

Monroe *et al.* (1988) also state that holes K-1 through K-121 and KS-201 through KS-285 were drilled in 1986 and 1987. This implies that 121 contractor holes were drilled in this period, compared to the 122 summarized above, as well as 85 Simco holes, as opposed to the 79 mentioned above (or 81, if the two short core holes are included). Such discrepancies in company summary reports are not unusual and can be caused by counts that do, or do not, include holes abandoned prior to intersecting targeted mineralized zones that were subsequently re-drilled.

Ten assessment holes were drilled in 1989 (Wodzicki, 1989), and two deep “rotary” holes were drilled in 1990 (Monroe, 1990). While the term “rotary” could be used to describe an RC hole, the depths of the two holes are consistent with the use of conventional rotary methods. One of the deep holes (K-424) was drilled at the Main Zone to a depth of 259 metres, while the other (K-425) was drilled approximately 300 metres north-northeast of the Upper Zone to a depth of 576 metres. Twelve vertical assessment holes were drilled in 1991 with Cominco’s Simco truck-mounted drill (McMaster, 1991).

No other information about the drill rigs or procedures for Cominco’s drilling programs is presently available.

#### **10.1.4 Hecla Drilling 1992**

Hecla appears to have drilled approximately 64 RC holes for a total of 3,335 metres in 1992. The 2007 technical report (Cowdery, 2007) indicated discrepancies among previous reports, which had totals of 62, 64, and 60 Hecla holes. A tabulation of Hecla holes dated August 3, 1992 lists 61 holes. No information about who performed the drilling or the type of rigs or procedures used is presently available. Hecla reportedly discovered the West Ridge deposit with drilling in 1992 (Jones, 1994).

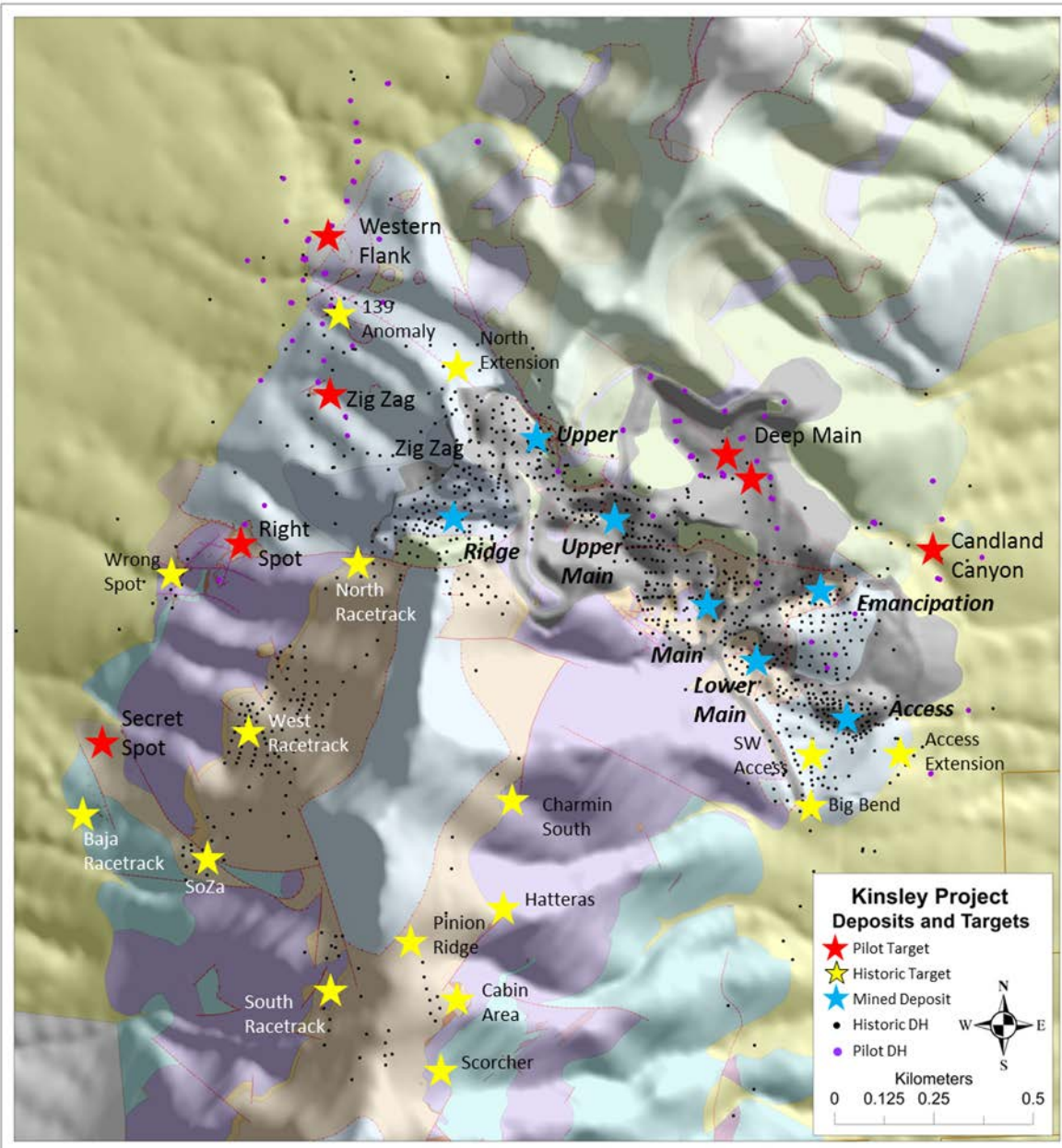
#### **10.1.5 Alta Drilling 1993 - 1997**

Alta began drilling at Kinsley in 1993 and utilized a number of different drilling contractors throughout the years. In 1993, Alta contracted with C&L Drilling (“C&L”); the core drilling contractor they used is unknown. In 1994, C&L and Christiansen Drilling were used, while in 1995, Hackworth Drilling, Saga Drilling, and Tonto Drilling (“Tonto”) were the contractors. Tonto, Stratagrount Drilling (“Stratagrount”), and Drift Drilling (“Drift”) were the contractors in 1996; a total of 387 holes were drilled during the year (King *et al.*, 1997). In 1997, the last year Alta drilled at Kinsley, Stratagrount and Drift were the drilling contractors on the property, and a total of 167 RC holes were drilled for a total of 10,688 metres. Alta appears to have drilled a total of 659 holes at Kinsley, including seven core and 652 RC holes. No information on types of rigs or drilling procedures used is presently available.

In drilling programs through 1997, Cominco and Alta identified and tested a number of exploration targets, summarized in Section Drilling by Pilot Gold, and carried out infill and step-out drilling on existing targets.



Figure 10.3 Map of Mined Deposits with Current and Historical Exploration Targets



### 10.1.6 Pan American

Pan American drilled three RC holes in 2004 for a total of 863 metres. No information is presently available concerning the drilling contractor, type of rig, or drilling procedures used by Pan American. Other than collar locations, Pilot Gold currently has no other Pan American drill data, but additional data are held by a third party and may be accessible in the future.



## 10.2 Drilling by Pilot Gold 2011 - 2015

Since acquiring the Kinsley property in mid-2011, Pilot Gold has drilled a total of 222 core and RC holes through the end of October, 2015. Collar locations are shown on Figure 10.1 and Figure 10.3.

For all years, the contractor for core drilling was Major Drilling America, Inc. (“Major Drilling”) of Salt Lake City, Utah and Elko, Nevada. All core holes were drilled with HQ-size tools (6.4-centimetre diameter core), unless ground conditions mandated a reduction to NQ (4.8-centimetre core diameter). To date, ground conditions in three holes (PK003C, PK137C and PK186C) have necessitated a reduction to NQ coring. Down-hole surveys for core holes were completed with a Reflex E-Z Shot electronic solid-state single-shot down-hole camera supplied by Major Drilling. Readings were taken at the collar and at approximately 30-metre intervals down hole. Significant hole deviations were not encountered.

The RC drill contractor in 2012 was Major Drilling America, Inc., and in 2013-2015 it was Boart Longyear of Elko, Nevada. RC Drilling encountered relatively few problems and most holes were completed to the required depth. One RC hole, PK209, was lost before completion, and was re-drilled from surface. A few of the deeper holes on the west side of the range were lost due to loss of circulation in highly fractured formations. The drillers used a variety of solutions for this, including venturi-equipped centre tubes in the hammer to create negative pressure in the return tube, an auxiliary air pressure booster, and pumping of lost-circulation products into the hole, with varying success. A centre-return hammer was used in almost all holes except for the upper portion of holes where significant alluvium was encountered. The centre-return hammer allowed drillers to regain circulation within a few feet after drilling into voids, often encountered in the massive limestone formations. A casing advance system was used in areas that contain significant unconsolidated material, including the area north of the Main pit.

Down-hole surveys for RC holes were carried out by logging contractor International Directional Services (IDS) of Elko, Nevada. IDS utilized a truck-mounted, through-the-drill steel Reflex Gyro gyroscopic survey instrument. Readings are taken at the bottom, top, and at 50-foot intervals throughout the completed drill hole. There generally can be more deviation in RC holes, however significant drill-hole deviations have not been encountered in the RC drilling at Kinsley.

Drill core is logged on site at the Kinsley logging facility, or at Pilot Gold’s warehouse in Elko, Nevada. Information is logged directly into digital files by a Pilot Gold geologist. The digital logs include fields for rock type, colour, alteration, mineralization, and structural data, with a separate log for breccia descriptions. Rock Quality Designation (“RQD”) was also captured in the logs. The core was photographed both wet and dry for archival and geotechnical purposes. The logs captured data largely in numerical or letter code format. Completed logs were imported into an Access database. The core was then cut in Pilot Gold’s Elko warehouse, sampled, and delivered to ALS for sample preparation in Elko.

In 2011, Pilot Gold’s drill-hole collars were surveyed at the end of the drilling program by All Points North Surveying and Mapping of Elko, Nevada, using a geodetic survey-grade Trimble 4000-series GPS receiver with a base station for real-time correction. Accuracy of the measurements is  $\pm 2$  centimetres in the X and Y directions and  $\pm 3$  centimetres in the Z direction. In 2012 and subsequent



years, the drill-hole collars were surveyed during and at the end of the drilling program by Pilot personnel using a Trimble Geo Explorer XH GPS receiver with differential correction accuracy of 0.5m in the X&Y directions and 1m in the Z direction. Holes where a brass tag and wire could be located were attributed with a label of "Exact" in the database location field. Historical holes that could not be located were surveyed at the most likely location on the drill pad based on the orientation of the hole and were given an "Approximate" label in the database location field.

Subsequent to drilling, drill holes are abandoned according to Nevada state regulations. Drill collars are marked in the field after completion with a cement plug, wire, and metal tag.

### **10.2.1 Drilling - 2011**

Pilot Gold drilled six core holes at Kinsley in late 2011 for a total of 1,267 metres, including three located immediately south of the Emancipation pit and three on the east, north and west sides of the Main pit. Hole locations and results are summarized in Appendix C. The primary purpose of this drilling program was to validate drilling carried out by previous operators. To that end, the holes were twins or near-twins of existing holes. Results of this exercise are discussed in Section 10.3.

### **10.2.2 Drilling - 2012**

Pilot Gold drilled a total of 15 core and 47 RC holes for a total of 12,019 metres in 2012. Hole locations and results are summarized in Appendix C. Drilling was constrained by the disturbance limitations of the Notice of Intent, and it was restricted largely to areas that had been previously disturbed. Most of the drilling focused on down-dip extensions of mineralization north of the Main pit. Results were highly variable but in general did show the presence of mineralization extending down dip to the north for at least 300 metres north of the pit, with a notable intercept of 20.4 metres averaging 5.48 g Au/t in PK014C. In addition, several holes tested the Dunderberg Canyon area to the east of the Main pit, with PK039 returning 10.7 metres averaging 1.08 g Au/t.

The final 13 holes of the season, PK056 through PK068, tested for mineralization in the Dunderberg Shale in the Western Flank area. This area was selected to follow up on several shallow historical drill holes that detected gold mineralization in this area, which is on trend and approximately 550 metres north of the historic pits. Mineralization in the Dunderberg Shale was encountered in a number of Pilot Gold drill holes, including 15.2 metres averaging 1.73 g Au/t in PK056 and 13.7 metres averaging 6.03 g Au/t in PK061. Of greater importance was an intercept in PK067 at approximately 100 metres below the Dunderberg Shale horizon, which returned 4.6 metres averaging 9.50 g Au/t.

### **10.2.3 Drilling - 2013**

Pilot Gold drilled a total of 14,223 metres in 15 core and 43 RC holes in 2013. Hole locations and results are summarized in Appendix C. The 2013 drill program focused on step out, follow-up, and initial drill testing of targets defined by compilation, modelling and 2012 exploration, and was aided by receipt of the approved PoO in August, 2013.

A follow-up test of the Dunderberg Canyon area with nine RC holes did not yield additional mineralization. "Ken's Jasperoid" or the "Keneroid", a gold-bearing jasperoid body located





approximately one kilometre north of the Main Pit, was tested with 6 RC holes, which did not yield any significant intercepts.

The majority of the drilling focused on the Western Flank zone, both lateral to, and deeper than, previous historical and Pilot Gold 2012 drilling.

Significant intercepts in Western Flank drilling in 2013 include:

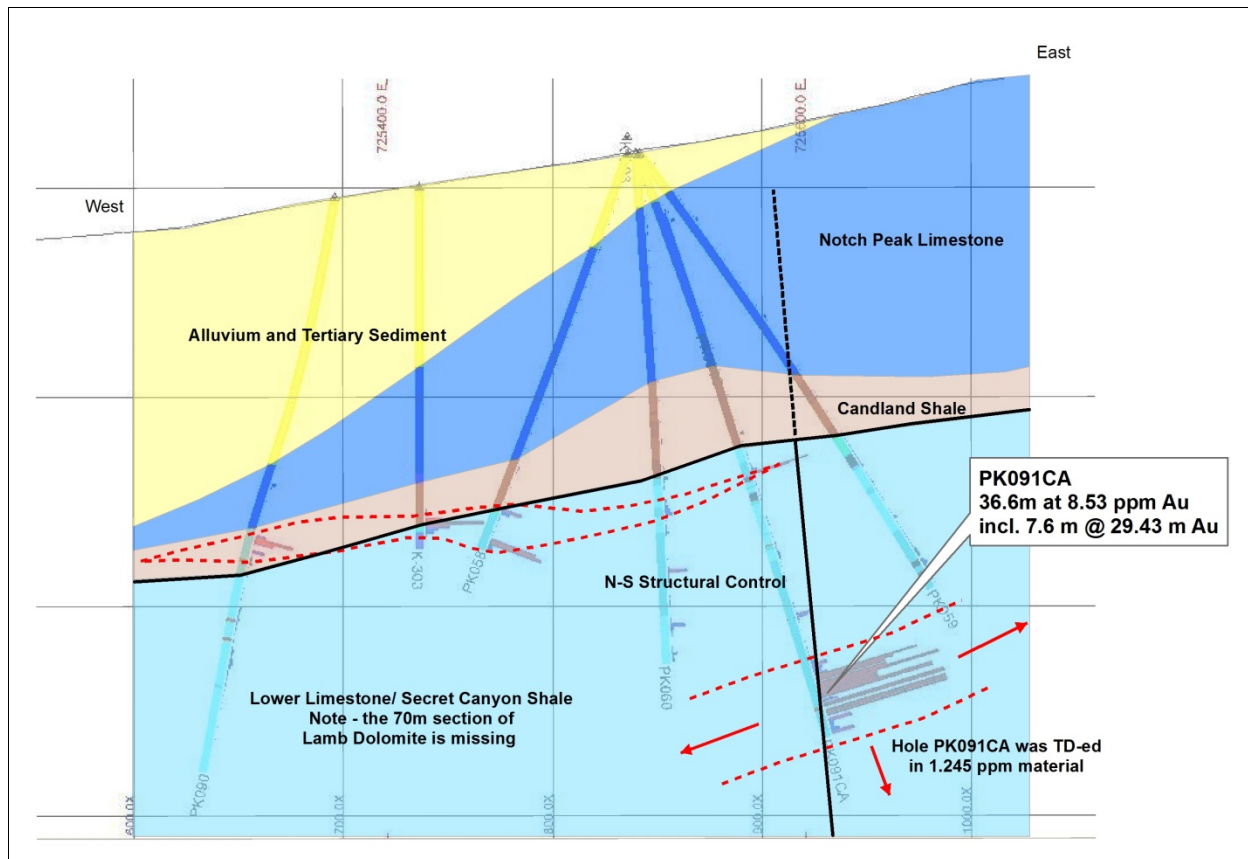
- 1.48 g Au/t over 6.1 metres in PK070
- 2.21 g Au/t over 10.7 metres in PK073
- 1.65 g Au/t over 24.4 metres in PK074, including 7.30 g Au/t over 1.5 metres
- 1.00 g Au/t over 6.1 metres in PK075
- 15.6 g Au/t over 3.0 metres, and 1.84 g Au/t over 6.1 metres in PK083C
- 0.92 g Au/t over 4.6 metres in PK086
- 8.53 g Au/t over 36.6 metres in PK091CA, including 29.4 g Au/t over 7.6 metres
- 5.00 g Au/t over 7.6 metres, and 4.71 g Au/t over 7.3 metres in PK096C
- 2.15 g Au/t over 4.6 metres in PK099
- 2.51 g Au/t over 16.8 metres in PK102
- 2.50 g Au/t over 24.4 metres in PK104C
- 6.34 g Au/t over 5.9 metres, and 3.45 g Au/t over 4.6 metres in PK106C
- 1.52 g Au/t over 6.1 metres in PK108
- 0.87 g Au/t over 9.1 metres, and 0.88 g Au/t over 10.7 metres in PK123

Most of the drilling focused on the Dunderberg Shale horizon, where drilling outlined a roughly tabular zone of mineralization, elongate in a north-northeast direction. The zone is largely stratabound and dips gently to the north. In the southern part of the Western Flank area, the mineralization is more tightly distributed around a high-angle, north-northeast-striking fault.

As with other parts of the property, some holes were allowed to test deeper portions of the stratigraphy. The Hamburg dolomite in this area is faulted out, with holes going directly from the Dunderberg Shale into the Hamburg Limestone across a low-angle fault. At least one hole (PK067) had previously encountered high-grade mineralization at greater depth. Several holes during this program were inadvertently shut down in deeper mineralization due to lack of recognition of very fine-grained pyrite in the chips or core, including PK073 (10.7 metres averaging 2.21 g Au/t) and PK083C (6.1 metres averaging 1.84 g Au/t and 9.1 metres averaging 0.49 g Au/t). A conceptual breakthrough came with PK091CA, which, while it was also terminated in mineralization, nevertheless returned 36.6 metres averaging 8.53 g Au/t. Mineralization in the form of very fine-grained pyrite was intersected in laminated to thin, alternating beds of shale and limestone. PK104C also contained a significant intercept (24.4 metres averaging 2.50 g Au/t) higher in the hole in Hamburg limestone. A cross section representing stratigraphy and mineralized intercepts at the end of the 2013 drilling season is shown in Figure 10.4.



**Figure 10.4 Cross Section through the Western Flank zone at the End of 2013**  
(looking north)



Note: Candland Shale is currently recognized as the Dunderberg Shale

## 10.2.4 Drilling - 2014

Pilot Gold has drilled a total of 26,943.7 metres in 38 core and 45 RC holes in 2014, as contained in the current MDA drilling database. Drilling targeted gold mineralization discovered in PK91CA in the Secret Canyon Shale (Western Flank target), as well as targets derived from surface gold mineralization mapped and sampled in the Right Spot, Secret Spot, and Racetrack areas (see Figure 10.3).

### 10.2.4.1 Western Flank Target 2014

Drilling in the area around PK091C in the Western Flank target showed a zone with continuity of high grade in a west-northwest direction and significant thicknesses that is hosted within the Secret Canyon Shale, as well as a higher-grade zone plunging to the north, with highlights as follows:

- 6.8 g Au/t over 41.7 metres in PK127C
- 10.5 g Au/t over 42.7 metres in PK131C
- 7.5 g Au/t over 53.3 metres in PK132C
- 10.6 g Au/t over 30.0 metres in PK133C



- 15.6 g Au/t over 38.7 metres in PK137CA
- 5.59 g Au/t over 38.1 metres in PK158C
- 6.16 g Au/t over 45.7 metres in PK175CA
- 10.1 g Au/t over 39.6 metres in PK186C

The distribution of drilling and the shape of the mineralized zone are illustrated in Figure 10.5 and Figure 10.6. The zone is largely closed off to the west, but is still open along narrow corridors to the east, north and south.

**Figure 10.5 Plan Map Western Flank Target Drilling – 2014**

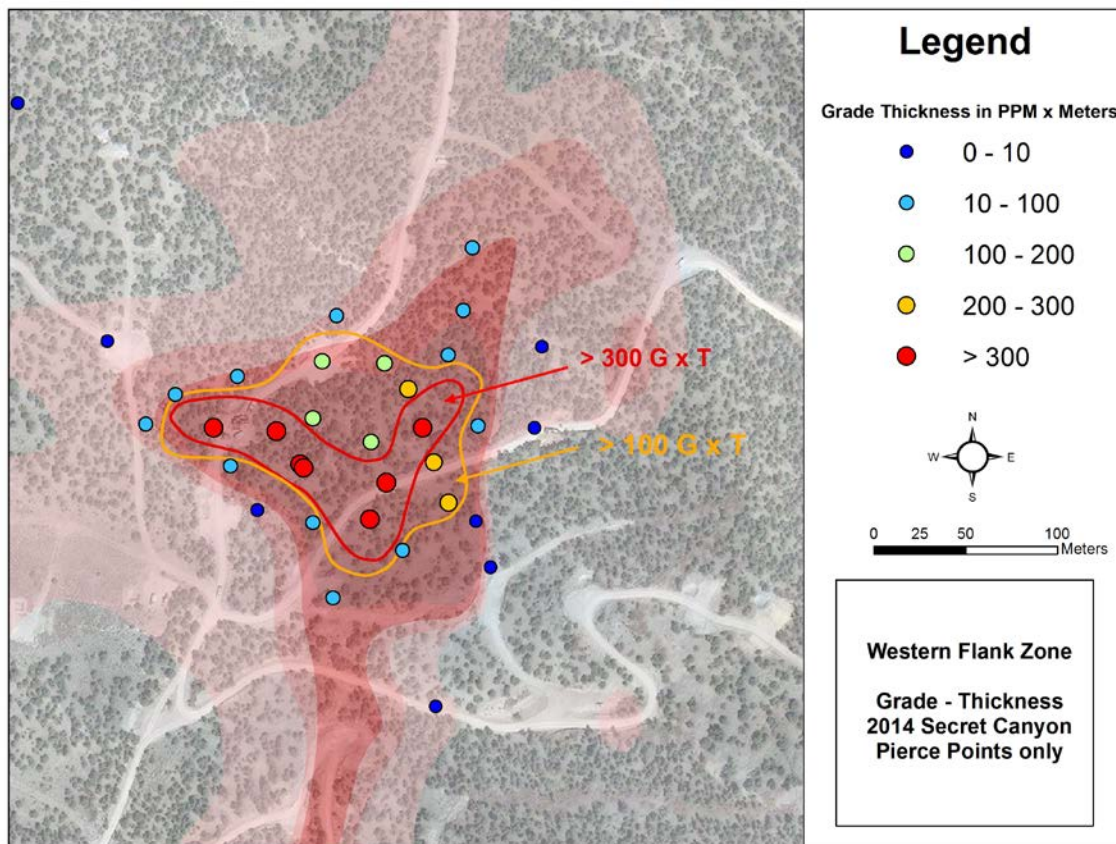
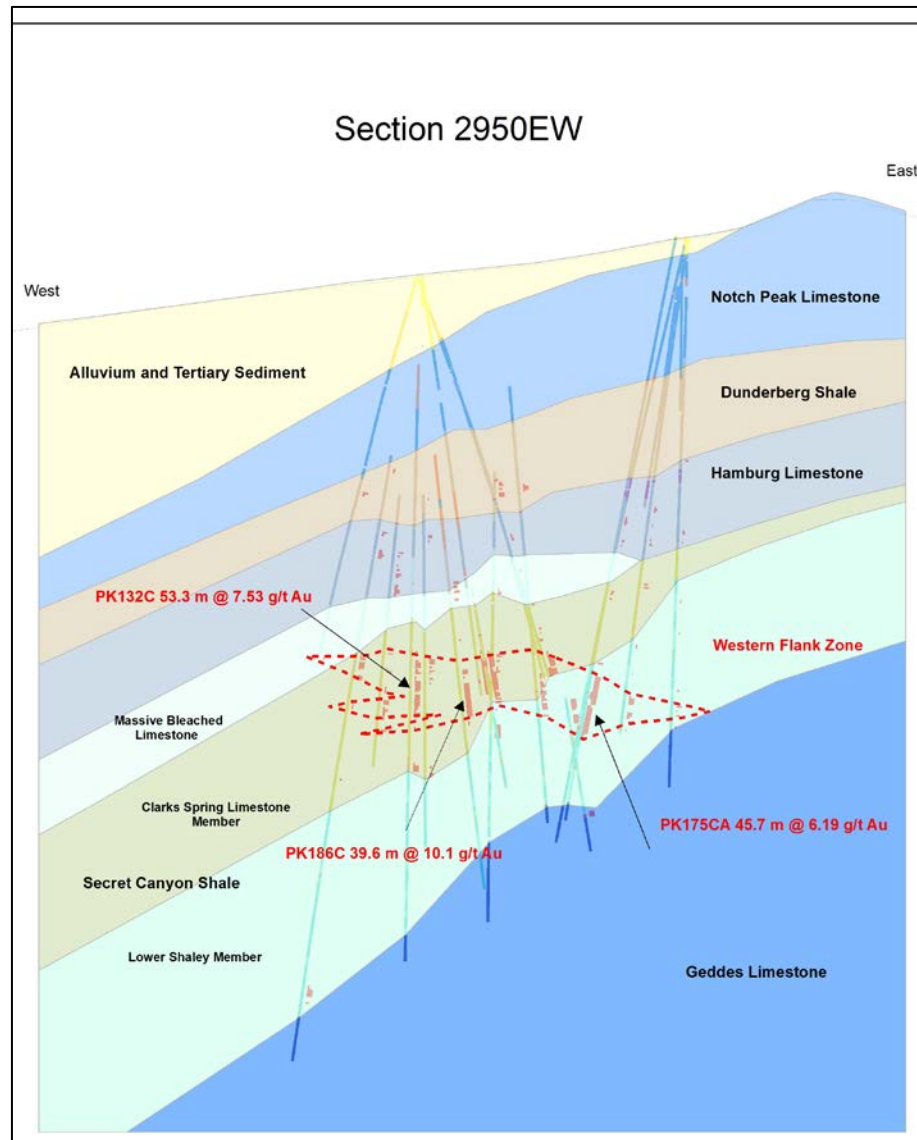




Figure 10.6 Cross Section Western Flank Target – 2014 Drilling Looking North



#### 10.2.4.2 Right Spot Target

Drilling in 2014 also focused on an area named the Right Spot target, located approximately 900 metres south-southwest of the Western Flank zone and shown in Figure 10.7. In this area, the Dunderberg Shale is exposed at the surface along a narrow, east-west-trending zone, dipping moderately to the north under the Notch Peak Limestone. Several drill holes targeted the near-surface extent of mineralization encountered in surface samples. Highlights of drilling include:

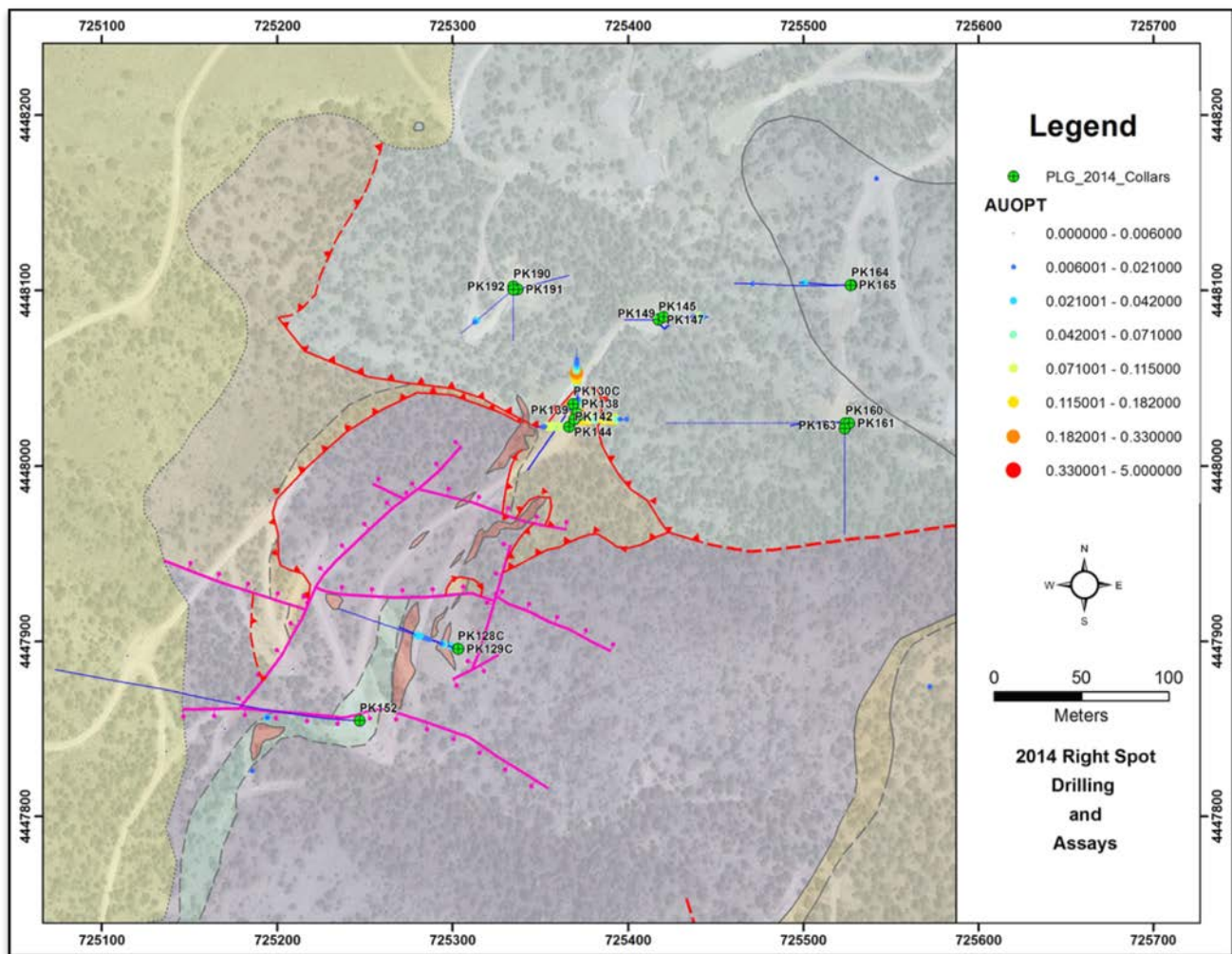
- 3.57 g Au/t over 11.5 metres in PK130C
- 3.35 g Au/t over 41.1 metres in PK144
- 3.08 g Au/t over 19.8 metres in PK138



The intercepts begin at or near the surface; efforts to extend mineralization laterally and down dip have been largely unsuccessful.

Also at Right Spot, a hole collared in the Hamburg Limestone encountered a shaly horizon at shallow depth. This stratigraphic interval returned 0.89 g Au/t over 6.1 metres and 0.58 g Au/t over 15.5 metres in PK129C. Adjacent hole PK128C returned 0.63 g Au/t over 9.1 metres. No attempt has been made to follow these intercepts up with additional drilling.

**Figure 10.7 Plan Map of the Right Spot Target with Selected 2014 Drill-Hole Traces**



### 10.2.4.3 Secret Spot and Racetrack Targets

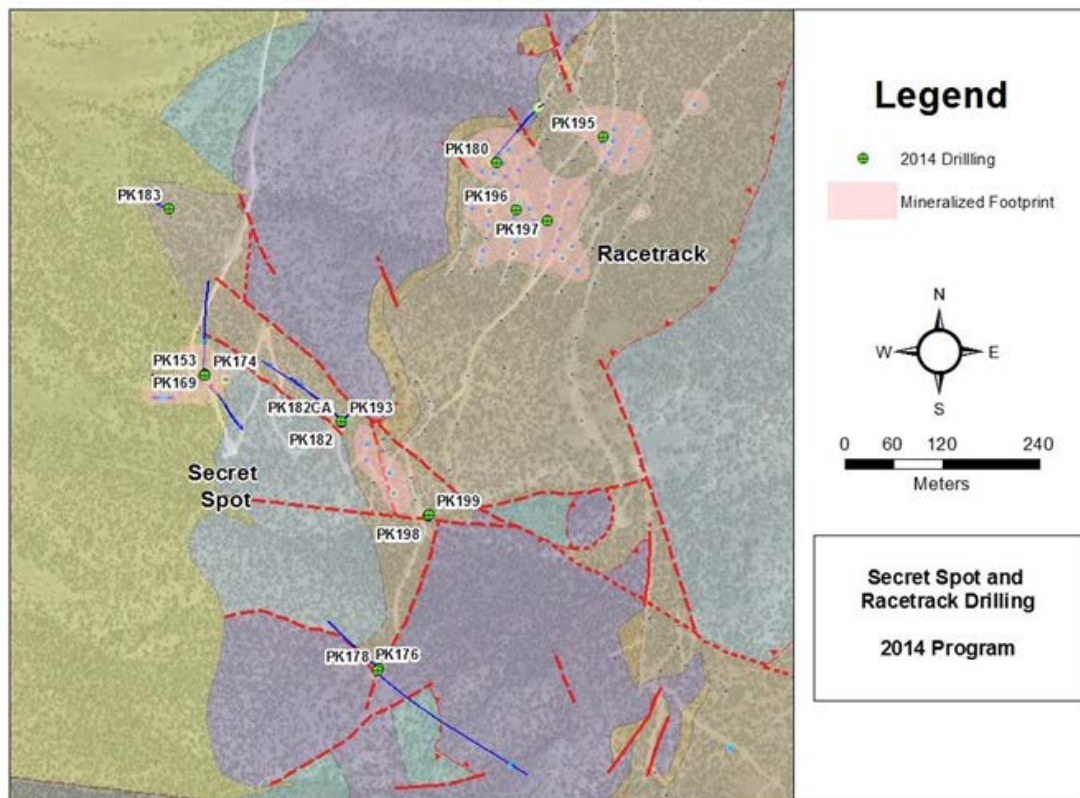
A third target, the “Secret Spot” (Figure 10.8) is located another one kilometre to the south of the Right Spot. At this location, a west-northwest-striking fault system is mapped at the surface. The fault is projected to intersect the north-northeast-trending Western Flank structure under shallow cover immediately west of the range. A hole drilled at this location (PK153) intersected a 70-metre interval



that includes three significant intercepts within the Secret Canyon Shale stratigraphic horizon: 1.34 g Au/t over 25.9 metres, 1.09 g Au/t over 13.7 metres, and 3.02 g Au/t over 6.1 metres. Subsequently, three step-out holes were drilled around PK153 in an attempt to vector into higher-grade mineralization, which was not successful. Further drilling is needed to test this area.

A fourth target, the Racetrack Zone, is located to the northeast of the Secret Spot (Figure 10.8). A large number of shallow historical drill holes tested shallow mineralization in the Dunderberg Shale, which is partly outcropping in this zone. PK180 was drilled to test the potential for mineralization in the Secret Canyon Shale in this area and returned an interval grading 1.25 g Au/t over 10.7 metres in the target stratigraphy. The hole also returned a 7.6-metre interval grading 2.69 g Au/t in the Dunderberg Shale. This was followed up with three short RC holes in the Racetrack Zone (PK195-PK197), with results varying slightly from the historical drilling.

**Figure 10.8 Plan Map of the Secret Spot and Racetrack Targets with 2014 Drill-Hole Traces**



#### 10.2.4.4 Silica Knob Target

The Silica Knob target is located 1.6 kilometres north-northeast of the Western Flank target. In late 2014, a single drill hole tested the target at another intersection between a west-northwest-striking fault and the north-northeast-trending Western Flank structure. PK203 returned an interval of 0.4 g Au/t over 9.1 metres in the targeted Hamburg Limestone stratigraphy, but the Secret Canyon Shale was not encountered and was apparently faulted out.

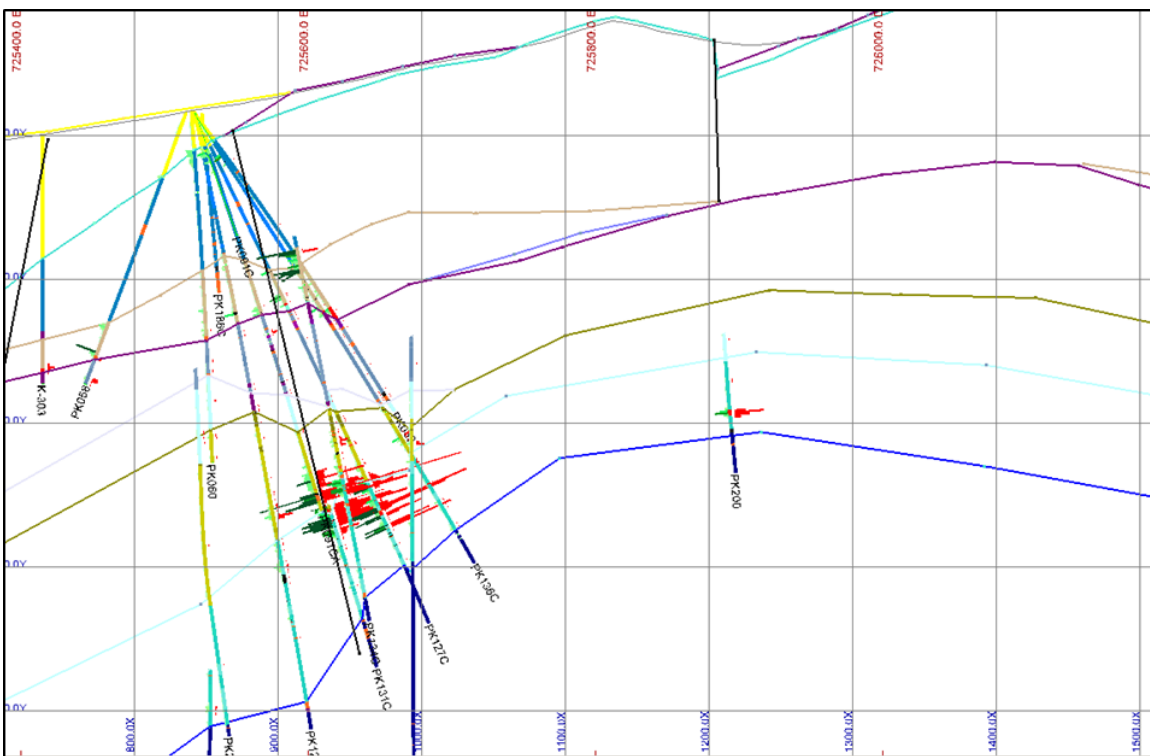


### 10.2.4.5 Kinsley Trend Target

A number of drill holes in 2014 also tested for the presence of Secret Canyon Shale-hosted mineralization along the Kinsley trend. Three holes were drilled directly under the Upper, Main and Access pits. All three encountered the target stratigraphy at the approximate modelled depth, and all three contained anomalous gold through this interval within the targeted stratigraphy.

A north-south fan of three holes was drilled from a site located between the Western Flank zone and the Upper Pit, designed to intercept mineralization that might be located between the two zones. The northerly of the three holes, PK200, returned an intercept of 6.14 g Au/t over 7.6 metres in the targeted Secret Canyon Shale (Figure 10.9). The intercept is located 150 metres east of the Western Flank Zone. The undrilled interval between the intercept in PK200 and the Western Flank Zone was tested for continuity of mineralization in 2015.

**Figure 10.9 Cross Section of the Kinsley Trend – Western Flank Area**  
(looking north)

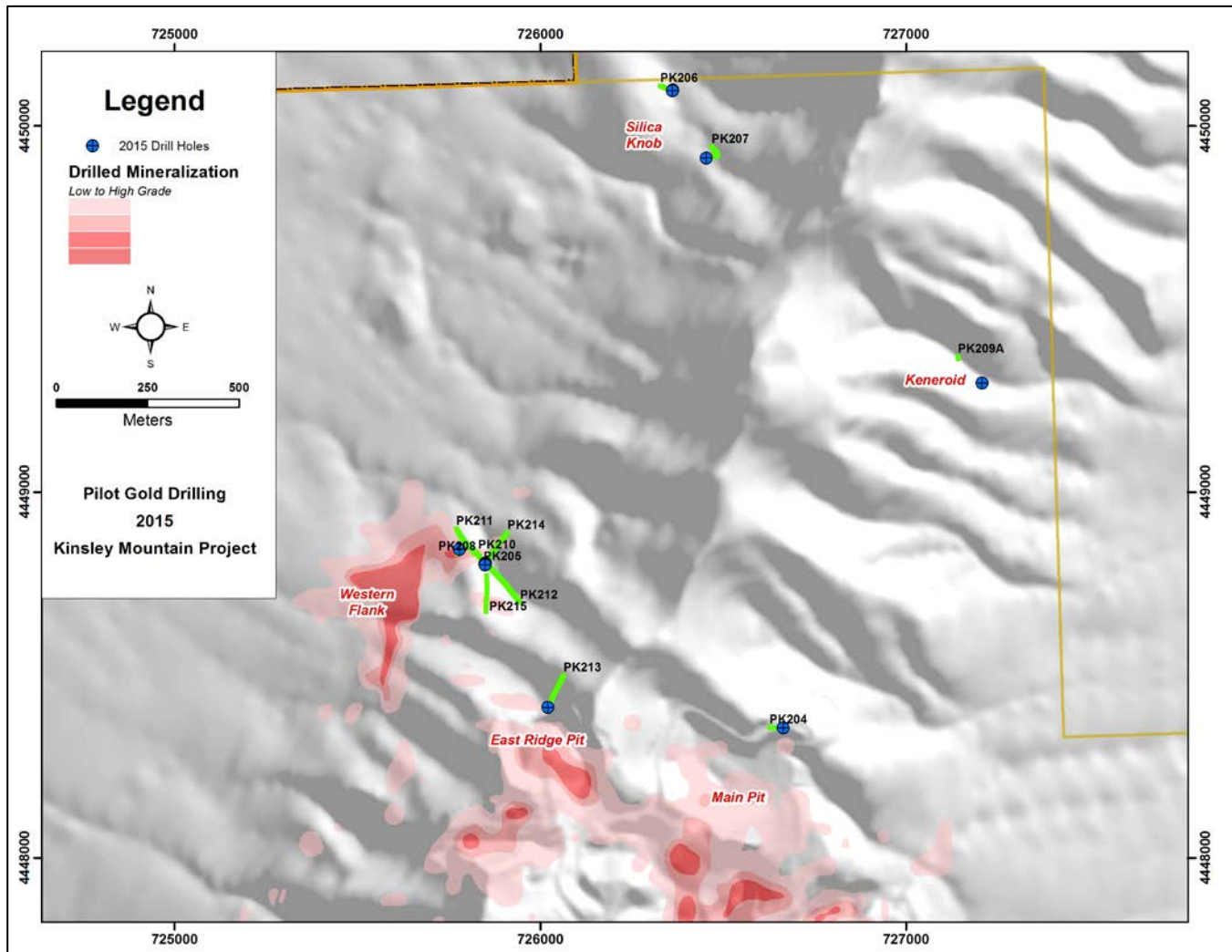


### 10.2.5 Pilot Gold Drilling - 2015

Pilot Gold drilled a total of 5,399 metres in 13 RC holes in 2015 (Figure 10.10). One hole in the Keneroid area was lost, and was re-drilled (PK-209A). Drilling targeted the Secret Canyon Shale horizon in several targets, including north of the Main Pit, Silica Knob, Keneroid, and north and east of the Western Flank Zone. Three of the holes were drilled to use in the downhole IP survey for placement of the downhole electrode.



Figure 10.10 2015 Pilot Gold Drilling Locations



### 10.2.5.1 Main Pit Target

PK204 was drilled approximately 350 metres north of the Main Pit, the first of the holes drilled for the IP survey. This hole was targeted based on structures apparent in the Hamburg Dolomite from prior drilling. This hole reached into the Geddes Limestone, but did not return significant values of gold in the Secret Canyon Formation. The only reportable intercept in PK204 was 1.5m of 0.48 ppm Au in the Dunderberg Shale.

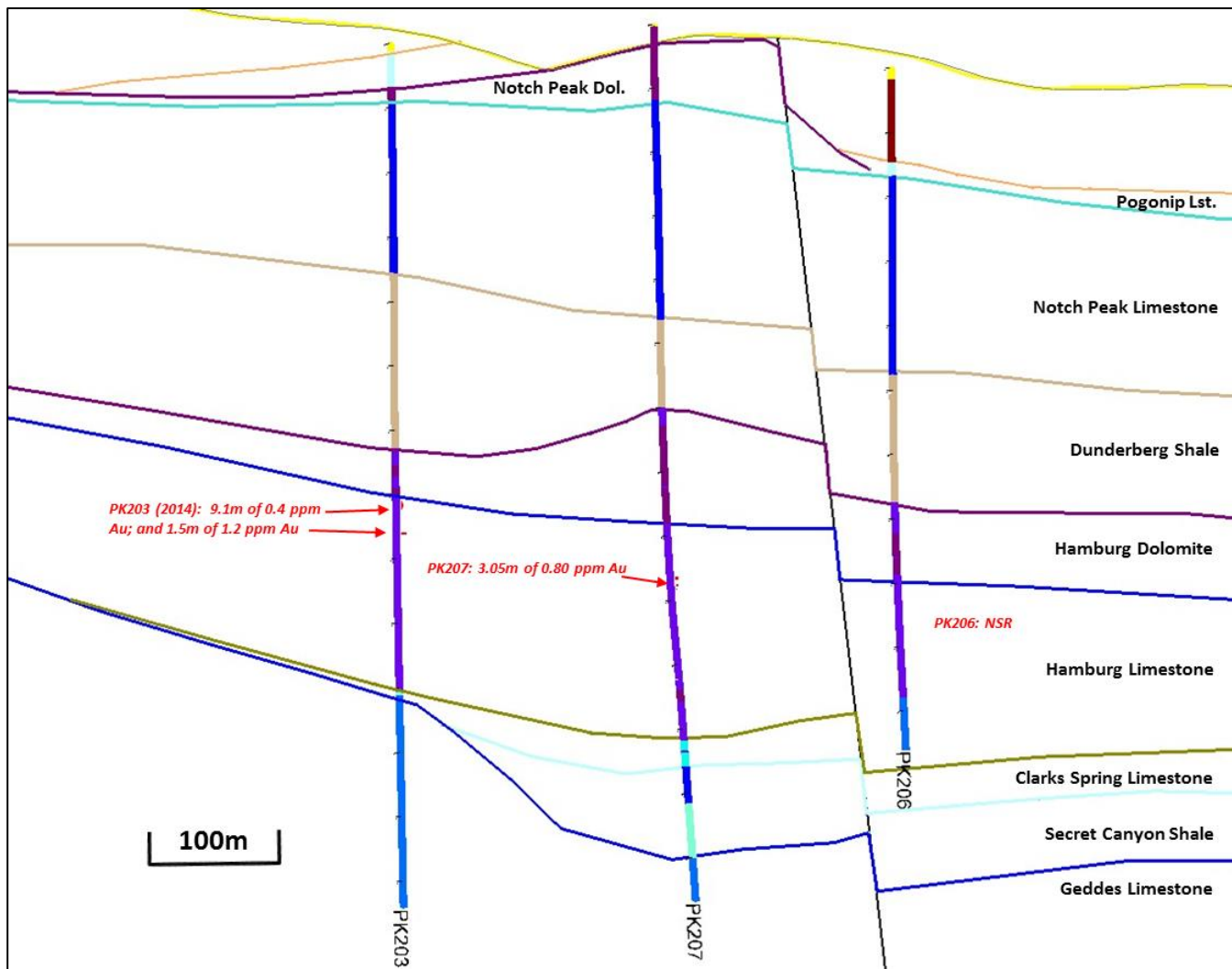




### 10.2.5.2 Silica Knob drilling

PK206 and PK207 were drilled in the Silica Knob Target, located 1.5 kilometres NNE of the Western Flank Zone, on the west side of the range. This target area has a 300x400 metre zone of silicified breccia on surface, and weak but present Au and Sb soil geochemistry in the vicinity. Pilot Gold geologic mapping identified a NW-striking structural zone through the range which meets the interpreted NNE-striking Western Flank trend at the Silica Knob Target. In 2014, Pilot Gold drilled one hole in this area, which intersected 9.1m of 0.4 ppm Au and 1.5m of 1.2 ppm Au, both in the Hamburg Limestone. PK206 and PK207 targeted prospective stratigraphy north and west of PK203, where it was interpreted to be shallower. The Secret Canyon Shale was not intersected in PK206, but PK207 intersected 70 metres of Secret Canyon Shale from 580 to 650 metres depth, with anomalous Au up to 0.196 ppm. The only reportable intercept in PK207 was 3.05m of 0.80 ppm Au in the Hamburg Limestone (Figure 10.11).

Figure 10.11 Silica Knob Cross Section Looking West Showing 2014 and 2015 Drill Holes





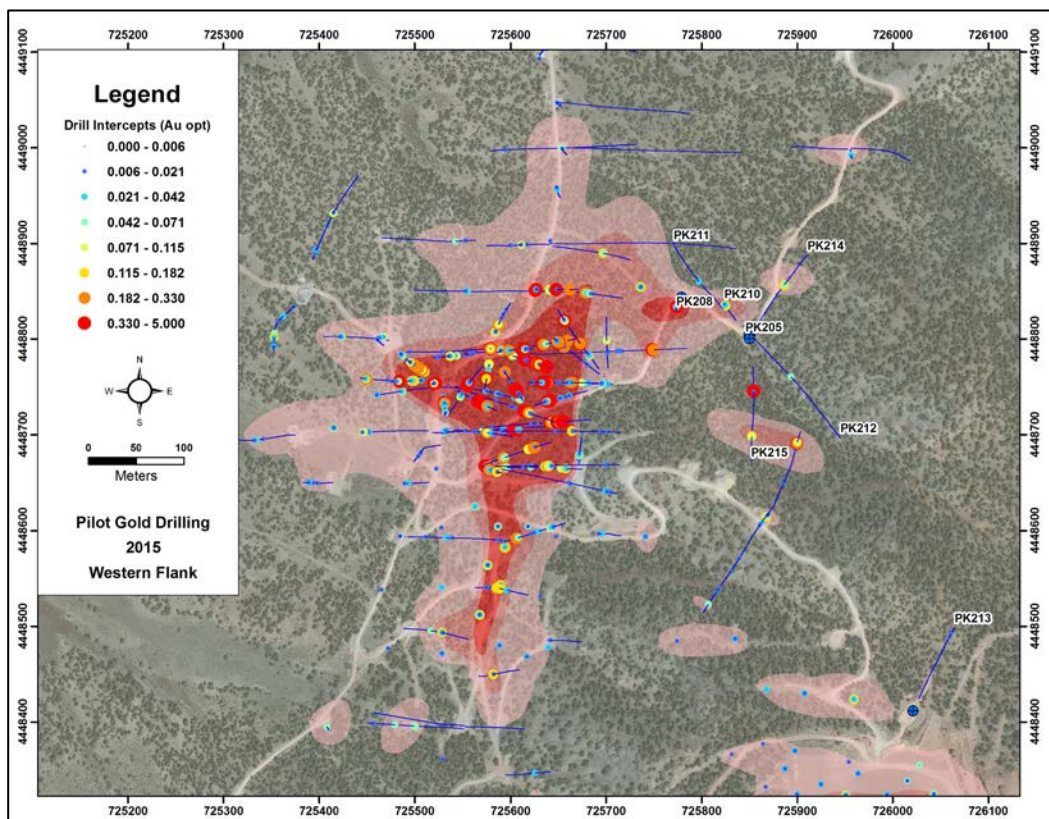
### 10.2.5.3 Western Flank Drilling

Holes PK205, PK208, PK210, PK211, PK212, PK214, and PK215 were drilled in the Western Flank area (Figure 10.12), with target intercepts located from 150 metres to 250 metres from the known high grade Western Flank mineralization. Highlights of this drilling include:

- 9.1 m averaging 2.34 g Au/t in PK208 (Dunderberg Shale horizon)
- 18.3 m averaging 3.46 g Au/t in PK208 (Secret Canyon Shale horizon).
- 13.7 m averaging 2.95 g Au/t in PK210 (Secret Canyon Shale horizon).
- 3.0 m averaging 6.97 g Au/t in PK215 (Dunderberg Shale horizon).
- 6.1 m averaging 2.69 g Au/t in PK215 (Secret Canyon Shale horizon)

The 2015 drilling east of the Western Flank zone demonstrated the presence of at least two areas of mineralization, including a possible E-W-trending zone defined by PK208, 210 and 214, and one located to the south, defined by PK215 and PK200, the latter drilled late in 2014. Additional drilling will be needed to define the extents of this mineralization and determine whether it joins with the Western Flank Zone. The drilling also shows that the Secret Canyon Shale is much thinner and higher in elevation in this area compared to the Western Flank zone.

**Figure 10.12 2015 Western Flank Drilling Map**





### 10.3 Core-RC Comparisons

The six core holes drilled by Pilot Gold in 2011 were designed to begin the process of confirming the historical drill data. Each hole is located near the collar coordinates of an Alta (A-series) or Cominco (K-series) RC hole drilled near the margins of historical open pits. The degree to which each of the Pilot Gold holes might represent a true twin of an historical hole is limited by uncertainties related to the exact location of the historical holes. Results from the 2011 Pilot Gold diamond drill holes are compared with data from corresponding Alta and Cominco RC holes in Table 10.3 and Figure 10.13. In Table 10.3, total gold endowments of the selected intercepts are calculated as the mean grade of the interval multiplied by the interval length, and the distance between the two holes in each set is given in the “Separation” column.

**Table 10.3 Statistical Comparisons of Pilot Gold Core Holes vs. Nearby Historical RC Holes**

RC Hole	From (m)	To (m)	Length (m)	Mean (g Au/t)	Median (g Au/t)	Mean x meters	Pilot Core	From (m)	To (m)	Length (m)	Mean (g Au/t)	Median (g Au/t)	Mean x meters	Separation (m)
A-947	88.4	106.7	18.3	1.16	1.06	21.21	PK001C	88.5	105.3	16.8	1.87	0.94	27.42	4.2
K-196A	88.4	97.5	9.1	5.22	4.85	47.76	PK002C	111.7	121.9	10.2	5.31	5.31	54.44	3.0
A-1077	102.1	117.4	15.2	1.47	0.93	22.47	PK003C	102.7	116.1	13.4	4.58	0.84	51.09	4.4
A-1074	39.6	54.9	15.2	5.92	1.51	90.29	PK004C	36.3	54.9	18.6	5.08	1.92	102.4	6.0
A-912	51.8	61	9.1	7.97	8.40	72.84	PK005C	51.7	56.9	5.2	0.24	0.24	1.23	4.0
A-915	42.7	61	18.3	2.62	1.13	48.04	PK006C	43.9	64.9	21.0	0.61	0.37	12.38	5.5

Intervals are based on a 0.1 g Au/t cut-off.

The hole pairs that include PK001C, PK002C, PK003C and PK004C in Figure 10.13 show that the main zones of mineralization intersected by the core and historical RC holes compare well in terms of the lengths of the mineralized intervals and their overall gold-grade morphologies. The close correspondence of the core and RC morphologies for these four core-RC sets indicates that each hole in the pair intersected similar geology within the main mineralized zones. In contrast, the poor correspondence of the gold-grade morphologies in the PK001C-A947 pair at levels above the main mineralized zone suggest that the RC hole intersected some secondary mineralized zones that the core hole did not. In the case of the PK004C-A1074 pair, the core hole intersected significant mineralization immediately below the main zone of mineralization, and this geology appears to be absent in the RC hole. While the core and RC results from the main mineralized zones generally compare well for these four sets of holes, the grade-times-thickness values of the core holes are higher than those of the RC holes in every case (Table 10.3).

The down-hole gold-grade morphologies of the PK005C pair do not compare well at all; the main zone of mineralization intersected in the historical RC hole is not apparent in the Pilot Gold core hole. Since no recovery problems were experienced in the core hole, the lack of correspondence in the gold-grade morphologies suggests that the geology intersected by each of the holes in the pair is different. One possible explanation for this is the location of the historical RC hole is inaccurate.

The gold-grade morphologies of the last hole set (PK006C-A915) correlate well, but the magnitudes of the grades returned from the core hole are significantly lower than those intersected by the RC hole.



This could be due to a natural decrease in grade at the margin of a mineralized zone and/or by a location problem with the RC hole (*i.e.*, the holes are farther apart than the database suggests).

The down-hole gold-grade plots are also useful in detecting possible down-hole contamination in RC holes. While hole A1077 could possibly have a ‘tail’ of gold values immediately below the main zone of mineralization, the evidence is not compelling, and, as a whole, the six RC holes in these graphs show no evidence of contamination problems.

**Figure 10.13 Down-Hole Plots of Pilot Gold Core vs. Historical RC Gold Values**

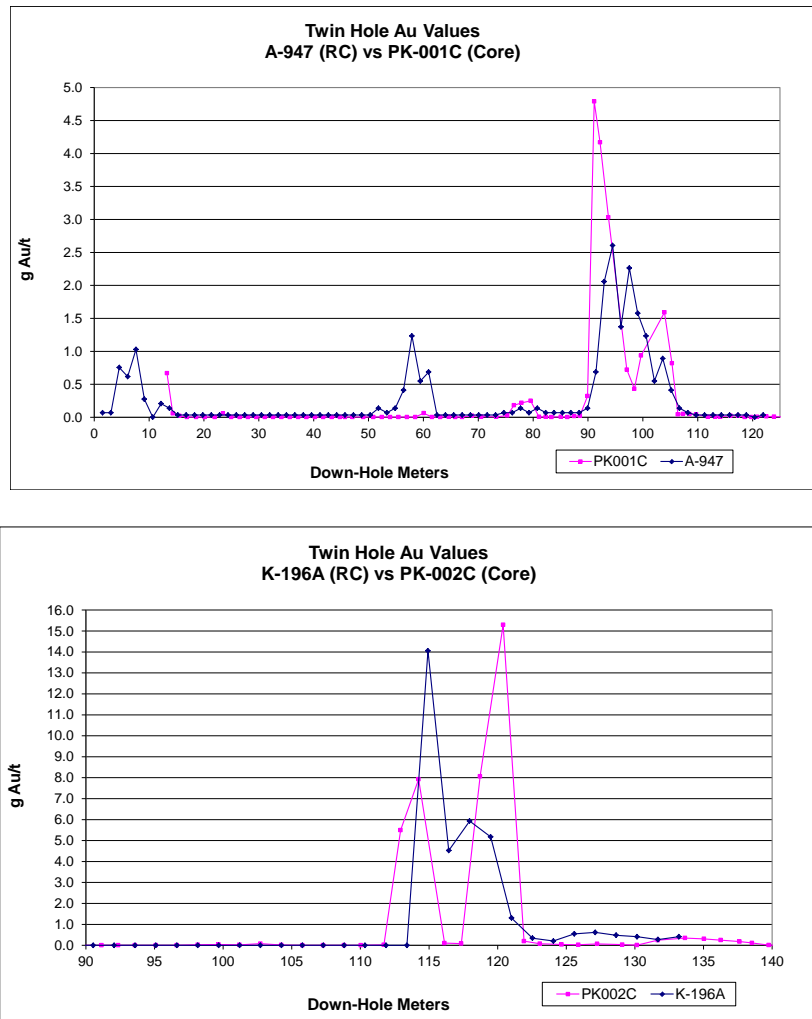




Figure 10.13 Down-Hole Plots of Pilot Gold Core vs. Historical RC Gold Values, continued.

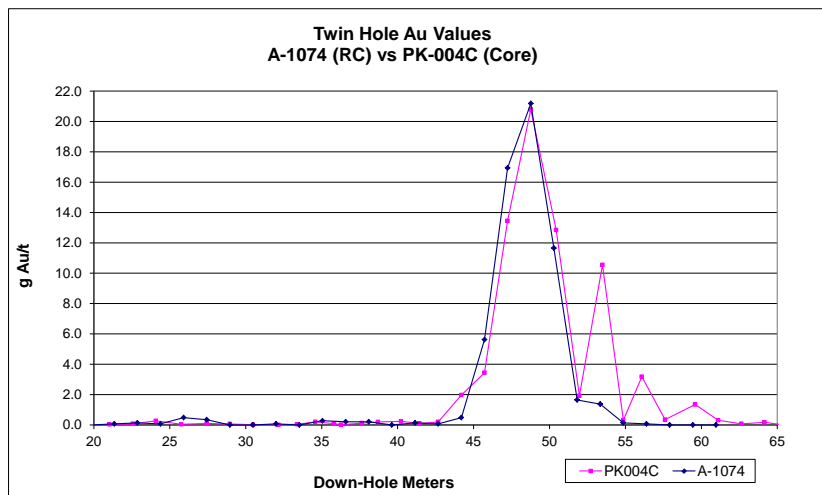
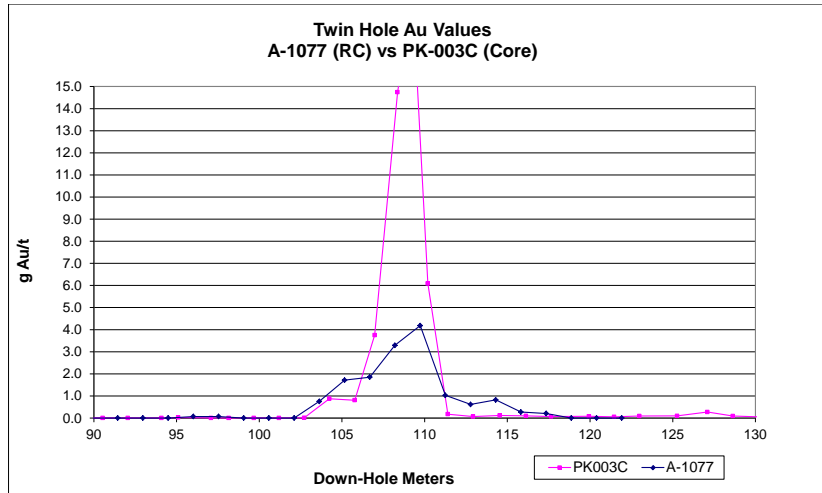
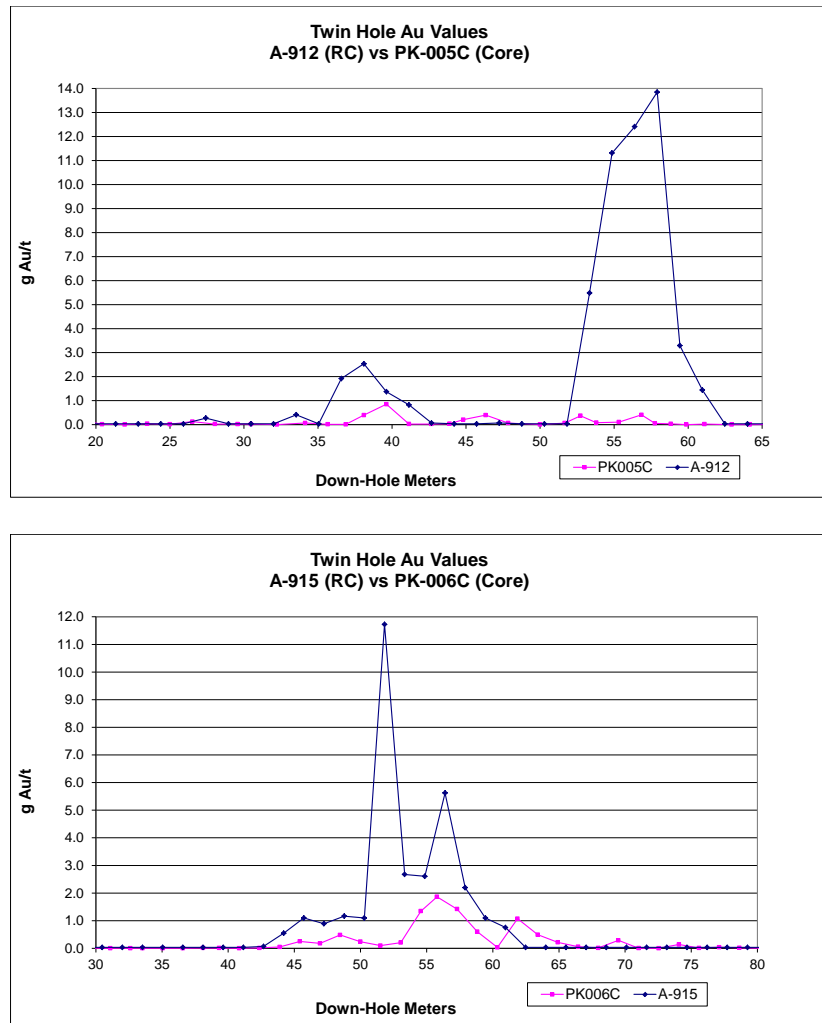




Figure 10.13 Down-Hole Plots of Pilot Gold Core vs. Historical RC Gold Values, continued.



#### 10.4 Summary Statement

Historical drilling was primarily conducted by RC drilling methods, although some of the early drilling was done by diamond core and a few holes may have been drilled by conventional rotary equipment. Pilot Gold has drilled a significant number of both core and RC holes. The majority of drill holes have vertical or subvertical orientations, which cut the predominantly shallow-dipping mineralized zones at relatively high angles. A significant number of angle holes were also completed, primarily by Pilot Gold, in attempts to either cut specific mineralized targets at high angles or to take advantage of a single pad as a site for multiple holes (which is especially prevalent for holes testing the deep Secret Canyon mineralization).

The predominant sample length for the drill intervals in the MDA database is 1.524 metres (five feet), with a relatively small percentage of shorter or longer intervals derived largely from Pilot Gold core holes. MDA believes the drill-hole sample intervals are appropriate for the style of mineralization at the Kinsley project.



MDA is unaware of any sampling or recovery factors that may materially impact the accuracy and reliability of the results and believes that the drill samples are of sufficient quality for use in the resource estimation discussed in Section 14.0. During the resource modeling, the RC drill data were carefully evaluated for the presence of potential down-hole contamination. Very few potentially contaminated intervals were identified, and these were removed from use in the estimation of the project resources.



## 11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The following sections summarize the extent of MDA's knowledge regarding the sample preparation, analysis, security, and quality control/quality assurance protocols used in the various drilling and surface-sampling programs at Kinsley. The commercial analytical laboratories known to have been used by the historical operators at Kinsley, as well as the sample preparation and analytical procedures known to have been used by these laboratories to obtain the gold assays, are, or were at the time, well recognized and widely used in the minerals industry. In addition, all of the historical operators were reputable, well-known mining/exploration companies, and there is ample evidence that these companies and their chosen commercial laboratories followed accepted industry practices with respect to sample preparation, analytical procedures, security. It is important to note, however, that most of the Alta drill samples, which comprise approximately half of the Kinsley database and almost one third of the assay data used directly in the estimation of the project resource grades, were analyzed at their in-house laboratory, and it is possible that some of Cominco's drill samples were analyzed at Cominco's in-house laboratory. It is also known that some of the Alta analytical results in the project database were derived from cyanide-leach analyses, which often yield partial gold determinations, as opposed to fire-assaying methods, which are assumed to be total-gold analyses.

The sample preparation, analysis, and security protocols of Pilot Gold at Kinsley meet current industry standards.

### 11.1 Historical Drilling Programs

#### 11.1.1 Cominco

Cominco prioritized the use of dry RC drilling, *i.e.* without the injection of drilling fluids, because they recognized that drilling dry can significantly improve sample quality (Monroe *et al.*, 1988). During the period 1986 through 1988, Cominco drilled approximately 60% of their RC drill holes dry and 40% wet; drill rigs with higher-capacity compressors were more successful at completing holes without injecting water than those with lower capacities. Drilling conditions were reported to be generally good, although the continued use of RC methods (as opposed to core) was highly recommended due to structural complexity, which creates broken ground, and the number of cavities intersected during drilling.

Sampling was done by the drill contractors at five-foot (1.524-metre) intervals; Cominco personnel reportedly checked the sampling techniques and procedures of the drill crew frequently. Dry samples were split with a Gilson splitter and two samples were collected in sample bags, one for assay and one as a duplicate sample stored for later use in metallurgical testing or for check assaying. Wet samples were split through either the Gilson splitter or an inverted cone wet splitter; Cominco reported that both of these methods experienced problems and recommended that future drilling contracts require the use of rotary splitters that are designed for wet sampling.

Cominco apparently analyzed all drill samples from holes K-1 through K-61 and KS-201 through KS-285 by fire assay with an atomic absorption ("AA") finish (Monroe *et al.*, 1988; Turner, 1988). There is a discrepancy in various Cominco reports as to whether holes K-62 through K-121 were by fire assay with an AA finish (Monroe *et al.*, 1988) or by fire assay with a gravimetric finish (Turner, 1988). Gold content of the 1991 drill samples was analyzed by fire assay with gravimetric finish, while silver,





arsenic, mercury, and antimony were analyzed by inductively coupled plasma atomic emission spectroscopy (“ICP-AES”).

Assay certificates for Cominco’s drill samples are not currently available. As discussed below, standards and duplicates from the 1986 and 1987 drilling programs were analyzed by Chemex Labs Ltd. (“Chemex”; now known as ALS Minerals, or “ALS”) at their Sparks, Nevada laboratory. Since there is little to be gained by assaying standards inserted into the drill-sample stream at a different laboratory than the one that analyzed the drill samples, this strongly suggests that the 1986 and 1987 drill samples were analyzed at Chemex. Furthermore, drill samples from the 1991 assessment drilling were analyzed by Chemex in Sparks, Nevada (McMaster, 1991). The laboratory(s) used for the 1988 and 1990 drill programs is not known; it is likely that these drill samples were analyzed at either Chemex or Cominco’s in-house laboratory.

### **11.1.2 Alta**

Alta drilled more than 80% of their RC holes dry (J. Robinson, written communication, 2012). Sampling was done by the drill contractors on five-foot (1.524-metre) intervals. A centre-return hammer was used on some holes, but most were drilled with a conventional hammer assembly. Drillers emptied the cyclone into a Gilson dry splitter and collected the samples in sample bags after the first split. MDA has no information on how Alta sampled their seven core holes.

The drill samples were sent to Alta’s laboratory at the Taylor Mill Site near Ely, Nevada, and analyzed for gold only. Details of laboratory procedures are unknown, but it is reported that, for the earlier phases of drilling, the gold results were reported as AA analyses, which indicate the cyanide-soluble gold content of the samples were reported (as opposed to total gold analyses provided by fire-assay techniques; J. Robinson, oral communication, 2012). Starting with holes drilled at the Emancipation area, laboratory personnel split the samples at the laboratory and produced a fire assay with AA finish, as well as a cyanide-soluble analysis. This was apparently due to carbonaceous and/or sulphidic nature of the material, which could lead to very low cyanide-soluble results. Wilson (1995b) states that drill samples were routinely analyzed by cyanide-soluble methods, with “mineralized” samples then undergoing fire assay as well, at least for the 1995 drill program. There is evidence that at least some of the drill samples from the 1994 drilling program were analyzed by American Assay Laboratories (“American Assay”) (Wilson, 1995a; see Section 12.2.2).

Alta’s samples were collected daily at the drill rig by Alta geologists and transported directly to Alta’s laboratory near Ely for processing. Samples were under the supervision of Alta employees at all times (J. Robinson, oral communication, 2012).

### **11.1.3 Hecla and Pan American**

No information is available regarding sample preparation, analysis, and security for the Hecla and Pan American drilling programs.



## 11.2 Pilot Gold Drill Samples

### 11.2.1 Core Drilling

Pilot Gold geologists were on site during the Pilot Gold drilling programs and they carried out geological logging of drill core, and defined the core sample intervals. Drill core was collected at the drill sites by Pilot Gold personnel. After quick logging of the drill core at Kinsley, the core was either logged on site in a trailer designated for that purpose, or transported by Pilot Gold geologists to a secure logging and core-cutting facility attached to Pilot Gold's Elko office.

All drill core was sampled except for backfill and pad-fill material, as well as the upper portions of holes drilled from the same drill pad. Sampled intervals were identified based on geological considerations. Sample lengths vary from approximately 0.24 to 5.8 metres, with an average length of 1.5 metres. All core was photographed wet and dry. Personnel from Rangefront Geological Consulting then cut the core length-wise into halves using diamond saws and sampled the core at Pilot Gold's Elko facility.

The drill core was routinely sawn into halves, with one half sampled and sent to the assay laboratory. During 2011 and 2012, when field-duplicate samples were taken, one of the halves of core was split into two ¼-core samples, one for the primary assay and one for the duplicate, leaving half of the core stored for future reference in the Pilot Gold Elko office. During the 2013 and 2014 drilling programs, the field duplicate consisted of the second half of core, with no core remaining in storage. All samples were transported by ALS personnel from the Pilot Gold cutting facility to the ALS sample preparation laboratory in Elko, Nevada. After sample preparation (see Section 11.2.3), sample pulps were sent from the ALS Elko laboratory to the ALS laboratory in Reno, Nevada, for analysis of gold by fire assay, and to the ALS laboratory in North Vancouver, B.C., for multi-element geochemical analyses.

### 11.2.2 RC Drilling

RC drilling was carried out with water injection and sampled on five-foot (1.524-metre) intervals. Samples were collected at the rig via a rotary wet splitter, which reduced the material to a manageable size, typically 10 to 12 kilograms. Samples were placed in numbered sample bags, stored on-site in bins provided by ALS, and were picked up by ALS personnel on a regular basis. The chain of custody was completed when ALS personnel delivered the bins to ALS' sample preparation facilities in Elko or Winnemucca, Nevada.

### 11.2.3 Sample Preparation and Assay Procedures

Pilot Gold employs a blind numbering system for both core and RC samples, such that the hole number and down-hole footage are not known to the assay laboratory. The primary assay laboratory for Pilot Gold has been ALS Minerals ("ALS"), a division of ALS Ltd. The ALS analytical facility in North Vancouver, B.C., is certified to ISO 9001:2008 standards and has received ISO/IEC 17025:2005 accreditation from the Standards Council of Canada (SCC) for all methods used to analyze samples from the Kinsley project, including inductively coupled plasma atomic emission and mass spectrometry ("ICP-MS"). The ALS laboratory in Reno, Nevada, which was responsible for fire assaying of all samples from the Kinsley project, is certified to ISO 9001:2008 standards and has received ISO/IEC 17025:2005 accreditation from the SCC for this method. ALS was chosen as Pilot Gold's primary



laboratory based on a rigorous, 2008 audit by consultant Barry Smee of all Nevada assay laboratory facilities. The audit was performed for Fronteer Gold; Pilot Gold was created as part of the 2011 acquisition of Fronteer Gold by Newmont Mining.

Pilot Gold's drill samples were prepared and analyzed by ALS. The entire sample submitted by Pilot Gold was crushed to 8 to 10 mesh (0.095 to 0.079 microns), following which a 400-gram subsample was obtained using a riffle splitter. The 400-gram subsample split was then pulverized to a nominal -150 mesh (less than 0.0035 to 0.0041 microns) particle size. The pulps were analyzed for gold by fire assay of a 30-gram charge with atomic absorption spectroscopy ("AAS") finish (ALS method code AuAA23). All samples were also analyzed for 51 elements using an aqua-regia digestion and ICP-MS techniques (ALS method code ME-MS41). Samples with gold contents greater than or equal to 5 g Au/t were re-analyzed by fire assay with a gravimetric finish (ALS method code AuGRA21). ALS also completed cyanide-soluble gold ("AuCN") analyses on most samples with reported values of 0.2 g Au/t or higher. For this procedure, 30 grams of sample pulp were continually rolled and leached for one hour in 60 millilitres of 0.25% NaCN solution, at room temperature, and maintained at a pH of 11 to 12. Gold was then analyzed by AAS using ALS method AuAA13.

All data from logging and assaying were verified on site and uploaded to a database maintained on a server in the office of Pilot Gold in Elko, Nevada.

### **11.3 Historical Surface Sampling**

#### **11.3.1 Cominco**

Cominco geologists collected rock, soil, and stream-sediment samples (from dry stream channels) and recorded descriptions including the sample location, rock type, soil horizon, *etc.* on paper cards.

The rock samples were analyzed for gold by fire assay with AAS finish, and for silver, arsenic, antimony, and sometimes other elements by ICP methods. Cominco used its in-house laboratory, Cominco American Incorporated Mobile Geochemical Laboratory in Spokane, Washington, as well as Chemex Labs Ltd., in North Vancouver, B.C. (now known as ALS Minerals, or "ALS") and Barringer Laboratories, Inc. of Sparks, Nevada for analyses of these samples.

For soil and stream-sediment samples, Cominco used its in-house laboratory; Chemex also analyzed some of the soil samples. Samples were analyzed for gold by fire assay with AA finish, as well as a suite of elements by "semi-quantitative multi-element ICP."

#### **11.3.2 Alta**

Alta geologists collected rock and soil samples and entered data regarding location, rock type, soil horizon, *etc.* on paper cards.

Alta appears to have used Chemical and Mineralogical Services of Salt Lake City for analysis of at least some of their soil samples, which were analyzed for gold, lead, silver, zinc, and copper; the method used for analysis of soil samples is not known. Most soil and rock samples were analyzed at Alta's in-house analytical laboratory.



### **11.3.3 Animas**

Animas geologists spot checked sample sites in the field to confirm that the soil pits were properly dug and located. The soil sample sites were located using hand-held GPS units. The ALS facility in Sparks, Nevada analyzed the samples. Gold was determined by fire assay with ICP finish; 51-element geochemical analyses were completed by ICP-MS determinations on 0.5-gram sample aliquots.

Stream-sediment samples (collected from dry stream channels) were submitted to ALS for preparation and analysis. All samples were sieved to -80 mesh (-0.007 microns). The -80 mesh fraction was analyzed for gold by fire-assay with ICP finish. Fifty-one elements were analyzed using ICP-MS on a 0.5-gram sample aliquot. No stream-sediment samples were collected from the disturbed and mine-contaminated drainages in the area of past mining operations.

Rock-chip samples were analyzed by ALS in Sparks, Nevada for gold by fire assay with ICP finish, and for 51-element geochemistry by ICP-MS on a 0.5 gram sample aliquot. All samples were well-described. Sample locations were determined with hand-held GPS and are considered accurate to better than four metres.

### **11.4 Pilot Gold**

Pilot Gold's geologists collected rock samples at sites located with a GPS unit and either entered sample descriptions directly into a hand-held ArcPad®/GPS unit, for direct upload into ArcMap®, or with hand-written descriptions that were later entered into a spreadsheet. Sampling was conducted as random chip sampling and random grab sampling of selected rock outcroppings. Samples were delivered directly to ALS's Elko preparation laboratory where they were crushed to  $\geq 70\%$  at  $< 2$  millimetres, riffle split, and pulverized to 85% at  $< 75$  microns. Assays were done by ALS in Reno, Nevada, and ALS in North Vancouver, B.C., with gold by fire assay and AAS finish, and for 51 elements by ICP-MS, respectively.



## **12.0 DATA VERIFICATION**

The major contributors to the current Kinsley project database include Cominco, Alta, and Pilot Gold. While records indicate that Cominco and Alta instituted quality assurance/quality control (“QA/QC”) programs, little useable data are available to review and comment on the results. Pilot Gold’s QA/QC programs meet current industry standards, and no significant issues have been identified (although splitting procedures at the drill rig warrant review).

In consideration of the fact that the Alta and Cominco analytical data were used to support a successful mining operation, and subsequent drilling by Pilot Gold is generally consistent with the results generated by these companies, MDA believes the Kinsley data as a whole are acceptable for use in this report.

MDA experienced no limitations with respect to its data verification activities.

### **12.1 Drill-Hole Database Auditing**

#### **12.1.1 Collar and Survey Tables**

As mentioned in Section 9.1.6, Pilot Gold completed a detailed review of the historical data, which included an audit of the x-y-z locations of 803 out of the 1,148 historical drill holes in the original project database (the total number of holes exceed those in the current MDA database because some holes have been excluded, including holes lying outside of the property, holes lacking collar coordinates and/or assay information, and holes with uncertain locations); 345 holes were not audited due to lack of back-up information. MDA was provided with the Pilot Gold revised database, and completed an audit of collar locations of 110 of the holes. Allowing for the fact that many of the x-y-z data were rounded, often to one decimal place, only one discrepancy (in elevation) was found. Azimuth, dip, and depth data were available for 80 of the 110 holes audited by MDA, with no discrepancies found.

MDA reviewed original digital records of collar and down-hole surveys for selected Pilot Gold drill holes and found no discrepancies with the Pilot Gold database.

As part of the site visits, MDA collected handheld GPS measurements of the locations of 12 Pilot Gold drill holes. The “x” and “y” coordinates measured by MDA have an average difference of less than one metre, while the average difference in elevation is four metres for the five holes measured during the 2012 site visit and 12 metres in 2014 (all 2014 GPS readings lower than the database). Given the limitations of handheld GPS readings, especially with respect to elevations, these differences are within expectations. While evidence of historic drill sites, including piles of RC cuttings, was noted in the field, no definitive historic drill-hole collar locations were observed.

#### **12.1.2 Assay Table**

Pilot Gold also completed a comprehensive audit of the drill-hole assays. A total of 99% of the historical drill-hole sample intervals were checked, with all identified errors corrected. Materials used for the auditing includes copies of original laboratory assay certificates (55% of the sample intervals) and assay information compiled into a bound volume that was obtained by Pilot Gold along with other project files (45% of the sample intervals). The bound volume includes what appears to be pages from a



database printout on a hole-by-hole basis that includes sample numbers, down-hole from's and to's, and analytical data, as well as header information that includes collar coordinates and analytical procedures, for all Cominco and Hecla drill holes.

Pilot Gold provided MDA with a copy of a detailed spreadsheet that documented the audit and all corrections made to the database as a result of the auditing. MDA then used the corrected assay information to perform an additional audit, using the same back-up information. A total of 132 (11%) of the historical drill holes, including 5,531 sample intervals (11%), were audited by MDA (the total number of holes and sample intervals exceed those in the current MDA database for the reasons explained above). Three transcription errors were identified (0.016 entered as 0.015 oz Au/ton; 0.018 entered as 0.18 oz Au/ton; 0.218 entered as 0.0218 oz Au/ton). The only other discrepancies identified consisted of two immaterial detection-limit entry errors and two intervals that were not assayed but had database values equal to the assay detection limits.

MDA obtained original digital assay certificates directly from ALS for all Pilot Gold holes drilled at Kinsley, compiled these into a single spreadsheet, and used an automated software routine to directly compare the assay data provided to MDA by Pilot Gold against the ALS digital analyses. A few discrepancies were found, related to the choice of analyses when both AAS and gravimetric assays were available, and these were resolved and corrected where appropriate.

## 12.2 Quality Assurance/Quality Control Programs

### 12.2.1 Cominco

Cominco's QA/QC protocols for drilling completed through 1988 included the insertion of standards and duplicates into the sample stream at the rate of approximately one standard and one duplicate for each 40 drill samples (Monroe *et al.*, 1988). In addition, check assays were run on a set of mineralized drill samples. No evidence of the use of blanks has been found, and the nature of QA/QC programs after 1988, if any, is not known.

Cominco QA/QC results for the 1986 and 1987 drilling programs, which include holes K-1 through K-121 and KS-201 through KS-285, are summarized by Turner (1988). Six different standards were inserted with the drill samples; the source of the standards (*e.g.*, commercial or in-house standards) is not known. Turner (1988) stated that, "*The nominal "accepted" values for each of the standards was determined by having analyses performed by several labs, using several techniques (usually AA, but with some fire-gravimetric) and averaging the results.*"

The standards and duplicate samples were analyzed by ALS of North Vancouver, B.C (Chemex Labs Ltd. at that time); it is assumed that the associated drill samples were also analyzed by ALS. Analyses of standards from holes K-1 through K-61 were by fire assay with AAS finish ("FA/AA"), while those from holes K-62 through K-121 were by fire assay with gravimetric finish ("FA/GRAV") as summarized in Table 12.1.



**Table 12.1 Summary of Cominco Standard Results – 1986-1987 Drilling Programs**

Standard	Accepted Value (g Au/t)	Mean of ALS Analyses (g Au/t)		Number of ALS Analyses	
		FA/AA	FA/GRAV	FA/AA	FA/GRAV
A	0.065	0.074	0.065	18	10
B	0.363	0.282	0.297	17	21
C	0.813	0.773	0.959	22	7
D	2.137	2.199	2.498	19	19
E	5.650	5.203	5.865	22	4
F	5.984	6.223	7.409	20	14

Turner concluded the following:

- Standards returned values that “agree relatively well with the normal accepted values for the standard.”
- Duplicate analyses of separate splits (known today as “field duplicates”) show only “minor” variation between the splits. The correlation between duplicate analyses was “excellent at both high and low values.”
- Fire-assay samples analyzed with gravimetric finish returned results 10 to 15% higher than those with AA finish. The percentage difference increased with increasing gold value. Monroe *et al.* (1988) noted that this finding was particularly important to the Kinsley drill results in that all drill-hole analyses up to hole K-120 were done by FA/AA (note discrepancy of this range of holes with those of Turner (1988), and all subsequent analyses were done by FA/GRAV methods (perhaps the change was in part due to the QA/QC results).
- Standards analyzed with AA finishes returned values averaging 2.7% lower than the expected values, whereas standards analyzed with gravimetric finishes averaged 10.6% higher.

Turner (1988) examined field-duplicate data and concluded that the close correlation between the original and field-duplicate samples strongly suggested that the sampling procedures used yielded representative samples for each sample interval.

Cominco also performed a “lab performance analysis” by sending splits of RC sample cuttings from 70 sample intervals from various 1986 and 1987 drill holes to American Assay, Barringer Laboratories, Rocky Mountain Geochemical of Nevada, and GD Resources, Inc. (“GD Resources”), all located in Sparks, Nevada, as well as to Cone Geochemical Inc. of Lakewood, Colorado, and Geochemical Services Inc. of Torrance, California. Copies of the original assay certificates from these laboratories are included in the report by Monroe *et al.* (1988). It appears that most, if not all, of these commercial laboratories received the 70 sample splits, prepared pulps from these splits, and analyzed the pulps for gold by fire assaying with gravimetric finishes (charge size varied by laboratory). At least some of the



laboratories then re-analyzed the pulps by fire assaying with an AAS finish, perhaps as a follow-up to the standard results discussed above.

The fire assay data from all of the studies summarized above need to be compiled and evaluated. Drill logs should be used to identify original samples, standards, and duplicates.

### **12.2.1.1 Cominco Subsampling Study**

GD Resources completed a subsampling study in 1988 for Cominco using nine unspecified samples weighing 14 to 32 kilograms (Kay, 1988). Each sample was homogenized and then split into three subsamples (A, B, and C splits). The A subsample was completely pulverized to -75 microns (-200 mesh) and then split into eight subsamples that were analyzed by fire assay using 50-gram charges. The B sample was split into eight subsamples of 0.4 to 1.5 kilograms, each of which was pulverized to -75 microns and fire assayed. The C sample was subdivided into four size fractions to determine gold content by sieve fraction.

After completing all analyses, GD Resources concluded that RC-sample splits of approximately 0.4 to 1.5 kilograms that are entirely pulverized are sufficient to yield representative assays. The screen fractions were stated to generally show a relatively high proportion of the contained gold in the -75 micron fraction.

### **12.2.2 Alta**

Alta was known to use their assay laboratory at the Taylor mill site near Ely, Nevada as the primary laboratory. The Alta mine laboratory was monitored through the use of an internal QA/QC program for blast-hole samples from Alta's nearby Easy Junior Mine (J. Robinson, written communication, 2012). According to J. Robinson, former mine geologist for Alta at Kinsley and currently working with Pilot Gold, standards were inserted at the Alta laboratory and duplicate splits were also created and analyzed at the Alta laboratory. The results of these QA/QC programs are not presently available.

A set of 25 field duplicates comprised of splits of RC cuttings from five-foot (1.524-metre) sample intervals collected at the drill rig were analyzed by American Assay (A splits) in June 1994, and the (B splits) were analyzed at the Alta mine laboratory in January 1995 (Wilson, 1995a). The samples were taken from holes A-532, A-550, and A-551, all drilled in 1994. The American Assay fire-assay and cyanide-leach analyses of these samples are systematically higher grade than those from the Alta mine laboratory. The source of this bias cannot be determined; factors such as subsampling at the drill rig, subsampling by the analytical laboratories, and analytical differences could be involved. The project database uses the American Assay analyses because, based on the dates of the analyses provided above, they appear to be the original drill-sample analyses.

An additional set of 41 field duplicates from six 1995 RC holes (A-552, A-553, A-554, A-555, A-556, and A-560) were analyzed by American Assay; in this case, the Alta mine laboratory assayed the original drill splits (Wilson, 1995b). Following the preparation and analyses by American Assay, the American Assay pulps were sent back to Alta and assayed by the mine laboratory. While the Alta laboratory completed cyanide-soluble analyses on all of the samples, fire assays were completed on only 28 samples. Excluding three samples that Alta believed to have sample numbering problems, the mean





of the 25 American Assay fire-assay results is identical to the Alta mine laboratory mean of the original sample analyses (2.91 g Au/t). However, Alta's re-assays of the American Assay pulps are systematically higher, and the mean of the re-assays (3.09 g Au/t) is 6% higher than the American Assay mean.

### **12.2.3 Hecla and Pan American**

No information is available on QA/QC programs of Hecla and Pan American.

### **12.2.4 Pilot Gold QA/QC**

The QA/QC program instituted by Pilot Gold for the Kinsley drilling programs included the systematic analyses of standards, coarse blanks, field duplicates, preparation duplicates, and analytical duplicates (replicates). The 2011, 2012, and 2013 drill programs also employed check assaying by Inspectorate America Corp. ("Inspectorate") of Sparks, Nevada. Inspectorate was selected as Pilot Gold's secondary laboratory under advisement from consultant Barry Smee. The QA/QC program was designed to ensure that at least one standard, blank, and field duplicate was inserted into the drill-sample stream for every 36 drill samples, which is the number of samples in each ALS analytical batch. All holes drilled by Pilot Gold at Kinsley have been subject to this QA/QC program.

#### **12.2.4.1 Certified Standards**

Certified standards were used to evaluate the analytical accuracy and precision of the ALS analyses during the time the drill samples were analyzed. Eight certified standards were prepared by Minerals Exploration and Environmental Geochemistry ("MEG") of Carson City, Nevada and one standard was sourced from Rocklabs of Auckland, New Zealand. Five of the standards (with a designated prefix of "FG") were produced from coarse-reject material obtained from RC drill samples from the Long Canyon gold deposit. Due to similarities in the nature of mineralization between Long Canyon and Kinsley, the same standards were deemed acceptable for use at the Kinsley project. The remaining three standards were custom prepared from material sourced from Kinsley drill-hole samples. The certified values and standard deviations for all standards used by Pilot Gold, as well as the number of ALS analyses of the standards inserted with the drill samples, are reported in Table 12.2.

The standards were assigned sample numbers in sequence with their accompanying drill samples and were inserted into the drill-sample stream prior to sampling for RC holes and during sampling for core holes. The standard selected for insertion was based on the expected gold values from the accompanying drill samples. Analyses were completed by ALS as described above. A total of 991 standard samples have been analyzed as of the Effective Date of this report, as detailed in Table 12.2.



**Table 12.2 Pilot Gold Certified Standards**

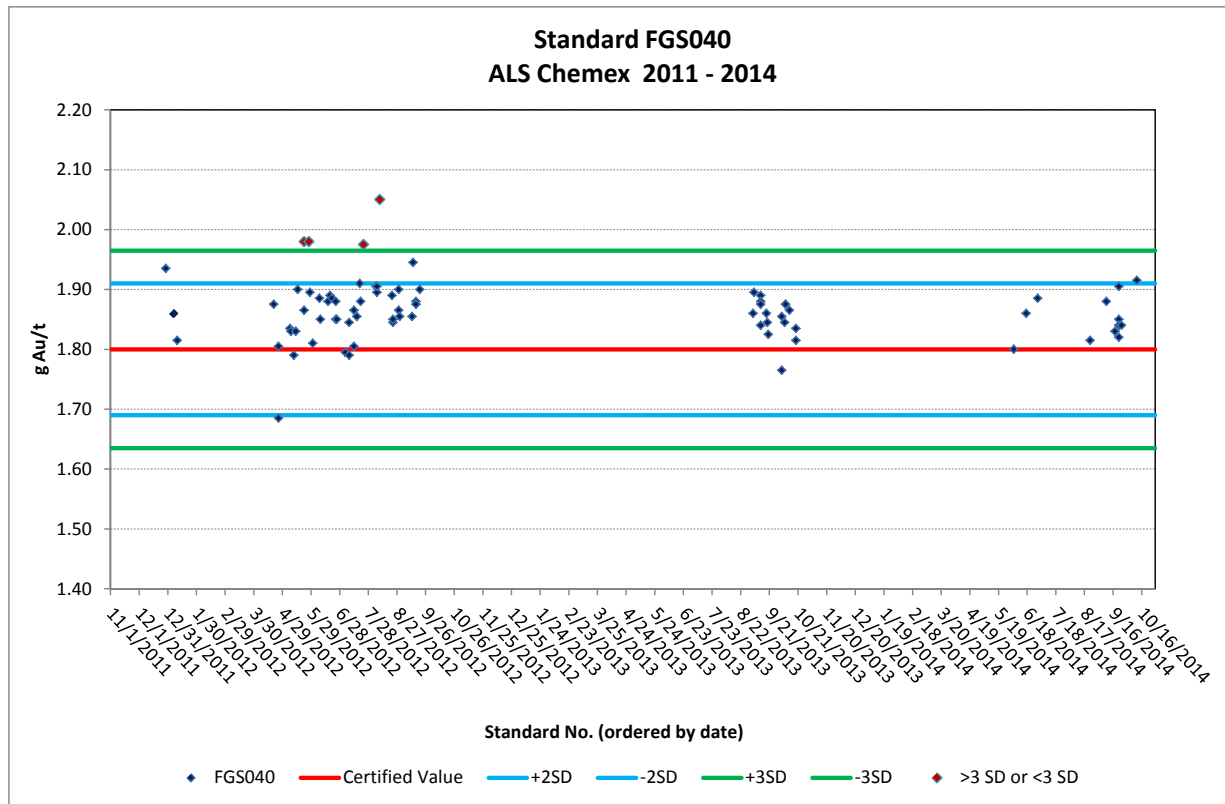
Standard ID	Standard Source	Value (g Au/t)	Standard Deviation	Standards Analyzed
FGS010	MEG	14.325	0.52	3
FGS030	MEG	2.249	0.080	86
FGS040	MEG	1.853	0.057	79
FGS050	MEG	0.327	0.039	229
FGS2011A	MEG	7.210	0.070	76
PG13001X	MEG	1.873	0.075	151
PG13002X	MEG	2.188	0.087	246
PG14001X	MEG	0.328	0.017	60
Oxc88	Rocklabs	0.203	0.010	61

In the case of normally distributed data, 95% of the standard analyses are expected to lie within the two-standard deviation limits of the certified/accepted value, while only 0.3% of the analyses are expected to lie outside of the three standard deviation limits. Note, however, that most assay datasets from metal deposits are positively skewed. All samples outside of the three standard-deviation limits were considered to be failures. As it is statistically unlikely that two consecutive analyses of standards would lie between the two and three standard-deviation limits, such samples would also be considered failures unless further investigations prove otherwise. Failures should trigger investigation, possible laboratory notification of potential problems, and a possible re-run of all samples included with the failed standard result.

Systematic low or high biases in the laboratory analyses relative to the expected value of the standard can lead to failures as defined above, but are more properly characterized as bias. For example, Figure 12.1 charts the ALS analyses of standard FGS040. While four samples lie above the three standard-deviation limits and therefore could be considered as ‘failures’, it is evident that the ALS analyses are biased high with respect to the certified standard value. It is this high bias, not excessive variability, which causes three of the four ‘failures’.



Figure 12.1 Plot of Certified Standard FGS040 Analyses



Laboratory performance as measured by each of the standards was continuously monitored by the use of graphs similar to Figure 12.1. Out of the 991 standards analyzed in the Kinsley drilling program, there were 16 ‘failures’, and Pilot Gold notified the lab in each case. Taking bias into account, however, leads to the identification of only six actual failures (<1% of the total standard analyses). In only one out of the six real failure cases was the failed standard analysis associated with mineralized drill-sample assays (certificate EL12171305); the samples associated with this failed standard analysis were not, but should have been, re-assayed.

ALS analyses of standards FGS030, FGS040, and FGS050 are systematically biased high compared to the expected values over the entire 2011 to 2014 time period (these standards were not submitted with the 2015 drill samples), while none of the analyses of other MEG or Rocklabs standards show high bias. ALS analyses of standards 2011a and PG13001X have indications of low biases. Of note is the fact that the expected values of standards FGS040 (high bias in ALS analyses) and PG13001X (low bias in ALS analyses) are quite close.

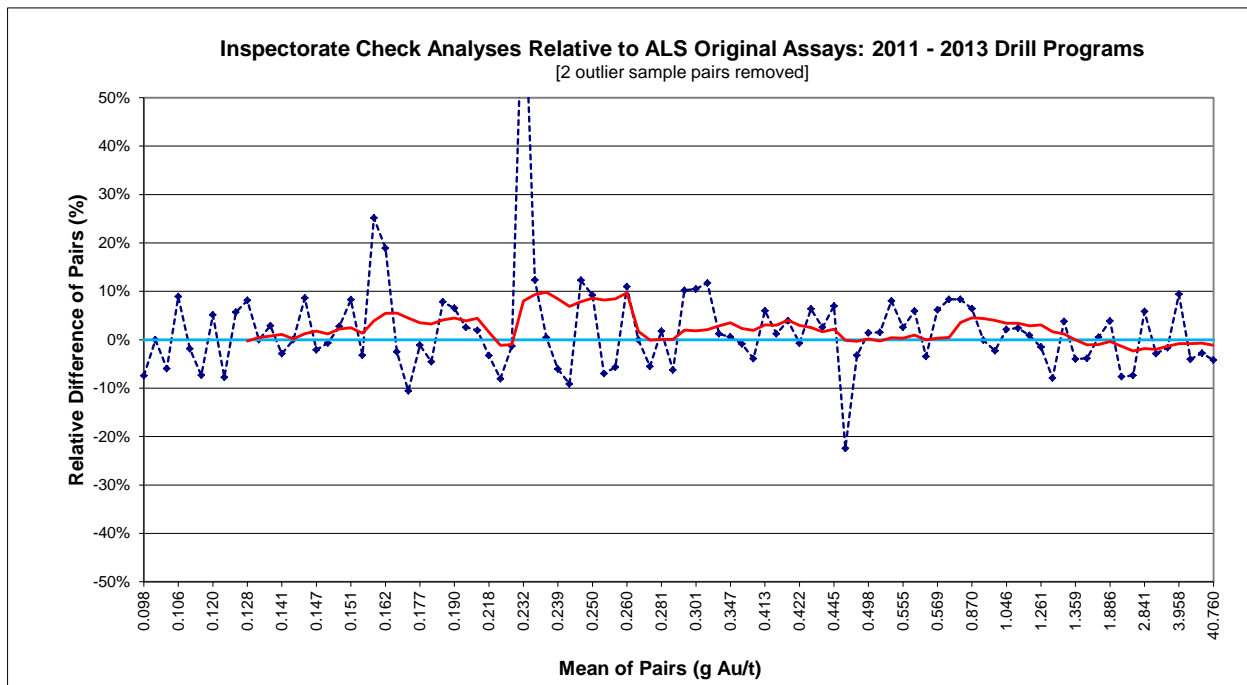
#### 12.2.4.2 Pilot Gold Check Assays

As a further check on analytical accuracy, Pilot Gold selected a portion of the original sample pulps from each of the 2011, 2012, and 2013 drill programs and sent these to Inspectorate for re-assaying of gold contents. The procedure for selection of check assays consisted of querying all samples that returned greater than 100 ppb gold and assigning these a random number. The selection was then sorted



on the random number and approximately 5% of these were selected for re-assay. The original ALS pulps were used for the check assays. Standards and blanks were also submitted to Inspectorate along with the ALS pulps. A similar analytical method was used at Inspectorate for the gold check analyses. These check analyses are compared to the original ALS assays by means of the relative difference graph shown in Figure 12.2.

**Figure 12.2 Inspectorate Check Assays Relative to ALS Original Analyses**



The relative-difference graph shows the difference (plotted on the y-axis) of each Inspectorate check assay relative to its paired original ALS analysis. The x-axis of the graph plots the means of the gold values of the paired data in a sequential, non-linear fashion. The red line shows the moving average of the relative differences of the pairs and provides a visual guide to trends in the data. Positive relative-difference values indicate that the check analysis is greater than the original. Two outlier pairs with relative differences greater than 350% have been removed from the displayed data.

There is some suggestion of a slight high bias in the check assays up to a mean grade of the pairs of approximately 1 g Au/t, but the mean of all of the check assays is 2% lower than the ALS analyses. Variability is for the most part  $\pm 10\%$ , with the average absolute value of the relative differences at 6%, which is in the range of expectations for a sediment-hosted gold deposit in Nevada (no nugget effect).

#### 12.2.4.3 Pilot Gold Coarse Blanks

Coarse blanks are samples of barren material that are used to detect possible contamination, which is most common during sample preparation stages. In order for analyses of blanks to be meaningful, they must be sufficiently coarse to require the same crushing and pulverizing stages as the drill samples. It is also important for blanks to be placed in the sample stream within a series of mineralized samples,



which would be the source of most contamination issues. Blank results that are greater than five times the lower detection limit are typically considered failures that require further investigation and possible re-assay of associated drill samples (0.025 g Au/t for the Kinsley gold analyses based on the 0.005 g Au/t detection limit).

Pilot Gold used coarse blank material from a bulk sample of barren rhyolite provided by MEG. In mid-2014, blank material was switched to a “carbonate” blank material consisting of coarse crushed cinder-block material that was also provided as certified blank material by MEG. These blanks were coarse enough to require primary and secondary crushing, in order to monitor the entire sample preparation process experienced by the drill samples.

As of the Effective Date of this report, a total of 1,034 coarse-blank analyses were available from the 2011 through 2015 drill programs. Of these, 257 were within series of mineralized (above background) drill samples. There were a total of 12 failures, three of which were from unmineralized drill-sample series and therefore cannot be explained. Only one of the failures (0.097 g Au/t) returned a value greater than 0.060 g Au/t, and this was one of the unexplained failures associated with unmineralized drill samples (the lab was notified, but otherwise no action was taken or warranted). The remaining nine indicate a ~4% failure rate relative to the 257 blank analyses that were from mineralized intervals. Most of these blanks were inserted with 2014 drill samples which included many high-grade intervals from the Western Flank target area. While the blank data provide evidence of cross contamination during ALS sample preparation, the magnitude of this contamination is insignificant. Pilot Gold nonetheless instituted a clean-sand wash into the sample preparation protocols for samples from zones suspected of carrying high-grade gold.

#### **12.2.4.4 Pilot Gold Field Duplicates**

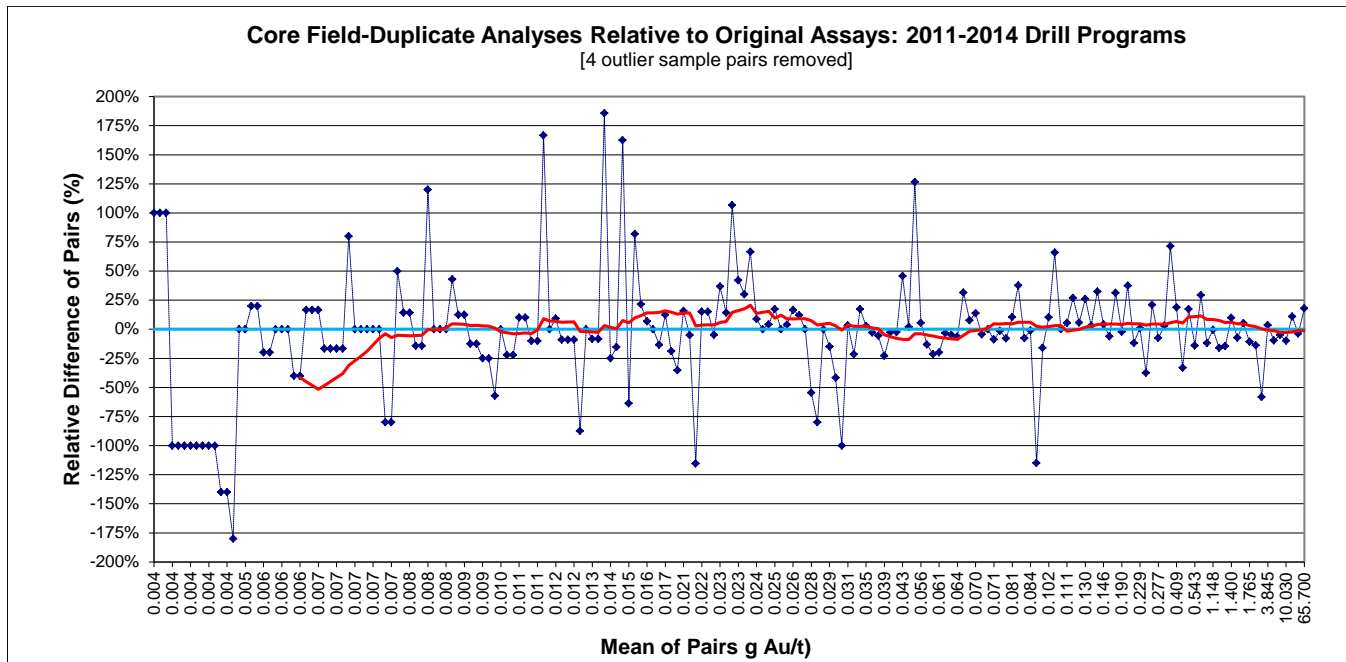
Field duplicates are secondary splits of drill samples. Field duplicates are mainly used to assess inherent geologic variability and subsampling variance. The field duplicate samples were submitted to ALS at the same time as their associated original drill samples.

In the case of Pilot Gold’s core drilling, field duplicates from the 2011 and 2012 drilling programs consisted of ¼-core splits, with the paired originals also being ¼-core splits (all other primary samples were ½-core splits). In 2013 and 2014, the field duplicate (and paired primary samples) consisted of ½-core splits. The RC field duplicates were splits of the cuttings collected at the drill rig at the same time as the primary samples. The outlet on the cyclone was set up with a “Y” splitter and, for the field duplicate, a second bucket was added to the secondary outlet of the “Y”, so that two samples were collected for the interval. The field duplicates were collected randomly in the case of RC drilling, which resulted in a large number of duplicates of unmineralized intervals.

A total of 317 core duplicates were collected and analyzed by ALS. The core-duplicate data are presented in Figure 12.3; 123 pairs in which both the duplicate and original analyses are below the detection limit were removed from the dataset, as were four outlier pairs.



Figure 12.3 Core Duplicate Analyses Relative to Original Assays



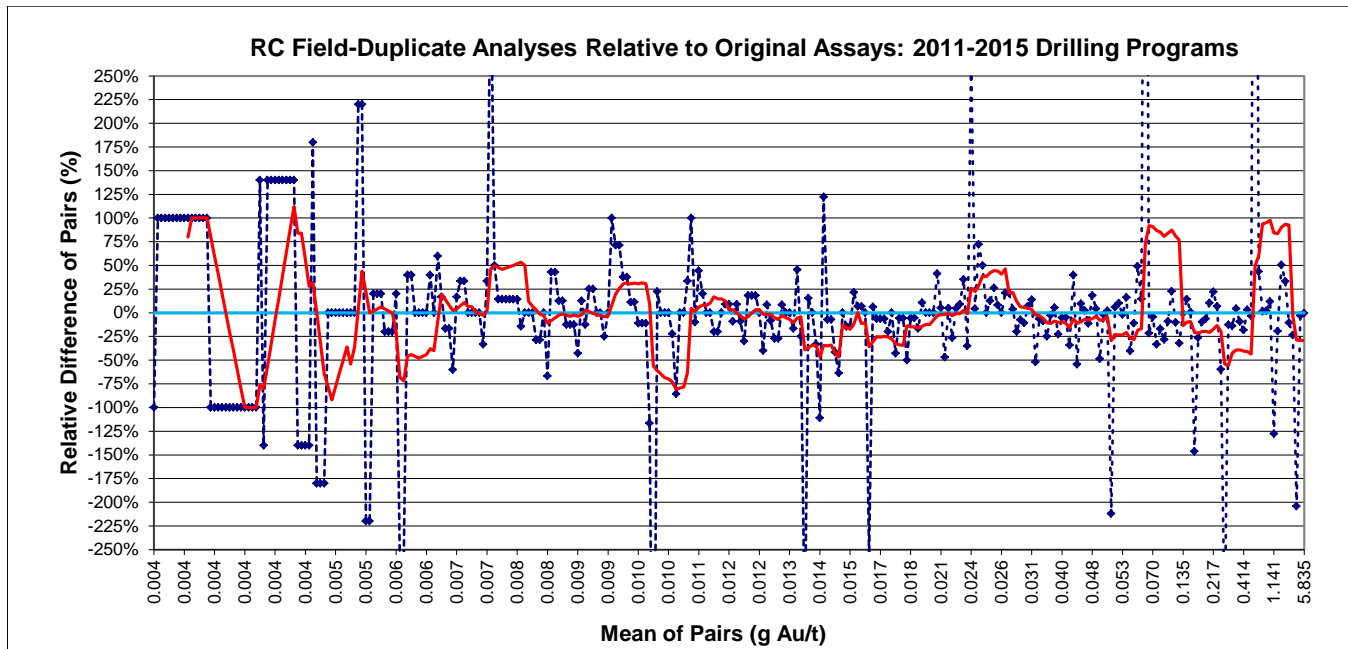
No consistent bias is evident in the core-duplicate data. While the mean gold grade of the duplicates is 5% higher than the mean of the original assays, the duplicate mean is 3% lower than the mean of the originals if the highest-grade pair is removed. The average of the absolute value of the relative differences is 20% at a 0.2 g Au/t cutoff of the mean of the pairs, and this average decreases incrementally at higher cutoff grades.

Figure 12.4 shows the 305 RC field-duplicate pairs in which both the originals and duplicates are above the lower detection limit. Most of the sample pairs are not at material grades, with only 26 pairs having a mean grade of the pair that exceeds 0.2 g Au/t.

At the mean of the pairs cutoff of 0.2 g Au/t, the mean of the duplicate analyses (1.274 g Au/t) is 13% lower than the mean of the original assays (1.470 g Au/t). This discrepancy is in part due to the extreme spikes in the relative differences, which are more plentiful on the negative side (duplicate grade << original grade). The variability of the pairs is significantly higher than seen in the duplicate-core data, with an average absolute value of the relative differences of 76%, although this average is highly influenced by the extreme relative-difference pairs and would be closer to 25% without these extreme pairs. All of these statistical observations are limited by the fact that they are based on a small number of sample pairs.



Figure 12.4 RC Duplicate Analyses Relative to Original Assays



#### 12.2.4.5 Pilot Gold Preparation Duplicates

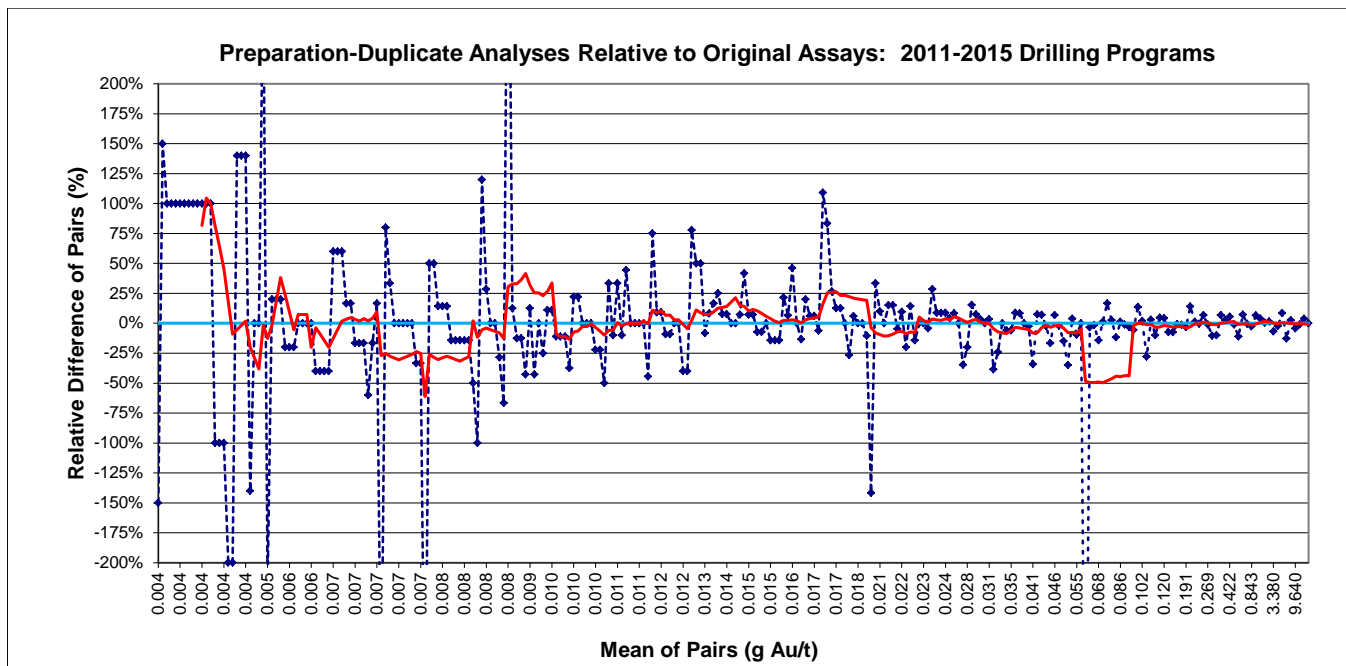
Preparation duplicates are analyses of pulps derived from second splits of the coarsely ground material that remained after the primary split was taken. These duplicates can therefore be used to evaluate the variability introduced by subsampling of the coarsely crushed material. ALS routinely creates and analyzes preparation duplicates as part of their internal QA/QC protocols, so Pilot Gold requests and tracks those results.

A relative difference graph that plots the preparation duplicate data from the 2011 through 2015 drilling programs is shown in Figure 12.5; all pairs in which both analyses are less than the detection limit have been removed. Because these duplicates provide information relative to the variability introduced after coarse crushing of the drill samples, both core and RC data are shown together.

Of the total of 264 pairs shown in Figure 12.5, only 28 pairs have mean grades of the pairs in excess of 0.2 g Au/t. The mean grades of the duplicate and original analyses of these 28 pairs agree closely (4.240 and 4.246 g Au/t, respectively), and no bias is evident in the data. The average absolute value of the relative differences is 5% at the cutoff of the mean of the pairs of 0.2 g Au/t.



Figure 12.5 Preparation Duplicate Analyses Relative to Original Assays



#### 12.2.4.6 Pilot Gold Analytical Duplicates

Analytical duplicates (or replicates) are second analyses of the original pulps that are usually performed routinely by the primary analytical laboratory. These duplicates can be used to evaluate the precision of the subsampling of the pulp, and of the analysis itself. ALS completes analytical duplicates as part to their internal QA/QC routine, and Pilot Gold received these analyses on the drill-hole sample assay certificates.

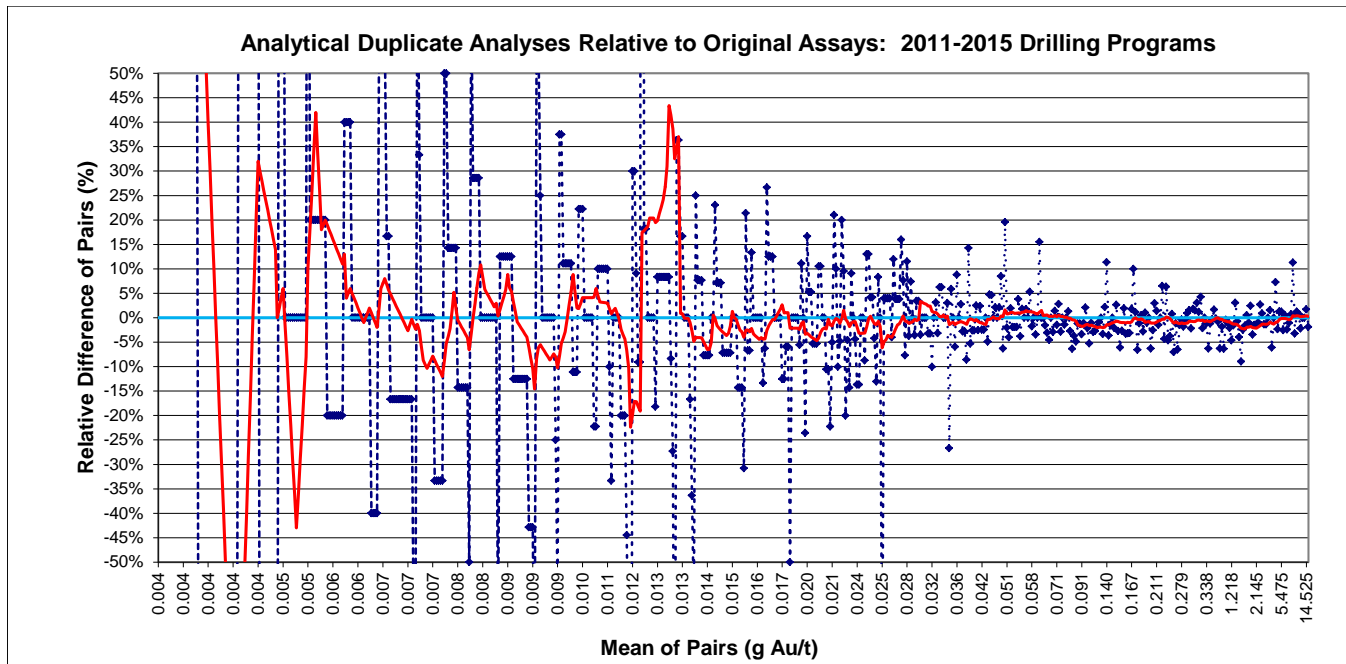
A total of 1080 analytical duplicate assays were performed. Of these, there are 600 sample pairs in which both the original and duplicate assays exceed the lower detection limit. Figure 12.6 plots the paired analytical duplicate data.

A total of 82 pairs exceeded a cutoff of the mean of the pairs of 0.2 g Au/t. While the moving average line suggests a very slight (~1%) low bias in the replicate analyses relative to the original assays, the means of the duplicate analyses of these 82 pairs and the associated original assays are very close (2.686 and 2.691 g Au/t, respectively), the variability is low (average absolute values of the relative difference of 2%), and no bias is present.





Figure 12.6 Analytical Duplicate Analyses Relative to Original Assays



## 12.2.5 QA/QC Discussion

### 12.2.5.1 Historical Programs

It is difficult to assess the adequacy of historical drilling programs with respect to QA/QC procedures due to a lack of data.

Cominco inserted standards and duplicates into their drill-sample streams at regular intervals, but the source and certification are not known at present. Results for analyses of the standards are available only for the 1986 – 1987 drilling. There is no evidence that blanks were part of Cominco's QA/QC program. A check assaying program was carried out that involved six laboratories, but the results have not been located. Assay certificates are not currently available for Cominco drilling programs.

Even less is known about Alta's QA/QC procedures. Standards and duplicates were inserted at the laboratory, but no additional information is known, and no evidence exists of the insertion of blanks. A proprietary (and not well-documented) cyanide-soluble assay method was used for most holes, with conventional fire assay methods used on some holes. It is unlikely that assay certificates are available for any of the Alta drill holes.

### 12.2.5.2 Pilot Gold QA/QC Programs

Pilot Gold's certified-standard results show systematic high biases (ALS analyses higher than expected values) for several standards, and slight low biases for others. With few exceptions, the ALS analyses are within the two standard-deviation limits defined by the certified standards. MDA does not believe



the biases are significant, especially in consideration of the data used to arrive at the expected values of the standards. If the individual analyses of a standard for each of the laboratories that participated in the certification process are compared to the actual expected value, most of the certifying laboratories will have high or low biases of varying magnitudes relative to the expected value. In addition, the expected grades of two of the standards showing biases are very similar, yet the ALS analyses of one of the standards are biased high and its analyses of the other are biased low.

The Inspectorate check assays of the 2011-2013 drilling programs appear to have a slight high bias relative to the original ALS analyses. In consideration of all of the standard and check-assay data, MDA finds no material issues with the ALS gold analyses of the Pilot Gold drill samples.

The field, preparation, and analytical duplicates analyzed as part of Pilot Gold's QA/QC programs allow for the assessment of the various stages of subsampling that are taken above ground. Unrepresentative (in terms of gold content) subsampling can be evidenced by biases in the duplicate data. No significant biases are indicated by the core field duplicates, preparation duplicates, or analytical duplicates. A bias is seen in the RC data, however, whereby the analyses of the original RC samples tend to be higher grade than the assays of the duplicate splits, although more pairs at material grades are needed before definitive conclusions can be made. In any case, RC subsampling procedures undertaken at the drill site should be carefully examined. In particular, MDA believes the use of "Y"-type splitters should be discontinued, as these are not designed for representative subsampling and have been found to be problematic at other project sites.

The duplicate data can also be useful in the determination of the variability in gold grades due to subsampling and geological heterogeneity. Field duplicates incorporate the cumulative variability instilled by all sample preparation and subsampling undertaken above ground, including (i) sample splitting at the drill site; (ii) all sample preparation and splitting stages at the laboratory; and (iii) analytical precision. The precision of the analyses, as indicated by the replicate data, is 2%. The preparation-duplicate data indicate a variability of 5%, but this incorporates the analytical precision as well, therefore the variability experienced in the subsampling stages (coarse reject and pulp splitting) within the laboratory is 3%. The variability instilled by the cutting of core is approximately 15% (determined by the total variability as indicated by the core duplicate data (20%) minus the laboratory subsampling (3%) and analytical (2%) variability). These data suggest that the total variability (or uncertainty) inherent in any single gold analysis of Pilot Gold drill core at Kinsley is  $\pm 20\%$ , which is not considered unusually high.

The total variability of the RC samples is  $\sim 75\%$ , but if pair data with extreme relative differences are excluded the variability would be  $\sim 25\%$ . It is unusual for RC variability to exceed that of the core (20%), because RC cuttings are typically sampled systematically at five-foot intervals (1.524 metres) while core sampling is most commonly determined to some extent by geologic factors that can separate higher-grade sample intervals from adjacent lower-grade intervals. In addition, RC drilling inevitably involves some subsurface smearing of material from one sample interval into another. These factors lead to more 'averaging' of sample grades from RC drilling relative to core, which in turn usually leads to lower variability in RC analyses. The opposite relationship with the Pilot Gold drill data, in combination with the bias evident in the RC field duplicates discussed above, reinforces the recommendations that the RC subsampling procedures at the drill site be carefully evaluated and the use of the "Y"-type splitter discontinued.



MDA recommends that the rate of the collection of duplicate samples within, and on the immediate outer boundaries of, the mineralized envelopes intersected by drilling should be increased if possible. At the same time, the collection rate of duplicates within long intervals of barren material can be decreased. This recommendation is made with an understanding that the recognition of mineralized envelopes prior to the receipt of assays is not always possible, particularly with respect to RC drilling.

### 12.3 Independent Verification of Mineralization

Mr. Gustin visited the Kinsley property on February 10, 2012 and October 28, 2014. In addition to the visits to the project site, reviews of the digital drill-hole database and other compiled geologic data at the Pilot Gold office in Elko were conducted, and Pilot Gold drill core was inspected at the core storage facility connected to the office.

As part of the review of mineralized intervals within the Pilot Gold drill core, MDA collected independent samples for assaying. Each of these samples consisted of selected pieces of drill core collected more-or-less representatively from the remaining half-core of the Pilot Gold sample interval. An additional sample of outcropping mineralization was collected by MDA at the project site.

MDA maintained continuous custody of the samples and delivered them directly to the ALS facility in Reno, Nevada for assaying. Gold was determined by 30 gram fire assay with gravimetric finish (ALS code Au-GRA21); cyanide-leach analyses were also run on the 2014 samples (code Au-AA13). The results of these independent samples are provided in Table 12.3.

**Table 12.3 MDA Independent Sample Results**

Sample	Description	Hole ID or Location	Au-GRA21 (g Au/t)	Au-AA13 (g Au/t)
2012 Sampling				
MDA-PK02-1	Core sample	PK002	13.1	
MDA-PK04-2	Core sample	PK004	20.2	
MDA-PK05-3	Core sample	PK005	0.5	
MDA-UP-1	Chip sample from outcrop	Upper Pit	4.6	
2014 Sampling				
MDA-PGK-1	Oxidized and partially oxidized core	PK137CA	50.8	42.2
MDA-PGK-2	Unoxidized core	PK137CA	48.8	0.18
MDA-PGK-3	Oxidized core	PK130C	9.53	7.91

While the MDA samples are not exact duplicates of the Pilot Gold drill samples, the magnitudes of the MDA gold results are similar to those obtained by Pilot Gold.

The site visits included inspections of all of Alta's open pits. The production of gold from the project is a matter of public record. The MDA independent sampling is sufficient to confirm the presence of gold mineralization in concentrations similar to those reported by Pilot Gold from their 2011 core drilling program.



## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Various metallurgical tests were carried out by Cominco and Alta in the 1980s and early 1990s. In 2012, Pilot Gold contracted a consulting metallurgist, Gary Simmons (an independent Qualified Person under NI 43-101), to assess the need for further metallurgical studies through an evaluation of the historical metallurgical test work and Pilot Gold's increasing body of drill data and drill samples. The authors are not aware of any processing factors or deleterious elements that could have a significant effect on gold extraction that are not discussed in this report.

The following provides a summary of the historical testing and work subsequently carried out by Pilot Gold.

### 13.1 Cominco

Cominco carried out metallurgical testing from 1986 to 1988. Results were summarized in Monroe *et al.*, (1988), with copies of the original laboratory reports included in the appendices. In early 1986, Minerals Processing of Sparks, Nevada conducted bottle-roll cyanide-leach ("bottle-roll") tests on five composite samples from what Cominco variously described as RC, rotary, or conventional rotary holes drilled at the Main Zone (Minerals Processing, 1986a; Monroe *et al.*, 1988). Samples were pulverized to minus-80 mesh (-180 microns) prior to the test. Gold extractions from these tests ranged from 75.0 to 96.3% and averaged 86.5%. Additional bottle-roll tests by Minerals Processing in September 1986 included two tests of laboratory rejects from RC, rotary, or conventional rotary drill-hole composites from the Main Zone, and a third test with composites of laboratory rejects of drill-hole samples from the Upper Zone (Minerals Processing, 1986b, 1986c). Testing included 96- and 72-hour agitated bottle-roll cyanide-leach tests. Main Zone gold extractions were 82.2% and 83.5%, and the composite from the Upper Zone yielded a gold extraction of 78.3%.

Metallurgical testing by Cominco was continued in 1987 and 1988 at McClelland Laboratories, Inc. ("McClelland") of Reno, Nevada. McClelland conducted bottle-roll tests on five cuttings composites in 1987 that included four composites that were readily amenable to direct cyanidation at the cuttings feed size, and one pyritic (unoxidized) composite from the margins of the North Main Zone. A gold extraction of 22.7% was obtained from the unoxidized composite, which indicated it was not amenable to recovery by direct cyanidation (McClelland, 1987). Tail screen analyses of the five composites showed that, in general, residual gold values were fairly evenly distributed throughout the various size fractions. Cyanide consumptions and lime requirements were low.

Initial column percolation leach tests of three relatively high-grade bulk samples were carried out in April 1988 by McClelland (Monroe *et al.*, 1988; McClelland, 1988a). Samples were crushed to a nominal minus 2-inch feed size. Cyanide consumptions were fairly low. Direct agitated cyanidation (bottle roll?) tests were also conducted on each sample ground to 80% -200 mesh (-74 microns).

A test for the potentially adverse adsorption of dissolved gold-cyanide complex by organic carbon in mineralized material at Kinsley was conducted by McClelland on a single sample from the Access Zone (McClelland, 1988b; Monroe *et al.*, 1988). Such adsorption, which can reduce gold recovery, is known as "preg-robbing". A total of 5.9% of the gold was extracted in eight hours, at which time dissolved values began to be re-adsorbed by the sample. Only 11.8% of the contained gold was extracted by the



end of the 48-hour leach cycle. The combined data indicated that the sample contained gold-bearing carbonaceous material and had severe “preg-robbing” characteristics, which were not markedly reversible by carbon-in-leach (“CIL”) cyanidation treatment.

### **13.2 Alta**

Upon acquiring the Kinsley project, Alta undertook additional metallurgical testing. This included column percolation leach (“column-leach”) tests on representative core samples from five drill holes to confirm Cominco’s results from tests on surface bulk samples and RC sample cuttings. Alta’s results compared well with Cominco’s results. Alta also conducted bottle-roll tests on all rock types suspected of being carbonaceous and conducted acid generation and neutralization studies on waste rocks.

Alta (1994) summarized results of their metallurgical testing by McClelland soon after acquiring Kinsley, along with the results of most of Cominco’s metallurgical testing performed by McClelland. The following summary of the McClelland results for both companies is taken from Alta’s metallurgical review (Alta, 1994).

A total of 52 cyanide extraction tests were performed. The average gold extraction of all tests (column-leach and bottle roll) from within the “reserve” outlined by Cominco and Alta was 80%, with cyanide-soluble gold extractions generally ranging between 60% and 93%. The average extraction from all column tests was 80.3%, and the average of all bottle-roll tests included within the “reserve” was 79.3% (results from the Access Zone were considered to be from an exploration target and were not included as part of the “reserve”).

Extractions from the Main Zone were somewhat higher than those from the Ridge Zone and Upper Zone. Thirteen bottle-roll tests and six column-leach tests from the Main Zone averaged 81.8% and 83.2% extraction of gold, respectively. Four bottle-roll tests from the Ridge Zone averaged 76.1% extraction. Ten bottle-roll tests from the Upper Zone averaged 78.2% extraction of gold, and four column-leach tests from the Upper Zone averaged 76.1% extraction of gold. Column-leach and bottle-roll test results were nearly identical for tests within these zones.

Alta concluded that the Kinsley oxidized mineralization was generally readily amenable to recovery by cyanidation. Column tests consistently showed rapid gold extraction rates, with about 70% of the gold extracted after seven days and nearly complete extraction after about 21 days. Gold extraction did not appear to be significantly influenced by crush size or duration of tests. Extraction did appear to be somewhat grade dependent, particularly in the Upper Zone: lower-grade intervals typically showed lower gold extractions than higher-grade materials, with gold extractions from the lower-grade materials ranging from 48% to 72%.

Alta used an average recovery of 74% in its “feasibility” study to account for anticipated solution distribution and channeling effects during heap-leaching. Cominco had estimated the overall recovery to be 75%.

Bottle-roll tests conducted by Alta subsequent to the test work summarized above were completed using apparently mixed oxidized/unoxidized material and carbonaceous drill cuttings from the Emancipation pit area. McClelland conducted two thiosulfate-extraction bottle-roll tests on a composite of



carbonaceous drill-cuttings from Alta holes A-1074 and A-1075 in the summer of 1997 (McClelland, 1997). Gold extractions from the bottle-roll tests were reported to be 0.6% and 1.2% of the head-grade values. McClelland stated that thiosulfate was not an effective lixiviant for recovering gold from this sample, and concluded the precious metals are locked within either a sulphide or silicate matrix and therefore not available for direct leaching (McClelland, 1997). In 1997, Kappes, Cassidy & Associates (“KCA”) conducted bottle-roll tests on two composites from the same two drill holes (A1074 and A1075). Two tests were performed on each composite – one using a direct-cyanide bottle-roll leach test and the other a CIL/cyanide-leach bottle test (KCA, 1997). The composite created from an apparently mixed oxidized/unoxidized interval in hole A1075 resulted in a gold extraction of 40.2% from the direct-cyanide leach, and 45.0% extraction with the CIL/cyanide leach. The second composite, a mixture of material from both of the holes, reportedly resulted in 0% gold extractions for both tests.

### 13.3 Alta Heap-Leach Recoveries

While it is difficult to state recoveries in most heap-leach operations accurately, due in part to the lack of heap-feed head grade data, estimations of the Alta heap-leach recoveries have been reported. Overall gold recovery in 1997 was estimated at approximately 68% (King *et al.*, 1997). Cowdery (2007) reported an average gold recovery of 73% from Alta’s operation in 1995 through 1997 (see Table 6.2 and related discussion).

### 13.4 Pilot Gold

Pilot Gold has routinely submitted all drill samples with  $>0.2$  g Au/t for cyanide-soluble gold analysis.

#### 13.4.1 2012 Pilot Gold Program

In 2012, consulting metallurgist Gary Simmons was contracted to assess the need for metallurgical studies on mineralized material and waste rock. Mr. Simmons reviewed the historical and Pilot Gold drilling, including examination of drill core, cyanide-extraction data and historical metallurgical studies. Mr. Simmons recommended a pilot program of analysis of selected oxidized, transition, and unoxidized, sulphide-bearing intervals for total and organic carbon, “preg-robbing” potential, total and sulphide sulphur, ICP multi elements, and cyanide-soluble gold. Samples of such drill core were taken from drill holes around the historical pits.

The results of this analysis showed that unoxidized sulphide-bearing intervals are refractory and in part contain varying levels of “preg-robbing” organic carbon. Based on the limited information from this program, the Main Extension and Upper Main areas of mineralization have a number of higher “preg-robbing” organic carbon intervals than the other areas of mineralization. Further investigation is needed to correlate the sampled material lithology and alteration to the geochemistry, cyanide solubility, and “preg-robbing” potential for each potential material type. This evaluation will assist in better defining the location of various metallurgical material types and the selection of treatment methods for all material types.



### 13.4.2 2014 Pilot Gold Program

Portions of the following discussion are summarized in Simmons (2015) and Gathje (2015a).

In the middle of 2014, Pilot Gold submitted composites of core samples to Hazen Research Inc. (“Hazen”), in Golden, Colorado for metallurgical testing. Samples composited for testing were selected from high-grade mineralization recently encountered in the Secret Canyon Shale in the Western Flank zone. The gold mineralization in this zone is associated with mixtures of oxidized and unoxidized sulphide grains. In the unoxidized portions of this zone, the gold is refractory (in solid solution) in arsenian pyrite and is not amenable to recovery by conventional cyanide leaching.

The Secret Canyon Shale is a carbonate host-rock that is alkaline in nature. Although the gold associated with sulphides is refractory, the pyrite and arsenian pyrite morphologies are somewhat different than typical Carlin-style sulphides. The sulfides of pyrite and arsenian pyrite are dense, not easily oxidized in place (or after drilling and exposure to air), and there are few sulphide grains finer than 20 microns. Review of the initial petrographic information indicated that the sulphides may be a good candidate for flotation. Flotation and cyanide leaching of the flotation tails was selected as the best flow sheet for processing and recovering gold from the mixture of oxide and sulphide in the Secret Canyon Shale.

A Phase 1 work program was conducted on four Master Composites that were compiled from fourteen of the seventeen variability composites that were delivered to Hazen. This was a scoping-level study designed to test critical parameters needed to define a flow sheet suitable for processing all materials in the Secret Canyon zone of mineralization.

#### 13.4.2.1 Composite Selection

**Variability Composites:** Seventeen variability composites were selected from drill core and shipped to Hazen. Variability samples were selected from geologic/lithologic domains designed to cover a range of gold and arsenic grade, cyanide solubility and sulphide content. Head assays in Table 13.1 are weight averages from the individual drill-hole intercepts included in each composite.



**Table 13.1 Variability Composite Head Assays**  
(from Pilot Gold Drilling Database)

Comp ID	Hole ID	From M	To M	Interval	F-Form	Au Final ppm	AuCN ppm	AuCN %	Ag ppm	C org %	CO3 %	Preg-rob %	S= %	As ppm	Sb ppm	Hg ppm	Cu ppm	Pb ppm	Zn ppm	
				M																
KM#1	PK091CA	262.1	268.7	6.55	CCSL	8.41	5.41	64.3%	2.45	0.04	23.0	2.9%	0.28	553	7	0.15	16.3	9.0	68	
KM#2	PK091CA	268.7	285.6	16.92	CCSL	14.76	4.37	29.6%	1.16	0.05	26.5	2.9%	0.75	915	279	0.22	30.8	10.2	88	
KM#3	PK131C	268.8	287.1	19.81	CCSL	13.19	4.98	37.8%	2.86	0.06	25.4	5.5%	0.70	628	94	0.39	23.2	18.7	92	
KM#4	PK131C	287.1	302.4	15.24	CSC	14.63	5.26	35.9%	1.55	0.05	16.1	2.1%	1.20	1,208	50	0.16	37.4	10.0	89	
KM#5	PK127C	276.5	282.5	6.10	CCSL	2.46	<0.03	0.0%	0.86	0.07	36.1	35.9%	0.58	307	9	0.07	14.8	10.5	47	
KM#6	PK127C	282.5	301.0	18.44	CSC	2.99	0.03	1.0%	0.61	0.05	24.5	9.1%	0.80	506	57	0.05	22.3	9.8	62	
KM#7	PK127C	301.0	310.6	9.60	CSC	14.49	14.38	99.3%	1.52	0.06	14.5	8.9%	0.07	1,164	17	0.27	34.4	12.7	130	
KM#8	PK127C	310.6	318.1	7.53	CSC	10.14	9.00	88.8%	1.05	0.06	21.2	12.7%	0.45	765	12	0.25	28.1	11.7	77	
KM#9	PK132C	254.2	271.0	16.8	CCSL	3.84	0.01	0.2%	1.08	0.07	33.8	27.7%	0.60	224	270	0.18	12.4	14.0	57	
KM#10	PK132C	271.0	276.1	5.2	CCSL	43.13	0.15	0.4%	4.57	0.06	19.1	4.3%	2.93	1,300	3,299	0.97	38.2	16.1	187	
KM#11	PK132C	276.1	286.2	10.1	CCSL	7.58	0.00	0.0%	0.66	0.05	33.6	9.3%	0.72	527	13	0.10	12.3	6.6	49	
KM#12	PK132C	286.2	296.9	10.7	CCSL	3.21	0.00	0.0%	0.42	0.05	41.2	9.4%	0.34	258	8	0.06	10.6	7.9	37	
KM#13	PK137CA	256.3	264.6	8.2	CCSL,FZ	30.31	22.58	74.5%	3.83	0.08	19.9	4.5%	0.69	1,450	45	0.35	38.0	13.0	106	
KM#14	PK137CA	264.6	292.0	27.43	CSC	12.84	0.02	0.2%	1.50	0.07	29.7	11.4%	1.11	682	387	0.30	21.5	7.9	101	
KM#15	PK133C	310.0	323.7	13.7	CSC	4.71	1.09	23.2%	0.77	0.06	22.6	1.2%	0.78	718	13	0.11	22.3	10.9	68	
KM#16	PK133C	323.7	334.5	10.8	CSC	14.71	1.21	8.2%	1.62	0.14	23.4	34.0%	1.34	767	106	0.50	33.8	8.4	119	
KM#17	PK133C	334.5	341.8	7.3	CSC	12.98	6.90	53.2%	3.58	0.10	22.6	9.2%	0.98	960	236	0.22	33.7	12.5	130	

AuCN is cyanide-soluble gold from ALS method AuAA13.

**Master Composites Make-up:** Fourteen of the variability composites were combined into four Master Composites for Phase 1 testing. Geologic formation, head grade, and cyanide-soluble gold analyses were used, as general guidelines for compiling the Master Composites (Table 13.2).





**Table 13.2 Master Composite Make-up**

M Comp ID	V Comp ID	Hole ID	From M	To M	Interval M	Kgs	F-Form	F-Subunit	L-Lith1	L-Lith2	Au Final ppm	AuCN ppm	AuCN %
KMMC-1	KM#5	PK127C	276.5	282.5	6.10	14.2	CCSL	CCSlsh	lst	shl	2.5	<0.03	0.0%
KMMC-1	KM#11	PK132C	276.1	286.2	10.1	23.4	CCSL	CCSlsh	lst	slt	7.6	0.00	0.0%
KMMC-1	KM#12	PK132C	286.2	296.9	10.7	24.9	CCSL	CCSlsh	lst	slt	3.2	0.00	0.0%
KMMC-1	KM#9	PK132C	254.2	271.0	16.8	39.1	CCSL	CCSlsh	lst	slt	3.8	0.01	0.2%
KMMC-1						<b>101.6</b>	<b>CCSL</b>				<b>4.36</b>	<b>0.00</b>	<b>0.00</b>
KMMC-2	KM#1	PK091CA	262.1	268.7	6.55	15.3	CCSL	CCSlsh	shl	bx,lst	8.4	5.41	64.3%
KMMC-2	KM#10	PK132C	271.0	276.1	5.2	12.1	CCSL	CCSbxa	slt	lst	43.1	0.15	0.4%
KMMC-2	KM#2	PK091CA	268.7	285.6	16.92	16.9	CCSL	CCSl,CCSbxa	lst,bx	slt,shl	14.8	4.37	29.6%
KMMC-2	KM#13	PK137CA	256.3	264.6	8.2	19.2	CCSL,FZ	CCSlsh,CCSjsp	lst,jsp	lslt,jasp	30.3	22.6	74.5%
KMMC-2						<b>63.4</b>	<b>CCSL,FZ</b>				<b>23.3</b>	<b>9.32</b>	<b>39.9%</b>
KMMC-3	KM#14	PK137CA	264.6	292.0	27.43	63.9	CSC	CSClsh	lst	lslt	12.8	0.02	0.2%
KMMC-3	KM#6	PK127C	282.5	301.0	18.44	43.0	CSC	CSCsh	lst	shl	3.0	0.03	1.0%
KMMC-3	KM#16	PK133C	323.7	334.5	10.8	25.2	CSC	CSClsh	shl	lst	14.7	1.21	8.2%
KMMC-3						<b>132.1</b>	<b>CSC</b>				<b>10.0</b>	<b>0.25</b>	<b>2.5%</b>
KMMC-4	KM#4	PK131C	287.1	302.4	15.24	35.5	CSC	CSClsh	shl	lst	14.6	5.26	35.9%
KMMC-4	KM#17	PK133C	334.5	341.8	7.3	17.0	CSC	CSCj,CSCsh	jasp,shl	lst	13.0	6.90	53.2%
KMMC-4	KM#8	PK127C	310.6	318.1	7.53	17.5	CSC	CSClsh	lst	shl	10.1	9.00	88.8%
KMMC-4						<b>70.1</b>	<b>CSC</b>				<b>13.1</b>	<b>6.60</b>	<b>50.3%</b>

AuCN is cyanide-soluble gold from ALS method AuAA13.

**Master Composites Head Assays:** Master Composite head assays are summarized in Table 13.3. Of significant importance for the Western Flank - Secret Canyon mineralization is the ratio of gold (g Au/t) to sulphide sulphur (%). This ratio is high in comparison with other refractory sediment-hosted gold deposits in Nevada. There are two significant benefits to higher Au-to-sulphide sulphur ratios, as exhibited by the Secret Canyon mineralization:

1. High ratios are a favorable characteristic used to identify mineralization with potential to produce high-grade concentrates by flotation, for sale into the commercial smelting market (assuming reasonable arsenic content), or for local shipment and sale to refractory gold producers in Nevada.
2. High ratios also contribute to a lower capital requirement for on-site processing of the mineralized materials or concentrates, as a major cost of these facilities is directly related to the total mass of sulphide-sulphur that requires oxidation treatment.

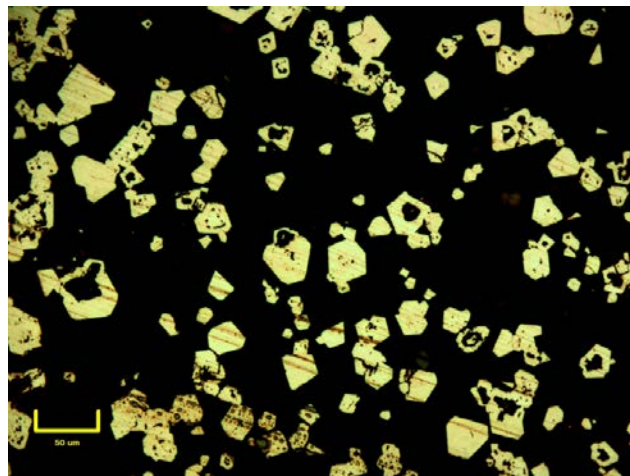


**Table 13.3 Master Composite Head Assays**  
(from Pilot Gold drill-hole database)

M Comp ID	V Comp ID	Au Final ppm	AuCN ppm	AuCN %	Ag ppm	Ratio Au:S=	C %	C org %	CO3 %	Preg-robb %	S= %	As ppm	Sb ppm	Hg ppm	Cu ppm	Pb ppm	Zn ppm
KMMC-1	KM#5	2.5	<0.03	0.0%	0.86	4.2	7.30	0.07	36.1	35.9%	0.58	307	8.65	0.07	14.8	10.5	47
KMMC-1	KM#11	7.6	0.00	0.0%	0.66	10.1	6.77	0.05	33.6	9.3%	0.72	527	13	0.10	12.3	6.6	49
KMMC-1	KM#12	3.2	0.00	0.0%	0.42	8.8	8.29	0.05	41.2	9.4%	0.34	258	8	0.06	10.6	7.9	37
KMMC-1	KM#9	3.8	0.01	0.2%	1.08	6.0	6.82	0.07	33.8	27.7%	0.60	224	270	0.18	12.4	14.0	57
KMMC-1		<b>4.36</b>	<b>0.00</b>	<b>0.00</b>	<b>0.79</b>	<b>7.8</b>	<b>7.24</b>	<b>0.06</b>	<b>35.9</b>	<b>20.1%</b>	<b>0.56</b>	<b>314</b>	<b>110</b>	<b>0.11</b>	<b>12.3</b>	<b>10.3</b>	<b>49</b>
KMMC-2	KM#1	8.4	5.41	64.3%	2.45	29.6	4.63	0.04	23.0	2.9%	0.28	553	7.23	0.15	16.3	9.0	68
KMMC-2	KM#10	43.1	0.15	0.4%	4.57	13.9	3.88	0.06	19.1	4.3%	2.93	1300	3299	0.97	38.2	16.1	187
KMMC-2	KM#2	14.8	4.37	29.6%	1.16	19.6	5.35	0.05	26.5	2.9%	0.75	915	278.62	0.22	30.8	10.2	88
KMMC-2	KM#13	30.3	22.6	74.5%	3.83	40.7	4.06	0.08	19.9	4.5%	0.69	1450	45	0.35	38.0	13.0	106
KMMC-2		<b>23.3</b>	<b>9.32</b>	<b>39.9%</b>	<b>2.93</b>	<b>22.6</b>	<b>4.51</b>	<b>0.06</b>	<b>22.2</b>	<b>3.6%</b>	<b>1.03</b>	<b>1063</b>	<b>718</b>	<b>0.39</b>	<b>30.9</b>	<b>11.9</b>	<b>107</b>
KMMC-3	KM#14	12.8	0.02	0.2%	1.50	10.4	6.02	0.07	29.7	11.4%	1.11	682	387	0.30	21.5	7.9	101
KMMC-3	KM#6	3.0	0.03	1.0%	0.61	3.7	4.95	0.05	24.5	9.1%	0.80	506	57.00	0.05	22.3	9.8	62
KMMC-3	KM#16	14.7	1.21	8.2%	1.62	10.6	4.82	0.14	23.4	34.0%	1.34	767	106	0.50	33.8	8.4	119
KMMC-3		<b>10.0</b>	<b>0.25</b>	<b>2.5%</b>	<b>1.24</b>	<b>9.49</b>	<b>5.44</b>	<b>0.08</b>	<b>26.8</b>	<b>15.0%</b>	<b>1.05</b>	<b>641</b>	<b>226</b>	<b>0.26</b>	<b>24.1</b>	<b>8.6</b>	<b>92</b>
KMMC-4	KM#4	14.6	5.26	35.9%	1.55	12.2	3.28	0.05	16.1	2.1%	1.20	1208	49.8	0.16	37.4	10.0	89
KMMC-4	KM#17	13.0	6.90	53.2%	3.58	12.7	4.62	0.10	22.6	9.2%	0.98	960	236	0.22	33.7	12.5	130
KMMC-4	KM#8	10.1	9.00	88.8%	1.05	22.4	4.31	0.06	21.2	12.7%	0.45	765.10	11.52	0.25	28.1	11.7	77
KMMC-4		<b>13.1</b>	<b>6.60</b>	<b>50.3%</b>	<b>1.92</b>	<b>13.7</b>	<b>3.86</b>	<b>0.07</b>	<b>19.0</b>	<b>6.4%</b>	<b>0.96</b>	<b>1037</b>	<b>86</b>	<b>0.20</b>	<b>34.2</b>	<b>11.0</b>	<b>96</b>

**Petrography of Secret Canyon Shale-Hosted Mineralization:** A microphotograph from T. Hill (written communication to Pilot Gold, 2014) is shown in Figure 13.1, with the Secret Canyon Shale-hosted pyrite and arsenian pyrite morphologies visible in reflected light. The black cores of the sulphide grains have been mainly identified as carbonate material, while the left-to-right lines across the sulphide particles are polishing striations. There are relatively few particles much smaller than 20 microns in size, and the sulphide particle surfaces are sharply defined and largely euhedral.

**Figure 13.1 Thin-Section Microphotograph of Secret Canyon Sulphides**





### 13.4.2.2 Flotation and Cyanide Leaching of Flotation Tails

Flotation testing was conducted in four stages starting in October and ending in December 2014. Four Master Composites were selected for testing. The overall goal of the program was to investigate the potential for using flotation to recover and concentrate the sulphide minerals and associated gold into a high-grade gold concentrate for sale to commercial smelters or to one of the refractory gold processing facilities located in Nevada operated by Barrick, Newmont, or Jerritt Canyon Gold.

In the analysis that follows, flotation and tailings leach-information is taken from Gathje (2015) and Simmons (2015). The four stages of scoping tests are briefly summarized here:

- Series 1: Investigate rougher flotation grind size *vs.* gold and sulphide sulphur recovery.
- Series 2: Investigate rougher tailings de-sliming, and re-grind and flotation of the +500-mesh sand product.
- Series 3: Investigate the sand product re-grind size *vs.* corresponding gold and sulphur recovery and the impact on overall concentrate grade.
- Series 4: Incorporate the findings from Series 1-3 into a final flowsheet for testing on all four of the master composites.

A summary of results for all scoping series of work is provided in Table 13.4.

Due to the mixed oxide-sulphide nature of the Western Flank mineralization, cyanide extraction of gold remaining in the flotation tails was tested via one of two methods: 1) a standard laboratory cyanide-soluble assay procedure; or 2) a more comprehensive CIL bottle-roll test used on the final Series 4 tests (Table 13.4). The boxes highlighted in red in Table 13.4 show results from the cyanide-solubility test procedure (Tests 9-16). The Tails Cyanide Leach results shown in black are from CIL bottle-roll tests (Tests 17-20).



**Table 13.4 Summary of Results for Flotation and Leaching of Master Composite**

Test 3024-44 Composite K/M/M/C	Primary Grind % Pass P80 200 µm	Scavenger (sands) Re grind	Rougher Flotation															Overall Recov %	Calculated																	
			Rougher Concentrate				Rougher Tail				Scavenger Concentrate <sup>1/</sup>			Combined Concentrate					Final Tail				Feed													
			Assay		Distribution		Assay		Distribution		Assay			Distribution		Assay			Distribution		Tail CN Leach															
			%	S <sup>2</sup>	Au	S <sup>2</sup>	%	S <sup>2</sup>	Au	S <sup>2</sup>	%	S <sup>2</sup>	Au	S <sup>2</sup>	%	S <sup>2</sup>	Au		S <sup>2</sup>	%	S <sup>2</sup>	Au	S <sup>2</sup>	Res	% Au Extr'n	Recov %	Au	S <sup>2</sup>								
			Wt	gpt	%	%	Wt	gpt	%	%	Wt	gpt	%	%	Wt	gpt	%		%	Wt	gpt	%	%	Wt	gpt		%	%	%	3/	4/	5/	gpt	%		
<b>Test Series 1 - Rougher Flotation Only</b>																																				
5	1	83	68	6.00	51.0	6.05	<b>76.3</b>	<b>70.6</b>	94.00	1.01	0.16	23.7	29.4										na		<b>76.3</b>	4.01	0.51									
6	1	73	88	6.34	46.7	4.54	<b>75.1</b>	<b>64.5</b>	93.66	1.06	0.17	24.9	35.5										na		<b>75.1</b>	3.95	0.45									
7	1	97	42	7.53	41.5	5.18	<b>76.7</b>	<b>75.0</b>	92.47	1.03	0.14	23.3	25.0										na		<b>76.7</b>	4.08	0.52									
8	1	85	65	6.13	49.4	5.87	<b>74.9</b>	<b>70.5</b>	93.87	1.08	0.16	25.1	29.5										na		<b>74.9</b>	4.04	0.51									
<b>Test Series 2 - Rougher w/Sands Re grind and Scavenger Flotation</b>																																				
9	1	80	75	83	6/	9.67	33.61	4.38	<b>77.8</b>	<b>75.6</b>	90.33	1.05	0.15	22.2	24.4	2.36	21.5	3.10	<b>12.2</b>	<b>13.1</b>	12.03	31.2	4.13	<b>90.0</b>	<b>88.7</b>	87.97	0.48	0.07	10.0	11.3	na	<b>9.3</b>	<b>0.9</b>	<b>90.9</b>	4.18	0.56
10	2	85	64	87	6/	16.08	97.46	6.28	<b>77.8</b>	<b>87.3</b>	83.92	5.40	0.18	22.2	12.7	2.19	66.9	4.02	<b>7.3</b>	<b>7.6</b>	18.27	93.8	6.01	<b>85.1</b>	<b>94.9</b>	81.73	3.67	0.07	14.9	5.1	na	<b>55.8</b>	<b>8.3</b>	<b>93.4</b>	20.1	1.16
11	3	82	71	87	6/	16.35	41.72	4.86	<b>83.4</b>	<b>81.3</b>	83.65	1.56	0.21	16.6	18.7	2.46	27.7	4.25	<b>8.3</b>	<b>10.7</b>	18.80	39.9	4.78	<b>91.7</b>	<b>92.0</b>	81.20	0.83	0.10	8.3	8.0	na	<b>24.6</b>	<b>2.0</b>	<b>93.7</b>	8.18	0.98
12	4	84	66	91	6/	15.15	51.64	5.29	<b>68.9</b>	<b>77.5</b>	84.85	4.19	0.27	31.1	22.5	2.19	50.3	6.07	<b>9.7</b>	<b>12.9</b>	17.34	51.5	5.39	<b>78.6</b>	<b>90.4</b>	82.66	2.93	0.12	21.4	9.6	na	<b>62.6</b>	<b>13.4</b>	<b>92.0</b>	11.4	1.03
<b>Test Series 3 - Rougher w/Variable Sands Re grind and Scavenger/Cleaner Flotation</b>																																				
												Ro Conc 1			Scavenger Cleaner Concentrate			RC1 + SVCC			SVT + 1CT + Slimes <sup>7/</sup>															
13	3	~82	71	57	7/	2.10	<b>173</b>	<b>18.6</b>	<b>43.9</b>	<b>41.1</b>				3.79	89.0	10.9	<b>40.8</b>	<b>43.5</b>	5.90	119	13.6	<b>84.7</b>	<b>84.6</b>	94.10	1.35	0.16	15.3	15.4	na	<b>20.7</b>	<b>3.2</b>	<b>87.9</b>	8.28	0.95		
14	3	~82	71	44	7/	1.99	<b>173</b>	<b>17.5</b>	<b>41.3</b>	<b>36.2</b>				2.84	125	15.7	<b>42.5</b>	<b>46.2</b>	4.83	145	16.4	<b>83.8</b>	<b>82.4</b>	95.17	1.42	0.18	16.2	17.6	na	<b>15.9</b>	<b>2.6</b>	<b>86.4</b>	8.35	0.96		
15	3	~82	71	27	7/	2.27	<b>172</b>	<b>18.8</b>	<b>46.6</b>	<b>44.4</b>				2.33	146	17.4	<b>40.7</b>	<b>42.2</b>	4.60	159	18.1	<b>87.3</b>	<b>86.6</b>	95.40	1.12	0.13	12.7	13.4	na	<b>26.5</b>	<b>3.4</b>	<b>90.7</b>	8.37	0.96		
16	2	~85	64	30	7/	2.17	<b>346</b>	<b>22.7</b>	<b>36.8</b>	<b>41.4</b>				3.17	267	18.3	<b>41.5</b>	<b>48.8</b>	5.34	299	20.1	<b>78.3</b>	<b>90.2</b>	94.66	4.70	0.12	21.7	9.8	na	<b>53.2</b>	<b>11.5</b>	<b>89.8</b>	20.4	1.19		
<b>Test Series 4 - Rougher w/20µm Sands Re grind and Scavenger/Cleaner Flotation</b>																																				
17	1	83	68	<b>16</b>	7/	1.43	<b>132</b>	<b>16.4</b>	<b>44.7</b>	<b>44.9</b>				2.34	78.0	9.80	<b>43.2</b>	<b>43.9</b>	3.77	98.6	12.3	<b>87.9</b>	<b>88.8</b>	96.23	0.53	0.06	12.1	11.2	0.40	9.1	<b>1.1</b>	<b>89.0</b>	4.23	0.52		
18	2	85	65	<b>18</b>	7/	2.33	<b>359</b>	<b>21.7</b>	<b>41.2</b>	<b>46.9</b>				3.03	275	16.6	<b>41.0</b>	<b>46.6</b>	5.36	312	18.8	<b>82.2</b>	<b>93.5</b>	94.64	3.84	0.07	17.8	6.5	1.03	71.8	<b>12.8</b>	<b>95.0</b>	20.3	1.08		
19	3	83	70	<b>17</b>	7/	1.85	<b>191</b>	<b>19.2</b>	<b>42.0</b>	<b>39.4</b>				3.11	129	14.9	<b>47.6</b>	<b>51.4</b>	4.96	152	16.5	<b>89.6</b>	<b>90.8</b>	95.04	0.92	0.09	10.4	9.2	0.53	34.7	<b>3.6</b>	<b>93.2</b>	8.42	0.90		
20	4	92	54	<b>15</b>	7/	1.44	<b>239</b>	<b>20.0</b>	<b>30.2</b>	<b>29.9</b>				2.91	179	19.8	<b>45.8</b>	<b>60.0</b>	4.35	199	19.9	<b>76.0</b>	<b>89.9</b>	95.65	2.85	0.10	24.0	10.1	0.72	74.0	<b>17.8</b>	<b>93.8</b>	11.4	0.96		

1/ Scavenger concentrate derived from flotation of the +500 mesh (25µm) fraction from the rougher tails.

5/ Overall recovery is the total of gold recovered into flotation concentrate plus the gold extracted from the combined tails.

2/ Final tail is the combination of the -500 mesh fraction (slimes) from the rougher tail and the scavenger tail.

6/ % passing 500 mesh (25µm) for the scavenger tail.

3/ Percentage of gold contained in the final tail.

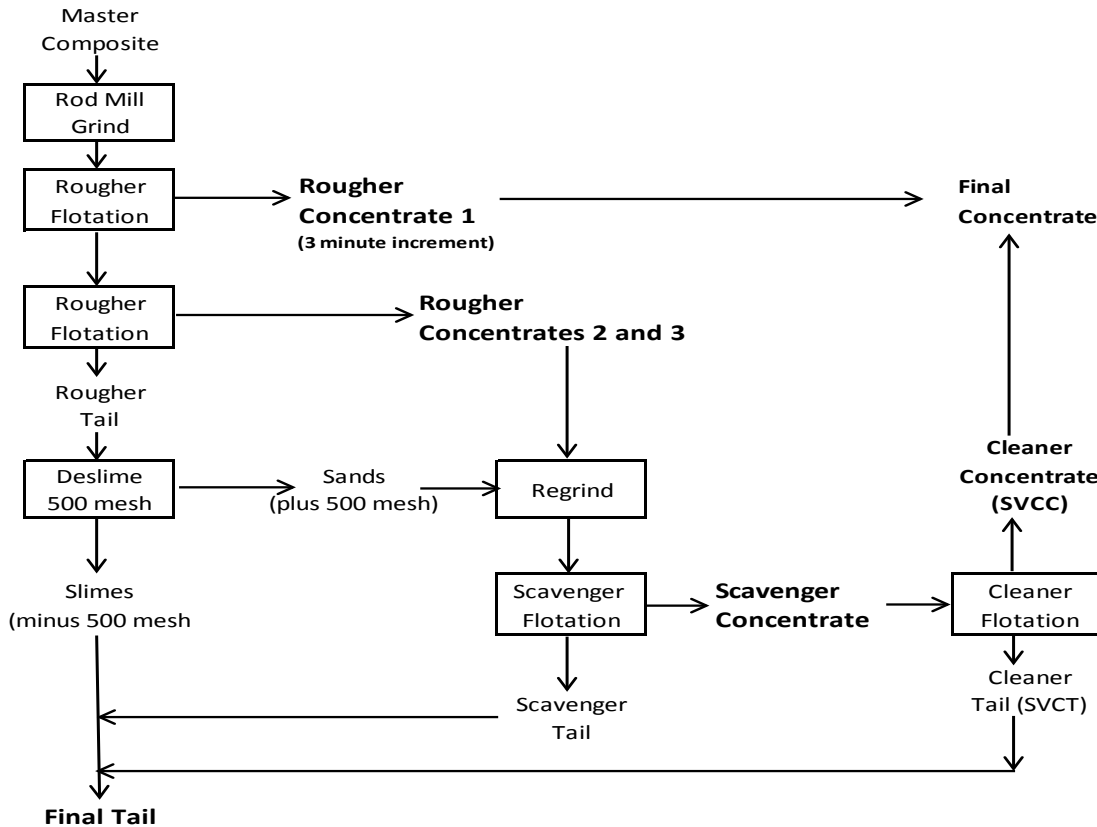
7/ P80 of sands re grind.

4/ Percentage of extracted gold on a whole ore basis.



The final flowsheet used to test all four Master Composites is shown in Figure 13.2. This flowsheet achieves the original goal of producing a high-grade concentrate and high gold recovery. There is still limited potential for improvement with optimization of flotation and cyanide leaching conditions.

Figure 13.2 Flowsheet for Test Series 3 and 4



The final test series investigated the two-stage flowsheet for each of the four Master Composites; results are presented in Table 13.5. Overall, gold recoveries ranged from 89.0% to 95.0%, with an average of 92.7%. Gold recovery into the flotation concentrates ranged from 76.0% to 89.6%, and sulphide-sulphur recoveries ranged from 88.8% to 93.5%. The concentrates ranged in weight recovery from 3.77% to 5.36%, with gold grades of 98.6 g Au/t to as high as 312 g Au/t.

Two refractory composites (KMMC-1 and -3) demonstrated the highest flotation gold recoveries because they contained very little cyanide-soluble gold. On the other hand, composites KMMC-2 and KMMC-4, which contain significant cyanide-soluble gold, demonstrated the greatest benefit from cyanidation of the float tails. For composite KMMC-2 the leaching of the tails increased gold recovery by 12.8 percent and for composite KMMC-4 the increase was 17.8 percent. Note that for these two composites the cyanidation extracted 72% to 74% of the gold contained in the final flotation tail product. These results reinforce the importance of leaching of the flotation tails in any future studies.



**Table 13.5 Summary of Results for Flotation and Tail Cyanidation of Master Composites**

Test 3024-44	Composite KMMC	Primary Grind		Scav Re-grind P80 µm	Final Concentrate				Flotation Tail				Tails Leach			Overall		Calculated Feed		
		%	P80 µm		Assay		Distribution 1/		Assay		Distribution		NaCN Leach			Au Rec %	4/	Au gpt	S <sup>=</sup> %	
					%	Au	S <sup>=</sup>	Au	S <sup>=</sup>	%	Au	S <sup>=</sup>	Au	S <sup>=</sup>	Res					% Au Extrc'n
					Wt	gpt	%	%	%	gpt	%	%	%	%	Au gpt			Tail 2/	Ovrrall 3/	gpt
17	1	83	68	16	3.77	98.6	12.3	87.9	88.8	96.23	0.53	0.06	12.1	11.2	0.40	9.1	1.1	89.0	4.23	0.52
18	2	85	65	18	5.36	312	18.8	82.2	93.5	94.64	3.84	0.07	17.8	6.5	1.03	71.8	12.8	95.0	20.3	1.08
19	3	83	70	17	4.96	152	16.5	89.6	90.8	95.04	0.92	0.09	10.4	9.2	0.53	34.7	3.6	93.2	8.42	0.90
20	4	92	54	15	4.35	199	19.9	76.0	89.9	95.65	2.85	0.10	24.0	10.1	0.72	74.0	17.8	93.8	11.4	0.96

1/ Whole material basis

2/ Percent extraction of gold contained in the final tail.

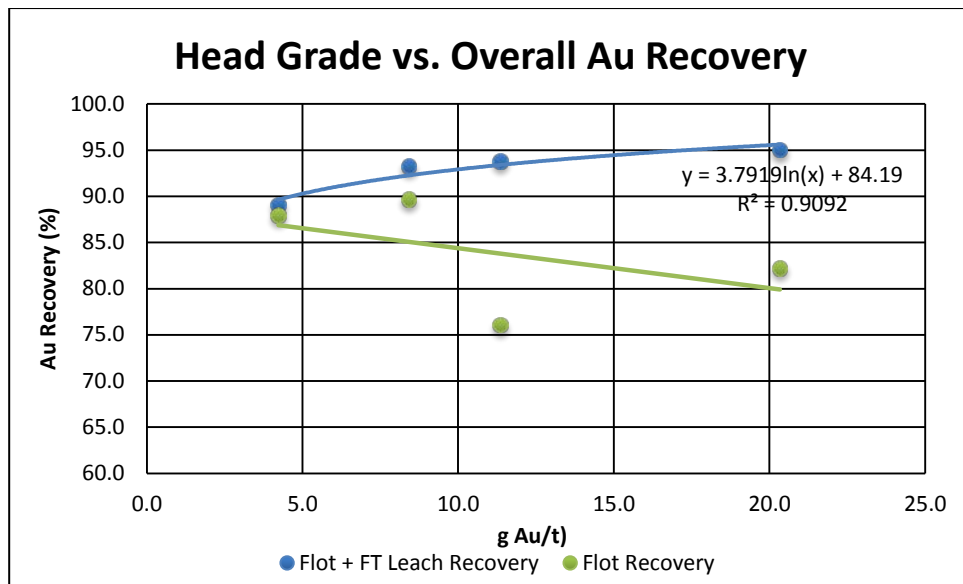
3/ Percent extraction of gold from the final tail based on whole material feed.

4/ Overall recovery is the total of the gold recovered into flotation concentrate plus the gold extracted from the final tails.

### 13.4.2.3 Flotation Modelling

A summary of gold head grade versus gold recovery is shown in Figure 13.3. The green data points represent flotation recovery of gold without the benefit of cyanide leaching of the flotation tails. The data show a significant drop in flotation gold recovery as the head grade increases. However, total gold extraction, shown by the blue points, increases as head grades increase due to the additional gold extraction from the cyanidation of the flotation tails (which increases with increasing head grade). Although the data are quite limited, cyanide leaching of the flotation tails raises the overall gold recovery to the range of 90-95%.

**Figure 13.3 Gold Head Grade vs. Overall Gold Recovery**



Flot = Flotation; Flot + FT = Flotation plus Flotation Tails.

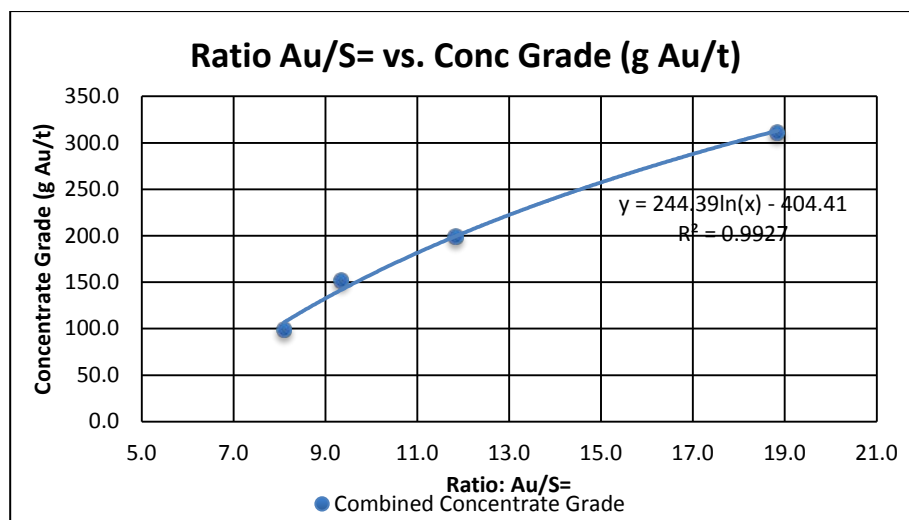


The blue data points in Figure 13.3 include both flotation recovery and CIL bottle-roll gold extraction from the tails. When the CIL bottle-roll gold extraction is added to the flotation recovery, a predictable recovery model is achieved using a natural log function with a correlation coefficient  $R^2$  of 0.99.

Figure 13.4 shows the relationship of concentrate gold grade versus the ratio (“Au/S”) of gold (g Au/t) to sulphide sulphur (%). There is an excellent correlation of final concentrate gold grade to flotation feed Au/S ratio.

Additional variability composite flotation and tails leach testing is required to establish deposit wide variability information to refine and increase confidence these important models.

**Figure 13.4 Gold to Sulphide-Sulphur Ratio vs. Concentrate Grade**



A sulphide concentrate with a gold grade of 98.6 g Au/t was produced from the lowest-grade flotation feed sample KMMC-1, which had a corresponding head assay of 4.23 g Au/t. Flotation feed grades as low as 3.0 g Au/t may produce a concentrate grade sufficient for commercial smelting, as long as arsenic and antimony do not increase significantly at lower gold head grades. Concentrates produced from material with a head grade lower than 3.0 g Au/t would likely require concentrate treatment at one of the Nevada refractory-gold treatment facilities run by Barrick, Newmont, or Jerritt Canyon Gold..

#### 13.4.2.4 Concentrate Penalty Analysis

Detailed chemical analyses were conducted on concentrates from Test Series 4 to enable the evaluation of their suitability for smelter marketing. The proposed flowsheet generates two concentrate products; a short residence-time rougher concentrate and a cleaner concentrate from the scavenger circuit. These were individually assayed and the results are summarized in Table 13.6.



**Table 13.6 Concentrate Impurity Analysis**

Element	Units	MC-1	MC-2	MC-3	MC-4	Avg
Conc Wt	%	3.77	5.36	4.96	4.35	4.61
<b>Quantative Analysis</b>						
Au	gpt	98.5	311.5	152.1	198.8	190.2
Ag	gpt	20.1	37.2	22.9	36.6	29.2
As	%	0.69	1.17	0.98	1.22	1.01
Cl	%	0.0061	0.0051	0.0052	0.0051	0.0054
Hg	ppm	2.4	7.1	4.6	2.9	4.3
F	ppm	<0.10	<0.10	<0.10	<0.10	<0.10
S=	%	12.3	18.8	16.5	19.9	16.9
<b>ICP-1 Analysis</b>						
Al	%	3.971	3.651	4.47	4.02	4.028
As	%	0.721	1.205	0.977	1.253	1.039
Ba	%	0.023	0.018	0.022	0.017	0.02
Be	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bi	%	<0.005	<0.005	<0.005	<0.005	<0.005
Ca	%	9.555	3.823	4.096	3.787	5.315
Cd	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ce	%	0.005	0.006	0.005	0.005	0.005
Co	%	0.011	0.009	0.012	0.015	0.012
Cr	%	0.035	0.027	0.044	0.05	0.039
Cu	%	0.079	0.082	0.084	0.092	0.084
Fe	%	14.061	20.396	18.792	22.196	18.861
K	%	1.95	1.735	2.029	1.849	1.891
La	%	0.002	0.002	0.002	0.002	0.002
Mg	%	1.572	0.805	1.143	0.991	1.127
Mn	%	0.024	0.014	0.017	0.018	0.018
Mo	%	0.006	0.005	0.003	0.004	0.005
Na	%	0.076	0.08	0.136	0.105	0.099
Ni	%	0.05	0.048	0.046	0.054	0.050
P	%	0.044	0.021	0.021	0.019	0.026
Pb	%	0.017	0.014	0.009	0.011	0.013
Re	%	<0.0005	<0.0005	0.001	0.001	0.0003
S	%	14.243	22.631	19.767	23.298	19.985
Se	%					
Sb	%	0.461	1.582	0.33	0.022	0.598
Sr	%	0.032	0.012	0.013	0.009	0.017
Te	%	<0.005	<0.005	<0.005	<0.005	<0.005
Th	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ti	%	0.251	0.215	0.195	0.132	0.198
V	%	0.005	0.004	0.005	0.004	0.005
Y	%	0.001	0.001	0.001	0.001	0.001
Zn	%	0.104	0.156	0.149	0.088	0.124
Zr	%	0.007	0.005	0.005	0.003	0.005

The final concentrate products averaged 4.61% of the feed weight and contained an average of 190 g Au/t. There were significant variations in the gold grades of the individual concentrates depending on the float-feed gold grade, Au/S<sup>-</sup> ratio, and the flotation stage. Silver in the concentrates was low, averaging 29 g Ag/t.





Arsenic and antimony concentrations were variable and averaged 1.01% and 0.60%, respectively. Both arsenic and antimony concentrations exceed normal penalty levels for commercial copper smelters; levels above 0.10% - 0.30% arsenic and antimony require special terms with accepting smelters. All smelters have a limit for arsenic and antimony concentrations, above which they typically will not accept material. For small concentrate tonnages, some smelters can and do make exceptions, but it is standard that special arrangements be made to determine penalty costs when arsenic and antimony exceed the normal rejection limits. Due to the likely low tonnage of concentrates that would be produced from an operation at Kinsley, it may be feasible for concentrates with such high-grade gold content to be marketable, either for direct sale to a smelter or for sale to a concentrate blender. Other potential contaminant elements, including mercury (Hg), appear to be within acceptable limits and should pose no problems.

All of the Nevada-based operating roaster and autoclave process facilities designed for processing refractory gold materials should be able to treat high-grade gold concentrates from the Kinsley project.

Lead smelters are also a potential destination for low tonnages of gold concentrates. Typically the arsenic and antimony limits at lead smelters are higher than for copper smelters, in the range of 0.30% to 0.50%.

#### **13.4.2.5 Flotation Phase 1 Conclusions**

The following conclusions can be drawn from the Phase 1 test work:

1. Testing was successful in developing a flowsheet for producing high-grade gold concentrates with the potential for sale to commercial smelters, or to Nevada mine owners of refractory processing facilities.
2. Concentrate contaminants as indicated by the test work, namely arsenic and antimony, are above normal smelter acceptance limits, but not so high as to preclude their potential treatment. Special smelter arrangements or concentrate blending options should be investigated.
3. The elevated levels of arsenic and antimony in concentrate should be of little concern for Nevada operators of autoclave facilities, which should readily be able to treat materials similar to those that could be produced from the Kinsley project.
4. In some cases, Nevada mine operators using roasting technology are willing to purchase third-party sulphide concentrates, similar to concentrates that could be produced at Kinsley, for their contained fuel value (concentrates with high sulphide content have high fuel value). These high fuel value materials are then blended with the mine operator's low-sulphide (low fuel value) whole ore feeds.

#### **13.4.2.6 Recommendations Based on Phase 1 Results**

The following are recommendations for further test work:

1. The completed test work investigated four Master Composites, but presently at Hazen there are remaining materials from 17 variability composites. These should be tested to provide information to determine overall deposit variability and to develop models for mass recovery and



gold grade, as a function of gold head grade, gold cyanide solubility, and sulphide sulphur content.

2. There are aspects of the current flowsheet that require further refinements, such as primary grind size, reagent dosages, flotation times, and the best point for integration of regrinding. Tails leaching requires testing for optimization of retention time and cyanide conditions.
3. Limited mineralogical studies are in progress, but more will be needed to help direct future test work and aid in the interpretation of metallurgical results. For example, the current work shows that for KMMC-2, the final tail (*i.e.*, the cyanide-leach residue) assays 1.03 g Au/t; it would be useful to determine how these gold losses occur, and whether there is opportunity for improvement.
4. After the work recommended above is completed, and the information is analyzed and modeled, a concentrate-marketing options study should be commissioned to include:
  - a. Sale to commercial smelters (lead and copper smelters);
  - b. Sale to concentrate blenders;
  - c. Sale to Nevada mine owners who operate refractory ore processing facilities, both roasting and autoclave facilities.

### 13.4.3 2015 Pilot Gold Dunderberg Shale Program

In 2015 a scoping level flotation program was carried out to investigate the response of the Dunderberg Shale to the recently developed Secret Canyon flowsheet. As with the Secret Canyon testing, this test program was conducted in cooperation with G.L. Simmons Consulting, LLC. The laboratory testing was conducted by John Gathje Consulting, LLC, using the facilities and support provided by Hazen Research, Inc. (Golden, Colorado). Additional details are provided in Gathje (2015b).

Flotation testing of Dunderberg Shale-hosted mineralization was undertaken after thin sections revealed a relatively medium grain size for gold-bearing pyrites, relatively low sulphide sulfur concentrations and moderately high gold to sulphide sulfur ratios (ranging from 2.3 to 2.6). These data suggested that the mineralized material may be amenable to producing a concentrate of sufficient grade to support low cost on-site or off-site treatment, over more expensive whole ore treatment options such as roasting or autoclaving.

Drill core analyses provided by Pilot Gold were used to select drill core intervals from which two composites were prepared for testing. The composites were identified as WF-CC#1 (PK096C, 136.2 – 143.9 m) and WF- CC#2 (PK187C, 133.8 – 140.5 m) and assayed 4.72 and 2.37 g/t Au, respectively. Both materials were highly “refractory” meaning gold cyanide solubility was low with assays showing <2% solubility. The two composites contained high carbonate values (15% to 19% CO<sub>3</sub>) along with arsenic (0.2 to 0.3% As), and ~0.1% organic carbon. The measured sulphide sulfur values were 2% and 0.9%, respectively and pyrite was observed during testing.

The two composites of Dunderberg Shale described above were tested. Subsamples were subjected to rougher and scavenger flotation testing over a range of conditions, including variations in grind size, followed by cyanidation of the flotation tails. Gold recovery into a combined Rougher concentrate 1



and Scavenger sands cleaner concentrate (RC1 + 1CC) ranged from 82-83% and concentrate grade ranged from 42 g Au/t to 56 g Au/t (Table 13.7).

Preliminary findings indicate that the two Dunderberg Shale composites tested appear to be amenable to the Secret Canyon flowsheet, although not at optimal conditions and performance. Mill throughput is expected to be lower than for Secret Canyon Shale material, and flotation performance modestly inferior to what could be expected with some flowsheet modifications.

**Table 13.7 2015 Dunderberg Shale Summary Results**

Test 3024-48	Comp	Grind, P80 $\mu$ m		Product	Wt %	Grade		Distribution	
		Primary	Regrind			Au gpt	S <sup>-2</sup> %	Au %	S <sup>-2</sup> %
5	CC#1	71	19	RC1 + 1CC Calc'd Feed	7.44	55.7 4.98	22.3 1.91	83.2	87.0
7	CC#1	61	17	RC1 + 1CC Calc'd Feed	7.86 100.00	48.9 4.65	19.9 1.84	82.7	84.9
<b>Average</b>				<b>RC1 + 1CC Calc'd Feed</b>	<b>7.65</b>	<b>52.3 4.82</b>	<b>21.1 1.87</b>	<b>83.0</b>	<b>86.0</b>
2	CC#2	144	31	RC1 + 1CC Calc'd Feed	5.67	42.1 2.87	14.2 0.95	83.2	84.7
9	CC#2	68	19	RC1 + 1CC Calc'd Feed	5.36	41.9 2.74	13.0 0.90	81.9	77.3
<b>Average</b>				<b>RC1 + 1CC Calc'd Feed</b>	<b>5.51</b>	<b>42.0 2.81</b>	<b>13.6 0.93</b>	<b>82.6</b>	<b>81.0</b>

The mineralized material was not oxidized, and no benefit was realized from cyanide leaching of the flotation tails. However this method could result in recovery of additional gold from partially oxidized material.

Concentrates were assayed for deleterious elements and were found to contain arsenic and antimony (Table 13.8), and are compared to the concentrate assays from the Secret Canyon Shale that is discussed in section 13.4.2.4. Arsenic in Dunderberg concentrate ranged from 1.55% to 3.14% and averaged 2.35% while antimony ranged from 0.048% to 0.067% and averaged 0.058%. While arsenic and antimony are elevated, it is believed the levels would not preclude direct sale to a typical Nevada refractory ore processing facility.

These flotation results are encouraging and the total concentrate mass, by comparison to typical Nevada refractory gold deposits, are superior (lower mass – producing higher grade concentrates) when using conventional flotation with air. This is the first flotation testing ever attempted on the Kinsley Mountain Dunderberg Shale sulphide material that is adjacent to and beneath the existing Alta Gold pits. Further metallurgical development of this and similar material types should be investigated as the resource is developed.



**Table 13.8 Concentrate Impurity Analysis Comparison – Dunderberg Shale vs. Secret Canyon**

Element	Units	Secret Canyon HG					Dunderberg Shale		
		MC-1	MC-2	MC-3	MC-4	Avg	CC#1	CC#2	Avg
Conc Wt	%	3.77	5.36	4.96	4.35	4.61	7.43	5.36	6.40
<b>Quantative Analysis</b>									
Au	gpt	98.5	311.5	152.1	198.8	190.2	55.7	41.9	48.8
Ag	gpt	20.1	37.2	22.9	36.6	29.2	na	na	na
As	%	0.69	1.17	0.98	1.22	1.01	1.55	3.14	2.35
Cl	%	0.0061	0.0051	0.0052	0.0051	0.0054	0.0055	0.0044	0.0050
Hg	ppm	2.4	7.1	4.6	2.9	4.3	15.6	32.2	23.9
F	ppm	1265	843	605	865	895			
Se	%	<0.10	<0.10	<0.10	<0.10	<0.10	na	na	na
S <sub>(tot)</sub>	%						24.4	15.5	20.0
SO <sub>4</sub> <sup>=</sup>	%						0.05	0.04	0.05
S <sup>= 1/</sup>	%						24.4	15.5	20.0
S <sup>= 2/</sup>	%	12.3	18.8	16.5	19.9	16.9	22.3	13.0	17.7
C <sub>(tot)</sub>	%						1.70	2.64	2.17
CO <sub>3</sub>	%						4.98	8.01	6.50
C <sub>(org)</sub> <sup>3/</sup>	%						0.67	0.96	0.82
C <sub>(org)</sub> <sup>4/</sup>	%						0.70	1.03	0.87
<b>ICP-1 Analysis</b>									
Al	%	3.971	3.651	4.470	4.020	4.028	4.00	4.78	4.39
As	%	0.721	1.205	0.977	1.253	1.039			
Ba	%	0.023	0.018	0.022	0.017	0.020	0.024	0.024	0.024
Be	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bi	%	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ca	%	9.555	3.823	4.096	3.787	5.315	2.01	3.36	2.69
Cd	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ce	%	0.005	0.006	0.005	0.005	0.005	0.0056	0.0076	0.0066
Co	%	0.011	0.009	0.012	0.015	0.012	0.011	0.011	0.011
Cr	%	0.035	0.027	0.044	0.050	0.039	0.031	0.007	0.019
Cu	%	0.079	0.082	0.084	0.092	0.084	0.060	0.053	0.057
Fe	%	14.061	20.396	18.792	22.196	18.861	22.3	15.4	18.9
K	%	1.950	1.735	2.029	1.849	1.891	1.79	2.23	2.01
La	%	0.002	0.002	0.002	0.002	0.002	0.0020	0.0031	0.0026
Mg	%	1.572	0.805	1.143	0.991	1.127	0.88	1.28	1.080
Mn	%	0.024	0.014	0.017	0.018	0.018	0.0281	0.0379	0.0330
Mo	%	0.006	0.005	0.003	0.004	0.005	0.003	0.001	0.002
Na	%	0.076	0.080	0.136	0.105	0.099	0.085	0.134	0.110
Ni	%	0.050	0.048	0.046	0.054	0.050	0.040	0.028	0.034
P	%	0.044	0.021	0.021	0.019	0.026	0.074	0.130	0.102
Pb	%	0.017	0.014	0.009	0.011	0.013	0.016	0.015	0.016
Re	%	<0.0005	<0.0005	0.001	0.001	0.0003	<0.005	<0.005	<0.005
S	%	14.243	22.631	19.767	23.298	19.985	23.7	14.9	19.3
Sb	%	0.461	1.582	0.330	0.022	0.598	0.048	0.067	0.058
Sr	%	0.032	0.012	0.013	0.009	0.017	0.006	0.009	0.008
Te	%	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Th	%	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.005	0.0015	0.003
Ti	%	0.251	0.215	0.195	0.132	0.198	0.125	0.233	0.179
V	%	0.005	0.004	0.005	0.004	0.005	0.0037	0.0047	0.004
Y	%	0.001	0.001	0.001	0.001	0.001	0.0008	0.0013	0.001
Zn	%	0.104	0.156	0.149	0.088	0.124	0.077	0.119	0.098
Zr	%	0.007	0.005	0.005	0.003	0.005	0.0040	0.0061	0.005

1/ Sulfide sulfur determined as the difference between total sulfur in the form of sulfate  
2/ Sulfide sulfur determined as sulfur not soluble in dilute hydrochloric acid  
3/ Organic carbon measured as carbon (by LECO) remaining after a hydrochloric digestion  
4/ Organic carbon by difference between total carbon and carbon contained in carbonate



There was little attempt to optimize the Dunderberg materials, on their own merit, as the goal of this preliminary program was to evaluate the response of these materials to the Secret Canyon flowsheet. In retrospect, this approach was not optimal, and consideration should be given to subjecting these materials to a more standard metallurgical development program to determine their optimum metallurgical performance. During the current metallurgical program testing it was discovered that the Dunderberg material slimes easily, during primary grinding, and that slimes losses are high (10-12%). Coarser primary grinding and/or slimes flotation show promise to increase flotation recovery by 3-5%. Flotation percent solids had to be reduced to produce acceptable results. Concentrate regrinding to the 15-20 micron range appears to be required to improve concentrate grade and recovery, and mineralogy samples should be analyzed before doing much more work on Dunderberg material types.



## 14.0 MINERAL RESOURCE ESTIMATES

### 14.1 Introduction

The mineral resource estimation for the Kinsley project follows the guidelines of Canadian National Instrument 43-101 (“NI 43-101”). Modeling and estimation of the mineral resources of the Kinsley project were completed in October 2015 under the supervision of Michael M. Gustin, a qualified person with respect to mineral resource estimations under NI 43-101. The effective date of the resource estimate is October 15, 2015. Mr. Gustin is independent of Pilot Gold by the definitions and criteria set forth in NI 43-101; there is no affiliation between Mr. Gustin and Pilot Gold except that of an independent consultant/client relationship.

MDA classifies resources in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories in accordance with the “CIM Definition Standards - For Mineral Resources and Mineral Reserves” (2014) and therefore NI 43-101. CIM mineral resource definitions are given below, with CIM’s explanatory text shown in italics:

#### **Mineral Resource**

*Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.*

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

*Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals.*

*The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase ‘reasonable prospects for eventual economic extraction’ implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include estimates of cutoff grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity*



*price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing.*

*Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.*

### **Inferred Mineral Resource**

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

*An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.*

*There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.*

### **Indicated Mineral Resource**

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.



Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

*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 Pre-Feasibility Study which can serve as the basis for major development decisions.*

### **Measured Mineral Resource**

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

*Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.*

### **Modifying Factors**

Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.





MDA reports resources at cutoffs that are reasonable for deposits similar in nature to Kinsley given anticipated mining methods and plant processing costs, while also considering economic conditions, to fulfill regulatory requirements that a resource exists “in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.”

## **14.2 Data**

The Kinsley gold resources were estimated using data generated by Pilot Gold and previous historical operators, including Alta, Cominco and Hecla. These data, which is primarily derived from RC and diamond-core drill holes, as well as digital topography of the project area, were provided to MDA by Pilot Gold and incorporated into a digital database. The project database is in UTM Zone 11 NAD83 coordinates (metres).

## **14.3 Deposit Geology Pertinent to Resource Modeling**

Gold at Kinsley occurs primarily as stratabound mineralization, with the host stratigraphy gently folded into an anticline with an axis that more-or-less lies along the crest of the Kinsley Mountains. The mineralization often occurs at, or subparallel to, stratigraphic contacts, along which strata-parallel structural movement of uncertain extent is sometimes evident. While less common, examples of solution breccia-hosted mineralization are not unusual. Some high-angle faults and zones of structural disturbance appear to be related to mineralization in drill core, particularly in the Western Flank area, although it is difficult to correlate these structures from hole-to-hole. Another characteristic of the Western Flank zone is that the bulk of the higher-grade mineralization crosscuts the Secret Canyon Shale stratigraphy.

## **14.4 Modeling of Geology**

Pilot Gold provided MDA with a digital set of 50-metre-spaced cross sections with lithologic and structural interpretations. Due to the predominance of stratabound and strataform mineralization at Kinsley, these interpretations were used extensively in MDA’s modeling of the gold mineralization, although the lithologies were not coded into the final block model.

## **14.5 Oxidation Modeling**

Pilot Gold also completed modeling of oxidized, unoxidized, and mixed oxidation (transition) zones on a set of project cross sections at 50-metre spacings that was current through mid-2013. MDA modified these interpretations using subsequent drill data and created wireframe oxidation solids from the final sectional polygons.

The mineralization in the Western Flank area, while relatively deep and primarily unoxidized, is characterized by zones of variable, but often strong, oxidation along zones of structural disturbance and faults. While important, these zones of variable oxidation are often at such small scales as to preclude modeling, or, where of sufficient scale, cannot be confidently correlated from hole-to-hole. However, in light of the metallurgical test work completed on Western Flank mineralization, which leads to a potential processing flow sheet in which mineralization of all oxidation states is treated similarly, the complications of oxidation are not material to the resource modeling of the Western Flank zone.



## 14.6 Density Modeling

Cominco carried out a number of specific-gravity (“SG”) determinations (Table 14.1). The materials used for the determinations include one assay pulp from each of three bulk metallurgical samples, selected rock samples from the same three bulk metallurgical samples, and four samples of core from the two shallow Simco holes drilled at the Main and Upper zones (SC-1 and SC-2). Selected pieces from the bulk samples and the core samples were measured by McClelland; the source of the pulp determinations is not known.

**Table 14.1 Cominco Specific Gravity Determinations**

Material	Sample	Deposit	Type	SG Determinations			Average SG Value	
							Wet	Dry
Bulk Samples: Pulps	1	Lower Main	wet	2.41	2.31	2.30	2.34	
	2	Main	wet	2.35	2.36	2.39	2.37	
	3	Upper	wet	2.29	2.31	2.38	2.33	
Bulk Samples: Rock Grabs	1	Lower Main	wet	2.56	2.69	2.56	2.60	
	2	Main	wet	2.59	2.68	2.62	2.63	
	3	Upper	wet	2.62	2.59	2.63	2.61	
	1	Lower Main	dry	2.46	2.64	2.41		2.50
	2	Main	dry	2.74	2.57	2.53		2.61
	3	Upper	dry	2.59	2.63	2.51		2.58
Core Samples	KSC-1 1.75-3.53 m	Main	wet	2.62			2.62	
	KSC-2 1.52-4.27 m	Upper	wet	2.68			2.68	
	KSC-2 4.27-7.19 m	Upper	wet	2.67			2.67	
	KSC-2 7.19-9.11 m	Upper	wet	2.63			2.63	
	KSC-1 1.75-3.53 m	Main	dry	2.61				2.61
	KSC-2 1.52-4.27 m	Upper	dry	2.67				2.67
	KSC-2 4.27-7.19 m	Upper	dry	2.62				2.62
	KSC-2 7.19-9.11 m	Upper	dry	2.60				2.60

The low SG values derived from the pulps can be attributed to the incorporation of the pore-space voids within the pulped material into the measurements. The Main Zone core sample consisted of silicified/jasperoidal material, while the remaining three core samples were comprised of unsilicified limestone.

The SG values of the dry samples are most applicable to resource and reserve estimations. The average of the seven dry bulk specific gravities is 2.60.



Down-hole neutron-activation (natural gamma and gamma-gamma density) measurements were also carried out by Summit Geotechnical Consulting of Reno, Nevada in 1988 along mineralized intervals from several open drill holes in the Upper, Main, and Access zones, which produced an average SG value of 2.58 (Summit Geotechnical Consulting, 1988), although a number of problems plagued the study and the reliability of the results was questioned.

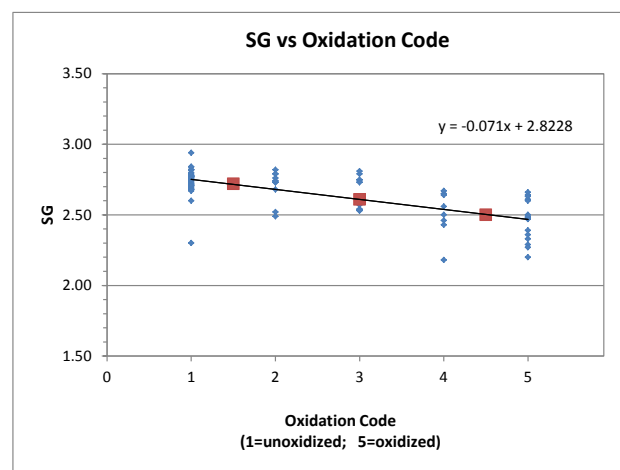
Cominco reported (Monroe *et al.*, 1988) that the results from all of their testing suggest the average SG value of “ore” at Kinsley ranged from 2.50 to 2.65. In the end, Cominco chose a value of 2.46 as a “conservative estimate” of the SG for use in their historical “ore reserve” calculations, although further testing was recommended.

Alta reported the Kinsley mineralization has an average SG of 2.56, although no backup data are presently available that support this estimate. An SG of 2.46 was used in the Alta historical “reserve” estimates (Alta Gold, 1994), which is the same SG used by Cominco in their estimates.

MDA evaluated 129 bulk specific-gravity determinations completed by ALS for Pilot Gold. The measurements were made on selected samples of drill core using the water-immersion method on spray-coated samples (ALS code OA-GRA08n). The data were examined by gold domain (discussed in Section 14.7), lithology, and oxidation. A strong correlation was found between the logged degree of oxidation and SG, whereby the SG values increase as oxidation decreases (Figure 14.1). If only those determinations that lie within the modeled mineral domains are examined, the relationship is similar.

The correlation is due in part to the fact that oxidation (weathering) changes the chemical composition of the rocks and typically increases void spaces, which lead to decreases in specific gravity.

**Figure 14.1 Specific Gravity vs Oxidation – Pilot Gold Data**



Using the best-fit line shown in Figure 14.1, values for oxidized, unoxidized, and mixed portions of the resource model were determined (shown on the graph as red boxes); these values are listed in Table 14.2. An SG of 1.8 was assigned to dumps and material that partially backfills some of the Alta open pits.



**Table 14.2 Modeled Specific Gravity Values**

Type	Code	Model SG
Oxidized	4.5	2.50
Mixed	3	2.60
Unoxidized	1.5	2.72
Dump/Backfill	-	1.80

## 14.7 Gold Modeling

The gold mineral resources at Kinsley were modeled and estimated by:

- evaluating the drill data statistically;
- utilizing the Pilot Gold geologic and structural interpretations, as well as drill-hole alteration and mineralization coding, to serve as the base for interpreting gold mineral domains on a set of east-west cross sections spaced at 25-metre intervals;
- rectifying the cross-sectional mineral-domain interpretations on a set of north-south long sections spaced at five-metre intervals;
- analyzing the modeled mineralization geostatistically to aid in the establishment of estimation and classification parameters; and
- interpolating grades into a three-dimensional block model using the long-sectional gold mineral domains to control the estimation.

### 14.7.1 Mineral Domains

A mineral domain encompasses a volume that ideally is characterized by a single, natural, grade population of a metal that occurs within a specific geologic environment.

In order to define the mineral domains at Kinsley, the natural gold populations were first identified on population-distribution graphs that plot the gold-grade distribution of all of the project drill-hole assays. This analysis led to the identification of low-, mid-, and high-grade gold populations. Ideally, each of these populations can then be correlated with specific geologic characteristics that are captured in the project database, which can be used in conjunction with the grade populations to interpret the bounds of each of the gold mineral domains. The approximate grade ranges of the low- (domain 100), medium- (domain 200), and high-grade (domain 300) domains are listed in Table 14.3.



**Table 14.3 Approximate Grade Ranges of Gold Domains**

Domain	(g Au/t)
100	~0.1 to ~0.4
200	~0.4 to ~3
300	> ~3

MDA modeled the Kinsley gold mineralization by interpreting mineral-domain polygons on the set of vertical, 25-metre spaced, north-looking (Az. 000°) cross sections that span the presently known extents of the deposit. The mineral domains were constructed using the Pilot Gold geologic and structural sections as a base. In addition to gold grades, arsenic and antimony grades were plotted on the drill holes to aid in the gold modeling.

Due to the preponderance of historical RC holes that lack detailed geologic logging in many areas of the deposit, especially along the eastern flank of the Kinsley Mountains, geologic details that can be important in the delineation of the mineral domains were not always available. Jasperoids were logged in almost all holes, however, and, along with the Pilot Gold lithologic cross sections, served as a fundamental guide in the mineral-domain interpretations on the eastern flank.

There are two styles of mineralization that predominate at Kinsley, one that characterizes mineralization in units that overlie the Secret Canyon Shale and one that characterizes mineralization within the Secret Canyon Shale. In the former case, which dominates the mineralization exploited in the Alta Gold open pits, higher-grade (domain 200 and 300) mineralization commonly occurs along the Hamburg Upper Limestone - Dunderberg Shale contact, often within jasperoidal breccias in the upper Hamburg. Strata-parallel zones in the upper portions of the Dunderberg Shale are also common. This style of mineralization appears to be controlled by low-angle thrust(?) related structures along lithologic contacts, although jasperoids that lie along higher-angle structures occur locally. As mentioned above, jasperoid is identified in most historic holes, and its presence, along with the stratigraphic position of the mineralization, was used extensively in the modeling. However, geologic criteria are rarely available to distinguish between the two higher-grade domains, so the modeling of the highest-grade domain (domain 300) was guided primarily by gold grades.

In contrast, the highest-grade domain modeled at the Western Flank deposit, which is primarily hosted by the Secret Canyon Shale (the second style of mineralization), is characterized by weak silicification, decalcification (often manifested by bleaching in unoxidized core), enhanced pyrite concentrations, and very local deformation of the host units related to relatively high-angle structures. The mineralization, while predominantly unoxidized and well below the transitional to unoxidized boundary, is characterized by variable oxidation (especially in the highest-grade areas), with the oxidation being related to the high-angle structures mentioned above. All of these features are readily identifiable in the Pilot Gold drill core that defines the Western Flank deposit, and these features were used extensively in the medium- and high-grade domain interpretations.



The low-grade domain (domain 100) modeled for both styles of mineralization encompasses weaker gold mineralization that extends laterally outwards from the higher-grade domains, with its limits primarily defined by grade.

The gold domains were modeled to the extents of the original pre-mining topography of the Kinsley Mountains in order to allow comparisons of reported gold production to the tonnes and grade of the mined material as estimated in the resource model.

As part of the sectional mineral-domain modeling, MDA also created 17 unique triangulated surfaces that were used to correlate specific mineralized zones from cross section to cross section.

The east-west cross sectional mineral-domain envelopes were pressed three-dimensionally to drill-holes lying within the cross sectional windows, and the pressed polygons were then sliced vertically at five-metre intervals. These slices, along with slices of triangulated surfaces of the mineralized zones modeled by MDA, were used to guide the final rectification of the gold mineral domains on a set of five-metre-spaced, vertical, north-south long sections.

Cross-sections showing examples of the gold mineral-domain modeling are shown in Figure 14.2 and Figure 14.3. Figure 14.2 shows the central portion of the Western Flank zone, while a section of the eastern side of the range is shown in Figure 14.3.



Figure 14.2 Kinsley Cross Section 4448750N Showing Gold-Domain Modeling

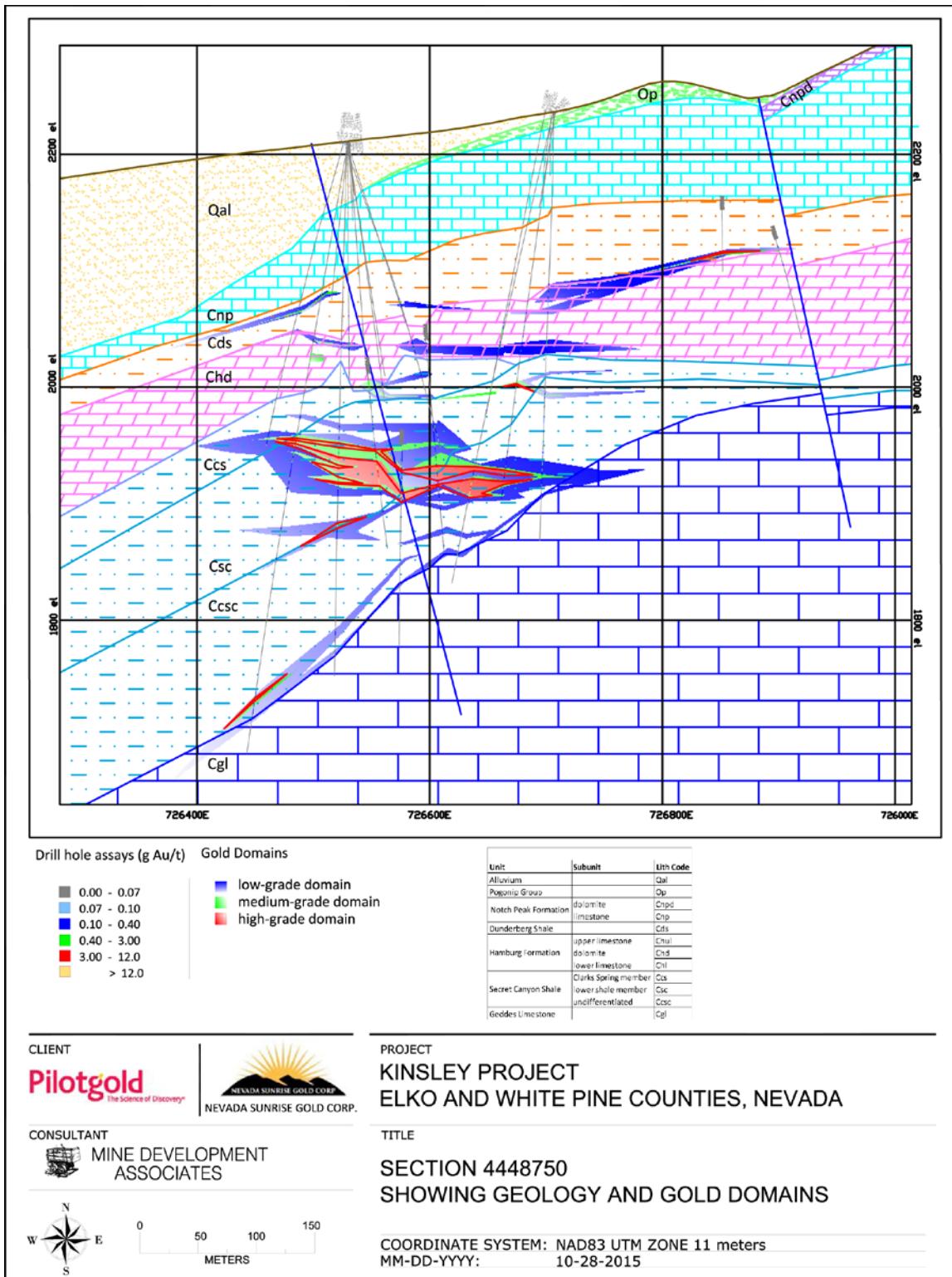
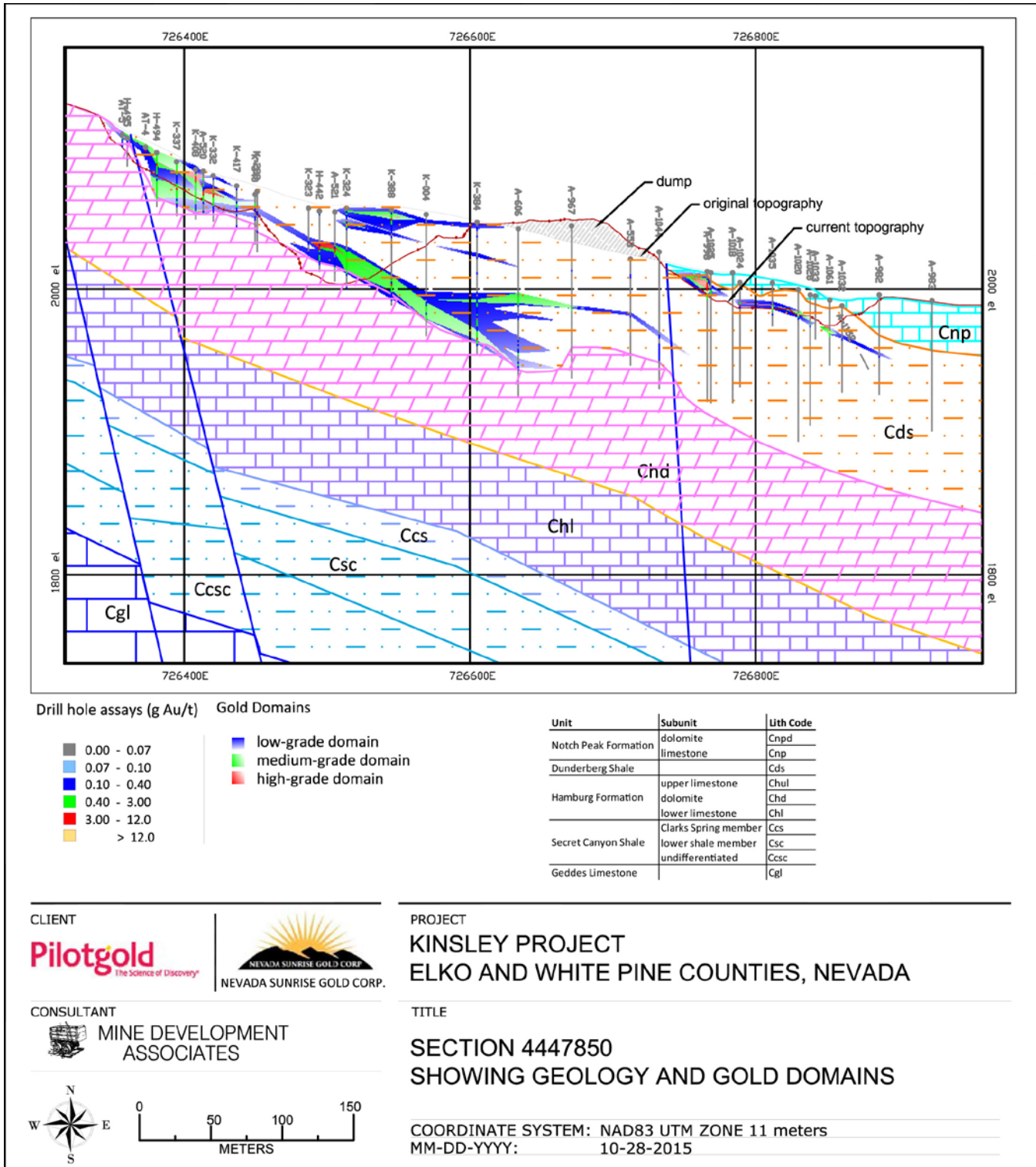




Figure 14.3 Kinsley Cross Section 4447850N Showing Gold-Domain Modeling







## 14.7.2 Assay Coding, Capping, and Compositing

Drill-hole gold assays were coded to the mineral domains using the cross-sectional polygons. Assay caps were determined by the inspection of population distribution plots of the coded assays by domain to identify high-grade outliers that might be appropriate for capping; the plots were also evaluated for the possible presence of multiple grade populations within each of the gold domains. Descriptive statistics of the coded assays by domain and visual reviews of the spatial relationships of the possible outliers and their potential impacts during grade interpolation were also considered in the definition of the assay caps (shown in Table 14.4).

**Table 14.4 Gold Assay Caps by Mineral Domain**

Domain	g Au/t	Number Capped (% of samples)
100	2.5	7 (<1%)
200	5.5	11 (<1%)
300	70	3 (<1%)

In addition to the assay caps, restrictions on the search distances of higher-grade portions of the domains were applied during grade interpolations (discussed further below). The use of search restrictions can allow one to minimize the number of samples subjected to capping while properly respecting the highest-grade populations within each domain.

Descriptive statistics of the capped and uncapped coded assays are provided in Table 14.5.

**Table 14.5 Descriptive Statistics of Coded Gold Assays**

Domain	Assays	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min. (oz Au/ton)	Max. (oz Au/ton)
100	Au	6051	0.265	0.206	0.250	0.94	0.000	8.470
	Au Cap	6051	0.263	0.206	0.208	0.79	0.000	2.500
200	Au	3179	1.360	1.097	1.165	0.86	0.000	33.600
	Au Cap	3179	1.338	1.097	0.830	0.62	0.000	5.500
300	Au	786	8.295	4.971	9.289	1.12	0.079	103.500
	Au Cap	786	8.252	4.971	8.932	1.08	0.079	70.000
All	Au	10016	1.221	0.411	3.368	2.76	0.000	103.500
	Au Cap	10016	1.209	0.411	3.253	2.69	0.000	70.000

The capped assays were composited at 1.524-metre down-hole intervals respecting the mineral domains. The composite length is equal to the length of over 90% of the coded assays, the majority of which are derived from five-foot RC samples. A composite length of 3.048 was tried initially, but this generated many composites at lengths less than three metres. The mean grade of these shorter composites was less than the full-length composites, and this grade bias inappropriately affected grade estimation. The 1.524-metre composites solved this problem.



Descriptive statistics of Kinsley composites are shown in Table 14.6.

**Table 14.6 Descriptive Statistics of Gold Composites**

Domain	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min. (oz Au/ton)	Max. (oz Au/ton)
100	6073	0.263	0.206	0.207	0.79	0.000	2.500
200	3192	1.338	1.097	0.817	0.61	0.000	5.500
300	772	8.252	5.074	8.286	1.00	0.079	65.296
All	10037	1.209	0.411	3.120	2.58	0.000	65.296

### 14.7.3 Block Model Coding

The long-sectional mineral-domain polygons were used to code a three-dimensional un-rotated block model (000° bearing) comprised of five-metre (wide) x five-metre (long) x five-metre (high) blocks. The percentage volume of each mineral domain is stored within each block (the “partial percentages”) in order for the block model to better reflect the irregularly shaped limits of the various domains.

The oxidation solids discussed in Section 14.5 were used to code the model blocks as oxidized, mixed, or unoxidized on a block-in/block-out basis.

Due to the metallurgical results that apply uniquely to mineralization hosted by the Secret Canyon Shale (most prominently at the Western Flank zone), a metallurgical domain solid was created to encompass all mineralized Secret Canyon Shale, irrespective of oxidation state, and this solid was used to code the model blocks.

Three topographic surfaces were used to code the block model: a pre-mining surface created from USGS DEM data, present-day topography derived from a BLM aerial survey completed in 2004, and a surface created by Pilot Gold and modified by MDA that models the post-mine/pre-backfill topography. These surfaces were used to define: (1) the percentage of each block that lies below the present-day surface; and (ii) blocks that represent bedrock or backfill/dump.

The specific-gravity values shown in Table 14.2 were assigned to model blocks coded as bedrock based on their oxidation codes, while all blocks codes as backfill/dump were assigned a specific gravity value of 1.8. The specific-gravity values were then used in combination with the percentage of each block that lies below the present-day topographic surface to determine the tonnage of the block.

### 14.7.4 Grade Interpolation

A variographic study was completed using all composites from the mineral domains, as well as the composites from each of the three domains. The average mineralized orientation was assumed to be horizontal. Maximum strike (and dip) ranges of 50 to 65 metres in the horizontal direction were modeled, with vertical (across strike/dip) ranges of 15 to 25 metres. The maximum ranges would be expected to increase if subsets of the composites were examined according to the actual, folded orientations of the host stratigraphy.



The gentle folding of the host stratigraphy, in combination with both low- and high-angle fault controls, lead to a variety of mineralized orientations. The model was therefore coded to 15 orientation domains, each of which is assigned a unique strike and dip that is applied to the search ellipse during grade interpolation.

Statistical analyses of coded assays and composites, including coefficients of variation and population-distribution plots, indicate that multiple populations were captured in each of the three gold domains. The recognition of multiple populations within the domains, in addition to the results of initial grade-estimation runs that indicated the higher-grade samples were affecting inappropriate volumes, led to the incorporation of search restrictions. These restrictions place limits on the maximum distances the highest-grade composites in each domain can be from a block to be used in the interpolation of gold grades into that block. The final search-restriction parameters were derived from the results of multiple interpolation iterations that employed various search-restriction parameters.

Gold grades were interpolated using inverse distance to the third power, ordinary kriging, and nearest-neighbor methods. The mineral resources reported herein were estimated by inverse-distance interpolation, as this method led to results that were judged to more appropriately reflect the drill data than those obtained by ordinary kriging. The nearest-neighbor estimation was completed as a check on the inverse-distance and kriging interpolations. The parameters applied to the gold-grade estimations at Kinsley are summarized in Table 14.7.

**Table 14.7 Summary of Kinsley Estimation Parameters**

**Au Domains 100, 200 & 300**

Estimation Pass	Search Ranges (m)			Composite Constraints		
	Major	S-Major	Minor	Min	Max	Max/hole
1	70	70	20	1	20	4
2	150	150	43	1	20	4
3	300	300	300	1	20	4

**Search Restrictions**

Domain	Grade Threshold	Search Restriction	Estimation Pass
Au 100	>0.7 g Au/t	50 metres	1
		120 metres	2 & 3
Au 200	>1.0 g Au/t	50 metres	1
		100 metres	2 & 3
Au 300	>6 and <25 g Au/t	35 metres	1, 2 & 3
	>25 g Au/t	25 metres	

**Ordinary Kriging Parameters**

Model	Nugget	First Structure			Second Structure				
	C <sub>0</sub>	C <sub>1</sub>	Ranges (m)			C <sub>2</sub>	Ranges (m)		
SPH-Normal	0.300	0.249	15	15	4	0.099	50	50	15

<sup>1</sup> kriging interpolation used as a check against the reported inverse-distance interpolation



Grade interpolation was completed using length-weighted composites in three passes. The third pass, with the longest search radii, was used to estimate grades into the very few blocks unestimated in the first two passes.

The estimation passes were performed independently for each of the mineral domains, so that only composites coded to a particular domain were used to estimate grade into blocks coded by that domain. The estimated grades were coupled with the partial percentages of the mineral domains to enable the calculation of weight-averaged gold grades for each block. The final resource grades, and their associated resource tonnages, are fully block-diluted. Unmineralized portions of each block are assigned a grade of 0 g Au/t in the weight-averaged calculations.

#### **14.7.5 Model Checks**

Volumes derived from the sectional mineral-domain modeling were compared to both the long-sectional and coded block-model volumes to assure close agreement, and all block-model coding was checked visually on the computer. A polygonal estimate using the cross-sectional interpretations, as well as the nearest-neighbor and ordinary-krige estimates of the modeled resources, was undertaken as a check on the inverse-distance estimation results; no unexpected relationships between the check estimates and the inverse-distance estimate were identified. Various grade-distribution plots of assays and composites *vs.* nearest-neighbor, ordinary-krige, and inverse-distance block grades were evaluated as a check on both the global and local estimation results. Finally, the inverse-distance grades were visually compared to the drill-hole assay data to assure that reasonable results were obtained.

#### **14.8 Kinsley Project Mineral Resources**

The estimated gold resources of the Kinsley project (Table 14.8) are tabulated using three cutoff grades. A cutoff of 0.2 g Au/t is applied to oxidized mineralization that is potentially available to open-pit mining and heap-leach processing. A cutoff of 1.0 g Au/t is applied to Secret Canyon Shale mineralization potentially available to open-pit mining, milling, flotation, and shipping to a third-party roaster/autoclave. All other unoxidized and mixed mineralization that is potentially available to open-pit extraction and similar processing as the Secret Canyon Shale mineralization is reported at a cutoff of 1.3 g Au/t.

Although the mineral-domain modeling was extended into the open pits mined by Alta Gold, this material was removed from reported resources.



**Table 14.8 Kinsley Project Gold Resources**

Indicated Resources			Inferred Resources		
Tonnes	g Au/t	oz Au	Tonnes	g Au/t	oz Au
5,529,000	2.27	405,000	3,362,000	1.13	122,000

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Mineral Resources are reported at a 0.2 g Au/t cutoff for oxidized mineralization potentially available to open-pit mining and heap-leach processing; a 1.0 g Au/t cutoff is applied to Secret Canyon Shale mineralization potentially available to open-pit mining, milling, flotation, and shipping to a third-party roaster/autoclave; all other unoxidized and mixed mineralization potentially available to open-pit mining and similar processing as the Secret Canyon Shale mineralization is reported at a cutoff of 1.3 g Au/t.
3. Rounding may result in apparent discrepancies between tonnes, grade, and contained metal content.
4. The Effective Date of the mineral resource estimate is October 15, 2015.

In order to determine the limits of modeled mineralization potentially available to open-pit extraction, MDA completed a pit optimization using a \$1,300/oz gold price and parameters applicable to: (i) oxidized, potentially heap-leachable mineralization - \$2.50/t processing cost, \$1.41/t General and Administrative (“G&A”) cost, and a gold recovery of 75%; (ii) mixed and unoxidized mineralization that could potentially be processed by flotation, leaching of the flotation tails, and custom oxidation by roaster or autoclave - \$32.00/t processing cost, \$7.04/t G&A cost, and 85% recovery; and (iii) mineralization hosted within the Secret Canyon Shale, which potentially could also be processed by flotation, leaching of the flotation tails, and custom oxidation by roaster or autoclave - \$28.30 processing cost, \$7.04/t G&A cost, and 95% recovery.

The optimization led to deeper pit depths on the western side of the Kinsley range than on the eastern flank, due to the higher-grade mineralization hosted in the Secret Canyon Shale on the western side. The pits were used to define the following maximum depths below the topographic surface for the potentially open-pit resources at Kinsley: 125 metres below the topographic surface on the east side of the Kinsley Mountains and 350 metres below the surface on the western side. The latter constraint effectively removes all modeled deep mineralization hosted in the Secret Canyon Shale outside of the Western Flank zone.

The Kinsley resources are classified on the basis of the number and distance of composites used in the interpolation of a block gold grade, as well as the number of holes that contributed composites to the interpolation (Table 14.9). Specific parameters are applied to each of two areas: resources hosted within the Secret Canyon Shale, and resources in all stratigraphic units above the Secret Canyon Shale. The somewhat less restrictive parameters applied to the Secret Canyon Shale resources reflect the predominance of Pilot Gold drill holes in the definition of these resources, including many core holes.



**Table 14.9 Kinsley Classification Parameters**

<b>Class</b>	<b>Min. No. of Comps</b>	<b>Additional Constraints</b>
Indicated: Secret Canyon Shale Mineralization	3	Minimum of 2 holes within an average distance of 25 metres from block
Indicated: All Other Mineralization	3	Minimum of 2 holes within an average distance of 20 metres from block
Inferred	1	All estimated blocks not classified as Indicated

No Measured resources are defined due to the predominance of historical drill data in much of the eastern flank of the Kinsley Mountains and the early-stage nature of the metallurgical test work in the case of the modeled mineralization along the western flank of the range.

Although MDA is not an expert with respect to any of the following aspects of the project, MDA is not aware of any unusual environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that are not discussed in this report that may materially affect the Kinsley mineral resources as of the date of this report.

Figure 14.4 and Figure 14.5 show cross-sections showing the estimated block-model gold grades that correspond to the mineral-domain cross-sections presented above.



Figure 14.4 Kinsley Cross Section 4448750N Showing Block-Model Gold Grades

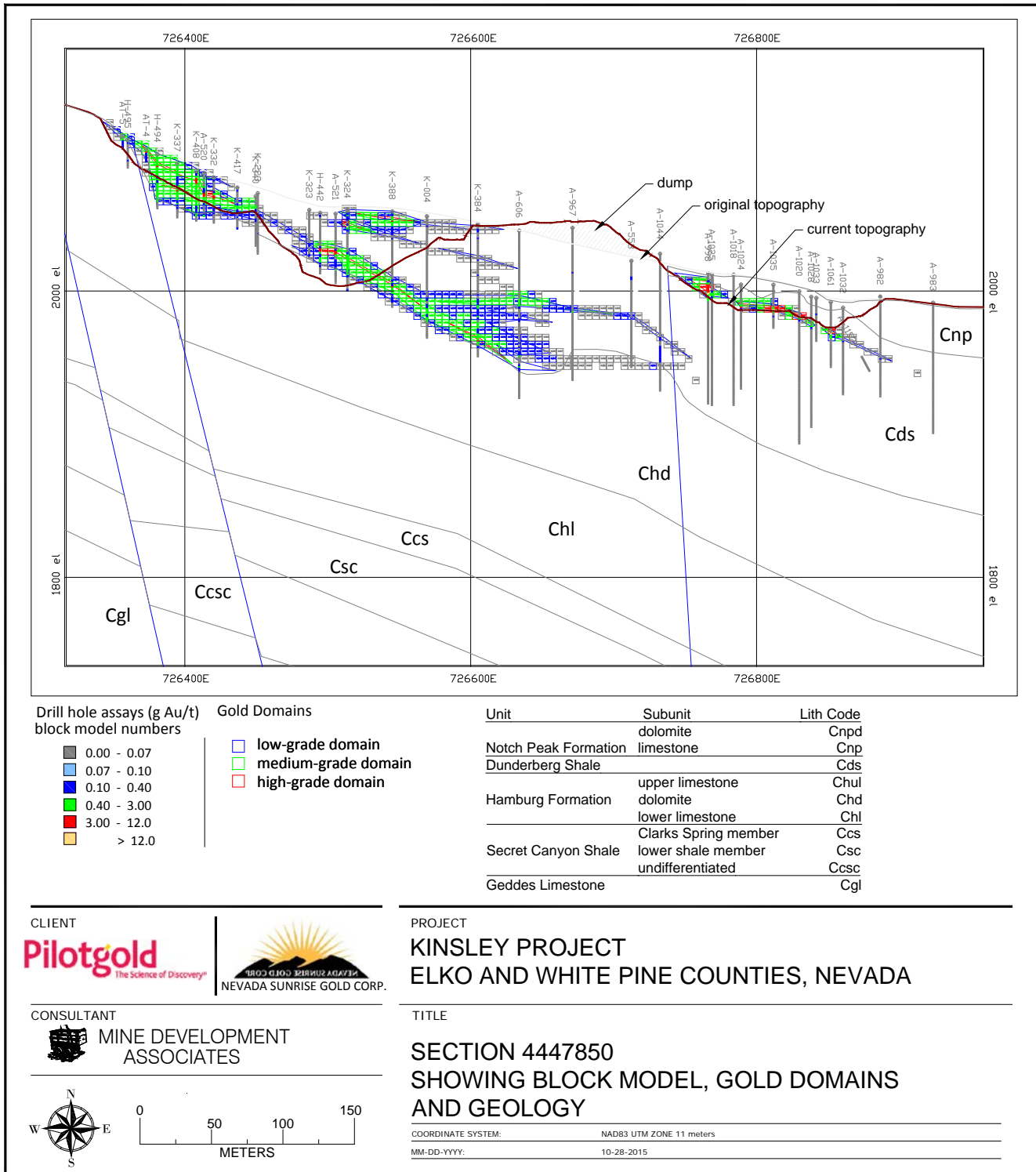
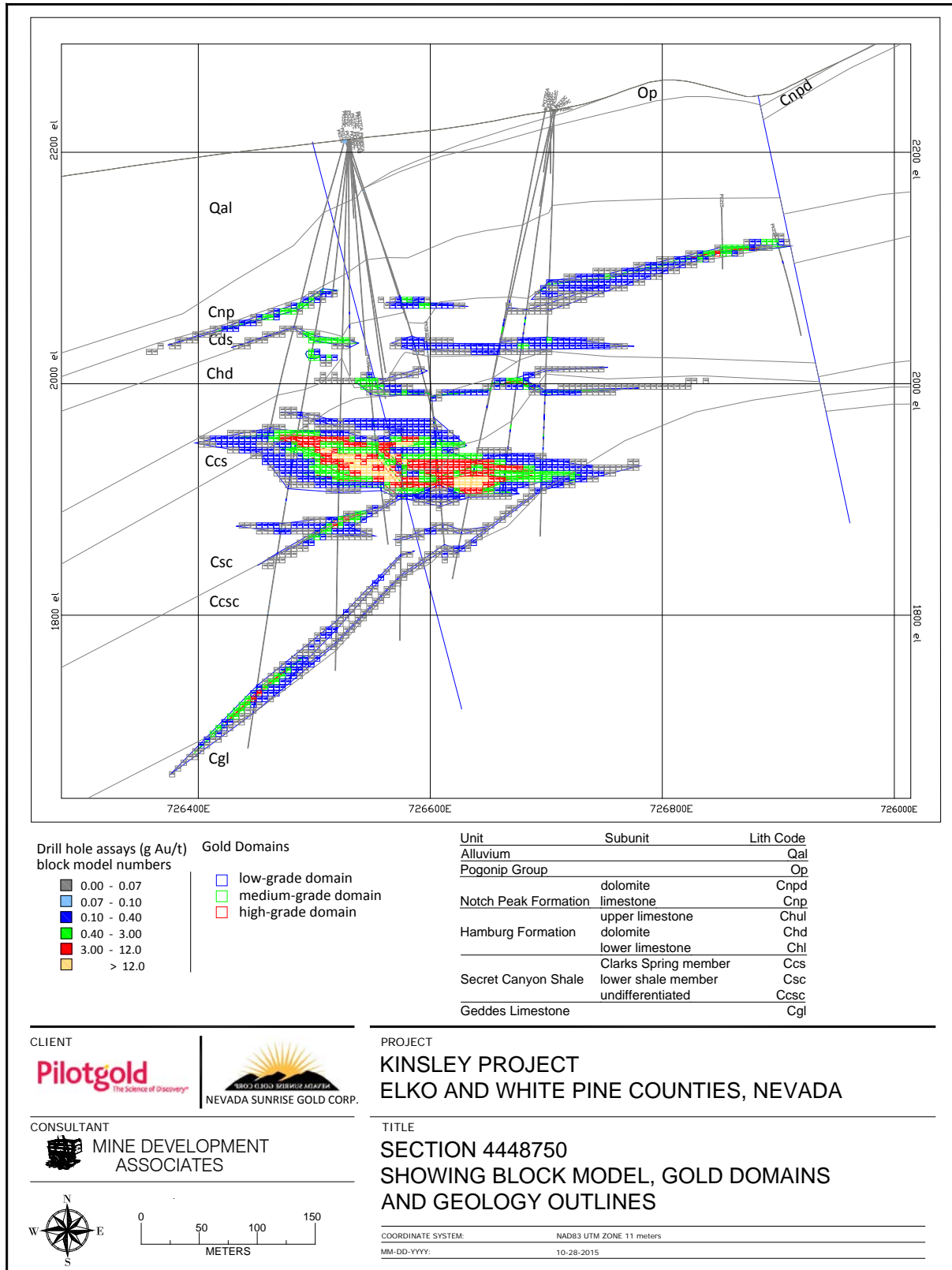




Figure 14.5 Kinsley Cross Section 4447850N Showing Block-Model Gold Grades







The modeled mineralization is tabulated by oxidation state using multiple cutoffs in Table 14.10 in order to provide grade-distribution information, as well as to present sensitivities of the resources to economic conditions or mining scenarios other than those envisioned by the reportable cutoffs.

**Table 14.10 Kinsley Mineralization at Various Cutoffs**

**Oxidized Mineralization**

Cutoff (g Au/t)	Indicated			Cutoff (g Au/t)	Inferred		
	Tonnes	g Au/t	oz Au		Tonnes	g Au/t	oz Au
<b>0.20</b>	<b>3,548,000</b>	<b>0.66</b>	<b>76,000</b>	<b>0.20</b>	<b>2,384,000</b>	<b>0.60</b>	<b>46,000</b>
0.50	1,670,000	1.04	56,000	0.50	1,003,000	0.99	32,000
0.70	1,064,000	1.30	44,000	0.70	613,000	1.24	24,000
1.00	551,000	1.74	31,000	1.00	291,000	1.70	16,000
1.30	334,000	2.13	23,000	1.30	150,000	2.24	11,000
2.00	132,000	2.96	13,000	2.00	49,000	3.64	6,000
3.00	36,000	4.38	5,000	3.00	21,000	5.44	3,600

**Mixed + Unoxidized Mineralization**

Cutoff (g Au/t)	Indicated			Cutoff (g Au/t)	Inferred		
	Tonnes	g Au/t	oz Au		Tonnes	g Au/t	oz Au
0.70	1,017,000	1.82	60,000	0.70	1,196,000	1.53	59,000
1.00	694,000	2.28	51,000	1.00	724,000	1.98	46,000
<b>1.30</b>	<b>520,000</b>	<b>2.67</b>	<b>45,000</b>	<b>1.30</b>	<b>470,000</b>	<b>2.44</b>	<b>37,000</b>
2.00	308,000	3.40	34,000	2.00	219,000	3.42	24,000
3.00	146,000	4.48	21,000	3.00	93,000	4.78	14,000
4.00	66,000	5.74	12,000	4.00	42,000	6.41	9,000
5.00	31,000	7.15	7,000	5.00	25,000	7.70	6,000

**Secret Canyon Shale Mineralization**

Cutoff (g Au/t)	Indicated			Cutoff (g Au/t)	Inferred		
	Tonnes	g Au/t	oz Au		Tonnes	g Au/t	oz Au
0.70	1,708,000	5.29	291,000	0.70	699,000	1.98	44,000
<b>1.00</b>	<b>1,461,000</b>	<b>6.04</b>	<b>284,000</b>	<b>1.00</b>	<b>508,000</b>	<b>2.41</b>	<b>39,000</b>
1.30	1,290,000	6.70	278,000	1.30	397,000	2.76	35,000
2.00	1,067,000	7.76	266,000	2.00	253,000	3.41	28,000
3.00	845,000	9.15	248,000	3.00	137,000	4.20	19,000
4.00	686,000	10.46	231,000	4.00	48,000	5.44	8,000
5.00	564,000	11.75	213,000	5.00	20,000	6.84	4,000

Note: Rounding may cause apparent discrepancies.



## **14.9 Discussion of Resource Modeling**

Three cutoffs were used to define the project resources. The cutoff applied to oxidized materials is consistent with resources associated with potential open-pit heap-leach projects throughout Nevada. Early-stage Pilot Gold metallurgical testing has demonstrated the potential for mixed and unoxidized materials to be processed by milling, flotation, leaching of tails derived from mixed materials, and shipping of the concentrates to a third-party autoclave or roaster. This processing flowsheet is unusual in comparison to mixed and unoxidized mineralization from most sediment-hosted deposits in Nevada, which typically require treatment of whole ore (without pre-concentration). The preliminary testing at Kinsley indicates that mineralization hosted in the Secret Canyon Shale yields better concentration ratios than can be obtained from the Dunderberg Shale, which is consistent with mineralogical observations. The results of this testing were used to determine the Kinsley resource cutoffs for mixed and unoxidized materials.

The historical drill data were used by Alta to support the development of a successful gold operation at Kinsley. This fact, as well as the consistency of the results from Pilot Gold drill holes to those of nearby historical holes throughout the project area, led to the use of the historical data in the definition of Indicated resources.

The historical Alta assay data used directly in the estimation of the project resource grades include some cyanide-soluble analyses. About one-quarter of the coded and composited Alta assays are known to be cyanide-soluble analyses, which represent 7% of all coded assays. In order to approximate the potential impacts of the inclusion of the cyanide-soluble data on the project resource estimation, a separate estimation was completed that excluded the known cyanide-soluble data. The exclusion of the cyanide-soluble data leads to the addition of 336,000 tonnes and 4,000 ounces at the cutoffs used to compile the reported resources. It is possible that other historical Alta analytical data that are assumed to be fire assays are actually cyanide-soluble analyses.

The modeling of the Kinsley gold mineralization included areas lying within the Alta Gold open pits, with this material then removed from the reporting of the project resources. The ore reportedly placed on the heap-leach pads during the Alta Gold operation totaled 4,271,788 tonnes grading 1.34 g Au/t, which resulted in a total production of 134,777 ounces of gold (see Section 6.4). Using the reported average heap-leach recovery of 73.2%, this implies a total of 184,120 ounces of gold were mined and placed on the pads. MDA modeled 4,664,098 tonnes of oxidized material in the pits with an average grade of 1.231 g Au/t, for a total of 184,541 ounces, using a cutoff of 0.4 g Au/t (0.012 oz Au/ton, the cutoff grade of the 1997 Alta “feasibility” study). Some mixed and a very small amount of unoxidized materials were also modeled by MDA within the pits. If 50% of the modeled mixed material is added to the modeled ‘ore’, the totals become 4,849,836 tonnes grading 1.229 g Au/t, for 191,637 ounces of gold. It is very difficult to know the exact tonnes and especially the grade of the materials actually placed on the Alta Gold heap-leach pads, and average heap-leach recoveries are typically very difficult to accurately determine. In any case, the reported production and MDA’s modeling within the open pits are reasonably close.



## **15.0 MINERAL RESERVE ESTIMATES**

There are no current mineral reserve estimates for the Kinsley project.



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## **16.0 ADJACENT PROPERTIES**

In 2007, Kinsley Resources, Inc. (“Kinsley Resources”), a California-based private corporation, staked a large area of the Kinsley Mountains, completely surrounding the south claim block of what is now Pilot Gold’s Kinsley property, and extending northward along the crest and west side of the range. The Kinsley Resources website indicated in 2012 that their property, which is comprised of unpatented mining claims, exceeded 5,666 hectares (14,000 acres). Kinsley Resources has, over time, let a number of the claims lapse, many of which have been subsequently staked by Pilot Gold. Kinsley Resources claims currently surround the western, southern and a portion of the eastern sides of the Pilot Gold property. Kinsley Resources recently quit-claimed several small blocks of claims on the east side of the property to related parties. Some small base metal prospects are known from these claims, particularly in the vicinity of the intrusive stock on the south end of the Kinsley Mountains. Known gold mineralization is restricted to a small area immediately south of the Kinsley project boundary.

In the autumn of 2011, Barrick Gold Exploration, Inc. staked a large number of claims along the eastern flank of the Kinsley Mountains due east and south of the Kinsley mine site. Approximately four holes were drilled on the claims. Results are not known, however no further work has taken place, and the claims were allowed to lapse in 2015.

Columbus Gold holds claims over a large jasperoid body located across the valley to the northeast of the Kinsley property.

MDA has not verified any information derived from any adjacent property, and any such information is not necessarily indicative of the mineralization at the Kinsley property that is the subject of this Technical Report.



## **17.0 OTHER RELEVANT DATA AND INFORMATION**

MDA is not aware of any other information relevant to this Technical Report on the Kinsley project that is not discussed herein.



## 18.0 SUMMARY AND CONCLUSIONS

MDA reviewed the Kinsley project data, audited the drill-hole database, examined available QA/QC data, and visited the project site. MDA believes that the data provided by Pilot Gold, including Pilot Gold's geological interpretations, are reasonably representative of the Kinsley project geology and gold mineralization.

The Kinsley property includes a past-producing heap-leach gold mine that was operated by Alta. The mine produced approximately 138,000 ounces of gold in the late 1990s from eight shallow open pits that exploited oxidized sediment-hosted gold mineralization. Pilot Gold acquired an interest in the project in September 2011, and consultants have advised Pilot Gold that no outstanding reclamation liabilities associated with the Alta mining operations can be assigned to the company.

At least 1,158 generally shallow holes were drilled at Kinsley at various times between 1986 and 2004, 1143 of which are in the project database. Approximately 244 of these holes intersected potentially significant gold intercepts that lie beyond the limits of the Alta pits. Since acquiring the property in 2011 and through late 2015, Pilot Gold drilled a total of 222 core and RC holes. Six holes were drilled in 2011 and focussed on confirming mineralization encountered by the previous operators in areas around the Alta pits. Holes drilled in 2012 through 2014 extended mineralization north of the Main pit, confirmed mineralization in the southeast Access area, and discovered new mineralization in the Dunderberg Canyon and Western Flank areas. Drilling in 2014 focused on near-surface mineralization in the Right Spot and Secret Spot targets and, more significantly, deep stratigraphic targets in the Western Flank target area. The 2015 drilling included step out drilling in the Western Flank area and tests of some satellite targets within the Kinsley project area.

Previous operators recognized that gold typically occurs in Upper Cambrian rocks as (i) jasperoid-hosted oxide mineralization in the upper Hamburg Limestone; (ii) stratabound and structurally hosted oxide and unoxidized mineralization within the Dunderberg Shale; and (iii) dissolution/collapse-breccia-hosted oxide mineralization in the Notch Peak Formation. Pilot Gold has since identified gold in additional stratigraphic units below the upper Hamburg Limestone, including a jasperoid-altered limestone unit within the Hamburg Dolomite, and pyritized and variably oxidized and brecciated shale and limestone in the lower Hamburg Limestone and Secret Canyon Shale, both of Middle Cambrian age.

Pilot Gold's discovery of high-grade mineralization hosted by the Secret Canyon Shale at the Western Flank target is of particular note. This discovery, which has generated numerous high-grade drill intercepts over significant true widths, lies along the northwestern extension of the mineralized trend defined by the Alta open pits (the Kinsley trend). The significance of the Western Flank target is best understood by the following: (i) the Hamburg Dolomite, which overlies the Secret Canyon Shale, was previously thought to be a lower boundary to the mineralization, so few historical holes were drilled to depths sufficient to test the deeper stratigraphy; and (ii) the high-grade mineralization hosted in the Secret Canyon Shale at the Western Flank target is overlain by gold mineralization in the same stratigraphic units that were mined by Alta. The potential for additional occurrences of high-grade mineralization at depth in the Secret Canyon Shale along the Kinsley trend, and possibly other similar structural settings, is clearly excellent. For example, drilling has encountered gold in the Secret Canyon Shale at four target areas that are spread over a length of more than 3.5 kilometres in south-southwestern direction along the western side of the Kinsley Mountains.



In addition to the potential of the lower stratigraphic section at the Kinsley property, the Pogonip Group remains virtually untested. The Ordovician Pogonip Group has been eroded from the southernmost portions of the Kinsley property through to the northern limits of the Kinsley trend, but dominates exposures over large areas of the property to the north. The base of Pogonip Group hosts gold mineralization at the Long Canyon gold deposit, with which the Kinsley project shares a number of similarities. Surface sampling has demonstrated that jasperoid bodies up to 7 kilometres to the north of the mine are highly anomalous with respect to pathfinder elements related to Carlin gold systems.

The amenability of oxidized mineralization at Kinsley to heap-leach processing is well established by both metallurgical testing and the success of heap leaching at the Alta mining operation. The newly discovered Western Flank zone is quite different, however, due to: (i) the mineralization is generally unoxidized, although cross-cutting zones of oxidization related to faults and associated structural perturbances are characteristic of the mineralization; and (ii) the close correlation of increasing gold grades with increasing sulphide (pyrite) contents. Preliminary metallurgical testing completed by Pilot Gold suggests that the unoxidized gold mineralization hosted by the Secret Canyon Shale at the Western Flank target and the Dunderberg Shale in the historic mine area may be amenable to flotation concentration followed by cyanide leaching of the flotation tails, and processing of the concentrates at a roaster, autoclave, or possibly a smelter.

The Kinsley project potential open-pit gold resources are tabulated using three cutoff grades that reflect degree of oxidation and metallurgical considerations. A cutoff of 0.2 g Au/t is applied to oxidized materials that are potentially amenable to heap-leach processing. Transitional and unoxidized resources hosted in the Secret Canyon Shale have a 1.0 g Au/t cutoff applied, while transitional and unoxidized resources hosted in units overlying the Secret Canyon Shale, primarily in the Dunderberg Shale, are defined with a cutoff of 1.3 g Au/t. These higher cutoffs reflect the potential processing scenarios outlined in the previous paragraph. All of the resources are constrained to depths below the surface that could reasonably allow open-pit mining, as defined by pit-floor elevations of optimized pits. Indicated resources total 5,529,000 tonnes averaging 2.27 g Au/t (405,000 ounces), with an additional 3,362,000 tonnes averaging 1.132 g Au/t (122,000 ounces) assigned to the Inferred category.

Pilot Gold has demonstrated the potential for further discovery of potentially viable oxidized, mixed, and unoxidized mineralization at the Kinsley project is excellent. This is particularly true for high-grade targets hosted by the Secret Canyon Shale. The discovery of additional pods of mineralization similar to the Western Flank zone could significantly enhance the resources and the potential economic viability of the project. MDA believes it is likely that such zones remain to be discovered.



## 19.0 RECOMMENDATIONS

As discussed in Section 18.0, MDA believes the Kinsley project clearly warrants significant additional investment. Based on results to date, an aggressive program of drilling should be undertaken in 2016 and, subject to the results of this program, continued in 2017.

Given the high grades and positive results of the preliminary metallurgical testing of the high-grade Secret Canyon Shale-hosted mineralization in the Western Flank zone, an effort should be made to identify other zones of mineralization along similar structural settings across the property (*e.g.*, within the Kinsley trend and the Secret Spot and Racetrack targets). Further drilling of the Western Flank zone is also needed to fully define its extents, with an emphasis on possible extensions of the mineralization to the east.

Beyond the work summarized above, exploration targets should continue to be developed on the property, to the north and south of the Kinsley trend and within the newly acquired claims in the southern portion of the property. With success, new and existing targets that have not been tested by drilling should then be prioritized for future drilling.

MDA recommends a Phase 1 US \$4,200,000 program for 2016 that includes 4,000 metres of core drilling and 16,000 metres of RC drilling to test Secret Canyon Shale-hosted targets throughout the Kinsley Mine trend, along the eastern flank of the range south of the Mine trend to the LBFJ target, to the north and south of the Western Flank deposit, and at the Racetrack and Secret Spot targets.

A US \$6,300,000 Phase 2 program, which is contingent upon the receipt of encouraging results from the Phase 1 program, is recommended to: (i) continue definition drilling of mineralized areas of potential economic significance; (ii) continue exploratory surface work and the drill-testing of new and insufficiently drilled targets; (iii) complete follow-up metallurgical testing of transition and unoxidized mineralization that is unlikely to be amenable to heap leaching; and (iv) undertake an updated resource estimate and an associated preliminary economic assessment to define and progress the project. The Phase 2 program includes 15,000 metres of definition core drilling and 14,000 metres of exploratory RC drilling.

Details of the costs of the recommended programs are provided in Table 19.1.





**Table 19.1 Cost Estimates for Phase 1 and Phase 2 Kinsley Project Exploration Programs**

<b>Item</b>	<b>Phase 1 - 2016</b>	<b>Phase 2 - 2017</b>
RC and Core Drilling (incl. access roads and drill pads, water, surveys, etc.)	\$2,500,000	\$3,780,000
Assaying and geochemistry	650,000	900,000
Soil and Rock Sampling	25,000	25,000
Direct Salaries and Expenses	675,000	675,000
Land Holding Costs	170,000	170,000
IP Survey	100,000	175,000
Permitting	40,000	75,000
Metallurgy	40,000	100,000
Resource Estimation	0	125,000
Scoping Study	0	275,000
<b>Total</b>	<b>\$4,200,000</b>	<b>\$6,300,000</b>

Note: costs related to field support, overhead and indirect labor, travel, community relations, legal and advisory expenses, and other administration have not been included.



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## 21.0 DATE AND SIGNATURE PAGE

Effective Date of report: October 15, 2015

Completion Date of report: December 16, 2015

*“Michael M. Gustin”*

Michael M. Gustin, C.P.G.

December 16, 2015

Date Signed

*“Moira T. Smith”*

Moira T. Smith, P.Geo.

December 16, 2015

Date Signed

*“Gary L. Simmons”*

Gary L. Simmons, QP

December 16, 2015

Date Signed



## 22.0 CERTIFICATES OF AUTHORS

### MICHAEL M. GUSTIN, C.P.G.

I, Michael M. Gustin, C.P.G., do hereby certify that:

1. I am currently employed as Senior Geologist by Mine Development Associates, Inc., 210 South Rock Blvd., Reno, Nevada 89502.
2. I graduated with a Bachelor of Science degree in Geology from Northeastern University in 1979 and a Doctor of Philosophy degree in Economic Geology from the University of Arizona in 1990. I have worked as a geologist in the mining industry for more than 30 years. I am a Licenced Professional Geologist in the state of Utah (#5541396-2250), a Licenced Geologist in the state of Washington (# 2297), a Registered Member of the Society of Mining Engineers (#4037854RM), and a Certified Professional Geologist of the American Institute of Professional Geologists (#CPG-11462).
3. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”). I have previously explored, drilled, evaluated and modelled similar sediment-hosted gold deposits in Nevada and elsewhere. I certify that by reason of my education, affiliation with certified professional associations, and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
4. I visited the Kinsley project site most recently on October 27 and 28, 2014, and the Elko office most recently on October 29, 2015.
5. I am responsible for all sections, except Section 13.4, of this report titled, “*Updated Technical Report and Estimated Mineral Resources for the Kinsley Mountain Project, Elko and White Pine Counties, Nevada*” with an Effective Date of October 15, 2015 (the “Technical Report”).
6. Other than my work with Pilot Gold Inc., I have had no prior involvement with the Kinsley property or project that is the subject of this Technical Report, and I am independent of Pilot Gold Inc. and all of its affiliates and subsidiaries as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101.
7. As of the Effective Date of this Technical Report, to the best of my knowledge, information, and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 16<sup>th</sup> day of December, 2015.

***“Michael M. Gustin”***

Michael M. Gustin, C.P.G.





**Moira T. Smith, P. Geo.**

I, Moira T. Smith, P. Geo., do hereby certify that:

1. I am a geologist residing at 928 Hardrock Place, Spring Creek, NV 89815, and employed by Pilot Gold (USA) Inc. as Chief Geologist.
2. I graduated from Pomona College, with a B.A in Geology in 1983. I obtained a M.Sc. in Geology from Western Washington University in 1986, and a Ph.D. in Geology from University of Arizona in 1990. I have practiced my profession continuously since 1990.
3. I am a Professional Geoscientist (P.Geo.) registered in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (#122720); I have relevant experience having led or participated in geological studies supporting 6 advanced exploration and development projects and/or operations, in 4 different countries.
4. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with professional associations (as deemed in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
5. I assisted in the preparation of, and am responsible for, Sections 5 through 9 of the report titled “***Updated Technical Report and Estimated Mineral Resources for the Kinsley Mountain Project, Elko and White Pine Counties, Nevada***”, with an Effective Date of October 15, 2015 (the “Technical Report”) relating to the Kinsley property. I have worked on the property in a technical capacity since September, 2011 and personally visited the site most recently on November 17 and 18, 2014.
6. As of the Effective Date of this Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
7. I am not independent of the Pilot Gold Inc. (the “Issuer”) applying all the tests in Section 1.5 of NI 43-101 and acknowledge that I hold securities of the Issuer in the form of stock and stock options.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 16<sup>th</sup> day of December, 2015 in Elko, Nevada

***“Moira T. Smith”***

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Moira T. Smith  
Chief Geologist  
Pilot Gold (USA) Inc.



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**Gary L. Simmons, MMSA QP**

I, Gary L. Simmons do hereby certify that:

1. I am currently the Owner of GL Simmons Consulting, LLC, with an office at 105 Chapel Road, Clyde Park, MT 59018.
2. This certificate applies to the technical report titled “*Updated Technical Report and Estimated Mineral Resources for the Kinsley Mountain Project, Elko and White Pine Counties, Nevada*”, with an Effective Date of October 15, 2015, (the “Technical Report”) prepared for Pilot Gold Inc. (“the Issuer”);
3. I am a Qualified Professional (QP) Member with special expertise in Metallurgy, QP No. 01013QP, registered with the Mining and Metallurgical Society of America (MMSA). I am also a Registered Member of the Society for Mining, Metallurgy and Exploration of the SME, Member ID 2959300.

I am a graduate of the Colorado School of Mines with a B.Sc. in Metallurgical Engineering (1972). I have been involved in the Mining business since 1974 and have practiced my profession continuously since 1974. I have held senior mine and metallurgical production and corporate level management, technical and development positions for mining companies with operations in the United States, Canada, Australia, Indonesia, Peru and Mexico. I have worked as an independent consultant since 2008.

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

4. I visited the Kinsley Mountain Project site on September 14, 2012.
5. I am responsible for Sub-Section 13.4 of the Technical Report.
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101.
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
9. As of the Effective Date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 16<sup>th</sup> day of December, 2015 in Elko, Nevada

***“Gary L. Simmons”***

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Gary L Simmons, MMSA QP

**APPENDIX A**

**KINSLEY MOUNTAIN PROJECT FEDERAL UNPATENTED LODGE MINING  
CLAIMS AND PATENTED CLAIMS**

**as of October 31, 2015**

(Compiled and provided by Pilot Gold)

**ACE, SOZA, and TRUST Claims**

Owned by Nevada Sunrise LLC, Leased to Kinsley Gold LLC

Township 26 North, Range 67 East, Sections 1 and 12

Township 26 North, Range 68 East, Sections 5-8

Township 27 North, Range 67 East, Section 36

Township 27 North, Range 68 East, Sections 31-32

Mt. Diablo Base Line & Meridian

Elko County, Nevada

**Total Claims: 144**

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
ACE 5554	10/25/2000		NMC821967	12/27/2000	465496	12/20/2000
ACE 5555	10/25/2000		NMC821968	12/27/2000	465497	12/20/2000
ACE 5556	10/25/2000		NMC821969	12/27/2000	465498	12/20/2000
ACE 5557	10/25/2000	3/7/2001 3/29/2001	NMC821970	12/27/2000 3/7/2001 NA	465499 NA 468507	12/20/2000 NA 4/2/2001
ACE 5648	10/26/2000	3/7/2001 3/29/2001	NMC821971	12/27/2000 3/7/2001 NA	465500 NA 468507	12/20/2000 NA 4/2/2001
ACE 5649	10/26/2000	3/7/2001 3/29/2001	NMC821972	12/27/2000 3/7/2001 NA	465501 NA 468507	12/20/2000 NA 4/2/2001
ACE 5650	10/26/2000	3/7/2001 3/29/2001	NMC821973	12/27/2000 3/7/2001 NA	465502 NA 468507	12/20/2000 NA 4/2/2001
ACE 5651	10/26/2000	3/7/2001 3/29/2001	NMC821974	12/27/2000 3/7/2001 NA	465503 NA 468507	12/20/2000 NA 4/2/2001
ACE 5652	10/26/2000	3/7/2001 3/29/2001	NMC821975	12/27/2000 3/7/2001 NA	465504 NA 468507	12/20/2000 NA 4/2/2001
ACE 5653	10/25/2000		NMC821976	12/27/2000	465505	12/20/2000
ACE 5654	10/25/2000		NMC821977	12/27/2000	465506	12/20/2000
ACE 5655	10/25/2000		NMC821978	12/27/2000	465507	12/20/2000
ACE 5656	10/25/2000		NMC821979	12/27/2000	465508	12/20/2000
ACE 5657	10/25/2000	3/7/2001 3/29/2001	NMC821980	12/27/2000 3/7/2001 NA	465509 NA 468507	12/20/2000 NA 4/2/2001
ACE 5748	10/26/2000	3/7/2001 3/29/2001	NMC821981	12/27/2000 3/7/2001 NA	465510 NA 468507	12/20/2000 NA 4/2/2001
ACE 5749	10/26/2000	3/7/2001 3/29/2001	NMC821982	12/27/2000 3/7/2001 NA	465511 NA 468507	12/20/2000 NA 4/2/2001

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
ACE 5750	10/26/2000	3/7/2001 3/29/2001	NMC821983	12/27/2000 3/7/2001 NA	465512 NA 468507	12/20/2000 NA 4/2/2001
ACE 5751	10/26/2000	3/7/2001 3/29/2001	NMC821984	12/27/2000 3/7/2001 NA	465513 NA 468507	12/20/2000 NA 4/2/2001
ACE 5752	10/27/2000	3/7/2001 3/29/2001	NMC821985	12/27/2000 3/7/2001 NA	465514 NA 468507	12/20/2000 NA 4/2/2001
ACE 5753	10/27/2000		NMC821986	12/27/2000	465515	12/20/2000
ACE 5754	10/27/2000		NMC821987	12/27/2000	465516	12/20/2000
ACE 5755	10/25/2000	3/7/2001 3/29/2001	NMC821988	12/27/2000 3/7/2001 NA	465517 NA 468507	12/20/2000 NA 4/2/2001
ACE 5756	10/25/2000		NMC821989	12/27/2000	465518	12/20/2000
ACE 5848	10/27/2000		NMC821990	12/27/2000	465519	12/20/2000
ACE 5849	10/27/2000		NMC821991	12/27/2000	465520	12/20/2000
ACE 5850	10/27/2000		NMC821992	12/27/2000	465521	12/20/2000
ACE 5851	10/27/2000		NMC821993	12/27/2000	465522	12/20/2000
ACE 5852	10/27/2000		NMC821994	12/27/2000	465523	12/20/2000
TRUST #1	4/25/2001		NMC824004	6/25/2001	470181	5/1/2001
TRUST #2	4/25/2001		NMC824005	6/25/2001	470182	5/1/2001
TRUST #3	4/25/2001		NMC824006	6/25/2001	470183	5/1/2001
TRUST #4	4/26/2001		NMC824007	6/25/2001	470184	5/1/2001
ACE 5745	4/26/2001		NMC824008	6/25/2001	470185	5/1/2001
ACE 5746	4/26/2001		NMC824009	6/25/2001	470186	5/1/2001
ACE 5747	4/26/2001		NMC824010	6/25/2001	470187	5/1/2001
ACE 5845	4/26/2001		NMC824011	6/25/2001	470188	5/1/2001
ACE 5846	4/26/2001		NMC824012	6/25/2001	470189	5/1/2001
ACE 5847	4/26/2001		NMC824013	6/25/2001	470190	5/1/2001
ACE 5448	4/7/2002		NMC829976	7/1/2002	485151	7/1/2002
ACE 5449	4/7/2002		NMC829977	7/1/2002	485152	7/1/2002
ACE 5450	4/7/2002		NMC829978	7/1/2002	485153	7/1/2002
ACE 5451	4/6/2002		NMC829979	7/1/2002	485154	7/1/2002
ACE 5452	4/6/2002		NMC829980	7/1/2002	485155	7/1/2002
ACE 5453	4/6/2002		NMC829981	7/1/2002	485156	7/1/2002
ACE 5454	4/6/2002		NMC829982	7/1/2002	485157	7/1/2002
ACE 5455	4/6/2002		NMC829983	7/1/2002	485158	7/1/2002
ACE 5543	4/4/2002		NMC829984	7/1/2002	485159	7/1/2002
ACE 5544	4/6/2002		NMC829985	7/1/2002	485160	7/1/2002
ACE 5545	4/6/2002		NMC829986	7/1/2002	485161	7/1/2002
ACE 5548	4/7/2002		NMC829987	7/1/2002	485162	7/1/2002

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
ACE 5549	4/7/2002		NMC829988	7/1/2002	485163	7/1/2002
ACE 5550	4/7/2002		NMC829989	7/1/2002	485164	7/1/2002
ACE 5551	4/6/2002		NMC829990	7/1/2002	485165	7/1/2002
ACE 5552	4/6/2002		NMC829991	7/1/2002	485166	7/1/2002
ACE 5553	4/6/2002		NMC829992	7/1/2002	485167	7/1/2002
ACE 5644	4/4/2002		NMC829993	7/1/2002	485168	7/1/2002
ACE 5645	4/4/2002		NMC829994	7/1/2002	485169	7/1/2002
ACE 5646	4/4/2002		NMC829995	7/1/2002	485170	7/1/2002
ACE 5640	10/13/2003		NMC857758	12/17/2003	512092	12/22/2003
ACE 5641	10/13/2003		NMC857759	12/17/2003	512093	12/22/2003
ACE 5642	10/13/2003		NMC857760	12/17/2003	512094	12/22/2003
ACE 5643	10/13/2003		NMC857761	12/17/2003	512095	12/22/2003
ACE 5658	10/14/2003		NMC857762	12/17/2003	512096	12/22/2003
ACE 5659	10/14/2003		NMC857763	12/17/2003	512097	12/22/2003
ACE 5660	10/14/2003		NMC857764	12/17/2003	512098	12/22/2003
ACE 5740	10/13/2003		NMC857765	12/17/2003	512099	12/22/2003
ACE 5741	10/13/2003		NMC857766	12/17/2003	512100	12/22/2003
ACE 5742	10/13/2003		NMC857767	12/17/2003	512101	12/22/2003
ACE 5743	10/13/2003		NMC857768	12/17/2003	512102	12/22/2003
ACE 5744	10/13/2003		NMC857769	12/17/2003	512103	12/22/2003
ACE 5757	10/13/2003		NMC857770	12/17/2003	512104	12/22/2003
ACE 5758	10/14/2003		NMC857771	12/17/2003	512105	12/22/2003
ACE 5759	10/14/2003		NMC857772	12/17/2003	512106	12/22/2003
ACE 5760	10/14/2003		NMC857773	12/17/2003	512107	12/22/2003
ACE 5840	10/13/2003		NMC857774	12/17/2003	512108	12/22/2003
ACE 5841	10/13/2003		NMC857775	12/17/2003	512109	12/22/2003
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ACE 5940	10/13/2003		NMC857779	12/17/2003	512113	12/22/2003
ACE 5941	10/13/2003		NMC857780	12/17/2003	512114	12/22/2003
ACE 5942	10/13/2003		NMC857781	12/17/2003	512115	12/22/2003
ACE 5943	10/13/2003		NMC857782	12/17/2003	512116	12/22/2003
ACE 5944	10/13/2003		NMC857783	12/17/2003	512117	12/22/2003
ACE 5945	10/13/2003		NMC857784	12/17/2003	512118	12/22/2003
ACE 5946	10/13/2003		NMC857785	12/17/2003	512119	12/22/2003
ACE 5947	10/13/2003		NMC857786	12/17/2003	512120	12/22/2003
ACE 5948	10/13/2003		NMC857787	12/17/2003	512121	12/22/2003
ACE 5949	10/13/2003		NMC857788	12/17/2003	512122	12/22/2003
ACE 5950	10/13/2003		NMC857789	12/17/2003	512123	12/22/2003
ACE 6043	10/13/2003		NMC857790	12/17/2003	512124	12/22/2003
ACE 6044	10/13/2003		NMC857791	12/17/2003	512125	12/22/2003

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
ACE 6045	10/13/2003		NMC857792	12/17/2003	512126	12/22/2003
ACE 6046	10/13/2003		NMC857793	12/17/2003	512127	12/22/2003
ACE 6047	10/13/2003		NMC857794	12/17/2003	512128	12/22/2003
ACE 6048	10/13/2003		NMC857795	12/17/2003	512129	12/22/2003
ACE 6049	10/13/2003		NMC857796	12/17/2003	512130	12/22/2003
ACE 6050	10/13/2003		NMC857797	12/17/2003	512131	12/22/2003
ACE 6143	10/13/2003		NMC857798	12/17/2003	512132	12/22/2003
ACE 6144	10/13/2003		NMC857799	12/17/2003	512133	12/22/2003
ACE 6145	10/13/2003		NMC857800	12/17/2003	512134	12/22/2003
ACE 6146	10/13/2003		NMC857801	12/17/2003	512135	12/22/2003
ACE 6147	10/13/2003		NMC857802	12/17/2003	512136	12/22/2003
ACE 6148	10/13/2003		NMC857803	12/17/2003	512137	12/22/2003
ACE 6149	10/13/2003		NMC857804	12/17/2003	512138	12/22/2003
ACE 6150	10/13/2003		NMC857805	12/17/2003	512139	12/22/2003
SOZA #1	1/16/2004		NMC859898	1/21/2004	513715	2/3/2004
SOZA #2	1/16/2004		NMC859899	1/21/2004	513716	2/3/2004
SOZA #3	1/16/2004		NMC859900	1/21/2004	513717	2/3/2004
ACE 5853	7/28/2004		NMC876718	9/10/2004	523766	9/13/2004
ACE 5854	7/28/2004		NMC876719	9/10/2004	523767	9/13/2004
ACE 5855	7/28/2004		NMC876720	9/10/2004	523768	9/13/2004
ACE 5856	7/28/2004		NMC876721	9/10/2004	523769	9/13/2004
ACE 5857	7/28/2004		NMC876722	9/10/2004	523770	9/13/2004
ACE 5858	7/28/2004		NMC876723	9/10/2004	523771	9/13/2004
ACE 5951	7/28/2004		NMC876724	9/10/2004	523772	9/13/2004
ACE 5952	7/28/2004		NMC876725	9/10/2004	523773	9/13/2004
ACE 5953	7/28/2004		NMC876726	9/10/2004	523774	9/13/2004
ACE 5954	7/28/2004		NMC876727	9/10/2004	523775	9/13/2004
ACE 5955	7/28/2004		NMC876728	9/10/2004	523776	9/13/2004
ACE 5956	7/28/2004		NMC876729	9/10/2004	523777	9/13/2004
ACE 5957	7/28/2004		NMC876730	9/10/2004	523778	9/13/2004
ACE 5958	7/28/2004		NMC876731	9/10/2004	523779	9/13/2004
ACE 6051	7/29/2004		NMC876732	9/10/2004	523780	9/13/2004
ACE 6052	7/29/2004		NMC876733	9/10/2004	523781	9/13/2004
ACE 6053	7/29/2004		NMC876734	9/10/2004	523782	9/13/2004
ACE 6054	7/29/2004		NMC876735	9/10/2004	523783	9/13/2004
ACE 6055	7/29/2004		NMC876736	9/10/2004	523784	9/13/2004
ACE 6056	7/29/2004		NMC876737	9/10/2004	523785	9/13/2004
ACE 6057	7/29/2004		NMC876738	9/10/2004	523786	9/13/2004
ACE 6058	7/29/2004		NMC876739	9/10/2004	523787	9/13/2004
ACE 6151	7/29/2004		NMC876740	9/10/2004	523788	9/13/2004
ACE 6152	7/29/2004		NMC876741	9/10/2004	523789	9/13/2004

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ACE 6153	7/29/2004		NMC876742	9/10/2004	523790	9/13/2004
ACE 6154	7/29/2004		NMC876743	9/10/2004	523791	9/13/2004
ACE 6155	7/29/2004		NMC876744	9/10/2004	523792	9/13/2004
ACE 6156	7/29/2004		NMC876745	9/10/2004	523793	9/13/2004
ACE 6157	7/29/2004		NMC876746	9/10/2004	523794	9/13/2004
ACE 6158	7/29/2004		NMC876747	9/10/2004	523795	9/13/2004
ACE 5446	9/4/2004		NMC880251	10/26/2004	525664	10/27/2004
ACE 5447	9/4/2004		NMC880252	10/26/2004	525665	10/27/2004
ACE 6001	12/22/2011		NMC1066043	2/3/2012	651728	2/3/2012
ACE 6002	12/22/2011		NMC1066044	2/3/2012	651729	2/3/2012
ACE 6003	12/22/2011		NMC1066045	2/3/2012	651730	2/3/2012

**KN, ACE, KCE, and KS Claims in Elko County**

Owned by Kinsley Gold LLC

Township 26 North, Range 67 East, Sections 1, 2, and 11-14

Township 26 North, Range 68 East, Sections 4, 5, 7-9, and 16-18

Township 27 North, Range 67 East, Section 24

Township 27 North, Range 68 East, Sections 7-8, 16-21, and 28-33

Mt. Diablo Base Line & Meridian

Elko County, Nevada

**Total Claims: 346**

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KN-1	10/25/2011		NMC1063529	1/9/2012	650126	12/27/2011
KN-2	10/25/2011		NMC1063530	1/9/2012	650127	12/27/2011
KN-3	10/25/2011		NMC1063531	1/9/2012	650128	12/27/2011
KN-4	10/25/2011		NMC1063532	1/9/2012	650129	12/27/2011
KN-5	10/25/2011		NMC1063533	1/9/2012	650130	12/27/2011
KN-6	10/25/2011		NMC1063534	1/9/2012	650131	12/27/2011
KN-7	10/25/2011		NMC1063535	1/9/2012	650132	12/27/2011
KN-8	10/25/2011		NMC1063536	1/9/2012	650133	12/27/2011
KN-9	10/25/2011		NMC1063537	1/9/2012	650134	12/27/2011
KN-10	10/25/2011		NMC1063538	1/9/2012	650135	12/27/2011
KN-11	10/25/2011		NMC1063539	1/9/2012	650136	12/27/2011
KN-12	10/25/2011		NMC1063540	1/9/2012	650137	12/27/2011
KN-13	10/25/2011		NMC1063541	1/9/2012	650138	12/27/2011
KN-14	10/25/2011		NMC1063542	1/9/2012	650139	12/27/2011
KN-15	10/25/2011		NMC1063543	1/9/2012	650140	12/27/2011



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KN-16	10/25/2011		NMC1063544	1/9/2012	650141	12/27/2011
KN-17	10/25/2011		NMC1063545	1/9/2012	650142	12/27/2011
KN-18	10/25/2011		NMC1063546	1/9/2012	650143	12/27/2011
KN-19	10/26/2011		NMC1063547	1/9/2012	650144	12/27/2011
KN-20	10/26/2011		NMC1063548	1/9/2012	650145	12/27/2011
KN-21	10/26/2011		NMC1063549	1/9/2012	650146	12/27/2011
KN-22	10/26/2011		NMC1063550	1/9/2012	650147	12/27/2011
KN-23	10/26/2011		NMC1063551	1/9/2012	650148	12/27/2011
KN-24	10/26/2011		NMC1063552	1/9/2012	650149	12/27/2011
KN-25	10/26/2011		NMC1063553	1/9/2012	650150	12/27/2011
KN-26	10/26/2011		NMC1063554	1/9/2012	650151	12/27/2011
KN-27	10/26/2011		NMC1063555	1/9/2012	650152	12/27/2011
KN-28	10/26/2011		NMC1063556	1/9/2012	650153	12/27/2011
KN-29	10/26/2011		NMC1063557	1/9/2012	650154	12/27/2011
KN-30	10/26/2011		NMC1063558	1/9/2012	650155	12/27/2011
KN-31	10/26/2011		NMC1063559	1/9/2012	650156	12/27/2011
KN-32	10/26/2011		NMC1063560	1/9/2012	650157	12/27/2011
KN-33	10/26/2011		NMC1063561	1/9/2012	650158	12/27/2011
KN-34	10/26/2011		NMC1063562	1/9/2012	650159	12/27/2011
KN-35	10/26/2011		NMC1063563	1/9/2012	650160	12/27/2011
KN-36	10/26/2011		NMC1063564	1/9/2012	650161	12/27/2011
KN-38	10/26/2011		NMC1063565	1/9/2012	650162	12/27/2011
KN-39	10/26/2011		NMC1063566	1/9/2012	650163	12/27/2011
KN-40	10/26/2011		NMC1063567	1/9/2012	650164	12/27/2011
KN-41	10/26/2011		NMC1063568	1/9/2012	650165	12/27/2011
KN-42	10/26/2011		NMC1063569	1/9/2012	650166	12/27/2011
KN-43	10/26/2011		NMC1063570	1/9/2012	650167	12/27/2011
KN-44	10/26/2011		NMC1063571	1/9/2012	650168	12/27/2011
KN-45	10/26/2011		NMC1063572	1/9/2012	650169	12/27/2011
KN-46	10/26/2011		NMC1063573	1/9/2012	650170	12/27/2011
KN-47	10/26/2011		NMC1063574	1/9/2012	650171	12/27/2011
KN-48	10/26/2011		NMC1063575	1/9/2012	650172	12/27/2011
KN-49	10/26/2011		NMC1063576	1/9/2012	650173	12/27/2011
KN-50	10/26/2011		NMC1063577	1/9/2012	650174	12/27/2011
KN-51	10/26/2011		NMC1063578	1/9/2012	650175	12/27/2011
KN-52	10/26/2011		NMC1063579	1/9/2012	650176	12/27/2011
KN-53	10/26/2011		NMC1063580	1/9/2012	650177	12/27/2011
KN-54	10/26/2011		NMC1063581	1/9/2012	650178	12/27/2011
KN-55	10/26/2011		NMC1063582	1/9/2012	650179	12/27/2011
KN-58	10/26/2011		NMC1063583	1/9/2012	650180	12/27/2011
KN-59	10/26/2011		NMC1063584	1/9/2012	650181	12/27/2011

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KN-60	10/26/2011		NMC1063585	1/9/2012	650182	12/27/2011
KN-61	10/26/2011		NMC1063586	1/9/2012	650183	12/27/2011
KN-62	10/26/2011		NMC1063587	1/9/2012	650184	12/27/2011
KN-63	10/26/2011		NMC1063588	1/9/2012	650185	12/27/2011
KN-64	10/26/2011		NMC1063589	1/9/2012	650186	12/27/2011
KN-65	10/26/2011		NMC1063590	1/9/2012	650187	12/27/2011
KN-66	10/26/2011		NMC1063591	1/9/2012	650188	12/27/2011
KN-67	10/26/2011		NMC1063592	1/9/2012	650189	12/27/2011
KN-68	10/27/2011		NMC1063593	1/9/2012	650190	12/27/2011
KN-69	10/27/2011		NMC1063594	1/9/2012	650191	12/27/2011
KN-70	10/27/2011		NMC1063595	1/9/2012	650192	12/27/2011
KN-71	10/27/2011		NMC1063596	1/9/2012	650193	12/27/2011
KN-72	10/27/2011		NMC1063597	1/9/2012	650194	12/27/2011
KN-73	10/27/2011		NMC1063598	1/9/2012	650195	12/27/2011
KN-74	10/27/2011		NMC1063599	1/9/2012	650196	12/27/2011
KN-75	10/27/2011		NMC1063600	1/9/2012	650197	12/27/2011
KN-78	10/27/2011		NMC1063601	1/9/2012	650198	12/27/2011
KN-79	10/27/2011		NMC1063602	1/9/2012	650199	12/27/2011
KN-80	10/27/2011		NMC1063603	1/9/2012	650200	12/27/2011
KN-81	10/27/2011		NMC1063604	1/9/2012	650201	12/27/2011
KN-82	10/27/2011		NMC1063605	1/9/2012	650202	12/27/2011
KN-83	10/27/2011		NMC1063606	1/9/2012	650203	12/27/2011
KN-84	10/27/2011		NMC1063607	1/9/2012	650204	12/27/2011
KN-85	10/27/2011		NMC1063608	1/9/2012	650205	12/27/2011
KN-86	10/27/2011		NMC1063609	1/9/2012	650206	12/27/2011
KN-87	10/27/2011		NMC1063610	1/9/2012	650207	12/27/2011
KN-88	10/27/2011		NMC1063611	1/9/2012	650208	12/27/2011
KN-89	10/27/2011		NMC1063612	1/9/2012	650209	12/27/2011
KN-90	10/27/2011		NMC1063613	1/9/2012	650210	12/27/2011
KN-91	10/27/2011		NMC1063614	1/9/2012	650211	12/27/2011
KN-92	10/27/2011		NMC1063615	1/9/2012	650212	12/27/2011
KN-93	10/27/2011		NMC1063616	1/9/2012	650213	12/27/2011
KN-94	10/27/2011		NMC1063617	1/9/2012	650214	12/27/2011
KN-95	10/27/2011		NMC1063618	1/9/2012	650215	12/27/2011
KN-96	10/27/2011		NMC1063619	1/9/2012	650216	12/27/2011
KN-97	10/27/2011		NMC1063620	1/9/2012	650217	12/27/2011
KN-98	10/27/2011		NMC1063621	1/9/2012	650218	12/27/2011
KN-99	10/27/2011		NMC1063622	1/9/2012	650219	12/27/2011
KN-100	10/27/2011		NMC1063623	1/9/2012	650220	12/27/2011
KN-101	10/27/2011		NMC1063624	1/9/2012	650221	12/27/2011
KN-102	10/27/2011		NMC1063625	1/9/2012	650222	12/27/2011

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KN-103	10/27/2011		NMC1063626	1/9/2012	650223	12/27/2011
KN-104	10/27/2011		NMC1063627	1/9/2012	650224	12/27/2011
KN-105	10/27/2011		NMC1063628	1/9/2012	650225	12/27/2011
KN-106	10/27/2011		NMC1063629	1/9/2012	650226	12/27/2011
KN-107	10/27/2011		NMC1063630	1/9/2012	650227	12/27/2011
KN-108	10/27/2011		NMC1063631	1/9/2012	650228	12/27/2011
KN-109	10/27/2011		NMC1063632	1/9/2012	650229	12/27/2011
KN-110	10/28/2011		NMC1063633	1/9/2012	650231	12/27/2011
KN-111	10/28/2011		NMC1063634	1/9/2012	650232	12/27/2011
KN-112	10/28/2011		NMC1063635	1/9/2012	650233	12/27/2011
KN-113	10/28/2011		NMC1063636	1/9/2012	650234	12/27/2011
KN-114	10/28/2011		NMC1063637	1/9/2012	650235	12/27/2011
KN-115	10/28/2011		NMC1063638	1/9/2012	650236	12/27/2011
KN-116	10/28/2011		NMC1063639	1/9/2012	650237	12/27/2011
KN-117	10/28/2011		NMC1063640	1/9/2012	650238	12/27/2011
KN-118	10/28/2011		NMC1063641	1/9/2012	650239	12/27/2011
KN-119	10/28/2011		NMC1063642	1/9/2012	650240	12/27/2011
KN-120	10/28/2011		NMC1063643	1/9/2012	650241	12/27/2011
KN-121	10/28/2011		NMC1063644	1/9/2012	650242	12/27/2011
KN-122	10/28/2011		NMC1063645	1/9/2012	650243	12/27/2011
KN-123	10/28/2011		NMC1063646	1/9/2012	650244	12/27/2011
KN-124	10/28/2011		NMC1063647	1/9/2012	650245	12/27/2011
KN-125	10/28/2011		NMC1063648	1/9/2012	650246	12/27/2011
KN-126	10/28/2011		NMC1063649	1/9/2012	650247	12/27/2011
KN-127	10/28/2011		NMC1063650	1/9/2012	650248	12/27/2011
KN-128	10/28/2011		NMC1063651	1/9/2012	650249	12/27/2011
KN-129	10/28/2011		NMC1063652	1/9/2012	650250	12/27/2011
KN-130	10/28/2011		NMC1063653	1/9/2012	650251	12/27/2011
KN-131	10/28/2011		NMC1063654	1/9/2012	650252	12/27/2011
KN-132	10/28/2011		NMC1063655	1/9/2012	650253	12/27/2011
KN-133	10/28/2011		NMC1063656	1/9/2012	650254	12/27/2011
KN-134	8/3/2012		NMC1077061	8/24/2012	660247	8/21/2012
KN-135	8/3/2012		NMC1077062	8/24/2012	660248	8/21/2012
KN-136	8/3/2012		NMC1077063	8/24/2012	660249	8/21/2012
KN-137	8/3/2012		NMC1077064	8/24/2012	660250	8/21/2012
KN-138	8/3/2012		NMC1077065	8/24/2012	660251	8/21/2012
KN-139	8/3/2012		NMC1077066	8/24/2012	660252	8/21/2012
KN-140	8/3/2012		NMC1077067	8/24/2012	660253	8/21/2012
KN-141	8/3/2012		NMC1077068	8/24/2012	660254	8/21/2012
KN-142	8/3/2012		NMC1077069	8/24/2012	660255	8/21/2012
KN-143	8/3/2012		NMC1077070	8/24/2012	660256	8/21/2012

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KN-144	8/3/2012		NMC1077071	8/24/2012	660257	8/21/2012
KN-145	8/3/2012		NMC1077072	8/24/2012	660258	8/21/2012
KN-146	8/3/2012		NMC1077073	8/24/2012	660259	8/21/2012
KN-147	8/3/2012		NMC1077074	8/24/2012	660260	8/21/2012
ACE 5356	9/1/2012		NMC1078733	10/5/2012	662148	10/4/2012
ACE 5456	9/1/2012		NMC1078734	10/5/2012	662149	10/4/2012
ACE 5457	9/1/2012		NMC1078735	10/5/2012	662150	10/4/2012
ACE 5458	9/1/2012		NMC1078736	10/5/2012	662151	10/4/2012
ACE 5459	9/1/2012		NMC1078737	10/5/2012	662152	10/4/2012
ACE 5859	9/1/2012		NMC1078738	10/5/2012	662153	10/4/2012
ACE 5860	9/1/2012		NMC1078739	10/5/2012	662154	10/4/2012
ACE 5861	9/1/2012		NMC1078740	10/5/2012	662155	10/4/2012
ACE 5862	9/1/2012		NMC1078741	10/5/2012	662156	10/4/2012
ACE 5863	9/1/2012		NMC1078742	10/5/2012	662157	10/4/2012
ACE 5959	9/1/2012		NMC1078743	10/5/2012	662158	10/4/2012
ACE 5960	9/1/2012		NMC1078744	10/5/2012	662159	10/4/2012
ACE 5961	9/1/2012		NMC1078745	10/5/2012	662160	10/4/2012
ACE 5962	9/1/2012		NMC1078746	10/5/2012	662161	10/4/2012
ACE 5963	9/1/2012		NMC1078747	10/5/2012	662162	10/4/2012
ACE 6059	9/1/2012		NMC1078748	10/5/2012	662163	10/4/2012
ACE 6060	9/1/2012		NMC1078749	10/5/2012	662164	10/4/2012
ACE 6061	9/1/2012		NMC1078750	10/5/2012	662165	10/4/2012
ACE 6062	9/1/2012		NMC1078751	10/5/2012	662166	10/4/2012
ACE 6063	9/1/2012		NMC1078752	10/5/2012	662167	10/4/2012
ACE 6064	9/1/2012		NMC1078753	10/5/2012	662168	10/4/2012
ACE 6065	9/1/2012		NMC1078754	10/5/2012	662169	10/4/2012
ACE 6159	9/1/2012		NMC1078755	10/5/2012	662170	10/4/2012
ACE 6160	9/1/2012		NMC1078756	10/5/2012	662171	10/4/2012
ACE 6161	9/1/2012		NMC1078757	10/5/2012	662172	10/4/2012
ACE 6162	9/1/2012		NMC1078758	10/5/2012	662173	10/4/2012
ACE 6163	9/1/2012		NMC1078759	10/5/2012	662174	10/4/2012
ACE 6164	9/1/2012		NMC1078760	10/5/2012	662175	10/4/2012
ACE 6165	9/1/2012		NMC1078761	10/5/2012	662176	10/4/2012
ACE 6256	9/1/2012		NMC1078762	10/5/2012	662177	10/4/2012
ACE 6257	9/1/2012		NMC1078763	10/5/2012	662178	10/4/2012
ACE 6258	9/1/2012		NMC1078764	10/5/2012	662179	10/4/2012
ACE 6259	9/1/2012		NMC1078765	10/5/2012	662180	10/4/2012
ACE 6260	9/1/2012		NMC1078766	10/5/2012	662181	10/4/2012
ACE 6261	9/1/2012		NMC1078767	10/5/2012	662182	10/4/2012
ACE 6262	9/1/2012		NMC1078768	10/5/2012	662183	10/4/2012
ACE 6263	9/1/2012		NMC1078769	10/5/2012	662184	10/4/2012
ACE 6264	9/1/2012		NMC1078770	10/5/2012	662185	10/4/2012
ACE 6265	9/1/2012		NMC1078771	10/5/2012	662186	10/4/2012

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ACE 6356	9/1/2012		NMC1078772	10/5/2012	662187	10/4/2012
ACE 6357	9/1/2012		NMC1078773	10/5/2012	662188	10/4/2012
ACE 6252	9/27/2012		NMC1083280	12/19/2012	665661	12/19/2012
ACE 6253	9/27/2012		NMC1083281	12/19/2012	665662	12/19/2012
ACE 6254	9/27/2012		NMC1083282	12/19/2012	665663	12/19/2012
ACE 6255	9/27/2012		NMC1083283	12/19/2012	665664	12/19/2012
ACE 6354	9/27/2012		NMC1083287	12/19/2012	665668	12/19/2012
ACE 6355	9/27/2012		NMC1083288	12/19/2012	665669	12/19/2012
ACE 6454	9/27/2012		NMC1083292	12/19/2012	665673	12/19/2012
ACE 6455	9/27/2012		NMC1083293	12/19/2012	665674	12/19/2012
ACE 6456	9/27/2012		NMC1083294	12/19/2012	665675	12/19/2012
ACE 6457	9/27/2012		NMC1083295	12/19/2012	665676	12/19/2012
ACE 6556	9/27/2012		NMC1083301	12/19/2012	665682	12/19/2012
ACE 6557	9/27/2012		NMC1083302	12/19/2012	665683	12/19/2012
ACE 6656	9/26/2012		NMC1083308	12/19/2012	665689	12/19/2012
ACE 6657	9/26/2012		NMC1083309	12/19/2012	665690	12/19/2012
ACE 6756	9/26/2012		NMC1083314	12/19/2012	665695	12/19/2012
ACE 6757	9/26/2012		NMC1083315	12/19/2012	665696	12/19/2012
ACE 6856	9/26/2012		NMC1083320	12/19/2012	665701	12/19/2012
ACE 6857	9/26/2012		NMC1083321	12/19/2012	665702	12/19/2012
ACE 6956	9/26/2012		NMC1083326	12/19/2012	665707	12/19/2012
ACE 6957	9/26/2012		NMC1083327	12/19/2012	665708	12/19/2012
ACE 7056	9/26/2012		NMC1083331	12/19/2012	665712	12/19/2012
ACE 7057	9/26/2012		NMC1083332	12/19/2012	665713	12/19/2012
KN-148	12/16/2013		NMC1099854	1/28/2014	683035	1/22/2014
KN-149	12/16/2013		NMC1099855	1/28/2014	683036	1/22/2014
KN-150	12/16/2013		NMC1099856	1/28/2014	683037	1/22/2014
KCE 5563	12/18/2013		NMC1099857	1/28/2014	683038	1/22/2014
KCE 5564	12/18/2013		NMC1099858	1/28/2014	683039	1/22/2014
KCE 5565	12/18/2013		NMC1099859	1/28/2014	683040	1/22/2014
KCE 5566	12/18/2013		NMC1099860	1/28/2014	683041	1/22/2014
KCE 5567	12/18/2013		NMC1099861	1/28/2014	683042	1/22/2014

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KCE 5568	12/18/2013		NMC1099862	1/28/2014	683043	1/22/2014
KCE 5663	12/18/2013		NMC1099863	1/28/2014	683044	1/22/2014
KCE 5664	12/18/2013		NMC1099864	1/28/2014	683045	1/22/2014
KCE 5665	12/18/2013		NMC1099865	1/28/2014	683046	1/22/2014
KCE 5666	12/18/2013		NMC1099866	1/28/2014	683047	1/22/2014
KCE 5667	12/18/2013		NMC1099867	1/28/2014	683048	1/22/2014
KCE 5668	12/18/2013		NMC1099868	1/28/2014	683049	1/22/2014
KCE 5766	12/18/2013		NMC1099869	1/28/2014	683050	1/22/2014
KCE 5767	12/18/2013		NMC1099870	1/28/2014	683051	1/22/2014
KCE 5866	12/19/2013		NMC1099871	1/28/2014	683052	1/22/2014
KCE 5867	12/19/2013		NMC1099872	1/28/2014	683053	1/22/2014
KCE 5868	12/19/2013		NMC1099873	1/28/2014	683054	1/22/2014
KCE 5966	12/19/2013		NMC1099874	1/28/2014	683055	1/22/2014
KCE 6751	12/20/2013		NMC1099875	1/28/2014	683056	1/22/2014
KCE 6848	12/20/2013		NMC1099876	1/28/2014	683057	1/22/2014
KCE 6849	12/20/2013		NMC1099877	1/28/2014	683058	1/22/2014
KCE 6850	12/20/2013		NMC1099878	1/28/2014	683059	1/22/2014
KCE 6851	12/20/2013		NMC1099879	1/28/2014	683060	1/22/2014
KCE 6946	12/20/2013		NMC1099880	1/28/2014	683061	1/22/2014
KCE 6947	12/20/2013		NMC1099881	1/28/2014	683062	1/22/2014
KCE 6948	12/20/2013		NMC1099882	1/28/2014	683063	1/22/2014
KCE 6949	12/20/2013		NMC1099883	1/28/2014	683064	1/22/2014
KCE 6950	12/20/2013		NMC1099884	1/28/2014	683065	1/22/2014
KCE 6951	12/20/2013		NMC1099885	1/28/2014	683066	1/22/2014
KCE 5443	1/23/2014		NMC1100330	2/21/2014	683693	2/19/2014
KCE 5444	1/23/2014		NMC1100331	2/21/2014	683694	2/19/2014
KCE 5445	1/23/2014		NMC1100332	2/21/2014	683695	2/19/2014
KCE 6351	12/19/2013		NMC1100503	3/7/2014	684057	3/5/2014
KCE 6352	12/19/2013		NMC1100504	3/7/2014	684058	3/5/2014
KCE 6353	12/19/2013		NMC1100505	3/7/2014	684059	3/5/2014
KCE 6451	12/19/2013		NMC1100506	3/7/2014	684060	3/5/2014
KCE 6452	12/19/2013		NMC1100507	3/7/2014	684061	3/5/2014
KCE 6453	12/19/2013		NMC1100508	3/7/2014	684062	3/5/2014
KCE 6551	12/19/2013		NMC1100509	3/7/2014	684063	3/5/2014
KCE 6552	12/19/2013		NMC1100510	3/7/2014	684064	3/5/2014
KCE 6553	12/19/2013		NMC1100511	3/7/2014	684065	3/5/2014
KCE 6554	12/19/2013		NMC1100512	3/7/2014	684066	3/5/2014
KCE 6555	12/19/2013		NMC1100513	3/7/2014	684067	3/5/2014
KCE 6651	12/20/2013		NMC1100514	3/7/2014	684068	3/5/2014

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KCE 6652	12/20/2013		NMC1100515	3/7/2014	684069	3/5/2014
KCE 6653	12/20/2013		NMC1100516	3/7/2014	684070	3/5/2014
KCE 6654	12/20/2013		NMC1100517	3/7/2014	684071	3/5/2014
KCE 6655	12/20/2013		NMC1100518	3/7/2014	684072	3/5/2014
KCE 6752	12/20/2013		NMC1100519	3/7/2014	684073	3/5/2014
KCE 6753	12/20/2013		NMC1100520	3/7/2014	684074	3/5/2014
KCE 6754	12/20/2013		NMC1100521	3/7/2014	684075	3/5/2014
KCE 6755	12/20/2013		NMC1100522	3/7/2014	684076	3/5/2014
KCE 6852	12/20/2013		NMC1100523	3/7/2014	684077	3/5/2014
KCE 6853	12/20/2013		NMC1100524	3/7/2014	684078	3/5/2014
KCE 6854	12/20/2013		NMC1100525	3/7/2014	684079	3/5/2014
KCE 6855	12/20/2013		NMC1100526	3/7/2014	684080	3/5/2014
KCE 6952	12/20/2013		NMC1100527	3/7/2014	684081	3/5/2014
KCE 6953	12/20/2013		NMC1100528	3/7/2014	684082	3/5/2014
KCE 6954	12/20/2013		NMC1100529	3/7/2014	684083	3/5/2014
KCE 6955	12/20/2013		NMC1100530	3/7/2014	684084	3/5/2014
KCE 7053	12/20/2013		NMC1100531	3/7/2014	684085	3/5/2014
KCE 7054	12/20/2013		NMC1100532	3/7/2014	684086	3/5/2014
KCE 7055	12/20/2013		NMC1100533	3/7/2014	684087	3/5/2014
KCE 5439	3/13/2014		NMC1101664	4/22/2014	685259	4/16/2014
KCE 5440	3/13/2014		NMC1101665	4/22/2014	685260	4/16/2014
KCE 5441	3/13/2014		NMC1101666	4/22/2014	685261	4/16/2014
KCE 5442	3/13/2014		NMC1101667	4/22/2014	685262	4/16/2014
KCE 5539	3/13/2014		NMC1101668	4/22/2014	685263	4/16/2014
KCE 5540	3/13/2014		NMC1101669	4/22/2014	685264	4/16/2014
KCE 5541	3/13/2014		NMC1101670	4/22/2014	685265	4/16/2014
KCE 5542	3/13/2014		NMC1101671	4/22/2014	685266	4/16/2014
KCE 6040	3/13/2014		NMC1101672	4/22/2014	685267	4/16/2014
KCE 6041	3/13/2014		NMC1101673	4/22/2014	685268	4/16/2014
KCE 6042	3/13/2014		NMC1101674	4/22/2014	685269	4/16/2014
KCE 6140	3/13/2014		NMC1101675	4/22/2014	685270	4/16/2014
KCE 6141	3/13/2014		NMC1101676	4/22/2014	685271	4/16/2014
KCE 6142	3/13/2014		NMC1101677	4/22/2014	685272	4/16/2014
KS 1	8/14/2014		NMC1103902	8/29/2014	689664	8/26/2014
KS 2	8/14/2014		NMC1103903	8/29/2014	689665	8/26/2014
KS 3	8/14/2014		NMC1103904	8/29/2014	689666	8/26/2014
KS 4	8/14/2014		NMC1103905	8/29/2014	689667	8/26/2014
KS 5	8/14/2014		NMC1103906	8/29/2014	689668	8/26/2014
KS 21	8/13/2014		NMC1103922	8/29/2014	689671	8/26/2014

<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KS 22	8/13/2014		NMC1103923	8/29/2014	689672	8/26/2014
KS 23	8/13/2014		NMC1103924	8/29/2014	689673	8/26/2014
KS 24	8/13/2014		NMC1103925	8/29/2014	689674	8/26/2014
KS 25	8/13/2014		NMC1103926	8/29/2014	689675	8/26/2014
KS 26	8/13/2014		NMC1103927	8/29/2014	689676	8/26/2014
KS 27	8/13/2014		NMC1103928	8/29/2014	689677	8/26/2014
KS 28	8/13/2014		NMC1103929	8/29/2014	689678	8/26/2014
KS 29	8/13/2014		NMC1103930	8/29/2014	689679	8/26/2014
KS 30	8/13/2014		NMC1103931	8/29/2014	689680	8/26/2014
KS 31	8/13/2014		NMC1103932	8/29/2014	689681	8/26/2014
KS 32	8/13/2014		NMC1103933	8/29/2014	689682	8/26/2014
KS 33	8/13/2014		NMC1103934	8/29/2014	689683	8/26/2014
KS 34	8/13/2014		NMC1103935	8/29/2014	689684	8/26/2014
KS 35	8/13/2014		NMC1103936	8/29/2014	689685	8/26/2014
KS 36	8/13/2014		NMC1103937	8/29/2014	689686	8/26/2014
KS 37	8/13/2014		NMC1103938	8/29/2014	689687	8/26/2014
KS 38	8/13/2014		NMC1103939	8/29/2014	689688	8/26/2014
KCE 4958	9/1/2015		NMC1112687	10/22/2015	703825	10/20/2015
KCE 4959	9/1/2015		NMC1112688	10/22/2015	703826	10/20/2015
KCE 4960	9/1/2015		NMC1112689	10/22/2015	703827	10/20/2015
KCE 4961	9/1/2015		NMC1112690	10/22/2015	703828	10/20/2015
KCE 4962	9/1/2015		NMC1112691	10/22/2015	703829	10/20/2015
KCE 5058	9/1/2015		NMC1112692	10/22/2015	703830	10/20/2015
KCE 5059	9/1/2015		NMC1112693	10/22/2015	703831	10/20/2015
KCE 5060	9/1/2015		NMC1112694	10/22/2015	703832	10/20/2015
KCE 5061	9/1/2015		NMC1112695	10/22/2015	703833	10/20/2015
KCE 5062	9/1/2015		NMC1112696	10/22/2015	703834	10/20/2015
KCE 5158	9/1/2015		NMC1112697	10/22/2015	703835	10/20/2015
KCE 5159	9/1/2015		NMC1112698	10/22/2015	703836	10/20/2015
KCE 5160	9/1/2015		NMC1112699	10/22/2015	703837	10/20/2015
KCE 5161	9/1/2015		NMC1112700	10/22/2015	703838	10/20/2015
KCE 5162	9/1/2015		NMC1112701	10/22/2015	703839	10/20/2015
KCE 5163	9/1/2015		NMC1112702	10/22/2015	703840	10/20/2015
KCE 5164	9/1/2015		NMC1112703	10/22/2015	703841	10/20/2015
KCE 5165	9/1/2015		NMC1112704	10/22/2015	703842	10/20/2015
KCE 5166	9/1/2015		NMC1112705	10/22/2015	703843	10/20/2015
KCE 5167	9/1/2015		NMC1112706	10/22/2015	703844	10/20/2015
KCE 5168	9/1/2015		NMC1112707	10/22/2015	703845	10/20/2015
KCE 5258	9/1/2015		NMC1112708	10/22/2015	703846	10/20/2015



<b>Claim Name</b>	<b>Location Date</b>	<b>Amendment Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>Elko County Document Number</b>	<b>County Recording Date</b>
KCE 5259	9/1/2015		NMC1112709	10/22/2015	703847	10/20/2015
KCE 5260	9/1/2015		NMC1112710	10/22/2015	703848	10/20/2015
KCE 5261	9/1/2015		NMC1112711	10/22/2015	703849	10/20/2015
KCE 5262	9/1/2015		NMC1112712	10/22/2015	703850	10/20/2015
KCE 5263	9/1/2015		NMC1112713	10/22/2015	703851	10/20/2015
KCE 5264	9/1/2015		NMC1112714	10/22/2015	703852	10/20/2015
KCE 5265	9/1/2015		NMC1112715	10/22/2015	703853	10/20/2015
KCE 5266	9/1/2015		NMC1112716	10/22/2015	703854	10/20/2015
KCE 5267	9/1/2015		NMC1112717	10/22/2015	703855	10/20/2015
KCE 5268	9/1/2015		NMC1112718	10/22/2015	703856	10/20/2015
KCE 5366	9/1/2015		NMC1112719	10/22/2015	703857	10/20/2015
KCE 5367	9/1/2015		NMC1112720	10/22/2015	703858	10/20/2015
KCE 5368	9/1/2015		NMC1112721	10/22/2015	703859	10/20/2015
KCE 5466	9/1/2015		NMC1112722	10/22/2015	703860	10/20/2015
KCE 5467	9/1/2015		NMC1112723	10/22/2015	703861	10/20/2015
KCE 5468	9/1/2015		NMC1112724	10/22/2015	703862	10/20/2015

**KS Claims in White Pine County, Nevada**  
Owned by Kinsley Gold LLC

Township 26 North, Range 67 East, Sections 13, 14, 23 and 24  
Township 26 North, Range 68 East, Sections 18-20  
Mt. Diablo Base Line & Meridian

**Total Claims: 23**

<b>Claim Name</b>	<b>Location Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>White Pine County Document Number</b>	<b>County Recording Date</b>
KS 8	8/14/2014	NMC1103909	8/29/2014	367034	8/27/2014
KS 9	8/14/2014	NMC1103910	8/29/2014	367035	8/27/2014
KS 10	8/14/2014	NMC1103911	8/29/2014	367036	8/27/2014
KS 11	8/14/2014	NMC1103912	8/29/2014	367037	8/27/2014
KS 12	8/14/2014	NMC1103913	8/29/2014	367038	8/27/2014
KS 13	8/14/2014	NMC1103914	8/29/2014	367039	8/27/2014
KS 14	8/14/2014	NMC1103915	8/29/2014	367040	8/27/2014
KS 15	8/14/2014	NMC1103916	8/29/2014	367041	8/27/2014
KS 16	8/14/2014	NMC1103917	8/29/2014	367042	8/27/2014
KS 17	8/14/2014	NMC1103918	8/29/2014	367043	8/27/2014
KS 18	8/14/2014	NMC1103919	8/29/2014	367044	8/27/2014
KS 19	8/14/2014	NMC1103920	8/29/2014	367045	8/27/2014
KS 20	8/14/2014	NMC1103921	8/29/2014	367046	8/27/2014
KS 56	9/10/2014	NMC1105563	11/10/2014	367466	10/24/2014
KS 58	9/10/2014	NMC1105564	11/10/2014	367467	10/24/2014
KS 60	9/10/2014	NMC1105565	11/10/2014	367468	10/24/2014
KS 64	9/10/2014	NMC1105566	11/10/2014	367469	10/24/2014
KS 65	9/10/2014	NMC1105567	11/10/2014	367470	10/24/2014
KS 66	9/10/2014	NMC1105568	11/10/2014	367461	10/24/2014

The following claims are located in both Elko and White Pine Counties:

<b>Claim Name</b>	<b>Location Date</b>	<b>BLM Serial Number</b>	<b>BLM Recording Date</b>	<b>County Document Number</b>	<b>County Recording Date</b>
KS 6	8/14/2014	NMC1103907	8/29/2014	Elko- 689669 WP- 367032	8/26/2014 8/27/2014
KS 7	8/14/2014	NMC1103908	8/29/2014	Elko- 689670 WP- 367033	8/26/2014 8/27/2014
KS 39	8/13/2014	NMC1103940	8/29/2014	Elko- 689689 WP- 367047	8/26/2014 8/27/2014
KS 40	8/13/2014	NMC1103941	8/29/2014	Elko- 689690 WP- 367048	8/26/2014 8/27/2014

## PATENTED CLAIMS

Patented mining claims subject to LEASE AGREEMENT (Patented Mining Claims) effective as of the 2nd day of May, 2014 (the “Effective Date”), by and between MARVIL INVESTMENTS, LLC, a Utah limited liability company, whose address is 3183 E. Old Ridge Circle, Cottonwood Heights, Utah 84121-4422 (the “Lessor” herein), and KINSLEY GOLD, LLC, a Delaware corporation, whose address is 1031 Railroad St., Suite 110, Elko, NV 89801 (the “Lessee” herein),

The following patented lode mining claims, as described by their United States mineral survey number, are situated in the Kinsley Mountains Mining District, Elko County, Nevada, and in the section, township and range of the Mt. Diablo Meridian of Public land Survey System specified below.

<b>Claim Name</b>	<b>USMS Number</b>	<b>Patent Number</b>
Emigrant No. 2	1719	27357
Eva May	1722	27375
Mountain View	1722	27375
Antelope	1722	27375
Climax	1923	36090

Mineral Survey No. 1719 is situated in portions of Section 13, Township 26 North, Range 67 East; and portions of Section 18, Township 26 North, Range 68 East, Mt. Diablo Meridian.

Mineral Survey No. 1722 is situated in portions of Sections 7 and 18, Township 26 North, Range 28 East, Mt. Diablo Meridian.

Mineral Survey No. 1923 is situated in portions of Section 13, Township 26 North, Range 67 East; and portions of Section 18, Township 26 North, Range 68 East, Mt. Diablo Meridian.

**APPENDIX B: HISTORICAL UNMINED GOLD INTERCEPTS**

(Compiled and provided by Pilot Gold)

Significant gold intercepts from all historical programs that fall outside of mined open pits. Intervals were calculated using a cut-off of 0.009 oz Au/ton (0.309 g Au/t), and a maximum of four metres of internal waste. Gold endowment is represented by gold in g/t multiplied by the interval in metres, as shown in the last column of the table.

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
A-1074	42.7	53.3	10.7	0.245	8.41	89.67
K-139	94.5	118.9	24.4	0.090	3.09	75.31
A-1075	38.1	57.9	19.8	0.110	3.78	74.84
A-912	51.8	61.0	9.1	0.232	7.96	72.76
A-1130	105.2	117.3	12.2	0.149	5.10	62.21
A-1053	39.6	50.3	10.7	0.154	5.26	56.16
K-196A	88.4	105.2	16.8	0.089	3.05	51.15
A-915	42.7	61.0	18.3	0.077	2.62	47.91
K-308	134.1	149.4	15.2	0.079	2.70	41.18
A-603	70.1	83.8	13.7	0.088	3.00	41.13
K-078	65.5	79.2	13.7	0.084	2.87	39.30
K-383	67.1	86.9	19.8	0.049	1.68	33.19
A-1132	86.9	103.6	16.8	0.054	1.86	31.21
A-955	48.8	67.1	18.3	0.048	1.64	30.06
K-118	39.6	61.0	21.3	0.035	1.19	25.31
K-312	153.9	164.6	10.7	0.068	2.32	24.79
A-635	80.8	96.0	15.2	0.047	1.62	24.63
A-1061	21.3	25.9	4.6	0.152	5.21	23.80
A-909	50.3	59.4	9.1	0.076	2.59	23.70
K-384	64.0	85.3	21.3	0.032	1.09	23.23
A-562	96.0	112.8	16.8	0.040	1.38	23.07
A-609	29.0	35.1	6.1	0.107	3.66	22.34
K-322	35.1	42.7	7.6	0.086	2.93	22.34
A-604	57.9	70.1	12.2	0.053	1.81	22.02
A-1077	102.1	114.3	12.2	0.052	1.78	21.71
K-077	77.7	96.0	18.3	0.034	1.18	21.50
K-055	74.7	83.8	9.1	0.068	2.35	21.45
A-1131	112.8	121.9	9.1	0.068	2.34	21.40
A-917	53.3	65.5	12.2	0.051	1.74	21.19
A-947	89.9	105.2	15.2	0.040	1.36	20.77
A-807	15.2	35.1	19.8	0.030	1.04	20.67
A-932	30.5	42.7	12.2	0.048	1.65	20.15
A-978	86.9	99.1	12.2	0.046	1.56	19.00
H-469	51.8	62.5	10.7	0.052	1.78	18.95
A-957	62.5	83.8	21.3	0.026	0.89	18.89
A-945	91.4	103.6	12.2	0.045	1.52	18.58
K-101	89.9	97.5	7.6	0.071	2.42	18.48
A-630	80.8	94.5	13.7	0.039	1.35	18.48

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
A-595	25.9	39.6	13.7	0.037	1.28	17.54
A-718	32.0	45.7	13.7	0.037	1.26	17.33
K-365	118.9	128.0	9.1	0.055	1.87	17.07
A-1121	96.0	108.2	12.2	0.041	1.40	17.01
A-869	9.1	22.9	13.7	0.036	1.24	17.01
A-936	39.6	45.7	6.1	0.081	2.79	17.01
A-1079	35.1	50.3	15.2	0.032	1.10	16.81
K-094	65.5	80.8	15.2	0.032	1.10	16.75
A-514	30.5	41.1	10.7	0.046	1.57	16.75
H-439	41.1	44.2	3.0	0.161	5.50	16.75
K-027	15.2	18.3	3.0	0.160	5.46	16.65
K-368	82.3	88.4	6.1	0.079	2.71	16.49
A-1016	41.1	51.8	10.7	0.045	1.54	16.39
A-1085	0.0	13.7	13.7	0.035	1.19	16.39
A-1086	9.1	19.8	10.7	0.044	1.51	16.08
A-907	38.1	45.7	7.6	0.062	2.11	16.08
H-453	10.7	29.0	18.3	0.026	0.88	16.02
K-037	27.4	36.6	9.1	0.050	1.70	15.55
K-380	62.5	76.2	13.7	0.032	1.10	15.08
A-1120	18.3	25.9	7.6	0.057	1.96	14.93
A-954	65.5	77.7	12.2	0.035	1.21	14.72
H-436	32.0	41.1	9.1	0.046	1.59	14.51
K-349	39.6	51.8	12.2	0.035	1.19	14.51
K-189	114.3	121.9	7.6	0.055	1.90	14.46
A-628	10.7	16.8	6.1	0.069	2.36	14.40
H-438	33.5	54.9	21.3	0.019	0.65	13.88
A-1040	32.0	36.6	4.6	0.088	3.01	13.78
K-129A	65.5	85.3	19.8	0.020	0.70	13.78
A-1153	44.2	50.3	6.1	0.065	2.23	13.57
H-435	24.4	30.5	6.1	0.065	2.23	13.57
H-437	68.6	71.6	3.0	0.129	4.40	13.41
A-924	91.4	115.8	24.4	0.016	0.55	13.36
K-090	103.6	117.3	13.7	0.027	0.93	12.73
A-618	71.6	77.7	6.1	0.061	2.07	12.63
K-137	106.7	114.3	7.6	0.047	1.60	12.21
A-930	36.6	45.7	9.1	0.038	1.31	12.00
K-129	62.5	68.6	6.1	0.057	1.96	11.95
A-1055	41.1	44.2	3.0	0.111	3.80	11.59
A-948	94.5	105.2	10.7	0.031	1.08	11.48
H-461	50.3	57.9	7.6	0.044	1.49	11.38
A-946	59.4	67.1	7.6	0.044	1.49	11.38
K-158	73.2	89.9	16.8	0.019	0.67	11.17
A-953	62.5	74.7	12.2	0.027	0.92	11.17

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
K-056	57.9	64.0	6.1	0.053	1.82	11.12
A-551	44.2	56.4	12.2	0.026	0.90	10.96
K-004	61.0	74.7	13.7	0.023	0.79	10.86
A-617	38.1	44.2	6.1	0.052	1.78	10.86
A-686	19.8	24.4	4.6	0.069	2.37	10.86
A-1142	111.3	117.3	6.1	0.051	1.75	10.65
K-362	61.0	64.0	3.0	0.101	3.46	10.54
A-862	4.6	15.2	10.7	0.029	0.98	10.44
K-122	74.7	82.3	7.6	0.039	1.34	10.23
A-605	62.5	68.6	6.1	0.049	1.68	10.23
K-018	62.5	67.1	4.6	0.065	2.24	10.23
A-912	35.1	41.1	6.1	0.049	1.66	10.13
H-497	82.3	89.9	7.6	0.039	1.33	10.13
H-456	10.7	24.4	13.7	0.021	0.73	10.07
K-303	158.5	166.1	7.6	0.038	1.30	9.92
A-753	12.2	19.8	7.6	0.038	1.29	9.81
A-602	12.2	19.8	7.6	0.038	1.29	9.81
K-040	105.2	112.8	7.6	0.038	1.29	9.81
K-073	105.2	114.3	9.1	0.031	1.06	9.66
H-458	18.3	24.4	6.1	0.046	1.58	9.60
A-593	3.0	10.7	7.6	0.036	1.25	9.50
A-1126	39.6	48.8	9.1	0.030	1.04	9.50
K-055	103.6	112.8	9.1	0.029	1.00	9.19
A-696	71.6	79.2	7.6	0.035	1.19	9.08
K-008	18.3	29.0	10.7	0.025	0.84	8.98
A-719	30.5	42.7	12.2	0.021	0.73	8.87
A-806	29.0	33.5	4.6	0.057	1.94	8.87
A-809	29.0	39.6	10.7	0.024	0.82	8.77
K-261	47.2	51.8	4.6	0.055	1.89	8.66
A-710	54.9	65.5	10.7	0.024	0.81	8.66
H-457	56.4	65.5	9.1	0.028	0.95	8.66
H-469	71.6	79.2	7.6	0.033	1.12	8.56
K-319	21.3	32.0	10.7	0.023	0.80	8.56
A-940	22.9	27.4	4.6	0.054	1.85	8.46
A-592	0.0	15.2	15.2	0.016	0.55	8.46
A-804	4.6	13.7	9.1	0.026	0.90	8.25
A-631	24.4	35.1	10.7	0.023	0.77	8.25
A-958	57.9	67.1	9.1	0.026	0.89	8.14
A-974	10.7	18.3	7.6	0.031	1.07	8.14
A-1105	10.7	19.8	9.1	0.026	0.88	8.04
A-808	16.8	29.0	12.2	0.019	0.65	7.93
K-091	50.3	56.4	6.1	0.038	1.30	7.93
A-606	47.2	53.3	6.1	0.038	1.28	7.83

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
K-424	77.7	79.2	1.5	0.146	5.00	7.62
A-779	29.0	39.6	10.7	0.021	0.71	7.62
A-623	25.9	29.0	3.0	0.073	2.50	7.62
K-137	89.9	102.1	12.2	0.018	0.62	7.52
A-875	42.7	47.2	4.6	0.048	1.64	7.52
H-454	68.6	76.2	7.6	0.028	0.97	7.41
A-963	24.4	27.4	3.0	0.071	2.43	7.41
A-685	45.7	48.8	3.0	0.070	2.40	7.31
K-346	16.8	21.3	4.6	0.046	1.59	7.25
K-425	295.7	300.2	4.6	0.046	1.58	7.20
A-966	1.5	13.7	12.2	0.017	0.58	7.10
A-996	18.3	25.9	7.6	0.027	0.93	7.10
A-1057	45.7	50.3	4.6	0.045	1.53	6.99
A-819	22.9	33.5	10.7	0.019	0.64	6.84
K-315	91.4	99.1	7.6	0.026	0.89	6.78
A-845	4.6	15.2	10.7	0.019	0.64	6.78
A-838	16.8	24.4	7.6	0.026	0.88	6.68
K-081	91.4	100.6	9.1	0.021	0.72	6.58
A-754	1.5	13.7	12.2	0.016	0.54	6.58
K-374	62.5	74.7	12.2	0.016	0.53	6.47
A-1056	44.2	48.8	4.6	0.041	1.39	6.37
A-559	96.0	103.6	7.6	0.024	0.84	6.37
A-627	61.0	67.1	6.1	0.031	1.04	6.37
A-597	29.0	33.5	4.6	0.041	1.39	6.37
K-399	86.9	91.4	4.6	0.040	1.38	6.32
H-436	47.2	50.3	3.0	0.061	2.07	6.32
K-115	33.5	38.1	4.6	0.040	1.38	6.32
K-049	80.8	86.9	6.1	0.030	1.04	6.32
A-1118	42.7	56.4	13.7	0.013	0.46	6.26
K-145	76.2	82.3	6.1	0.030	1.01	6.16
K-198	79.2	85.3	6.1	0.030	1.01	6.16
A-952	50.3	56.4	6.1	0.030	1.01	6.16
K-145	57.9	62.5	4.6	0.039	1.34	6.11
A-605	47.2	53.3	6.1	0.029	0.99	6.05
A-951	47.2	53.3	6.1	0.029	0.99	6.05
A-865	9.1	15.2	6.1	0.029	0.99	6.05
A-625	47.2	54.9	7.6	0.023	0.79	6.05
A-1039	35.1	38.1	3.0	0.057	1.95	5.95
K-143	6.1	9.1	3.0	0.057	1.93	5.90
H-470	59.4	65.5	6.1	0.028	0.97	5.90
K-177	42.7	48.8	6.1	0.028	0.96	5.85
A-1017	12.2	15.2	3.0	0.056	1.92	5.85
K-346	42.7	48.8	6.1	0.028	0.94	5.74



Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
A-1082	41.1	50.3	9.1	0.018	0.63	5.74
K-198	50.3	54.9	4.6	0.037	1.26	5.74
K-074	44.2	47.2	3.0	0.055	1.87	5.69
A-708	36.6	39.6	3.0	0.054	1.85	5.64
A-562	6.1	15.2	9.1	0.018	0.62	5.64
A-758	0.0	3.0	3.0	0.054	1.85	5.64
K-348	19.8	22.9	3.0	0.053	1.82	5.53
K-037	51.8	54.9	3.0	0.053	1.82	5.53
K-400	86.9	89.9	3.0	0.053	1.80	5.48
A-866	7.6	19.8	12.2	0.013	0.45	5.43
A-813	0.0	4.6	4.6	0.035	1.19	5.43
A-1003	105.2	111.3	6.1	0.026	0.89	5.43
K-010	7.6	13.7	6.1	0.026	0.88	5.38
A-578	32.0	39.6	7.6	0.020	0.70	5.32
A-1141	99.1	103.6	4.6	0.033	1.14	5.22
K-014	42.7	48.8	6.1	0.025	0.86	5.22
K-401B	22.9	24.4	1.5	0.100	3.42	5.22
A-633	30.5	36.6	6.1	0.025	0.86	5.22
A-1090	24.4	36.6	12.2	0.013	0.43	5.22
K-320	15.2	25.9	10.7	0.014	0.48	5.17
K-241	50.3	61.0	10.7	0.014	0.48	5.17
A-917	70.1	77.7	7.6	0.020	0.67	5.11
A-926	57.9	61.0	3.0	0.049	1.68	5.11
A-928	77.7	85.3	7.6	0.020	0.67	5.11
K-015	120.4	126.5	6.1	0.024	0.83	5.06
A-926	77.7	82.3	4.6	0.032	1.10	5.01
K-028	54.9	57.9	3.0	0.048	1.64	5.01
A-863	7.6	16.8	9.1	0.016	0.55	5.01
A-515	38.1	47.2	9.1	0.016	0.55	5.01
H-487	39.6	44.2	4.6	0.032	1.10	5.01
H-488	117.3	121.9	4.6	0.032	1.08	4.96
A-546	7.6	15.2	7.6	0.019	0.65	4.96
K-341	61.0	64.0	3.0	0.048	1.63	4.96
A-572	0.0	6.1	6.1	0.024	0.80	4.91
A-740	61.0	64.0	3.0	0.047	1.61	4.91
H-476	35.1	44.2	9.1	0.016	0.53	4.85
A-1037	132.6	138.7	6.1	0.023	0.79	4.80
K-142	103.6	106.7	3.0	0.046	1.58	4.80
K-317	102.1	106.7	4.6	0.031	1.05	4.80
A-534	0.0	6.1	6.1	0.023	0.79	4.80
A-590	0.0	7.6	7.6	0.018	0.63	4.80
A-908	18.3	22.9	4.6	0.031	1.05	4.80
K-124	41.1	47.2	6.1	0.023	0.79	4.80

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
K-362	41.1	44.2	3.0	0.046	1.58	4.80
A-558	10.7	13.7	3.0	0.045	1.54	4.70
K-205	15.2	18.3	3.0	0.045	1.52	4.65
A-560	71.6	76.2	4.6	0.029	1.00	4.59
A-616	36.6	39.6	3.0	0.044	1.51	4.59
A-946	100.6	103.6	3.0	0.044	1.51	4.59
A-867	15.2	22.9	7.6	0.018	0.60	4.59
A-528	36.6	41.1	4.6	0.029	0.99	4.54
A-1002	16.8	19.8	3.0	0.043	1.47	4.49
H-481	21.3	27.4	6.1	0.022	0.74	4.49
H-492	0.0	6.1	6.1	0.022	0.74	4.49
A-947	54.9	61.0	6.1	0.021	0.72	4.38
K-394	86.9	89.9	3.0	0.042	1.44	4.38
A-705	35.1	39.6	4.6	0.027	0.94	4.28
A-1082	16.8	24.4	7.6	0.016	0.56	4.28
A-579	0.0	6.1	6.1	0.021	0.70	4.28
A-980	39.6	41.1	1.5	0.080	2.74	4.18
K-046	67.1	70.1	3.0	0.040	1.37	4.18
A-1031	41.1	45.7	4.6	0.027	0.91	4.18
A-552	80.8	83.8	3.0	0.040	1.37	4.18
A-1066	6.1	9.1	3.0	0.039	1.34	4.07
A-837	0.0	6.1	6.1	0.020	0.67	4.07
A-561	79.2	83.8	4.6	0.026	0.89	4.07
A-1028	19.8	22.9	3.0	0.039	1.34	4.07
K-029	18.3	21.3	3.0	0.039	1.32	4.02
A-584	32.0	35.1	3.0	0.038	1.30	3.97
A-559	54.9	59.4	4.6	0.025	0.87	3.97
A-561	99.1	105.2	6.1	0.019	0.65	3.97
K-100	102.1	106.7	4.6	0.025	0.87	3.97
A-541	30.5	38.1	7.6	0.015	0.52	3.97
A-938	24.4	27.4	3.0	0.038	1.30	3.97
K-416	18.3	27.4	9.1	0.013	0.43	3.91
A-694	65.5	73.2	7.6	0.015	0.51	3.86
A-717	12.2	15.2	3.0	0.037	1.27	3.86
K-366	41.1	47.2	6.1	0.019	0.63	3.86
A-655	35.1	36.6	1.5	0.072	2.47	3.76
A-903	76.2	82.3	6.1	0.018	0.62	3.76
A-1098	21.3	27.4	6.1	0.018	0.62	3.76
H-470	71.6	74.7	3.0	0.036	1.22	3.71
K-035	59.4	61.0	1.5	0.071	2.43	3.71
A-1073	97.5	100.6	3.0	0.035	1.20	3.65
A-931	85.3	88.4	3.0	0.035	1.20	3.65
K-385	68.6	71.6	3.0	0.035	1.20	3.65

Hole-ID	From (m)	To (m)	Interval (m)	oz Au/ton	g Au/t	g/t x m
A-736	22.9	29.0	6.1	0.018	0.60	3.65
A-887	0.0	6.1	6.1	0.018	0.60	3.65
A-947	3.0	7.6	4.6	0.023	0.80	3.65
A-918	59.4	67.1	7.6	0.014	0.48	3.65
H-486	45.7	51.8	6.1	0.017	0.58	3.55
A-906	16.8	21.3	4.6	0.023	0.78	3.55
K-038	0.0	4.6	4.6	0.023	0.78	3.55
K-123	62.5	70.1	7.6	0.014	0.47	3.55
K-379	85.3	93.0	7.6	0.013	0.46	3.50
H-452	1.5	6.1	4.6	0.022	0.76	3.50
K-238	9.1	13.7	4.6	0.022	0.76	3.50
A-597	42.7	45.7	3.0	0.033	1.13	3.44
A-582	18.3	22.9	4.6	0.022	0.75	3.44
A-741	39.6	42.7	3.0	0.033	1.13	3.44

**APPENDIX C: PILOT GOLD DRILL HOLES AND SIGNIFICANT RESULTS BY  
YEAR**

(Compiled and provided by Pilot Gold)

**Collar locations, Pilot Gold drill holes, 2011 - 2014**

Hole #	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Azimuth	Dip	Year
PK001C	726658.4	4447888.9	2049.8	215.5	0	-90	2011
PK002C	726395.4	4448057.0	2148.9	145.2	90	-68	2011
PK003C	726573.8	4448161.0	2079.2	282.6	0	-90	2011
PK004C	726834.4	4447674.8	2008.6	171.3	0	-90	2011
PK005C	726854.7	4447708.9	2012.3	279.5	0	-90	2011
PK006C	726794.4	4447740.0	2028.7	172.8	0	-90	2011
PK007	726320.3	4448274.0	2139.2	301.8	0	-90	2012
PK008C	726574.0	4448157.0	2079.0	54.9	180	-70	2012
PK009C	726569.3	4448165.8	2079.2	131.1	180	-60	2012
PK010C	726517.4	4448159.3	2082.9	117.7	0	-90	2012
PK011	726320.1	4448272.1	2139.5	301.8	180	-55	2012
PK012C	726516.6	4448159.3	2082.9	270.8	270	-70	2012
PK013	726388.0	4448404.8	2123.1	131.1	0	-90	2012
PK014C	726515.5	4448159.2	2083.0	126.5	270	-50	2012
PK015	726475.7	4448371.7	2116.0	225.6	0	-90	2012
PK016C	726491.8	4448208.8	2085.0	137.2	0	-90	2012
PK017	726390.3	4448409.5	2123.2	236.2	0	-90	2012
PK018C	726492.0	4448209.4	2085.0	127.1	270	-70	2012
PK019C	726491.1	4448208.9	2085.4	143.4	90	-70	2012
PK020C	726582.8	4448209.2	2080.1	175.3	0	-90	2012
PK021	726576.9	4448321.7	2107.4	190.5	0	-90	2012
PK022C	726577.3	4448206.6	2080.1	108.5	90	-70	2012
PK023	726726.3	4448344.3	2095.6	249.9	0	-90	2012
PK024	726676.1	4448307.8	2088.7	231.6	0	-90	2012
PK025C	726629.6	4448145.8	2075.8	109.9	0	-90	2012
PK026	726622.8	4448254.1	2082.5	274.3	0	-90	2012
PK027C	726494.7	4448206.8	2085.2	125.4	270	-50	2012
PK028	726690.7	4448155.5	2071.4	121.9	0	-90	2012
PK029C	726656.7	4448194.7	2076.0	94.8	0	-90	2012
PK030	726692.3	4448102.3	2067.1	121.9	270	-80	2012
PK031C	726788.9	4447455.3	1998.4	163.7	90	-85	2012
PK032	726696.9	4448099.5	2067.1	121.9	90	-75	2012
PK033	726708.1	4448026.0	2060.1	112.8	90	-80	2012
PK034C	727095.7	4447409.6	1957.4	191.9	270	-55	2012
PK035	727189.6	4447568.2	1941.8	262.1	270	-65	2012
PK036	726951.9	4448042.0	1978.6	298.7	0	-90	2012
PK037	726948.9	4448041.5	1978.5	164.6	270	-45	2012
PK038	726954.4	4448037.9	1978.4	225.6	90	-60	2012
PK039	727097.3	4447979.7	1954.3	182.9	0	-90	2012

Hole #	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Azimuth	Dip	Year
PK040	727096.4	4447979.6	1954.7	195.1	270	-70	2012
PK041	727099.1	4447978.3	1953.9	208.8	90	-65	2012
PK042	727223.6	4447953.2	1937.0	157.0	0	-90	2012
PK043	726489.5	4448206.0	2086.7	140.2	270	-52	2012
PK044	726572.8	4448206.8	2080.4	140.2	270	-80	2012
PK045	726690.9	4448153.2	2071.0	121.9	90	-77	2012
PK046	726657.5	4448195.5	2076.4	121.9	90	-70	2012
PK047	726618.2	4448252.3	2081.5	207.3	270	-60	2012
PK048	726616.6	4448251.7	2081.1	176.8	270	-45	2012
PK049	726575.9	4448320.2	2110.4	231.6	270	-77	2012
PK050	726454.6	4448246.1	2088.2	140.2	0	-90	2012
PK051	726453.5	4448245.5	2088.3	140.2	270	-72	2012
PK052	726462.4	4448296.0	2089.7	164.6	90	-80	2012
PK053	726454.3	4448295.7	2090.6	195.1	270	-80	2012
PK054	726450.8	4448295.4	2091.0	189.0	270	-60	2012
PK055	727094.2	4447408.1	1958.3	213.4	270	-80	2012
PK056	725568.0	4448666.9	2028.7	195.1	90	-77	2012
PK057	725569.2	4448667.2	2028.9	243.8	90	-62	2012
PK058	725514.9	4448704.2	2015.6	201.2	270	-70	2012
PK059	725520.8	4448702.0	2015.9	249.9	90	-55	2012
PK060	725518.9	4448702.1	2015.9	243.8	90	-85	2012
PK061	725583.1	4448786.1	2006.3	243.8	90	-72	2012
PK062	725579.7	4448789.6	2005.2	231.7	270	-70	2012
PK063	725644.1	4448897.3	1995.2	243.8	90	-70	2012
PK064	725640.4	4448898.9	1994.2	365.8	270	-80	2012
PK065	725655.3	4449000.1	1981.7	274.3	90	-50	2012
PK066	725652.4	4449000.2	1982.6	365.8	0	-90	2012
PK067	725588.2	4448787.2	2005.9	295.7	90	-50	2012
PK068	725641.0	4448900.0	1993.0	304.8	90	-50	2012
PK069	725466.0	4448906.2	1979.9	208.8	90	-65	2013
PK070	725472.6	4448798.8	1996.3	233.2	270	-75	2013
PK071	725515.0	4448650.3	2018.3	227.1	270	-80	2013
PK072	725525.9	4448749.6	2009.5	269.7	270	-75	2013
PK073	725526.7	4448749.9	2009.8	281.9	90	-70	2013
PK074	725626.7	4448849.8	1996.4	298.7	90	-65	2013
PK075	725624.3	4448850.2	1996.2	271.3	270	-60	2013
PK076	725648.9	4448999.3	1982.1	269.7	270	-70	2013
PK077	725648.3	4449046.9	1979.8	281.9	0	-90	2013
PK078	725650.2	4449047.2	1979.9	294.1	90	-50	2013
PK079	725634.3	4449101.9	1975.0	221.0	0	-90	2013
PK080	725634.7	4449101.9	1975.0	294.1	90	-65	2013
PK081	725652.3	4448948.2	1989.5	227.1	0	-90	2013

Hole #	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Azimuth	Dip	Year
PK082	725727.4	4449144.8	1978.7	341.4	0	-90	2013
PK083C	725568.7	4448666.9	2028.1	279.5	90	-85	2013
PK084	725730.2	4449145.6	1978.0	318.5	90	-75	2013
PK085C	725569.8	4448666.5	2028.1	246.0	90	-85	2013
PK086	725414.7	4448650.0	2002.6	257.6	270	-80	2013
PK087C	725483.9	4448593.8	2019.8	230.7	0	-90	2013
PK088	725955.7	4448997.6	2021.9	257.6	0	-90	2013
PK089C	725487.5	4448593.4	2019.9	258.2	90	-65	2013
PK090	725375.0	4448699.8	1995.1	281.9	270	-80	2013
PK091C	725520.0	4448701.0	2015.0	89.5	90	-70	2013
PK091CA	725521.4	4448702.3	2015.1	291.7	90	-70	2013
PK092	727093.9	4447980.3	1954.4	208.8	270	-60	2013
PK093	725408.3	4448398.3	2024.0	160.0	0	-90	2013
PK094	727123.2	4448048.8	1946.3	269.7	0	-90	2013
PK095	725716.1	4448594.9	2060.7	294.1	270	-80	2013
PK096C	725624.9	4448849.2	1997.5	276.5	0	-90	2013
PK097	727122.0	4448048.9	1945.7	178.3	270	-60	2013
PK098	727099.8	4448145.4	1959.8	190.5	0	-90	2013
PK099	725488.1	4448497.9	2033.9	274.3	90	-70	2013
PK100	727099.1	4448145.0	1960.2	178.3	270	-70	2013
PK101C	725652.7	4448999.6	1982.4	276.5	90	-73	2013
PK102	725563.6	4448540.3	2043.2	227.1	90	-75	2013
PK103	727101.0	4448145.0	1960.6	190.5	90	-70	2013
PK104C	725571.6	4448667.2	2028.2	214.9	90	-70	2013
PK105	727112.3	4447899.9	1945.8	166.1	0	-90	2013
PK106C	725707.4	4448753.3	2035.2	334.2	270	-82	2013
PK107	727111.8	4447899.9	1945.8	172.2	270	-75	2013
PK108	725567.3	4448447.8	2061.0	245.4	90	-80	2013
PK109	727117.5	4447897.5	1945.4	160.0	90	-75	2013
PK110	727107.8	4449353.5	1977.8	263.7	235	-70	2013
PK111C	725572.8	4448667.8	2028.0	292.9	102	-62	2013
PK112	725594.9	4448344.5	2075.0	227.1	90	-75	2013
PK113	727106.9	4449353.6	1977.5	283.5	235	-50	2013
PK114	725621.6	4448307.1	2091.8	251.5	90	-85	2013
PK115C	725639.0	4448485.1	2075.5	200.3	90	-80	2013
PK116	727108.2	4449354.4	1977.0	227.1	0	-90	2013
PK117	725956.2	4448999.5	2023.7	281.9	90	-70	2013
PK118C	725552.9	4448395.0	2056.1	230.7	90	-75	2013
PK119C	725552.7	4448392.8	2056.9	297.8	270	-70	2013
PK120	727159.8	4449323.1	1961.2	239.3	235	-50	2013
PK121	725953.4	4448998.8	2023.2	225.6	270	-70	2013
PK122C	725579.2	4448786.4	2005.8	227.7	270	-83	2013

Hole #	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Azimuth	Dip	Year
PK123	725626.4	4448259.0	2115.1	227.1	90	-85	2013
PK124	727107.2	4449355.7	1977.2	263.7	280	-60	2013
PK125	727356.0	4449320.0	1927.0	237.7	310	-60	2013
PK126C	725521.4	4448705.5	2014.8	435.0	90	-78	2014
PK127C	725521.7	4448705.5	2014.8	389.2	90	-66	2014
PK128C	725303.2	4447895.9	2100.8	209.4	285	-80	2014
PK129C	725303.3	4447895.8	2100.7	139.3	285	-60	2014
PK130C	725368.9	4448035.3	2087.8	264.3	210	-80	2014
PK131C	725529.7	4448754.7	2008.7	398.4	110	-72	2014
PK132C	725529.1	4448754.7	2009.0	456.9	0	-90	2014
PK133C	725706.1	4448753.8	2035.8	413.6	270	-77	2014
PK134C	725569.7	4448668.3	2028.7	374.0	80	-78	2014
PK135C	725585.1	4448586.0	2046.8	361.8	75	-78	2014
PK136C	725521.0	4448702.0	2015.0	367.9	90	-57	2014
PK137C	725529.6	4448755.1	2009.1	282.9	120	-80	2014
PK137CA	725529.6	4448755.1	2009.4	346.9	120	-80	2014
PK141C	725580.6	4448786.7	2004.9	428.9	0	-90	2014
PK138	725371.6	4448028.6	2087.0	41.1	0	-65	2014
PK139	725370.9	4448029.9	2087.1	47.2	0	-38	2014
PK142	725366.4	4448022.4	2087.4	29.0	270	-48	2014
PK144	725369.4	4448026.6	2086.9	47.2	90	-50	2014
PK140	726134.8	4448168.0	2159.7	411.5	0	-83	2014
PK143	726660.3	4447894.1	2050.5	426.7	270	-63	2014
PK145	725417.5	4448083.6	2085.7	470.9	0	-90	2014
PK146	726923.3	4447820.9	2003.2	589.8	190	-70	2014
PK147	725417.3	4448083.4	2085.8	56.4	270	-70	2014
PK149	725420.4	4448085.0	2087.3	74.7	90	-70	2014
PK148C	725580.6	4448789.8	2004.9	428.9	20	-83	2014
PK151C	725579.1	4448786.7	2005.3	428.9	180	-85	2014
PK150	725382.4	4448852.1	1981.2	563.9	30	-80	2014
PK155C	725577.8	4448784.7	2005.4	468.5	270	-80	2014
PK158C	725576.8	4448786.4	2004.8	385.4	90	-78	2014
PK159C	725529.7	4448756.8	2010.3	532.3	270	-80	2014
PK152	725247.0	4447854.9	2050.2	501.4	270	-80	2014
PK153	725013.0	4447303.0	2063.0	518.2	0	-90	2014
PK154	725473.0	4448802.8	1995.2	501.4	0	-90	2014
PK156	725013.0	4447303.0	2063.0	518.2	0	-65	2014
PK157	725380.0	4448842.9	1981.3	544.1	180	-87	2014
PK160	725524.2	4448024.5	2121.9	134.1	270	-40	2014
PK161	725526.3	4448024.4	2122.2	121.9	270	-70	2014
PK163	725523.7	4448021.4	2123.0	135.6	180	-65	2014
PK164	725527.4	4448103.2	2124.8	147.8	270	-65	2014



Hole #	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Azimuth	Dip	Year
PK165	725527.0	4448103.1	2124.5	152.4	270	-57	2014
PK162C	725705.9	4448752.6	2036.1	449.6	315	-76	2014
PK166C	725706.5	4448752.3	2036.0	367.9	270	-90	2014
PK168C	725703.2	4448751.8	2035.7	374.0	0	-80	2014
PK167	725013.5	4447303.1	2063.3	486.2	270	-82	2014
PK169	725015.2	4447300.6	2063.9	550.2	180	-85	2014
PK170C	725671.6	4448663.9	2060.8	654.4	0	-90	2014
PK171	725017.0	4447300.0	2063.3	499.9	86	-85	2014
PK172C	725529.7	4448754.0	2009.7	459.0	180	-85	2014
PK173C	725529.7	4448753.7	2009.0	487.1	300	-83	2014
PK174	725016.0	4447297.2	2063.2	438.9	131	-80	2014
PK175CA	725699.4	4448751.6	2037.1	398.4	255	-78	2014
PK176	725223.9	4446949.7	2154.9	294.1	315	-75	2014
PK177C	725570.2	4448667.3	2027.9	389.2	115	-85	2014
PK181C	725861.4	4448603.8	2109.6	355.7	34	-80	2014
PK178	725224.9	4446943.0	2155.1	413.0	132	-56	2014
PK179C	725626.3	4448850.4	1996.5	435.0	90	-83	2014
PK180	725366.0	4447569.6	2158.9	434.3	30	-80	2014
PK182	725182.4	4447250.1	2112.4	379.5	0	-90	2014
PK183	724965.2	4447514.2	2024.6	510.5	0	-90	2014
PK184	725551.9	4448396.2	2054.2	501.4	270	-82	2014
PK185CA	725530.8	4448756.9	2008.2	184.1	110	-86	2014
PK186C	725526.1	4448704.5	2014.8	422.8	29.9	-78.9	2014
PK187C	725582.1	4448784.1	2004.8	364.8	145	-81	2014
PK188C	725584.4	4448786.4	2005.1	386.2	82	-84	2014
PK185CAB	725530.9	4448757.4	2008.2	185.0	110	-86	2014
PK190	725334.8	4448102.3	2063.5	44.2	180	-45	2014
PK191	725337.0	4448100.7	2063.6	61.0	75	-60	2014
PK189C	725707.8	4448752.4	2035.9	404.5	305	-79	2014
PK192	725334.6	4448100.4	2064.0	54.9	230	-45	2014
PK193	725183.2	4447252.0	2112.7	166.2	310	-60	2014
PK194	725184.1	4447252.0	2112.3	195.1	314.7	-44.7	2014
PK195	725504.6	4447597.4	2184.8	25.9	0	-90	2014
PK196	725397.5	4447514.0	2171.5	38.1	0	-90	2014
PK197	725429.9	4447494.7	2183.1	45.7	0	-90	2014
PK198	725283.3	4447133.6	2142.4	35.1	0	-90	2014
PK199	725282.9	4447132.4	2142.4	38.1	210	-50	2014
PK182CA	725178.8	4447248.1	2111.7	497.1	0	-90	2014
PK200	725863.4	4448609.0	2109.2	359.7	36.3	-70.3	2014
PK201	725862.4	4448608.1	2109.1	373.4	211.6	-71.1	2014
PK202	725492.1	4448663.5	2013.6	432.8	40.5	-84.8	2014
PK203	726245.8	4449709.0	2007.2	670.6	88.8	-89.5	2014

**Pilot Gold 2014 DRILL HOLES AND RESULTS**

Cutoff (g/t)	0.2, 5.0
Min g/t*m	1
Max Waste (m)	5
Topcut (g/t)	100

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Hole Lengt h (m)	Zone	Stratigrap hic Host
<b>*PK126C (090, -78)</b>	<b>273.4</b>	<b>287.1</b>	<b>13.7</b>	<b>1.70</b>	0.2	435 .0	Western Flank	Secret Canyon
<b>incl</b>	<b>284.1</b>	<b>285.6</b>	<b>1.5</b>	<b>7.10</b>	5.0			
<b>and</b>	319.1	323.7	4.6	0.51	0.2			
<b>*PK127C (090, -66)</b>	137.8	140.4	2.6	0.57	0.2	389 .2	Western Flank	Candland
<b>and</b>	233.8	236.8	3.0	0.37	0.2			
<b>and</b>	268.8	270.4	1.5	0.68	0.2			
<b>and</b>	<b>276.5</b>	<b>318.1</b>	<b>41.7</b>	<b>6.85</b>	0.2			
<b>incl</b>	<b>282.5</b>	<b>287.1</b>	<b>4.6</b>	<b>8.50</b>	5.0			
<b>incl</b>	<b>301.0</b>	<b>309.5</b>	<b>8.5</b>	<b>16.3</b>	5.0			
<b>incl</b>	<b>314.6</b>	<b>318.1</b>	<b>3.6</b>	<b>20.5</b>	5.0			
<b>PK128C (285, -80)</b>	14.3	23.5	9.1	0.63	0.2	209 .4	Right Spot	Lamb/Ha mburg
<b>PK129C (285, -60)</b>	14.3	20.4	6.1	0.89	0.2	139 .3	Right Spot	Lamb/Ha mburg
<b>and</b>	<b>32.6</b>	<b>48.2</b>	<b>15.5</b>	<b>0.58</b>	0.2			
<b>PK130C (210, -80)</b>	<b>5.2</b>	<b>16.8</b>	<b>11.5</b>	<b>3.57</b>	0.2	264 .3	Right Spot	Candland
<b>incl</b>	<b>5.2</b>	<b>6.7</b>	<b>1.5</b>	<b>5.05</b>	5.0			
<b>incl</b>	8.2	11.3	3.1	5.87	5.0			
<b>PK131C (110, -72)</b>	229.2	232.3	3.0	0.36	0.2	398 .4	Western Flank	Secret Canyon
<b>and</b>	247.5	249.0	1.5	0.68	0.2			
<b>and</b>	<b>262.7</b>	<b>305.4</b>	<b>42.7</b>	<b>10.5</b>	0.2			
<b>incl</b>	<b>276.5</b>	<b>299.3</b>	<b>22.9</b>	<b>18.3</b>	5.0			
<b>PK132C (-90)</b>	172.8	174.3	1.5	1.46	0.2	456 .9	Western Flank	Candland
<b>and</b>	<b>249.6</b>	<b>303.0</b>	<b>53.3</b>	<b>7.53</b>	0.2			
<b>incl</b>	<b>257.3</b>	<b>259.5</b>	<b>2.3</b>	<b>18.1</b>	5.0			
<b>incl</b>	<b>269.4</b>	<b>292.3</b>	<b>22.9</b>	<b>14.9</b>	5.0			
<b>and</b>	324.3	331.9	7.6	4.67	0.2			
<b>incl</b>	327.1	328.9	1.8	13.7	5.0			

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host	
<b>PK133C (270, -77)</b>	206.3	210.9	4.6	0.46	0.2	413.6	Western Flank	Lamb/Hamburg	
and	246.0	247.5	1.5	0.67	0.2			Secret Canyon	
and	<b>310.0</b>	<b>340.0</b>	<b>30.0</b>	<b>10.6</b>	0.2				
incl	<b>322.2</b>	<b>338.6</b>	<b>16.5</b>	<b>16.1</b>	5.0				
<b>PK134C (80, -78)</b>	<b>110.3</b>	<b>114.9</b>	<b>4.6</b>	<b>3.31</b>	0.2	374.0	Western Flank	Candland	
and	122.5	124.1	1.5	1.45	0.2			Secret Canyon	
and	<b>238.4</b>	<b>250.5</b>	<b>12.2</b>	<b>1.44</b>	0.2				
and	<b>265.2</b>	<b>284.1</b>	<b>18.9</b>	<b>2.84</b>	0.2				
incl	<b>273.4</b>	<b>276.5</b>	<b>3.0</b>	<b>6.59</b>	5.0				
incl	<b>279.5</b>	<b>282.5</b>	<b>3.0</b>	<b>7.17</b>	5.0				
<b>PK135C (75, -78)</b>	43.3	44.8	1.5	0.47	0.2	361.8	Western Flank	Notch Peak	
and	<b>102.7</b>	<b>106.7</b>	<b>4.0</b>	<b>6.46</b>	0.2			Candland	
incl	<b>104.2</b>	<b>106.7</b>	<b>2.4</b>	<b>9.00</b>	5.0				
and	111.9	113.4	1.5	1.14	0.2				
and	220.1	223.1	3.0	0.64	0.2				Lamb/Hamburg
and	282.5	288.6	6.1	0.97	0.2				Secret Canyon
and	294.7	297.8	3.0	0.74	0.2				
<b>PK136C (90, -57)</b>	265.8	271.9	6.1	1.36	0.2	367.9	Western Flank	Secret Canyon	
<b>PK137C** (120 -80)</b>	<b>253.9</b>	<b>282.9</b>	<b>29.0</b>	<b>21.3</b>	0.2	282.8	Western Flank	Secret Canyon	
incl	<b>259.7</b>	<b>264.6</b>	<b>4.9</b>	<b>46.4</b>	5.0				
incl	<b>270.5</b>	<b>281.9</b>	<b>11.4</b>	<b>32.7</b>	5.0				
<b>PK137CA** (120, -80)</b>	<b>253.3</b>	<b>292.0</b>	<b>38.7</b>	<b>15.6</b>	0.2	346.9	Western Flank	Secret Canyon	
incl	<b>259.4</b>	<b>281.3</b>	<b>21.9</b>	<b>26.2</b>	5.0				
<b>PK138 (0, -65)</b>	<b>3.0</b>	<b>22.9</b>	<b>19.8</b>	<b>3.08</b>	0.2	41.1	Right Spot	Candland	
incl	<b>9.1</b>	<b>12.2</b>	<b>3.0</b>	<b>6.64</b>	5.0				

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
<b>PK139 (0, -38)</b>	<b>19.8</b>	<b>39.6</b>	<b>19.8</b>	<b>2.43</b>	0.2	47.2	Right Spot	Candland
<b>incl</b>	<b>27.4</b>	<b>30.5</b>	<b>3.0</b>	<b>6.40</b>	5.0			
<b>PK140 (0, -83)</b>	<b>NSR</b>				0.2	411.5	Upper Pit	
<b>PK141C (0, -90)</b>	136.2	143.3	7.0	1.1	0.2	428.9	Western Flank	Candland
<b>and</b>	<b>276.5</b>	<b>293.2</b>	<b>16.8</b>	<b>2.5</b>	0.2			Secret Canyon
<b>incl</b>	284.1	285.6	1.5	7.1	5.0			
<b>and</b>	303.9	310.0	6.1	0.29	0.2			
<b>and</b>	323.7	326.7	3.0	0.40	0.2			
<b>and</b>	<b>360.3</b>	<b>390.8</b>	<b>30.5</b>	<b>3.81</b>	0.2			
<b>incl</b>	<b>364.8</b>	<b>367.9</b>	<b>3.0</b>	<b>10.4</b>	5.0			
<b>PK142 (270, -48)</b>	<b>0.0</b>	<b>22.9</b>	<b>22.9</b>	<b>1.75</b>	0.2	29.0	Right Spot	Candland
<b>PK143 (270, -63)</b>	3.0	9.1	6.1	0.33	0.2	426.7	Main Pit	Candland
<b>and</b>	67.1	68.6	1.5	1.24	0.2			
<b>and</b>	76.2	93.0	16.8	1.19	0.2			
<b>incl</b>	88.4	89.9	1.5	6.74	5.0			
<b>PK144 (90, -50)</b>	<b>0.0</b>	<b>41.1</b>	<b>41.1</b>	<b>3.35</b>	0.2	47.2	Right Spot	Candland
<b>incl</b>	32.0	36.6	4.6	5.11	5.0			
<b>PK145 (0, -90)</b>	<b>NSR</b>				0.2	470.9	Right Spot	
<b>PK146 (190,-70)</b>	474.0	477.0	3.0	0.46	0.2	589.8	Emancipation Pit	Secret Canyon
<b>PK147 (270, -70)</b>	<b>NSR</b>				0.2	56.4	Right Spot	
<b>PK148C (20, -83)</b>	140.7	148.4	7.8	1.76	0.2	428.9	Western Flank	Candland
<b>incl</b>	140.7	142.2	1.5	5.62	5.0			Secret Canyon
<b>and</b>	205.7	213.4	7.6	2.89	0.2			
<b>incl</b>	210.3	211.5	1.2	9.89	5.0			
<b>PK149 (90, -70)</b>	53.3	67.1	13.7	1.39	0.2	74.7	Right Spot	Candland

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
PK150 (30, -80)	217.9	221.0	3.0	0.74	0.2	563.9	Western Flank	Candland
and	381.0	388.6	7.6	1.06	0.2			Secret Canyon
PK151C (180, -85)	133.0	143.3	10.2	2.04	0.2	428.9	Western Flank	Candland
and	204.8	209.4	4.6	0.98	0.2			Secret Canyon
and	248.7	261.2	12.5	0.90	0.2			Secret Canyon
and	276.5	279.5	3.0	2.47	0.2			
and	292.9	305.4	12.5	8.35	0.2			
incl	297.6	303.9	6.2	14.5	5.0			
PK152 (270, -80)	NSR				0.2	501.4	Right Spot	
PK153 (0, -90)	411.5	437.4	25.9	1.34	0.2	518.2	Secret Spot	Secret Canyon
and	443.5	457.2	13.7	1.09	0.2			
incl	451.1	452.6	1.5	5.03	5.0			
and	469.4	475.5	6.1	0.21	0.2			
and	477.0	483.1	6.1	3.02	0.2			
incl	480.1	481.6	1.5	6.01	5.0			
PK154 (0, -90)	147.8	153.9	6.1	1.65	0.2	501.4	Western Flank	Candland
and	166.1	169.2	3.0	0.99	0.2			
and	166.1	169.2	3.0	0.99	0.2			
and	239.3	242.3	3.0	1.09	0.2			Secret Canyon
and	248.4	256.0	7.6	0.43	0.2			
and	341.4	345.9	4.6	0.55	0.2			
PK155C (270, -80)	200.3	204.8	4.6	0.27	0.2	468.5	Western Flank	Secret Canyon
and	244.4	246.0	1.5	2.97	0.2			
and	255.1	305.4	50.3	0.67	0.2			
PK156 (0, -65)	NSR							
PK157 (180, -87)	309.4	310.9	1.5	0.81	0.2	544.1	Western Flank	Secret Canyon
and	438.9	442.0	3.0	0.84	0.2			
and	458.7	467.9	9.1	1.53	0.2			
and	492.3	495.3	3.0	0.47	0.2			
and	519.7	522.7	3.0	0.63	0.2			

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
<b>PK158C (90, -78)</b>	136.2	145.4	9.1	2.41	0.2	385.4	Western Flank	Candland
<b>and</b>	218.5	223.1	4.6	4.46	0.2			Secret Canyon
<b>and</b>	<b>274.9</b>	<b>313.0</b>	<b>38.1</b>	<b>5.59</b>	0.2			
<b>incl</b>	<b>282.5</b>	<b>299.3</b>	<b>16.8</b>	<b>9.99</b>	5.0			
<b>and</b>	358.7	362.6	3.8	8.21	0.2			
<b>incl</b>	359.7	362.6	2.9	9.44	0.2			
<b>PK159C (270, -80)</b>	171.3	175.9	4.6	1.89	0.2	532.3	Western Flank	Hamburg
<b>and</b>	185.0	191.1	6.1	1.99	0.2			Secret Canyon
<b>and</b>	<b>255.1</b>	<b>273.4</b>	<b>18.3</b>	<b>3.91</b>	0.2			
<b>incl</b>	<b>258.2</b>	<b>265.8</b>	<b>7.6</b>	<b>8.15</b>	5.0			
<b>and</b>	284.1	293.5	9.4	0.32	0.2			
<b>and</b>	479.1	492.9	13.7	2.14	0.2			
<b>incl</b>	485.2	486.5	1.2	10.6	5.0			
<b>PK160 (270, -40)</b>	<b>NSR</b>					134.1	Right Spot	Candland
<b>PK161 (270, -70)</b>	<b>NSR</b>					121.9	Right Spot	Candland
<b>PK162C (270, -40)</b>	164.6	167.9	3.3	1.74	0.2	449.6	Western Flank	Candland
<b>and</b>	231.3	234.1	2.7	1.88	0.2			Secret Canyon
<b>and</b>	235.0	239.9	4.9	6.81	0.2			
<b>incl</b>	<b>237.3</b>	<b>237.6</b>	<b>0.3</b>	<b>70.1</b>	5.0			
<b>and</b>	<b>364.7</b>	383.7	19.1	2.89	0.2			
<b>incl</b>	<b>371.5</b>	374.3	2.8	10.5	5.0			
<b>PK163 (180, -55)</b>	<b>NSR</b>					135.6	Right Spot	Candland
<b>PK164 (270, -75)</b>	<b>129.5</b>	131.1	1.5	0.76	0.2	147.8	Right Spot	Candland
<b>PK165 (270, -57)</b>	<b>NSR</b>					152.4	Right Spot	Candland
<b>PK166C (0, -90)</b>	148.4	150.0	1.5	0.96	0.2	367.9	Western Flank	Candland
<b>and</b>	195.7	198.7	3.0	0.77	0.2			Hamburg
<b>and</b>	280.4	283.6	3.2	1.15	0.2			Secret

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
and	302.4	305.4	3.0	0.51	0.2			Canyon
and	311.5	320.6	9.1	0.97	0.2			
<b>PK167 (270, -82)</b>	<b>NSR</b>					486.2	Secret Spot	
<b>PK168C (00, -78)</b>	233.8	236.8	3.0	2.1	0.2	374.0	Western Flank	Secret Canyon
<b>PK169 (180, -85)</b>	477.0	502.9	25.9	0.68	0.2	550.2	Secret Spot	Secret Canyon
and	521.2	525.8	4.6	0.23	0.2			
<b>PK170C (00, -87)</b>	218.5	220.1	1.5	0.7	0.2	654.4	Western Flank	Secret Canyon
and	273.4	276.5	3.0	2.5	0.2			
and	287.1	288.6	1.5	1.3	0.2			
<b>PK171 (90, -85)</b>	<b>478.5</b>	<b>487.7</b>	<b>9.1</b>	<b>1.84</b>	0.2	499.9	Secret Spot	Secret Canyon
<b>PK172C (180, -83)</b>	172.8	178.9	6.1	0.86	0.2	459.0	Western Flank	Hamburg
and	239.9	241.4	1.5	1.77	0.2			
and	<b>255.1</b>	<b>273.4</b>	<b>18.3</b>	<b>2.41</b>	0.2			
incl	<b>256.6</b>	<b>260.0</b>	<b>3.4</b>	<b>6.99</b>	5.0			
and	328.3	336.0	7.8	0.66	0.2			
and	407.5	413.6	6.1	0.79	0.2			
<b>PK173C (300, -83)</b>	<b>182.0</b>	<b>214.0</b>	<b>32.0</b>	<b>1.43</b>	0.2	487.1	Western Flank	Hamburg
incl	<b>209.4</b>	<b>210.9</b>	<b>1.5</b>	<b>9.87</b>	0.2			
and	<b>247.5</b>	<b>297.8</b>	<b>50.3</b>	<b>1.15</b>	5.0			
incl	<b>252.4</b>	<b>253.3</b>	<b>0.9</b>	<b>9.64</b>	5.0			
and	<b>303.9</b>	<b>308.5</b>	<b>4.6</b>	<b>3.12</b>	0.2			
incl	303.9	305.4	1.5	8.47	5.0			
and	340.5	343.5	3.0	1.61	0.2			
and	436.5	438.0	1.5	1.80	0.2			
and	463.9	467.0	3.0	0.60	0.2			
<b>PK174 (135, -80)</b>	416.1	422.1	6.1	0.2	0.2	438.9	Secret Spot	Secret Canyon

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
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<b>PK175CA (255, -78)</b>	189.6	197.2	7.6	0.54	0.2	398.4	Western Flank	Hamburg
<b>and</b>	241.4	244.4	3.0	0.75	0.2			Secret Canyon
<b>and</b>	<b>287.1</b>	<b>332.8</b>	<b>45.7</b>	<b>6.19</b>	0.2			
<b>including</b>	<b>299.9</b>	<b>319.1</b>	<b>19.2</b>	<b>13.8</b>	5.0			

<b>PK176 (315, -75)</b>	<b>NSR</b>				0.2	294.1	Secret Spot	
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<b>PK177C (115, -85)</b>	<b>110.3</b>	<b>116.4</b>	<b>6.1</b>	<b>6.88</b>	0.2	389.2	Western Flank	Candland	
<b>incl</b>	<b>111.9</b>	<b>114.9</b>	<b>3.0</b>	<b>11.0</b>	5.0			Hamburg	
<b>and</b>	180.4	185.0	4.6	0.31	0.2				
<b>and</b>	215.5	218.5	3.0	0.37	0.2				
<b>and</b>	235.3	236.8	1.5	2.55	0.2				
<b>and</b>	<b>261.2</b>	<b>284.1</b>	<b>22.9</b>	<b>1.51</b>	0.2				Secret Canyon
<b>incl</b>	<b>279.5</b>	<b>281.0</b>	<b>1.5</b>	<b>5.33</b>	5.0				

<b>PK178 (130, -55)</b>	0.0	9.1	9.1	0.52	0.2	413.0	Secret Spot	Candland
<b>and</b>	368.8	373.4	4.6	0.52	0.2			Secret Canyon

<b>PK179C (90, -83)</b>	138.1	145.9	7.9	1.72	0.2	435.0	Western Flank	Candland
<b>and</b>	<b>207.9</b>	<b>209.4</b>	<b>1.5</b>	<b>15.4</b>	0.2			Hamburg
<b>and</b>	345.0	353.4	8.4	1.81	0.2			
<b>incl</b>	<b>352.3</b>	<b>353.4</b>	<b>1.1</b>	<b>8.53</b>	5.0			

<b>PK180 (30, -80)</b>	<b>1.5</b>	<b>9.1</b>	<b>7.6</b>	<b>2.69</b>	0.2	434.3	Racetrack	Candland
<b>incl</b>	<b>4.6</b>	<b>6.1</b>	<b>1.5</b>	<b>5.34</b>	5.0			Secret Canyon
<b>and</b>	388.6	399.3	10.7	1.25	0.2			

<b>PK181C (30, -87)</b>	140.8	142.3	1.5	0.81	0.2	355.7	Nose Road	Candland
<b>and</b>	235.3	238.4	3.0	3.01	0.2			Hamburg
<b>and</b>	262.7	264.3	1.5	2.13	0.2			



Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host	
PK182 (0, -90)	86.9	94.5	7.6	2.03	0.2	379.5	Secret Spot	Candland	
PK182C (0, -90)	104.2	107.3	3.0	0.25	0.2	497.1	Secret Spot	Candland	
and	111.9	114.9	3.0	0.44	0.2				
and	156.1	159.1	3.0	0.23	0.2			Hamburg	
PK183 (0, -90)	182.9	190.5	7.6	0.32	0.2	510.5	Secret Spot	Candland	
PK184 (270, -82)	NSR					501.4	So. Western Flank		
PK185C, CA, CAB	Hole lost due to poor ground conditions							Western Flank	
PK186C (030, -79)	212.4	226.5	14.0	1.53	0.2	422.8	Western Flank	Candland	
and	252.4	256.6	4.3	0.36	0.2				
and	273.4	313.0	39.6	10.1	0.2				
incl	283.8	305.4	21.6	17.4	5.0			Clarks Spring	
PK187C (145, -81)	133.8	140.5	6.7	3.09	0.2	364.8	Western Flank	Candland	
and	252.1	258.2	6.1	0.43	0.2				
and	262.7	293.2	30.5	6.05	0.2			Clarks Spring	
incl	274.3	282.5	8.2	8.10	5.0				
PK188C (082, -84)	136.2	144.9	8.7	4.50	0.2	386.2	Western Flank	Candland	
incl	140.8	144.0	3.2	8.22	5.0				
and	276.5	282.5	6.1	0.32	0.2			Hamburg	
and	286.9	316.1	29.2	4.39	0.2				
incl	295.8	298.7	2.9	11.0	5.0			Secret Canyon	
and	349.2	350.3	1.1	0.53	0.2				
PK189C (305, -79)	163.7	166.1	2.4	0.3	0.2	404.5	Western Flank	Candland	
and	200.3	201.8	1.5	0.4	0.2				
and	323.7	326.7	3.0	2.1	0.2			Hamburg	

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
and	346.6	367.9	21.3	3.2	0.2			Secret Canyon
incl	361.2	364.8	3.7	9.4	5.0			
and	372.5	381.6	9.1	2.3	0.2			
incl	372.5	374.6	2.1	7.5	5.0			
PK190 (180, -45)	NSR					44.2	Right Spot	
PK191 (75, -60)	NSR					61.0	Right Spot	
PK192 (230, -45)	38.1	41.1	3.0	0.69	0.2	54.9	Right Spot	Candland
PK193 (310, -60)	NSR					166.1	Secret Spot	
PK194 (310, -45)	175.3	178.3	3.0	0.32		195.1	Secret Spot	
PK195 (0, -90)	9.1	12.2	3.0	0.48	0.2	25.9	Racetrack	Candland
and	16.8	19.8	3.0	0.35	0.2			
PK196 (0, -90)	NSR					38.1	Racetrack	
PK197 (0, -90)	32.0	39.6	7.6	0.55	0.2	45.7	Racetrack	Candland
PK198 (0, -90)	NSR					35.1	Racetrack	
PK199 (210, -50)	19.8	21.3	1.5	0.34	0.2	38.1	Racetrack	Candland
PK200 (030, -70)	312.4	320.0	7.6	6.15	0.2	359.7	Nose Road	Secret Canyon
incl	313.9	318.5	4.6	8.73	5.0			
PK201 (210, -70)	4.6	7.6	3.0	0.35	0.2	373.4	Nose Road	Notch Peak Secret Canyon
and	263.7	268.2	4.6	0.29	0.2			

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Hole Length (m)	Zone	Stratigraphic Host
PK202 (045, -85)	170.7	172.2	1.5	0.37	0.2	432.8	Western Flank	Candler
and	210.3	211.8	1.5	0.36	0.2			Hamburg
and	219.5	221.0	1.5	0.37	0.2			
and	227.1	228.6	1.5	0.45	0.2			

PK203 (0, -90)	355.1	364.2	9.1	0.4	0.2	670.6	Silica Knob	Hamburg
and	379.5	381.0	1.5	1.2	0.2			

\*Reportable intercepts for PK126C and PK127C were revised slightly by increasing the minimum g/t\*m in order to eliminate smaller and lower grade intervals. One additional "including" intercept was added to the table in PK127C

\*\*PK 137C was lost near the bottom of the mineralized zone due to poor ground conditions higher in the hole. PK137CA was wedged off the same hole from above the mineralized zone using NQ tools and was completed through the mineralized zone immediately adjacent to PK137C.

**Pilot Gold 2013 DRILL HOLES AND RESULTS**

Cutoff (g/t)	0.2, .0
Min g/t*m	0.1
Max Waste (m)	5
Topcut (g/t)	100

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Zone
<b>PK069 (90, -65)</b>	163.1	164.6	1.5	1.79	0.2	Western Flank
and	184.4	185.9	1.5	0.31	0.2	
<b>PK070 (270, -75)</b>	<b>164.6</b>	<b>170.7</b>	<b>6.1</b>	<b>1.48</b>	0.2	Western Flank
<b>PK071 (270, -80)</b>	160.0	161.5	1.5	1.21	0.2	Western Flank
<b>PK072 (270, -75)</b>	147.8	150.9	3.0	1.78	0.2	Western Flank
and	260.6	263.7	3.0	0.74	0.2	
<b>PK073 (90, -70)</b>	144.8	147.8	3.0	0.78	0.2	Western Flank
and	182.9	189.0	6.1	0.43	0.2	
and	253.0	262.1	9.1	0.49	0.2	
and	<b>271.3</b>	<b>281.9</b>	<b>10.7</b>	<b>2.21</b>	0.2	
<b>PK074 (90, -65)</b>	<b>144.8</b>	<b>169.2</b>	<b>24.4</b>	<b>1.65</b>	0.2	Western Flank
including	146.3	147.8	1.5	7.30	5.0	
<b>PK075 (270, -60)</b>	<b>138.7</b>	<b>144.8</b>	<b>6.1</b>	<b>1.00</b>	0.2	Western Flank
<b>PK076 (270, -70)</b>	182.9	184.4	1.5	0.25	0.2	Western Flank
<b>PK077 (0, -90)</b>	257.6	260.6	3.0	0.34	0.2	Western Flank
<b>PK078 (90, -53)</b>	No Significant Results					Western Flank
<b>PK079 (0, -90)</b>	205.7	207.3	1.5	0.22	0.2	Western Flank
<b>PK080 (90, -65)</b>	No Significant Results					Western Flank
<b>PK081 (0, -90)</b>	143.3	146.3	3.0	0.70	0.2	Western Flank
<b>PK082 (0, -90)</b>	No Significant Results					Western Flank

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Zone
<b>PK083C (90, -83)</b>	<b>111.4</b>	<b>114.5</b>	<b>3.0</b>	<b>15.6</b>	5.0	Western Flank
and	146.9	157.6	10.7	0.60	0.2	
and	233.8	239.9	6.1	1.84	0.2	
and	262.7	271.9	9.1	0.49	0.2	
<b>PK084 (90, -75)</b>	254.5	256.0	1.5	0.38	0.2	Western Flank
<b>PK085C (90, -85)</b>	218.5	220.1	1.5	0.57	0.2	Western Flank
<b>PK086 (270, -80)</b>	189.0	193.5	4.6	0.92	0.2	Western Flank
<b>PK087C (0, -90)</b>	55.5	57.0	1.5	0.39	0.2	Western Flank
<b>PK088 (0, -90)</b>	213.4	216.4	3.0	1.18	0.2	Western Flank
<b>PK089C (90, -65)</b>	107.9	108.8	0.9	0.77	0.2	Western Flank
and	241.4	244.4	3.0	0.24	0.2	
<b>PK090 (270, -80)</b>	166.1	175.3	9.1	0.74	0.2	Western Flank
<b>PK091CA (90, -70)</b>	159.0	161.8	2.9	1.46	0.2	Western Flank
and	231.5	233.8	2.3	0.71	0.2	
and	<b>255.1</b>	<b>291.7</b>	<b>36.6</b>	<b>8.53</b>	<b>0.2</b>	
including	<b>276.5</b>	<b>284.0</b>	<b>7.6</b>	<b>29.4</b>	<b>5.0</b>	
<b>PK092 (270, -60)</b>	173.7	178.3	4.6	0.32	0.2	Dunderberg Cyn.
<b>PK093 (0, -90)</b>	108.2	111.3	3.0	1.46	0.2	Western Flank
<b>PK094 (0, -90)</b>	155.4	163.1	7.6	0.95	0.2	Dunderberg Cyn.
<b>PK095 (270, -80)</b>	193.5	195.1	1.5	0.96	0.2	Western Flank
and	260.6	262.1	1.5	0.66	0.0	
<b>PK096C (0, -90)</b>	136.2	143.9	7.6	5.00	0.2	Western Flank
including	138.4	139.3	0.9	20.7	5.0	
and	201.5	208.8	7.3	4.71	0.2	
including	202.7	204.2	1.5	19.4	5.0	
<b>PK097 (270, -60)</b>	No Significant Results					Dunderberg Cyn.

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Zone
PK098 (0, -90)	144.8	146.3	1.5	0.2	0.2	Dunderberg Cyn.
PK099 (90, -70)	86.9	89.9	3.0	0.93	0.2	Western Flank
and	132.6	137.2	4.6	2.15	0.2	
PK100 (270, -70)	No Significant Results					Dunderberg Cyn.
PK101C (90, -73)	No Significant Results					Western Flank
PK102 (90, -75)	77.7	80.8	3.0	0.43	0.2	Western Flank
and	<b>88.4</b>	<b>105.2</b>	<b>16.8</b>	<b>2.51</b>	<b>0.2</b>	
including	103.6	105.2	1.5	5.17	<b>5.0</b>	
and	132.6	134.1	1.5	0.93	0.2	
PK103 (90, -70)	No Significant Results					Dunderberg Cyn.
PK104C (90, -70)	<b>185.0</b>	<b>209.4</b>	<b>24.38</b>	<b>2.5</b>	<b>0.2</b>	Western Flank
PK105 (0, -90)	No Significant Results					Dunderberg Cyn.
PK106C (270, -82)	180.8	184.6	3.7	0.71	0.2	Western Flank
and	202.4	207.0	4.6	0.52	0.2	
and	232.3	235.8	3.5	1.56	0.2	
and	273.4	276.5	3.0	0.53	0.2	
and	<b>308.2</b>	<b>314.1</b>	<b>5.9</b>	<b>6.34</b>	0.2	
including	<b>309.5</b>	<b>312.9</b>	<b>3.4</b>	<b>9.91</b>	5.0	
and	319.1	323.7	4.6	3.45	0.2	
including	320.9	321.9	1.0	9.14	5.0	
PK107 (270, -75)	No Significant Results					Dunderberg Cyn.
PK108 (90, -80)	89.9	96.0	6.1	1.52	0.2	Western Flank
PK109 (90, -75)	No Significant Results					Dunderberg Cyn.
PK110 (235, -70)	228.6	230.1	1.5	0.2	0.2	Ken's Jasperoid
PK111C (102, -62)	182.9	186.6	3.7	0.37	0.2	Western Flank
and	263.5	271.9	8.4	0.38	0.2	
PK112 (90, -75)	128.0	129.5	1.5	1.42	0.2	Western Flank

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut-Off	Zone
PK113 (235, -50)	No Significant Results					Ken's Jasperoid
PK114 (90, -85)	No Significant Results					Western Flank
PK115C (90, -80)	14.3	15.8	1.5	0.58	0.2	Western Flank
PK116 (0, -90)	No Significant Results					Ken's Jasperoid
PK117 (90, -70)	No Significant Results					Western Flank
PK118C (90, -75)	No Significant Results					Western Flank
PK119C (270, -70)	146.9	151.9	5.0	2.13	0.2	Western Flank
and	211.1	211.8	0.7	1.65	0.2	
and	274.9	279.5	4.6	0.56	0.2	
PK120 (235, -50)	No Significant Results					Ken's Jasperoid
PK121 (270, -70)	No Significant Results					Western Flank
PK122C (270, -83)	137.8	140.8	3.0	0.52	0.2	Western Flank
and	145.4	146.2	0.9	0.21	0.2	
PK123 (90, -83)	0.0	9.1	9.1	0.87	0.2	Western Flank
and	143.3	153.9	10.7	0.88	0.2	
PK124 (280, -60)	No Significant Results					Ken's Jasperoid
PK125 (310, -60)	No Significant Results					Ken's Jasperoid

**Pilot Gold 2011 AND 2012 DRILL HOLES AND RESULTS**

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Zone
<b>PK001C (-90)</b>	<b>88.5</b>	<b>105.3</b>	<b>16.8</b>	<b>1.64</b>	0.2	East Main
<b>PK002C (90, -68)</b>	<b>111.7</b>	<b>120.4</b>	<b>8.7</b>	<b>6.23</b>	0.2	North Main
<b>incl</b>	<b>117.3</b>	<b>120.4</b>	<b>3.0</b>	<b>12.0</b>	5.0	
<b>and</b>	131.7	135.0	3.4	0.33	0.2	
<b>PK003C (-90)</b>	102.7	110.2	7.5	6.75	0.2	North Main
<b>incl</b>	107.0	110.2	3.2	13.5	5.0	
<b>PK004C (-90)</b>	<b>42.7</b>	<b>61.1</b>	<b>18.4</b>	<b>5.91</b>	0.2	North Access
<b>incl.</b>	<b>45.7</b>	<b>53.5</b>	<b>7.8</b>	<b>11.9</b>	5.0	
<b>and</b>	148.0	152.1	4.1	0.54	0.2	
<b>PK005C (-90)</b>	36.9	39.6	2.7	0.65	0.2	North Access
<b>and</b>	159.6	165.0	5.5	0.58	0.2	
<b>and</b>	166.7	167.6	0.9	0.06	0.2	
<b>PK006C (-90)</b>	53.0	63.4	10.4	0.95	0.2	North Access
<b>PK007 (-90)</b>	No Significant Results					North Main
<b>PK008C (180, -70)</b>	No Significant Results					North Main
<b>PK009C (180, -60)</b>	113.1	122.8	9.8	0.88	0.2	North Main
<b>PK010C (-90)</b>	86.3	93.3	7.0	0.66	0.2	North Main
<b>PK011 (180, -55)</b>	187.5	201.2	13.7	0.41	0.2	North Main
<b>PK012C (270, -70)</b>	No Significant Results					North Main
<b>PK013 (-90)</b>	No Significant Results					North Main
<b>PK014C (270, -50)</b>	<b>94.5</b>	<b>114.9</b>	<b>20.4</b>	<b>5.48</b>	0.2	North Main
<b>including</b>	<b>97.5</b>	<b>103.0</b>	<b>5.5</b>	<b>16.4</b>	5.0	
<b>PK015 (-90)</b>	185.9	187.5	1.5	0.569	0.2	North Main
<b>PK016C (-90)</b>	113.1	113.8	0.8	0.52	0.2	North Main



Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Zone
PK017 (-90)	224.0	227.1	3.0	0.33	0.2	North Main
PK018C (270, -70)	120.4	122.8	2.4	0.85	0.2	North Main
PK019C (90, -70)	126.6	137.2	10.5	1.40	0.2	North Main
PK020C (-90)	No Significant Results					North Main
PK021 (-90)	172.2	184.4	12.2	0.381	0.2	North Main
PK022C (90, -70)	No Significant Results					North Main
PK023 (-90)	204.2	207.3	3.0	0.33	0.2	North Main
and	211.8	213.4	1.5	0.40	0.2	
and	214.9	217.9	3.0	0.20	0.2	
PK024 (-90)	147.8	149.4	1.5	0.40	0.2	North Main
and	157.0	158.5	1.5	0.53	0.2	
and	185.9	202.7	16.8	0.29	0.2	
PK025C (-90)	87.0	94.2	7.2	0.44	0.2	North Main
PK026 (-90)	178.3	182.9	4.6	0.37	0.2	North Main
PK027C (270, -50)	No Significant Results					North Main
PK028 (-90)	85.3	102.1	16.8	0.66	0.2	North Main
PK029C (-90)	72.2	74.7	2.5	0.31	0.2	North Main
PK030 (270, -80)	45.7	54.9	9.1	1.45	0.2	North Main
and	71.6	79.2	7.6	0.45	0.2	
PK031C (90, -85)	31.1	59.9	28.8	0.92	0.2	SE Access
PK032 (90, -75)	42.7	44.2	1.5	0.55	0.2	North Main
and	56.4	57.9	1.5	0.22	0.2	
and	86.9	103.6	16.8	0.45	0.2	
PK033 (90, -80)	39.6	41.1	1.5	0.32	0.2	North Main
and	91.4	93.0	1.5	0.44	0.2	
and	99.1	100.6	1.5	0.61	0.2	

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Zone
PK034C (270, -55)	98.8	101.2	2.4	1.70	0.2	SE Access
PK035 (270, -65)	No Significant Results					SE Access
PK036 (-90)	123.4	128.0	4.6	0.45	0.2	Dunderberg Cyn
and	257.6	262.1	4.6	0.72	0.2	
PK037 (270, -45)	149.4	152.4	3.0	0.44	0.2	Dunderberg Cyn
PK038 (90, -60)	No Significant Results					Dunderberg Cyn
PK039 (-90)	155.4	166.1	10.7	1.08	0.2	Dunderberg Cyn
PK040 (270, -70)	153.9	161.5	7.6	0.74	0.2	Dunderberg Cyn
PK041 (90, -65)	No Significant Results					Dunderberg Cyn
PK042 (-90)	No Significant Results					Dunderberg Cyn
PK043 (270, -52)	128.0	129.5	1.5	1.15	0.2	North Main
PK044 (270, -80)	39.6	41.1	1.5	0.38	0.2	North Main
and	97.5	100.6	3.0	0.31	0.2	
and	118.9	120.4	1.5	0.34	0.2	
and	123.4	126.5	3.0	0.27	0.2	
PK045 (90, -77)	97.5	106.7	9.1	1.03	0.2	North Main
PK046 (90, -70)	80.8	82.3	1.5	0.49	0.2	North Main
PK047 (270, -60)	176.8	178.3	1.5	0.28	0.2	North Main
PK048 (270, -45)	128.0	131.1	3.0	0.21	0.2	North Main
PK049 (270, -77)	182.9	184.4	1.5	0.58	0.2	North Main
PK050 (-90)	126.5	128.0	1.5	0.52	0.2	North Main
PK051 (270, -72)	120.4	126.5	6.1	3.20	0.2	North Main
PK052 (90, -80)	120.4	123.4	3.0	3.13	0.2	North Main

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Zone
<b>PK053 (270, -80)</b>	166.1	169.2	3.0	0.23	0.2	North Main
and	170.7	181.4	10.7	0.63	0.2	
<b>PK054 (270, -60)</b>	169.2	170.7	1.5	0.55	0.2	North Main
and	172.2	173.7	1.5	0.05	0.2	
and	175.3	184.4	9.1	1.12	0.2	
and	185.9	187.5	1.5	0.21	0.2	
<b>PK055 (270, -80)</b>	103.6	105.2	1.5	0.80	0.2	SE Access
<b>PK056 (90, -77)</b>	<b>111.3</b>	<b>126.5</b>	<b>15.2</b>	<b>1.73</b>	0.2	Western Flank
incl	<b>111.3</b>	<b>112.8</b>	<b>1.5</b>	<b>10.6</b>	5.0	
and	193.5	195.1	1.5	0.60	0.2	
<b>PK057 (90, -62)</b>	114.3	115.8	1.5	1.84	0.2	Western Flank
and	184.4	204.2	19.8	2.30	0.2	
<b>PK058 (270, -70)</b>	179.8	182.9	3.0	0.80	0.2	Western Flank
and	<b>195.1</b>	<b>201.2</b>	<b>6.1</b>	<b>1.52</b>	0.2	
<b>PK059 (90, -55)</b>	237.7	239.3	1.5	0.27	0.2	Western Flank
<b>PK060 (90, -85)</b>	155.4	157.0	1.5	0.24	0.2	Western Flank
and	170.7	173.7	3.0	0.35	0.2	
and	199.6	201.2	1.5	1.04	0.2	
and	225.6	227.1	1.5	0.77	0.2	
and	239.3	240.8	1.5	0.28	0.2	
<b>PK061 (90, -72)</b>	<b>143.3</b>	<b>157.0</b>	<b>13.7</b>	<b>6.03</b>	0.2	Western Flank
incl.	<b>144.8</b>	<b>149.4</b>	<b>4.6</b>	<b>15.2</b>	5.0	
and	217.9	219.5	1.5	6.25	0.2	
<b>PK062 (270, -70)</b>	135.6	137.2	1.5	0.28	0.2	Western Flank
and	219.5	221.0	1.5	0.50	0.2	
<b>PK063 (90, -70)</b>	149.4	152.4	3.0	3.91	0.2	Western Flank
<b>PK064 (270, -80)</b>	112.8	114.3	1.5	0.22	0.2	Western Flank
and	144.8	149.4	4.6	1.66	0.2	
and	205.7	208.8	3.0	0.41	0.2	

Hole ID (Az, Dip) (degrees)	From (m)	To (m)	Intercept (m)	Au (g/t)	Au Cut- Off	Zone
<b>PK065 (90, -50)</b>	No Significant Results					Western Flank
<b>PK066 (-90)</b>	<b>140.2</b>	<b>146.3</b>	<b>6.1</b>	<b>2.48</b>	0.2	Western Flank
<b>PK067 (90, -50)</b>	170.7	172.2	1.5	0.27	0.2	Western Flank
and	184.4	193.5	9.1	0.40	0.2	
and	<b>237.7</b>	<b>242.3</b>	<b>4.6</b>	<b>9.50</b>	0.2	
incl	<b>239.3</b>	<b>240.8</b>	<b>1.5</b>	<b>20.5</b>	0.2	
<b>PK068 (90, -50)</b>	No Significant Results					Western Flank