Geological Report

on the

Winnemucca Mountain Property

Humboldt County, Nevada, USA

For: **AHL Holdings Ltd.**
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SUMMARY

AHL Holdings Ltd. has an option to acquire a 100% interest in the Winnemucca Mountain Property, The Property covers 498 hectares and is accessible by road from the town of Winnemucca, Nevada.

The property is located in a geographic and geologic area that is well known for hosting many gold occurrences and mines of a wide variety of genetic types. The most significant gold deposit in the Winnemucca Mountain area with respect to proximity and similarity is Sleeper, which produced 1.7 million ounces of gold from high grade ore, and is still actively being explored for additional gold resources.

Mineralization at Winnemucca Mountain is typical of low-sulfidation epithermal gold mineralization. The Swordfish mineral occurrence, which was delineated by extensive drilling between 1987 and 1990, is estimated to contain 4.15 million tonnes grading 0.82 g/t gold. This resource is not NI 43-101 compliant. Gold mineralization is hosted in a pediment covered, northeast trending, quartz-carbonate breccia vein which is localized along an extensional fault cutting a large diatreme. Most of the mineralization is confined to a single composite quartz vein at a depth of approximately 200 meters and along a strike length of approximately 670 meters. At depth, the vein develops thicknesses in excess of 30 meters.

Mineralization is also hosted within fractured and veined Triassic sediments peripheral to the diatreme, and anomalous gold is associated with quartz-sulfide veinlets and sulfide-free quartz-carbonate veins and breccias contained within siltstone on the northeast margin of the diatreme.

Previous work on the Winnemucca Mountain property was largely confined to delineating the Swordfish zone and only a few holes were drilled to test geophysical and/or geochemical targets even though many of these returned anomalous results. Furthermore, the Swordfish zone itself was drilled, at best, on 60-meter centers. At the nearby Sleeper gold mine, the narrow, high grade veins that enrich the deposit were consistently missed with drilling on 30-meter centers and were not delineated until drilled on 9-meter centers.

Based on these results a two-stage, success contingent, work program consisting of data compilation, geochemical sampling, mapping, geophysical surveying, and drilling at a total estimated cost of US $ 400,000 is warranted and recommended.

INTRODUCTION AND TERMS OF REFERENCE

This report was prepared for AHL Holdings Ltd. Its purpose is to assess the economic potential of the Winnemucca Mountain property through a review of publicly available geological data and unpublished data provided by Kayzak Resources, Paul A. Hawkins & Associates Ltd., Anvil Resources, Ltd., Santa Fe Pacific Mining, Inc., Newmont Mining, Inc., Arctic Precious Metals, Inc. and St. Joe American Corporation.

The Winnemucca Mountain property is located in Humboldt County, Nevada. Exploration work completed on the Property consists of geological mapping, geochemical sampling, various geophysical surveys and extensive drilling.

This report is based, in part, on the Author's personal examination of the ground on February 26, 2004, accompanied by Howard Metzler of Kayzak Resources.

DISCLAIMER

This report is not intended to be a guarantee of mineral title, property option or sale agreements, nor is it intended to assess potential environmental, political or legal issues or liabilities. The information contained in this report is not a complete accounting of previous exploration on the Winnemucca Mountain property since not all prior data are available to the Author. Most of the data presented herein have been acquired from prior maps and reports and, in many instances, the method of data acquisition and processing are unknown or uncertain. Certain data are inconsistent and conflict with other data, largely due to a complex and fragmented property history including multiple operators and multiple local grid coordinate systems. In addition, several of the maps are illegible and have no scales, index keys, or legends, making review and interpretation difficult and potentially inaccurate.

All interpretations and conclusions are based on the writer's personal examination of the Winnemucca Mountain property on February 26, 2004 and on referenced sources that are believed to be reliable. The author was not present during any of the historic drill programs, and has not inspected any of the drill cuttings or core from the property. The Property has an extensive pediment cover and therefore the writer had to rely, in part, on prior data provided by AHL and Newmont. These data are known to be incomplete.

Resource figures on the Winnemucca Mountain property, and other properties, are not NI 43-101 compliant, have not been verified by the author, are presented for disclosure purposes only, and should not be relied on. All locations are subject to survey. Conversions from imperial to metric units are approximate, except assay data. Numerical scales on digital maps included in this report may not be accurate.

PROPERTY DESCRIPTION AND LOCATION

The Winnemucca Mountain property[1] is located in northwestern Nevada, approximately 6 kilometers northwest of the municipality of Winnemucca (Figure 1). The property is within the Winnemucca Mountain Mining District (Tingley, 1998) of Humboldt County. The claims are situated on the west flank of Winnemucca Mountain in Sections 2, 3, 10, 11, 12, 13, 14, 15 and 22 of Township 36N, Range 37E; Mt. Diablo Baseline and Meridian. The approximate geographic centre of the property lies at UTM grid coordinates 4539000N and 433400E (NAD 27); 41°00.3' north latitude and 117°47.4' west longitude.

The Winnemucca Mountain property consists of 62 unsurveyed contiguous mining claims covering approximately 498 hectares as set out in Table 1 below.

Table 1
Winnemucca Mountain Property Claims

Claim Name	BLM Serial No.	Registered Owner	Location Date	Expiry Date
WM #1	NMC 733156	AHL Holdings Ltd.[2]	01/04/1996	Sept. 1,2005
WM #2	NMC 405978	Arctic Precious Metals[3]	04/11/1987	Sept. 1,2005
WM #3	NMC 733157	AHL Holdings Ltd.	01/04/1996	Sept. 1,2005
WM #4	NMC 405980	Arctic Precious Metals	04/11/1987	Sept. 1,2005
WM #5	NMC 733158	AHL Holdings Ltd.	01/04/1996	Sept. 1,2005
WM #6	NMC 405982	Arctic Precious Metals	04/11/1987	Sept. 1,2005
WM #8	NMC 405983	Arctic Precious Metals	04/11/1987	Sept. 1,2005
WM # 10	NMC 405984	Arctic Precious Metals	04/11/1987	Sept. 1,2005
Golden West #6	NMC 733140	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #7	NMC 733141	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #8	NMC 733142	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #9	NMC 733143	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005

[1] Claim data on the Winnemucca Mountain property have been provided to the Author by AHL Holdings Ltd. The Author has not independently reviewed or verified any of the claim details. Therefore, the Author has no opinion on the validity of the claims. Claim posts placed before 2004 may have been destroyed by range fires.

[2] Under the terms of the March 22, 2004 Option Agreement between AHL Holdings Ltd. and Golden Arc Mining & Refining Inc., Golden Arc Mining & Refining Inc. had the title to these 32 mineral claims transferred to AHL Holdings Ltd. In the event that AHL Holdings Ltd. fails to exercise the option contained in the option agreement, AHL Holdings Ltd. is required to return title to these mineral claims to Golden Arc Mining & Refining Inc.

[3] Under the terms of the March 22, 2004 Option Agreement between AHL Holdings Ltd. and Golden Arc Mining & Refining Inc., Golden Arc Mining & Refining Inc. was required to have the title to 5 mineral claims currently registered to Arctic Precious Metals transferred to AHL Holdings Ltd. As of the date of this report, such transfer has not been effected. If such transfer of title is subsequently effected, and in the event that AHL Holdings Ltd. fails to exercise the option contained in the option agreement, AHL Holdings Ltd. is required to return title to these mineral claims to Golden Arc Mining & Refining Inc.

Claim Name	BLM Serial No.	Registered Owner	Location Date	Expiry Date
Golden West #10	NMC 733144	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #11	NMC 733145	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #12	NMC 733146	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #13	NMC 733147	AHL Holdings Ltd.	01/02/1996	Sept. 1,2005
Golden West #14	NMC 733148	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Golden West #15	NMC 733149	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Golden West #16	NMC 733150	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Golden West #17	NMC 733151	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Golden West #18	NMC 733152	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Golden West #19	NMC 733153	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Gold West Frac A	NMC 733154	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
Gold West Frac B	NMC 733155	AHL Holdings Ltd.	01/03/1996	Sept. 1,2005
T & C #1	NMC 479032	AHL Holdings Ltd.	05/08/1988	Sept. 1,2005
T & C #2	NMC 479033	AHL Holdings Ltd.	05/08/1988	Sept. 1,2005
T & C #3	NMC 479034	AHL Holdings Ltd.	05/08/1988	Sept. 1,2005
TJ #12	NMC 155540	AHL Holdings Ltd.	04/02/1980	Sept. 1,2005
TJ #14	NMC 733159	AHL Holdings Ltd.	01/04/1996	Sept. 1,2005
TJ #15	NMC 733160	AHL Holdings Ltd.	01/04/1996	Sept. 1,2005
TJ #16	NMC 155544	AHL Holdings Ltd.	04/04/1980	Sept. 1,2005
TJ #17	NMC 155545	AHL Holdings Ltd	04/04/1980	Sept. 1,2005
TJ #18	NMC 155546	AHL Holdings Ltd	04/04/1980	Sept. 1,2005
TJ #19	NMC 155547	AHL Holdings Ltd.	04/04/1980	Sept. 1,2005
TJ #29	NMC 155557	AHL Holdings Ltd.	04/04/1980	Sept. 1,2005
TJ #30	NMC 155558	AHL Holdings Ltd.	04/17/1980	Sept. 1,2005
TJ#34	NMC 155562	AHL Holdings Ltd.	04/17/1980	Sept. 1,2005
WM#101[4]	Pending	AHL Holdings Ltd.	11/10/2004	Sept. 1,2005
WM#102	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#103	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#104	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#105	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#106	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#107	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#108	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#109	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#110	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#111	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#112	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#113	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#114	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#115	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#116	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#117	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#118	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#119	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#120	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005
WM#121	Pending	AHL Holdings Ltd	11/13/2004	Sept. 1,2005
WM#122	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1,2005

[4] The WM 101-125 claims were staked in November 2004 directly by AHL Holdings Ltd., and had not been recorded at the BLM or County Recorder's Office at the time of this report preparation. In the event that AHL Holdings Ltd. fails to exercise the option contained in the option agreement, AHL Holdings Ltd. is required to transfer title to these 25 mineral claims to Golden Arc Mining & Refining Inc. The expiry date of Sept. 1, 2005 is subject to recording.

Claim Name	BLM Serial No.	Registered Owner	Location Date	Expiry Date
WM#123	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1, 2005
WM#124	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1, 2005
WM#125	Pending	AHL Holdings Ltd	11/10/2004	Sept. 1, 2005

The claims are collectively called the Winnemucca Mountain property as depicted in Figure 2.

Under an option agreement dated March 22, 2004 (the "Option Agreement"), AHL Holdings Ltd. acquired an option to purchase a 100% interest in 37 unpatented mining claims located in Humboldt County, Nevada, USA from Golden Arc Mining & Refining Inc. of Winnemucca, Nevada. Under the terms of the Option Agreement, AHL paid $2,000 US on signing of the Option Agreement and is to pay a further $7,000 US within five business days of the Start Date (as defined in the Option Agreement), incur $100,000 US of exploration expense by the first anniversary of the Start Date and incur $200,000 US of cumulative exploration expense by the second anniversary of the Start Date. AHL acquired a 100% interest in an additional 25 claims by staking, but these claims are still subject to the Option Agreement.

AHL is to pay a 2% net smelter returns royalty to Golden Arc. AHL has the right to purchase the royalty for the price of $1,000,000 US for each of the two percentage royalty points.

AHL is required to pay advance royalty payments of (a) $10,000 by the first anniversary of the Start Date, (b) $10,000 by the second anniversary of the Start Date, $20,000 by the third and each successive anniversary of the Start Date until production commences at which time the obligation to pay advance royalty payments will terminate.

In the event that AHL transfers any interest in the claims or the option agreement to a public company, such transfer will not be effective until the public company has issued and delivered to Golden Arc 100,000 shares in the capital of the public company.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Winnemucca Mountain property is located approximately 6 kilometers northwest of Winnemucca and is accessible from State Route 49, a graded gravel road from Winnemucca to Jungo. A paved road that provides access to a US Air Force radar installation on top of Winnemucca Mountain traverses the southern and northern portions of the claim block. Accommodations and basic provisions are readily available in Winnemucca.

The claims that comprise the Winnemucca Mountain property lie in an irregular, northerly trending block along the western flanks of Winnemucca Mountain. The mountain slopes are generally moderate along the west side of the claims, steepening on the east and in drainages. Pediment and alluvium cover is extensive, particularly in the western, or lower, part of the property where a classic bajada is developed. Within the claims, elevations range from approximately 1435 meters in the southwest corner to nearly 2000 meters in the east. The area is devoid of trees, and vegetation consists of sagebrush and sparse grass.

The climate in southern Humboldt County is arid with annual rainfall averaging 20 cm (8 inches; Winnemucca Chamber of Commerce Website) and snowfall of 38 cm (16 inches; Nevada Climate Summaries Website). The area is characterized by hot summers and short, cold winters.

HISTORY

The discovery of the Comstock Lode in western Nevada in 1859 spurred mineral exploration throughout Nevada. Gold and silver were first discovered in the Winnemucca Mining District in 1863 and, during the 1860's, several smelters were constructed along the Humboldt River (Willden, 1964). The early productive lodes consisted of quartz veins containing small amounts of variably oxidized copper and lead (Buffa & Coyner, 1990).

The first significant gold discovery in Humboldt County was the Getchell gold deposit in 1933 (Willden, 1964). The Getchell Mine began production in 1938 and has operated intermittently since. The current owners, Placer Dome and Newmont, reopened the Mine in 2002 with a resource of 7 million ounces of gold (Placer Dome website). Since discovery of the Getchell Deposit, Humboldt County has been the site of numerous other significant gold discoveries. Major gold deposits in the area include the Lone Tree, Marigold, Preble, Pinson, Turquoise Ridge, and Twin Creeks, all located east and northeast of Winnemucca, and the Hycroft (Crowfoot-Lewis), Sandman, Rosebud, and Sleeper deposits to the northwest (Tingley, 1998).

On Winnemucca Mountain itself, the Adamson mine, located just east of the TJ #30 claim in the northeast portion of section 11, reported gold production from "rich ore" in 1911-1912 totaling $13,711 (approximately 20 kg of gold equivalent; Willden, 1964). The Pride of the Mountain mine, which reported gold and silver production during 1915 (Willden, 1964), is situated just east of the Golden West claims in the northwestern portion of section 23. Both mines exploited gold-bearing quartz veins cutting metasedimentary rocks. Topographic maps indicate six 'prospects' and one old 'mine' within the boundaries of the Golden West 8 and 10 claims. These may be mercury workings referred to by Schnell & Hodges (1990) and Tingley (1998).

The upper slopes of Winnemucca Mountain contain dozens of prospects and several old mines. One of these, the Shively Mine on the north side of Winnemucca Mountain (not on Winnemucca Mountain property), exploited a west-northwest striking, moderate to steeply dipping quartz-calcite vein. In 1982, St. Joe conducted a drilling program directed at this structure. Results of their drilling included 27.4 m (90') of 0.34 g/t Au in DH1 and 9.1 m (30') of 0.69 g/t Au in DH2 (Hodges, et al, 1989).

The first record of exploration within the present Winnemucca Mountain property claim area is an undated map by St. Joe American Corporation that describes rock sampling over much of the claim block and soil sampling across the Golden West 6 to 13 claim area. This work was most likely done in conjunction with work in the Shively Mine area during 1982. The same map indicates that Cordex Exploration Company drilled seven drill holes, also on the Golden West 6 to 13 claims. Metzler (pers. comm.) reports that the Cordex holes were drilled in 1972. In addition, 200 meters (700 feet) of trenching was completed and over 1,000 meters (3,300 feet) of existing underground workings were mapped and sampled and the construction of drill access roads were completed (Metzler, pers. comm.). A map dated October 1982 indicates that induced polarization, magnetic, and VLF electromagnetic surveys were performed on the property. Details of work done by St. Joe and Cordex are not available[5].

The next record of exploration is by Arctic Precious Metals Inc. in 1985 (Moore, 1987). Work over the next few years included rock sampling by Arctic and Tenneco Minerals in 1986, with geological mapping by Arctic in 1986 in the northern claim area. During 1987, Arctic drilled 573 meters in 5 reverse circulation drill holes. Results were encouraging with hole WM 5 intersecting a 1.5 meter interval of 1050 ppb gold. The next year, Arctic conducted detailed rock sampling, VLF-EM and magnetic surveys over a breccia pipe target area, followed by 7 diamond drill holes for a total of 637 meters. Drill hole WM 7 intersected up to 1950 ppb gold over 1.5 meters and WM 13 cut two large intervals (44 and 55 meters) of elevated gold (164 ppb and 147 ppb respectively). (SFPM data)

In late 1988, Santa Fe Pacific Mining, Inc. (now Newmont) entered into a joint venture with Arctic after recognizing the significance of anomalous gold in the breccia pipe identified by the Arctic drilling. Santa Fe became operator (Bokich, 1989) and, between 1988 and 1990, conducted geological mapping, rock sampling, trenching, CSAMT and induced polarization geophysical surveys, drilled 286 auger drill holes and a total of 18,260 meters (52,470.8 feet) in 73 reverse circulation drill holes. Three of these drill holes were re-entered with a diamond drill. The total diamond drill footage is uncertain but is in excess of 145 meters (477 feet). It should be noted that not all of Santa Fe's drilling was within the boundaries of the current claim block. Santa Fe's work outlined the

[5] Details of the St. Joe and Cordex work are not available; the work is referenced solely for complete disclosure.

Swordfish occurrence that extends approximately 670 meters (2200 feet) along the western flank of Winnemucca Mountain within the current claim block.

In 1994, Anvil Resources of Vancouver, B.C., acquired the property (Metzler, 1994) and became the project operator. Anvil did a great deal of internal compilation work, prepared a topographic base map and collected surface samples to confirm previous gold tenors. They performed test assaying to determine optimum analytical procedures for coarse gold samples and milling tests on bulk samples to maximize gold liberation. An induced polarization (IP) survey conducted in 1996 confirmed that resistivity highs correlated well with known mineralized areas and delineated two new target zones (Metzler, 1994).

In March, 2004, AHL Holdings Ltd. entered into an option agreement with Golden Arc Mining & Refining to acquire a 100% interest in the Winnemucca Mountain property. There is no record of exploration work since 1994.

GEOLOGICAL SETTING

Regional Geology

Nevada lies within the Basin and Range geological province. The geologic structure of this province is the result of repeated interactions between the North American Plate and oceanic plates to the west which are expressed as folds, thrust faults, strike slip faults, normal faults, igneous intrusions, volcanism, metamorphism and sedimentary basins. Every mountain range in the Basin and Range province is bounded on at least one side by a normal fault, many of which are still active. The area's highly complex and active tectonic history has created a diversity of depositional environments, deep-seated structures, hydrothermal centers and numerous mineral deposits.

Humboldt County is underlain by rocks ranging in age from probable Early Cambrian to late Miocene or early Pliocene (Willden, 1964). In general, the oldest rocks are in the southeastern portion of the county with younger rocks to the north and west, however, late Tertiary volcanic and sedimentary rocks are randomly distributed throughout the county (Stewart and Carlson, 1986). Five orogenic episodes have been recognized but structural (and lithologic) elements are not continuous between mountain ranges.

The most important of the orogenic episodes in Nevada is the Antler Orogeny, the late Devonian collision of an arc terrane complex with the western margin of North America (Price, et al, 1999). The arc material (allochthon) was thrust over cratonic carbonates along the Roberts Mountain thrust fault. Mountain building accompanied the Antler Orogeny, resulting in a high mountain range to the west. In addition to the folding and low-angle faulting associated with orogenic compression and mountain building, high-angle reverse and strike-slip faulting was widespread, forming important wrench fault systems (Stewart, 1980). These

high-angle faults were crucial in localizing the fluid flow responsible for gold deposition (Price, et al, 1999).

Mineral deposits have been found in all rock units exposed in the county (Stewart and Carlson, 1976). At least three periods of epigenetic ore mineral deposition have been recognized. The oldest are the iron deposits (Cretaceous or older?) in the Jackson Mountains. Contact metamorphic tungsten and vein deposits belong to the second period, developed in conjunction with the emplacement of Cretaceous and Tertiary intrusive rocks. The third, late Tertiary (?), depositional episode includes mercury, uranium and gold-silver deposits, including the Getchell and Sleeper gold deposits.

Current gold producers in Humboldt County include the Getchell, Marigold and Twin Creeks mines.

Property Geology

The general geology of Winnemucca Mountain is shown on two publicly available maps: Willden (1964) and Stewart and Carlson (1976) and, in more detail, by Arctic Precious Metals Inc. (1987). The latter map is included in this report as Figure 3. The oldest unit exposed on Winnemucca Mountain is the Upper Triassic Winnemucca Formation (Burke and Sieberling, 1973) that underlies the upper elevations. Willden (1964) describes these rocks as gray to brown calcareous shale; buff and gray, thin-bedded to massive carbonate rocks, buff to light brownish-gray calcareous sandstone, gray and brown shale and slate and some light brown feldspathic quartzite.

A younger, unnamed quartzite-mudstone formation is faulted against the Winnemucca Formation on the northwest side of Winnemucca Mountain by a normal fault of uncertain displacement. This unit consists of light brown or buff, thin to thick bedded, fine-grained, feldspathic quartzite which usually weathers dark brown; buff to light brown, medium bedded mudstone; and small amounts of light brown phyllitic shale. Arctic's map does not segregate the Winnemucca Formation and the unnamed quartzite-mudstone formation that are all mapped as Triassic siltstone and conglomerate.

The sedimentary rocks are cut by several small intrusive bodies. The largest is a Jurassic (?)-Cretaceous stock which intrudes Winnemucca Formation rocks on the southern side of Winnemucca Mountain, measuring approximately 2 by 2.75 kilometers. According to Willden (1964), the intrusive contains no quartz but, in general, contains more plagioclase than mafic minerals so is compositionally a diorite. Arctic's map identifies this unit as granite and hornfels. Willden (1964) has identified a small body of Tertiary volcanic rocks on the west side of Winnemucca Mountain as dacite. Arctic's map shows a number of these bodies, classified as andesite and tuff.

Tertiary basalt and andesite unconformably overlie the older units on the north side of the mountain. These also include more silicic volcanic and sedimentary rocks (Willden, 1964).

An east-northeast trending Tertiary diatreme body measuring 0.4 by 1.5 kilometers intrudes Triassic sedimentary rocks on the west side of the mountain, in the vicinity of the WM 5 and 6 claims. The diatreme, containing gold mineralization now known as the Swordfish zone, is described by Metzler (1994) as an ellipsoid plug of brecciated, silicic dacite and rhyolite with sharp contacts. The east side of the Swordfish zone is bounded by a north trending normal fault while the west half is subparallel to a major northeast trending fault. The breccia contains angular clasts of the older siltstone and granodiorite (Moore, 1987).

Arctic's local geology map shows much more structural detail than either Willden (1964), or Stewart and Carlson (1986). Three directions of major faulting are apparent, each of which appear confined to a particular area of Winnemucca Mountain. In the northern portion of the mountain are three parallel northeast trending faults, situated approximately 900 meters apart. According to Metzler (1994), movement on these faults is primarily dip-slip although some minor strike-slip movement was also noted. On the southern flank of the mountain are two parallel north-northeast trending faults 1.5 kilometers apart. Southerly and southeasterly oriented faults dominate the central part of Winnemucca Mountain. Santa Fe geologists believed that the topography of Winnemucca Mountain was in part controlled by extensional range-front faults (Metzler, 1994), and the dominant structural trend, especially with respect to mineralizing events, is northeast.

DEPOSIT TYPES

The Winnemucca Mountain property is in the Basin and Range structural province, an area that contains one of the world's largest concentrations of precious metal deposits. The property has characteristics in common with other well studied projects, however, **the following information is not necessarily indicative of mineralization on the Winnemucca Mountain property that is the subject of this technical report.**

Known mineralization at Winnemucca Mountain is typical of low-sulfidation epithermal, sediment- and volcanic-hosted gold deposits found elsewhere in northern Nevada, for example Sleeper (1.68 million ounces of gold and 2.3 million ounces of silver produced between 1986 and 1996; Amax Gold Inc.) and Midas (3.7 million ounces gold equivalent; Leavitt, et al, 2000), as well as El Penon in Chile (2.1 million ounces gold equivalent; Robbins, 2000).

Low-sulfidation epithermal precious metal deposits typically consist of quartz and quartz-carbonate veins, stockworks and breccias carrying gold, silver, electrum, argentite and pyrite with lesser and variable amounts of sphalerite, chalcopyrite,

galena, rare tetrahedrite and sulphosalt minerals which have formed in high-level (epizonal) to near-surface environments (Romberger, 1990). Mineralization commonly exhibits open-space filling textures and is associated with volcanic-related hydrothermal to geothermal systems. These deposits are frequently vertically and laterally zoned, and associated with volcanic island and continental margin magmatic arcs and continental volcanic fields with extensional structures.

Cheong, et al (2000) describe low sulfide gold-quartz veins in northwestern Nevada as concentrated in a 60- to 100-kilometer wide, 200-kilometer long, linear, north trending corridor extending from the Humboldt Range in the south to the Idaho border in the north. Winnemucca Mountain is centrally located on the eastern edge of this corridor that is believed to have acted as a regional-scale shear zone. The gold-quartz veins are hosted by deformed Mesozoic metasedimentary, metavolcanic and igneous rocks, affected by both brittle and brittle-ductile shear deformation resulting in thrusts, faults, folds and shear zones. Gold mineralization is accompanied by sparse base metal minerals.

Winnemucca Mountain is situated just 8 km east of the Ten Mile Mining District, a small gold producing area believed to have produced approximately 570 kilograms (20,000 ounces) of gold between 1900 and 1942 (Bowell, et al, 2000). Mines in the Ten Mile area worked oxidized deposits where some exceptionally rich pockets of gold (up to 65 g/t) were concentrated in favorable structural traps in supergene enriched zones.

At El Penon, Chile, a low sulfidation epithermal vein system is spatially related to a rhyolite dome complex. The deposit is controlled by fault zones containing quartz and adularia veins in felsic pyroclastic, volcaniclastic, and flow units (Robbins, 2000). Silicification is the dominant alteration grading outward into quartz-sericite-illite-adularia. El Penon gold and gold-silver bearing veins, stockworks, and breccias contain banded, sucrosic, comb, and bladed carbonate-replacement habits. The veins formed from episodically boiling, low salinity epithermal fluids 310 to 450 meters below the paleo water table (Robbins, 2000). Mineralization at El Penon is vertically zoned with the most significant gold grades at 200 meters below the present surface (Robbins, 2000).

The Midas gold mine, located approximately 100 km east of Winnemucca and operated by Newmont Mining, hosts high grade gold-silver mineralization discovered by drilling of geochemically barren to weakly anomalous, sulfide-free quartz veins and stockworks exposed on surface (Leavitt, et al, 2000). The host rocks are Miocene felsic ash-flow tuffites, volcaniclastic sediments and mafic dikes that are cut by NNW and NW-SE trending fault zones. The Midas vein systems display propylitic and argillic wallrock alteration as well as silicification associated with vertically zoned ore veining (Redfern and Rowe, 2003).

The Sleeper gold mine, located in the Slumbering Hills approximately 40 kilometers north-northwest of the Winnemucca Mountain project, is a well-known

example of a low-sulfidation epithermal gold deposit. In the 1930's, narrow stockwork veins were first worked underground in the Sleeper area. In 1982, Amax Gold Inc. began exploration in the area and in 1984 intersected 104 meters grading 28 g/t gold (Wood, 1988) in a drill hole. The mine operated from 1986 to 1996, producing nearly 1.7 million ounces of gold and 2.3 million ounces silver (Amax annual reports). At Sleeper, Triassic siltstone and Miocene latite flows are locally cut by an extensive north-northeast trending fault zone 1000 meters wide and 10 kilometers long (Wood, 1988). A large northwest trending normal fault 3 to 30 meters wide intersects the northeast fault zone in the vicinity of the gold deposit which formed in a complex breccia 180 meters wide and 550 meters long at the intersection of these faults (Wood, 1986). The breccia formed in latite lava flows that have undergone extensive tectonic fracturing and hydrothermal brecciation. The orebody is 100 meters wide, 300 meters long and persists to a depth of over 100 meters (Wood, 1988; L. Kornze, pers. comm.).

MINERALIZATION

The Winnemucca Mountain property and surrounding area has had a long history of mineral exploration. As a result, gold occurrences and targets have been identified at several areas within the current property boundaries. Types of gold-bearing occurrences identified to date on the Winnemucca Mountain property are (Moore, 1987): quartz stockworks in hornfelsed intrusive contact zones, quartz veins, volcanic breccias, and quartz-calcite veins.

Swordfish Zone

Gold mineralization at the Swordfish zone was discovered in 1989 by drilling in a completely pediment covered area (Santa Fe JV minutes, 1989). It is not clear what led to the targeting of the drill holes. The zone is hosted in a quartz-carbonate vein that is localized along an extensional fault cutting a diatreme (Schnell, 1989). The vein strikes north-northeast and dips 45^{o} to the northwest. In the north, the vein becomes wider and more continuous at depth, in the south, it is tighter and mineralizing solutions have been forced into horizontal structures creating a semi-bedded deposit. Outside the perimeters of the Swordfish zone, the vein horsetails into less competent sediments (Schnell, 1989). At depth, the quartz-calcite vein develops thicknesses in excess of 30 meters in the heart of the system drilled by Santa Fe; the thickest vein intercept is 59.4 meters.

According to Metzler (1996), gold occurs as free gold. The vein is oxidized to depths in excess of 275 meters and gold grades accordingly increase with depth. High grade seams within the main vein average 1 to 1.5 g/t gold. Gold tenors are highly variable, ranging from near background to 68.6 g/t across 1.5 meters in hole 83.

Schnell (1989) describes hanging wall alteration as argillic to propylitic while the footwall is propylitic and/or densely silicified. The enclosing volcanics are highly

pyritic with heavy dark brown to black sulfide concentrates and minor amounts of free gold (Metzler, 1995). Small, subsidiary veinlets and fractures are more abundant, less discrete, and of lower maximum grade in the footwall than in the hanging wall. Hanging wall or footwall veinlets typically contain 1.4 g/t gold (0.04 opt gold**)** over 1.5 meters, or less.

Mineralization is also hosted within Triassic siltstones peripheral to the Swordfish zone breccia where there has been structural preparation, as at Don's rock, described below. Maximum gold tenors range from 665 ppb to 69,200 ppb with average tenors of approximately 500 ppb. Small quantities of gold are also found associated with quartz-sulfide veinlets contained within the Triassic siltstones on the northeast margin of the Swordfish zone (eg, holes DWM 17 and DWM 19). Gold tenors average 500 ppb but range up to 1904 ppb over an intercept of 48.8 meters (hole DWM 019) and 69 g/t over an intercept of 1.5 meters (Hole DWM 83). Mineralization appears to be localized by the intersection of the diatreme-sediment contact and a steep east-west trending structure. It is also defined by a trace element soil anomaly (Schnell, 1989).[6]

Santa Fe geologists took a tour of the Sleeper Mine in 1989 with the intent of comparing the geological characteristics of the Sleeper gold deposit and the Swordfish zone at Winnemucca Mountain (Hodges, 1989). They found that although there were important differences, the two hydrothermal systems were very similar. While the country rock for both systems was a thick sequence of Triassic siltstones, the host rock in the immediate vicinity of the Sleeper Mine was a brecciated ash flow tuff while at Winnemucca Mountain it is a diatreme.

Hodges (1989) states that the structural configuration of both systems is essentially identical with both systems utilizing north-northeast trending, high-angle extensional fractures as the primary hydrothermal conduits. Propylitic alteration is extensive, argillic alteration near absent and silica flooding is pervasive and coincident with precious-metals mineralization in both systems. Veining and mineralization persist to depths in excess of 480 meters downdip and the veins horsetail both upwards and along strike. Gold indicator geochemistry at both properties is characterized by anomalous silver, arsenic, antimony, mercury, bismuth and selenium, in addition to gold.

Both systems contain early, barren and pervasive quartz-pyrite flooding as veins and breccias. Sleeper has a second stage of high-grade, delicately banded veins consisting of quartz, adularia, stibnite, electrum, naumannite and tetrahedrite which range in thickness from 0.3 to 4.5 meters, averaging 1.5 meters (Wood, 1988). Alteration at Sleeper is dominated by opaline and microcrystalline silica with adularia in veins and is unusually low in chlorite and sulfide minerals. A third quartz-pyrite flooding event contains low-grade, silver-rich, quartz, naumannite, tetrahedrite, stibnite and electrum as stockworks and

[6] Detailed information on soil geochemistry is not available to the Author; reference is made to the soil anomaly solely for disclosure purposes.

"black matrix" breccias (Wood, 1986). This material seems identical in composition, texture and tenor to a late phase of the Winnemucca Mountain mineralization (Hodges, 1989).

Sulfide-rich quartz veins encountered at the Swordfish zone, which returned up to 68.6 g/t (2.002 oz/t) gold in drill holes, may be similar to the banded veins mined at Sleeper. The banded character of the veins at Sleeper changes within 180 to 210 meters of the surface to become massive, off-white to honey-colored quartz at depth, similar to the quartz at Winnemucca Mountain (Hodges, 1989).

The Swordfish zone within the Winnemucca Mountain system is more continuously developed over a much thicker zone than is the Sleeper system (Hodges, 1989). The Winnemucca Mountain vein also contains more polyphase hydrothermal brecciation while calcite is more common than at Sleeper. Both systems are localized by pre-existing breccia zones.

Don's Rock

Don's Rock is an outcrop of altered, resistive weathering silicified Triassic sedimentary rocks with anomalous Au-Ag-As-Hg-Sb geochemistry. This zone, located in the southwest corner of the WM 5 claim, was identified by Santa Fe and explored by three reverse circulation drill holes (DWM 41 to 43) in 1989. Low grade gold mineralization is associated with polyphase quartz-carbonate veins and hydrothermal breccias. Mineralization is hosted in a variably silicified, propyllitized and argillic altered siltstone irregularly interbedded with conglomerate. Pyrite occurs as fine and coarse disseminations, veinlets and fracture coatings. Initial drilling intersected low levels of elevated gold with a best interval of **3** meters grading 0.95 g/t Au from hole DWM 43 (Hodges, et al, 1989), but later reports suggest higher grade mineralization of 7.6 g/t across 3 meters was intersected in Hole DWM 41 (Schnell and Hodges, 1990d). No assay reports are available to be able to resolve this inconsistency on assays and hole numbers. The Don's Rock zone may represent alteration and low grade mineralization peripheral to the main Swordfish zone.

Ridge Zone

At the Ridge Zone, a resistive weathering, steeply northwest dipping, vein-like zone of quartz-carbonate breccia is exposed along a strike length of some 50 meters before being covered by alluvium. Exposure is poor, but the zone appears to have a true width of about three meters. The zone does not contain any sulfides, however clay minerals are abundant in the matrix, at least near surface. A grab sample collected by the Author returned 508 ppb gold. This area has only been tested by one prior drill hole, however results for this hole are not available.

Golden West

In the southern part of the current Winnemucca Mountain Property, gold mineralization was tested by Cordilleran Exploration (Cordex) in 1972 (Metzler, pers. comm.). No results of this program are available. Rock samples collected by Anvil Resources returned up to 0.82 g/t gold from a discontinuous breccia zone on the Golden West claims (Metzler, 1994).

Several 'prospects' indicated on the local topographic map sheet are situated within the property boundaries, however, the Author has no further information on these prospects.

EXPLORATION

Geological Mapping

Geological mapping was completed in 1986 by Arctic Precious Metals over all of Section 11 and large portions of the adjacent sections for a total of approximately 12.8 square kilometers or 1280 hectares. Much of this work was done outside of the current claim area but does cover the TJ & the T&C claim area. Geology was compiled at a scale of 1 inch = 500 feet (1:6000). The map in the Author's possession has no legend.

Gierzycki (1992) has mapped the property area as underlain by the Winnemucca Formation intruded by several small intrusive bodies. The Winnemucca Formation is in fault contact with the Raspberry Formation in the west and on the eastern boundary. The fault is mapped as a thrust fault. There is no geological description of the Raspberry Formation.

In 1989, Santa Fe Pacific Mining Inc. followed up Arctic's work with mapping over a much broader area in portions of sections 1, 2, 10 (Township 37N Range 38E) and 1, 12, 13, 14, 15, 22, 23 and 24 (Township 36N Range 37E). Not including large blocks of data that have been intentionally excised from the map in the Author's possession (not from the vicinity of the present claims), it appears that Santa Fe's mapping covered approximately 10 square kilometers or 1000 hectares. In terms of the present claim block, their work covered the Golden West 6 to 16 claims, all of the TJ and T&C claims and the WM 2 to 4 claims. Geologic data were compiled at a scale of 1 inch = 1000 feet (1:12,000) and were digitized using AutoCAD (Hodges, et al, 1989). There is no legend on the map in the Author's possession. Hodges (Oct 1989) states that Santa Fe also mapped the area north-northeast of the Swordfish zone in more detail (1 inch = 400 feet or 1:4800) using airphotos and acetate overlays of topography, however these data are not available.

For purposes of this report, the geology by Arctic and Santa Fe has been simplified and compiled as Figure 4.

Geochemical Sampling

Soil geochemical sampling is reported to have been completed by Santa Fe in 1989 (Hodges, et al, 1989), however, the extent and quality of this sampling is unknown. Sample results were digitized using AutoCAD (Hodges, et al, 1989). None of these data are in the Author's possession. It was reported by Gierzcki (1992) that the soil surveys performed by Santa Fe gave inconclusive results and may not be a cost effective tool.

During 1985 and 1986, Arctic Precious Metals and Tenneco collected rock chip samples over most of section 11 and the eastern portion of section 10 in the vicinity of the TJ and T&C claims. Approximately 235 samples were collected during this period. During 1988, rock sampling continued to the west, concentrating on the Swordfish zone area. Rock sample results are presented as Figure 5 of this report with several anomalous areas of gold greater than 1000 ppb indicated. Anomalous gold values in surface rock samples appear to follow a northeast trend.

Surface sampling by Anvil Resources in 1995 confirmed the presence of anomalous gold but determined that few surface samples were of "ore grade" material (Metzler, 1995a). Anvil also confirmed the presence of particulate gold and performed crushing tests to determine the requisite mesh size of a pulverized sample required to achieve reasonable liberation of free gold (Metzler, 1995c). None of these data have been provided to the Author.

On February 26, 2004, the Author conducted a property examination, accompanied by Howard Metzler. During the course of this examination, three rock samples were collected to verify mineralization. Samples are described in Table 2 below and locations are plotted in Figure 5. The samples were sent to American Assay Laboratories in Sparks, Nevada where they were analyzed for gold and silver by traditional lead fire assay and for 69 additional elements by multi-element ICP-2A scan. Analytical results for gold are indicated in table 2.

Table 2
Rock Samples Collected by Author

SAMPLE NUMBER	SAMPLE DESCRIPTION	GOLD
WM-01	Grab sample of bleached, brecciated, fractured sediments with quartz-chalcedony veinlets from boulder pile on small alluvial fan	22 ppb
WM-02	"Don's Rock" - Selected sample of quartz-chalcedony veinlet stockwork in bleached conglomerate with angular clasts up to 2 cm. in size	25 ppb
WM-03	Quartz-carbonate vein, no sulfides, clays in interstices, strong micro breccia texture, clasts up to 2 cm. Vein trends 037^{o}	508 ppb

Auger Drill Sampling

An auger drill orientation program was initiated by Santa Fe in 1989 (Hodges, 1989) with completion of 100 auger drill holes. Bedrock samples collected in this manner were analyzed for gold, silver, arsenic, antimony, mercury, copper, lead and zinc and abundances of these minerals were reduced to a series of bubble plots (Hodges et al, 1989) where numerical results are indicated by different sized spheres. Data were compiled at a scale of 1 inch = 1000 feet (1:12,000). The trace element rock geochemical data were examined and compared to soil data for the same elements. It was determined that auger sampling of the underlying bedrock was more useful than conventional shallow soil sampling since the resultant geochemical patterns could be correlated to areas of known mineralization delineated by deeper reverse circulation drilling (SFPM 1989). In 1990, an additional 186 auger drill holes were completed in the area north of the Swordfish zone where an IP survey had indicated anomalous results (Schnell & Hodges, July 1990).

The bubble plots for gold, silver, arsenic, antimony and mercury are in the Author's possession. For the purposes of this report, areas of elevated to anomalous geochemistry for Au, Ag, As, Sb and Hg have been digitized and are presented as Figures 6 to 10.

Several zones of anomalous silver are evident from the maps. The zone in the southern portion of the property appears structurally related to a series of SE trending faults and correlates to the area of drilling completed by Cordex. A silver anomaly in the WM 1-6 claims covers the Swordfish zone. Several anomalous areas are outlined outside the property.

An anomalous zone of antimony in the southern portion of the property appears to be structurally controlled. Several areas with elevated arsenic, gold and mercury were identified throughout the claim area

Ground Magnetometer Survey

A detailed ground magnetometer survey was conducted by Arctic Precious Metals in March of 1988 (SFPM 1989). The Author does not have any information regarding the type of magnetometer utilized for this survey, nor whether a base station magnetometer was utilized to correct for diurnal variation.

A total of 24.2 line-kilometers was surveyed in 20 east-west trending lines over the Swordfish zone area (SFPM 1989). The total field magnetic data were contoured and plotted at a scale of 1 inch = 200 feet (1:4800).

The contoured magnetic data ranges from 49970 NT in the extreme southwest corner of the grid to 50020 NT in the southeast. These data do not contribute to the understanding of this property and are, therefore, not included in this report.

Ground VLF-EM Survey

A detailed ground VLF-EM survey was conducted by Arctic Precious Metals during 1989 (SFPM 1989) covering 24.2 line kilometres, and was plotted at a scale of 1 inch = 200 feet (1:2400).

The contoured VLF-EM survey data from this survey show little variation. The data do not contribute to the understanding of this property and are, therefore, not included in this report.

Airborne Geophysical Surveys

The minutes of a Joint Venture Committee meeting between Santa Fe and Arctic indicate that an Airborne Magnetometer survey was flown over the Krum Hills area in 1989. Flight lines were spaced at 400-meter intervals (Hodges, et al, 1990) and included the present Winnemucca Mountain Property.

In February 1990, a more detailed airborne Magnetometer and VLF-EM survey was completed by Aerodat Limited over the existing Winnemucca Mountain claim area in an attempt to more closely delineate the structural and/or stratigraphic fabric of the area (SFPM 1989). Aerodat utilized a high sensitivity cesium magnetometer and an unspecified VLF-EM device, using a Motorola Mini-Ranger radar navigation system for navigation and recovery. The survey used an average east-west line spacing of 200 meters and an average north-south line spacing of 400 meters with average terrain clearance of 60 meters and sensor clearance of 45 meters. The calculated vertical magnetic gradient and total field VLF-EM data were plotted in color at a scale of 1:12,000.

Magnetic contour data outline several north to northwest trending magnetic highs, the most easterly of which coincides with the Swordfish zone. See Figure 11 of this report.

The airborne VLF-EM data do not show correlation with areas of known mineralization on Winnemucca Mountain and are, therefore, not presented in this report.

CSAMT

Reference is made to a completed Controlled Source Audio-Frequency Magneto-Telluric (CSAMT) survey by Hodges, Oct 1989. However, these data were not available to the author at the time of this report preparation.

Induced Polarization

In the autumn of 1989, Santa Fe Pacific contracted Great Basin Geophysical Inc. to perform a Gradient Array IP orientation survey (SFPM 1989). The orientation survey was successful and the gradient array survey, including chargeability and resistivity, was completed over a 2.6 square kilometer area centered on the Swordfish zone. According to Hodges, et al (1989), the results clearly identified the Main Vein, Don's Rock, Saddle Hill and other areas of mineralization and silicification. Hodges, et al, (1989) state, "This (technique) promises to be an indispensible tool in the recognition of other blind targets within the JV area". Ground follow-up in an area of anomalous resistivity along the eastern margin of the Swordfish zone area was found to correlate with a zone of quartz veining which strikes N-S and dips near vertically (Hodges, et al, 1990). Only one map remains of this survey; a resistivity contour map with local grid coordinates that cannot be referenced to other maps in the Author's possession.

In 1996, Practical Geophysics of Salt Lake City, Utah was retained by Anvil Resources to conduct a gradient array resistivity survey (Fox, 1996). The survey was conducted between April 8 and 20, 1996 by a four-person crew. A total of 45 line-kilometers was surveyed over two grids. The northernmost grid (Grid 1) was centered 500 meters west of the common corner post of sections 10, 11, 14 and 15 to cover the Swordfish zone, and Grid 2 was centered 450 meters west of the common corner post of sections 14, 15, 22 and 23 to cover the Golden West claims. A 30-meter measuring dipole was used to measure signal strength along east-west grid lines spaced 60 meters apart (Fox, 1996). Survey data were presented as contoured apparent resistivity and contoured spontaneous potential gradient at a scale of 1 inch = 500 feet. It should be noted that numerical data on maps are hand-written, then copied and are partly illegible.

On Grid 1, contours indicate that resistivity ranges from less than 20 to 700 ohm-meters, outlining a strong northwest to northeast trending linear which correlates extremely well with the surface projection of the Swordfish zone (Metzler, 1996). A second target zone was outlined to the east. The areas of anomalous resistivity outlined by the gradient array survey in Grid 1 are presented as Figure 12 of this report. Apparent resistivity on Grid 2 are much lower, seldom exceeding 200 ohm-meters.

Spontaneous potential gradient, measured in millivolts, is extremely low over both grids, showing no variation over the known mineralized zones.

Trenching

Bulldozer trenching was completed on the Winnemucca Mountain Property by St. Joe in 1982. This trenching was not successful in reaching bedrock due to thick pediment cover (St. Joe American, undated Internal Memo).

In 1995, Anvil Resources proposed extensive surface trenching, combined with shallow drilling, along the blocked resource zones in an attempt to delineate shallow mineralization (Metzler, 1995b). The author has seen no indication that the proposed trenching was carried out or results thereof.

DRILLING

During 1987 and 1988, Arctic Precious Metals Inc. drilled 5 reverse circulation drill holes (573 meters) and 7 diamond drill holes (637.2 meters). Between 1988 and 1990, Santa Fe Pacific Mining drilled a total of 73 additional reverse circulation drill holes for 15,993 meters. Four of these holes (29, 39, 59 and 71) were re-entered and extended by diamond drilling. The exact amount of the diamond drill footage is unknown since the last two holes were not logged and are evidenced only by photographs but it as at least 145.6 meters.

In addition to the above, eleven additional drill holes are evident on the drill hole location map provided by Paul A. Hawkins & Associates Ltd. These drill holes are numbered DKH 5, 11, 12 and CWM 6, 7, 8, 9, 10, 11, 12 and 29. The holes were all collared to test the Swordfish zone and are shown on cross sections prepared by Santa Fe Pacific Mining indicating that the holes were drilled prior to Santa Fe's involvement. However, it is not clear if these holes were renumbered from (or to) the DMW series holes reported elsewhere by Santa Fe. The Author is not aware of who drilled these holes, nor are the drill logs in his possession. It should also be noted that several of these holes were used in Santa Fe's (non-NI 43-101 compliant) resource calculation.

All of the above drill data were digitized and cross sections were produced using AutoCad. A computer program called Geostat was utilized to develop a cross-sectional resource estimate for the Swordfish zone (Schnell and Hodges, 1990). Drill hole collar locations are shown on Figures 13 and 14 of this report. Sample recoveries were locally poor and therefore assays and sample widths may not be accurate (Schnell and Hodges, 1990; Metzler, pers. comm.).

Reverse circulation drill hole cuttings were sampled on 1.5 meter intervals. Diamond drill core was split and also sampled at 1.5 meter intervals except where those intervals were bisected by geological controls, in which case, smaller samples were collected. All analytical certificates included with drill logs[7] in the Author's possession indicated that drill core and cutting samples were sent to Chemex Labs Inc. in Sparks, Nevada where gold was analyzed by Fire Assay. Various combinations of gold indicator elements were also analyzed. Drill samples were often composited following Fire Assay for detection of indicator elements.

[7] Not all drill logs and assay reports are available to the author.

Most of the previous drilling concentrated on exploring and defining the Swordfish zone. During 1990, the upper oxidized portion of the zone was drilled on 61 meter centers to depths rarely exceeding 100 meters. Drilling confirmed that the vein horsetails toward the surface where the tenor of gold mineralization decreases (Schnell & Hodges, July 1990). Grid drilling failed to increase the grade of the Swordfish zone area but enough data were collected to allow a non NI 43-101 compliant gold resource estimate to be made for the main Swordfish zone. It was agreed (by the JV partners) that although deep core testing of the quartz vein did encounter thick zones of mineralized quartz vein demonstrating the significant vertical continuity of the system, the tenor of the gold mineralization did not increase with depth (SFPM 1989). No further work was recommended in this area.

Three holes drilled to test mineralization in the Don's Rock area returned only erratic, un-oxidized gold mineralization (SFPM 1989). The best Au interval was 10' of 948 ppb (Hodges, et al, 1989). The true thickness of the interval is unknown. Participants at an Arctic/Santa Fe joint venture meeting in 1989 agreed that IP Resistivity data suggested that the central parts of the Don's Rock target had yet to be drill tested and a coincident IP low/Resistivity high in this area suggested the possibility of shallow, oxidized mineralization.

Eight drill holes (DWM 78 to 85) were completed during 1990 to test various geophysical anomalies and lineaments outside of the Swordfish zone (Schnell & Hodges, July 1990). Not all of these holes are shown on the drill hole location maps in the Author's possession and grid coordinates given on drill logs use different origins and have been rounded off. The Author assumes no responsibility for the correct location of these holes as plotted on Figures 13 and 14. Seven of the eight holes intersected gold mineralization in silicified or quartz veined Triassic siltstone with mineralized intervals ranging from 1.5 to 59.4 meters in width. The relationship between the sample length and the true thickness of the mineralization is unknown. The best intervals consisted of 1.5 meters grading 69 g/t gold in DWM 83 and 9 meters averaging 1538 ppb Au encountered in DWM 85, associated with open space filling and replacement silicification along the down-dip projection of a densely silicified fault breccia found at the surface (Schnell & Hodges, November 1990).

TABLE 3
SELECTED DRILL HOLE RESULTS
Winnemucca Mountain Property

Drill hole	From-To (Ft)	Interval[8] (Ft)	(m)	Area	Grade Opt Au	Grade g/t Au
DWM 014	190-195'	5'	1.5	Swordfish	0.413	14.2
DWM 015	55-85'	35'	10.7	Swordfish	0.070	2.4
015	145-150'	5'	1.5	Swordfish	0.094	3.2
DWM 019	15'-45'	30'	9.1	Swordfish	0.027	0.9
DWM 026	610-615	5'	1.5	Swordfish	0.101	3.5
DWM 027	510-525'	15'	4.6	Swordfish	0.052	1.8
027	875-890'	15'	4.6	Swordfish	0.029	1.0
DWM 028	360-425'	65'	19.8	Swordfish	0.031	1.1
DWM 030	845-900	55'	16.8	Swordfish	0.040	1.4
DWM 032	25-35'	10'	3.0	Swordfish	0.173	5.9
DWM 038	675-700	25'	7.6	Swordfish	0.051	1.7
DMW 039	1100-1105'	5'	1.5	Swordfish	0.156	5.3
039	1342-1347'	5'	1.5	Swordfish	0.243	8.3
DWM 041	455-465	10'	3.0	Don's Rock	0.223	7.6
DWM 045	70-80'	10'	3.0	Swordfish	0.164	5.6
DWM 053	265-290'	25'	7.6	Swordfish	0.047	1.6
DWM 055	250-255'	5'	1.5	Swordfish	0.259	8.9
DWM 066	645-690'	45'	13.7	Swordfish	0.114	3.9
DWM 077	615-635'	20'	6.1	Swordfish	0.058	2.0
DWM 083	460-465'	5'	1.5	Swordfish ext	2.002	68.6

Note: Data from Santa Fe Precious Metals Drill Logs

SAMPLING METHOD AND APPROACH

The extent of soil and rock geochemical sampling completed by previous workers is unknown due to missing data, therefore the Author cannot attest to the sampling methods used, nature or spacing of samples collected, or the quality of the sampling procedures.

Santa Fe Pacific Mining utilized an auger drill to collect a total of 286 bedrock samples from overburden covered areas. This sampling occurred sporadically over an area of approximately 18 square kilometers that included the present claim area and extensive ground to the east. It appears that over 80% of the total samples were collected within the existing claim area. Sample collection was along lines in some areas and as sporadic groupings in other areas, possibly due to access limitations for the auger drilling equipment. Easterly trending grid lines were sampled in the Don's rock area and north of the Swordfish zone. Sample holes were drilled at 30 meter intervals along 60 meter spaced lines. East of the Swordfish zone, northerly trending lines were spaced 120 meters apart with samples collected at 60 meter intervals. The Author cannot comment

[8] Insufficient data are available to determine true width.

on the sampling methods, nor can he comment on possible sample bias, due to missing data.

Reverse circulation drill hole cuttings were sampled on 1.5-meter intervals, and diamond drill core was split and also sampled at 1.5 meter intervals except where those intervals were bisected by geological controls, in which case, smaller samples were collected. A total of at least 17,348 meters[9] of drilling has been completed, with approximately 11,340 samples collected from the drill holes. No data are available to indicate sampling methods or parameters used to establish the sampling interval, however, based on Santa Fe's reputation and success at finding gold deposits elsewhere in Nevada, sampling methods for all of Santa Fe's drilling programs are considered appropriate.

SAMPLE PREPARATION, ANALYSES AND SECURITY

The Author is not familiar with any of the sample preparation methods or quality control measures employed prior to dispatch of rock, soil or drill samples to an analytical or testing laboratory, nor can he describe the method or process of sample splitting and reduction with regard to either reverse circulation cuttings or diamond drill core.

Of the analytical certificates included with drill logs, it appears that all samples[10] of diamond drill core and reverse circulation cuttings were sent to Chemex Labs Inc., an ISO registered facility, in Sparks, Nevada. All core and cutting samples were analyzed for gold by traditional fire assay using a 30 gram sample. The lower detection limit for this method was 5 ppb gold. Most of the holes drilled by Santa Fe Pacific Minerals were also analyzed for Ag, As, Sb, Hg, Cu, Pb, Zn, Mo, W, Bi, Sn, Te, Ba and Se (Schnell, 1989). Many of Santa Fe's samples were combined after fire assaying with subsequent analysis for indicator elements performed on four-sample composites. In addition to fire assay for gold, Arctic performed As and Hg analyses on their five reverse circulation holes; it is unknown what analyses were performed for the seven diamond drill holes since the analytical certificates are missing.

The Author cannot comment on any security measures that may have been taken to ensure the validity and integrity of any of the samples collected by previous workers on the Winnemucca Mountain Property. Based on Santa Fe's reputation and success at finding gold deposits elsewhere in Nevada, there is currently no reason to suspect that the Santa Fe drill data are anything but reliable.

The three samples collected by the Author in 2004 were personally collected, maintained and delivered to American Assay Laboratories in Sparks, Nevada

[9] Most but not all of this drilling was performed within current limits of Winnemucca Mountain property.
[10] Not all drill logs and assay certificates were available for review by the author.

where they were subjected to lead fire assay for gold and silver and a multi-element ICP-2A scan for 69 elements.

No aspect of the sample preparation was conducted by an employee, officer, director or associate of AHL Holdings.

DATA VERIFICATION

In the minutes of an Arctic/Santa Fe joint venture meeting, potential problems associated with the coarse gold in the Swordfish zone were discussed (SFPM, 1989). It was noted that the partners had evaluated the geochemical data and check assays, and did not feel that potential mineralization was being significantly under-estimated. They concluded that no changes were required to their drill sampling procedures (SFPM 1989). The reference to check assays indicates that such procedures were followed although the author has not seen evidence of such. The Swordfish zone is completely pediment covered and therefore the author was not able to collect any verification samples.

Based on the reputation of Santa Fe and the geologists who performed and supervised prior exploration work on the Winnemucca Mountain Property, the quality of existing data is believed to be sufficient to make the interpretations and conclusions in this report.

Three rock samples were collected by the Author during the course of a property examination for data verification purposes. The samples, one grab and two selected samples, were taken to confirm mineralization and, as such, were not unbiased samples. The author's samples from the Don's Rock area returned low gold values, confirming the low gold values reported at surface by Santa Fe (Hodges, et al, 1989). A sample collected by the author at the Ridge zone returned 508 ppb gold, corresponding well with the 100 ppb to 1000 ppb gold values reported by Arctic Precious Metals.

ADJACENT PROPERTIES

There are no known mineral deposits on properties adjacent to the Winnemucca Mountain Property that would aid in assessing the economic potential of the Winnemucca Mountain Property. **Even if such a mineral deposit were identified, it would not necessarily be indicative of potential mineralization on the property that is the subject of this technical report.**

There are numerous mineral occurrences, deposits and mines in the general vicinity of the Winnemucca Mountain Property that have been summarized in this report under "Deposit Types". None of those properties offer any certainty of the type or quantity of mineralization on the Winnemucca Mountain property.

MINERAL PROCESSING AND METALLURGICAL TESTING

In 1995, Anvil Resources confirmed the presence of particulate gold and performed crushing tests to determine the requisite mesh size of a pulverized sample to achieve reasonable liberation of free gold for fire assay purposes (Metzler, 1995c). Sampling was restricted to surface outcrops, float and dump samples. Samples weighing a minimum of 10 pounds (4.5 kg) were crushed in a jaw crusher and cone crusher, and then concentrated on a Eutectic table. Cones were visually examined for free gold then amalgamated with mercury in a tumbler. The amalgam was parted with nitric acid and the remaining gold weighed on a Cahn 23 microbalance. The mercury was subsequently analyzed for gold to monitor contamination, and those results were factored into the final results (Metzler, 1995c).

According to Metzler (1995c), insufficient grinding capabilities allowed only 50% of the samples to be crushed below - 20 to 30 Tyler mesh. The size of the particulate gold recovered indicated that at least 90% of the sample would have to be pulverized to smaller than – 150 (Tyler) mesh would be required for reasonable liberation of the free gold.

Metzler (1995c) amalgamated five samples, reporting on the results of two. A ten pound (4.5 kg) sample returned 0.0251 opt (0.86 g/t) gold and a 20 pound (9.1 kg) sample returned 0.0254 opt (0.87 g/t).

MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Santa Fe Pacific Gold Corp. utilized a computer program called Geostat to calculate a cross-sectional resource estimate for the Swordfish zone area (Schnell and Hodges, 1990b). All resource calculations were based on arithmetic averages (Metzler, 1994). Santa Fe estimated that the Swordfish zone contained 4.15 million tonnes grading 0.82 g/t gold (4.58 million tons grading 0.028 opt gold) at a 0.29 g/t cutoff (0.01 opt cutoff; Schnell and Hodges, 1990b). Most of this resource is confined to the main quartz vein at a depth of approximately 200 meters (700 feet), over a strike length of approximately 670 meters (2200 feet; Metzler, 1995b). This resource is not NI 43-101 compliant, is presented for disclosure purposes only, and therefore should not be relied on.[11]

OTHER RELEVANT DATA AND INFORMATION

During the course of Santa Fe's 1989 mapping program, all potentially hazardous workings were located (Hodges, 1989). These were fenced and posted with warning signs during December 1989 (Hodges, et al, 1990).

[11] The resource calculated by Santa Fe has not been verified by the Author and the Author has no opinion as to its reliability.

INTERPRETATION AND CONCLUSIONS

The Winnemucca Mountain Property is a gold prospect at an early stage of exploration. There are no known economic mineral deposits on the property. Although it is always difficult to quantify geological merits, existing data on geology, mineralization, and location suggest that the Winnemucca Mountain property has significant potential.

The property is underlain by locally calcareous siltstone and conglomerate of the Triassic Winnemucca Formation. These strata are intruded by mid to upper Mesozoic granitoid rocks, which have, in turn, been intruded and/or unconformably overlain by a complex of Tertiary (Miocene?) volcanic breccias, flows, and tuffs. The geologic setting is interpreted as suitable for hosting gold deposits, especially of an epithermal style that is well known in northern Nevada.

Modern exploration work on the Winnemucca Mountain Property has consisted of geological mapping, geochemistry, geophysics, and at least 17,348 meters of drilling. The most recent work on the property was in 1995. Records of prior work are incomplete, thereby making conclusive interpretations difficult.

The most significant mineral occurrence now known on the Winnemucca Mountain Property is the Swordfish zone, a north to northeast-trending, low sulfide, gold bearing, quartz-carbonate vein discovered by drilling in a pediment-covered area. The zone is controlled by multiple faults within a diatreme complex. A non-NI 43-101 compliant resource is currently too small and low grade to be of economic interest, especially considering that the zone occurs at a depth of approximately 200 meters below surface.

At the Sleeper deposit, located 40 km northwest of Winnemucca Mountain, gold mineralization is localized in narrow high-grade veins which were consistently missed during exploration drilling on 30-metre centers. These narrow veins were finally delineated by drilling on 9-metre centers. Drilling at Winnemucca Mountain has not intersected any high grade structures but drilling was, at best, carried out on 60-metre centers. Reported high grade drill intercepts at Winnemucca Mountain, including 69 g/t gold across 1.5 meters, based on wide-spaced drill centers, indicate that gold grades within the Swordfish zone are irregular and higher grade zones may be found with more detailed drilling. The Sleeper deposit and Winnemucca Mountain property have similar geochemistry, structure, alteration, and host rocks.

At the Don’s Rock zone, drill testing of chalcedonic breccias carrying less than 50 ppb gold and anomalous mercury on surface returned up to 948 ppb gold in drill holes. While this grade is not of economic interest, the increase in grade with depth is suggestive of vertically zoned epithermal-style precious metal

mineralization that has been well documented in similar geological settings at Midas, El Penon, and elsewhere.

Anomalous gold mineralization in a well-developed, low-sulfide, quartz-carbonate breccia vein at the Ridge zone may represent the surface expression of higher grade gold mineralization at depth. This area is located within an area of variably anomalous concentrations of gold, silver, arsenic, and mercury in rock and soil samples, high magnetic relief, and high resistivity.

Most of the drilling completed to date on the Winnemucca Mountain property has been concentrated in the Swordfish zone area. In addition to the Ridge Zone, there are many untested, or partially tested, gold exploration targets consisting of a combination of outcropping vein-type mineralization, geochemical anomalies, and geophysical anomalies identified during previous work programs.

Results of exploration work on the Winnemucca Mountain Property have successfully identified blind gold mineralization covered by an extensive blanket of pediment at the Swordfish zone. None of the zones currently have sufficient resources to be of economic interest. In order to advance the property, the currently known mineralization at the Swordfish zone will have to be increased, either in terms of tonnages or grade, or both, and in compliance with NI 43-101, or new zones of mineralization will have to be found.

The density of prior drill holes at the Swordfish mineralized body does not preclude the possibility that higher grade zones of gold mineralization remain to be found within the previously drill tested area. The high grade intercept reported in hole DWM 83 at the Swordfish zone has not yet been followed up. There is adequate untested ground on the Property, in particular north and east of the Swordfish zone, to potentially host new zones of gold mineralization and achieve a substantial increase in tonnages and possibly grade.

The Ridge zone represents the potential surface expression of vertically-zoned epithermal precious metal mineralization. Anomalous gold values on surface combined with the style of mineralization and alteration are not unlike Midas. A single drill hole has not adequately tested this area.

Outside of the known mineralized zones, there are multiple untested exploration targets comprised of a combination of rock geochemical anomalies, soil geochemical anomalies, and geophysical anomalies of a similar magnitude to the anomalies that have resulted in the discovery of bedrock mineralization at the Swordfish zone by follow-up drilling.

Mineral exploration, by nature and by definition, is a highly results-dependent undertaking. It is possible, in fact likely, that the collection of new data as part of the recommended work program below will produce constantly evolving interpretations, targets, methods, and budgets. Accordingly, it is not possible to

accurately predict appropriate work or budgets for all mineral exploration programs. Modification of the work program recommended herein may be acceptable or even necessary as the work progresses, in the discretion of an appropriately qualified person, provided that the qualified person is aware of all relevant and available data and budget limitations. Therefore it will be necessary to have a qualified person closely supervise the recommended work program and monitor the results thereof to maximize exploration efficiency.

The character of the Winnemucca Mountain property is of sufficient merit to justify continued exploration. However, all future exploration will be speculative and involve risk, and therefore it can not be stated with certainty that additional exploration will be successful in advancing the property.

RECOMMENDATIONS

The following two-stage work program, where the second stage is contingent on an economic evaluation of results obtained in the first, is recommended:

Stage 1

1. Attempt to obtain missing exploration data from prior operators, in particular Arctic Precious Metals. Carry out a thorough compilation and review of existing exploration data. Acquire additional land if necessary.
2. Map the entire property and surrounding areas at a scale of 1:5000 or more detailed. Special attention must be paid to understanding structure, and to investigate outcropping gold mineralization at the eastern part of the property.
3. Complete reconnaissance scale soil sampling over the entire property, with more detailed sampling in the area of the Swordfish and Ridge Zones, and other potential targets. Given the extensive pediment cover, sampling must be completed with an auger or other type of mechanized equipment capable of collecting samples at five meters or more below surface. Interpretation of soil geochemical results must assess the potential effects of narrow mineralized shoots and vertically zoned mineralization.
4. Carry out CSAMT and/or Induced Polarization surveying as orientation and reconnaissance in the known Swordfish and Ridge Zones, and expand survey area if positive results are obtained.

Stage 2 (Contingent on positive results obtained in Stage 1)

1. Continue exploration by reverse circulation drilling.

Costs for the recommended work program are estimated below:

Data compilation, geological mapping, and supervision:	$ 15,000
Soil sampling:	25,000
Geophysical surveys:	15,000
Analytical costs:	10,000
Meals and accommodations:	5,000
Truck rentals, fuel, communications, travel, and supplies:	10,000
Report preparation and independent consulting:	10,000
Contingencies:	10,000
Total estimated cost, Stage 1:	US $ 100,000

Stage 2

Drilling; 3,000 meters @ $50/meter:	$ 150,000
Geological support and supervision:	20,000
Analytical costs:	25,000
Meals and accommodations:	15,000
Truck rentals, fuel, communications, travel, and supplies:	15,000
Report preparation and independent consulting:	15,000
Permitting, road building, and reclamation:	20,000
Contingencies:	40,000
Total estimated cost, Stage 2:	$ 300,000
Total Estimated Cost, Stages 1 and 2:	US $ 400,000

The character of the Winnemucca Mountain property is of sufficient merit to justify the recommended two-stage, success contingent, work program.

Respectfully submitted;

November 25, 2004

Harmen J. Keyser, P.Geol.

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DATE

The effective date of this report is November 25, 2004.

ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

The Winnemucca Mountain property is a mineral prospect at a pre-development stage of exploration and no additional requirements are applicable to this technical report on the Winnemucca Mountain property.

STATEMENT OF QUALIFICATIONS

I, Harmen J. Keyser, hereby certify that:

1. This Statement of Qualifications and the accompanying technical report have been prepared in accordance with National Policy 43-101 and Form 43-101F1.

2. I am an independent consulting geologist with office at 830-355 Burrard Street, Vancouver, B.C., Canada.

3. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981).

4. I have been employed as a geologist on a full-time and part-time basis continuously since 1978.

5. I am a Licensee of the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (L1034).

6. I am a "Qualified Person" as defined in National Instrument 43-101.

7. I am independent of AHL Holdings Ltd. in accordance with section 1.5 of National Instrument 43-101.

8. I am the author of this report on the Winnemucca Mountain property, which is based on my personal examination of the Property on February 26, 2004 and on data from referenced sources. I am not aware of any material fact or material change with respect to the subject matter of this report which is not reflected in this report.

9. I have read National Instrument 43-101 and Form 43-101F1.

10. I consent to the use of this report by AHL Holdings Ltd. for any purpose deemed necessary, provided that no portion is used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

November 25, 2004 Harmen J. Keyser, P.Geol.