TECHNICAL REPORT FOR THE GREEN SPRINGS EXPLORATION PROPERTY IN

WHITE PINE COUNTY, NEVADA, USA

Prepared For

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SUMMARY

Palladon Ventures Ltd. ("Palladon") entered into an option agreement May 7, 2004 (amended July 9, 2004) to acquire a 100% undivided interest from Genesis Gold Corporation ("Genesis) in five exploration properties, including the Green Springs exploration property, located in White Pine County. Nevada, U.S.A. Palladon is earning the undivided 100% interest in the property, subject to a 2% Net Smelter Return ("NSR") to Genesis Gold and a 1% NSR on encumbered property, by issuing 2 million common shares to Genesis Gold over four years.

The Green Springs property covers an area of 1340 acres or 5.42 square kilometers (542 hectares). The property lies in the east-central Great Basin, approximately 224 miles (360 kilometers) southeast of the capital city of Nevada, Carson City, and 38 miles (61 kilometers) southwest of Ely, the county seat of White Pine County, Nevada. The property encompasses several hills on the northwestern flank of the White Pine Range within the White Pine Mining District. The 67 unpatented mining claims of the Green Springs property are owned by Genesis Gold and are located specifically in parts of Sections 22, 26, 27, 28, 33, and 34 of T 15 N, R 57 E.

The exploration target at Green Springs is Carlin-style precious metal style hosted by middle Paleozoic sedimentary rocks. Previously, the property produced 1.1 million metric tons of ore that averaged 2.1 grams per ton (0.0675 oz/ton) gold at a cutoff of 0.7 grams per ton (0.0225 oz/ton) with a strip ratio of 2.7 to 1. The operator of the property was U. S. Mineral Exploration Company ("USMX"). The largest pit, the C pit, covered three closely spaced gold deposits and contained one million tons of 1.9 grams per ton gold (0.0611 oz/ton). The highest grade gold known mined on the Green Springs property was from the D pit, which yielded 140,000 metric tons of 2.4 grams per ton (0.0772 oz/ton) from a single 395-foot by 100-foot by 100-foot shoot (120-meter by 30-meter by 30-meter) Excellent potential exists for the delineation of more economically viable gold deposits at Green Springs. A regionally important host rock unit, the Pilot Shale, underlies the entire property at generally shallow depths of less than 300 feet (90 meters). This target has been relatively untested and Genesis Gold has begun to identify within this unit, including untested outcrops carrying ore-grade gold values (up to 2.5 grams/ton or 0.0804 oz/ton gold).

The Green Springs Property lies on the northwestern front of the White Pine Range. This portion of the range consists dominantly of eastern assemblage Cambrian to Pennsylvanian sedimentary rocks, largely carbonate units, overlain locally by late Tertiary sedimentary rocks. These rocks are exposed in a large anticline, the Pogonip Dome, with the core of the dome lying about 7 miles (11 kilometers) north of Green Springs. The nearest large intrusives, the Seligman and Monte Crisco stocks at Mt. Hamilton, are exposed in the core of the dome

The geology of the Green Springs property is dominated by Devonian to Mississippian sedimentary rocks exposed in two major north-south trending anticlines. The oldest unit is the Guilmette Formation, a massive light gray thick bedded limestone where definitively identified. A thick sequence of dolomite exposed in the northwest area of

the property is of uncertain stratigraphic position but is tentatively correlated with middle Guilmette. The base of the Guilmette is not exposed near the property, so its local thickness is undetermined. Regionally, it is reported to be at least 1600 feet (490 meters) thick. The Guilmette weathers in bold outcrops and commonly forms massive cliffs.

Above the Guilmette is the Pilot Shale, which is actually dominated by dolomitic to calcareous siltstone with minor shale. The Pilot Shale may be the most important potential gold host on the property. At its base is a 6.6- to 10-foot (2- to 3 meter) thick dark brown calcareous sandstone with some argillaceous limestone just above that. A thickness of 174 feet (53 meters) for the Pilot Shale is reported by USMX geologists on the property. In one exposure on the north side of Cathedral Canyon on the northwest side of the property, the Pilot Shale is only a few feet thick, presumably as a result of tectonic thinning. The Pilot Shale weathers recessively and outcrops are rare. No more than 10% of the section has been seen on the property during mapping by Zimmerman (2004).

The Joanna Limestone sits conformably above Pilot Shale. It consists of a medium-gray thick-bedded coarse limestone with common crinoids fragments. It also contains approximately 1% dark gray chert pods 5 to 15 cm thick. It forms bold outcrops and local cliffs. Much of the property is composed of essentially a dip-slope exposure of Joanna limestone (Photograph 2) with local thin scabs of jasperoid. The Joanna Limestone is reported to be 260 to 295 feet (80 to 90 meters) thick by USMX geologists. Mapping by Genesis Gold geologists indicates the Joanna is 46 meters to 61 meters thick (Figure 3).

On top of the Joanna is the Chainman formation. The lower portion of the Chainman is less than 165 feet (50 meters) thick of thin-bedded dark gray silty to sandy argillaceous limestone. It also contains crinoids, but they are much less abundant than in the Joanna. Above this limestone unit, the Chainman consists of shale with some siliceous and calcareous sandstone and siltstone. The Chainman is not resistant and weathers to slope-forming relief with small outcrops. The Chainman is reported to be 1,480 feet (450 meters) thick in the range to the west.

The uppermost Paleozoic unit on the Green Springs property is the Diamond Peak Formation, 590 feet (180 meters) of sandstone and conglomerate, gradational to the underlying Chainman Formation. It is not exposed within the property boundary but was mapped by USMX geologists, possibly from drill intercepts.

No igneous units have been identified on the property. A thick Tertiary altered dike has intruded the Paleozoic units about 1.5 km northwest of the property. All these units are covered by Tertiary alluvium to the west of the range front. The depth of the alluvium is unknown, but is presumably not thick.

Gold mineralization is restricted to the silty limestones and jasperoids of the lower Chainman Formation where it is controlled by structurally generated permeability. Gold occurs in irregular to elliptical, near-vertical shoots which transect, and are independent of, alteration facies. The shoots usually extend from the middle of the lower jasperoid into the middle of the limestone. The South C shoot continued into the upper jasperoid, where its exposure was the discovery outcrop. The highest gold values often coincide with the decalcified facies between the lower jasperoid and the over-lying limestone. Weak bedding control is illustrated by up-dip ore extensions, particularly within the lower jasperoid, as illustrated by the 1 to 3 grams per ton (0.032 to 0965 oz/ton) gold in areas of the pit. Gold values generally taper smoothly away, both horizontally and vertically, from high-grade cores, which assay as much as 7 grams per ton (0.225 oz/ton), into waste rock. Geochemistry at Green Springs is typical of that in Carlin-style systems, with gold associated with anomalous arsenic, antimony, silver, barium, mercury, and thallium. This has been documented in soils and drilling by USMX geologists and in rock samples by Genesis Gold geologists.

There is good potential to discover one or more economic gold deposits within the Green Springs project area. Several factors point to this conclusion:

- The gold-bearing hydrothermal system that generated previously mined gold deposits at Green Springs is quite likely to have generated more gold deposits that remain to be discovered.

- The project area displays a large area of hydrothermal alteration with local strong geochemical anomalies.

- Very favourable host rocks, such as the Pilot Shale and portions of the Chainman Formation, occur at depths amenable to open pit mining over the majority of the property area. These stratigraphic zones are yet largely untested.

- In isolated outcrops, it has been demonstrated that the Pilot Shale carries ore-grade gold values.

- Ore-controlling faults not previously recognized have been identified, and others are likely to be discovered. These faults may control ore-grade mineralization at depth in the Pilot Shale.

- Land status and infrastructure are supportive of a mining operation.

Further work on the Green Springs property is strongly recommended to further define drill targets and then subsequently test these targets with drilling. Phase I would involve an expenditure of US$96,000 and consist of continued geologic mapping to better define controls on silicification, faults, and any other potential ore-controlling features. The Phase I program also includes significant geophysical and geochemical work to better define and delineate targets, including an IP survey and a soil sampling program. Adjacent claims groups should be acquired and additional claims staked if warranted.

Dependent upon the successful results of the Phase I exploration program, a Phase II program, involving an expenditure of US$250,000, would consist of drill testing approximately 5 to 10 targets with 25 reverse circulation drill holes with some spot coring. Drill hole depths would average approximately 400 feet (120 meters).

1.0 INTRODUCTION AND TERMS OF REFERENCE

1.1 GENERAL

Mr. George S. Young, President and a Director of Palladon Ventures Ltd. ("Palladon") commissioned this report for the Green Springs exploration property, White Pine County, Nevada, U.S.A. This report is written to the requirements and standards of disclosure for mineral projects as stated in National Instrument 43-101. This report is based on a compilation of published and unpublished geologic and geophysical data, maps and reports compiled from private, academic and government sources by the author.

1.2 CURRENCY AND UNITS OF MEASUREMENT

Unless otherwise specifically stated, the U.S. system of measurements is used in this report. Precious metal values are reported in ounce (oz) per ton, unless stated otherwise. The US$ is utilized as the monetary unit except where otherwise indicated. Conversion factors as well as common abbreviations used in this report are as follows:

Linear Measure

1 inch	=	2.54 centimeters
1 foot	=	0.3048 meter
1 yard	=	0.9144 meter
1 mile	=	1.609 kilometers

Area Measure

1 acre	=	0.4047 hectare
1 hectare	=	2.471 acres
1 square mile	=	640 acres or 259 hectares or 2.590 sq. km

Units of Weight

1 short ton	=	2000 pounds or 0.893 long tonne
1 long tonne	=	2240 pounds or 1.12 short tons
1 metric tonne	=	2204.62 pounds or 1.10 short tons
1 pound (16 oz)	=	0.454 kilograms or 14.5833 troy ounces
1 troy oz	=	31.103486 grams
1 troy oz per short ton	=	34.2857 grams per metric ton
1 troy oz per long ton	=	30.6122 grams per metric ton

Analytical Values	percent	grams per metric tonne	troy oz per short ton
1%	1%	10,000	291.667
1 gram/tonne	0.0001%	1	0.0291667
1 troy oz/short ton	0.003429%	34.2857	1
10 ppb			0.00029
100 ppm			2.917

Temperature Conversion Formulas

Degrees Fahrenheit = (ºC x 1.8) + 32
Degrees Celsius = (ºF – 32) x 0.556

Frequently Used Abbreviations

AA	atomic absorption spectrometry
Ag	silver
As	arsenic
Au	gold
ºC	degrees Celsius (centigrade)
cm	centimeter
Cu	copper
F	fluorine
ºF	degrees Fahrenheit
g	gram(s)
Hg	mercury
kg	kilogram
km	kilometer
m	meter(s)
Mn	manganese
my	million years
NSR	net smelter return
oz	troy ounce
oz/ton	ounce per short ton
oz/tonne	ounce per metric tonne
Pb	lead
ppb	parts per billion
ppm	parts per million
sq	square
Sb	antimony
Tl	thallium
Zn	zinc

2.0 DISCLAIMER

This technical report was prepared by Mr. R. H. Russell, M.Sc. Geology, Licensed Geologist in the State of Washington (#205), USA. Mr. John Zimmerman, M.Sc. Geology of Genesis Gold Corporation ("Genesis Gold"), prepared most of the illustrations and provided geologic data and first-hand knowledge of the Green Springs property. This report was commissioned by Mr. George S. Young on behalf of Palladon. Mr. Russell has over 36 years experience in the mining industry, including mineral exploration, mine development, reserve estimation, economic evaluation and modeling, and Mr. Russell has extensive exploration and development experience in the Great Basin and Nevada. Mr. Zimmerman has a M.Sc. degree in geology from the University of Arizona and over 25 years experience as a geologist, mostly in the field of gold exploration in Nevada.

Mr. Russell visited the Green Springs property on July 23, 2004, and is relying on knowledge obtained on that examination and the information provided to him by Palladon and Genesis Gold. Additional sources of information are data and information from work performed by Genesis Gold, and descriptions and interpretations of the geology and mineral deposits of the area taken largely from the published scientific papers and the data provided by Genesis Gold. Additional descriptions and interpretations of the geology and mineral deposits of the area are taken from, public records and studies prepared and written by qualified persons, or by professional people employed by companies that performed the work prior to the time the designation of "qualified person" was in use. It is believed that the data and information contained herein are accurate and reliable.

It was not within the scope of this report to examine in detail or to independently verify the legal status or ownership of the mineral property. Palladon has provided information concerning the status of the mineral property. The author reviewed the relevant documents and has no reason to believe that ownership and status are other than as has been represented, but determination of secure mineral title is solely the responsibility of Palladon, and a full mineral title audit is strongly recommended as a normal course of due diligence.

3.0 PROPERTY LOCATION, ACCESS AND DESCRIPTION

Palladon entered into an option agreement May 7, 2004 (amended July 9, 2004) to acquire a 100% undivided interest from Genesis Gold in five exploration properties, including the Green Springs exploration property, located in White Pine County. Nevada, U.S.A. Palladon is earning the undivided 100% interest in the property, subject to a 2% Net Smelter Return ("NSR") to Genesis Gold and a 1% NSR on encumbered property, by issuing 2 million common shares to Genesis Gold over four years.

The Green Springs property covers an area of 1340 acres or 5.42 square kilometers (542 hectares). The property is composed of 67 unpatented mining claims owned by Genesis Gold. The property is in eastern White Pine County in eastern Nevada, approximately 224 miles (360 kilometers) east of the capital city of Carson City. The property is located approximately 38 air miles (61 kilometers) miles southwest of the White Pine County seat at Ely, Nevada, specifically in parts of Sections 22, 26, 27, 28, 33, and 34 of T 15 N, R 57 E. The property boundaries are irregular but are encompassed within an area with UTM coordinates (Zone 11N, NAD27) of:

TABLE 3.1
UTM Coordinates

Corner	X (meters) - Easting	Y (meters) - Northing
NW	624300	4335000
NE	626750	4335000
SW	624300	4331000
SE	626750	4331000

3.1 MINERAL DISPOSITION

The Green Springs property consists of 67 unpatented mining claims, as follows:

TABLE 3.2
Green Springs Land

Property Name	Identification Number
Unpatented claims GRS 66-71, 86-92, 201-204, 204-209, 301-308, 405-408, 505-509, 603-609, and 702-707	BLM # NMC 883305-883359
Unpatented claims GSR 110-112, 210-212, 309-311, 409-411	BLM # NMC 859884-859895

3.2 LEGAL SURVEY

The unpatented claims at the Green Springs property have not been legally surveyed and no legal survey is required.

The underlying land is owned by the Bureau of Land Management ("BLM") and the US Forest Service ("USFS"). The BLM administers all unpatented mining claims. A $135 annual rental fee is required for each claim, payable to the BLM, and a payment of $8 per claim to White Pine County. The annual rental fees must be paid to the BLM before September 1 of each year to retain the claims, and the claims are also held by filing a Notice of Intent to Hold Mining Claims in the appropriate county (White Pine County). Each individual claim is 1,500 feet (457 meters) long by 600 feet (182 meters) wide with four corner posts and one location monument. All the claims are located by 2-inch x 2-inch (5.1 x 5.1-centimeter) wooden monuments about 4.5 feet (1.4 meters) high, properly marked.

3.3 ENVIRONMENTAL AND PERMITTING

The Green Springs property is not subject to any know environmental liabilities. The previous mining operation by USMX does not affect Genesis Gold/Palladon's ability to conduct exploration or subsequent development activities.

Prior to commencement of any surface disturbance, Palladon must obtain documents from the appropriate BLM and/or USFS office which permits exploration activities such as trenching, drilling, or construction of new roads. Palladon must also post a reclamation bond prior to performing any surface disturbance on the property; however, no Environmental Impact Statement ("EIS") is needed to conduct such work in the district in which the property is located. Generally, a period of two months should be allowed for permit application, preparation and approval.

4.0 PHYSIOGRAPHY, INFRASTRUCTURE AND CLIMATE

The claims lie on BLM and US National Forest ground at elevations of 6,300 to 7,300 feet (1,921 to 2,226 meters). Topography is moderate to locally steep with the hillsides covered with sagebrush, juniper, and pinion. Dirt and gravel roads provide good access to the project area. There are no perennial streams transecting the project area although Cathedral Canyon on the north end of the project area is a major drainage. The area receives moderate winter snows and occasional summer thunderstorms.

The town of Ely is located 70 driving miles (113 kilometers) northeast of the Greens Springs property. Access to the property from Ely is by Highway 50 west 50 miles (80 kilometers) to the turnoff to Green Springs, then south 20 miles (32 kilometers) on good dirt roads. Ely is a community of approximately 7,000 people. It is the county seat, has retail and service suppliers, a small airport, hospital, police, and other facilities. Ely has long been the support and residence base for the nearby Ruth porphyry copper mine.

Train lines and a network of Interstate and state highways provide excellent transportation infrastructure throughout Nevada. A spur rail line to Ely from the major intercontinental lines is planned to be re-opened soon to ship concentrates from the recently re-opened Ruth copper mine. Grid electrical power is not available on the property.

The mean annual precipitation ranges from 10 to 14 inches (25.4 to 35.6 centimeters), most of which falls in the form of snow between November and March or rain from summer thunderstorms. The seasonal temperatures range from 0°F to 50°F (-17.8ºC to 10ºC) in winter months and from 50°F to 90°F (10ºC to 32ºC) in summer months. Exploration and mining can be conducted in the area on a year round basis except during short periods of heavy snow.

5.0 HISTORY

Lode mining claims at the Green Springs property were first located by U. S. Minerals Exploration Company ("USMX") in 1979 (Wilson, Cox and Lance, 1991). These claims were all abandoned by the middle 1990's. John Cox located two claims in the late 1990's which he currently holds. The Cox claims are completely surrounded by the 67 Genesis Gold claims which were located in 2003 and 2004. Nevada Mine Development holds 17 claims which abut the north side of the Genesis claims.

Genesis Gold holds the Green Springs property as sole and beneficial owner with good and marketable title subject only to the paramount title of the United States of America, and has the authority and capacity to convey a 100% undivided interest in the property to Palladon. The number and location of claims that may have been present prior to those held by USMX, Cox or Nevada Mine Development is not known. However, under the title laws of the United States of America, had there been any prior claimants, any mineral or surface rights to the ground that prior claimants may have held, and is now held by Genesis Gold, are now null and void. As a result, the Genesis Gold Green Springs property is believed to be unencumbered by any claim ownership prior to Genesis Gold.

5.1 PREVIOUS WORK

Modern exploration at the Green Springs property was initiated by USMX in the late 1970's as part of regional jasperoid exploration program, and continued with various joint venture partners until 1986. The exploration model used at that time focused on the "Pilot Shale/Alligator Ridge model", and while targets were identified and drilled, "none proved large enough to warrant continuing in the partnership" (Wilson, Cox and Lance, 1991). At that time, USMX began its own exploration program, focused on finding and developing resources in the near-surface Chainman Formation units. As a result, lode claims overlying the Green Springs deposits were initially staked in 1979 along a 2.5-mile long (4-kilometer) north-trending band of jasperoids that crop out prominently along the western front of the White Pine Range (Figure 3 and Photo 1). Detailed soil sampling over the Chainman Formation at Green Springs and a campaign of 350 shallow drill holes defined the C, C North, and D gold deposits which reportedly contain 1.1 million metric tons of ore at a grade of 2.1 grams per ton (0.0675 oz/ton Au) (Wilson, Cox and Lance, 1991). The deposits were mined from 1988 to 1990 and processed with heap leach technology. In addition to these gold deposits three more gold deposits, the "A", "B", and "E", which have not been mined (Wilson, Cox and Lance, 1991). Cox (personal communication, 2004) says that the B and E "deposits" may contain a combined 10,000 to 20,000 ounces of gold resource. The Cox claims cover the B and E deposits while the Nevada Mine Development claims control the A deposit. The size of the A deposit is unknown to the author.

Exploration drilling commenced in June 1986 using a track mounted reverse circulation drill rig. This drill system allowed for reduced road construction and subsequent cost as well as associated permitting delays, and greatly expedited the exploration program. The fourth drill hole in the program intersected 69 feet (21 meters) of 1.9 grams per ton gold (0.061 oz/ton), starting at a depth of 10 feet (3 meters) below the surface. Over the next 12 months, approximately 350 holes were drilled on a 50 by 100-foot (15 by 30-meter) grid, which delineated the deposits (Wilson, Cox and Lance, 1991).

At the same time the drilling program began, a detailed soil sampling program was conducted over the 1.5 mile (2.4 kilometer) band of jasperoids that were subsequently found to constitute the main gold trend. Gold values as high as 3.4 grams per ton (0.109 oz/ton) were obtained from soil samples over argillized limestone next to relatively barren jasperoid outcrops over portions of what subsequently was found to be the main gold deposit. The results of the soil program, coupled with detailed mapping, were instrumental in guiding USMX's successful drilling program in the Greens Springs area. Stream sediment samples also identified the main orebody (Wilson, Cox and Lance, 1991).

5.2 PRODUCTION AT GREEN SPRINGS

The C, C North and D gold deposits were mined between May, 1988 and early 1990. The deposits produced 1.1 million metric tons of mineralized rock that averaged 2.1 grams per ton (0.0675 oz/ton) gold at a cutoff of 0.7 grams per ton (0.0225 oz/ton), with a strip ratio of 2.7 to 1. The largest pit, the C pit, covered three closely spaced gold deposits and contained one million tons that averaged 1.9 grams per ton gold (0.0611 oz/ton). The highest grade gold previously mined on the Green Springs property was from the D pit, which yielded 140,000 metric tons that averaged 2.4 grams per ton (0.0772 oz/ton) from a single 395-foot by 100-foot by 100-foot shoot (120-meter by 30-meter by 30-meter) (Wilson, Cox and Lance, 1991).

6.0 GEOLOGIC SETTING

The Green Springs Property lies on the northwestern front of the White Pine Range, in the central portion of the Great Basin Geologic Province in White Pine County, Nevada. This portion of the White Pine Range consists dominantly of eastern assemblage Cambrian to Pennsylvanian sedimentary rocks, largely carbonate units, overlain locally by late Tertiary sedimentary rocks. These rocks are exposed in a large anticline, the Pogonip Dome of Humphrey (1960), with the core of the dome lying about 7 miles (11 kilometers) north of Green Springs. The nearest large intrusives, the Seligman and Monte Crisco stocks at Mt. Hamilton, are exposed in the core of the dome (Hose and Blake, Jr., 1976).

6.1 REGIONAL GEOLOGY

White Pine County is located along the eastern edge of Nevada and is bounded on its east side by the Nevada/Utah State line. The county is made up of elongate north-trending mountain ranges and generally flat-bottomed valleys that typify the Basin and Range province. The county's total area is 8,904 square miles (14,326 square kilometers), an area larger than the state of New Jersey. The county seat, Ely, is just south of the center of the county. Located in the Basin and Range province, the county presents sharp contrasts in physiography. It contains nearly flat-bottomed valleys 5,500 to 6,100 feet (1,677 to 1,860 meters) above sea level, separated by north-trending ranges of rugged mountains cresting at heights of more than 9,000 feet (2,744 meters). The highest point in the county is the summit of Wheeler Peak in Great Basin National Park in the Snake Range at 13,063 feet (3,983 meters) above sea level (Hose and Blake, Jr., 1976).

From late Precambrian until the Early Triassic, White Pine County was part of the Cordilleran miogeosyncline in which a total of 30,000 to 40,000 feet (9,146 to 12,195 meters) of strata accumulated. The lowest 10,000 feet (3,050 meters) of this section are mainly quartzite and the rest is mostly limestone and dolomite with lesser amounts of sandstone, siltstone, and shale. No Middle or Upper Triassic or Jurassic strata have been identified in the county, but limited outcrops of continental Lower Cretaceous strata occur in the westernmost part of the county (Hose and Blake, Jr., 1976).

Plutonic rocks are of Jurassic, Cretaceous, and Tertiary age and range in composition from granite through quartz monzonite to granodiorite. Dikes and sills are locally very common. The Tertiary plutons may be the deep-seated equivalents of the older Tertiary volcanic rocks. In the vicinity of intrusive rocks, particularly the larger ones, the country rock has been metamorphosed to grades as high as staurolite-garnet. The contact metamorphosed rocks are also locally intensely deformed (Hose and Blake, Jr., 1976).

During the Paleozoic, no intensive tectonism occurred in this region of Nevada, although mild or gentle regional upwarps formed hiatuses in parts of the stratigraphic section. Major tectonic events, such as the Antler orogeny in areas to the west, had generally only secondary effects in White Pine County. A significant angular discordance at the base of the Lower Cretaceous rocks in the westernmost part of White Pine County records the first major tectonism, but this event can be dated only as post-Early Permian and pre-Early Cretaceous. No positive correlation of this unconformity with structural features in other parts of White Pine County is possible (Hose and Blake, Jr., 1976).

East-central Nevada was affected by two major tectonic events, one during the late Mesozoic to early Tertiary time, and the other, the Basin and Range tectonism, reached its climax in the late Miocene. The younger of these two events produced the elongate fault-block mountain ranges and flat-bottomed valleys that characterize the physiography of today. The older event produced a variety of structural features, including high-angle faults and low-angle faults, which are mainly of the younger-on-older type. Fairly large amplitude folds are also found in the nonmetamorphic terrane. These large folds contrast with the tight folds of small magnitude in the contact metamorphosed rocks. Large-scale features include: (1) a structural trough extending from the north end of the county southward through the Butte Range to Jakes Valley, with a branch cutting southeast across the Egan Range just south of Ely; (2) homoclinal blocks that are intricately faulted; and (3) a low-angle fault complex deemed to be a decollement (Hose and Blake, Jr., 1976).

6.2 STRATIGRAPHY

Table 6.1 shows the Middle Paleozoic stratigraphic section in the Green Springs property area. Theses units are discussed in the subsequent sections as well as other rock units that have a bearing on the geology of the property area.

6.3 DEVONIAN STRATA

Throughout most of White Pine County, the nomenclature we have applied to the Devonian carbonate rock was derived from Gold Hill, Utah (Nolan, 1935). In the Diamond Mountains, along the western edge of the county, the terminology refined by Nolan, Merriam and Williams (1956) is in general use. Thus the Nevada Formation of the Diamond Mountains is equivalent to the Sevy Dolomite and Simonson Dolomite plus perhaps a part of the lower Guilmette Formation of areas to the east, and the Devils Gate Limestone of the Diamond Mountains is equivalent to the remainder of the Guilmette Formation. The Diamond Mountains sequence of Devonian carbonate is very much like the sequence to the east but differs in some details of definition. The Diamond Mountains section also contains a thick unit of quartzite, the Oxyoke Canyon Sandstone Member, which separates the Beacon Peak Dolomite Member from the overlying Sentinel Mountain Dolomite Member. The top of the Oxyoke Canyon is the approximate top of the Sevy Dolomite in areas to the east (Hose and Blake, Jr., 1976).

6.3.1 Sevy Dolomite

The Sevy Dolomite, together with the Simonson Dolomite, was studied extensively by Osmond (1954). The Sevy is probably one of the most distinctive, uniform, and persistent stratigraphic units in east-central Nevada. Hose and Blake, Jr. (1976) have estimated that its thickness in the Red Hills and the central Cherry Creek Mountains ranges from 400 to 500 feet (120 to 150 meters) and have estimated that the equivalent of the Sevy in the Nevada Formation of the southern Ruby Mountains is 300 to 500 feet thick (90 to 150 meters), but it is so poorly exposed that this estimate may be too large.

The Sevy Dolomite was named by Nolan (1935) and consists mainly of medium-gray dolomite that weathers light gray to yellowish gray, but in some places, it includes layers of darker dolomite. Most of the dolomite is very fine textured, but it becomes somewhat coarser in the lower part of the formation (Osmond, 1954). Thin beds of medium- to rather coarse-grained quartz sandstone, which Hose and Blake, Jr. (1976) regard as tongues of the Oxyoke Canyon Sandstone Member of the Nevada Formation, occur locally in about the upper 100 feet (30 meters) of the unit. In many places, the Sevy Dolomite contains quartz grains that are not abundant enough to form beds of sandstone but appear to float in the dolomite matrix. The dolomite beds weather to blocky angular cuboidal fragments, on the surfaces of which one can sometimes observe a faint lamination. The contact of the Sevy with the underlying Fish Haven and Laketown Dolomites is generally well marked because the rocks below it are darker, coarser grained, and more massive than the Sevy Dolomite (Hose and Blake, Jr., 1976).

6.3.2 Simonson Dolomite

Nolan (1935) named the Simonson Dolomite for exposures in the Gold Hill district of western Utah. Osmond (1954), who made a comprehensive study of the Simonson Dolomite, over large parts of eastern Nevada and western Utah, has divided the formation on lithologic grounds into four members that appear to persist over large areas. The oldest of these, which he called the "coarse member," consists of sugary textured pale-yellowish-brown dolomite that weathers pale brown to light olive gray. The dolomite in this member is generally friable and forms rounded ledges. The next higher member, the "lower alternating member," consists of beds of dense light-colored dolomite, like the dominant rock in the Sevy Dolomite, and alternates with beds of somewhat coarser medium-dark-gray dolomite that weathers olive gray. Most of the darker beds are distinctively laminated, a characteristic that was observed in the type area by Nolan (1935). The next higher unit, which Osmond (1954) called the "brown cliff member," is generally about 50 feet (15meters) thick and consists of finely crystalline dark to medium gray dolomite that weathers olive gray to pale yellowish brown. This member contains abundant fossils, and because these consist of light-colored dolomite, they contrast sharply with the darker matrix. The “brown cliff member," is more resistant to weathering than the units below and above it. The highest member, which Osmond (1954) called the "upper alternating member," bears a general resemblance to his "lower alternating member" but contains lenses of fine-grained medium-gray limestone (Hose and Blake, Jr., 1976).

The contact of Simonson Dolomite with the underlying Sevy Dolomite is characterized in some places by a gradational zone 10 to 20 feet (3 to 6 meters) thick, but in most places, the position of the contact can be closely determined by the sharp contrast between the dense, medium-light-gray dolomite of the Sevy and the pale-brown to yellowish gray sugary textured and massive dolomite of the Simonson. The Sevy just below the contact frequently contains beds of sandstone or zones of sandy dolomite. C. W. Merriam (*in* Hose, 1966) has correlated the upper part of the Simonson in the Confusion Range of western Utah with the Woodpecker Limestone and Bay State Dolomite Members of the Nevada Formation in the Eureka area (Hose and Blake, Jr., 1976).

6.3.3 Guilmette Formation

The Guilmette Formation and the Devils Gate Limestone, which are similar in lithologic character and of about the same age, vary in thickness. The thinnest, clearly unfaulted sections of the Guilmette are in the Red Hills where their thickness, according to estimates by Hose and Blake, Jr. (1976) ranges from 1,050 to 1,175 feet (320 to 360 meters). Hose and Blake, Jr. (1976) have also estimated that the Guilmette exposed in the central part of the Cherry Creek Range is less than 500 feet (150 meters) thick, but this is less than any thickness measured elsewhere. Moores, Scott and Lumsden (1968) have found the Guilmette Formation to be about 2,000 feet (610 meters) thick in the White Pine Range-Grant Range area. According to Nolan and others (1956), the Devils Gate Limestone at Newark Mountain and the Alhambra Hills in the western part of White Pine County is 1,190 feet (360 meters) thick (Hose and Blake, Jr., 1976).

The Guilmette Formation has a characteristic lithology that persists over large areas. It is predominantly even-bedded, dark-gray to grayish-black sublithographic limestone that weathers olive gray to medium light gray and is locally cut by small veins of white calcite. Most of the limestone is in beds 1 to 5 feet (0.3 to 1.5 meters) thick, but some of the formation is thin bedded, and some of the unit forms thick, massive beds. The Guilmette is somewhat darker on fresh fractures than any other Paleozoic limestone in this region. In many sections, as much as 30 percent of this formation consists of medium to dark gray dolomite that weathers light olive gray to brownish black. Much of the Guilmette, particularly the upper part, contains biostromes. These are mainly stromatoporoids of either the *Stromatopora* or the *Amphipora* type, but corals are very abundant in certain zones (Hose and Blake, Jr., 1976).

The contact of the Guilmette Formation with the underlying Simonson Dolomite is marked by the contrast between the alternating layers of laminated dolomite and limestone in the Simonson and the somewhat more resistant medium- to thick-bedded limestone in the Guilmette. The Guilmette Formation and older Devonian units in White Pine County constitute a sequence of rocks much like that exposed in the Confusion Range of western Utah. The work by Hose and Blake, Jr. (1976) supports the correlation of these units with the Nevada Formation and Devils Gate Limestone as proposed by Hose (1966).

6.4 DEVONIAN /MISSISSIPPIAN STRATA

6.4.1 White Pine Group of Misch (1960)

The White Pine Group of Misch (1960) includes, in ascending order, the Pilot Shale, the Joana Limestone, and the Chainman Formation. East of the White Pine Range, this group is overlain by the Ely Limestone, but in the White Pine Range and farther west the Group is overlain by and intertongues with the Diamond Peak Formation.

6.4.2 Pilot Shale

The Pilot Shale was named by Spencer (1917) for exposures in the Ely (Robinson) district, Nevada, and the unit has subsequently been identified in many parts of central and eastern Nevada and western Utah. In western Utah, the Pilot Shale is found in the Mountain Home Range, Burbank Hills and the Confusion Range. The Pilot Shale was deposited across the Devonian/Mississippian time line and, in reality, only a small part of the formation is actually shale. Most of the unit consists of yellow- and orange-weathering, thin-bedded, silty limestone, with thin interbeds of shale, siltstone, sandstone, and limestone. It is less resistant than the Guilmette Formation beneath and the Joana Limestone above, so it forms strike-valleys and covered slopes wherever it occurs (Hintze and Davis, 2003). It should be noted that rocks at or near the Devonian/Mississippian age boundary are important ore hosts at the Rain Mine and Bullion/Railroad district 18 to 25 miles (29 to 40 kilometers) south of the town of Carlin, Nevada (Abbott, 2003; Abbott and Keith, 1999; Jackson and Ruetz, 1991; Mathewson, 2001; Mathewson and Beetler, 1998; Thoreson, 1991), and at the Alligator Ridge gold deposit, approximately 40 miles (65 kilometers) west of Ely, Nevada (Wilson, Cox and Lance, 1991).

According to Moores, Scott and Lumsden (1968), the Pilot Shale is absent in the southern part of the White Pine and northern Grant Ranges. However, Hose and Blake, Jr. (1976) map about 75 to 100 feet (23 to 30 meters) of Pilot along upper Ellison Creek in the White Pine Range, and farther north in the White Pine Range, Humphrey (1960) reports that there are 150 to 200 feet (45 to 60 meters) of the Pilot. Approximately 6 miles north of Mount Grafton, in the southern Schell Creek Range, Hose and Blake, Jr. (1976) found that the pilot Shale is as much as 50 feet (15 meters) thick in some places, but has thinned out to a knife edge. The thickest sections of the Pilot are in the northeastern part of the county. Fritz (1960) found it to be 615 feet (190 meters) thick in the southern Cherry Creek Range, Dechert (1967) gives its thickness in the northern Schell Creek Range as 700 feet (210 meters) and Hose and Blake, Jr. (1976) have estimated that it is 950 feet (290 meters) thick in the Red Hills.

The Pilot Shale consists mainly of platy, slope-forming olive-gray dolomitic siltstone, interbedded with silty shale that weathers dusky yellow gray and usually contains a large proportion of silt-sized quartz grains. Although these rocks are generally predominant, in some places the Pilot contains thin beds of nodular argillaceous and silty limestone and clay shale. Locally, the siltstone and shale are limy. The basal contact of the Pilot is marked by a contrast between the slope-forming shales and the resistant beds of underlying Devonian limestone. The Pilot Shale in the near Eureka is regarded by Nolan and others (1956) as Devonian and Mississippian in age, which is comparable to the age for the unit in western Utah (Hose and Blake, Jr., 1976; Hose, 1966).

6.5 MISSISSIPPIAN STRATA

6.5.1 Joana Limestone

The Joana Limestone was named by Spencer (1917) after the Joana mine near Ely. The unit is a sequence of limestone beds that succeeds the Pilot Shale and is overlain by the Chainman Formation. The ages of the uppermost and lowermost beds of the Joana vary from place to place in the eastern Great Basin. For example, the lower part of the Joana Limestone in the northern Pancake Range contains beds of Kinderhook (Early Mississippian) age, whereas in the Confusion Range of western Utah, a Kinderhookian fauna occurs as much as 180 feet (55 meters) below the base of the Joana (Hose and Blake, Jr., 1976; Hose, 1966).

At most localities in White Pine County north of the latitude of Ely, the reported thicknesses of the Joana Limestone ranges from 90 to 225 feet (25 to 70 meters). Humphrey (1960) reports that in the White Pine Range the Joana is as much as 150 to 250 feet (45 to 75 meters) thick, which is compatible with the estimate of Hose and Blake, Jr. (1976) of 150 to 175 feet (45 to 53 meters) for the southern White Pine Range. The rocks that Hose and Blake, Jr. (1976) have mapped as Joana in the Pancake Range are more than 500 feet (150 meters) thick, but they may include some limestone that grades laterally into rocks mapped elsewhere as Pilot Shale (Hose and Blake, Jr., 1976).

The Joana Limestone consists mainly of massive medium gray to medium light gray limestone that is a cliff and ridge forming unit, but it includes some zones in which the beds are no more than a foot thick, and these zones form ragged ledgy slopes. Some of the Joana contains nodules of chert. The limestone is organic detrital, being made up of fragments of echinoderms, bryozoans, foraminifers, algae, and indurated calcareous mud (Hose and Blake, Jr., 1976).

6.5.2 Chainman Formation (Shale)

The Chainman Formation, originally called the Chainman Shale by Spencer (1917), was named for the old Chainman mine located 2 miles (3 kilometers) west of Ely. The Chainman crops out in some part of nearly every mountain range in White Pine County. The rocks mapped as Chainman are overlain in the Diamond Mountains, Ruby Mountains, Butte Mountains, and parts off the White

Pine Range by the Diamond Peak Formation, but are overlain elsewhere by the Ely Limestone (Hose and Blake, Jr., 1976).

Because the Chainman Formation consists primarily of soft, incompetent rocks, the unit has been more severely deformed than the units below and above, and is in general poorly exposed. For these reasons, it is very difficult to obtain any reliable measurements of its thickness or to determine its precise relations to the underlying and overlying stratigraphic units. Moores, Scott and Lumsden (1968) state that in parts of the southern White Pine/Grant Range area, the Chainman is as much as 2,000 feet (610 meters) thick (Hose and Blake, Jr., 1976). In this area, the Chainman is overlain by the Ely Limestone, which in some ranges in eastern White Pine County has been brought in contact with the Chainman by a low-angle fault (Hose and Blake, Jr., 1976).

The Chainman Formation is generally quite uniform in lithologic character, consisting mainly of very dark-gray to black shale and olive-gray platy siltstone or silty shale. Locally, as in the Cherry Creek Range, the lower part of the unit includes thin beds of dark gray, bituminous, fine-grained limestone and some lighter colored organic detrital limestone. In the upper 50 feet (15 meters)of the Chainman in at least in the eastern two-thirds of the county, there are beds of medium-gray to olive-gray organic-detrital limestone. Where the Chainman is succeeded by the Ely Limestone, its upper half commonly contains a few beds of quartzite and quartzitic siltstone that weather rusty brown or olive, and form ragged ledges on an otherwise covered slope (Hose and Blake, Jr., 1976).

6.5.3 Diamond Peak Formation

West of the White Pine and Butte Ranges, the Diamond Peak Formation is easily recognized and mapped as a discrete unit of formational rank. In the northern White Pine Range, Hose and Blake, Jr. (1976) to locally include the unit with the White Pine Group of Misch (1960). The thickness of the Diamond Peak in the vicinity of Hamilton was said by Humphrey (1960) to range from 600 to 1,000 feet (180 to 300 meters), and Hose and Blake, Jr. (1976) estimate that in the area just east of Bald Mountain in the southern Ruby Mountains, the Diamond Peak attains a maximum thickness of 2,500 feet (760 meters) (Hose and Blake, Jr., 1976).

Stewart (1962) describes the Diamond Peak Formation in the Pancake Range as consisting predominantly of olive gray siltstone and silty claystone, with sandstone ranking next in abundance and conglomerate constituting only about 1 percent of the section. Brew (1961), however, says that in that part of the Diamond Range which is included in the Eureka quadrangle, conglomerate makes up at least 12 percent of the formation. The sandstone is crossbedded and massive to platy; in some places, it is interbedded with grit. The Diamond Peak weathers grayish yellow, moderate yellowish orange, or brick red and the texture of the sandstone ranges from very fine to very coarse. The conglomerate contains pebbles and cobbles that consist mainly of quartzite or chert; the latter are, according to Nolan, Merriam and Williams (1956) derived from the Vinini Formation (Hose and Blake, Jr., 1976).

6.6 INTRUSIVE ROCKS

In the White Pine Range, Armstrong (1970) obtained a potassium-argon age of 90.4 my for the Seligman stock at Mt. Hamilton, and Adair and Stringham (1960) an age of 128 my by the lead-alpha method. Approximately 0.75 mile (1.2 kilometers) southwest of the Seligman stock is the Monte Cristo stock, which Humphrey (1960) believes to be older, but from which no radiometric ages are known to have been obtained (Hose and Blake, Jr., 1976).

The Seligman stock consists of medium-grained biotite-hornblende granodiorite. The Monte Cristo stock was probably of similar composition when it was intruded, but it has undergone such intense hydrothermal alteration that it has largely been converted to quartz, sericite, and clay minerals (Hose and Blake, Jr., 1976; Humphrey, 1960).

6.7 COVER ROCKS

Generally, thick sections of alluvium and younger volcanic sequences fill the valleys and relatively thin ash–flow tuffs, conglomerates and cover hills and are present at various locations in the White Pine Range (Hose and Blake, Jr., 1976).

6.8 STRUCTURE

White Pine County contains a wide variety of structural features that were produced mainly by two major tectonic events. Although the duration and timing of these two events are not precisely known, both were probably of long duration, and the older one at least was genetically multiphased. On the basis of regional considerations, the older major event seems to have occurred sometime during the late Mesozoic and early Cenozoic, and the younger Basin and Range event or orogeny may have started in the Oligocene and reached a climax in the late Miocene. The Basin and Range tectonic event was responsible for the present basins and ranges. In addition to these major tectonic events, the region was also affected by small upwarps that occurred at various times during the Paleozoic as manifested by local mild unconformities. In parts of White Pine County, coarse clastic detritus within the Paleozoic strata records coeval tectonic activity during the Mississippian, Pennsylvanian, and Permian in areas to the west. Distinct angular unconformities between or within certain Paleozoic units of the western part of the county also indicate tectonic activity to the west, and one at the base of the Early Cretaceous Newark Canyon Formation may indicate Triassic or Jurassic tectonism (Hose and Blake, Jr., 1976).

6.8.1 Low-angle Faults

The most important single structural feature of eastern Nevada is a large, low-angle fault or fault complex the Snake Range. Apparently, large areas in eastern Nevada are underlain by this decollement which is well exposed in many places and extends throughout the Snake Range. The structure is more than 50 miles (80 kilometers) long and more than 15 miles (24 kilometers) wide. It is easily recognized by the marked difference in age of component rocks and by the difference in structural patterns between the upper and the lower plates. A particularly striking feature of the decollement is that only the lower plate was cut by intrusive bodies that locally metamorphosed the country rock. More than likely, somewhere the upper plate must contain intrusive and metamorphic rocks, but these have been moved out of the Snake Range (Hose and Blake, Jr., 1976).

The upper plate of the decollement contains both low-angle and high-angle faults, and in the Snake Range, all the low-angle faults within the upper plate have put younger rocks on top of older rocks. Faults in the upper plate put Pennsylvanian rock on Mississippian, another put the Devonian Guilmette Formation on the older Devonian Simonson Dolomite, and another places the Simonson on the Pogonip Group of Ordovician age. Misch (1960) has described the result of this low angle faulting as "piled up" structure, but the term may be misleading because it suggests a thickening of the allochthon complex, whereas the Paleozoic section of the allochthon actually has been greatly thinned by the elimination of strata (Hose and Blake, Jr., 1976). Low-angle faults that put older rocks on younger are much less common in this region of Nevada than those that put younger on older and are generally of small displacement (Hose and Blake, Jr., 1976).

Estimates of the age of the Basin and Range tectonism are based upon indirect evidence. In the early Pliocene part of the younger Tertiary sequence exposed in the north-easternmost part of White Pine County, there are large clasts of coarse-grained porphyritic granitic rock whose lithologic character suggests that they were derived from a pluton exposed on Haystack Peak in the Deep Creek Range of western Utah. This granitic rock, which must have been emplaced and cooled at depth, was later elevated by the Basin and Range tectonism to altitudes of as much as 12,000 feet.

6.8.2 Folds

Except for parts of the metamorphic autochthonous terrane, most folds, especially those of some magnitude, are restricted to the vicinity of the Butte structural trough. The trends of principal folds within the structural trough area generally parallel the axis of the trough. Folds just west of the trough in the White Pine and Pancake Ranges have northerly trends and are marked to some extent by longitudinal faults. The folds are framed by upper Paleozoic rocks that contain thick incompetent units, which undoubtedly had some effect on the fold form (Hose and Blake, Jr., 1976).

6.9 GEOLOGIC SETTING AND GEOCHEMISTRY OF THE PROPERTY

6.9.1 Geology

The geology of the Green Springs property is dominated by Devonian to Mississippian sedimentary rocks exposed in two major north-south trending anticlines (Figure 3). The oldest unit is the Guilmette Formation, a massive light gray thick bedded limestone where definitively identified. A thick sequence of dolomite exposed in the northwest area of the property is of uncertain stratigraphic position but is tentatively correlated with middle Guilmette. The base of the Guilmette is not exposed near the property, so its local thickness is undetermined. Regionally, it is reported to be at least 1600 feet (490 meters) thick (Humphrey, 1960). The Guilmette weathers in bold outcrops and commonly forms massive cliffs.

Above the Guilmette is the Pilot Shale, which is actually dominated by dolomitic to calcareous siltstone with minor shale. The Pilot Shale may be the most important potential gold host on the property (Figure 4). At its base is a 6.6- to 10-foot (2- to 3 meter) thick dark brown calcareous sandstone with some argillaceous limestone just above that. Wilson, Cox and Lance (1991) report a thickness of 174 feet (53 meters) for the Pilot on the property. In one exposure on the north side of Cathedral Canyon on the northwest side of the property, the Pilot Shale is only a few meters thick, presumably as a result of tectonic thinning. The Pilot weathers recessively and outcrops are rare. No more than 10% of the section has been seen on the property during mapping by Zimmerman (2004).

The Joanna Limestone sits conformably above Pilot Shale. It consists of a medium-gray thick-bedded coarse limestone with common crinoids fragments. It also contains approximately 1% dark gray chert pods 5 to 15 cm thick. It forms bold outcrops and local cliffs. Much of the property is composed of essentially a dip-slope exposure of Joanna limestone (Photograph 2) with local thin scabs of jasperoid. The Joanna Limestone is reported to be 260 to 295 feet (80 to 90 meters) thick by Wilson, Cox and Lance (1991). Mapping by Zimmerman (2004) indicates the Joanna is 46 meters to 61 meters thick (Figure 3).

On top of the Joanna is the Chainman formation. The lower portion of the Chainman is less than 165 feet (50 meters) thick of thin-bedded dark gray silty to sandy argillaceous limestone (Wilson, Cox and Lance, 1991). It also contains crinoids, but they are much less abundant than in the Joanna. Above this limestone unit, the Chainman consists of shale with some siliceous and calcareous sandstone and siltstone. The Chainman is not resistant and weathers to slope-forming relief with small outcrops. The Chainman is reported to be 1,480 feet (450 meters) thick in the range to the west (Carden, 1991).

The uppermost Paleozoic unit on the property is the Diamond Peak Formation, 590 feet (180 meters) of sandstone and conglomerate, gradational to the underlying Chainman Formation. It is not exposed within the property boundary but was mapped by Wilson, Cox and Lance (1991), possibly from drill intercepts.

No igneous units have been identified on the property. A thick Tertiary altered dike has intruded the Paleozoic units about 1.5 km northwest of the property (Figure 3). All these units are covered by Tertiary alluvium to the west of the range front. The depth of the alluvium is unknown, but is presumably not thick, as indicated on the section by Wilson, Cox and Lance (1991).

6.9.2 Structure

Structurally, the property is dominated by 2 parallel anticlines; another parallel one lies along the west edge of the property and to the southwest. These are broad open anticlines plunging slightly to the south-southwest. The necessary intervening synclines are not displayed, probably due to poor exposures and fault eliminations (Zimmerman, 2004).

High-angle faults are abundant on the property, although most have limited normal offset. Exceptions to this are the two large northwest to north-south faults between the 2 anticlines, each of which indicate 160 to 330 feet (50 to 100 meters) of offset. In addition, the major northwest trending fault on the north end of the property and the north-northeast faults each display a few hundred feet of offset. Reverse offset of 50 feet (15 meters) on a high-angle fault in the "D" pit is described by Wilson, Cox and Lance (1991) and reverse offset is indicated for some other faults mapped by Zimmerman (2004). Horizontal slickensides are seen on some fault surfaces indicating strike-slip movement (Zimmerman, 2004).

A major low-angle fault was mapped and described by Wilson, Cox and Lance (1991) that they called the "Green Springs thrust" although the stratigraphic relationships, younger units on top of older units, indicate that the structure is a low-angle normal fault. The thinned wedge of Pilot Shale on top of Guilmette (?) dolomite in the northwest part of the property likely is a result of a similar low-angle fault (Zimmerman, 2004).

6.9.3 Alteration

Alteration is widespread through the property (Figure 3). The vast majority of alteration is jasperoid developed at the contact of the Joanna Limestone and the overlying Chainman Formation, the "lower jasperoid" of Wilson, Cox and Lance (1991)(Table 6.1). Locally it contains barite in vugs and fractures. This jasperoid varies in thickness from a few feet to tens of feet near the range front. Where best developed the jasperoid forms large orange-brown to dark brown rugged outcrops (Photograph 1). A similar jasperoid is also developed locally at the top of the basal Chainman limestone unit at its contact with the overlying shale unit, the "upper jasperoid" of Wilson, Cox and Lance (1991). On the north end of the property, the basal calcareous sandstone of the Pilot Shale is also silicified and locally brecciated and also contains barite (Zimmerman, 2004).

Decalcification was noted in pits during the mining of the orebodies (Wilson, Cox and Lance 1991) and constituted an important ore-related alteration type. Its development was wholly restricted to the basal limestone of the Chainman Formation. Weak decalcification was noted in small exposures of Pilot above the silicified sandstone areas on the north side of the property (Zimmerman, 2004).

6.9.4 Mineralization

The following description of the mined gold deposits is from Wilson, Cox and Lance (1991):

Gold mineralization is restricted to the silty limestones and jasperoids of the lower Chainman Formation where it is controlled by structurally generated permeability. Gold occurs in irregular to elliptical, near-vertical shoots which transect, and are independent of, alteration facies. The shoots usually extend from the middle of the lower jasperoid into the middle of the limestone. The South C shoot continued into the upper jasperoid, where its exposure was the discovery outcrop. The highest gold values often coincide with the decalcified facies between the lower jasperoid and the over-lying limestone. Weak bedding control is illustrated by up-dip ore extensions, particularly within the lower jasperoid, as illustrated by the 1 to 3 grams per ton (0.032 to 0965 oz/ton) gold in Figure 5. Gold values generally taper smoothly away, both horizontally and vertically, from high-grade cores, which assay as much as 7 grams per ton (0.225 oz/ton), into waste rock (Wilson, Cox and Lance 1991).

Though visually difficult to recognize, gold zones are usually more fractured and deformed than the adjacent waste rock. Beds may be tightly folded, contorted, and overturned, particularly where they have been dragged along local faults. Gold zones are rarely undeformed; however, many highly deformed areas are unmineralized. There are no recognizable controlling "veins" or fault zones that can be traced from one gold shoot to the next, although some individual shoots are well defined. A cluster of three gold shoots were mined in the C pit. The northern shoot was isolated from the southern two, which overlapped to form a deposit that measured 115 feet by 230 feet by 115 feet (35 meters by 70 meters by 35 meters) high (Figure 5) (Wilson, Cox and Lance 1991).

All ore-grade rock is oxidized. Limonite percentage and color, however, are primarily functions of silicification and generally poor indicators of gold content. The upper and lower jasperoids, both in outcrop and in pit exposure, are pervasively stained with reddish-brown to orange iron oxides (Figure 6 and Photograph). Stockwork fractures and veins, as much as several centimeters wide, are coated with multicolored cellular open-spaced boxworks and banded indigenous limonites. Greenish scorodite and stibiconite have been tentatively identified in the upper jasperoid, the rock unit which is most anomalous in pathfinder trace elements. Barite is common in the lower jasperoid, where it occurs as late, well formed crystals inside limonitic vugs and open fractures. Orange- to reddish-brown, gossany jasperoids are gold-bearing only where they occur within gold shoots and they are often lower grade than the adjacent unmineralized-looking limestone (Wilson, Cox and Lance 1991).

Indirect contrast with the jasperoids, limonites in the lower Chainman limestone may reflect gold mineralization. Yellow, jarositic(?), argillized limestones are more likely to be gold-bearing than tan colored ones. Highly brecciated gold-bearing limestones are usually, though not always, more limonitic than the waste breccias (Wilson, Cox and Lance 1991).

Sulfides have been observed only in drill cuttings, as the base of complete oxidation in the ore-bearing lower Chainman Formation is usually at a depth of 300 feet (90 meters), a depth far below the bottom of any of the pits. Samples from a few deep holes contain traces (less than 1 percent) of relict, medium-grained pyrite encapsulated in otherwise oxidized lower jasperoids. Black, carbonaceous, relatively impermeable, Chainman and Pilot shales usually contain 1 to 2 percent fine-grained, disseminated pyrite, even at depths as shallow as 65 feet (20 meters) below the surface. As much as 10 percent pyrite was drilled in a refractory gold zone in what is probably the Green Springs thrust fault in the west end of the B orebody. Traces of chalcopyrite and sphalerite were logged in cuttings from near the top of the Guilmette Formation under the leach pads 2,300 feet (700 meters) west of the C pit (Wilson, Cox and Lance 1991).

In the absence of petrographic studies, gold is believed to occur on the limonitic fractures. Grades are proportional to the density of these surfaces, as observed in pit exposures and indicated by crusher size analyses. The -2.5 cm fraction, which represents the more fractured, weaker gold mineralization, routinely assays twice that of the +2.5 cm fraction. Overall recovery in excess of 80 percent in a heap cycle of 45 days indicates readily accessible fine-grained gold (Wilson, Cox and Lance 1991).

Despite the statement by Wilson, Cox and Lance (1991) that here are no recognizable controlling "veins or fault zones," mapping, sampling, and analysis by Zimmerman (2004) suggest otherwise. Zimmerman (2004) has traced a significant west-northwest trending fault from the C pit over 3,940 feet (1200 meters) to the east, which he has named the C1 structure (Figure 3 and 4). In the C pit, this fault shows offset of about 15 meters (Figure 5). In Figure 5, adapted from Wilson, Cox and Lance (1991), the C1 fault appears to control mineralization, as gold occurs on its northwest end, small pods of gold-bearing rock occur near it to the east, gold mineralization extends well updip in the lower jasperoid near the fault, and jasperoid thickens near the fault. In addition, sampling along the C1 structure by Zimmerman (2004) has produced consistent geochemical anomalies, including ore-grade gold values (up to 1.95 grams/ton or 0.625 oz/ton) over 4,000 feet (1,220 meters) from the pit.

6.9.5 Geochemistry

Geochemistry at Green Springs is typical of that in Carlin-style systems, with gold associated with anomalous arsenic, antimony, silver, barium, mercury, and thallium. This has been documented in soils and drilling by Wilson, Cox and Lance (1991) and rock chips by Zimmerman (2004).

USMX conducted a detailed soil sampling program over the outcrop areas of the lower Chainman that displayed obvious alteration. This delineated numerous anomalies of gold (+100 ppb), arsenic (+100 ppm), silver (+0.4 ppm), antimony (+5 ppm), mercury (+0.5

ppm), and thallium (+3 ppm) and was instrumental in guiding the successful drilling program (Wilson, Cox and Lance 1991).

Zimmerman (2004) collected over 182 rock chip samples in an effort to identify untested targets in the project area. These results are compiled Appendix I.

Highlights of this effort include:

- Delineation of the C1 structure with anomalous geochemistry over 1500 meters from the pit, including ore grade values of gold (1.955 grams/ton) along with strong pathfinder values.

- Ore-grade values of gold (up to 2.5 grams/ton Au) in decalcified Pilot Shale on the north end of the property. The highest gold values were collected from small outcrops of calcareous or dolomitic siltstone above the basal calcareous sandstone unit. The rest of the slope is covered; the nearest outcrop of Pilot upslope is about 50 vertical meters above and very weakly altered and mineralized.

- Strongly anomalous geochemistry in silicified basal sandstone unit of the Pilot Shale on the north end of the property. There are two outcrops areas of this material 500 meters apart and they contain up to 0.60 grams/ton gold and up to 54 grams/ton silver.

- Other isolated anomalies that require further follow-up.

7.0 GEOPHYSICS

A limited VLF survey by USMX was marginally successful in tracing contacts under alluvial cover. Genesis Gold or Palladon have not conducted any geophysical surveys on the Green Springs property.

8.0 GOLD MINERALIZATION AT GREEN SPRINGS

The mineralization style at Green Springs is a typical Carlin-type gold system. It displays all the hallmarks of Carlin-style deposits including being hosted by Paleozoic calcareous/clastic sedimentary rocks, ore zones with diffuse boundaries and extremely fine-grained gold, alteration dominated by silicification (jasperoid) and decalcification, and associated anomalous pathfinder geochemistry of arsenic, antimony, thallium, mercury, and barium. Even the high silver values in the basal Pilot Shale, while uncommon, are also seen in basal silicified rocks in some other Carlin-type systems including the north end of the Carlin Trend and at the Mercur mine in Utah (Jory, 2002; Wilson and Parry, 1990).

9.0 DRILLING RESULTS

Neither Genesis Gold nor Palladon have drilled any holes on the Green Springs property.

USMX commenced exploration drilling in June 1986 using a track mounted reverse circulation drill rig. This drill system allowed for reduced road construction costs and associated permitting delays and greatly expedited the exploration program. The fourth drill hole in the program intersected 69 feet (21 meters) of 1.9 grams per ton gold (0.061 oz/ton) starting at a depth of 10 feet (3 meters) below the surface. Over the next 12 months, approximately 350 holes were drilled on a 50 by 100-foot (15 by 30-meter) grid, which delineated the deposits (Wilson, Cox and Lance, 1991).

10.0 ADJACENT PROPERTIES

The Green Springs property is composed of 67 unpatented mining claims (Figure 2) owned by Genesis Gold. John Cox located two claims in the late 1990's which he currently holds. The Cox claims are completely surrounded by the 67 Genesis Gold claims which were located in 2003 and 2004. Nevada Mine Development holds 17 claims which abut the north side of the Genesis claims.

Other deposits in the immediate vicinity of the Green Springs property are the Mt. Hamilton polymetallic skarn system, approximately 10 miles (16 kilometers) to the north-northwest and the sediment hosted gold deposit at Easy Junior, approximately 7.5 miles (12 kilometers) to the west-northwest (Figure 1B). The Pan gold deposit is also in the general vicinity, located 14 miles northwest. The Griffon gold deposit is located 10 miles (16 kilometers) southeast of Green Springs.

11.0 SAMPLING METHOD AND APPROACH

Genesis Gold collected a total of 182 surface rock samples from various points on the Green Springs property (Appendix I). Mr. John Zimmerman, geologist for Genesis Gold, collected the samples and the samples were collected in accordance with industry standards, placed in a standard cloth sample bag, and transported to Elko, Nevada, to the ALS-Chemex sample preparation facility. ALS Chemex prepared the rock samples for analysis and shipped the pulps to either Reno, Nevada or Vancouver, British Columbia, Canada for analysis. Based on the author's knowledge of Mr. Zimmerman's professional credentials and the reputation of ALS Chemex as a premier analytical laboratory, the author believes that the samples were collected, prepared and analyzed according to industry standards and the analytical results are accurate and reliable.

12.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

The 182 surface rock samples collected from the Green Springs property by Genesis Gold were prepared for analysis by ALS Chemex at their Elko, Nevada sample preparation facility and the pulps were shipped to either Reno, Nevada or Vancouver, British Columbia, Canada for analysis. The samples were not out of Mr. Zimmerman's possession prior to being dropped off at the ALS Chemex sample preparation facility. Based on the author's personal knowledge of the professional methods which ALS Chemex employs to prepare and analyze samples, the author assumes all necessary security procedures and precautions were taken to assure quality control and accuracy of the sample results.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Genesis Gold/Palladon have not conducted any metallurgical tests on the 182 rock samples collected by Genesis Gold or any other samples from the Green Springs property.

14.0 DATA VERIFICATION

The data collected by companies that have previously explored in the Green Springs area, primarily USMX, are assumed to be accurate and reliable, based on the author's knowledge of that exploration organization. Other data for this report have been compiled by the author and provided to him by Genesis Gold, and includes a field visit to Green Springs. Mr. John Zimmerman provided data and expertise on behalf of Genesis Gold and collected the rock samples as noted previously. Other data are from published sources. It is therefore the conclusion of the author that all data pertaining to the Green Springs property are accurate and reliable.

15.0 MINERAL RESOURSE ESTIMATES

There are no known mineral resources or mineral reserves on the property. USMX performed resource estimate in the course of its mining activities; however, the author is not aware of what these historic resource estimates were. There is no existing development infrastructure other than unimproved roads. All infrastructure developed by USMX has been removed.

16.0 INTERPRETATION AND CONCLUSIONS

There is good potential to discover one or more economic gold deposits within the Green Springs project area. Several factors point to this conclusion:

- The gold-bearing hydrothermal system that generated previously mined gold deposits at Green Springs is quite likely to have generated more gold deposits that remain to be discovered.

- The project area displays a large area of hydrothermal alteration with local strong geochemical anomalies.

- Very favourable host rocks, such as the Pilot Shale and portions of the Chainman Formation, occur at depths amenable to open pit mining over the majority of the property area. These stratigraphic zones are yet largely untested.

- In isolated outcrops, it has been demonstrated that the Pilot Shale carries ore-grade gold values.

- Ore-controlling faults not previously recognized have been identified, and others are likely to be discovered. These faults may control ore-grade mineralization at depth in the Pilot Shale.

- Land status and infrastructure are supportive of a mining operation.

17.0 RECOMMENDATIONS

Further work on the Green Springs property is strongly recommended to further define drill targets and then subsequently test these targets with drilling. Phase I would involve an expenditure of $96,000 and consist of continued geologic mapping to better define controls on silicification, faults, and any other potential ore-controlling features. The Phase I program also includes significant geophysical and geochemical work to better define and delineate targets, including an IP survey and a soil sampling program. Adjacent claims groups should be acquired and additional claims staked if warranted.

Dependent upon the successful results of the Phase I exploration program, a Phase II program, involving an expenditure of $250,000, would consist of drill testing approximately 5 to 10 targets with 25 reverse circulation drill holes with some spot coring. Drill hole depths would average approximately 400 feet (120 meters). Details of the Phase I and Phase II budget proposals are given below:

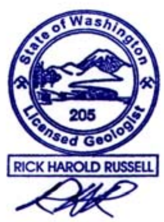
TABLE 17.1
Green Springs: Recommended Phase I Budget

Item	Expense in US$
Geo. Mapping/Sampling/Data Comp: 1 Geo. @ US$365/ Day - 25 Days	$9,125
Land Acquisition and Holding Costs	$12,500
Bonding & Permitting	$20,000
Geophysics – IP 14 days @ $2,000/Day.	$28,000
Assays – Rock (200) and Soils (400) @ $28.00/sample	$16,800
Food, Lodging, Travel and Vehicle Expenses @ $160/Day – 20 Days	$3,200
Misc. Supplies and Equipment	$1,500
Contingency ± 5.0%	$4,875
Total	**$96,000**

TABLE 17.2
Greens Springs: Proposed Phase II Budget

Item	Expense in US$
Drill Supervision: 1 Geo. @ US$365/ Day – 35 Days	$12,775
Drill Roads: 8,000 Feet (2,440 meters) @ $5.00/Foot	$40,000
Drilling – 10,000 Ft. (3,050 meters) @ $13.60/Ft.	$136,000
Assays – Drill (2100) @ $20.00/sample	$42,000
Food, Lodging, Travel and Vehicle Expenses @ $160/Day – 35 Days	$5,600
Misc. Supplies and Equipment	$3,500
Contingency ± 5.0%	$10,125
Total	**$250,000**

Dated this 22nd Day of April, 2005.



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CERTIFICATE OF QUALIFIED PERSON

I, Rick H. Russell, Geologist, do hereby certify that:

1. I am currently retained as an Independent Consulting Geologist by:

   Palladon Ventures Ltd.
   1500 – 409 Granville Street
   Vancouver, BC
   Canada V6C 1T2

2. I graduated with a Bachelor of Science degree in Geology from Northern Illinois University, De Kalb, Illinois, in 1966. In addition, I obtained a Masters of Science degree in Geology from Northern Illinois University in 1969.

3. I am a Licensed Geologist registered with the State of Washington, No. 205, and a member of the Society of Economic Geologists and the Geological Society of Nevada.

4. I have worked as a professional geologist continuously for 36 years since graduating with a Masters of Science degree from university. I have practiced my profession in the exploration for and the development of a variety of precious and base metal projects in Canada, the United States, including Alaska, Eastern and Central Europe, South America and Mexico.

5. 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, work experience and affiliation with a professional association (as defined in NI 43-101), I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I am either responsible for the preparation of or have edited and approved all sections of the technical report titled "Technical Report For The Green Springs Exploration Property In White Pine County, Nevada, USA, For

Palladon Ventures Ltd." and dated April 22, 2005 (the "Technical Report") relating to the Green Springs Property.

7. The date and duration of my most recent visit to the Green Springs Property is July 23, 2004 for 5.0 hours.

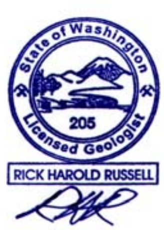
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101. I do not have, nor do I expect to receive, directly or indirectly, any interest in the subject property of the Technical Report or any other property discussed in the Technical Report, or securities of Palladon Ventures Ltd., or any affiliated companies.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form. The Technical Report has been prepared in conformity with generally accepted Canadian mining industry practice.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 22nd Day of April, 2005.



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APPENDIX I

Rock Sample Analytical Results, Green Springs Property

APPENDIX II
GREEN SPRINGS PROPERTY, WHITE PINE COUNTY, NEVADA

Surface Samples Collected 2004 by Genesis Gold ***(0.050 ppm Au or more)***

Sample Number	Au ppm	Ag ppm	As ppm	Ba ppm	Sb ppm	Hg ppm	Tl ppm
Z04-60	-0.005	-0.2	19	90	1	0	0
Z04-61	-0.005	-0.2	2	170	1	0	0
Z04-62	***0.086***	0.2	65	2820	6	1	0
Z04-63	***0.106***	0.7	118	1060	8	0	0
Z04-64	***0.163***	0.3	69	410	5	0	0
Z04-65	0.008	-0.2	52	110	2	0	0
Z04-66	-0.005	-0.2	36	90	2	1	0
Z04-67	-0.005	-0.2	52	1350	7	0	0
Z04-68	***0.227***	2.1	86	870	4	1	0
Z04-69	***1.580***	3.8	246	1770	25	1	0
Z04-70	0.009	0.2	272	1800	10	1	0
Z04-71	0.017	0.2	52	2540	6	1	0
Z04-72	-0.005	0.2	56	460	8	1	0
Z04-73	0.011	0.4	174	170	9	1	0
Z04-74	***1.440***	2	281	150	27	1	0
Z04-75	0.005	0.2	59	2580	6	1	0
Z04-76	***1.260***	0.8	306	380	18	2	0
Z04-77	***0.559***	0.4	394	150	28	1	0
Z04-78	***0.763***	0.6	422	550	26	2	10
Z04-79	***0.132***	0.3	182	3140	15	1	20
Z04-80	***0.417***	0.5	243	2560	31	2	0
Z04-81	0.005	0.2	163	190	5	1	0
Z04-82	0.021	0.2	128	150	7	1	0
Z04-83	***0.586***	0.6	158	610	8	0	0
Z04-84	***0.121***	0.2	188	850	9	1	0
Z04-85	***0.782***	0.7	197	850	14	1	0
Z04-86	0.027	-0.2	467	2660	12	1	0
Z04-87	0.016	-0.2	96	290	4	0	0
Z04-88	0.039	0.2	102	480	2	1	0
Z04-89	***1.870***	0.8	130	2900	9	1	0
Z04-90	***0.373***	0.2	134	250	7	1	0
Z04-91	***0.755***	0.3	118	1630	9	1	0
Z04-92	***0.230***	0.3	152	1840	10	1	0
Z04-93	***0.225***	0.3	178	130	15	1	0
Z04-94	***1.175***	1.2	260	250	12	1	0
Z04-95	***0.370***	0.7	378	80	15	1	0
Z04-96	0.019	-0.2	82	1330	2	0	0
Z04-97	0.017	0.3	105	70	6	1	0

Surface Samples Collected 2004 by Genesis Gold ***(0.050 ppm Au or more)***

Sample Number	Au ppm	Ag ppm	As ppm	Ba ppm	Sb ppm	Hg ppm	Tl ppm
Z04-98	-0.005	-0.2	25	540	5	0	0
Z04-99	***1.100***	1.1	102	1230	15	1	0
Z04-100	0.01	0.3	22	480	3	1	0
Z04-101	-0.005	0.2	10	520	2	1	0
Z04-102	0.008	-0.2	498	1320	11	0	0
Z04-103	-0.005	0.2	360	170	21	1	10
Z04-104	0.007	0.2	170	780	10	0	0
Z04-105	-0.005	-0.2	10	290	2	1	0
Z04-106	-0.005	-0.2	8	700	2	1	0
Z04-107	-0.005	-0.2	11	180	5	0	0
Z04-108	-0.005	-0.2	5	40	1	1	0
Z04-109	-0.005	0.3	42	100	1	1	0
Z04-110	0.005	0.2	47	140	5	1	0
Z04-111	-0.005	0.2	13	550	2	0	0
Z04-112	-0.005	0.2	46	120	2	0	0
Z04-113	-0.005	-0.2	12	60	3	0	0
Z04-114	0.011	0.2	38	80	4	0	0
Z04-115	***0.366***	0.3	117	210	8	1	0
Z04-116	***0.148***	-0.2	26	40	2	1	0
Z04-117	0.022	-0.2	13	80	2	0	0
Z04-118	***0.121***	-0.2	102	210	6	1	0
Z04-119	***0.943***	0.7	148	2330	14	2	0
Z04-120	***0.115***	0.2	180	460	12	1	0
Z04-121	***0.140***	0.2	72	2770	6	1	0
Z04-122	***0.129***	-0.2	49	2020	6	0	0
Z04-123	0.048	-0.2	48	3680	6	1	0
Z04-124	0.005	-0.2	68	590	10	1	0
Z04-125	-0.005	-0.2	3	2390	2	1	0
Z04-126	***0.058***	-0.2	22	2260	2	1	0
Z04-127	***0.154***	7.4	66	750	4	0	0
Z04-128	***0.202***	14.8	95	1220	5	0	0
Z04-129	***0.129***	9.1	48	2890	3	0	0
Z04-130	***0.240***	11.6	47	2080	3	1	0
Z04-131	***0.389***	20	78	1710	4	1	0
Z04-132	***0.294***	2.1	64	2270	7	0	0
Z04-133	***0.290***	8.1	66	1410	7	0	0
Z04-134	***0.820***	13.9	507	2810	18	1	30
Z04-135	***2.150***	31.4	1310	2270	37	2	30
Z04-136	-0.005	-0.2	7	240	-2	0	0
Z04-137	-0.005	-0.2	12	600	2	0	0

Surface Samples Collected 2004 by Genesis Gold ***(0.050 ppm Au or more)***

Sample Number	Au ppm	Ag ppm	As ppm	Ba ppm	Sb ppm	Hg ppm	Tl ppm
Z04-138	-0.005	-0.2	6	120	-2	0	0
Z04-139	-0.005	-0.2	9	70	-2	1	0
Z04-140	-0.005	-0.2	25	110	14	1	0
Z04-141	-0.005	-0.2	16	110	2	0	0
Z04-142	-0.005	-0.2	10	80	-2	1	0
Z04-143	-0.005	-0.2	21	120	2	1	0
Z04-144	-0.005	-0.2	9	980	2	0	0
Z04-145	-0.005	-0.2	13	2760	2	1	0
Z04-146	-0.005	-0.2	5	910	-2	0	0
Z04-147	-0.005	-0.2	4	300	-2	1	0
Z04-148	-0.005	-0.2	24	570	-2	0	0
Z04-149	0.015	-0.2	30	70	3	0	0
Z04-150	***0.079***	-0.2	42	2810	4	0	0
Z04-151	-0.005	-0.2	43	340	4	0	0
Z04-152	0.047	-0.2	599	2670	28	2	0
Z04-153	0.005	-0.2	57	2490	6	0	0
Z04-154	-0.005	-0.2	32	2130	9	1	0
Z04-155	***1.955***	0.6	237	1080	26	1	0
Z04-156	0.017	-0.2	23	2500	4	0	0
Z04-157	-0.005	-0.2	13	2240	2	0	0
Z04-158	***0.209***	-0.2	27	2510	4	0	0
Z04-159	-0.005	-0.2	44	1040	8	0	0
Z04-160	0.016	1.6	32	80	2	1	0
Z04-161	0.038	3.8	186	300	32	3	0
Z04-162	-0.005	-0.2	67	80	-2	0	0
Z04-163	***0.324***	54.7	119	1840	33	0.2	0.2
Z04-164	***0.188***	15.85	91	2600	9	0.14	0.28
Z04-165	***0.190***	9.55	48	1820	7	0.15	0.16
Z04-166	***0.430***	15	136	2360	7	0.26	4.65
Z04-167	***0.596***	4.19	182	2120	10	0.31	3.39
Z04-168	-0.005	0.02	37	50	3	0.17	0.78
Z04-169	-0.005	0.02	7.3	1920	1	0.03	0.05
Z04-170	-0.005	0.02	3.5	150	1	0.02	0.09
Z04-171	0.047	0.09	48.3	250	8	0.46	0.33
Z04-172	0.007	0.12	118.5	170	11	0.59	0.72
Z04-173	0.044	0.16	23	90	9	0.26	0.18
Z04-174	***0.086***	0.18	40	60	7	0.28	0.13
Z04-175	0.031	0.08	287	2730	26	0.1	4.44
Z04-176	0.034	0.3	172.5	1780	33	0.79	1.88

Surface Samples Collected 2004 by Genesis Gold ***(0.050 ppm Au or more)***

Sample Number	Au ppm	Ag ppm	As ppm	Ba ppm	Sb ppm	Hg ppm	Tl ppm
Z04-177	0.021	0.23	161	3020	25	0.65	1.12
Z04-178	-0.005	0.04	3.9	630	0	0.05	0.04
Z04-179	-0.005	0.05	11.4	380	3	0.14	0.28
Z04-180	-0.005	0.04	26.9	240	3	0.15	0.04
Z04-181	-0.005	0.03	22.8	1860	3	0.03	0.75
Z04-182	-0.005	0.04	23.9	2450	2	0.09	0.1
Z04-183	-0.005	0.04	24.9	230	2	0.17	0.07
Z04-184	0.012	0.09	28.8	1140	4	0.36	0.18
Z04-185	0.044	0.25	95	260	10	0.19	0.38
Z04-186	-0.005	0.02	161	1830	4	0.27	0.65
Z04-187	-0.005	0.08	223	1030	6	0.28	2.48
Z04-188	***0.218***	0.08	274	3040	37	0.67	25.8
Z04-189	***0.062***	0.07	19.1	480	2	0.21	0.31
Z04-190	***0.485***	0.5	118.5	440	11	0.72	0.42
Z04-191	***0.207***	0.29	117.5	1620	4	0.37	0.26
Z04-192	0.012	0.16	167.5	400	9	0.44	2.02
Z04-193	0.026	0.02	159	1500	9	0.15	1.24
Z04-194	***0.100***	30.8	44.2	1860	7	0.13	0.26
Z04-195	***0.084***	7.63	49.9	1300	8	0.14	0.65
Z04-196	***2.470***	10.45	461	1530	11	0.7	18.2
Z04-197	***2.310***	11.1	559	3010	12	0.88	22.9
Z04-198	0.007	0.09	49.3	1540	7	0.26	1.12
Z04-199	-0.005	0.07	23	350	3	0.19	0.41
Z04-200	0.013	0.17	51.8	1220	1	0.07	0.17
Z04-201	-0.005	0.17	45.2	2140	6	0.37	0.1
Z04-202	-0.005	0.17	46.1	2020	6	0.37	0.1
Z04-203	-0.005	0.07	70	250	4	0.13	0.5
Z04-204	-0.005	0.11	20.7	1600	1	0.22	0.06
Z04-205	-0.005	0.16	113	530	6	0.12	1.1
Z04-206	0.028	0.28	109.5	350	9	1.02	4.44
Z04-207	0.006	0.24	127.5	190	5	0.37	1.49
Z04-208	-0.005	0.03	116	1880	3	0.29	1.84
Z04-209	-0.005	0.05	49.8	90	3	0.37	0.22
Z04-210	-0.005	0.01	19.4	60	1	0.06	1.69
Z04-211	0.035	7.74	33.6	2200	3	0.14	0.57
Z04-212	***0.995***	0.43	114	400	17	0.63	0.3
Z04-213	***0.147***	0.22	65.1	1990	14	0.48	0.43

Surface Samples Collected 2004 by Genesis Gold ***(0.050 ppm Au or more)***

Sample Number	Au ppm	Ag ppm	As ppm	Ba ppm	Sb ppm	Hg ppm	Tl ppm
Z04-214	***1.085***	0.44	225	580	17	0.49	1.12
Z04-215	***0.489***	0.27	113	500	14	0.39	0.84
Z04-216	0.01	0.06	140.5	350	15	0.21	1.25
Z04-217	0.033	0.04	56.8	750	6	0.5	0.32
Z04-218	-0.005	0.04	37.7	100	4	0.06	0.07
Z04-219	***0.087***	0.11	297	1060	40	0.59	4.81
Z04-220	***0.149***	0.13	97.2	520	11	0.97	2.31
Z04-221	0.02	0.05	18.7	260	3	0.12	0.16
Z04-222	-0.005	0.02	17.3	1360	3	0.23	0.37
Z04-223	***0.074***	0.03	6.2	200	2	0.02	0.02
Z04-224	-0.005	0.07	65.3	240	5	0.12	2.23
Z04-225	-0.005	0.03	128	200	5	0.12	1.17
Z04-226	-0.005	0.02	35.4	1600	3	0.09	0.05
Z04-227	-0.005	0.03	268	1270	15	0.42	2.28
Z04-228	-0.005	0.03	244	200	10	0.04	1.16
Z04-229	-0.005	0.03	98.3	90	8	0.45	5.71
Z04-230	-0.005	0.03	27.3	1670	3	0.15	0.18
Z04-231	-0.005	0.05	19.9	670	2	0.1	0.22
Z04-232	-0.005	0.01	9.4	1100	2	0.04	0.02
Z04-233	-0.005	0.02	63.2	1140	6	0.46	0.16
Z04-234	-0.005	0.01	63.3	1730	8	0.41	1.34
Z04-235	-0.005	0.04	40	670	4	0.88	1.48
Z04-236	-0.005	0.05	32	840	2	0.24	0.46
Z04-237	***0.166***	4.92	130	1240	7	0.28	0.78
Z04-238	***0.259***	6.28	131.5	2700	6	0.2	0.97
Z04-239	-0.005	0.05	18	110	1	0.06	0.54
Z04-240	-0.005	0.04	28	480	1	0.21	3.12
Z04-241	-0.005	0.26	96.9	200	2	0.19	2.22

(Note: Samples Z04-60 to Z04-162 were analyzed with a detection limit of 1.0 ppm for Hg and 10 ppm for Tl. All anayses by ALS - Chemex