GOLD, SILVER, AND MERCURY ROCK CHEMISTRY

FOR THE

ADELAIDE MINING DISTRICT

SONOMA RANGE, HUMBOLDT COUNTY, NEVADA

BY

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ABSTRACT

A rock geochemical survey of the Adelaide Mining District which is in north-central Nevada, about 16 kilometers south of Golconda, Nevada, shows varied patterns of gold, silver and mercury distributions. High gold values are present (1) along the Adelaide fault system, (2) in hydrothermally altered areas scattered throughout the district, and (3) in a copper skarn near the east edge of the mining district. Gold was not detected in any of the several jasperoid samples which were analyzed at detection limits of 0.1 ppm. Silver is enriched throughout the mining district and may have been enriched in certain types of rock within unaltered Lower Cambrian to Lower Ordovician Preble Formation, given an unaltered chert nodule contained 14 ppm silver. Mercury distribution, is probably related to the hydrothermal alteration, but individual anomalies of mercury are discontinuous and do not show distinct patterns as commonly present in many other mining districts.

INTRODUCTION

The Adelaide Mining District, also known as the Gold Run Mining District, is located 16 kilometers south of the town of Golconda, Nevada in the eastern foothills of the Sonoma Range, Humboldt County Nevada(fig. 1). The district has produced gold, silver, copper, lead, and zinc (Stager and Tingley 1988; Willden, 1964; Vanderberg, 1938). Presently,(1989) there is a gold placer operation on Gold Run Creek, one of several streams draining slopes in the district. The study area contains several mines including: the Adelaide Crown Mines (epithermal), the Adelaide Mine (skarn-inactive), and some small inactive manganese mines in the northwestern part of the district.

figure 1: Location of the Adelaide District

Most mining in the district occurred in the 1920's and 1950's, when there were both active underground and open pit mines (Wilden 1964; Trengrove, 1959; Vanderberg, 1938), although mining began here in the late 1800's. The Adelaide Mine, a copper skarn mine was exploited by several underground workings, and waste rock is present in large spoil piles nearby. At the Adelaide Crown Mines, west of the skarn mine, there are both underground and open pit mines strung out in a north-trending line along the Adelaide fault system. An old mill site is located just east of the Adelaide Crown Mines. Formerly there were gold placer mines along Cumberland Creek and in Bill Major's Canyon. In the late 1800's, several small manganese mines were active in the northwestern part of the district (Penrose,1893).

The host rock for mineralization in the district is the Lower Cambrian to Lower Ordovician Preble Formation (Madden-McGuire 1988; Madden-McGuire and Carter, 1988; Rees and Rowell, 1980; Rowell and others; 1979, Holtz and Willden; 1964 and Gilluly, 1967), which is intensely faulted and silicified in the this district, sometimes alteration severely masks pre-alteration lithologies. Faulted, discontinuous garnet and pyroxene skarn occurs also in the Preble Formation. The skarn can be observed at the Adelaide Mine and south of the Adelaide Crown Mines. Some faults with accompanying silicification related to epithermal mineralization apparently are post-skarn formation. In addition, skarn is overprinted with quartz veins and finely disseminated silicification.

The purpose of our study is to determine major element, and trace element distribution patterns in the metal mining district, using quantitative rock analysis for various elements. The entire database which was developed from this study is currently being evaluated.

STRUCTURE AND GEOLOGY OF THE SONOMA RANGE

The study area is structurally complex. Rocks of the Preble Formation crop out as a window, stratigraphically below the Golconda allochthon (Silberling and Roberts, 1962; Gabrielse and others, 1983). The window is bound on the west by a probable thrust fault (called here the western thrust(?)) that may correlate with the Roberts Mountain thrust (Silberling, 1975) and on the east by a range-front fault. The lowermost contact of the Golconda allochthon is the Golconda thrust; this thrust crops out east of the study area in the Edna Mountains and the eastern-most edges of the Golconda allochthon, at the same general latitude of the Adelaide Mining district, is in the Battle Mountains, about 30 kilometers to the east. The western thrust(?) which is at the western-most boundary of our study area, has faulted rock fragments caught up within it, but the orientation of the fault plane at depth is difficult to determine from only surface exposures. The trace of this thrust(?) fault defines nearly a north-south line along which allochthonous chert, quartzite, and greenstone of the Ordovician Valmy Formation (Gilluly and Gates, 1965, p. 23-34; Roberts, 1964, p. 17-22; Churkin and Kay, 1967) and is in contact with the para-authochthonous transitional assemblage rocks of the Preble Formation.

The most widespread formation to crop out in the study area is the Preble Formation (Ferguson and others, 1951; Stewart and Carlson, 1984), and in particular limestone, phyllitic schist, and shale facies of this formation. Three obvious geological features in the study area, are: a copper-, lead-, zinc-, tungsten-, and gold-bearing skarn probably related to Cretaceous granodiorite at depth (Marsh and Erickson, 1978) and a system of north-striking faults, (often called the Adelaide fault), with epithermal mineralization along it; and the Valmy Formation abruptly crops out just to the west of this fault system, thus putting it in contact with the Preble Formation.

MINE DESCRIPTIONS

The study centers on two mining areas within the district: the Adelaide Crown Mines, an area of gold and silver mines of epithermal origin; and the Adelaide Mine, an area of copper skarn. The Adelaide Crown Mines are a cluster of epithermal sediment-hosted gold and silver mines includes open pit, and underground mines along a steeply dipping (70^{o}W) north-striking system of faults (Adelaide fault). One caved group of underground workings form a large deep pit that looks like an open pit. There are also some small discontinuous skarn occurrences caught up along the faults, in the area of the Adelaide Crown Mines. Except for the skarn, mineralization in the Adelaide Crown Mines is controlled by the steep north-striking faults.

Characteristics of the rocks at the Adelaide Crown Mines and south in the Cumberland Creek area, include many of the general characteristics of sediment-hosted deposits (see Berger, 1986; Berger and Silberman, 1986). The mineralization is hosted in strongly silicified limestone of the Preble Formation. The Adelaide fault, which is a dominant structure in this region, was activated several times during mineralization; thin (average less than 8 cm in thickness) discontinuous stockwork quartz veins were broken repeatedly by faults showing small displacements. Some drusy quartz coatings and veins are gray to bluish-gray which are often indicative of metal-bearing quartz. Red jasper and gray, red and black jasperoid are common. Some rock has a porcelain appearance and contains crusts with cinnabar, orpiment, and realgar, together with manganese and iron oxides. Silicified veins of calcite and barite are present in narrow extensional zones within fault zones. There is no obvious spatial relationship of clay-altered dikes to gold mineralization, but many of the prospect pits expose clay-altered dike rock within them, as if prospectors had a particular interest in them. A trace element assemblage of As, Sb, Hg, Tl, Au, and Ag is common in these rocks (T.M. Cookro unpublished data). Sinter is present along the faults and and black earthy oxides are present just below silicifed "cap" rock.

The Adelaide Mine (the skarn mine, east of the Adelaide Crown mines) exploited a copper-gold skarn, that contains by-product lead and silver and minor tungsten (scheelite). The ore is hosted in a strongly folded and faulted silicifed, laminated shaley limestone of the Preble Formation. The mine workings include several shafts and underground workings with resulting spoil piles showing extensive iron and copper oxide staining. Selected samples of the ore have the following mineralogy: chalcopyrite, chalcocite, pyrrhotite, pentlandite(?), pyrite, galena, scheelite, and molybdenite, with calcite, orthoclase, diopside, brown and green garnet, vesuvianite and quartz in veins and vugs sometimes with drusy textures. Preliminary mineral chemistry studies of garnet and pyroxene indicate that garnet is grossular-rich and that pyroxene is rich in the diopside molecular end member (J.M. Hammarstrom, unpub. data, 1989).

ROCK DESCRIPTIONS

The Preble Formation is composed of phyllite or phyllitic schist and shale, limestone and quartzite; it is strongly folded and faulted, thermally metamorphosed probably by fluids emanating from Late Cretaceous granodiorite exposed in the eastern part of the study area, and by fluids possibly associated with Tertiary magmatism in the western part of the study area. Strongly altered punky rhyolitic dike rock was discovered in mine dumps in the northern part of the study area, is similar to Tertiary rhyolite dikes northwest of the study area, in the Sonoma range. Locally, limestone is dolomitized because of hydrothermal alteration; this is especially well developed north of the Adelaide Crown Mines along the north-striking fault system between rocks of the Valmy and Preble Formations. All of the rocks of the Preble Formation have been thermally and chemically altered to some extent.

The phyllite and phyllitic schist or shale of the Preble Formation is moderately foliated and interbedded with limestone and quartzite, and has dark gray to black carbonaceous layers with light gray to white quartz-rich layers, some of which are calcite-rich. The calcareous layers are commonly mineralized and the oxidation products from weathering of sulfides results in notable concentrations of brown iron-oxide staining on the mottled gray and white rock.

Limestone of the Preble Formation, which in the study area, is both bedded and massive, has been locally dolomitized. The process of dolomitization in the Adelaide Mining District was probably through epigenetic hydrothermal alteration. The dolomite is spatially associated with the mineralized faults. The dolomite is also locally silicified and strongly indurated with fine-grained secondary silica.

Micaceous quartzite of the Preble Formation has a characteristic color of dark red to dark greenish yellow; it commonly shines in the sun, from reflectance of small grains of aligned muscovite. It is poorly sorted and contains feldspar grains which give it the reddish-colored weathered surface.

Calcic exoskarn with a sugary texture and associated sulfide impregnated rock probably resulted from contact metasomatism of the Preble Formation by Cretaceous granodiorite (Erickson, 1974; Marsh and Erickson, 1978). Some of the sulfide-rich zones related to the skarn are in extensional zones of fracturing and developed late but during the skarn-forming process; and have been disturbed by repeated movement along the host fractures. At the Adelaide Mine laminated calcareous siltite of the Preble Formation typically has been converted in part to garnet-pyroxene-chalcopyrite-pyrrhotite assemblages that form conspicuous ovoid to lensoid pale brownish green concentrations against the dark gray calcareous siltite. These garnet-pyroxene-chalcopyrite-pyrrhotite assemblages commonly are 2-10 cm wide and transect bedding in the siltite. They are marked by a conspicuous pale gray to creamy white outer border of diopside and probable potassium feldspar that generally measures several mm to 1 cm. Sulfides in these garnet-pyroxene clots show fabrics wherein the sulfides are tightly intergrown with garnet and pyroxene, as found in many sulfide skarn bodies elsewhere. Examination of geologic relations in the wall of the largest open cut at the Adelaide Mine indicates that the overall "front" between sulfidized and unaltered rocks of the Preble Formation is quite sharp. Sulfide-rich skarn, was also overprinted subsequently by a later quartz-veining event. This final silicification event dilutes the the metal content that was first introduced when the sulfide-rich skarn formed. Some of the quartz veins and vugs, overprinted on the sulfide concentrations, are ladened with tiny unidentified opaque minerals.

Gossan is associated with sulfidized skarn at the Adelaide Mine, or is related to hydrothermal sulfide concentrations, along the north-striking faults. Samples were called gossan if the greater part of the sample was punky earthy iron oxides; the gossan samples often have crystal molds after sulfides, usually pyrite. Identification of the original rock in which the gossan formed generally was not possible, but probably the rock was some lithologic variant of the Preble Formation. Quartz veins, vugs and colloform banding are common in the gossan samples. Some gossan is nearly all hydrated iron, but others have a high specific gravity indicating that some primary sulfides remain within the sample. Fresh surfaces were impossible to obtain, so the sulfides could not be identified. Some of the gossan shows copper and arsenic oxides on weathered surfaces.

The Valmy Formation in the study area is well indurated, fine grained and includes chert, greenstone, quartzite, and siltstone. The rocks of the Valmy Formation form the western boundary of the study area. Outcrops of Valmy Formation are blocky in shape and dark-brown to nearly black in color. Fresh surfaces of typical samples of quartzite are very dark gray and fresh samples of greenstone (altered andesite and/or basalt) are greenish gray-brown, both are very fine grained.

There are three types of dikes included within the term "dike rock" in the tabulated data (table 1). Those named simply "dike rock" are intensely altered by hydrothermal fluids to punky and friable rocks; and their pre-alteration composition cannot be identified.

Locally, however, they contain large euhedral mica grains that are probably secondary in origin. Nonetheless these rocks were probably chemically intermediate in composition

Diorite dikes, the least altered among the types of dike rock in the district, are recognizable as a dark grayish-green rock , medium grained hypidiomorphic granular to porphyritic in texture containing about 25 volume percent plagioclase phenocrysts, which are sausseritized and sericitized. These dikes have a distinct chemical signature, being enriched in Co, Cr, Cd and Ni (T.M. Cookro, unpub. data, 1990). The diorite dikes sometimes have patches of colorful green alteration, where nickel has been hydrated. Cobalt bloom, erythrite, is present in some of the highly altered rock which is almost completely altered to clay minerals. The diorite dikes are compositionally similar to, and probably related to the nickel-cobalt-bearing diorite in Cottonwood Canyon, south of the Adelaide Mining District (Ferguson, 1939).

The dacite dike rock apparently was emplaced after the epithermal-related faulting in the western part of the mining district. These dacite dikes show only a slight amount of secondary alteration.

Three rock types, that are extremely altered, have been grouped for geochemical purposes into a category termed "altered rock??" (table 1 and 2), and "altered volcanic". One set of samples under this label has textures characteristic of tuff and has volcanic quartz phenocrysts. The float is discontinuous, mostly found on mine dumps, was identified after sampling as an altered (Tertiary?) rhyolite. And the other set of samples is probably altered greenstone of the Valmy Formation which was caught up along the faults; this too has a punky texture. Some mine adits in the Adelaide Mining District begin in the punky or frothy looking rhyolite dike, and some adits have small spoil piles that include this rock type. The rhyolite dike was originally considered, by the first author to be tuff, because of the texture. It is extremely alteredbut could be identified when a large sample was broken and the core revealed volcanic textures. The punky texture of the rock, the presence of leached pumice fragment holes within, and the presence of the lithic fragments and volcanic quartz are characteristic of this rhyolite. The original textures are strongly overprinted by introduced silica and secondary minerals which include metal-bearing sulfides and oxides. The other rock type included in the term "altered rock??" is strongly altered greenstone of the Valmy Formation which is in fault-bounded slices of rock. It also has a punky texture, but no evidence of the former presence of collapsed pumice fragments, and contains highly anomalous concentrations of Cr (>2 ppm), Cd(>4 ppm), Ni (> 4 ppm), and Pt (>0.5 ppb) (T.M. Cookro unpub. data, 1990). The greenstone becomes buff to creamy white in color where it is intensely altered. Unaltered rocks of the Valmy Formation crop out several meters west of the mineralized faults. Identification of these two rock types are still subject to further refinement.

The samples included within the term "altered volcanic?" category are highly altered volcanic rocks that include relict phenocrysts and some vesicles. These rocks also are so altered that their protolith cannot be identified with any degree of confidence.

Some rounded fragments of rhyolite float were also sampled but these rocks do not have source outcrops in close proximity to the study area. Please note that the rhyolite identified ,as such,in the chemical tables is a different type of rhyolite than the rhyolite (for now called "altered rock") earlier identified that has a punky tuff-like texture; that is it is dense and glassy looking and not related to mineralization in the district.

SAMPLING PROCEDURE

A sampling pattern was designed to provide both altered and unaltered rock for chemical analysis. In many of the valleys and low-lying areas, the district has negligible rock outcrops, except where the ground has been disturbed by prospect pits, trenches and the like; so these had to be used as the sample sites. As described above, the dominant rock types in the study area are phyllitic shale, phyllitic schist, limestone, and quartzite of the Preble Formation, so they were naturally heavily sampled. It was nearly impossible to sample unaltered Preble Formation, in as much as these rocks all show some indications of silicification. In addition, a number of representative samples were taken, of various types of alteration products, such as: silicified barite, silicifed calcite, a chalky clay-altered rock, black crustiform coatings, clinker, jasperoid, black earthy manganese oxide concentrations, wad, and quartz veins (called "quartz" in the tables) with colloform bands, drusy textures, and vugs. The terms manganese oxide and wad are used to differentiate between a black, soft and earthy material, and a brownish-red-black, well indurated material. Some of the wad samples are cemented with silica. The soft earthy manganese occurs just below a barrier of highly silicified cap rock, and is localized at the apex of small anticlines in the silicified cap rock. The earthy manganese-rich material may have resulted from ponding of thermal fluids below the silica barrier; fluids which probably were supersaturated with manganese and precipitated the Mn as an oxide.

GEOCHEMICAL METHODS

Several hundred rock samples were submitted for quantitative analysis. Gold, silver and mercury were determined by partial AAS methods (Aruscavage and Crock, 1987, and Wilson and others, 1987).

GOLD, SILVER, AND MERCURY ROCK CHEMISTRY

Relatively high gold concentrations (tables 1-2; plates 2; plates overlay on the Adelaide and Gold Run Creek 7.5 minute quadrangles as a topographic base using UTM'S as the coordinate system) apparently are more consistently dispersed across wide areas in the southern part of the study area around Cumberland Creek, Bill Major's Canyon and the Cumberland Mine. In this part of the study area the surface traces of the Adelaide fault system splay out southward In the northern part of the study area evidence of mining activities such as open pits and underground mines, probably, in affect, show those areas that contained the most rich pockets of gold. High silver concentrations are common throughout the mining district. Mercury is erratically high in the rocks analyzed, such that the amount of mercury enrichment is difficult to assess.

Gold concentrations in gossan average 2.4 ppm and include one sample that has a concentration of 70 ppm gold. Skarn, calc-silicate skarn, and sulfide-rich skarn average 0.9, 0.4 and 0.7 ppm gold. Samples of wad averaged 0.56 ppm gold, the samples of silicified barite and silicified calcite crystals were also enriched in gold (0.1-0.8 ppm). Nearly one-half of the manganese oxide-rich samples contain detectable gold in the 1.1 to 0.1 ppm range.

Gold was not detected at 0.1 ppm levels of determination in the breccia, in the white chalky residue from hydrothermal alteration of the Preble Formation (?), or in most of the dike rocks, jasperoid, quartz diorite , or the glassy rhyolite and obsidian float.

Silver is highly anomalous in most rocks of the study area, especially in skarn, hydrothermally altered rock along fault zones, and surprisingly in a chert nodule which did not look altered (tables 1-2; plates 3). Skarn averaged 109 ppm Ag; within gossan silver values averaged 108 ppm Ag, and the sulfide-rich skarn averaged 46 ppm Ag. One sample of calc-silicate-bearing skarn contained anomalous Ag.

Silver is anomalous in most hydrothermally altered rocks, but it is difficult to determine what effect post-mineral faulting and supergene alteration may have had as enrichment factors. Silver may have been remobilized and concentrated from a locally silver-

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rich rock (Preble Formation, the limestone member), because silver enrichment is so common throughout the Preble Formation and the chert nodule sampled contains 14 ppm silver. Other examples of hydrothermally altered silver-rich samples include: silicified barite (23 and 57 ppm Ag); fault breccia which is made up mostly of fragments of the Preble Formation (4 and 10 ppm Ag); silicified calcite crystals (15 and 43 ppm Ag); a white chalky hydrothermally altered material of unknown protolith (12 ppm Ag), black amorphous crustiform material (23 ppm Ag); altered dikes that are pre-faulting in age contains (3-42 ppm Ag); a single sample of dolomite had 60 ppm Ag. Only one of nine jasperoid samples showed elevated silver content (17 ppm Ag). Silver seems to have a strong affinity for silicifed limestone of the Preble Formation (average 18 ppm), and in calcareous quartzite facies; it is enriched in one phyllitic shale sample (46 ppm Ag) and silver is more commonly anomalous in schist (average 14 ppm) than the phyllitic shale.

Silver was not detected in analyses of samples of clinker, dacite, gabbro, obsidian, rhyolite (glassy-type) , quartz monzonite , or the sample of yellow oxide. Concentrations of silver are at relatively low levels in dike rock, and dolomite.

Mercury (Tables 1 and 2, Plate 4) is notably high in the "altered rock" (average 0.8 ppm Hg), altered volcanic (0.5 ppm Hg average), gossan (0.6 ppm Hg), and in some samples of the earthy Mn oxide (4.4-0.28 ppm) and in one quartz vein sample (8.4 ppm) and in one sample of sulfide (3.4 ppm). The significance of mercury enrichment is not known. Mercury was not detected in silicified barite, dacite, or obsidian samples analyzed.

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Table 1: Rock Geochemistry of the Adelaide Mining District, Humboldt County Nevada. Cookro and Theodore, 1989

Sample	Location in UTMS		Hg	Ag	Au
85KG001	57.57119	17.61918	0.06	3	0.1
85KG002	57.57119	17.61918	0.06	3	0.1
85KG003	57.17606	17.95710	0.24	3	0.1
85KG004	57.17606	17.95710	0.17	3	0.1
85KG005	57.16234	17.93342	0.21	3	0.1
85KG006	57.16234	17.93342	0.21	3	0.1
85KG007	56.98806	17.88432	0.07	3	0.1
85KG008	56.95602	18.04011	0.07	3	0.1
85KG009	56.95602	18.04011	0.02	3	0.1
85KG010	56.95602	18.04011	0.52	3	0.1
85KG011	56.91622	18.11586	0.07	3	0.1
85KG012	56.91622	18.11586	0.15	4	0.1
85KG013	56.92472	18.43320	0.04	3	0.1
85KG014	56.92472	18.43320	0.03	3	0.1
85KG015	57.05797	18.46572	0.00	13	70.0
85KG016	57.05797	18.46572	0.02	3	0.3
85KG017	56.90713	18.84876	0.00	12	0.1
85KG018	56.90713	18.84876	0.00	24	0.1
85KG019	57.06220	18.68389	0.28	3	0.1
85KG020	56.38609	18.06224	0.40	3	0.1
85KG021	56.38609	18.06224	0.74	3	0.1
85KG022	56.02438	18.16545	0.89	3	0.1
85KG023	56.02438	18.16545	0.00	8	0.3
85KG024	55.93018	18.18320	0.70	3	0.1
85KG025	55.93018	18.18320	0.00	7	0.3
85KG026	55.91488	18.22316	0.00	7	0.2
85KG027	55.91488	18.22316	0.29	3	0.1
85KG028	55.44527	18.36754	0.13	3	0.1
85KG029	55.38828	18.93469	1.20	3	0.1
85KG030	55.39885	19.13334	2.00	4	0.1
85KG031	55.39885	19.13334	0.00	19	0.1
85KG032	55.39885	19.13334	0.53	7	0.1
85KG033	55.40350	19.07089	0.27	4	0.1
85KG034	55.40350	19.07089	0.00	15	0.1
85KG035	55.37235	18.88290	1.20	3	0.1
85KG036	55.40460	18.88004	0.51	3	0.1

Sample	Location in UTMS		Hg	Ag	Au
85KG037	55.40460	18.88004	0.03	3	0.1
85KG038	55.52324	18.77695	0.04	3	0.1
85KG039	55.52324	18.77695	0.07	3	0.1
85KG041	54.80167	18.43835	0.10	3	0.1
85KG042	54.90145	18.47435	0.76	3	0.1
85KG044	55.42118	18.68918	3.30	3	0.3
85KG045	54.78681	17.05312	0.17	3	0.1
85KG046	54.78681	17.05312	0.03	3	0.1
85KG048	55.04788	17.53353	0.29	3	0.1
85KG049	55.04788	17.53353	0.34	3	0.1
85KG050	54.87268	17.23770	0.23	3	0.1
85KG051	54.87268	17.23770	0.08	3	0.1
85KG052	55.59356	17.52027	0.00	97	3.5
85KG053	55.59356	17.52027	0.00	20	0.4
85KG054	55.59356	17.52027	0.00	15	0.4
85KG055	55.52160	17.42335	0.00	15	0.9
85KG057	55.83339	17.64192	0.29	3	0.1
85KG058	55.81063	17.67096	0.00	57	0.7
85KG059	55.81063	17.67096	0.00	33	0.1
85KG060	55.81063	17.67096	0.00	38	0.5
85KG061	55.59619	17.80772	0.11	5	0.1
85TC002	58.34813	17.04885	0.06	3	0.1
85TC005	58.43006	16.98712	0.00	40	0.1
85TC048	55.04788	17.53353	0.02	4	0.1
85TC049	55.04788	17.53353	0.07	3	0.1
85TC051	57.11113	16.01912	0.00	3	0.1
85TC054	56.81601	16.13354	0.00	28	0.1
85TC055	58.27589	16.94626	0.02	3	0.1
85TC056	58.27589	16.94626	0.02	3	0.1
85TC060	58.27589	16.94626	0.00	110	0.1
85TC061	58.27589	16.94626	0.06	80	0.2
85TC064	58.27589	16.94626	0.07	46	0.1
85TC065	57.06367	18.71031	0.34	3	0.1
85TC067	57.06367	18.71031	0.04	3	0.1
85TC068	57.06367	18.71031	0.03	3	0.1
85TC069	57.08014	18.75719	0.09	3	0.1
85TC070	57.08014	18.75719	0.06	3	0.1
85TC071	57.06349	18.83326	0.03	3	0.1

Sample	Location in UTMS		Hg	Ag	Au
85TC072	57.06349	18.83326	0.07	3	0.1
85TC073	57.06349	18.83326	0.02	3	0.1
85TC074	57.06349	18.83326	0.05	3	0.1
85TC075	57.06349	18.83326	0.72	5	0.1
85TC076	57.12843	18.90581	0.03	3	0.1
85TC077	57.08815	18.62680	0.25	3	0.1
85TC078	57.30080	18.67540	0.03	3	0.1
85TC079	57.39147	18.66748	0.02	3	0.1
85TC080	57.39147	18.66748	0.02	3	0.1
85TC081	57.90168	18.88911	0.05	3	10.0
85TC082	57.90168	18.88911	0.02	3	0.1
85TC083	57.93262	18.80987	0.02	3	0.1
85TC084	56.84576	18.95232	0.18	3	0.2
85TC085	57.06134	19.12811	0.08	3	0.1
85TC086	57.06134	19.12811	0.03	3	0.1
85TC087	57.06134	19.12811	0.12	3	0.1
85TC088	57.05112	19.09276	0.00	8	0.1
85TC089	57.05112	19.09276	0.00	8	0.1
85TC090	57.05112	19.09276	0.00	27	0.1
85TC091	57.06183	19.07366	0.00	11	0.2
85TC092	57.06183	19.07366	0.05	4	0.1
85TC093	57.09531	19.02613	0.03	3	0.1
85TC095	57.08729	19.01889	0.32	8	0.6
85TC096	57.14360	19.08360	0.02	3	0.1
85TC097	57.14360	19.08360	0.03	3	0.1
85TC098	57.17725	18.95777	0.02	3	0.1
85TC099	57.17725	18.95777	0.02	3	0.1
85TC100	57.17725	18.95777	0.02	3	0.1
85TC102	55.67828	18.34369	0.00	23	0.1
85TC117	57.59252	17.50710	0.02	3	0.1
85TC118	57.59252	17.50710	0.03	3	0.1
85TC119	57.17606	17.95710	0.28	3	0.1
85TC120	57.16234	17.93342	0.07	3	0.1
85TC121	56.97013	17.91086	0.03	3	0.1
85TC122	56.97281	17.97383	0.03	3	0.1
85TC123	56.97281	17.97383	0.03	3	0.1
85TC124	56.97281	17.97383	0.03	3	0.1
85TC125	56.87669	18.16715	0.00	42	0.1

Sample	Location in UTMS		Hg	Ag	Au
85TC126	56.87669	18.16715	0.02	3	0.1
85TC127	56.87669	18.16715	0.06	3	0.1
85TC128	56.87669	18.16715	0.12	3	0.3
85TC129	56.90713	18.84876	0.00	110	0.3
85TC130	56.90713	18.84876	0.00	14	0.1
85TC131	56.90713	18.84876	0.00	11	0.1
85TC132	56.38483	18.05920	0.68	3	0.1
85TC133	56.38483	18.05920	0.11	3	0.1
85TC134	56.38483	18.05920	0.31	3	0.1
85TC134A	56.38483	18.05920	0.34	7	0.1
85TC135	56.05713	18.23163	0.83	3	0.1
85TC136	56.05713	18.23163	0.18	3	0.1
85TC137	55.91640	18.01823	0.62	3	0.1
85TC138	55.91640	18.01823	0.25	3	0.1
85TC139	55.97489	17.97281	2.60	3	0.1
85TC141	55.48371	18.41719	0.00	9	0.3
85TC142	55.48371	18.41719	0.00	17	0.8
85TC143	55.48371	18.41719	1.00	3	0.1
85TC147	55.34423	19.06400	0.44	3	0.1
85TC148	55.34423	19.06400	0.47	4	0.1
85TC149	55.34423	19.06400	0.00	8	0.1
85TC150	55.34423	19.06400	3.70	5	0.1
85TC151	55.34423	19.06400	0.00	25	0.1
85TC152	55.34423	19.06400	2.30	4	0.1
85TC153	55.34423	19.06400	0.90	3	0.1
85TC155	55.34423	19.06400	4.40	4	0.1
85TC156	55.34423	19.06400	1.20	3	0.7
85TC157	55.42155	18.82599	0.00	31	0.2
85TC158	55.42155	18.82599	0.00	90	0.1
85TC159	55.43778	18.85513	0.00	26	0.1
85TC160	55.43778	18.85513	0.70	3	0.1
85TC161	55.43778	18.85513	0.07	3	0.1
85TC162	55.43778	18.85513	1.60	3	0.1
85TC163	55.43778	18.85513	8.40	3	0.4
85TC164	55.43778	18.85513	1.30	3	0.1
85TC167	55.43778	18.85513	0.19	3	0.1
85TC168	55.43778	18.85513	0.02	3	0.1
85TC169	55.43778	18.85513	0.80	3	0.1

Sample	Location in UTMS		Hg	Ag	Au
85TC171	54.78681	17.05312	0.20	3	0.1
85TC172	55.04788	17.53353	0.46	5	0.1
85TC173	55.09430	17.22342	0.04	3	0.1
85TC177	55.49084	17.71980	0.00	10	0.1
85TC178	55.49084	17.71980	0.00	18	1.4
85TC181	55.49084	17.71980	0.00	56	8.0
85TC182	55.49084	17.71980	0.00	14	0.1
85TC184	55.59619	17.80772	0.00	27	0.3
85TC185	55.58628	17.65922	0.00	21	0.1
86TC001	58.08130	16.67647	0.04	6	0.1
86TC002	58.08130	16.67647	0.00	52	0.1
86TC003	58.08130	16.67647	0.00	210	0.1
86TC004	58.08130	16.67647	0.00	18	0.1
86TC005	58.08130	16.67647	0.00	32	0.1
86TC006	58.15807	16.88225	0.00	17	0.1
86TC007	58.16114	16.88467	0.00	33	0.1
86TC008	58.16114	16.88467	0.04	4	0.1
86TC009	57.97242	16.81861	0.00	15	0.2
86TC010	57.97242	16.81861	0.03	4	0.1
86TC011	57.97242	16.81861	0.02	4	0.1
86TC012	58.08008	16.67648	0.00	40	0.3
86TC013	58.08130	16.67647	0.02	4	0.1
86TC014	57.89773	16.72325	0.02	4	0.1
86TC015	58.05893	16.62779	0.02	4	0.1
86TC016	57.98221	16.66421	0.02	4	0.1
86TC017	57.93257	16.48878	0.02	4	0.1
86TC018	57.92890	16.48820	0.02	4	0.1
86TC019	57.92793	16.44184	0.02	4	0.1
86TC020	57.79901	16.56841	0.80	22	0.1
86TC021	57.79901	16.56841	0.36	4	0.1
86TC022	57.73371	16.46896	0.00	4	0.1
86TC023	57.73371	16.46896	0.00	19	0.1
86TC024	57.62510	16.50157	0.02	4	0.1
86TC026	57.62510	16.50157	0.28	6	0.1
86TC027	57.70885	16.52311	0.21	4	0.1
86TC028	57.75639	16.06863	0.05	4	0.1
86TC029	57.64516	16.08843	0.02	4	0.1
86TC030	57.59610	15.97286	0.02	4	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC031	57.59610	15.97286	0.08	4	0.2
86TC032	57.46687	15.92133	0.02	4	0.1
86TC033	57.09334	15.74043	0.00	11	0.1
86TC034	57.18968	15.76759	0.07	7	0.1
86TC035	57.07653	15.88913	0.00	540	4.2
86TC036	57.07653	15.88913	0.00	12	0.1
86TC037	57.04295	15.88345	0.00	330	0.4
86TC038	57.07301	15.85370	0.00	12	0.1
86TC039	57.07301	15.85370	0.00	53	0.3
86TC040	57.07301	15.85370	0.02	4	0.1
86TC041	57.07301	15.85370	0.00	410	4.2
86TC042	56.87668	15.74984	0.00	11	0.3
86TC043	56.87668	15.74984	0.00	12	0.1
86TC044	56.83083	15.78408	0.00	39	1.3
86TC045	57.05473	16.03499	0.00	97	0.1
86TC046	57.05473	16.03499	0.07	4	0.1
86TC047	57.05764	16.07043	0.04	4	0.1
86TC048	57.05764	16.07043	0.00	82	0.1
86TC049	57.08929	16.06879	0.07	4	0.1
86TC050	57.08929	16.06879	0.00	37	0.1
86TC051	57.11113	16.01912	0.00	56	0.1
86TC052	56.91626	15.94408	0.00	35	0.3
86TC053	56.74150	16.16570	0.05	4	0.1
86TC054	56.81601	16.13354	0.04	4	0.1
86TC055	56.78094	15.88015	0.59	4	0.1
86TC056	56.79160	15.81151	0.07	4	0.1
86TC057	56.63972	15.75233	0.07	4	0.1
86TC058	56.48741	15.79713	0.00	10	0.1
86TC059	56.38702	15.94341	0.02	4	0.1
86TC060	56.45138	16.01842	0.00	300	0.1
86TC061	56.49625	16.00254	0.00	35	0.1
86TC062	56.43964	16.05160	0.00	790	4.7
86TC063	56.46096	16.09720	0.00	240	1.6
86TC065	56.54510	15.46424	0.02	4	0.1
86TC066	56.54510	15.46424	0.02	4	0.1
86TC067	57.43844	15.54513	0.00	34	0.1
86TC069	57.43844	15.54513	0.00	18	0.1
86TC072	57.53788	15.42702	0.00	73	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC073	57.48324	15.36524	0.00	130	0.1
86TC074	57.48324	15.36524	0.00	14	0.1
86TC077	56.70910	15.42785	0.00	100	0.1
86TC078	56.70910	15.42785	0.02	4	0.1
86TC079	56.52402	15.29998	0.02	4	0.1
86TC120	56.84490	14.46636	1.10	630	2.4
86TC121	56.84490	14.46636	0.05	4	0.1
86TC122	56.84490	14.46636	0.24	55	0.4
86TC123	56.84490	14.46636	0.02	4	0.1
86TC124	56.52180	14.26813	0.02	4	0.1
86TC125	56.52180	14.26813	0.02	4	0.1
86TC126	56.97579	14.32274	1.40	150	1.3
86TC127	56.97579	14.32274	1.80	42	1.8
86TC128	56.97579	14.32274	0.02	4	0.1
86TC129	56.97579	14.32274	0.02	4	0.1
86TC173	56.65274	15.08544	0.19	250	3.6
86TC174	56.65274	15.08544	0.12	28	0.5
86TC175	56.65274	15.08544	0.18	74	0.2
86TC176	56.65274	15.08544	0.03	4	0.1
86TC177	55.49328	17.72038	0.08	69	0.1
86TC178A	55.49328	17.72038	0.02	4	0.1
86TC178B	55.49328	17.72038	0.03	6	0.1
86TC179	55.49328	17.72038	0.04	10	0.1
86TC180	56.37786	15.12206	0.07	14	0.6
86TC181	56.37786	15.12206	0.14	28	0.1
86TC183	56.31553	15.01584	0.09	25	0.1
86TC185	56.31553	15.01584	0.06	23	0.3
86TC186	56.31553	15.01584	0.48	400	0.8
86TC187	56.31553	15.01584	0.06	91	2.0
86TC189	56.82428	14.29108	0.02	10	0.1
86TC190	56.82428	14.29108	0.04	9	0.1
86TC191	56.82428	14.29108	0.02	4	0.1
86TC192	56.13137	15.06894	0.04	11	0.1
86TC193	56.19865	15.06875	0.09	27	0.2
86TC194	56.30563	15.23311	0.12	4	0.1
86TC195	56.34013	15.30728	0.03	4	0.1
86TC197	56.15204	15.16629	0.07	10	0.1
86TC199	56.15204	15.16629	0.04	7	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC200	56.16404	14.98601	0.02	5	0.1
86TC201	56.16404	14.98601	0.03	4	0.1
86TC202	56.16404	14.98601	0.02	4	0.1
86TC203	56.46878	14.67680	0.02	4	0.1
86TC204	56.46878	14.67680	0.04	4	0.1
86TC205	56.48798	14.59263	0.26	100	1.4
86TC206	56.48798	14.59263	0.46	260	3.8
86TC207	56.48798	14.59263	0.36	200	0.1
86TC210	56.68145	14.72569	0.36	75	5.2
86TC211	56.78996	14.52363	0.02	4	0.1
86TC212	56.78996	14.52363	0.02	4	0.1
86TC213	56.78996	14.52363	0.02	4	0.1
86TC214	56.78996	14.52363	0.04	4	0.1
86TC215	56.78996	14.52363	0.02	4	0.1
86TC216	56.86789	14.53288	0.02	4	0.1
86TC217	56.86789	14.53288	0.02	4	0.1
86TC218	56.86789	14.53288	0.02	4	0.1
86TC219	56.86789	14.53288	0.02	4	0.1
86TC220	56.86789	14.53288	0.57	560	5.0
86TC221	56.58551	14.02079	0.07	85	0.1
86TC222	56.58551	14.02079	0.04	5	0.1
86TC223	56.58551	14.02079	0.05	7	0.1
86TC227	56.51315	14.25845	0.03	4	0.1
86TC228	56.50062	14.27880	0.02	4	0.7
86TC231	56.27155	19.74397	0.22	4	0.1
86TC232	56.27155	19.74397	0.22	4	0.1
86TC233	56.27155	19.74397	0.14	4	0.1
86TC234	56.60468	19.66360	0.04	4	0.1
86TC235	57.29062	19.73678	0.17	4	3.5
86TC236	57.29062	19.73678	0.18	4	0.1
86TC237	57.29062	19.73678	0.03	4	0.1
86TC238	57.07055	19.68032	0.04	4	0.1
86TC239	57.18320	19.67640	0.09	12	2.5
86TC240	58.59597	17.00853	0.02	4	0.1
86TC244	58.59597	17.00853	0.04	6	0.1
86TC248	58.60336	17.25130	0.02	4	0.1
86TC249	58.58083	17.26179	0.02	4	0.1
86TC250	58.69055	17.46190	0.03	4	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC251	58.68994	17.46190	0.04	4	0.4
86TC252	58.81631	17.52464	0.05	4	0.1
86TC253	58.81572	17.52709	0.02	4	0.1
86TC254	58.79939	17.47105	0.02	4	0.1
86TC256	58.80001	17.47227	0.02	4	0.1
86TC262	58.66025	17.10212	0.02	4	0.1
86TC264	58.66025	17.10212	0.03	4	0.1
86TC269	58.66025	17.10212	0.02	4	0.1
86TC270	58.66025	17.10212	0.02	4	0.1
86TC272	58.46814	17.22948	0.02	4	0.1
86TC273	58.46813	17.22765	0.05	4	0.1
86TC275	58.40588	17.15967	0.02	4	0.1
86TC277	58.40650	17.16088	0.02	4	0.1
86TC288	55.69482	20.06506	0.68	4	0.1
86TC288	55.69482	20.06506	1.12	4	0.1
86TC290	55.76050	20.15314	0.20	4	0.1
86TC293	55.66942	20.21563	0.22	4	0.1
86TC294	55.66942	20.21563	1.40	4	0.1
86TC295	55.66942	20.21563	2.80	11	0.1
86TC300	55.64987	20.28309	0.05	4	0.1
86TC304	55.64987	20.28309	0.06	4	0.1
86TC305	55.64987	20.28309	0.05	4	0.1
86TC306	55.64987	20.28309	0.34	4	0.1
86TC307	56.59101	20.50562	0.10	4	0.1
86TC308	55.72208	20.32651	2.60	4	0.1
86TC309	55.54820	20.25660	0.14	4	0.1
86TC310	56.01430	20.19204	0.05	4	0.1
86TC312	56.01430	20.19204	0.05	4	0.1
86TC313	56.01430	20.19204	0.19	4	0.1
86TC317	56.00307	20.08147	0.63	9	0.1
86TC318	55.92008	20.07094	7.80	950	1.6
86TC319	55.90152	20.00390	0.90	130	0.3
86TC320	55.90152	20.00390	0.04	4	0.1
86TC321	55.90152	20.00390	0.06	4	0.1
86TC322	55.93816	20.01076	0.76	4	0.1
86TC325	55.91292	19.94564	0.92	15	0.7
86TC326	55.90844	19.83805	1.50	26	0.4
86TC327	55.90844	19.83805	1.40	49	0.5

Sample	Location in UTMS		Hg	Ag	Au
86TC328	55.94755	19.93846	1.60	43	0.2
86TC330	55.93665	19.53306	0.99	61	0.1
86TC331	56.06059	19.59873	0.00	12	0.1
86TC332	56.08716	19.62652	0.00	44	0.1
86TC333	55.92410	19.68798	0.00	4	1.1
86TC334	55.65571	19.84563	0.41	4	0.1
86TC339	55.41309	19.42431	0.46	11	0.1
86TC341	55.41309	19.42431	0.00	4	1.0
86TC342	55.41309	19.42431	2.20	8	1.1
86TC343	55.41309	19.42431	0.59	4	0.4
86TC345	55.85804	19.66866	0.02	85	0.1
86TC347	55.95354	19.26920	0.00	60	0.4
86TC348	55.95354	19.26920	0.00	16	0.4
86TC353	55.64370	16.61684	0.00	5	0.2
86TC354	55.64370	16.61684	0.63	4	0.2
86TC356	55.64370	16.61684	0.02	4	0.1
86TC357	55.64370	16.61684	0.02	4	0.1
86TC358	55.64370	16.61684	0.02	14	0.1
86TC359	55.64370	16.61684	0.80	39	0.1
86TC360	55.79382	16.51007	0.08	6	0.1
86TC361	55.79382	16.51007	0.20	29	0.1
86TC362	55.72701	16.46169	1.76	10	14.6
86TC363	55.72701	16.46169	1.00	49	2.2
86TC364	55.68521	16.24015	0.02	10	2.5
86TC365	55.76694	16.68081	0.40	4	0.1
86TC366	55.84368	16.56728	0.04	4	0.1
86TC367	55.85898	16.67203	2.20	67	0.1
86TC368	55.85898	16.67203	1.20	24	0.1
86TC369	55.86732	16.72928	0.40	60	0.3
86TC370	56.03443	16.75349	0.02	28	0.1
86TC371	56.06989	16.82435	0.02	54	0.1
86TC372	56.06989	16.82435	0.02	36	0.4
86TC373	56.06989	16.82435	0.22	9	2.4
86TC374	55.92770	16.89680	0.40	52	0.5
86TC375	55.98242	16.95210	0.32	4	0.2
86TC376	56.19794	16.88397	0.02	4	0.1
86TC377	56.33466	16.95017	1.20	4	0.1
86TC378	56.33466	16.95017	0.36	4	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC379	56.20006	16.59214	0.00	510	8.8
86TC380	56.20006	16.59214	0.60	90	1.4
86TC381	56.20006	16.59214	2.80	43	0.8
86TC382	58.72289	13.03837	3.40	22	1.3
86TC383	58.72289	13.03837	2.40	4	0.1
86TC384	58.72289	13.03837	0.80	4	0.1
86TC385	58.72289	13.03837	4.20	4	0.1
86TC387	58.26831	12.98515	0.02	4	0.1
86TC388	56.33466	16.95017	0.40	30	0.1
86TC389	56.33466	16.95017	0.96	7	0.1
86TC390	56.50237	17.19613	0.40	4	0.1
86TC391	56.70082	17.00968	0.02	10	0.1
86TC392	56.76633	16.95186	0.16	4	0.1
86TC393	56.81460	16.95354	0.20	4	0.1
86TC394	56.60400	16.95566	0.32	4	0.1
86TC395	56.64492	16.64857	0.00	230	4.7
86TC396	56.64492	16.64857	0.00	180	0.7
86TC397	56.64492	16.64857	0.00	200	1.7
86TC398	56.32413	16.90760	0.00	350	8.7
86TC399	56.07283	16.57890	0.00	71	2.9
86TC400	56.15356	16.51779	0.00	140	0.3
86TC401	56.15925	16.46032	0.00	51	4.8
86TC403	56.19166	16.42929	0.00	1000	3.3
86TC404	56.19166	16.42929	0.00	61	1.8
86TC405	56.19166	16.42929	0.00	95	1.6
86TC405A	56.19166	16.42929	0	64	1
86TC406	55.94325	17.18652	0.02	4	0.1
86TC407	55.86116	17.20492	1.60	27	0.7
86TC408	55.86116	17.20492	2.40	6	0.1
86TC409	55.86116	17.20492	0.80	5	0.2
86TC410	55.86116	17.20492	1.20	6	0.9
86TC411	55.86116	17.20492	0.60	4	0.1
86TC412	56.04926	17.10548	1.28	4	2.6
86TC413	55.35197	17.03353	0.08	4	0.1
86TC414	55.35197	17.03353	0.20	4	0.1
86TC416	54.71426	16.50279	0.02	4	0.1
86TC417	54.71426	16.50279	0.04	4	0.1
86TC418	54.71426	16.50279	0.02	4	0.1

Sample	Location in UTMS		Hg	Ag	Au
86TC419	55.09634	16.80439	0.04	4	0.1
86TC420	55.20032	16.78076	0.04	4	0.1
86TC421	55.66394	16.93029	0.44	4	0.1
86TC422	55.66394	16.93029	0.02	15	0.1
86TC423	55.75803	17.07103	1.00	27	0.3
86TC424	55.75803	17.07103	0.00	170	1.2
86TC425	55.80293	17.12404	0.20	19	1.4

Note: The limit of detection for mercury is 0.02 ppm, for silver is 3 and 4 ppm depending on the sample set. and for gold is 0.1 ppm.

TABLE 1: ROCK CHEMISTRY OF THE ADELAIDE MINING DISTRICT, NEVADA: MERCURY, SILVER AND GOLD -COOKRO AND THEODORE, 1989

SORTED BY SAMPLE TYPE
QUALIFIER CODES: L=LESS THAN THE LIMIT OF DETECTION
H=INTERFERENCE

Sample	T	Location		Decription	HG_PPM	Q	AG_PPM	AU_PPM
85KG058	F	55.81063	17.67096	barite, s	0.00	H	57	0.7
85TC102	F	55.67828	18.34369	barite, s	0.00	H	23	0.1 L
86TC322	S	55.93816	20.01076	breccia	0.76		4	0.1 L
86TC437	F	56.62053	17.33935	breccia	0.02	L	4 L	0.1 L
86TC179	S	55.49328	17.72038	breccia	0.04		10	0.1 L
86TC381	S	56.20006	16.59214	calcite, s	2.80		43	0.8
85KG054	S	55.59356	17.52027	calcite, s	0.00	H	15	0.4
85TC156	S	55.34423	19.06400	calcite, s	1.20		3 L	0.7
85KG017	S	56.90713	18.84876	chalky	0.00	H	12	0.1
86TC237	S	57.29062	19.73678	chalky	0.03		4 L	0.1 L
85TC164	S	55.43778	18.85513	chert	1.30		3 L	0.1 L
85TC167	S	55.43778	18.85513	chert	0.19		3 L	0.1 L
86TC056	F	56.79160	15.81151	chert	0.07		4 L	0.1 L
85TC182	F	55.49084	17.71980	chert	0.00	H	14	0.1 L
86TC030	S	57.59610	15.97286	chert	0.02	L	4 L	0.1 L
86TC427	S	55.20572	18.65780	chert	4.40		4	0.1 L
85TC132	F	56.38483	18.05920	clinker	0.68		3 L	0.1 L
86TC238	S	57.07055	19.68032	crustiform	0.04		4 L	0.1 L
86TC185	S	56.31553	15.01584	crustiform	0.06		23	0.3
86TC216	S	56.86789	14.53288	dacite	0.02	L	4 L	0.1 L
86TC215	S	56.78996	14.52363	dacite	0.02	L	4 L	0.1 L
86TC213	S	56.78996	14.52363	dacite	0.02	L	4 L	0.1 L
86TC065	S	56.54510	15.46424	dike	0.02	L	4 L	0.1 L
86TC440	F	55.75498	18.59917	dike	3.80		4 L	0.1 L
85TC139	S	55.97489	17.97281	dike	2.60		3 L	0.1 L
85TC093	F	57.09531	19.02613	dike	0.03		3	0.1 L
85TC134	F	56.38483	18.05920	dike	0.31		3 L	0.1 L
85TC086	S	57.06134	19.12811	dike	0.03		3 L	0.1 L
85TC085	S	57.06134	19.12811	dike	0.08		3	0.1 L
85TC083	F	57.93262	18.80987	dike	0.02		3	0.1 L
86TC040	S	57.07301	15.85370	dike	0.02	L	4 L	0.1 L
85TC125	S	56.87669	18.16715	dike	0.00	H	42	0.1 L
85TC138	S	55.91640	18.01823	dike	0.25		3 L	0.1 L
85TC134A	F	56.38483	18.05920	dike	0.34		7	0.1 L
85TC135	S	56.05713	18.23163	dike	0.83		3 L	0.1 L

85TC137	S	55.91640	18.01823	dike	0.62	3 L	0.1 L
85KG045	S	54.78681	17.05312	dike	0.17	3 L	0.1 L
85TC090	S	57.05112	19.09276	dike	0.00 H	27	0.1
85TC087	S	57.06134	19.12811	dike	0.12	3	0.1 L
85KG021	F	56.38609	18.06224	dike	0.74	3	0.1 L
86TC375	F	55.98242	16.95210	dike	0.32	4 L	0.2
86TC256	S	58.80001	17.47227	dike	0.02 L	4 L	0.1 L
85KG002	S	57.57119	17.61918	dolomite	0.06	3 L	0.1 L
86TC347	S	55.95354	19.26920	dolomite	0.00 H	60	0.4
86TC334	S	55.65571	19.84563	dolomite	0.41	4 L	0.1 L
86TC343	S	55.41309	19.42431	dolomite	0.59	4 L	0.4
86TC429	S	56.80989	19.08591	dolomite	0.04	4 L	0.1 L
85KG044	F	55.42118	18.68918	dolomite	3.30	3 L	0.3
86TC420	S	55.20032	16.78076	gabbro?	0.04	4 L	0.1 L
86TC367	S	55.85898	16.67203	gossan	2.20	67	0.1 L
85TC091	S	57.06183	19.07366	gossan	0.00 H	11	0.2
86TC348	S	55.95354	19.26920	gossan	0.00 H	16	0.4
85TC147	S	55.34423	19.06400	gossan	0.44	3 L	0.1 L
86TC353	S	55.64370	16.61684	gossan	0.00 H	5	0.2
86TC364	S	55.68521	16.24015	gossan	0.02 L	10	2.5
86TC399	S	56.07283	16.57890	gossan	0.00 H	71	2.9
86TC368	S	55.85898	16.67203	gossan	1.20	24	0.1
85TC095	F	57.08729	19.01889	gossan	0.32	8	0.6
86TC378	F	56.33466	16.95017	gossan	0.36	4 L	0.1
86TC410	F	55.86116	17.20492	gossan	1.20	6	0.9
86TC380	F	56.20006	16.59214	gossan	0.60	90	1.4
85TC092	S	57.06183	19.07366	gossan	0.05	4	0.1 L
85TC128	S	56.87669	18.16715	gossan	0.12	3 L	0.3
86TC385	F	58.72289	13.03837	gossan	4.20	4 L	0.1 L
86TC397	S	56.64492	16.64857	gossan	0.00 H	200	1.7
85TC172	F	55.04788	17.53353	gossan	0.46	5	0.1
86TC197	S	56.12871	15.22770	gossan	0.10	10	0.1 L
86TC173	S	56.65274	15.08544	gossan	0.19	250	3.6
86TC221	S	56.58551	14.02079	gossan	0.07	85	0.1 L
86TC227	S	56.51315	14.25845	gossan	0.03	4 L	0.1 L
86TC126	S	56.97579	14.32274	gossan	1.40	150	1.3
86TC127	S	56.97579	14.32274	gossan	1.80	42	1.8
86TC239	S	57.18320	19.67640	gossan	0.09	12	2.5
86TC061	S	56.49625	16.00254	gossan	0.00 H	35	0.1 L
86TC181	S	56.37786	15.12206	gossan	0.14	28	0.1 L

86TC204	S	56.46878	14.67680	gossan	0.04	4 L	0.1 L
86TC198	S	56.15204	15.16629	gossan	0.07	10	0.1 L
86TC063	S	56.46096	16.09720	gossan	0.00 H	240	1.6
85TC184	S	55.59619	17.80772	gossan	0.00 H	27	0.3
86TC036	S	57.07653	15.88913	gossan	0.00 H	12	0.1 L
86TC037	S	57.04295	15.88345	gossan	0.00 H	330	0.4
86TC186	S	56.31553	15.01584	gossan	0.48	400	0.8
86TC034	S	57.18968	15.76759	gossan	0.07	7	0.1 L
86TC035	S	57.07653	15.88913	gossan	0.00 H	540	4.2
85TC185	S	55.58628	17.65922	gossan	0.00 H	21	0.1 L
86TC060	S	56.45138	16.01842	gossan	0.00 H	300	0.1
86TC328	S	55.94755	19.93846	gossan	1.60	43	0.2
86TC052	S	56.91626	15.94408	gossan	0.00 H	35	0.3
86TC318	F	55.92008	20.07094	gossan	7.80	950	1.6
86TC027	S	57.70885	16.52311	gossan	0.21	4 L	0.1 L
86TC062	S	56.43964	16.05160	gossan	0.00 H	790	4.7
85TC075	S	57.06349	18.83326	gossan	0.72	5	0.1 L
85KG015	F	57.05797	18.46572	gossan	0.00 H	13	70.0
85KG013	S	56.92472	18.43320	gossan	0.04	3 L	0.1 L
85TC143	F	55.48371	18.41719	jasper	1.00	3 L	0.1 L
85TC161	F	55.43778	18.85513	jasperoid	0.07	3 L	0.1 L
86TC310	S	56.01430	20.19204	jasperoid	0.05	4 L	0.1 L
86TC015	F	58.05893	16.62779	jasperoid	0.02 L	4 L	0.1 L
86TC294	S	55.66942	20.21563	jasperoid	1.40	4 L	0.1 L
86TC006	F	58.15807	16.88225	jasperoid	0.00 H	17	0.1 L
86TC011	F	57.97242	16.81861	jasperoid	0.02 L	4 L	0.1
86TC312	S	56.01430	20.19204	jasperoid	0.05	4 L	0.1 L
86TC313	S	56.01430	20.19204	jasperoid	0.19	4 L	0.1 L
85TC159	S	55.43778	18.85513	Mn oxide	0.00 H	26	0.1 L
85TC155	S	55.34423	19.06400	Mn oxide	4.40	4	0.1
85KG039	S	55.52324	18.77695	Mn oxide	0.07	3 L	0.1 L
86TC048	S	57.05764	16.07043	Mn oxide	0.00 H	82	0.1
86TC050	S	57.08929	16.06879	Mn oxide	0.00 H	37	0.1 L
86TC026	S	57.62510	16.50157	Mn oxide	0.28	6	0.1 L
86TC073	S	57.48324	15.36524	Mn oxide	0.00 H	130	0.1 L
86TC356	S	55.64370	16.61684	Mn oxide	0.02 L	4	0.1 L
86TC333	S	55.92410	19.68798	Mn oxide	0.00 H	4 L	1.1
86TC023	S	57.73371	16.46896	Mn oxide	0.00 H	19	0.1
86TC021	S	57.79901	16.56841	Mn oxide	0.36	4 L	0.1 L
86TC354	S	55.64370	16.61684	Mn oxide	0.63	4 L	0.2
86TC339	S	55.41309	19.42431	Mn oxide	0.46	11	0.1 L

86TC331	S	56.06059	19.59873	Mn oxide	0.00 H	12	0.1
86TC438	F	56.43540	17.26531	obsidian	0.02 L	4 L	0.1 L
86TC217	S	56.86789	14.53288	phyllitic	0.02	4 L	0.1 L
85TC068	S	57.06367	18.71031	phyllitic	0.03	3 L	0.1 L
86TC200	F	56.16404	14.98601	phyllitic	0.02	5	0.1 L
85TC067	S	57.06367	18.71031	phyllitic	0.04	3 L	0.1 L
86TC406	F	55.94325	17.18652	phyllitic	0.02 L	4 L	0.1 L
85TC065	S	57.06367	18.71031	phyllitic	0.34	3 L	0.1 L
85TC064	F	58.27589	16.94626	phyllitic	0.07	46	0.1
86TC366	S	55.84368	16.56728	phyllitic	0.04	4 L	0.1
86TC365	S	55.76694	16.68081	phyllitic	0.40	4 L	0.1
85KG024	S	55.93018	18.18320	phyllitic	0.70	3 L	0.1 L
86TC031	S	57.59610	15.97286	phyllitic	0.08	4 L	0.2
86TC029	S	57.64516	16.08843	phyllitic	0.02 L	4 L	0.1 L
86TC024	F	57.62510	16.50157	phyllitic	0.02	3 L	0.1 L
86TC195	F	56.34013	15.30728	phyllitic	0.03	4 L	0.1 L
85TC074	S	57.06349	18.83326	phyllitic	0.05	3 L	0.1 L
85TC099	S	57.17725	18.95777	phyllitic	0.02 L	3 L	0.1 L
85TC100	S	57.17725	18.95777	phyllitic	0.02 L	3 L	0.1 L
85TC098	S	57.17725	18.95777	phyllitic	0.02 L	3 L	0.1 L
85TC073	S	57.06349	18.83326	phyllitic	0.02	3 L	0.1 L
85KG041	S	54.80167	18.43835	phyllitic	0.10	3 L	0.1
86TC079	S	56.52402	15.29998	phyllitic	0.02 L	4 L	0.1 L
85TC124	F	56.97281	17.97383	phyllitic	0.03	3 L	0.1 L
85KG027	S	55.91488	18.22316	phyllitic	0.29	3 L	0.1 L
85TC126	S	56.87669	18.16715	phyllitic	0.02	3 L	0.1 L
86TC201	S	56.16404	14.98601	phyllitic	0.03	4 L	0.1 L
85TC071	S	57.06349	18.83326	phyllitic	0.03	3 L	0.1 L
85TC078	S	57.30080	18.67540	phyllitic	0.03	3 L	0.1 L
86TC409	S	55.86116	17.20492	phyllitic	0.80	5	0.2
85TC080	F	57.39147	18.66748	phyllitic	0.02	3 L	0.1 L
85TC081	S	57.90168	18.88911	phyllitic	0.05	3 L	10.0
86TC202	S	56.16404	14.98601	phyllitic	0.02	4 L	0.1 L
85TC069	S	57.08014	18.75719	phyllitic	0.09	3 L	0.1 L
85KG037	S	55.40460	18.88004	phyllitic	0.03	3 L	0.1 L
86TC434	F	56.13516	18.90110	qtz monz	0.02 L	4 L	0.1 L
86TC431	F	57.05112	19.09276	qtz monz	0.10	4 L	0.1 L
86TC178B	S	55.49328	17.72038	quartz	0.03	6	0.1 L
86TC178A	S	55.49328	17.72038	quartz	0.02	4	0.1 L
86TC032	S	57.46687	15.92133	quartz	0.02 L	4 L	0.1 L

86TC183	S	56.31553	15.01584	quartz	0.09	25	0.1
85KG042	S	54.90145	18.47435	quartz	0.76	3 L	0.1 L
86TC176	S	56.65274	15.08544	quartz	0.03	4 L	0.1 L
86TC128	S	56.97579	14.32274	quartz	0.02	4 L	0.1
86TC206	S	56.48798	14.59263	quartz	0.46	260	3.8
86TC222	S	56.58551	14.02079	quartz	0.04	5	0.1 L
85KG055	S	55.52160	17.42335	quartz	0.00 H	15	0.9
86TC223	S	56.58551	14.02079	quartz	0.05	7	0.1 L
85KG052	S	55.59356	17.52027	quartz	0.00 H	97	3.5
86TC069	F	57.43844	15.54513	quartz	0.00 H	18	0.1 L
86TC220	S	56.86789	14.53288	quartz	0.57	560	5.0
86TC231	S	56.27155	19.74397	quartz	0.22	4 L	0.1 L
86TC218	S	56.86789	14.53288	quartz	0.02	4 L	0.1 L
86TC211	S	56.78996	14.52363	quartz	0.02 L	4 L	0.1 L
86TC067	S	57.43844	15.54513	quartz	0.00 H	34	0.1 L
86TC254	F	58.79939	17.47105	quartz	0.02	4 L	0.1 L
85KG031	F	55.39885	19.13334	quartz	0.00 H	19	0.1
86TC074	S	57.48324	15.36524	quartz	0.00 H	14	0.1 L
86TC038	S	57.07301	15.85370	quartz	0.00 H	12	0.1
86TC039	S	57.07301	15.85370	quartz	0.00 H	53	0.3
85KG030	F	55.39885	19.13334	quartz	2.00	4	0.1 L
86TC205	S	56.48798	14.59263	quartz	0.26	100	1.4
86TC044	S	56.83083	15.78408	quartz	0.00 H	39	1.3
86TC043	S	56.87668	15.74984	quartz	0.00 H	12	0.1
86TC072	S	57.53788	15.42702	quartz	0.00 H	73	0.1 L
86TC042	S	56.87668	15.74984	quartz	0.00 H	11	0.3
85KG049	F	55.04788	17.53353	quartz	0.34	3 L	0.1 L
86TC430	S	57.05112	19.09276	quartz	0.04	4 L	0.1 L
85TC141	S	55.48371	18.41719	quartz	0.00 H	9	0.3
85TC163	S	55.43778	18.85513	quartz	8.40	3 L	0.4
86TC379	F	56.20006	16.59214	quartz	0.00 H	510	8.8
86TC387	S	58.26831	12.98515	quartz	0.02 L	4 L	0.1 L
86TC395	S	56.64492	16.64857	quartz	0.00 H	230	4.7
85TC120	S	57.16234	17.93342	quartz	0.07	3 L	0.1 L
86TC370	F	56.03443	16.75349	quartz	0.02 L	28	0.1
85TC142	S	55.48371	18.41719	quartz	0.00 H	17	0.8
86TC371	F	56.06989	16.82435	quartz	0.02 L	54	0.1
85TC070	S	57.08014	18.75719	quartz	0.06	3 L	0.1 L
85TC072	S	57.06349	18.83326	quartz	0.07	3	0.1 L
86TC412	F	56.04926	17.10548	quartz	1.28	4 L	2.6
86TC422	F	55.66394	16.93029	quartz	0.02 L	15	0.1 L
85TC130	F	56.90713	18.84876	quartz	0.00 H	14	0.1
85TC129	F	56.90713	18.84876	quartz	0.00 H	110	0.3

86TC398	S	56.32413	16.90760	quartz	0.00 H	350		8.7	
85TC127	F	56.87669	18.16715	quartz	0.06	3	L	0.1	L
86TC360	F	55.79382	16.51007	quartz	0.08	6		0.1	
86TC424	F	55.75803	17.07103	quartz	0.00 H	170		1.2	
85TC082	S	57.90168	18.88911	quartz	0.02 L	3	L	0.1	
86TC341	S	55.41309	19.42431	quartz	0.00 H	4		1.0	
85KG022	S	56.02438	18.16545	quartz	0.89	3	L	0.1	L
85KG020	F	56.38609	18.06224	quartz	0.40	3	L	0.1	L
86TC008	S	58.16114	16.88467	quartz	0.04	4	L	0.1	L
86TC358	F	55.64370	16.61684	quartz	0.02 L	14		0.1	
86TC359	S	55.64370	16.61684	quartz	0.80	39		0.1	
86TC369	S	55.86732	16.72928	quartz	0.40	60		0.3	
86TC361	S	55.79382	16.51007	quartz	0.20	29		0.1	
85KG016	S	57.05797	18.46572	quartz	0.02	3	L	0.3	
85KG018	F	56.90713	18.84876	quartz	0.00 H	24		0.1	L
85TC177	S	55.49084	17.71980	quartz	0.00 H	10		0.1	
86TC363	S	55.72701	16.46169	quartz	1.00	49		2.2	
85KG005	S	57.16234	17.93342	quartzite	0.21	3	L	0.1	L
85KG003	S	57.17606	17.95710	quartzite	0.24	3	L	0.1	L
86TC177	S	55.49328	17.72038	quartzite	0.08	69		0.1	L
86TC193	F	56.19865	15.06875	quartzite	0.09	4	L	0.1	L
86TC432	F	57.05797	18.46572	quartzite	0.02 L	4	L	0.1	L
86TC175	S	56.65274	15.08544	quartzite	0.18	74		0.2	
86TC428	S	55.30969	18.80510	quartzite	0.02 L	4	L	0.1	L
86TC320	S	55.90152	20.00390	quartzite	0.04	4	L	0.1	L
86TC232	S	56.27155	19.74397	quartzite	0.22	4	L	0.1	L
86TC394	S	56.60400	16.95566	quartzite	0.32	4	L	0.1	L
86TC321	S	55.90152	20.00390	quartzite	0.06	4	L	0.1	
86TC236	S	57.29062	19.73678	quartzite	0.18	4	L	0.1	L
86TC235	S	57.29062	19.73678	quartzite	0.17	4	L	3.5	
85KG006	S	57.16234	17.93342	quartzite	0.21	3	L	0.1	L
86TC390	S	56.50237	17.19613	quartzite	0.40	4	L	0.1	L
85KG007	S	56.98806	17.88432	quartzite	0.07	3	L	0.1	L
86TC207	S	56.48798	14.59263	quartzite	0.36	200		0.1	L
86TC407	F	55.86116	17.20492	quartzite	1.60	27		0.7	
86TC408	F	55.86116	17.20492	quartzite	2.40	6		0.1	
86TC174	S	56.65274	15.08544	quartzite	0.12	28		0.5	
85TC089	S	57.05112	19.09276	quartzite	0.00 H	8		0.1	L
86TC077	F	56.70910	15.42785	quartzite	0.00 H	10		0.1	L
85KG001	S	57.57119	17.61918	quartzite	0.06	3	L	0.1	L
85TC117	F	57.59252	17.50710	quartzite	0.02 L	3	L	0.1	L
85TC123	S	56.97281	17.97383	quartzite	0.03	3	L	0.1	L

86TC078	F	56.70910	15.42785	quartzite	0.02 L	4 L	0.1 L
86TC013	S	58.08130	16.67647	quartzite	0.02 L	4 L	0.1 L
86TC124	S	56.52180	14.26813	quartzite	0.02	4 L	0.1 L
86TC125	S	56.52180	14.26813	quartzite	0.02 L	4 L	0.1 L
86TC345	S	55.85804	19.66866	q. diorite	0.02 L	85	0.1 L
86TC248	F	58.60336	17.25130	rhyolite	0.02	4 L	0.1 L
86TC249	F	58.58083	17.26179	rhyolite	0.02	4 L	0.1 L
86TC384	F	58.72289	13.03837	rhyolite	0.80	4 L	0.1 L
86TC017	F	57.93257	16.48878	rhyolite	0.02	4 L	0.1 L
85KG012	F	56.91622	18.11586	rhyolite	0.15	4 L	0.1 L
86TC435	F	56.82032	17.37151	rhyolite	0.02	4 L	0.1 L
86TC436	F	56.68363	17.36648	rhyolite	0.02 L	4 L	0.1 L
85KG051	S	54.87268	17.23770	schist	0.08	3 L	0.1 L
85KG059	F	55.81063	17.67096	schist	0.00 H	33	0.1
86TC374	S	55.92770	16.89680	schist	0.40	52	0.5
85KG014	S	56.92472	18.43320	schist	0.03	3	0.1 L
86TC233	S	56.27155	19.74397	schist	0.14	4 L	0.1 L
85KG033	F	55.40350	19.07089	schist	0.27	4	0.1 L
85KG019	F	57.06220	18.68389	schist	0.28	3 L	0.1 L
86TC012	F	58.08008	16.67648	silic. ls.	0.00 H	40	0.3
86TC018	F	57.92890	16.48820	silic. ls.	0.02 L	4 L	0.1 L
85KG025	S	55.93018	18.18320	silic. ls.	0.00 H	7	0.3
85KG023	S	56.02438	18.16545	silic. ls.	0.00 H	8	0.3
86TC016	S	57.98221	16.66421	silic. ls.	0.02 L	4 L	0.1 L
86TC014	S	57.89773	16.72325	silic. ls.	0.02 L	4 L	0.1 L
86TC022	S	57.73371	16.46896	silic. ls.	0.00 B	4 L	0.1 L
85TC051	S	57.11113	16.01912	silic. ls.	0.00 H	3 L	0.1 L
85TC054	S	56.81601	16.13354	silic. ls.	0.00 H	28	0.1 L
86TC295	S	55.66942	20.21563	silic. ls.	2.80	11	0.1 L
86TC304	S	55.64987	20.28309	silic. ls.	0.06	4 L	0.1 L
86TC307	S	56.59101	20.50562	silic. ls.	0.10	4 L	0.1 L
86TC308	S	55.72208	20.32651	silic. ls.	2.60	4 L	0.1 L
86TC309	S	55.54820	20.25660	silic. ls.	0.14	4 L	0.1 L
85KG050	F	54.87268	17.23770	silic. ls.	0.23	3 L	0.1 L
86TC033	S	57.09334	15.74043	silic. ls.	0.00 H	11	0.1
85KG026	S	55.91488	18.22316	silic. ls.	0.00 H	7	0.2
86TC317	F	56.00307	20.08147	silic. ls.	0.63	9	0.1
85TC055	F	58.27589	16.94626	silic. ls.	0.02 L	3	0.1 L
86TC319	S	55.90152	20.00390	silic. ls.	0.90	130	0.3

85TC056	F	58.27589	16.94626	silic. ls.	0.02 L	3	0.1 L
86TC019	F	57.92793	16.44184	silic. ls.	0.02 L	4 L	0.1 L
86TC010	S	57.97242	16.81861	silic. ls.	0.03	4 L	0.1 L
86TC293	S	55.66942	20.21563	silic. ls.	0.22	4 L	0.1 L
85KG004	S	57.17606	17.95710	silic. ls.	0.17	3 L	0.1 L
85TC118	S	57.59252	17.50710	silic. ls.	0.03	3 L	0.1 L
85TC133	S	56.38483	18.05920	silic. ls.	0.11	3 L	0.1 L
85TC076	S	57.12843	18.90581	silic. ls.	0.03	3 L	0.1 L
85TC131	F	56.90713	18.84876	silic. ls.	0.00 H	11	0.1 L
85TC122	S	56.97281	17.97383	silic. ls.	0.03	3 L	0.1 L
85TC149	S	55.34423	19.06400	silic. ls.	0.00 H	8	0.1 L
85TC121	S	56.97013	17.91086	silic. ls.	0.03	3 L	0.1 L
85KG009	S	56.95602	18.04011	silic. ls.	0.02 L	3 L	0.1 L
85TC097	S	57.14360	19.08360	silic. ls.	0.03	3 L	0.1 L
85TC096	F	57.14360	19.08360	silic. ls.	0.02	3 L	0.1 L
85TC084	S	56.84576	18.95232	silic. ls.	0.18	3 L	0.2
86TC439	F	55.43780	17.67175	silic. ls.	0.04	4 L	0.1 L
85TC136	S	56.05713	18.23163	silic. ls.	0.18	3 L	0.1 L
86TC009	S	57.97242	16.81861	silic. ls.	0.00 H	15	0.2
86TC001	F	58.08130	16.67647	silic. ls.	0.04	6	0.1 L
85TC171	F	54.78681	17.05312	silic. ls.	0.20	3 L	0.1 L
86TC005	F	58.08130	16.67647	silic. ls.	0.00 H	32	0.1 L
86TC004	F	58.08130	16.67647	silic. ls.	0.00 H	18	0.1 L
86TC003	F	58.08130	16.67647	silic. ls.	0.00 H	210	0.1
86TC002	F	58.08130	16.67647	silic. ls.	0.00 H	52	0.1 L
86TC357	F	55.64370	16.61684	silic. ls.	0.02	4 L	0.1 L
85TC178	S	55.49084	17.71980	silic. ls.	0.00 H	18	1.4
85TC160	S	55.43778	18.85513	silic. ls.	0.70	3 L	0.1 L
85TC169	S	55.43778	18.85513	silic. ls.	0.80	3 L	0.1 L
85TC168	S	55.43778	18.85513	silic. ls.	0.02	3 L	0.1 L
85KG011	F	56.91622	18.11586	silic. ls.	0.07	3	0.1 L
86TC383	S	58.72289	13.03837	silic. ls.	2.40	4 L	0.1
85TC049	F	55.04788	17.53353	silic. ls.	0.07	3	0.1 L
86TC129	S	56.97579	14.32274	silic. ls.	0.02 L	4 L	0.1
86TC192	S	56.13137	15.06894	silic. ls.	0.04	11	0.1
86TC191	S	56.82428	14.29108	silic. ls.	0.02 L	4 L	0.1 L
86TC047	S	57.05764	16.07043	silic. ls.	0.04	4 L	0.1 L
86TC046	S	57.05473	16.03499	silic. ls.	0.07	4 L	0.1 L
86TC058	S	56.48741	15.79713	silic. ls.	0.00 H	10	0.1 L
86TC057	F	56.63972	15.75233	silic. ls.	0.07	4 L	0.1 L
86TC288	S	55.69482	20.06506	silic. ls.	1.12	4 L	0.1 L
85TC002	F	58.34813	17.04885	silic. ls.	0.06	3 L	0.1 L
85TC005	F	58.43006	16.98712	silic. ls.	0.00 H	40	0.1 L

86TC190	S	56.82428	14.29108	silic. ls.	0.04	9	0.1 L
86TC228	S	56.50062	14.27880	silic. ls.	0.02 L	4 L	0.7
86TC219	S	56.86789	14.53288	silic. ls.	0.02 L	4 L	0.1 L
85KG034	F	55.40350	19.07089	silic. ls.	0.00 H	15	0.1
86TC054	S	56.81601	16.13354	silic. ls.	0.04	4 L	0.1 L
86TC066	S	56.54510	15.46424	silic. ls.	0.02 L	4 L	0.1 L
86TC212	S	56.78996	14.52363	silic. ls.	0.02 L	4 L	0.1 L
85KG060	S	55.81063	17.67096	silic. ls.	0.00 H	38	0.5
86TC203	S	56.46878	14.67680	silic. ls.	0.02	4 L	0.1 L
86TC049	S	57.08929	16.06879	silic. ls.	0.07	4 L	0.1 L
86TC053	S	56.74150	16.16570	silic. ls.	0.05	4 L	0.1 L
85KG061	S	55.59619	17.80772	silic. ls.	0.11	5	0.1
86TC051	S	57.11113	16.01912	silic. ls.	0.00 H	56	0.1
86TC189	S	56.82428	14.29108	silic. ls.	0.02 L	10	0.1 L
86TC055	F	56.78094	15.88015	silic. ls.	0.59	4 L	0.1 L
85KG057	S	55.83339	17.64192	silic. ls.	0.29	3 L	0.1 L
85KG028	F	55.44527	18.36754	silic. ls.	0.13	3 L	0.1 L
85TC048	F	55.04788	17.53353	silic. ls.	0.02	4	0.1 L
86TC275	S	58.40588	17.15967	silic. ls.	0.02 L	4 L	0.1 L
85KG046	S	54.78681	17.05312	silic. ls.	0.03	3 L	0.1 L
86TC272	S	58.46814	17.22948	silic. ls.	0.02 L	4 L	0.1 L
86TC270	S	58.66025	17.10212	silic. ls.	0.02 L	4 L	0.1 L
86TC123	S	56.84490	14.46636	silic. ls.	0.02 L	4 L	0.1 L
86TC120	S	56.84490	14.46636	silic. ls.	1.10	630	2.4
86TC277	S	58.40650	17.16088	silic. ls.	0.02 L	4 L	0.1 L
85KG048	F	55.04788	17.53353	silic. ls.	0.29	3 L	0.1 L
85KG035	S	55.37235	18.88290	silic. ls.	1.20	3 L	0.1 L
86TC253	S	58.81572	17.52709	silic. ls.	0.02	4 L	0.1 L
86TC122	S	56.84490	14.46636	silic. ls.	0.24	55	0.4
85TC088	S	57.05112	19.09276	silic. ls.	0.00 H	8	0.1 L
86TC288	S	55.69482	20.06506	silic. ls.	0.68	4 L	0.1 L
86TC250	S	58.69055	17.46190	silic. ls.	0.03	4 L	0.1 L
86TC121	S	56.84490	14.46636	silic. ls.	0.05	4 L	0.1 L
85KG053	S	55.59356	17.52027	silic. ls.	0.00 H	20	0.4
86TC180	S	56.37786	15.12206	silic. ls.	0.07	14	0.6
86TC199	S	56.15204	15.16629	skarn	0.04	7	0.1 L
86TC376	F	56.19794	16.88397	skarn	0.02	4 L	0.1
86TC377	F	56.33466	16.95017	skarn	1.20	4 L	0.1
86TC403	F	56.19166	16.42929	skarn	0.00 H	1000	3.3
86TC400	S	56.15356	16.51779	skarn	0.00 H	140	0.3
86TC059	S	56.38702	15.94341	skarn	0.02 L	4 L	0.1 L
86TC401	F	56.15925	16.46032	skarn	0.00 H	51	4.8

86TC405A	F	56.19166	16.42929	skarn	0.00 H	64	1
86TC405	F	56.19166	16.42929	skarn	0.00 H	95	1.6
86TC240	F	58.59597	17.00853	skarn	0.06	11	0.1 L
86TC244	F	58.59597	17.00853	skarn	0.04	6	0.1 L
86TC269	S	58.66025	17.10212	skarn	0.02 L	4 L	0.1 L
86TC007	F	58.16114	16.88467	skarn	0.00 H	33	0.1 L
86TC264	F	58.66025	17.10212	skarn, calc	0.03	4 L	0.1 L
86TC242	F	58.59597	17.00853	skarn, calc	0.02 L	4 L	0.1 L
86TC262	F	58.66025	17.10212	skarn, calc	0.02	4 L	0.1 L
86TC251	S	58.68994	17.46190	skarn, calc	0.04	4 L	0.4
85TC181	S	55.49084	17.71980	skarn, calc	0.00 H	56	8.0
86TC414	S	55.35197	17.03353	sulfide	0.20	4 L	0.1 L
86TC416	F	54.71426	16.50279	sulfide	0.02	4 L	0.1 L
86TC413	S	55.35197	17.03353	sulfide	0.08	4 L	0.1 L
86TC411	F	55.86116	17.20492	sulfide	0.60	4 L	0.1 L
86TC404	F	56.19166	16.42929	sulfide	0.00 H	61	1.8
85TC158	S	55.42155	18.82599	sulfide	0.00 H	90	0.1 L
85TC173	S	55.09430	17.22342	sulfide	0.04	3 L	0.1 L
86TC417	F	54.71426	16.50279	sulfide	0.04	4 L	0.1
86TC419	S	55.09634	16.80439	sulfide	0.04	4 L	0.1 L
85TC119	S	57.17606	17.95710	sulfide	0.28	3 L	0.1 L
86TC421	S	55.66394	16.93029	sulfide	0.44	4 L	0.1 L
85TC061	F	58.27589	16.94626	sulfide	0.06	80	0.2
85TC060	F	58.27589	16.94626	sulfide	0.00 H	110	0.1
85TC077	S	57.08815	18.62680	sulfide	0.25	3 L	0.1 L
86TC210	F	56.68145	14.72569	sulfide	0.36	75	5.2
86TC423	F	55.75803	17.07103	sulfide	1.00	27	0.3
86TC418	F	54.71426	16.50279	sulfide	0.02	4 L	0.1 L
86TC426	F	55.20572	18.65780	sulfide	0.14	4 L	0.1 L
86TC382	S	58.72289	13.03837	sulfide	3.40	22	1.3
86TC041	S	57.07301	15.85370	sulfide	0.00 H	410	4.2
86TC425	F	55.80293	17.12404	alt. rock???	0.20	19	1.4
85TC150*	S	55.34423	19.06400	alt. rock???	3.70	5	0.1 L
85KG038	S	55.52324	18.77695	alt. rock???	0.04	3 L	0.1 L
85TC148*	F	55.34423	19.06400	alt. rock???	0.47	4	0.1 L
86TC290*	S	55.76050	20.15314	alt. rock???	0.20	4 L	0.1 L
85TC151*	S	55.34423	19.06400	alt. rock???	0.00 H	25	0.1
85TC162	S	55.43778	18.85513	alt. rock???	1.60	3 L	0.1 L
86TC326	S	55.90844	19.83805	alt. rock???	1.50	26	0.4
86TC273	S	58.46813	17.22765	alt. rock???	0.05	4 L	0.1 L

86TC325	S	55.91292	19.94564	alt. rock???	0.92	15	0.7
86TC327	S	55.90844	19.83805	alt. rock???	1.40	49	0.5
86TC330	F	55.93665	19.53306	alt. rock???	0.99	61	0.1 L
86TC332	S	56.08716	19.62652	alt. rock???	0.00 H	44	0.1 L
85KG032*	S	55.39885	19.13334	alt. rock???	0.53	7	0.1 L
85TC152*	S	55.34423	19.06400	alt. rock???	2.30	4	0.1 L
85KG008	F	56.95602	18.04011	alt. rock???	0.07	3 L	0.1 L
85KG010	S	56.95602	18.04011	alt. rock???	0.52	3 L	0.1 L
86TC388*	S	56.33466	16.95017	alt. rock???	0.40	30	0.1 L
85TC153*	S	55.34423	19.06400	alt. rock???	0.90	3 L	0.1 L
85TC157	S	55.42155	18.82599	alt. rock???	0.00 H	31	0.2
86TC389	S	56.33466	16.95017	alt. rock???	0.96	7	0.1 L
86TC392	F	56.76633	16.95186	alt.volcanic	0.16	4 L	0.1 L
86TC187	F	56.31553	15.01584	alt.volcanic	0.06	91	2.0
86TC393	F	56.81460	16.95354	alt.volcanic	0.20	4 L	0.1 L
85KG029	S	55.38828	18.93469	alt.volcanic	1.20	3 L	0.1 L
86TC362	S	55.72701	16.46169	alt.volcanic	1.76	10	14.6
86TC234	S	56.60468	19.66360	alt.volcanic	0.04	4 L	0.1 L
86TC391	F	56.70082	17.00968	alt.volcanic	0.02 L	10	0.1
85KG036	S	55.40460	18.88004	alt.volcanic	0.51	3 L	0.1 L
86TC396	S	56.64492	16.64857	wad	0.00 H	180	0.7
86TC300	S	55.64987	20.28309	wad	0.05	4 L	0.1 L
86TC305	S	55.64987	20.28309	wad	0.05	4 L	0.1 L
86TC306	S	55.64987	20.28309	wad	0.34	4 L	0.1 L
86TC045	S	57.05473	16.03499	wad	0.00 H	97	0.1
86TC372	F	56.06989	16.82435	wad	0.02 L	36	0.4
86TC342	S	55.41309	19.42431	wad	2.20	8	1.1
86TC373	F	56.06989	16.82435	wad	0.22	9	2.4
86TC194	F	56.30563	15.23311	wad	0.12	4 L	0.1 L
86TC252	S	58.81631	17.52464	y. oxide	0.05	4 L	0.1 L

TABLE 3: SUMMARY TABLES : ROCK CHEMISTRY OF THE ADELAIDE MINING DISTRICT, NEVADA
MERCURY, SILVER AND GOLD. COOKRO AND THEODORE, 1989

	Mercury	Silver	Gold
CHERT AVERAGE (6 SAMPLES)	1.00	5.33	0.10
MAXIMUM	4.4	14	0.1
MINIMUM	0	3	0.1
STANDARD DEVIATION	1.588	3.902	0
ALTERED AVERAGE (20 SAMPLES)	0.516	6.6	0.105
DIKE MAXIMUM	3.8	42	2
MINIMUM	0	3	2.005
STANDARD DEVIATION	0.9467	9.641	3.905
DOLOMITE AVERAGE (65 SAMPLES)	0.7333	13	0.233
MAXIMUM	3.3	60	0.4
MINIMUM	0	3	0.1
STANDARD DEVIATION	1.168	21.02	0.1374
GOSSAN AVERAGE (45 SAMPLES)	0.5782	108.5	2.3667
MAXIMUM	7.8	950	70
MINIMUM	0	3	0.1
STANDARD DEVIATION	1.3401	203.6	10.262
JASPEROID AVERAGE (9 SAMPLES)	0.3111	5.22	0.1
MAXIMUM	1.4	17	0.1
MINIMUM	0	3	0.1
STANDARD DEVIATION	0.4871	4.184	
MN OXIDE AVERAGE (14 SAMPLES)	0.443	24.71	0.1786
MAXIMUM	4.4	130	1.1
MINIMUM	0	3	0.1
STANDARD DEVIATION	1.1154	35.73	0.2568
PHYLLITIC AVERAGE (36 SAMPLES)	0.1008	4.667	0.3806
SHALE MAXIMUM	0.8	46	10
MINIMUM	0.02	3	0.1
STANDARD DEVIATION	0.1808	7.012	1.6261
QUARTZ: AVERAGE (64 SAMPLES)	0.3078	50.14	.8187
VUGS, MAXIMUM	8.4	560	8.8
VEINS, MINIMUM	0	3	0.1
STANDARD DEVIATION	1.0822	107.8	1.7866
QUARTZITE AVERAGE (30 SAMPLES)	0.2407	20.53	0.2533
MAXIMUM	2.4	200	3.5
MINIMUM	0	3	0.1
STANDARD DEVIATION	0.4936	40.91	0.6163
RHYOLITE AVERAGE (7 SAMPLES)	0.15	4	0.1
MAXIMUM	0.8	4	0.1
MINIMUM	0.02	4	0.1
STANDARD DEVIATION	0.2691	0	

	MAXIMUM	0.4	52	0.5
	MINIMUM	0	3	0.1
	STANDARD DEVIATION	0.1376	18.38	0.14
SILICIFIED	AVERAGE (13 SAMPLES)	0.201	18.15	0.1694
LIMESTONE	MAXIMUM	2.8	630	2.4
	MINIMUM	0	3	0.1
	STANDARD DEVIATION	0.4953	67.36	0.2794
SKARN	AVERAGE (13 SAMPLES)	0.1077	109.5	0.9077
	MAXIMUM	1.2	1000	4.8
	MINIMUM	0	4	0.1
	STANDARD DEVIATION	0.3159	260.3	1.4398
CALC	AVERAGE (5 SAMPLES)	0.022	14.4	1.74
SILICATE	MAXIMUM	1.2	1000	8
SKARN	MINIMUM	0	0	0
	STANDARD DEVIATION	0.3541	295.6	2.5437
SULFIDE	AVERAGE (20 SAMPLES)	0.3485	46	0.72
	MAXIMUM	3.4	410	5.2
	MINIMUM	0	3	0.1
	STANDARD DEVIATION	0.7426	90.31	1.4056
STRONGLY	AVERAGE (21 SAMPLES)	0.7976	16.67 0	.2286
ALTERED	MAXIMUM	3.7	61	1.4
ROCK	MINIMUM	0	3	0.1
	STANDARD DEVIATION	0.8989	17.19	0.3057
ALTERED	AVERAGE (8 SAMPLES)	0.4948	16.13	.15
VOLCANIC?	MAXIMUM	1.76	91 1	4.6
	MINIMUM	0.02	3	0.1
	STANDARD DEVIATION	0.604	28.43	4.7466
WAD	AVERAGE (9 SAMPLES)	0.3333	38.44	0.5667
	MAXIMUM	2.2	180	2.4
	MINIMUM	0	4	0.1
	STANDARD DEVIATION	0.6686	57.75	0.7288